

## 4.E Air Quality

The comments and corresponding responses in this section cover topics in draft SEIR Section 3.D, Air Quality. The comments are further grouped according to the following air quality issues that the comments raise:

- Comment AQ-1: Sensitive Receptors
- Comment AQ-2: Construction Schedule
- Comment AQ-3: Mitigation Measure

### *Comment AQ-1: Sensitive Receptors*

This response addresses comments from the commenter listed below; each comment on this topic is quoted in full below this list:

O-ARHS-1  
I-HANSON3-1  
I-HEGGIE2-19  
I-MARABELLO1-1

“Good afternoon. That’s a tough one to follow, but I’ve got a few concerns. My name’s Dr. Andrew Currier. I’m representing Archbishop Riordan High School, as its President.

There’s a multitude of concerns. But as it relates to this report, we serve 680 boys, 9 to 12, and a quarter of them, 170 of them, have diagnosed learning needs. And if you see, if I could pull this up, this circle RSP; that represents the learning area. It’s a specialized designed learning area for students with diagnosed learning needs that they can’t -- we can’t move them elsewhere in the building.

So, we’re worried that there’s not enough information about the noise, the dust, the disruption to their learning growth, their academic growth. Again, we don’t have any option to move them elsewhere in the building, so we really want more detail on that. We want some sensitivity to that. These are young men that cannot be served by San Francisco public schools. These are specialized programs.

We also have 50 students in residence at Archbishop Riordan High School who, also, some of them have significant learning needs. They can’t go elsewhere to receive this help.”

*(Andrew Currier, PhD, President, Archbishop Riordan High School, CPC Hearing, September 12, 2019 [O-ARHS-1])*

“The Draft SEIR discusses risks in the APEZ, which is the Air Pollutant Exposure Zone. The risk is highest for children, referred to as “sensitive receptors,” at Childcare Centers, and the SEIR identifies Childcare Centers in the area and their distance to the construction zone. The Childcare Center at City College, located in the bungalows is identified and though it is not the closest in

proximity it is the only center noted that lies within the APEZ, sits to the East and is in the prevailing path of the wind.

The draft SEIR fails to note the Childcare classes that are centered in the City College Multi-Use Building (MUB), which teaches classes with children on site. Though these children are not playing outside of the building, the MUB sits approximately 150 feet away from the proposed development (per figure 2-3) is to the East of the construction site, and downwind.

Because of the proximity of the MUB to the construction site, its location is comparable to the planned childcare site within the proposed construction area. The SEIR classifies the danger to those children for future health impacts as being significant but says that because the development's future daycare centers won't be up and running during construction this isn't likely to be an issue as follows:

From the draft SEIR page 3.D-71: 'in the unlikely event that the daycare would be completed in Phase 1 and be operational during Phase 2 construction, the potential for future health risk impacts from exposure of daycare receptors to Phase 2 construction TAC emissions would be potentially significant, especially given the potential that the project could be developed under an accelerated construction schedule of as little as three years' duration, increasing the DPM exposure of daycare receptors.'

The proposed project must study the potential danger to the children who participate in the classes in City College's MUB. The data shows that they are not included in this study. Because the draft SEIR identifies significant health impacts for children at the future daycare centers located within the construction area, those concerns must be addressed as well with the children in the MUB whose proximity and direction of location put them at similar risk. These children in the MUB are within the APEZ and the building they are in is to the East, and downwind of the proposed project. The danger to these children is also increased with the potential for an accelerated construction schedule for both alternatives, **after studying the impacts**; the SEIR must offer mitigations for these children for all of the alternatives studied in the draft SEIR."

*(Christine Hanson, Email, September 11, 2019 [I-HANSON3-1])*

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"Please include the sensitive receptors identified above for noise in assessments of air quality as appropriate, although air travels farther than noise."<sup>1</sup>

*(Jennifer Heggie, Email, September 23, 2019 [I-HEGGIE2-19])*

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#### **"FAILURE TO INCLUDE A SIGNIFICANT SENSITIVE RECEPTOR – STUDENT-ATHLETES**

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<sup>1</sup> The comment is referring to Mighty Bambini, childcare classes at the Multi-Use Building, and the future City College replacement childcare center.

1. Both the PEIR (page 251) and BAAQMD guidelines (<http://www.sparetheair.org/understanding-air-quality/air-pollutants-and-health-effects/whos-at-risk>) include persons engaged in strenuous exercise as sensitive receptors.

The SEIR does not do so similarly for a sizable group that exercises routinely and strenuously adjacent to the project area — CCSF athletes. It does not designate them, many of whom train and compete outdoors within 1/4 mile of the BR, as sensitive receptors. It fails to mention this significant group altogether. Thus they were not included in any of the analyses, including the Health Risk Assessment.

This is a violation of San Francisco Administrative Code chapter 31.

There are hundreds of CCSF student-athletes exercising strenuously, outdoors and indoors, who need to be factored in to required air quality analyses.

Plus there are many more who are strenuously exercising in CCSF Ocean Campus physical education courses that should be accounted for.

Also, if health risk assumptions used in the SEIR's air quality analyses are different for athletes than they are for students, and they probably are, then the athletes among the student body at Archbishop Riordan should be their own receptor type in the analyses."

*(Brian Marabello, Email, September 23, 2019 [I-MARABELLO1-1])*

## Response AQ-1: Sensitive Receptors and Construction

The comments relate to concerns about construction-related air quality impacts, and request that additional sensitive receptor locations and types of sensitive receptors be included in the air quality analysis.

Comments regarding noise impacts to sensitive receptors are addressed in Response NO-1, Noise Baselines, on RTC p. **Error! Bookmark not defined.** and Response NO-3, Construction Noise Impacts, on RTC p. **Error! Bookmark not defined.**

The response to the sensitive receptors and construction analysis comments is organized by the following subtopics:

- Sensitive Receptors Included in the Analysis
- City College Multi-Use Building Occupants as Sensitive Receptors
- Additional Sensitive Receptors
- Student Athletes as Sensitive Receptors

### *Sensitive Receptors Included in the Analysis*

As described on draft SEIR p. 3.D-20, some population groups are more susceptible to adverse health effects from air quality than others. These sensitive groups are known as “sensitive receptors.” As stated on draft SEIR p. 3.D-20:

“More sensitive population groups include: the elderly and the young; those with higher rates of respiratory disease, such as asthma and chronic obstructive pulmonary disease; and those with other environmental or occupational health exposures (e.g., indoor air quality) that affect cardiovascular or respiratory diseases. The air district defines sensitive receptors as children, adults, and seniors occupying or residing in residential dwellings, schools, daycare centers, hospitals, and senior-care facilities.”

