From: Robert C. Bylsma
To: pvollmann@oaklandca.gov
Subject: Howard Terminal Draft Environmental Impact Report, Case File No.: ER18-016
Date: Tuesday, April 27, 2021 2:48:30 PM
Attachments: howardterminaldeiruprr.pdf

Attached please find Union Pacific Railroad's Comments concerning the Howard Terminal Draft Environmental Impact Report.

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BUILDING AMERICA®

April 27, 2021

Via Email and First Class U.S. Mail and
Electronically via: https://comment-tracker.esassoc.com/oaklandsportseir/index.html

Peterson Vollmann
City of Oakland Bureau of Planning
250 Frank H. Ogawa Plaza
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pvollmann@oaklandca.gov

Re: Howard Terminal Draft Environmental Impact Report
Comments (Union Pacific Railroad Company)
Case File No.: ER18-016

Dear Mr. Vollmann:

Union Pacific Railroad Company ("UP") is submitting these comments on the Draft Environmental Impact Report ("DEIR") issued by the City of Oakland on February 26, 2021. We understand the DEIR to describe environmental impacts caused by development of a mixed use project on the approximately 50 acre Howard Terminal site (the "Project"), and the City's plan to mitigate those impacts as required by the California Environmental Quality Act (CEQA). The Project is designed to include a ballpark with a capacity of up to 35,000 persons, a 400-room hotel, a performance venue with a capacity of up to 3,500 patrons, parks, up to 3,000 residential dwelling units, up to 1.5 million square feet of commercial space, and up to 270,000 square feet of retail space. As discussed below and in prior communications about this Project, UP has serious concerns about the safety of vehicles and pedestrians which must cross UP's railroad tracks adjacent to Howard Terminal to access or leave the Project site.

UP's safety concerns are not limited to ballpark patrons who must cross the adjacent busy railroad corridor arriving and departing the ballpark, but also residents of the planned residential housing, including young children, shoppers, office and retail workers and their invitees, hotel guests and employees, restaurant patrons, and families that will use the planned parks. All of these people will enter and depart the project area and the described activities and venues, by walking, driving, or cycling across multiple sets of railroad tracks carrying freight and passenger

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trains day and night, seven days per week, traveling in both directions, and frequently stopped on what can be expected to be increasingly congested streets. The safety of the Oakland community and those outside the community who will use, work or play in the Project area requires grade separated vehicle and pedestrian access and egress locations to prevent train-related accidents and associated injuries and fatalities.

Railroad Operations in the Vicinity of Howard Terminal.

UP's main line – the tracks connected to UP's nationwide rail network – consists of multiple tracks running east and west, and serving UP's West Oakland Rail Yard, UP's Intermodal Facility, and various port terminal industrial customers. In addition, Amtrak and Capitol Corridor passenger trains operate on these same UP tracks. The tracks are located within UP's right-of-way that extends 50 feet on either side of the center line of the tracks. Exhibit 1 to this comment letter is an accurate diagram of UP's tracks and right-of-way.

The right-of-way containing UP's tracks runs on Embarcadero West – at street grade -- immediately adjacent to Howard Terminal and the proposed Project site. UP's freight trains operate on these main line tracks day and night, seven days a week. Because its trains serve industries, including the Port and its tenants and customers, train operations are not static and predictable. To the contrary, train traffic responds to the needs of customers rather than a set schedule, and may increase in coming years. Each day, as few as five or as many as 15 freight trains currently operate on these Embarcadero West main line tracks; several trains stop every day at Howard Terminal. Passenger trains currently add another approximately 60 trains per day to the rail traffic on this right-of-way.

Attached as Exhibit 2 to this comment letter is an hour-by-hour scatter plot of UP's signal activation data depicting both UP freight trains (orange dots) and passenger trains (blue dots) occupying Embarcadero West intersections between Market Street and Martin Luther King Jr. Way during the two month period January 1 to February 29, 2020. Each dot represents a train. Of particular note is not simply the sheer number of trains occupying these intersections throughout each day, but also the unpredictable, complex, and dynamic nature of UP's freight train movements and operations which have no discernable pattern. The DEIR presents a far different picture of predictable and static freight train operations having minimal impact on vehicle traffic and vehicle and pedestrian safety. As Exhibit 2 so vividly demonstrates, nothing could be further from the truth. Trains – usually multiple trains -- occupy these intersections literally during every hour of every day.

