Evaluation of the revenues, costs, and impacts of the proposed Oakland Waterfront Ballpark District at Howard Terminal on the City of Oakland

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Table of Contents

Executive Summary

The Pacific Merchant Shipping Association commissioned a report to assess the revenues, costs, and impacts of the proposed Oakland Waterfront Ballpark District at Howard Terminal (hereafter "the project" or "Howard Terminal") on the City of Oakland ("the City"), paying particular attention to the City's ability to pay for off-site infrastructure improvements. This financial aspect is especially pertinent because:

- Stadium projects regularly underperform expectations.
- The July 2021 Term Sheet proposed an Infrastructure Financing District (IFD), a risky and usually unsuccessful method to provide sports subsidies, over Howard Terminal for the City to reimburse the A's ("the developer") for *on-site infrastructure costs*.
- A proposal in April 2021 involved a separate Jack London Square IFD to pay for *the City's portion of off-site infrastructure*. In the July 2021 Term Sheet, the Jack London Square IFD was removed leaving no direct funding mechanism to cover the City's off-site expenses. The current plan is to issue a Limited Obligation Bond (LOB) that pledges incremental tax receipts generated within Howard Terminal,[1] a proposal akin to tax increment financing that is as risky and as typically unsuccessful as the IFD.

The Howard Terminal project is a proposed 55-acre development to be built on land managed by the Port of Oakland ("the Port"). It will contain up to 1.7 million square feet of commercial and retail uses, up to 3,000 residential units, up to 400 hotel rooms, up to 18 acres of open space, a performance venue with up to 3,500 seats, and a baseball stadium with up to 35,000 seats.

This assessment draws on interviews with railroads, Port tenants, labor unions, and Bay Area professional teams; prior academic research on stadium funding; examples of other stadium projects in the U.S.; and publicly available reports regarding the project from subject matter experts on financing, safety, transportation, ports, economic development, and real estate. There is limited detail on the scope of the Howard Terminal project, the City's obligations, and the financial calculations, but the most recent Term Sheet (July 2021) and public documents released since that time were used to conclude the following:

1. Revenue projections are overestimated. The amount, timing, and occupancy of the development will likely be affected by rising inflation, interest rates, and reduced access to capital. Current projections have overestimated tax revenues and underestimated the potential for fewer housing and affordable housing units to be built. Prior financial analysis overestimated the number of hotel stays, residents, employees, and businesses that will be new to Oakland. All of these factors have affected the ability to pay for on-site and off-site infrastructure. To cover *off-site expenses*, there are overestimates from sales, parking, transfer, utility, hotel, and business license taxes that would typically flow to the City's General Fund but will potentially be pledged to the LOB. Prior estimates of $16.9 million in net annual recurring tax revenues[2] to the City are more likely to be between $10.5 million and $12.4 million (see Section 2). To cover *on-site expenses*, there are overestimates of projected property tax revenue, which is typical in stadium and related development projects, and affects the ability of the City to reimburse the developer for constructing at least $603 million (see p. 16) of on-site infrastructure on their behalf.

2. Direct cost projections are underestimated. A September 2022 memo does not provide a new cost estimate but claims that even with initial grant funding secured, the city is still short of

public funding necessary to cover off-site infrastructure costs which were last estimated in 2021 and have likely substantially increased. There are still no details of which off-site projects are included in past estimates, nor whether they account for the cost of off-site Seaport Compatibility Measures (SCM) or off-site environmental impact mitigations. Project costs will continue to increase yearly after accounting for updated information, rising construction costs, and interest rates. Applying inflation calculations (23% from 2021 to 2022 and 7% thereafter) to the most recent detailed infrastructure estimates ($500 million) and adding in potential SCM and environmental mitigations ($100 million) implies the *total cost of required off-site infrastructure could easily exceed $850 million* by 2025[3] (see Section 3). These are currently the responsibility of the City's General Fund (or possible grants) and far exceed the annual $10.5 - 12.4 million net tax revenues to the General Fund attributable to the project. As a result, the "secured" $321.5 million in public grants only cover 37.8% of adjusted off-site costs. Furthermore, even if the City successfully received all of the $645.8 million listed as secured and potential future public grants (many of which are, in the City's analysis, "highly competitive" and unlikely to be received) it would be more than $200 million short of costs adjusted for inflation and relevant measures.

3. Indirect, unanticipated, and often inconspicuous costs have not been accounted for. The physical location of the Howard Terminal project and its lack of sufficient on-site parking or public transportation shifts vehicle traffic that used to queue in the 120-acre Coliseum parking lot to a 635-acre area that spans from West Oakland to Lake Merritt, encompasses all of Downtown Oakland, and overlaps with Port of Oakland traffic. Every entrant to Howard Terminal (resident, employees, shopper, or spectator) will cross freight and passenger railroads. The environmental impact report concludes there are "significant and unavoidable impacts" and even with feasible mitigation measures traffic congestion will exceed limits in the Alameda County Congestion Management Plan[4]. The most expensive solution to ensure rail safety has been described as impractical because of cost and future sea level rise, a less expensive solution is not possible because of land ownership rights, and the least expensive solution is the most hazardous and disruptive to current economic activity. Regardless of which train-related solution occurs, vehicle disruption to the Port alone could result in annual lost business revenue of $73 to $214 million (see p. 22). *This does not include lost economic activity to any other businesses* in the 635-acre area around Downtown Oakland that will be impacted by traffic from the new stadium.

Academic research consistently finds no economy-wide net benefits of new stadiums because any potential gains are nullified by the considerable unanticipated and inconspicuous costs. This conclusion is clearly illustrated in the case of Howard Terminal where $850 million or more in direct public expenditures are required solely because of the unique site selection and $10.5 to $12.4 million in net annual tax revenues are not sufficient to pay for these expenditures. The City will also bear costs as they reimburse the developer for on-site expenses that will increase due to inflation, interest rates, and unknown clean-up costs. Consider that sea rise remediation is offered as one benefit of this project yet the berms, floodwalls, and flood gates will surround *only* the Howard Terminal site and offer no protection for the remainder of the Oakland waterfront. By 2050, there will be temporary inundation of the site[5], the A's lease will expire, and there will still be 20 more years of property tax diversion in the IFD from the City to the A's.

These concerns, and more, are described in the sections below. Section 1 provides an overview and findings of research on government funding of stadiums in the U.S. This includes explanations for why academic research reaches different conclusions than firms that conduct

economic impact studies before stadiums are funded and built. Sections 2 through 4 explain how revenues can be overestimated, costs can be underestimated, and indirect costs can fail to be accounted for. Each section provides evidence from prior studies on major league stadiums and applies those findings to the Howard Terminal project. Section 5 summarizes the conclusions, identifies both new and widely acknowledged risks and concerns regarding the project, asks key questions, and offers limitations. **In summary, the City is offering at least $603 million in diverted property tax revenues to the A's, and the public will subsidize at least $850 million in additional infrastructure as public funding for the Howard Terminal Project.** Before delving into the details, this Executive Summary first responds to common project claims.

Analysis of Claimed Benefits

'No public funds will be used to build or operate the facility.'[6] While the stadium, and commercial and residential buildings themselves are proposed to be 100% privately financed, the project at Howard Terminal can only move forward with *additional on-site and off-site improvements*. In the current proposal, the City will reallocate its property tax revenues from the General Fund to the developer through an IFD to pay approximately $603 million for on-site streets, toxic clean-up, floodwalls, and other improvements. For this reason, the project is both publicly and privately funded. The public portion would not be required but for the development occurring at Howard Terminal, and the developer stated the private development will not happen without the public portion. *The City of Oakland is providing a real public subsidy of $603 million to the A's because these on-site infrastructure costs are only being reimbursed to the A's due to their decision to build at Howard Terminal*.

'The City's General Fund is not at risk.' The City Administrator's office stated the "…proposed financing structure won't put a dime of the City's or County's General Funds at risk"[7]. Yet the *off-site infrastructure projects* beyond the boundaries of Howard Terminal are not only necessary for the private development to exist, but are also extensive (123 pages of mitigations in the environmental impact report alone[8]), costly (currently at least $500 million, likely double that, but impossible to predict because no comprehensive list of projects is available), and the City is entirely responsible. Although the City is seeking state and federal grants, the Assistant City Administrator concludes that "significant increases in costs are anticipated and there are not yet sufficient funds currently in-hand to cover the estimated costs of the off-site infrastructure."[9] Only 8% ($51.8 million)[10] of the City's most recent cost estimate is secured and it is unlikely all of the submitted grants will be awarded. If a LOB is used to cover the gap, *revenues that would have gone to the General Fund will instead be diverted to pay for Howard Terminal off-site infrastructure*. It seems an additional public subsidy from the City's General Fund will be needed to pay for rail crossings and transit stations—expenditures that only exist because of the Howard Terminal project.

'The project will provide sea rise remediation.' The City has stated, "Many safety and infrastructure improvements that the Project would accelerate and fund are needed now, even absent the proposed Project, including protection against sea level rise"[11]. Sea level rise is a concern for miles of shoreline in Oakland, but *the only proposed infrastructure for sea rise are floodwalls and flood gates surrounding the Howard Terminal development itself*.[12] The developer will pay for these and then reimburse themselves through the IFD with property tax revenues that otherwise would have flowed to the City. Any potential gains in property values in

Jack London Square and surrounding areas could fall in future years as those parcels flood or are further burdened with the costs of mitigating the potential for sea level rise.

