



Molly Maybrun  
City Administrator's Office, City of Oakland  
250 Frank H. Ogawa Plaza  
Oakland, CA 94612

October 4, 2021

Re: Howard Terminal Ballpark District Air Quality Mitigation Measures

Dear Ms. Maybrun,

As you are aware, the City of Oakland has identified a Significant and Unavoidable (SU) Impact in the Air Quality chapter of the Howard Terminal Ballpark District Draft Environmental Impact Report (DEIR). Specifically, the EIR concludes that the Project's criteria air pollutant (CAP) emissions during Project operations will exceed the identified significance threshold for these pollutants. Certain comments on the DEIR suggested that one further mitigation for consideration in reducing CAP emissions would be to increase the vehicle trip reduction (VTR) target applied to ballpark and non-ballpark operations. AB 734 already requires the project to achieve a VTR of 20%. The comments raise the issue of whether it is feasible to increase this target as a means of addressing the project's SU air quality impact.

This letter serves two purposes. It:

1. Explains our concerns regarding using the "vehicle trip reduction" target as a means of addressing the Project's CAP emissions, and
2. Describes a more feasible, cost-effective path that achieves the same end as the mitigation measures of concern.

However, before detailing these issues, a discussion of the Project's Criteria Air Pollutant (CAP) emissions is necessary. The SU Impact identified in the DEIR is specific to three CAPs – ROG, NOx, and PM10. While the SU Impact is the correct approach in the DEIR, it does not accurately reflect the emissions efficiency of the Project.

### **Howard Terminal and the City of Oakland's Air Quality CEQA Threshold**

The SU Impact is identified because, upon build-out, the Project emits more CAPs than the City's current Threshold of Significance. As recommended by the Bay Area Air Quality Management District (BAAQMD), the City's Threshold for these three CAPs is an absolute number, as opposed to a relative number. That is, the threshold is expressed in terms of mass emissions, rather than using an efficiency metric (e.g., emissions per capita):



Table 1 City of Oakland CAP CEQA Thresholds of Significance

CAP	Threshold	
	lbs/day	Tons/year
ROG	54	10
NOx	54	10
PM10	82	15

The fact that each Threshold is an absolute number inherently disadvantages projects of a certain size, as is the case with the proposed Howard Terminal Ballpark District. Because the proposed project includes a dense land use program (3,000 units of housing, 1.5MM sf of office space, etc.), and the air quality analysis reflects the emissions associated with the construction and operations of this dense land use program, the Project necessarily surpasses the absolute numbers set in the City’s Threshold of Significance for CAPs. In our view, this approach is misguided. What ought to matter is the relative efficiency of a project on a per-capita basis. That is the approach taken for GHG emissions, vehicle miles traveled, and other environmental resource issues, and it makes sense here, too. This paints an unfavorable and skewed picture of the Project. Based on the CEQA determination, it appears as if the Project has a disproportionately net negative effect on regional air quality. However, the opposite is true.

When we look at the Project’s relative air quality emissions – emissions per capita – we see a very different picture. The Project proposes the exact kind of development that is needed to improve regional air quality and combat global climate change:

- Dense development addressing the housing crisis
- A good jobs-housing balance
- A wide range of services available within walking distance for future residents, employees and visitors, and
- Relatively low vehicle miles traveled

A smaller project with the exact opposite characteristics as those described above might not surpass the City’s CEQA Threshold for CAPs, potentially incentivizing less dense, more auto-dependent development in the exurbs over densification of our urban areas.

When we compare the per capita emissions of the Project with those of another recently approved project within the City of Oakland (namely, Oak Knoll Mixed-Use Community Plan Project), the picture clarifies: the Project’s emissions are low compared to a less dense, more suburban development (935 dwelling units and 72,000 square feet of commercial space spread across 187.9 acres). However, Oak Knoll has a similar 20% VTR requirements as the Project.