The health risk assessment (HRA) prepared ~~in-for~~ the draft SEIR includes all sensitive receptor locations within 1,000 meters of the project boundary. These include residential areas (based on residential land use and/or zoning data), daycares, and schools (for children under 16 years of age). As discussed on draft SEIR p. 3.D-20, sensitive receptors include a “representative sample of known residents (child and adult) in the surrounding neighborhood, and other sensitive receptors (school children, daycare facilities, etc.) located in the surrounding community and along the expected travel routes of the on-road delivery and haul trucks within the project vicinity.” Table 9 on draft SEIR Appendix E, p. 20, presents the location of daycares and schools within 1,000 meters of the project site, and whether each receptor is located within the Air Pollutant Exposure Zone (APEZ).

Comments states that the air quality analysis should include children present at childcare classes at the City College Multi-Use Building as sensitive receptors in the HRA. The commenter claims that due to the Multi-Use Building’s proximity to the site and its location in the APEZ, and because the draft SEIR finds a significant impact for new onsite daycare receptors that would be comparable to the Multi-Use Building receptors, receptors at the Multi-Use Building should be evaluated in the draft SEIR. Another comment requests that planned sensitive receptor locations at City College be included in the air quality analysis. A City College childcare center is ~~planned-proposed~~ to be located at the corner of Judson Street and Frida Kahlo Way. Another childcare/nursery school, the Mighty Bambini childcare/nursery school, is located at the corner of Staples and Frida Kahlo Way.

The potential presence of children in a given land use does not necessarily indicate that such a land use is a sensitive receptor for TAC emissions. Locations where a land uses is designed for children to receive instruction on a regular basis (i.e., are enrolled) such as an elementary or pre-school are considered to be sensitive receptors, and are analyzed as such in the draft SEIR. ~~The planning department does not consider adult~~Adult education facilities, such as City College, ~~are not considered~~ to be sensitive receptors with the exception of dedicated childcare facilities that may be present on such uses. This is because dedicated childcare facilities may have children present for many hours each day over five to seven days per week, and children are considered sensitive receptors due to their elevated breathing rates and susceptibility to TAC emission exposure.



### *City College Multi-Use Building Occupants as Sensitive Receptors*

The commenter is incorrect that the Multi-Use Building is in the APEZ. As noted on draft SEIR p. 3.D-66, the only APEZ locations in the study area (1,000-meter radius of the proposed project boundary) are receptor locations within 500 feet of I-280. The Multi-Use Building is located more than 500 feet from I-280 and therefore is not located in the APEZ.<sup>2</sup>

**Commented [RJ(1)]:** Confirm this remains true with the updated APEZ.

A commenter is incorrect that the childcare center in the bungalows at City College is in the APEZ; no daycare evaluated in the draft SEIR is located within the APEZ. As stated on draft SEIR p. 3.D-73, the tables that present risk results for receptors located in the APEZ, “do not show receptors types that are not already in the APEZ, including onsite residents, offsite daycare, and onsite daycare; risks to these receptors are discussed above.”

The commenter states that child attendees at the Multi-Use Building childcare classes would be present long enough in the building to be exposed to significant TAC emissions from project construction and operation. The planning department consulted with City College regarding the classes.<sup>3</sup> Based on information from City College, these classes are child behavior observation classes. The classes at the Multi-Use Building are three hours in duration and are offered daily. However, parents may opt to bring their child once a week, or up to five times a week. Thus, the presence of children at the Multi-Use Building would not occur for extended periods of time (i.e., eight hours per day, seven days per week, as do typical daycare and school receptors). Even if the children attended these classes five days a week, their time spent in the Multi-Use Building (e.g., 15 hours per week) would be much less than the time children would spend at the daycare locations evaluated in the SEIR (e.g., 56 hours per week). Thus, the exposure ~~duration of~~ for potential children who participate in the classes at the Multi-Use Building would be much lower than the exposure ~~duration estimated~~ for the daycare, school, and residential receptors included in the draft SEIR.

For daycare uses, the draft SEIR assumes exposure to project-generated TACs would occur eight hours per day, seven days per week (250 days per year). For schools, the SEIR assumed eight hours per day, five days per week (180 days per year). For residents, the SEIR assumed 24 hours per day, seven days per week (350 days per year).<sup>4</sup> Children who participate in the classes at the Multi-Use Building would be expected to be exposed to project-generated TACs a maximum of three hours per day, five days per week (180 days per year). This is 73 percent less than the exposure currently modeled for daycare receptors, 63 percent less than the exposure currently modeled for school receptors, and 94 percent less than the exposure currently modeled for residential receptors. Therefore, the exposure for potential Multi-Use Building children receptors would be substantially lower than what was modeled in the draft SEIR for receptors located at a similar distance from the proposed project's boundaries.

Further, the Multi-Use Building daycare receptors are located farther from the project site than four daycare locations evaluated in the draft SEIR. The Multi-Use Building is approximately 175 feet from

<sup>2</sup> San Francisco Department of Public Health and San Francisco Planning Department, *Air Pollutant Exposure Zone Map – Cityguide*, April 2014, <https://www.sfdph.org/dph/files/EHSdocs/AirQuality/AirPollutantExposureZoneMap.pdf>, accessed November 2019.

<sup>3</sup> Rosario Villasana, Department Chair of Child Development and Family Studies, City College. Phone correspondence with Jeanie Poling, San Francisco Environmental Planning, on October 1, 2019.

<sup>4</sup> See Table 10 on draft SEIR Appendix E, pp. 21 to 23.

the project site boundary. The HRA modeled 16 offsite daycare sensitive receptor locations, four of which are located within 160 feet of the project site, including Shining Stars Family Child Center, Harmony Family Childcare, Blooming Child Care, and Cel Coalition Center (see Table 9 on draft SEIR Appendix E, p. 20). None of these locations or the Multi-Use Building are in the APEZ.

In an effort to disclose potential health risk impacts for a child attendee at the Multi-Use Building, maximum mitigated lifetime excess cancer risk and annual average PM<sub>2.5</sub> concentrations were estimated for a child attendee. The results of this analysis are presented in **Table RTC-1, Mitigated Lifetime Excess Cancer Risk for the Multi-Use Building Child Attendee and Select Daycare, School, and Residential Sensitive Receptors for the Additional Housing Option**, and **Table RTC-2, Mitigated Annual Average PM<sub>2.5</sub> for the Multi-Use Building Child Attendee and Select Daycare, School, and Residential Sensitive Receptors for the Additional Housing Option**. For comparative purposes, the lifetime excess cancer risk at similar nearby sensitive receptor locations, as analyzed in the SEIR, are also presented in the table below. Results are presented for the Additional Housing Option because TAC emissions and health risks are greater for the Additional Housing Option than for the Developer's Proposed Option.