'The project will provide new and affordable housing.' There is no question that the Howard Terminal project could add up to 3,000 new housing units. But there is no guarantee that the maximum number of units will be built due to increased cost of construction, higher costs of borrowing, and a potential reduction in land if the expanded turning basin is built. In fact, *there is no minimum number of units listed in the Term Sheet and the affordable housing units are a percentage of that unknown total.* The City could potentially spend $850 million or more on infrastructure and will divert property taxes for 45 years to build fewer than 3,000 housing units, the majority of which will not be affordable. Moreover, it is not known if Oakland will gain more total affordable units because the Howard Terminal developer will receive tax credits for off-site units that may have gone to other off-site affordable housing developers applying for those same funds.

'The project will provide new jobs.' Project proponents tout 25,000 union construction jobs.[13] In reality, *these are temporary and studies find no net change in construction jobs* because stadium construction workers mostly substitute away from other local projects.[14] This is especially likely now because labor shortages exist. When evaluating the promised number of stadium construction jobs, actual employment does not achieve the promised levels.[15] The requirement of union-based jobs and the creation of the social justice fund at Howard Terminal are fantastic benefits; the City could also require these same terms of the developer if the ballpark was constructed in another location. The new ballpark doesn't need a substantially different number of jobs than currently exist at the Coliseum; existing jobs will simply move across town.

'The project will provide civic pride.' When asked about the Howard Terminal development, Mayor Schaaf stated, "…it's worth it for civic pride, for identity, and that's what sports teams give you."[16] Teams can be valuable local amenities that are sometimes worth paying for, and this is a common reason that local governments use to justify their sport-related spending. At least seven economic studies of public stadium subsidies have quantified this "love of team" as worth millions of dollars, and a government could be justified in spending an equivalent amount to maintain the public good of a team. But unfortunately, *local governments spend much more to keep their teams than the team is worth to the community residents*.[17] The question for the City Council is whether the A's are worth $850 million or more in direct costs, 45 years of diverted property tax revenues, and likely hundreds of millions annually in lost business revenues and wages from businesses near the new ballpark.

Section 1. Pre-Construction and Post-Construction Economic Impact Studies Reach Different Conclusions

Pre-construction studies predict large economic impacts

There are many ways to estimate the "impact" of a stadium on a community. Before construction, assumptions are made of how many people will attend, how much they will spend,

and how those new expenditures will ripple through the economy and create further benefits. The Oakland A's hired the Bay Area Council Economic Institute to conduct one such analysis and concluded the Howard Terminal project would result in $7.3 billion in economic benefit.[18] Pre-construction studies typically focus on only *benefits* – assumed gains – and do not factor in costs or losses that would compute a more realistic net change.

Post-construction studies find little or no economic impact

Academic research on professional stadiums focuses almost entirely on multi-year periods *after* construction because it requires no assumptions about spending behaviors. Instead, these studies evaluate employment, tax revenues, property values, and other publicly available data to see if the presence of a new stadium had any discernable effect on the local economy. This approach measures temporal *net* change because the gains and losses that occurred will have had the opportunity to affect taxes, employment, or any metric of choice. *Research on major league teams and stadia regularly finds there are no economy-wide discernable positive effects*.[19] A review of over 120 academic studies concludes there is, "little to no tangible impacts of sports teams and facilities on local economic activity, and the level of venue subsidies typically provided far exceeds any observed economic benefits."[20]

Which one is correct? Pre-construction or post-construction?

If pre-construction estimates find large positive gains and post-construction evaluations find no significant benefits then the conclusion is simple: one of these types of studies is incorrect. To support the conclusion that pre-construction studies are overestimated, consider:

1. The failure of projected revenues to cover sport-related expenses is common in professional sports.[21] Cincinnati raised sales taxes and property taxes, sold a hospital, and delayed investments in schools and public transit to cover their portion of debt for an MLB and NFL stadium. When the original funding source for the Minnesota Vikings stadium was insufficient, the government used a one-time contribution from a tobacco tax increase to cover their debt. Indianapolis raises taxes for restaurants, hotels, and rental cars to pay their portion of a new NFL stadium and still found deficits of $25-45 million per year.[22] In Sacramento, covid-related decreases in business activity left the city at least $6 million short in annual bond payments related to the Kings new arena.[23]
2. If the presence of a team or new stadium led to large measurable gains then we would find large, measurable losses when teams move away from cities. Instead, cities that have recently lost professional teams (Montreal, Seattle, St. Louis, San Diego, Oakland) have experienced no appreciable downturns in their economies attributable to the departure of a sports franchise.
3. Academic studies specifically comparing pre-construction stadium promises to post-construction realities find overestimates of both employment promises and "the scope and timeliness of ancillary real estate development."[24]

The conclusion that there is no economy-wide benefit from sports stadiums is often surprising to the public because of the following: a) large pre-construction estimates are rarely re-evaluated and updated after construction which leaves a general perception that large, pre-construction estimates are true or real; and, more importantly, b) sports construction projects are conspicuous.

They appear to be successful because it is easy to visually see new hotels, residential units, and bustling new stadiums, and to perceive that it is all gain. What we cannot see are the inconspicuous costs that are substantial enough that the *net* effect on an economy is usually indistinguishable from not having done the project at all.

To support this latter point about inconspicuous and indirect costs, academic research that looks *within* cities at areas around and adjacent to sports venues typically finds that any increases are offset by other decreases. For example, gains in food, drink, and hotel businesses related to the stadium are offset by decreases in non-sports-related entertainment businesses.[25] Hotel revenues can rise near the venues but fall further away.[26] Commercial rents[27] and property values can rise adjacent to new stadiums but usually this is most pronounced when the area has low property values to begin with or is already in the process of being gentrified.[28] The consequences of gentrification are a cascade of social injustices that are beyond the scope of this analysis but that also have real, measurable costs.[29]

The consistent theme in these findings is that *a) local expenditures are geographically moved within cities* and *b) local expenditures are substituted from one industry to another*. These result in no net gain to the local economy as money is being metaphorically moved from one hand to another. We can see conspicuous gains in some sectors if we look through a narrow lens at an area around a new ballpark, but this is a result of shifting the businesses that gain and lose, not a net increase in local economic activities. The calculation of a net, economy-wide shift requires a broader assessment to also account for losses that occur *because of* the new development. The sections below explain how revenues can be overestimated, costs can be underestimated, and indirect and inconspicuous costs can fail to be accounted for. In each section, evidence and knowledge from prior studies are presented and then applied to the Howard Terminal project.

Section 2. Revenues and Benefits can be Overestimated

1: The amount and timing of ancillary development can be overestimated which leads to higher estimates of property, parking, sales, and transfer tax revenues. As evidence, a Major League Soccer stadium in suburban Colorado promised 200 acres of development that is over a decade behind schedule.[30] In a project more similar to Howard Terminal, the NBA Brooklyn Nets built an arena and associated development in a congested metropolitan area. Eight years after the arena was completed and one year after all of the associated development was supposed to have been built out, completion rates of planned construction were as follows: 2% of retail, 14% of commercial, and 19% of all residential (only 21% of planned affordable units).[31]

Existing contractual obligations at Howard Terminal do not require a minimum build of commercial, residential, or retail spaces. If constructed, the Inner Harbor turning basin expansion could lead to a reduction in the full build-out of non-stadium properties which guarantees the current tax revenue estimates will not be achieved. Recessions, inflation, the current high cost of lending, and any reduction in access to capital can reduce the quantity and timing of non-stadium development which would lower the current tax revenue estimates. These risks are real and can occur, but because they are difficult to predict no adjustments are made to property, parking, or transfer tax estimates in Table 2, but sales tax capture is reduced from 65% to 50%.

2: The amount and timing of tenancy in ancillary development can be overestimated which leads to higher estimates of property, parking, sales, and transfer tax revenues. Occupancy rates depend on many factors including inflation, stock market performance, consumer confidence, employment rates, and trends related to virtual work. The forces that impact occupancy rates now will likely be very different when Howard Terminal construction is complete, but they serve to illustrate that demand is not always high.[32]

In terms of Howard Terminal projections, the Bay Area housing market exhibits strong demand which suggests residential properties will likely achieve projected target tenancy. However, the site's limited parking, proximity to heavy industry, and distance from public transportation may reduce the demand for commercial and retail space that relies on workers accessing the development. The San Francisco Bay Area has low rates of weekly office attendance (about 35%)[33] suggesting some risk of delayed or reduced occupancy in a Howard Terminal development that is primarily commercial. If there is a reduction in the number of ground leases signed or any lengthening of time to sign those leases, the current tax revenue estimates will not be achieved. The financial analyses produced by Century | Urban do not include their assumptions about the amount and timing of tenancy.[34] Similar to above, these risks are real but no adjustments are made to property, parking, or transfer tax estimates in Table 2, although sales tax capture is reduced from 65% to 50%.