Vehicles and pedestrians can access Howard Terminal (and the proposed Project site) only by crossing this busy railroad corridor. Moreover, as the DEIR indicates, UP's freight train operations normally require that trains stop for various reasons, blocking the intersections and

traffic, for periods of ten to 45 minutes (DEIR at 4.15-39). The DEIR data showed one train stopped for 87 minutes during the representative sample period the DEIR consultant selected (DEIR at 4.15-39). UP's own signal records, consolidated into the plot attached as Exhibit 2, show an average of almost 70 train occupations of intersections per day, with "gates down" times ranging from 10 to 15 minutes per hour for ten train switching moves. *See* Traffic Engineering Report attached as Exhibit 3. The DEIR does not acknowledge the significant impacts of these occupations, much less propose meaningful mitigation measures for vehicle and pedestrian traffic. In fact, the DEIR does not report total "gate down" time during peak hours, and reports down times only at Martin Luther King Jr. Way and Market Street crossings; it does not report down times at the other five street crossings. *Id.*

Significant Impacts to Pedestrian and Vehicle Traffic Must Be Mitigated

The DEIR minimizes rail operations adjacent to the Project site, and concludes that any safety impacts are "unavoidable." But the impacts are avoidable. Rather than dismissing the entirely avoidable dangers presented by these rail corridor crossings, the DEIR should have offered mitigation measures to address them. Stopped trains block streets, preventing both access to and egress from the Project site, at various times and various locations throughout every day. By adding up to 35,000 ballpark patrons traveling to and from games, *plus* residents of new housing, employees of businesses in new office space, shoppers using the new retail shops, and many others using the amenities planned for this development Project, all crossing the railroad corridor, the Project exposes thousands of Oakland residents and visitors to unnecessary dangers. All of these new users of the Project site must not only cross the railroad corridor – twice (coming and going) – but also will add to vehicle and pedestrian congestion, especially during periods of stopped freight trains.

A. Traffic Congestion.

The DEIR predicts that 3400 additional vehicles and 3300 additional pedestrians will access the Project area during peak hours (defined as a ball game or other event at the proposed stadium). Yet the capacity of the proposed ballpark is 35,000. The DEIR does not account for 35,000 patrons, or anything close to the number of patrons who may attend the ballpark following full build-out of the Project. In other words, 3400 vehicles and 3300 pedestrians do not add up to 35,000 ballpark patrons. The DEIR is deficient in failing to address this disparity, and the worst case traffic congestion and pedestrian safety and situation if the ballpark is filled to capacity.

Even assuming only 3400 additional vehicles at peak hours, the DEIR does not address where 3400 additional vehicles will queue when a stopped train is blocking the streets leading

into the Project site, and how 3300 additional pedestrians will safely cross the railroad tracks. The DEIR proposes to mitigate these significant impacts by constructing a single pedestrian bridge over the railroad tracks at Martin Luther King Jr. Way. The DEIR contains no data to support the notion that the capacity of the single proposed pedestrian bridge will be sufficient to handle 3300 additional pedestrians who gather to access the Project area. Importantly, the DEIR focuses on the number of pedestrians accessing the site to attend a ball game, rather than departing after a game. As noted in the attached traffic engineering report (Exhibit 3), the DEIR should have evaluated conditions when ball park patrons *depart*, all at once, following a game.

As noted above, vehicles entering the Project will encounter trains repeatedly blocking intersections for several minutes. Traffic will back up from the blocked intersection to other intersections, creating a domino effect of traffic that can be expected to back up into Oakland's City Center and to freeways. The DEIR did not address, much less propose mitigation measures for, the inevitable backup of vehicle traffic trying to enter the Project area. Traffic will be a nightmare. Cross-traffic on streets parallel to Embarcadero West will become blocked by vehicles trying to reach the Project area. The only viable mitigation measure is grade separation of the entire railroad corridor.

B. Pedestrian Safety.

The DEIR also does not address where these 3400 additional vehicles will park following full build-out of the Project. If the vehicles are to be parked outside the Project area, additional pedestrians from those parked vehicles will need to cross the rail corridor, both arriving and departing. While the DEIR predicts 3300 additional pedestrians, it does not predict or account for the number of people who will park their vehicles outside the Project area and become additional pedestrians entering the Project area from their offsite parking, and then leaving to return to their vehicles.

The proposed pedestrian bridge is not a realistic solution. If the proposed pedestrian bridge is choked with pedestrians, what will other pedestrians do to depart (or access) the Project area? The DEIR fails to address this question, and this failure is significant because pedestrians on their way to or from a baseball game can be expected to bypass an already choked pedestrian bridge and attempt to cross the railroad tracks at street grade. As noted in the attached Traffic Engineer's Report (Exhibit 3), pedestrian behavior at railroad crossings – not considered in the DEIR – has been characterized in research conducted by the Volpe National Transportation Systems Center as "risky." The San Diego Union-Tribune reported on September 8, 2010, that San Diego Padres' fans whose access to a baseball game at Petco Park was blocked by a BNSF freight train crawled under the train, crawled through the train between rail cars, and tried to outrun the moving train so they could reach the other side of the tracks before the train blocked their way. (The You Tube video referenced in the article can be found at the following link:

https://youtu.be/zW9RrPUu6j0). Based on this empirical data, the City must recognize the liability it is inviting because such dangerous behavior is foreseeable. The DEIR should have offered appropriate mitigation measures to prevent such obvious dangers. However, the DEIR does not address at all the dangerous behavior one can expect to see from those willing to climb under, over, and through trains to reach or leave a ball game or other activities in the Project site.