**TABLE RTC-1**  
**MITIGATED LIFETIME EXCESS CANCER RISK FOR THE MULTI-USE BUILDING CHILD ATTENDEE AND SELECT DAYCARE, SCHOOL, AND RESIDENTIAL SENSITIVE RECEPTORS FOR THE ADDITIONAL HOUSING OPTION**

Receptor	Location Relative to the Proposed Project	Mitigated Lifetime Excess Cancer Risk for the Additional Housing Option (in One Million) <sup>a,b</sup>			Draft SEIR Table Source
		Project	Background	Total	
Multi-Use Building child attendee	140 feet east <sup>c</sup>	4.9	26.6	31.5	n/a
Archbishop Riordan High School	30 feet north	1.9	17.5	19.4	3.D-13b
Shining Stars Family Child Center	30 feet west	12.8	21.9	34.7	3.D-13b
Harmony Family Childcare	50 feet southeast	4.2	41.3	45.5	n/a
Mighty Bambinis Childcare & Preschool	750 feet northeast	1.0	19.5	20.5	n/a
Residential	directly west/south	9.5	16.9	26.4	3.D-13b

NOTES:

SEIR = Subsequent Environmental Impact Report; n/a = not applicable (not presented in the draft SEIR tables).

<sup>a</sup> Cancer risks are presented for the construction plus operational emissions scenario (Scenario 3), as this exposure scenario results in the highest risks. These values are all for receptors not located in the APEZ.

<sup>b</sup> Mitigation measures include: (1) M-AQ-2a: all off-road construction equipment was modeled with Tier 4 Final engine emission standards; and (2) M-AQ-4a: all emergency generators were modeled with Tier 4 engine emission standards.

<sup>c</sup> Although the westernmost façade of the MUB building is approximately 175 feet from the project site's eastern boundary, the receptor grid was extended slightly westward as a conservative analysis.

SOURCE: ESA 2019

**Commented [RJ(2)]:** Do these reflect the updated background Citywide HRA values and totals? Please make sure they do and add discussion that the background reflects the most recent Citywide HRA data.

**TABLE RTC-2**  
**MITIGATED ANNUAL AVERAGE PM<sub>2.5</sub> FOR THE MULTI-USE BUILDING CHILD ATTENDEE AND SELECT DAYCARE, SCHOOL, AND RESIDENTIAL SENSITIVE RECEPTORS FOR THE ADDITIONAL HOUSING OPTION**

Receptor	Location Relative to the Proposed Project	Mitigated Annual Average PM <sub>2.5</sub> Concentration for the Additional Housing Option (µg/m <sup>3</sup> ) <sup>a,b</sup>			HRA <sup>c</sup> Table Source
		Project	Background	Total	
Multi-Use Building child attendee	140 feet east <sup>d</sup>	0.07	8.47	8.54	n/a
Archbishop Riordan High School	30 feet north	0.03	8.34	8.37	30
Shining Stars Family Child Center	30 feet west	0.04	8.49	8.53	30
Harmony Family Childcare	50 feet southeast	0.02	8.75	8.77	n/a
Mighty Bambinis Childcare & Preschool	750 feet northeast	0.00	8.30	8.31	n/a
Residential	directly west/south	0.06	8.57	8.64	30

## NOTES:

PM<sub>2.5</sub> = particulate matter less than or equal to 2.5 microns in diameter; µg/m<sup>3</sup> = micrograms per cubic meter; HRA = health risk assessment; n/a = not applicable (not presented in the HRA tables).

<sup>a</sup> PM<sub>2.5</sub> concentrations are presented for the construction plus operational emissions scenario (Scenario 3), as this exposure scenario results in the highest annual average PM<sub>2.5</sub> concentrations. These values are all for receptors not located in the APEZ.

<sup>b</sup> Mitigation measures include: (1) M-AQ-2a: all off-road construction equipment was modeled with Tier 4 Final engine emission standards; and (2) M-AQ-4a: all emergency generators were modeled with Tier 4 engine emission standards.

<sup>c</sup> Draft SEIR Appendix E.

<sup>d</sup> Although the westernmost façade of the MUB building is approximately 175 feet from the project site's eastern boundary, the receptor grid was extended slightly westward as a conservative analysis.

SOURCE: ESA 2019

As described on draft SEIR p. 3.D-66, a project would result in significant health risk impact if a receptor point meets the APEZ criterion<sup>5</sup> that otherwise would not meet the criterion without the project, and if the project would contribute to PM<sub>2.5</sub> concentrations at or above 0.3 µg/m<sup>3</sup> or result in an excess cancer risk at or greater than 10.0 per one million persons exposed.

As shown in Table RTC-1, the maximum mitigated lifetime excess cancer risk at the Multi-Use Building child attendee receptor location is 4.9 per million from the project. When combined with the background risk of 26.6 per million, the cumulative total mitigated risk is 31.5 per million. Because the cumulative total is less than the APEZ criterion of 100 per million, the Multi-Use Building child attendee receptor is not placed into the APEZ with the project's contribution. Also as shown in Table RTC-1, none of the nearby receptors analyzed in the draft SEIR is placed into the APEZ with the project's contribution, nor is the cumulative total risk for any of these receptors near the APEZ criterion of 100 per million.

As shown in Table RTC-2, the maximum mitigated annual average PM<sub>2.5</sub> concentration at the Multi-Use Building child attendee receptor location is 0.07 µg/m<sup>3</sup> from the project. When combined with the background annual average PM<sub>2.5</sub> concentration of 8.47 µg/m<sup>3</sup>, the cumulative total maximum mitigated annual average PM<sub>2.5</sub> concentration is 8.54 µg/m<sup>3</sup>. Because the total is less than the APEZ criterion of 10.0 µg/m<sup>3</sup>, the Multi-Use Building child attendee receptor is not placed into

**Commented [RJ(3)]:** Make sure this selects 2020 citywide hra background.

**Commented [RJ(4)]:** See above comment re: updated Citywide HRA background levels.

<sup>5</sup> The APEZ criterion for this location is based on: (1) cumulative PM<sub>2.5</sub> concentrations greater than 10 µg/m<sup>3</sup>, and/or (2) excess cancer risk from the contribution of emissions from all modeled sources greater than 100 per one million population. See draft SEIR pp. 3.D-39 to 3.D-40 for more detail.



the APEZ with the project's contribution. Also as shown in Table RTC-2, none of the nearby receptors analyzed in the draft SEIR is placed into the APEZ with the project's contribution, nor is the cumulative total risk for any of these receptors near the APEZ criterion of 10.0 µg/m<sup>3</sup>.

The commenter states that the draft SEIR finds significant health impacts for new onsite daycare receptors, and because the Multi-Use Building receptors are similar to these onsite receptors, the SEIR must study the Multi-Use Building. The draft SEIR concludes on p. 3.D-70 that without mitigation, "the impact with regard to increased cancer risk would be significant for onsite receptors not located in the APEZ," which includes the new onsite daycare receptors. To address this impact, the draft SEIR identifies Mitigation Measures M-AQ-4a (Diesel Backup Generator Specifications), and M-AQ-4b (Install MERV 13 Filters at the Daycare Facility), which would "reduce impacts related to TAC emissions at the daycare facility to a less-than-significant level" (draft SEIR p. 3.D-73). In addition, Mitigation Measure M-AQ-2a (Construction Emissions Minimization) would reduce TAC emissions from construction and therefore also the impact on these receptors. The draft SEIR concludes on p. 3.D-72, "Even with worst-case construction phasing assumptions for the onsite daycare receptor... health risks to onsite daycare sensitive receptors would be less than significant." Thus, the impact on new daycare receptors sited by the project would be less than significant, contrary to the commenter's claim that the draft SEIR identifies significant health impacts for these receptors. Mitigation Measures M-AQ-2a and M-AQ-4a would also reduce TAC exposure at the Multi-Use Building receptor location.