3: The number of new businesses that will lease within new commercial space can be overestimated. If existing businesses move into Howard Terminal from outside of it, not all utility consumption tax and business license revenue tax in the project is new to the City and Alameda County ("the County"). As evidence, a study of new business formation in 12 cities found no increase associated with a new sports venue.[35] In Sacramento, a study found retail businesses in existence before the new arena had shorter survival rates than businesses further from the arena.[36] A study of 871 large and small metropolitan areas in the U.S. found no net gain in businesses associated with a team or stadium.[37]

Findings from studies on other major league markets suggest the creation of new office space at Howard Terminal may not induce new demand for office space. In other words, commercial leases in Howard Terminal will likely derive from existing businesses that are geographically substituted from within the region. Century | Urban's estimates for utility consumption tax and business license revenue tax seem to assume all business is new to the City.[38] If any previous business locations were in Oakland, these tax revenues are overestimated. Assuming that only 50% of these revenues are new to Oakland business license tax falls from $4 million to $2 million and utility consumption taxes decrease by 50% for offices and retail spaces.

4: The number of new employees and residents located within the new commercial space and the new sales tax they generate can be overestimated. If any of the employees or residential occupants at Howard Terminal were previously working or residing in Oakland, then their taxable expenditures are not new but are merely geographically moving within the area. As evidence, an analysis of ten new sports venues found weak evidence that employment is higher in new businesses near a new venue compared to new businesses further away from the new venue.[39] A study of 861 metro areas finds teams and stadiums have no measurable net gain on employment and likely move jobs closer to a sports venue at the expense of jobs further away.[40]

Despite studies indicating most, if not all, 'new' employees and their associated expenditures at Howard Terminal will be substituted from elsewhere in the local economy, financial estimates from Century | Urban assume 65% of employees and residents are new to the City.[41] Similarly, the A's 2019 economic impact report predicts over 5,000 non-baseball jobs in Howard Terminal and each job is assumed to be new to the economy.[42] This is an overestimate as no adjustments are made for jobs that may be geographically substituted from existing businesses or the A's current location at the Coliseum. To adjust tax estimates, sales taxes attributable to offices, apartments, and condominiums are reduced from a 65% capture to 50%. Similarly, utility consumption taxes are reduced by 50%.

5: The amount spent on taxable retail sales can be overestimated leading to inflated projections of sales tax revenue. New sales tax is expected to derive from retail revenues. Any retail expenditures that are spatially shifted into Howard Terminal from elsewhere in the City will not generate new sales tax revenues. As evidence, an analysis of regular season MLB games in Texas found no effect on tax revenues[43] and a similar analysis over 25 years in Florida found no effect of MLB games or stadiums.[44] These studies conclude that residents do not increase spending but instead substitute their leisure budgets for sports. When looking within cities, analysis of a new NBA arena found higher sales near the arena and lower sales further away showing that spending geographically shifts within a city.[45]

Financial estimates from Century | Urban calculate $1.16 million in retail sales tax revenue for the City.[46] They assume 65% of retail sales are new but a more conservative assumption would only capture 50%, thus decreasing City retail sales tax revenues to $893,200.

6: The number of hotel stays that are new to the local economy can be overestimated. Any spatial displacement of hotel expenditures into Howard Terminal from other locations in the City cannot be considered new tax revenues. As evidence, an evaluation of the Staples Center found higher room revenues within one mile of the arena but larger decreases in room revenue for hotels between one and four miles away.[47] In a study of Charlotte, North Carolina, NBA games were associated with a decrease in hotel registrations in the suburbs, a decrease in total hotel revenue in the county, and no significant corresponding positive effects in any geographic area.[48] Overall, sports events spatially displace hotel activity or reduce (crowd out) typical hotel activity resulting in totals that are not always net positive.

In a financial analysis conducted by Century | Urban, Howard Terminal is predicted to generate $240,000 in sales tax and $3.5 million in transient occupancy tax.[49] There is no explicit statement, but it appears no attempt was made to account for the likely reduction in other hotels in the City and County. Given the cited research above on the substitution of hotel rooms and the increasing supply of hotel rooms in Oakland since these estimates were generated[50], a more conservative assumption would consider only half of these gains as new revenue thus decreasing sales tax to $120,000 and transient occupancy tax to $1,750,000.

7: The number of construction jobs that are new to the regional economy can be overestimated. Construction workers will typically substitute higher-paying sports jobs at the expense of other local projects. To the extent that there is full or near-full employment in the construction sector, this effect will be stronger. Workers will be hired from outside of the area and those wages will leave the local economy. The lack of workers will also drive up the cost of

other projects. As evidence, research on stadium construction in St. Louis showed there were no net gains in construction industry employment within the metropolitan area during the years of stadium construction.[51] The Brooklyn Nets estimated an average of 1,500 construction jobs per year but an audit recorded an average of only 400 workers on site.[52]

Thousands of workers are needed to construct a stadium, infrastructure, and associated housing and commercial space at Howard Terminal. Some reports place this number at 25,000 full-time job equivalents during construction.[53] At best this is an overly generous assumption and evidence from past projects suggests most of these jobs will substitute from other projects.

8: The number of baseball and stadium-related jobs can be overestimated. A replacement stadium moving from one part of a city to another has nearly identical operational needs at both locations and it will generally employ the same number of game-day and front-office staff. As evidence, before obtaining public funding, the Brooklyn Nets substantially overestimated the number of arena jobs compared to employees hired after the arena was complete.[54] The BMO Harris Bradley Center in Milwaukee laid off 651 workers when it closed in 2018 but the new replacement area hired 600 full- and part-time workers.[55]

The A's economic impact study predicts 667 new ballpark jobs[56] and each is assumed to be new to the economy. Instead, most will be geographically substituted from the Coliseum to the Howard Terminal site. The A's could provide the exact number of full- and part-time employees that will transfer between locations.

9: A replacement stadium in a new location is geographical redistribution of economic activity within a city. Any sales tax revenues generated from game-day activities at the Coliseum currently flow to the City and County. When those games are geographically redistributed to Howard Terminal, game day tax revenues will continue to accrue to the City and County. The only gain will come from non-residents who are new attendees. As evidenced above, analysis of MLB games and stadiums in Texas and Florida over several decades found no increase in tax revenues.[57] When looking inside cities, sales tax revenues increase near a venue and decrease away from it.[58] This tells us residents do not spend more and what they do spend shifts geographically. The spatial displacement of game-day revenues is nuanced due to potential changes in the number of attendees, where the attendees live, and the amount they spend. The potential effects are summarized in Table 1.

In 2019, when attendance was 1.67 million (around 20,600 per game), a simple estimate is 50% of those are residents who spend \$64.81 (\$259.22÷4) per game[59] and 1% sales tax would lead to \$1,082,327 in revenues for the City (**A.** and **B.** in the table). To disentangle A. and B. one must know the proportion of A's attendees who live outside the City and how much they spend at each game. These figures do not appear to be available in any of the economic impact studies or financial analysis reports. It is mostly irrelevant since those expenditures will also occur at the new stadium. Instead of 2019 attendance, a generous assumption of full capacity (35,000) to account for the "honeymoon" effect associated with new stadiums[60] means 14,400 new fans will attend per game or an extra 1.16 million per season. Recent research shows Oakland A's attendance is highly responsive to winning—it falls when the team loses and increases when the team wins more.[61] Thus, higher attendance estimates are appropriate to the extent that team ownership invests in high-quality talent associated with more wins. Whether attendance

estimates are high or low, the proportion of *new* game attendees who live inside and outside of the City in unknown (**C.** and **D.** in the table) which requires more assumptions or data from the team. For that reason, a broad assumption of 50% residents and 50% non-residents would result in $377,972 in new sales tax (**D.**) to the City. This generously assumes sell-out crowds and is still smaller than the sales tax estimates reported for the City ($510,000).[62]

Table 1. Financial and Economic Impacts of a Replacement Stadium in Oakland

	Revenues to City	New Revenues to City	Considered Economic Benefit?	Description
CURRENT COLISEUM				
Game attendees living in City	**A.** $ some positive number	--	No	A resident spending local money locally is basic economic activity.
Game attendees living outside City	**B.** $ some positive number	--	Yes	If these visitors would not have come to the City without the A's, this gain is considered economic benefit.
HOWARD TERMINAL				
Same number of game attendees (as above) living in City	**A.** $ same positive number that used to go to the City	$0	No	A resident spending local money locally is simple economic activity. Their spending now occurs in Howard Terminal but is not new City tax revenue.
Same number of game attendees (as above) living outside City	**B.** $ same positive number that used to go to the City	$0	Yes	These non-residents attended before and attend again. Their expenditures are economic benefit, *but would exist without a new stadium*. Their spending is now shifted towards Howard Terminal but is not new City tax revenue.
NEW game attendees living in City	**C.** $ same positive number that used to go to the City	$0	No	If residents used to spend their leisure dollars on other entertainment within the City then their expenditures will shift to Howard Terminal but are not new City tax revenues.
NEW Game attendees living outside City	$0	**D.** $ some positive number	Yes	This is the only category that is truly "new economic benefit" due to the *new* stadium. These visitors are spending dollars in the City that would not have occurred otherwise. (These expenditures may have still occurred elsewhere in the Bay Area, in which case this is a new benefit to Oakland, but not to the region.)