Table 2 Per Capita CAP Emissions: Howard Terminal and Oak Knoll

Project	Service Population at Buildout	ROG	NOx	PM10	Units
Howard Terminal Ballpark District <sup>1</sup>	13,894	30	30	5 <sup>3</sup>	(tons/year)
		0.0022	0.0022	0.00036	(tons/year/service population)
Oak Knoll Mixed-Use Community Plan <sup>2</sup>	2,416	14.2	7.8	0.4	(tons/year)
		0.0059	0.0032	0.00017	(tons/year/service population)
<i>Howard Terminal Ballpark District % Improvement from Oak Knoll for Emissions Efficiency</i>		63%	33%	-117% <sup>4</sup>	

Source: 1 – Project DEIR with updates from Ramboll Response to Comments Technical Addendum; 2 – Oak Knoll Mixed-Use Community Plan Draft Supplemental EIR, August 2016

Note: 3 – PM10 emissions for the Project were adjusted to remove road dust in order to more accurately compare to the Oak Knoll PM10 emissions which do not include road dust.

Note: 4 – Likely a result of differences between the CARB models that were used for the two projects, the newer version of the model used for Howard Terminal adjusted for increased emissions from brake and tire wear.

So, we see that counter to the conclusion one might draw from the DEIR’s Impact statement, the project has an efficient emissions profile. What’s more, the Project facilitates the dense, mixed-use development that is envisioned in State and Regional policies such as SB375 and Plan Bay Area. When assessing the project’s impact on air quality, it is important to consider these nuances, and understand the problems associated with the City’s current Policy.

We recognize that neither the City nor the BAAQMD are likely to change their adopted thresholds for CAPs within a time frame that would be meaningful for the Project. The Draft EIR sets forth the City’s thresholds for these pollutants. We do not expect the City to change them. Nevertheless, we do feel it is appropriate to note these facts because they place in context the conclusion that the Project’s CAP emissions are significant. We hope the City and BAAQMD will reconsider these thresholds in the future to bring CEQA into better alignment with the overarching goals of state environmental initiatives and policies, just as the approach to transportation analyses were modified in recent years to focus on VMT rather than Level of Service.

### Inefficient CAP Reduction Measures

However problematic the City’s current CEQA threshold may be, it is the threshold that applies to the Project; the SU impact identified in the DEIR follows from the use of this threshold and certain commenters have urged the City to consider whether feasible mitigation measures are available to address SU Impacts. We think it is entirely appropriate for the City of Oakland to analyze the feasibility of potential mitigation measures that would reduce the Project’s CAP emissions. At the same time, we are concerned that some of the specific measures suggested by commenters on the DEIR may have such



limited effectiveness that they are far too costly in relation to the meager CAP emissions reductions they would achieve. A measure that achieves little at great cost makes no sense, particularly when other equally or more effective measures may be available, or become available in the future.

We have specific concerns about two potential measures relating to the ballpark operations, namely:

- Transit subsidies for ballpark attendees
- Additional shuttle bus operations

The A's are not concerned with these mitigations as a matter of principal – the A's are excited to be pursuing a downtown ballpark location that will reduce our fan's dependence on personal vehicles, and facilitate more people to choose active and sustainable modes of transportation. The concern lies with the cost-effectiveness of these potential measures – they are incredibly expensive relative to their associated, modest CAP emission reductions.

To reduce the CAP emissions to the necessary levels ultimately identified in the EIR, the Athletics intend to implement more cost effective measures than additional ballpark VTR reduction measures, while maintaining 20% Vehicle Trip Reduction for the ballpark. Regarding the non-ballpark development, we do not have concerns with additional CAP-reducing transportation measures that increase VTR for the non-ballpark components.

To estimate the cost effectiveness of these potential measures, we used information from the Draft EIR, and industry information and conferred with Ramboll and Fehr and Peers. Estimated emissions reductions, costs, and cost effectiveness are summarized in the tables below.