**Commented [RJ(5)]:** Do you mean less than significant with the mitigation measures discussed above? Or less than significant irrespective of the mitigation measures? Please clarify.

The draft SEIR concludes that all impacts for sensitive receptors not located in the APEZ, including impacts under the compressed three-year construction schedule, would be less than significant (see draft SEIR pp. 3.D-69 to 3.D-71 for cancer risk impacts and pp. 3.D-76 to 3.D-77 for PM<sub>2.5</sub> impacts). The draft SEIR concludes that impacts would be significant and unavoidable *only for those sensitive receptors already located in the APEZ* (i.e., those located within 500 feet of I-280) under the compressed three-year construction schedule. As stated on draft SEIR p. 3.D-78, "the health risks to existing offsite sensitive receptors [located in the APEZ] may exceed the cancer risk thresholds under the worst-case three-year construction phasing scenario, as presented in draft SEIR Table 3.D-12a and Table 3.D-11b; therefore, this impact would be significant and unavoidable with mitigation." Since the draft SEIR concludes that health risks at all sensitive receptor locations not in the APEZ would be less than significant, the impact at the Multi-Use Building receptor would therefore also be less than significant.

Mitigation measures that would reduce TAC emissions from construction and therefore also the impact on these receptors would be enforced through the ~~a~~ Mitigation ~~m~~Monitoring and ~~r~~Reporting ~~P~~rogram (MMRP). In addition, certain mitigation measures have reporting and monitoring components to ensure their implementation. For example, Mitigation Measure M-AQ-2a (Construction Emissions Minimization) requires the project sponsor to submit a "~~C~~construction ~~E~~missions ~~M~~inimization ~~p~~lan" to the ~~E~~nvironmental Review Officer (ERO) on a quarterly basis demonstrating how Mitigation Measure M-AQ-2a and Mitigation Measure M-AQ-2c (On-Road Truck Emissions Minimization for the Compressed Construction Schedule) are implemented at the site.

#### *Additional Sensitive Receptors*

A commenter requests that the air quality analysis include additional sensitive receptor locations, including where the future City College replacement childcare center is planned at the corner of

Judson Street and Frida Khalo Way and the Mighty Bambini childcare/nursery school at the corner of Staples and Frida Kahlo Way.

With regard to the future City College replacement childcare center, the HRA includes this location as a residential sensitive receptor in the analysis. In addition, the HRA includes daycare receptors at Little Lemon nursery school, which is located 200 feet west of the corner of Judson Street and Frida Khalo Way, at the corner of Judson Street and Tennessee Street. The maximum lifetime excess residential cancer risk at the corner of Judson Street and Frida Khalo Way was estimated to be 1.1 per million from the project, and the maximum lifetime excess school cancer risk at the Little Lemon nursery school was estimated to be 0.35 per million from the project. Therefore, the daycare risk at the corner of Judson Street and Frida Khalo Way for the future City College replacement childcare would be equal to or lower than these values.

Regarding the Mighty Bambini childcare/nursery school at the corner of Staples and Frida Kahlo Way, the HRA does include this childcare/nursery school as a sensitive receptor; see Table 9 on draft SEIR Appendix E, p. 20. Also see Table RTC-1 and Table RTC-2, above. Therefore, additional analysis at these potential receptor locations is not warranted.

**Commented [R](6):** I assume these need to be updated to reflect the updated background risk values, and also new totals? I don't see any such updates in the EIR revisions section.

In summary, the draft SEIR adequately evaluates all sensitive receptor locations within 1,000 meters of the project site. The Multi-Use Building, if treated as a sensitive receptor, would have much lower exposure to project-generated TAC emissions and a lower health risk than the nearby daycare receptors evaluated in the SEIR, as presented in Table RTC-1 and Table RTC-2. The Multi-Use Building is not located in the APEZ and is therefore not comparable to the impact conclusion in the draft SEIR for receptors located in the APEZ. In addition, the Multi-Use Building is located farther away from the project boundary than a number of daycare receptors identified in the draft SEIR, including new onsite daycare receptors, and the draft SEIR concludes a less-than-significant impact for all of these sensitive receptors. The draft SEIR adequately analyzes impacts on all nearby sensitive receptors for the proposed project and alternatives and includes all feasible mitigation measures to address these impacts. No additional analysis or mitigation measures are necessary.

#### *Student Athletes as Sensitive Receptors*

A commenter states that the air quality analysis should include student athletes at Archbishop Riordan and City College as sensitive receptors in the health risk assessment (HRA). The commenter cites the Area Plan PEIR and the air district's "Spare the Air" website as evidence that student athletes should be considered sensitive receptors in the HRA. The draft SEIR appropriately analyzes the impacts to sensitive receptors.

The air district's "Spare the Air" website is not the air district's guidelines for CEQA analysis. The Spare the Air website describes people most at risk for the general impacts of air pollution, and includes children, seniors, and active adults. These receptor types are specifically identified as more susceptible to *acute* and *short-term* health effects due to elevated concentrations of ozone and particulate matter.

The HRA evaluates lifetime cancer risk and annual average particulate matter concentrations, per the air district's thresholds and CEQA Guidelines, and does not evaluate acute and short-term



health effects. The air district's CEQA guidelines define sensitive receptors as "facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals and residential areas."<sup>6</sup> The air district's CEQA Guidelines further describes sensitive receptors as the following:

*Sensitive individuals refer to those segments of the population most susceptible to poor air quality: children, the elderly, and those with pre-existing serious health problems affected by air quality (ARB 2005). Examples of receptors include residences, schools and school yards, parks and play grounds, daycare centers, nursing homes, and medical facilities. Residences can include houses, apartments, and senior living complexes. Medical facilities can include hospitals, convalescent homes, and health clinics. Playgrounds could be play areas associated with parks or community centers. (BAAQMD CEQA Guidelines, page 5-8)*

The ARB 2005 source cited by the air district states, "Sensitive individuals refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses where sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses)."<sup>7</sup>

In order to evaluate nearby student children as sensitive receptors, the HRA evaluates student receptors at Archbishop Riordan High School, which is located immediately adjacent to the project site boundary to the north, approximately 30 feet away (see Table 9 on draft SEIR Appendix E, p. 20). The HRA also evaluates eight additional school and 16 daycare locations as sensitive receptors, including the City College Child Development Lab School. See Table RTC-1 and Table RTC-2 above. Therefore, the HRA already assesses health risks at nearby schools with children receptors.