10: Off-site property tax growth is assumed to be "caused by" the new sports development. As evidence, some studies find gains in property geographically adjacent to or near new stadiums as a result of real estate speculation or from spillover amenity effects (in other words, people may like to live near stadiums).[63] Even when property tax revenues are found to increase, they are usually insufficient to cover the public share of construction costs.[64] A study on replacement stadiums within the same city (similar to the proposed Howard Terminal project) found gains near the new stadium with corresponding decreases elsewhere that led to a nearly net neutral effect on overall property valuations.[65] Another study of the Atlanta Braves replacement stadium found that property value growth near the stadium was the same as further from it.[66]

These findings from other major league markets run counter to three assumptions made about Howard Terminal's effect on existing property values: it will "accelerate development on neighboring blocks,"[67] it will cause a 1.3% County-wide growth in assessed value,[68] and it will cause 0.4 percentage point growth in property taxes in the area adjacent to Howard Terminal (from 6.4% to 6.8%).[69]

Given the different findings in academic studies, it does not seem possible to predict the change in property values outside of Howard Terminal, but there are three reasons the project is different from the research studies cited above. First, those studies primarily focus on inland cities and stadiums with 360-degree access, but Howard Terminal is surrounded by water and industrial areas which limits access to about 25% of its circumference[70] and reduces the number of parcels that can benefit. The limited access, plus overlap with truck and rail cargo movements will focus congestion and disruptions into a stadium access area that is 25% the size of a typical stadium leaving the possibility of fewer amenity effects from proximity to the ballpark. Second, Howard Terminal proponents tout sea level rise protections as one benefit of the project. But *floodwalls will only surround and protect the property at Howard Terminal*, not the parcels around Jack London Square that could potentially generate increased property tax revenues for the City, many of which are predicted to have daily inundation with sea level rise.[71] For this reason, if property tax revenue gains exist near the ballpark, they will be relatively short-lived, or at least require an evaluation by the City, which has not yet occurred. Finally, due to Proposition 13, even if off-site property valuations increase, actual property tax revenues will only increase if and when parcels are sold or trigger a reassessment. To the extent that property values rise but do not change hands, there will be no gains to Oakland from even marginal gains in off-site property values.

In addition, if property values increase primarily as the result of real estate speculation, this can drive up rents, drive out existing renters and industrial businesses, and increase the number of people in the adjacent area. Each of these will lead to more costs, as described in Section 3.

In summary, there are multiple reasons revenues and benefits can be overestimated. Predictions of the amount, timing, and occupancy of tax-generating entities within Howard Terminal have the potential to be overestimated (although so few details have been released it is impossible to know exactly where). City-wide net sales, utility consumption, and business license collections will likely not change from current levels once properties at Howard Terminal become operational because existing businesses, employees, residents, and game attendees will geographically shift their spending. These taxes will only rise if residents, businesses, employees, and game attendees in the Howard Terminal area are new to the City.

Under the existing Term Sheet, the City is responsible for the *direct cost* of all off-site infrastructure. Estimates of net tax revenue to the City can help determine if revenues from the development are sufficient to cover these costs. Using City tax revenues from a July 2021 financial report[72] and adjusting some of them as described above, Table 2 indicates a net gain of $10.5 million to the City's General Fund. In an alternate scenario, if annual recurring expenditures are scaled down by 18% (the same percentage decrease as the recurring revenue to the General Fund) to $8.3 million, the annual net revenue to the General Fund is $12.4 million. Either amount appears insufficient to pay for the City's portion of the off-site infrastructure, which is estimated at $850 million or more in Section 3. Furthermore, if the City uses a LOB and pledges any of these tax revenue streams from Howard Terminal to the bond, none of these revenues will accrue to the General Fund. Considering that most tax increases around a stadium are geographically shifted from elsewhere in the economy, the net effect will be a reallocation of tax revenues away from typical City needs and towards the stadium development.

The property taxes collected within the proposed Howard Terminal IFD are proposed to be returned to the site developer to reimburse their costs of on-site infrastructure and to fund community benefits. This diversion of new property tax revenues is an *indirect cost* to the public—if those taxes were not given back to the developer, they would accrue to the City's General Fund. Moreover, any reduction in construction, any delay in timing, and any reduction in occupancy will delay or reduce property tax payments into the IFD and the associated community benefits that stem from them. Although project costs continue to increase (Section 3) there is no evidence these property taxes will rise, and evidence in the section above suggests they might be lower than the current estimates.

Table 2. Estimates of Tax Revenues Accruing to the City from the Howard Terminal Development

	Century | Urban					
	Source from 7/2/21	Projected	Less Property Tax	% Change	Updated Estimate	Comments and Assumptions
Revenues Accruing to the IFD for On-site Expenses						
Annual Property Tax	Table 7	11,580,000		0%	11,580,000	IFD revenues for on-site infrastructure and community benefits; could decrease based on amount and timing of ancillary development and tenancy (see Section 2, points 1 and 2); past research suggests mostly substitution
Revenues Accruing to the General Fund for Off-site Expenses						
Property Tax In-Lieu of Vehicle License Fees	Table 8	3,100,000	3,100,000	0%	3,100,000	no evidence to support a change
Utility Consumption Taxes	Table 9	1,799,000	1,799,000	-50%	899,500	assume half, though research suggests it could be lower (see Section 2, points 3, 4, 5, 6, and 9)
Business License Tax	Table 10	4,009,000	4,009,000	-50%	2,004,500	assume half, though research suggests it could be lower (see Section 2, point 3)
Parking Taxes	Table 11	1,861,100	1,861,100	0%	1,861,100	no change, but could decrease based on amount and timing of ancillary development and tenancy (see Section 2, points 1 and 2)
Sales Tax	Table 12	3,099,900	3,099,900		2,374,472	Century | Urban assumes 65% capture from residents and tenants
Office		300,000	300,000	-23%	231,000	adjust capture from 65% to 50% (see Section 2, point 4); could decrease further based on amount and timing of ancillary development and tenancy, and past research suggests mostly substitution
Apartments		380,000	380,000	-23%	292,600	see above
Condominiums		500,000	500,000	-23%	385,000	see above
Retail		1,160,000	1,160,000	-23%	893,200	adjust capture from 65% to 50%, though research suggests it could be all substitution (see Section 2, point 5)
Hotel		240,000	240,000	-23%	184,800	adjust capture from 65% to 50%, though research suggests it could be all substitution (see Section 2, point 6)
Performance Center		9,900	9,900	0%	9,900	no change, though past research suggests it could be entirely substitution
Ballpark		510,000	510,000	-26%	377,972	see Section 2, point 9 and the calculations in Table 1
Transient Occupancy Tax	p. 17	3,500,000	3,500,000	-50%	1,750,000	assume half, though past research suggests it could be lower (see Section 2, point 6)
Transfer Tax Upon Resale	Table 13	9,788,000	9,788,000	0%	9,788,000	no change, but could decrease based on amount and timing of ancillary development and tenancy (see Section 2, points 1 and 2), could also increase with frequent turnover (see Section 2, point 10)
Subtotal		38,737,000	27,157,000		21,777,572	
Less Measure C and Z allocations		4,273,000	2,995,634		2,402,240	11% of subtotal as per original projections
Subtotal	Table 14	*34,464,000	24,161,366		19,375,332	
Plus Offsite Parking Revenue	Table 19	1,350,000	1,350,000		1,350,000	no evidence to change, but could be zero if the City already collects parking revenue from the Coliseum
Recurring Revenue to General Fund	Table 14	35,814,000	25,511,366		20,725,332	
Less Annual Recurring Expenditures	Table 24	10,250,000	10,250,000		10,250,000	Alternate scenario: scale down costs to $8,300,000
Annual Net Revenue to General Fund		*25,564,000	15,261,366		**10,475,332**	Alternate scenario: Annual Net Revenue to General Fund of **$12.4 million**
Sept 29, 2021 memo reports $16.91 million			16,910,000			
Less annual payment for $350M bond			13,000,000			
Annual Net Revenue to General Fund after Borrowing			3,910,000			

On July 2, 2021, financial estimates predicted $15.26 million in annual net revenue to the City's General Fund because of the Howard Terminal development[73]. A September 29, 2021 report adjusted this value to $16.91 million[74] though it is not clear why, so the more detailed values from July 2021 are adjusted according to the facts presented in Section 2. With multiple iterations of projections in the public domain, the intention in this Table is to illustrate reasonable adjustments to one of them. The items are presented here in the same order as the original report. *Rounding/computation errors exist in the original report.

Section 3. Costs can be Underestimated

Overestimated revenues are often trivial compared to the underestimation of costs which are a much larger concern, in both relative and absolute terms. There are three primary reasons.

1: Stadium construction, infrastructure, and ancillary development costs can be underestimated.[75] As evidence, in MLB, stadiums have gone over budget for the Seattle Mariners (24%), New York Yankees (30%), Washington Nationals (10%), and San Diego Padres (11%).[76] Atlanta planned to spend $13 million but ultimately spent $23 million on a pedestrian bridge connecting a transit station to the Mercedes-Benz Stadium.[77]

On-site. In July 2021, Oakland's City Administrator's office projected on-site costs to be $194 million.[78] In September 2021, Alameda County received a list of on-site infrastructure costs that included $236 million in hard costs and $163 million in soft costs.[79] Of concern is the lack of details on the size, quantity, or cost of each listed category. For example, 18 acres of on-site parks cost $133 million in July 2021 but only $65 million in September 2021. There is no clear explanation of how or why these numbers changed.

The producer price index for inputs to construction (a measure of construction inflation) increased 23.1% between July 2021 and September 2022.[80] It will rise further before actual construction begins. Interest rates and the cost of borrowing are higher now than when project estimates were calculated in 2021. Applying 23.1% inflation to the September 2021 values, the on-site cost rises to $492 million, and assuming 7% inflation until 2025 the cost could reasonably be $603 million. As on-site costs increase *the City must reimburse these costs to the developer through property taxes* as part of their indirect subsidy.