### *CAP Reductions*

*Table 3 CAP Reductions with Transit Subsidy, Additional BART Station Shuttle*

Description	ROG	NOx	PM10
	tons/yr		
Original Analysis Ballpark (20% VTR, No Transit Subsidy, 1 BART shuttle)	2.8	2.0	1.6
Revised Analysis Ballpark (23.6% VTR, Transit Subsidy, 2 BART shuttles)	2.6	1.9	1.5
Difference (Ballpark)	-0.13	-0.10	-0.088

Source: Ramboll



## Estimated Cost

Table 4 Transit Subsidy Estimated Annual Cost

Transit Subsidy Amount <sup>1</sup>	\$6.70
Transit Mode Split <sup>1</sup>	25%
Average Attendees/Game <sup>2</sup>	25,000
# of Games <sup>3</sup>	82
<b>Annual Cost</b>	<b>\$3,433,750</b>

Source: 1 – Fehr and Peers, 2 – DEIR, 3 – MLB Schedule

Table 5 Additional BART Shuttle Estimated Annual Cost

Number of Shuttles Required to Serve WO or LM BART	18-30
Service Hours per Shuttle per Game	8
Cost per Service Hour	\$70
Number of Games	82
<b>Annual Cost</b>	<b>\$826,560 - \$1,377,600</b>

Source: Fehr and Peers

## Cost Effectiveness

Table 6 Shuttle/Subsidy CAP Reduction Cost Effectiveness

Description	ROG	NOx	PM10
Total Reduction Ballpark (tons/year)	-0.13	-0.10	-0.088
Average Annual Cost for Proposed Mitigation Measure	\$4,535,830		
Average Annual Cost per ton of Pollutant Reduced (\$/ton/year)	<b>\$34,891,000 /ton ROG</b>	<b>\$45,358,300 /ton NOx</b>	<b>\$51,543,523 /ton PM10</b>

The cost per ton reduction for CAP emissions associated with the above VTR reduction measures is:

- ROG: \$34.9 MM/ton/year
- NOx: \$45.3 MM/ton/year
- PM10: \$51.5 MM/ton/year

By contrast, while the cost per ton for CAP emission reduction varies by project, Ramboll estimates that \$100,000 per ton is a conservatively high estimate, based on projects they have seen in the Bay Area. Using this metric as a comparison point, **the means and methods necessary to increase the VTR goal for the ballpark are 349 to 515 times more inefficient than the standard CAP reduction project.**



In analyzing the cost-effectiveness of the potential transportation measures, it is clear that no rational actor would implement additional shuttle buses or a transit subsidy to reduce CAP emissions. As Project sponsor, the Athletics will implement more cost-effective measures to achieve the CAP reductions that would be achieved through the subsidy/shuttle program contemplated by the DEIR and TMP.

## Cost-Effective Options

The analysis shows that the additional shuttle and transit subsidy would yield ROG, NOx and PM10 reductions of 0.47, 1.3 and .34 tons per year, respectively. As currently contemplated in the DEIR, there are a range of offset options available to achieve these same reductions through more cost effective and feasible measures:

- An existing program could be leveraged such as BAAQMD's vehicle buyback program, or fireplace retrofit program
- Emissions reductions credits could be purchased and retired, which would remove these emissions from the inventory used by the BAAQMD to show attainment with ambient air quality standards
- Community electric vehicle charging stations could be installed
- Port landside infrastructure and/or harbor craft could be retrofitted with electric engines

Each one of these options is far more cost effective than implementing additional shuttle buses or a transit subsidy program. The same reductions could be achieved at a fraction of the cost, leaving more resources to invest in other areas of the Project.

At most, a VTR target of more than 20% should be identified as an option to reduce the Project's operational CAP emissions. The mitigation measure should not preclude the use of other, more effective and efficient measures, as outlined above. In this fashion, the CAP emission reductions required by the mitigation measure will be achieved, but not in a manner that will cost much and yield little results. The A's are unlikely to pursue a VTR target of 23.6% for ballpark-related trips as a means of reducing operational CAP emissions. We may decide to run additional shuttles, or to subsidize transit, as a means of enhancing the experience of our guests. We are unlikely to do so, however, as a means of reducing CAP emissions. That is because this approach is a singularly inefficient means to that end.

We appreciate the need to diligently research all feasible air quality mitigations, and thought it necessary to clarify and communicate these concerns. Please let us know if you have any questions. We look forward to continuing to progress the Howard Terminal Ballpark District project with you.

Sincerely,

Noah Rosen  
Sr. Manager, Project Development  
Oakland Athletics