The commenter states that the PEIR also states that persons engaged in strenuous exercise are sensitive receptors. The PEIR states on p. 251 that certain land uses, including "schools, children's day care centers, playgrounds, hospitals, and convalescent homes" are considered "more sensitive than the general public to poor air quality." The PEIR also states on p. 251, "Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality."

Increased sensitivity to poor air quality is not the sole criterion for what defines a sensitive receptor, as discussed above with regard to the air district's CEQA Guidelines. The air district does not consider adult or student athletes as sensitive receptors [for purposes of the CEQA analysis](#). The PEIR goes on to state on p. 251, "Residential areas are considered more sensitive to air quality conditions compared to commercial and industrial areas because people generally spend longer periods of time at their residences, with associated greater exposure to ambient air quality conditions." The HRA includes residential receptor locations within 1,000 meters of the project site, in addition to schools and daycares within the same radius.

<sup>6</sup> BAAQMD, *California Environmental Quality Act Air Quality Guidelines*, May 2017, [http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en), accessed February 2019.

<sup>7</sup> CARB, *Air Quality And Land Use Handbook: A Community Health Perspective*, April 2005, <https://ww3.arb.ca.gov/ch/handbook.pdf>, accessed October 2019.

The commenter accurately claims that strenuous activities, such as those conducted by student athletes, would result in higher exposure to air pollution than the general student population. Exercise raises an individual's breathing rate, and a higher breathing rate means a higher exposure to air pollution. Age plays a significant role in the impacts of air pollution on health; the younger a student or child, the higher the exposure to air pollution and the higher risk of cancer or other health effects.<sup>8</sup> For example, children age 0 to 2 have an "age sensitivity factor" of 10, which means their risk of cancer from the same TAC exposure is ten times higher than an adult receptor; children age 2 to 16 have an age sensitivity factor of three. At age 16, the age sensitivity factor is one, because the student is considered an adult. Younger receptors also have higher average breathing rates, increasing their exposure as compared to older receptors with lower average breathing rates.

Because of this age sensitivity in younger populations, the HRA conservatively characterizes school receptors as within the 2- to 16-year age group, including high school receptors at Archbishop Riordan High School. This is conservative from an exposure perspective because the breathing rate used in the HRA for these receptors is the average breathing rate for children ages 2 to 16, and most or all high school students would be ages 13 to 18; the average breathing rate for children ages 13 to 18 is much lower.

In addition, the HRA assumes that school receptors would be exposed to 14 years of construction and operational TAC emissions, representing the full age group duration from ages 2 to 16. Again, this is conservative because no individual student receptor at Archbishop Riordan High School would likely be exposed to the pProject's TAC emissions for greater than four years. These exposure parameters are consistent with BAAQMD HRA guidelines.<sup>9</sup> Refer to Table 10 on draft SEIR Appendix E, p. 21, for additional discussion of the exposure parameters used in the HRA.

The City College student athlete receptor would be potentially exposed to 4 to 6 years of construction and/or operational emissions during the ages of 18 to 24, which represents a lower exposure than the current school and daycare receptors included in the HRA due to the age difference (as discussed above). Although breathing rates are greater for individuals engaged in exercise or other strenuous activities, the breathing rates for young adults engaged in strenuous activities are actually lower than the breathing rates used for the Archbishop Riordan High School receptors. See **Table RTC-3, Daily Breathing Rates for Sensitive Receptors at Schools**, for a comparison of breathing rates.

As presented above, the HRA uses an average breathing rate of 520 liters per kilogram body weight per eight-hour period (L/kg-8hrs) (the time period during which the student receptor is present), as recommended by BAAQMD.<sup>10</sup>

<sup>8</sup> California Environmental Protection Agency (CalEPA), Office of Environmental Health Hazard Assessment (OEHHA), *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessment*, February 2015, <https://oehha.ca.gov/media/downloads/cmr/2015guidancemanual.pdf>, accessed March 26, 2018.

<sup>9</sup> BAAQMD, *Air Toxics NSR Program Health Risk Assessment Guidelines*, December 2016, [http://www.baaqmd.gov/~media/files/planning-and-research/permit-modeling/hra\\_guidelines\\_12\\_7\\_2016\\_clean-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/permit-modeling/hra_guidelines_12_7_2016_clean-pdf.pdf?la=en), accessed October 2019.

<sup>10</sup> BAAQMD, *Air Toxics NSR Program Health Risk Assessment Guidelines*, December 2016, [http://www.baaqmd.gov/~media/files/planning-and-research/permit-modeling/hra\\_guidelines\\_12\\_7\\_2016\\_clean-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/permit-modeling/hra_guidelines_12_7_2016_clean-pdf.pdf?la=en), accessed October 2019.

**TABLE RTC-3**  
**DAILY BREATHING RATES FOR SENSITIVE RECEPTORS AT SCHOOLS**

Receptor Type	Daily Breathing Rate (L/kg-8hrs)	Age Group	Activity Type
Male Student – Used in draft SEIR <sup>a,b</sup>	520	2 to <16 years	moderate intensity
Male Student – High School Athlete	426	11 to <16 years	high intensity
Male Student – College Athlete	340	16 to <21 years	high intensity

**NOTES:**

L = liter; kg = kilogram; hrs = hours; DSEIR = Draft Supplemental Environmental Impact Report;

<sup>a</sup> This breathing rate was used in the DSEIR for all student receptors, including those at the Archbishop Riordan High School.

<sup>b</sup> The reason the moderate-intensity activity average breathing rate for the 2<16 age group is 520 L/kg-8hrs, which is higher than the age-specific high-intensity activity average breathing rates for the 11<16 and 16<21 age groups presented here, is because of the very high breathing rates for younger children. For example, the high-intensity activity average breathing rates are 1,387 L/kg-8hrs for age 2, 1,041 L/kg-8hrs for age 3<6, and 677 L/kg-8hrs for age 6<11.

**SOURCES:**

BAAQMD, *Air Toxics NSR Program Health Risk Assessment Guidelines*, December 2016,

[http://www.baaqmd.gov/~media/files/planning-and-research/permit-modeling/hra\\_guidelines\\_12\\_7\\_2016\\_clean-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/permit-modeling/hra_guidelines_12_7_2016_clean-pdf.pdf?la=en), accessed October 2019.

U.S. EPA, *Metabolically Derived Human Ventilation Rates: A Revised Approach Based Upon Oxygen Consumption Rates*, May 2009, EPA/600/R-06/129F, <https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=202543>, accessed December 2019.

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**Commented [WW7]:** Thank you for the table addition. Is there a reason "male" is identified?

Males ages 11 to 16 who are engaged in high-intensity activities have a breathing rate of approximately 456 L/kg-8hrs, which would represent a high school student engaged in strenuous activities. Males age 16 to 21 have a breathing rate of approximately 340 L/kg-8hrs, which would represent a college student engaged in strenuous activities. When compared with the exposure duration of 14 years and a breathing rate of 520 L/kg-8hrs used in the HRA for all school receptors, a college-age student athlete exposed for five years would have an exposure that is approximately ten percent of the exposure than the school receptors included in the draft SEIR would have (i.e., 90 percent less exposure).<sup>11</sup> Therefore, the general exposure assumptions used in HRA for school receptors are already more conservative than age-specific exposure assumptions for potential high school and college student athletes engaged in strenuous activities.