In addition, increases in private developer costs for the stadium, commercial, retail, and residential units increase the chance that they will not build the maximum number of contractually allowed units. Any reduction in contractually allowed units will decrease property tax revenues to the IFD, decrease revenues to the Community Fund, and threaten the ability to provide the proposed affordable housing and community benefits.

Off-site. Of more concern are the off-site infrastructure costs. The April 23, 2021 Term Sheet Draft proposed $360 million for "pedestrian grade separation, vehicular grade separation, bike lanes, railroad safety improvements, sidewalk improvements and intersection improvements."[81] The July 1, 2021 memo proposed $286 million ($147 million for rail grade separated crossings and $139 million for off-site transportation improvements).[82] The July 2021 Term Sheet includes a cost of $351.9 for a vague list of "transportation infrastructure, improvements, grade separation, and parking management."[83] The TOWN For All Infrastructure plan, which appears to have subsumed some of the Howard Terminal off-site projects, lists projects costing $500 million.[84] The September 2022 memo explains a lengthy process to provide a better cost estimate, but does not provide an actual value, and notes, "the City's cost estimate to construct and implement all offsite transportation infrastructure improvements, including grade separations and parking management will significantly exceed the A's previous estimate."[85] *None of the documentation provides an exact or complete list of off-site projects or costs which are currently the responsibility of the City*.

Project costs will continue to rise. An increase of 23.1% in the producer price index for construction between July 2021 and September 2022 brings the cost in the Term Sheet to $433.2 million and the cost of the TOWN plan to over $600 million. Yet, one grade separated crossing for Caltrain is estimated at around $355 million.[86] Two grade separated crossings alone could cost $710 million today. Safety experts and the railroads say that the grade separation and at-grade crossing improvements listed in the Transportation Guide will be insufficient[87] suggesting costs could rise higher. All of these cost estimates should be inflated further to reflect the fact that construction, were it to occur, would not commence for several more years.

There are two other potentially large, unknown costs. First, the environmental impact report has a Mitigation Monitoring and Reporting Program (MMRP) with 123 pages of required mitigations, each of which has a cost. It is not clear which costs accrue directly to the City since the MMRP requires the Project sponsor to implement them, but the Term Sheet requires the City to take on off-site costs. Second, the Term Sheet requires the A's and the Port to negotiate SCMs that will reduce negative impacts on Port operations. Although the most recent communication from the City states they are comfortable with the sufficiency of the SCMs[88], maritime stakeholders disagree. Regardless of whether the SCMs remain as is or are expanded, they also involve real costs and to the extent that they are off-site, the City may be responsible under the Term Sheet.

Transportation costs (for various transportation projects including one auto and one pedestrian grade separated crossing that safety experts call insufficient[89]) currently exceed $600 million if the most recent $500 million TOWN plan is used and 23% inflation between 2021 and 2022 is applied. Assuming an additional $100 million in costs for environmental mitigations and SCMs, 7% annual inflation, and construction commencing in three years, *the total cost of required off-site infrastructure could easily exceed $850 million and could plausibly reach $1 billion* given the unknown list of transportation upgrades.

There are two likely outcomes of such large and unaccounted for increases in off-site costs under the Term Sheet: 1. taxpayers could end up subsidizing the construction of projects and infrastructure that would not exist but for the ballpark built at Howard Terminal, 2. expensive mitigation measures and SCMs are shelved for more economical alternatives, for example including only at-grade crossings which increases the subsequent risk of injury or death as over 2 million people cross the railroad tracks each year to reach the Howard Terminal development.

2: On-site environmental and toxic remediation costs can be underestimated. As an example, environmental cleanup for the Washington Nationals stadium ran over budget by 9% ($63 million).[90] To illustrate the scope of environmental challenges in Oakland, the California Department of Toxic Substances Control (DTSC) in 2002 estimated the cost of Howard Terminal site clean-up to be approximately $100 million.[91] To avoid these clean-up costs, the DTSC instead agreed in 2003 to a land use covenant that prohibited residential uses on land that will be used for the Howard Terminal project.[92] Permits, resolutions, and work plans have been filed that now allow for cleanup and revised residential usage, but many potential future variables, including rising groundwater as a result of sea-level rise, construction activities revealing larger levels of pollution, or excavation for an expanded turning basin, could disrupt capped toxins in a way that requires more extensive and expensive remediation. If on-site project costs increase, there are two consequences: 1. it will increase the chance that developers will

build slower and/or build fewer than the maximum number of contractually allowed units which will decrease property tax revenues to the IFD, decrease revenues to the Community Fund, and threaten the ability to provide the proposed community benefits, and 2. the indirect cost to the City increases as more future property tax revenues are reimbursed to the team.

3: Ongoing maintenance and operational expenses can have no direct revenue source. In the case of Howard Terminal, the Term Sheet sensibly requires the developer to pay for maintenance of all onsite infrastructure and to reimburse the City for traffic, sanitary, and safety services provided in connection with baseball games in "surrounding neighborhoods."[93] There is some risk that the team may define "surrounding neighborhoods" narrowly to mean Jack London Square while the City will incur costs in Chinatown, Old Oakland, West Oakland, Downtown, and Jack London Square since these are the location of both parking and public transportation services. More importantly, the City is responsible for the maintenance of all off-site infrastructure.[94] *These additional maintenance costs to the City's General Fund will exist in perpetuity, although there is no dedicated revenue stream to cover their expense.*

In summary, indirect costs involve larger portions of property taxes that the City must reimburse to the developer as their costs increase. Higher costs can also decrease the number of housing units and affordable housing units built.

Direct costs to the City are off-site infrastructure costs of likely more than $850 million and unknown annual maintenance costs of that infrastructure in perpetuity. Analysis from 2021 suggests the City would have $13 million in annual payments for a $350 million general obligation bond. *Neither the $350 million bond nor the updated projected $10 million in annual net tax revenues are sufficient to pay for the direct cost of the off-site infrastructure.*

Section 4. Indirect and Inconspicuous Costs can Fail to be Considered

By far the largest costs of stadium projects are those that are rarely acknowledged or measured.

1: Economy-wide economic activity can decrease because local spending that is redistributed toward professional sports is more likely to leave the economy. As established above, residents' leisure spending is redistributed from local restaurants, bars, or other entertainment businesses toward the ballpark.[95] But dollars spent inside a ballpark are more likely to leave the economy because over 50% of team revenues are spent on salaries for players who rarely live full-time in the local economy, have high tax rates (especially in California), and have high saving rates.[96] All of these features cause more local leisure dollars to leak from the local economy when spent in the ballpark. Because the Oakland A's are moving across the City, only the new spending listed as D. in Table 1 will be affected by this larger leakage.

2: Ballparks create traffic disruptions that can have an economic cost. As evidence, academic research on traffic disruptions finds MLB teams in single-team markets caused 28,000 annual hours of traffic delay, 5 million additional vehicle miles traveled (VMT), and $7 million in social costs from greenhouse gas emissions.[97] Disruption was higher when ballparks were located in central business districts. Two-team markets (San Francisco Bay Area, Chicago, Los

Angeles, and New York) with much higher levels of baseline traffic did not experience the same effects for the following potential reasons:

- The ballparks in two-team markets are all served by existing subways and railways, and residents of big cities are accustomed to using public transportation.
- Markets with high levels of existing traffic cannot absorb the influx of new VMTs thus existing vehicle miles are crowded out; baseball VMTs substitute for other VMTs. Research confirms this substitution of baseball and non-baseball activity by finding no measurable gains or losses in taxable sales when games are not played.[98] This suggests cities with teams exist in a traffic equilibrium where *drivers know to curtail trips when there is an expectation of delays or disruptions*. Similarly, existing businesses near ballparks are located there because they can accommodate disruptions.

Applying these findings, moving the A's from the Coliseum to Howard Terminal will disrupt the existing equilibrium because a) Howard Terminal does not have the same level of transit, freeway, or parking access as the Coliseum, b) the team will relocate into a central business district, and c) it will be relocated away from an area that has adapted to a traffic equilibrium *to an area that will be forced to adapt to the constraints of more traffic by decreasing its business activity*.

Baseball-related traffic activity is a function of site location and parking supply. In terms of location, Howard Terminal is bounded by water on approximately 180 degrees, a rail line on 180 degrees, and a working port that blocks access on the western side. At most there are 90 degrees of access to the property[99] and every person who attends a game or lives/works at Howard Terminal will have to cross railroad tracks. Currently, every crossing would have to occur at street level. Because this is neither safe nor efficient, the transportation plan proposes a "transportation hub", a vehicle bridge over the railway, one new pedestrian and bicycle bridge, and the remainder of street-level rail crossings to be improved. As noted above, the project plan and Term Sheet offer no final specifics on what will be constructed or who will pay. There are numerous reports on the matter that delve into the details[100] but the main concerns (and there are many) are loss of life, no place for cars to queue on the way to the ballpark leading to backups into Downtown and onto 880, no place for vehicle queueing when leaving the ballpark, and the interplay of individuals and cars with passenger and freight trains that will create longer delays and further decrease economic activity. The environmental impact report confirms that "the Project would result in significant and unavoidable impacts…even with implementation of feasible mitigation measures" including traffic congestion that exceeds limits in the Alameda County Congestion Management Plan.[101] Two possible implications of significant, unavoidable traffic are a) game attendees have poor experiences and decrease their attendance which results in decreased sales tax revenues to the City which reduces their ability to pay for their LOB or b) game attendees continue to drive and create congestion which can decrease economic activity which results in lower tax revenues.

In terms of supply, the proposed Howard Terminal project will have 2,000 onsite parking spaces (compared to 10,000 at the Coliseum). A ferry terminal with service to San Francisco is adjacent, an Amtrak station is approximately 7 blocks away (although the Final Environmental Impact Report suggests it will not be used for game attendees[102]), and three BART stations are all 1 mile (or more) away. The transportation plan lists 3,000 parking spaces in Downtown Oakland and

400 in Chinatown. Near West Oakland BART, 800 spaces share the same single on- and off-ramp with both Port and ballpark vehicles. Other Bay Area professional sports teams report that between 50% and 80% of attendees drive to games[103] indicating the parking supply at Howard Terminal is insufficient and the parking supply throughout adjacent neighborhoods is similarly insufficient.

Because the transportation plan expects to use a) 3,400 parking spaces on the opposite side of 880 and b) expects public transportation users to take buses, shuttles, or walk to BART stations on the opposite side of 880, baseball traffic will undoubtedly affect the core business district in Downtown Oakland.[104] The shortage of parking and public transportation at Howard Terminal disperses game-related traffic from 155 acres at the Coliseum to at least 635 acres that encompass the core of Downtown Oakland.[105]

3: Land reductions and traffic can decrease the economic activity of nearby businesses. There are hundreds of businesses that surround the Howard Terminal development but the focus of this section is on only the Port of Oakland because there are published and publicly available data on their finances, employment, and economic impact.

Multiple dynamic features of a port are used to predict its growth and success (e.g., vessel size, cargo volume, dwell time, proportions of empty and full imports and exports, etc.) and covid-19 disrupted all of these dynamics. Because they have not stabilized to baseline, the Port of Oakland disagrees with its maritime tenants about growth targets, the capability of meeting those targets, and the infrastructure necessary to reach them. There are three factors that both parties agree upon:

1. the shipping industry will continue to move toward larger ships that deliver more containers per ship but make fewer port calls,[106]
2. the Port is experiencing increased competition from both East Coast and West Coast ports and is losing market share to ports in Canada that offer lower prices,[107] and
3. a "critical factor for capacity at the terminals is dwell time of containers…by getting containers out to cargo owners and not allowing storage on seaports clogging up capacity."[108]

Thus, ports succeed by efficiently distributing goods with the fewest disruptions. As was evident to consumers during covid-19-inspired supply chain disruptions, bottlenecks in the distribution, movement, or storage of containers in ports increase costs to both individuals and businesses.

The Oakland Intermodal Container Terminal (OICT) is the portion of the Port that lies west of Howard Terminal and is at most risk from the project development. OICT moves containers off ship, stores them until they can be transferred onto trucks or trains, and transitions those containers off the Port to Northern California and beyond. A similar cycle is repeated to export California agricultural, wine, and manufactured goods. The Howard Terminal portion of the Port is currently used as a staging and parking area to move containers to and from the Port through three access points to Highway 880. Trains move containers on railways that run directly adjacent to the Howard Terminal development.

The Port of Oakland is primarily a container port and the land occupied by the seaport is designated a Port Priority Use Area (PPUA). To develop Howard Terminal for residential and

commercial use, the A's successfully petitioned the Bay Conservation and Development Commission (BCDC) to remove Howard Terminal as a PPUA by stating it is not necessary to meet the *regional* ability to meet *growth* in sea cargo. (Port tenants strongly disagree with this determination as its current use for truck parking and container storage are essential Port functions.[109]) The analysis of PPUA designation did not involve an evaluation of how *current Port economic activity* could be *disrupted by development in Howard Terminal*.

In theoretical models of newly constructed stadiums, competition can cause existing firms to experience either reduced profits or exit.[110] As applied to Oakland, new restaurants or bars could crowd out shipping or maritime businesses. Similarly, any reduction in cargo activity at the Port could negatively affect the City's overall economic activity and tax revenues, in addition to Port revenue and state tax revenues. There are three reasons the project could be harmful to economic activity at the Port of Oakland.

a. Reassignment of Howard Terminal land away from maritime use

The decrease in Port land from reassigning Howard Terminal to commercial and baseball purposes leaves open the question of where current Port functions will be relocated. Currently, Howard Terminal is used as a storage area for containers that cannot fit adjacent to cargo terminals and 1,200 daily truck-moves deliver containers on- and off-site. In its support of the Howard Terminal development, Port managers argued the land was not needed to meet port demand.[111] Yet, in a 2022 grant application to the Department of Transportation, they noted the need to increase container capacity and efficiency at the port.[112] The Port's maritime tenants agree with the second characterization and believe proximate Port land is necessary for reducing dwell times to maximize business. The Port expects to replace Howard Terminal container storage and staging areas within the Port[113] but if alternate proposals are successful to use off-site lands, trucks will travel more miles, increase greenhouse gas and particle emissions, and potentially pass through congested ballpark areas, all of which decrease Port efficiency, increase dwell time, and decrease overall business activity.

b. Traffic delays in cargo movement

Even if off-site transportation improvements are funded and constructed, the environmental impact report concludes traffic delays will occur. The nearest freeway entrances to the ballpark are around 8 blocks away (Broadway and 8th) and (Union and 5th), the latter of which serves 50% of the truck traffic leaving the Port. The main driving route into the ballpark also overlaps with the main truck route to the Port.[114] Plans to demolish 980 in the coming decade[115] will further reduce freeway off-ramps to Howard Terminal from three to two, leading to more congestion at existing access points. Furthermore, Port congestion can result from fewer trains moving through as might happen with game-related delays.[116] There is no question that goods moving into and out of the Port will be delayed.

Delays are costly for ports. Not only do shippers pay for each day a container stays on site, but these increased costs can also lead to loss of business. For example, the world's largest mozzarella cheese maker experienced supply chain cost increases of 57% in 2021 and 50% in 2022, which led them to stop exporting out of the Port of Oakland.[117] Similarly, importers will deliver their goods to less constrained ports with lower costs.[118] But those diversions create

supply chain delays and inflated costs for consumers: each container delivered to a Southern California port incurs a cost of $2200 to return to distribution hubs in Northern California.[119] If one cargo ship with an average of 2000 containers diverts away from Oakland to Southern California, the economic cost to relocate to Northern California is $4.4 million. Ports with more fluid distribution, fewer delays, and overall lower costs are already taking business away from ports like Oakland.[120] In short, bottlenecks in ports lower throughput,[121] which lead to loss of business and jobs in Oakland.

To gauge the scope of the disruption from development at Howard Terminal the most recent 2018 economic impact report commissioned by the Port of Oakland is used. It concluded, "$2.2 billion is the direct business revenue received by the firms directly dependent upon the cargo moving via the marine terminals."[122] To be conservative, the 2017 values for employment, wages, business revenue, and state and local taxes are used, in part because the 2017 TEUs are similar to those today. Table 3 provides the computations for all Port employees.

OICT moves approximately 65% of the container volume at the Port[123] so full Port activity is scaled down to only that which is most likely to be disrupted by the Howard Terminal project. The computations assume all employment, wages, business, and taxes would decline proportional to the number of containers. The indirect and induced effects were computed using scale factors from the prior economic impact study as a way to make these values directly comparable to that study.[124] State and local taxes are not scaled because the report does not indicate how they were derived.

Table 3. Effect of Potential Disruptions on Employment, Wages, and Revenue on *all Port* Activity

Sample:	All Port	OICT (65% of all Port activity)				
Computation:	Direct Effects	Direct Effects	Direct 5% Loss	Direct, Indirect, Induced 5% Loss	Direct 10% Loss	Direct, Indirect, Induced 10% Loss
All Port Employment	11,393	7,405	-370	-901	-741	-1,803
in Oakland	2,611	1,697	-85	-207	-170	-413
in Alameda County	6,098	3,963	-198	-482	-396	-965
Wages (millions)	$641	$417	-$21	-$81	-$42	-$161
in Oakland	$147	$95	-$5	-$18	-$10	-$37
in Alameda County	$343	$223	-$11	-$43	-$22	-$86
Business Revenue (millions)	$2,243	$1,458	-$73	-$107	-$146	-$214
State/Local Taxes (millions)	$281	$183	-$9		-$18	

The number of ships unloaded at OICT is approximately 20-30 per week[125] but to be conservative, the lower vessel call figure of 2022 is used.[126] If delays and backlogs from Howard Terminal development prevent just one ship each week from berthing at OICT this is a 5% reduction in business activity. The Port economic impact study reports that 22.92% of Port

employees live in Oakland and 53.5% live in Alameda County.[127] In the one-ship reduction per week scenario, the County could lose the equivalent of 198 jobs and $11 million in direct wages, Oakland itself could lose 85 jobs and $5 million in direct wages, and business revenue at the Port could decrease by $73 million. If indirect and induced effects are included, Oakland could lose 207 jobs, $18 million in wages, and $107 million in business revenue at the Port. Looking beyond Oakland, disruptions in Port fluidity from Howard Terminal development could result in 370 direct or 901 total lost jobs worth $81 million in lost wages to the larger Bay Area economy. Approximately 34% of Port jobs are union based; up to 306 lost jobs would be union positions. Reductions in Port fluidity that lead to the loss of two ships each week are presented in the 10% scenario.