In addition, the City College student receptor would likely be located at the Community Health and Wellness Center, the swimming pool, or the track, which are approximately 1,150 feet, 1,000 feet, and 1,300 feet east of the project site, respectively. For comparison, the closest school receptor included in the HRA is 30 feet north of the site (Archbishop Riordan High School) and the closest daycare receptor included in the HRA is 30 feet west of the site (Shining Stars Family Child Center). Therefore, the TAC concentrations at the City College athlete receptor would be much lower than the concentrations at the receptor locations currently analyzed because concentrations decline substantially with distance, and health risks correlate directly with TAC concentrations for the same age groups and other exposure parameters.

<sup>11</sup> Based on a breathing rate that is 88 percent of a school receptor (456 vs. 520), total hours that are 36 percent of a school receptor (7,200 vs. 20,160), and an age sensitivity factor that is 33 percent of a school receptor (1 vs. 3).



The commenter's assertion that not including City College athletes in the HRA is a violation of San Francisco Administrative Code chapter 31 is incorrect. Chapter 31 of the San Francisco Administrative Code consists of implementing procedures for the City and administrative actions to be performed by the San Francisco Planning Department. As described above, the air quality and HRA analysis have been conducted in accordance with the CEQA Guidelines and the air district's CEQA Guidelines.

For these reasons, the HRA conservatively estimates health risks at sensitive receptor locations most susceptible to the project's TAC emissions, and any health risks for a City College student athlete receptor would be lower than those already reported in the HRA and draft SEIR for school and daycare receptors.

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### ***Comment AQ-2: Construction Schedule***

This response addresses comments from the commenter listed below; each comment on this topic is quoted in full below this list:

I-HEGGIE2-20  
I-MARABELLO2-1

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"The EIR construction modeling of air quality in Appendix D assumes three years. Again, six years is the Developers Option and should be the default, not three years which is not recommended due to air quality and other impacts."

(Jennifer Heggie, Email, September 23, 2019 [I-HEGGIE2-20])

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### **"INADEQUACY OF ESTIMATED NUMBER OF CONSTRUCTION WORKING DAYS PER YEAR"**

To calculate Average Daily Emissions of ROG, NOx, PM10, and PM2.5, the SEIR's analyses use a multiplier of 260-262 days. This would grossly underestimate the emissions in the very likely scenario where construction happens on more than 262 days per year. Commercial construction sites all around the city are routinely working 6 or even 7 days a week.

And this project will be no different. As you know, the developer is allowed to construct seven days a week, which is consistent with San Francisco Police Code section 2908.

And to keep this project on schedule and keep costs in line, the developers will work many weekends.

Thus, the estimates for emissions and necessary mitigation offsets should account for more working days.

If construction happens on just an additional 27 Saturdays and/or Sundays, this will increase all emissions by 10%. If developers average 6 construction days a week, this will inflate emissions by 19.8%. That percentage doubles if construction averages 7 days a week.

Let's assume a very likely average of construction occurring 6 days a week. This would cause the NOx levels to cross the significance threshold for both the Developers Proposed Option and the Additional Housing Option under both the six-year and compressed three-year schedules. As well, PM10, and PM2.5 will increase significantly. Thus, all lifetime excess cancer risks should be adjusted.

All four of the proposed option-schedule scenarios would trigger the implementation of Mitigation Measure M-AQ-2d. Thus, mitigation offsets would need to increase dramatically.

It's deceptive to use an unrealistic construction working days per year. Why not use a more realistic number so the developer and the public know the maximum or at least truer impacts? Should they come in under the number of estimated days, great. The monitoring will support them and they'll save money and lives."

*(Brian Marabello, Email, September 23, 2019 [I-MARABELLO2-1])*

## **Response AQ-2: Construction Schedule**

The comments opine on the construction schedule assumptions in the air quality modeling, state that the analysis should account for weekend construction, and that the analysis underestimates air quality impacts.

The response to the construction schedule and air quality analysis is organized by the following subtopics:

- Construction Schedule Analyzed in the Draft SEIR
- Emissions Associated with Weekend Construction Activities
- Construction Emissions Impacts in the Draft SEIR

### *Construction Schedule Analyzed in the Draft SEIR*

One comment states that the air quality analysis should have assumed six years in the emissions modeling, not three years. The air quality analysis includes both a six-year and a three-year construction schedule; the results for both schedules are presented in the draft SEIR. Regarding the six year construction schedule, as stated on draft SEIR p. 3.D-45, "With regard to construction schedule and phasing, the analysis assumed that Phase 0 (site preparation and grading) would require a full year, followed by Phase 1 construction for 30 months, followed by Phase 2 construction for 30 months, for a full construction duration of six years." Regarding the three-year construction schedule, this option represents the shortest possible construction schedule for the pProject.

The project sponsor developed a detailed construction schedule based on the number of anticipated work days and the equipment fleet necessary for construction. This schedule and total equipment hours are based on an average of five days of construction during the week, and conservatively lasts for a total of six years. According to the project sponsor, the vast majority of construction would occur five days per week, with occasional work on Saturdays. However, weekend days are rarely full eight to 10 hour days of activity and are more typically two to six hours of activity. The draft SEIR assumes that soil export would occur six days per week for two months during excavation activities. This includes some weekend activity.

Air quality impacts are also shown assuming that the project could be constructed over three years instead of six years. The draft SEIR estimates emissions and health risks under the three-year construction schedule, which includes weekend days of construction, and represents the shortest possible construction schedule. This compressed schedule was developed in consultation with the project sponsor and includes the amount of construction activity required to build the project in three years, which would require more weekend work than assumed under the six year construction schedule. Impacts are based on both weekday and weekend days of construction.

#### *Emissions Associated with Weekend Construction Activities*

One comment states that the air quality analysis should have accounted for weekend days of construction, instead of the 260 to 262 annual construction work days assumed in the analysis, which represents weekdays only. The commenter claims that if construction occurred six or seven days per week to include weekend work, emissions would increase by 10 to 40 percent from what was reported in the draft SEIR, and NO<sub>x</sub> would likely exceed the significance thresholds. If construction would occur six or seven days per week, the total number of equipment hours would not change; either 1) the average daily construction equipment hours would decline and the total duration would remain the same, or 2) the average daily construction equipment hours would remain the same and the total duration of construction would decrease. In the first case, the average daily emissions would actually decrease from what was analyzed in the draft SEIR, since because average daily equipment hours would decrease. In the second case, average daily and total construction emissions would not change; only total annual emissions may increase for the years when construction occurs, which would be less than six years for the reasons identified above. Neither case would result in increased criteria air pollutant or health risk impacts presented in the draft SEIR.