Table 4 represents a subset of employees that the Port described as being directly involved in container handling.[128] The difference is only 875 total jobs so the figures in Table 4 are not markedly different from Table 3. This underscores the importance of supporting and maintaining container-related business at the Port, which is the third point.

Table 4. Effect of Potential Disruptions on Employment, Wages, and Revenue on *Container-Related* Port Activity

Sample:	Container-related	OICT (65% of all Port activity)				
Computation:	Direct Effects	Direct Effects	Direct 5% Loss	Direct, Indirect, Induced 5% Loss	Direct 10% Loss	Direct, Indirect, Induced 10% Loss
Container-related Employment	10,518	6,837	-342	-832	-684	-1,664
in Oakland	2,411	1,567	-78	-191	-157	-381
in Alameda County	5,629	3,659	-183	-445	-366	-891
Wages (millions)	$592	$385	-$19	-$74	-$38	-$149
in Oakland	$136	$88	-$4	-$17	-$9	-$34
in Alameda County	$317	$206	-$10	-$40	-$21	-$80
Business Revenue (millions)	$2,031	$1,320	-$66	-$97	-$132	-$194
State/Local Taxes (millions)	$254	$165	-$8		-$17	

c. Failure to expand the Inner Harbor turning basin or delays in its usage

The current Inner Harbor turning basin adjacent to Howard Terminal is required to move ships in and out of the OICT. However, maritime safety experts note the presence of a single additional loitering personal watercraft in the turning basin, for concerts, ballgames, or other events, could disrupt this process and lead to delays that would cost ocean carriers up to $75,000 per day.[129] In addition, the City's own Port Economic Impact study explains the importance of expanding the Inner Harbor turning basin to accommodate the trend for larger ships.[130] As defined in the Maritime Reservation Scenario in the environmental impact report, 10 acres at Howard Terminal would be necessary to construct the expand the turning basin.[131] A more recent Army Corps of

Engineers feasibility study has tentatively selected a plan that requires only 2.3 instead of 10 acres of Howard Terminal.[132] The risks here are multiple:

- The removal of any number of acres from the Howard Terminal project could decrease the full project build-out and thus the tax revenue generating ability of the development.
- The current Term Sheet gives the A's the turning basin land and it must be later reclaimed by the Port which could be costly, delayed, and or may fail completely. Failure to reacquire the land and a worst-case scenario of OICT collapse could result in the loss of up to 6,837 container-related jobs earning a cumulative $385 million in wages at the OICT (though a portion could be saved by shifting to different cargo, which would be another cost). A better solution would be to not assign that land to the A's to begin with.
- In the case that the turning basin is expanded, marine terminal operators and maritime safety experts expect ship turning could be delayed due to ballpark activity.[133] Shippers pay to store containers and pay for every day they are at port. These increased costs to shippers can influence their decisions to leave Oakland for ports with lower costs of doing business.[134] If just one additional ship each week declines to do business in Oakland (for a total of two losses each week), job and wage losses rise to 170 direct jobs, 413 total jobs and $37 million in lost wages in Oakland (final columns of Table 3).
- If the turning basin is expanded with only 2.3 acres instead of 10 acres, the Port will have no future ability to expand the turning basin to account for the increasing size of cargo vessels. This will permanently limit the ability of OITC to adapt and grow, and in a worst-case scenario could result in the loss of up to 6,837 container-related jobs earning a cumulative $385 million in wages at the OICT.

4: Stadiums can generate social costs, pollution, gentrification, and displacement of renters. New stadiums are often constructed in areas with lower property values.[135] This lowers the cost of construction but also increases the gains to private businesses that can benefit from increased property values. Renters, cultural services, non-profits, and faith-based services are the most vulnerable to risks of displacement while property owners are insulated.[136] The City states the Community Benefits Agreement will provide "ample affordable housing opportunities,"[137] although *no assessment appears to have been made of whether the number of affordable units to be built is sufficient to accommodate the number of residents who will be displaced*.

High socially vulnerable neighborhoods adjacent to Howard Terminal are currently subject to higher than average levels of air pollution from transportation and industrial activities. The West Oakland Community Action Plan and the Seaport Air Quality 2020 and Beyond Plan are both making strides in reducing this exposure.[138] However, the environmental impact report concludes there will be significant and unavoidable impacts which include a corresponding increase in pollution from road and rail congestion.[139] These social costs of gentrification and pollution are real, though a dollar value is not quantified in this report.

In summary, the Howard Terminal development will likely disrupt the efficiency of the goods movement ecosystem in the Port of Oakland. This would reduce the current lease holders' ability to conduct profit-generating business, shift activity to other ports that are not impacted, and lead to a decrease in economic activity, jobs, and tax collections in Oakland, and the loss of revenues to the Port of Oakland itself. In a worst-case scenario 6,837 container-related jobs, of which 2,325 are union positions, could be lost.

None of these calculations include costs to other impacted businesses in the area related to the port (motor carriers and trucking, freight and passenger rail, Schnitzer Steel) or hundreds of local non-port-related businesses (auto repair, coffee roasters, plumbing supplies, cabinets, health care, telecommunications, marketing, building design, elevators, fitness, publishers, engineers, etc.). All of these businesses will be affected by the "significant and unavoidable impact" of traffic congestion in Alameda and Oakland and are the epitome of the inconspicuous costs that, when accounted for after a stadium is constructed, lead to no significantly measurable positive impact.

Section 5. Conclusion

Summary

For the reasons stated in the sections above, it is nearly impossible to accurately predict the values of sports projects before they are constructed, but some of the above concerns will become reality. Throughout this analysis, the assumptions are articulated and even with conservative calculations, **neither the proposed $350 million LOB nor the projected $10.5 - 12.4 million in annual net tax revenues from Howard Terminal development are sufficient to pay for the estimated $850 million direct cost of the off-site infrastructure**. In fact, both on-site and off-site *costs will continue to increase while revenues will not rise* above currently projected levels, and may actually be lower than current estimates.

Table 5. Summary of Direct and Indirect Costs Associated with Howard Terminal

	Value	Implication
Direct Costs		
Off-site infrastructure and some SCMs and mitigations	$850 million +	Direct subsidy. General Fund at risk.
Ongoing off-site maintenance	unknown	Direct subsidy. General Fund at risk.
On-site construction, remediation, etc.	$603 million +	Indirect subsidy. As costs rise, more property tax diversion, fewer potential units built, and decreased community benefits.
Indirect & Inconspicuous Costs		
Lost jobs in Oakland	85 – 413 positions	Only calculated for Port businesses, but many other businesses affected. Any gains at Howard Terminal are offset by these losses.
Lost wages in Oakland	$5 - 37 million	
Lost business revenue	$73 - 214 million	
Leakages	unknown	Decrease local economic activity.
Social costs	unknown	Solutions to social problems are costly.

The costs in Table 5 are consistent with findings in academic research studies that evaluate sports projects after they are built. Consistently, there are no measurable economy-wide gains

because 1. most visible gains involve substitution or geographic redistribution within the local economy, and 2. indirect costs that are not considered before the project are generally equivalent to any potential gains. As identified in the sections above, there are numerous small and large reasons why the Howard Terminal project will likely have the same outcome as other cities.

The fundamental flaw of Howard Terminal is its location (bounded by water, a busy rail line, and a functioning port) and the seeming impossibility of a transportation plan that allows neighboring businesses to maintain current levels of employment and economic activity. The environmental impact report describes a permanent or substantial transportation hazard that will not be fully eliminated and "even with mitigation the impact would be significant and unavoidable." **To accept that regular, hazardous congestion will occur is to accept that there will be some permanent loss of economic activity in the Port and in Downtown Oakland**. Moreover, the site location engenders congestion that requires additional direct costs for infrastructure, mitigations, and SCMs, likely to be borne by the public, and which may still be insufficient to protect current jobs and economic activity in other local businesses. No scenario avoids disruption to truck-related Port fluidity and therefore no scenario avoids decreasing economic activity at the Port and other surrounding businesses. Losses in jobs, wages, and business revenue lead to decreased tax revenues to the City's General Fund.

As a result of the numerous times that local governments have invested substantial resources into stadium projects based on a promise of economic stimulus and return on investment, this subject has been the topic of a considerable breadth of economic research. Over 120 studies almost entirely find non-measurable economy-wide gains from a new stadium or team. The physical challenges related to the Howard Terminal project and the likely corresponding decrease in economic activity around the project are perfect examples of how the indirect and inconspicuous costs of public subsidies for stadium projects can result in zero overall impact.

Key Risks

The risks and concerns with the project are too numerous to list here. They have been noted in reports from other subject matter experts in security, IFDs, finance, port operations, and transportation that are cited in the end notes. Summarized here are additional concerns, some of which may not have been noted in previous reports and some of which may involve similar or identical concerns. In the sections above, there are myriad concerns with the minutiae of the revenue estimates, but the more important risks are with the high-value costs.

- Both on-site and off-site construction costs listed in the Term Sheet have increased by 23% between July 2021 and September 2022. Further factoring in supply chain problems in procuring inputs, unknown environmental remediation, and typical cost overruns, **total costs will increase even more** if construction is approved and begins. **The City is not only aware of these increasing costs but is also aware that they have insufficient funds to pay for them**.[140]
- Only 8% ($51.8 million)[141] of the City's most recent cost estimate is secured. If $279.5 million of Port funding is diverted for off-site infrastructure, this additional public subsidy raises the percentage to 48% of the City's cost estimate leaving 52% ($334.6 million) unfunded. Even if the City obtains funding from all other proposed grants (which is highly unlikely) it will still not be sufficient to cover the expected costs leaving a Limited Obligation Bond and the diversion of General Funds as the only current solution.

- All projected tax revenues are estimated based on fully building the maximum number of units and square feet. But macroeconomic factors (inflation, interest rates, access to capital) can potentially reduce or delay the amount built in Howard Terminal. With **no minimum building requirements** in the current Term Sheet, delays and reductions could reduce tax revenues, funds for community benefits, the Community Fund, and affordable housing units. **None of these economic factors will reduce the amount of infrastructure that the public must construct to make the Howard Terminal project accessible – they will only increase the public cost.**
- Many of the benefits in the Community Benefits Agreement derive from increased property tax revenues. If these fall short of expectations for any of the macroeconomic reasons in the previous point, promised community benefits and new affordable housing will not be delivered.
- The enhanced Inner Harbor turning basin appears necessary to maintain OICT operations at current levels. Reclamation of land for the turning basin expansion will reduce the proposed 18 acres of public open spaces at Howard Terminal and could lead to further reductions in promised maximum builds which could further reduce tax revenues.
- Providing up-front development rights to land that is necessary for the Inner Harbor turning basin expansion could lead to costly recapture and reacquisition, or a failure to reacquire, which would decrease the ability to generate economic activity at the Port.
- The quantity and scope of off-site infrastructure is ill-defined and leaves open the risk of ballooning scope and costs. The Final Environmental Impact Report requires 123 pages of mitigation measures, some of which will occur off-site. Port tenants believe the current list of Seaport Compatibility Measures are insufficient.[142] Without a finalized list that are contractually agreed upon and whose costs have been apportioned, **it is not clear how much the SCMs and environmental mitigation will cost and who will pay**. The off-site costs are currently the responsibility of the City and could plausibly exceed $850 million. If expenses rise or revenues fall short of projections, taxpayers will be further responsible for these costs under the current Term Sheet.
- Per the current Term Sheet, the Phase 1 stadium development is allowed to open with only on-site infrastructure in place. Off-site infrastructure does not need to be contractually completed per the Term Sheet yet it is listed by other safety and transportation experts as exceptionally vital to the proper functioning of the project. (Most of the MMRP must be completed in advance of stadium opening, but there are contractual inconsistencies.) Failure to complete all off-site infrastructure increases the risk to truck, train, and personal safety. In this situation, it is not unreasonable to expect multiple and/or significant personal injury lawsuits against the City and Port.
- Most of the off-site infrastructure has to do with the safe and fluid movement of people, vehicles, and cargo. Without a funding mechanism or a completion date for off-site infrastructure, the stadium will cause "significant and unavoidable"[143] traffic disruptions that will affect not only the health and safety of individuals but will affect the economic activity in Downtown Oakland and the Port of Oakland.
- Even if there were a funding mechanism for transportation infrastructure, there is no optimal solution. Maximum safety would require fully-separated solutions that are exceptionally expensive, unlikely due to sea level rise, and explained to be harmful and impractical to existing businesses.[144] Proposals for partially-separated crossings (pedestrian and auto bridges) appear to be moving forward,[145] but costs could easily

exceed the $500 million TOWN estimate, are not sufficient to safely move both people and cargo, and rely on railroads to cede land that they are not willing to.

- Most of the economic activity in the new development will be redistributed from within the City of Oakland leading to net annual gains in City tax collections of $10.5 to 12.4 million. The City is proposing that those gains be diverted to a LOB that may not necessarily put the General Fund "at risk", but **revenue that would have gone to the General Fund will instead be diverted to pay for Howard Terminal off-site infrastructure**.
- Direct costs could exceed $850 million but the disruption caused by this project could annually, conservatively, result in $17 million of lost wages from 191 direct, indirect, and induced container-related jobs in Oakland. Businesses in Oakland could experience direct, indirect, and induced losses of $97 million and **unmeasured losses for hundreds of other businesses throughout Oakland** including direct revenue loss at the Port itself.

Key Questions

1. How can the City reasonably determine the revenue benefits of the project when so many details are unavailable? Will a detailed 45-year financial forecast be calculated before the City negotiates a Project Development Agreement?
2. Why are the A's required to stay in Oakland for only 25 years while they can recoup development expenditures for an additional 20 years after that?
3. By 2050, when there is temporary inundation of the site and sea rise makes it challenging to reach Howard Terminal, if the A's leave or request a new ballpark, what will happen to the existing stadium?
4. Is the diversion of property tax for 45 years and the assumption of infrastructure improvements ($850 million or more) a good investment for a project that acknowledges it will be subject to temporary inundation before the end of its initial period of public financing?
5. Why would the Port give development rights to land that is necessary for an Inner Harbor turning basin expansion and then be required to recapture and reacquire those rights? Wouldn't it be more cost-effective and in line with the Port's growth plans to retain the necessary Port property for existing maritime functions?
6. Given the risk of economic loss for maritime businesses at the Port of Oakland, shouldn't the developer and maritime stakeholders negotiate a finalized list of Seaport Compatibility Measures and a specific determination of who will pay for them *before* the City continues negotiation with the A's on a Project Development Agreement?
7. Although it is not required by CEQA, shouldn't the City insist that the Transportation Management Plan (TMP) specifically address, accommodate, and provide solutions and funding mechanisms to remove any risks to jobs and economic activity at the Port and other local businesses caused by game-day congestion?
8. What happens if federal grants cannot be obtained for off-site infrastructure? Who pays? Or what reductions or delays will there be in constructing infrastructure, and who gets to decide when and where those occur?
9. If there is no optimal solution for transportation safety (and the safest options are both cost and logistically prohibitive) what are the costs to settle lawsuits related to injury or death?
10. What is the maximum dollar amount of future property taxes committed to the IFD to be reimbursed to the developer? Is this amount reasonable and within the scope of other IFDs in California? What are "eligible capital improvements"? Can the developer request reimbursement for their borrowing costs (e.g., interest)?
11. Is there a risk that the Community Fund will not generate sufficient revenues since most of it depends on condominium transfer fees over 66 years? Will the City conduct a detailed, long-term financial analysis?

Limitations

This report endeavored to apply knowledge and findings from academic studies, government reports, and other reputable sources to provide a balanced assessment of the proposed ballpark at Howard Terminal. The findings of limited possible public benefits of the Howard Terminal project reflect the fact that the bulk of substantial and persistent economic research on the subject finds few net or lasting financial or economic benefits. The assessment was limited to publicly available documents, many of which lacked considerable detail on the assumptions and underlying calculations. More negotiations may have taken place that are not yet in the public domain. The only existing financial analysis is for a single, current year with no adjustments for the 45-year period of the project. For that reason, the report updates those simplistic one-year periods when possible and mostly offers likelihoods on which estimates are incorrect instead of actual numerical corrections. Moreover, the calculations used Oakland as the area of impact although the County is also expected to contribute its property tax revenues to the IFD. The simplification reflects the project directive and does not replace a thorough financial forecast by both the City and County.

About the Author

A California native, Dr. Nola Agha holds a Ph.D. in Management from the Isenberg School of Management at the University of Massachusetts, Amherst. She is currently a Full Professor in the Master's of Sport Management Program at the University of San Francisco and was elected in 2019 as a Board Member of the North American Association of Sports Economists (NAASE). Dr. Agha's research focuses on sport economics and she has conducted theoretical, conceptual, and empirical research regarding the economic impact of sports teams and stadiums. Her research has been published in fourteen different academic journals and nine book chapters. She currently serves on the editorial boards of the *Journal of Sports Economics*, the *Journal of Sport Management*, and the *Journal of Global Sport Management*.

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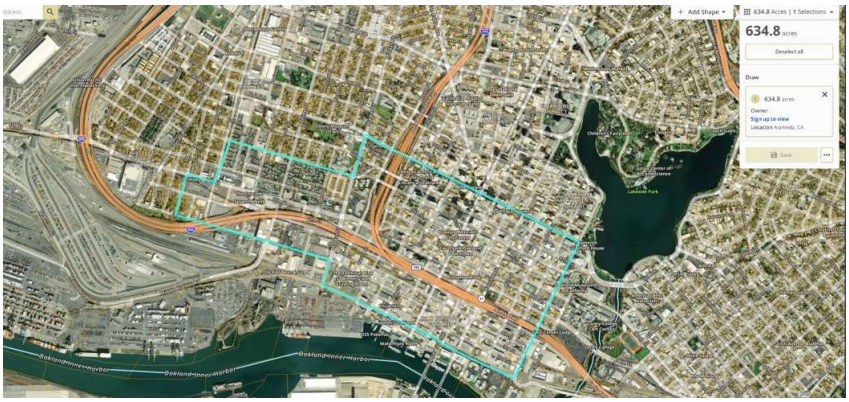
[104] Large events breed traffic in various forms depending on the layout of the stadium and adjacent streets. Around Oracle Park, the freeway and each street stretching 2.5 blocks from the ballpark to I-80 on-ramps are gridlocked before and after games. This occurs even with CalTrain one block away and Muni trains adjacent to the park. At the Coliseum, cars queue in lots until they can access 880 even with direct on ramp, off ramp, BART, & Amtrak access.

[105] From acres.co. To be conservative, the mapped area only bounds the BART and parking locations:



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