#### *Construction Emissions Impacts in the Draft SEIR*

As stated on draft SEIR pp. 3.D-50 to 3.D-51 with regard to criteria pollutant impacts, “because the construction schedule could be compressed into three years, average daily combined construction and operational emissions could increase substantially, increasing the reactive organic gas (ROG) and nitrous oxide (NO<sub>x</sub>) emissions. It is estimated that this shortened construction schedule could result in average daily criteria pollutant emissions that are 1.5 to 2.5 times greater than those presented in draft SEIR Table 3.D-8a. Therefore, the potential condensed project construction schedule and phasing would likely increase the NO<sub>x</sub> impact.” With regard to health risk impacts, the draft SEIR states on pp. 3.D-75 to 3.D-76 that under the three-year construction schedule, “the excess lifetime cancer risk at offsite sensitive receptor locations would increase” and the “the

annual average PM<sub>2.5</sub> concentrations at offsite sensitive receptor locations would increase, contributing further to the impact.”

To mitigate impacts associated with the three-year construction schedule, Mitigation Measure M-AQ-2d (Offset Construction Emissions for the Compressed Schedule) requires NO<sub>x</sub> offsets based on the amount of NO<sub>x</sub> that exceeds the air district’s threshold of 54 pounds per day over the duration when this threshold is exceeded. As explained on draft SEIR pp. 3.D-53 to 3.D-56, this measure would require a one-time reduction of 2.0 tons per year of ozone precursors for the Developer’s Proposed Option or 3.2 tons per year of ozone precursors for the Additional Housing Option. This calculation assumes 260 to 262 work days of construction per year. However, emissions are based on total equipment hours, not work days (as discussed above). Additional weekend days of construction would not increase the equipment hours, it would only reduce the number of equipment hours occurring per day (e.g., fewer hours on weekdays, more hours on weekend days). In this event, average daily emissions would go *down*, not up, and Mitigation Measure M-AQ-2d would be sufficient to reduce ozone precursor emissions to less than the threshold of significance.

The commenter further claims that if construction occurs over six or seven days per week, the total amount of PM<sub>10</sub> and PM<sub>2.5</sub> would increase, and health risks would also increase. As discussed above, construction activities on weekends would not increase total emissions, it would only change when the emissions occur throughout the construction period (i.e., more emissions over a shorter overall duration with the same number of workdays). The total TAC emissions for the project would remain approximately the same. This could mean, however, that more TAC emissions could occur during more susceptible sensitive receptor age groups, such as the 0 to 2 age group. Thus, the draft SEIR conservatively assumes that construction could occur over a compressed three-year period with regard to health risks, which would already account for this shift in emissions timing. As stated on draft SEIR p. 3.D-80, “... the project may be constructed over a shorter timeframe than assumed in this analysis. This could result in increased cancer risks to offsite receptors as well as increased PM<sub>2.5</sub> concentrations for both offsite and onsite receptors. Therefore, potential changes in the construction schedule could result in a significant and unavoidable impact.”

In order to present the maximum impact of the proposed project, the three-year construction schedule was used to determine air quality impacts. Because this is a possibility due to the unknowns associated with construction phasing depending on market conditions and other unanticipated factors, the draft SEIR conservatively uses this scenario to determine the air quality impacts of the proposed project. The draft SEIR concludes on pp. 3.D-56 and 3.D-80 that both criteria air pollutant impacts and health risk impacts would be significant and unavoidable with mitigation under the compressed three-year construction schedule. Therefore, construction occurring six or seven days per week would not result in a new NO<sub>x</sub> exceedance or a new impact. Thus, the draft SEIR finds a significant and unavoidable impact due to the uncertainty associated with the construction schedule, and this uncertainty incorporates the potential for accelerated construction activities that may include weekend construction.

**Commented [R](8):** If this is the offset mitigation measure, then we should caveat that the impact would be less than significant if the measure is feasible and implemented prior to or during the period in which the impact occurs.



Mitigation measures that would reduce criteria pollutant emissions from construction and operations that exceed any thresholds of significance will be enforced through the MMRP. In addition, certain mitigation measures have reporting and monitoring components to ensure their implementation. For example, Mitigation Measure M-AQ-2d, Offset Construction Emissions for the Compressed Schedule, requires that the project sponsor must either submit the offset project to the ERO for approval prior to issuance of the final certificate of occupancy for the final building associated with Phase 1, or provide the offset agreement to the ERO prior to issuance of the first site permit.

**Commented [RJ(9)]:** We should acknowledge that this mitigation measure may not be feasible if an offset project is not identified.

### ***Comment AQ-3: Mitigation Measure***

This response addresses comments from the commenter listed below; each comment on this topic is quoted in full below this list:

A-BAAQMD-1

“However, even with these Project design features and on-site mitigation measures, the DSEIR finds that air quality impacts from the Project still exceed the City’s thresholds of significance for the compressed schedule. Therefore, Mitigation Measure M-AQ-2d: Offset Construction Emissions for the Compressed Schedule (M-AQ-2d) proposes that the Project applicant provide funds to achieve additional emission reductions to reduce air emissions below the thresholds of significance. To this end, M-AQ-2d states that the Project applicant would provide funding to the Air District to fund emissions reduction projects in the region in order to offset the remaining criteria pollutant emissions generated by construction during the compressed schedule.

Please be aware that the Air District does not currently have a fee program for offsetting emissions. These are occasionally conducted on a case-by-case basis based on available projects. We recommend that M-AQ-2d replace “Air District” with “governmental entity.” This will allow the project applicant to seek additional options if the Air District has no available projects at the time.”

*(Greg Nudd, Deputy Air Pollution Control Officer, BAAQMD, Letter, September 23, 2019 [A-BAAQMD-1])*

### **Response AQ-3: Mitigation Measure**

The City incorporated the air district’s Clean Air Foundation into Mitigation Measure M-AQ-2d (Offset Construction Emissions for the Compressed Schedule), like the City has presented as mitigation for other projects in San Francisco, including the Potrero Power Station Mixed-use Project (Mitigation Measure M-AQ-2f), the Golden State Warriors Event Center and Mixed-Use Development at Mission Bay Blocks 29-32 (Mitigation Measure M-AQ-2b), and the Seawall Lot 337 and Pier 48 Mixed-Use Project (Mitigation Measure M-AQ-1.5). All of these mitigation measures reference the air district’s Clean Air Foundation and ozone precursor emissions offsets projects. In addition, based on correspondence with the air district, the air district provided the City with an

“Offsite Mitigation Program Questionnaire” for the City to complete and submit to the air district.<sup>12</sup> Upon submitting the questionnaire, the air district indicated that they would follow up with a “fee calculation analysis, should the program be administered through our Clean Air Foundation,” and that their “offsite mitigation program” could also include PM emission offsets if needed.

In addition, in 2016, the air district issued a ~~m~~Mitigation ~~P~~project ~~A~~greement for the Faria Preserve Residential Development and VTM 9342, through the Clean Air Foundation, with the purpose of assisting “Faria Preserve in satisfying the requirements of Mitigation Measure 3.3-1(b),” which is the EIR’s ozone precursor offsets mitigation measure.<sup>13</sup> The agreement would also “ensure the proper funding and management of an emissions reduction program to offset ozone precursor emissions attributable to construction of the Faria Preserve Residential Development” to address Faria Preserve’s obligation to satisfy the requirements of Mitigation Measure 3.3.1(b).

Based on this correspondence, it was the City’s understanding at the time it prepared the draft SEIR that the air district had a grant program for offsetting ozone precursor emissions. However, in response to the air district’s request, acknowledging that the air district’s emissions reduction grant program is evolving, and because individual emission reduction projects needed to support the ozone precursor offsets required by Mitigation Measure M-AQ-2d (Offset Construction Emissions for the Compressed Schedule) have not yet been identified, Mitigation Measure M-AQ-2d is revised as follows (deleted text is shown in ~~strike through~~ and new text is shown in double underline):

**Mitigation Measure M-AQ-2d: Offset Construction Emissions for the Compressed Schedule.** Under the compressed three-year construction schedule for either the Developer’s Proposed Option or the Additional Housing Option, the project sponsor shall implement this measure. Prior to issuance of the final certificate of occupancy for the final building associated with Phase 1, the project sponsor, with the oversight of the Environmental Review Officer (ERO), shall either:

1. *Directly fund or implement a specific offset project within San Francisco if available to achieve the equivalent to a one-time reduction of 2.0 tons per year of ozone precursors for the Developer’s Proposed Option or 3.2 tons per year of ozone precursors for the Additional Housing Option. To qualify under this mitigation measure, the specific emissions offset project must result in emission reductions within the San Francisco Bay Area Air Basin that would not otherwise be achieved through compliance with existing regulatory requirements. A preferred offset project would be one implemented locally within the City and County of San Francisco. Prior to implementing the offset project, it must be approved by the ERO. The project sponsor shall notify the ERO within six months of completion of the offset project for verification; or*
2. *Pay mitigation offset fees to the Bay Area Air Quality Management District Bay Area Clean Air Foundation or other governmental entity or third party. The mitigation offset fee, currently estimated at approximately \$30,000 per weighted ton, plus an administrative fee of no more than 5 percent of the total offset, shall fund one or more emissions reduction projects within the San Francisco Bay Area Air Basin. The fee will be*

determined by the ~~planning department~~ ERO, the project sponsor, and the ~~air district~~ governmental entity or third party responsible for administering the funds, and be based on the type of projects available at the time of the payment. This fee is intended to fund emissions reduction projects to achieve reductions of 2.0 tons per year of ozone precursors for the Developer's Proposed Option or 3.2 tons per year of ozone precursors for the Additional Housing Option, which is the amount required to reduce emissions below significance levels after implementation of other identified mitigation measures as currently calculated.

The agreement that specifies fees and timing of payment shall be signed by the project sponsor, the governmental entity or third party responsible for administering the ~~funds~~ air district, and the ERO prior to issuance of the first site permit. This offset payment shall total the predicted 2.0 tons per year of ozone precursors for the Developer's Proposed Option or 3.2 tons per year of ozone precursors for the Additional Housing Option above the 10-ton-per-year threshold after implementation of Mitigation Measures M-AQ-2a, M-AQ-2b, and M-AQ-2c.

The total emission offset amount is calculated by summing the maximum daily construction emissions of ROG and NOx (pounds/day), multiplying by 260 work days per year, and converting to tons. The amount represents the total estimated construction-related ROG and NOx emissions offsets required. No reductions are needed for operations or overlapping construction and operations.

The second paragraph on draft SEIR p. 3.D-54 is revised as follows to reflect changes in Mitigation Measure M-AQ-2d:

Mitigation Measure M-AQ-2d would offset emissions of ROG and NOx that would exceed the respective thresholds of significance for these pollutants. Thus, these offsets, if implemented, would reduce impacts to less-than-significant levels. The measure allows the project sponsor to directly fund or implement an offset project; however, no such project has yet been identified. Additionally, implementation of the emissions reduction project could be conducted by the ~~air district~~ governmental entity or third party responsible for administering the funds and is outside the jurisdiction and control of the City and not fully within the control of the project sponsor. Therefore, the residual impact of project emissions during construction is conservatively considered ***significant and unavoidable with mitigation***, due to some limited uncertainty in its implementation. This finding does assume that the project sponsor would implement Mitigation Measures M-AQ-2a, M-AQ-2b, and M-AQ-2c, in addition to Mitigation Measure M-AQ-2d. Although the specific offset projects are not known, it is anticipated that implementation of this mitigation measure would not result in any adverse environmental effects.

The last paragraph on draft SEIR p. 3.D-54 is revised as follows to reflect changes in Mitigation Measure M-AQ-2d:

The Developer's Proposed Option would be ***less than significant*** under the assumed six-year construction schedule. The Additional Housing Option under the assumed six-year schedule would be reduced to ***less than significant with mitigation*** through the implementation of Mitigation Measure M-AQ-2a and M-AQ-2b. Given the potential that the

project could be developed under an accelerated construction schedule of three years' duration, the potential exists that construction emissions of NOx would exceed the daily and annual significance thresholds even with mitigation, which would be a **significant impact** (see Table 3.D-8b). Therefore, in the case of the Developer's Proposed Option or the Additional Housing Option under the compressed three-year construction schedule, the project sponsor would also be required to implement Mitigation Measure M-AQ-2c, which requires that all heavy-duty trucks greater than 19,500 pounds must have model year 2014 or newer engines, and Mitigation Measure M-AQ-2d, which requires the project sponsor to implement emission offsets. However, because implementation of the emissions offset project would be conducted by the air district governmental entity or third party responsible for administering the funds and would be outside the jurisdiction and control of the City and not fully within the control of the project sponsor, because no specific emission reduction project has been identified, and because the project may be constructed over a much shorter timeframe resulting in higher NOx emissions than presented above, the impact with respect to criteria air pollutants is conservatively considered **significant and unavoidable with mitigation**. These conclusions are summarized in **Table 3.D 9, Summary of Construction Criteria Pollutant Impacts (Impact AQ-2)**.

With these changes, Mitigation Measure M-AQ-2d has the same effect as before on the project's construction emissions impact. Whether the emissions offset program is implemented by the air district or another governmental agency has no effect on the actual emission reductions, as long as the offset program complies with Mitigation Measure M-AQ-2d as worded above. Mitigation Measure M-AQ-2d would still offset emissions of ROG and NOx that would exceed the respective thresholds of significance for these pollutants. Further, even with implementation of this mitigation measure, the draft SEIR determines that the air quality impact would be significant and unavoidable. Therefore, no changes to impacts would result from this change to Mitigation Measure M-AQ-2d. These changes and do not result in significant new information with respect to the proposed project, including the level of significance of project impacts or any new significant impacts. Therefore, recirculation of the draft SEIR pursuant to CEQA Guidelines section 15088.5 is not required.

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