Moreover, trains in this corridor travel both east and west, creating the risk of a "two-train scenario," where a pedestrian (or vehicle) attempts to cross tracks occupied by a train, only to encounter a second train traveling in the opposite direction. If unaware of the second train, the pedestrian or driver may be struck and killed by that second train.

In addition, the DEIR should have evaluated how departing ball park patrons who have consumed alcohol and may be impaired will cross the railroad corridor safely. Large gatherings of pedestrians attempting to cross railroad tracks are in danger, especially if impaired or impatiently seeking to reach an imminent baseball game or other event, or go home following a game. A single, narrow pedestrian bridge over the railroad tracks is insufficient to mitigate these dangers. In recognition of these and other dangers, the California Public Utilities Commission, which has jurisdiction over the safety of highway-rail crossings in California, has declared in its June 2020 "Section 190 [Streets and Highways Code] Grade Separation Program":

> "The optimal safety improvement for an at-grade highway-rail crossing is the complete separation of the railroad tracks from the roadway through construction of a grade-separation structure. Replacement of at-grade crossings with grade-separated crossings eliminates the fatalities and injuries that often result from collisions between train and highway users. It also eliminates blocking delays that cause traffic congestion, reduces the noise from train horns and automatic warning devices, and can improve emergency response times."

The DEIR proposes fencing along the right-of-way from Martin Luther King Jr. Way to Washington Street as a means of preventing pedestrians from entering the railroad tracks. Such fencing would help prevent trespassing if it constructed with the best possible materials, such as vandal-resistant expanded metal, and if it is inspected regularly and repaired promptly. However, fencing would not assure pedestrian safety at grade crossings. Grade separation would make it unnecessary for pedestrians to cross the railroad tracks at all, and assure a large measure of safety and security for those accessing and leaving the Project site. Any fencing constructed must be sufficiently tall and durable, and placed entirely outside UP's right-of-way. UP will not allow fencing or pathways on its right-of-way.

C. Vehicle Safety.

The safety of pedestrians is not the only issue the DEIR fails to address and mitigate effectively. The DEIR offers the additional cars and trucks seeking access to the Project site during peak hours no new options; they must cross the railroad tracks at grade on one of the city streets entering or leaving the Project site. If a train is stopped on the tracks adjacent to Howard Terminal, the vehicles must sit and wait, typically ten to 45 minutes, but perhaps longer depending on train traffic and operations. The failure of the DEIR to address this key ingress and egress issue carries added significance when considering the impacts on traffic away from the Project site. Queues of vehicles seeking to enter the Project site at peak hours when a train is stopped on the tracks adjacent to Howard Terminal, or during switching and other routine train operations, will back up traffic from Embarcadero West into downtown Oakland and onto Highways 880 and 980. The DEIR recognizes the traffic congestion problem the Project will create, but fails to offer a solution. Traffic throughout the City will be snarled because of the additional vehicles seeking ingress to the Project site during these peak hours, and departing the Project area *en masse* after an event. The DEIR offers no effective mitigation measures.

As noted above, people engage in risky behavior near trains and train crossings, and such behavior is not limited to pedestrians. Drivers of vehicles can be expected to try to outrun oncoming trains to reach a ball game or other the Project destination to avoid being stuck on the wrong side of a stopped train. Such drivers also can be expected to drive through intersections controlled by signal gates. Again, the DEIR does not address such foreseeable behavior or seek to mitigate its impact.

D. The Grade Separation Solution.

The most obvious mitigation measure to address these impacts and dangers is grade separation, allowing vehicle traffic to flow freely and pedestrians to cross the rail corridor safely, unencumbered by stopped trains or train operations. The DEIR briefly considers and then dismisses the benefits of grade separation to mitigate these significant traffic and safety issues.

The DEIR expresses the same recognition of safety concerns that UP discusses above, but does not resolve them with the required mitigation measure. Specifically, the DEIR (Chapter 6 Alternatives) finds that:

1. Operation of the Project (during Phase 1 and at buildout) would generate additional multimodal traffic traveling across the at-grade railroad crossings on Embarcadero that would cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to **a permanent or substantial transportation hazard.** Mitigation

Measures TRANS-3a and TRANS-3b would reduce the hazard, but not to a less-than-significant level. (DEIR 6-5)

2. **Operation of the Project would increase congestion on regional roadways** included in the Alameda County Congestion Management Plan (CMP). Specifically, conditions would degrade from Level of Service (LOS) E or better to LOS F or increase the volume to capacity (v/c) ratio by 0.03 or more for segments already projected to operate at LOS F in 2020. (DEIR 6-5)

3. **Operation of the Project** (during Phase 1 and at buildout) would generate additional multimodal traffic traveling across the at-grade railroad crossings on Embarcadero that **would contribute to a cumulative transportation hazard.** Mitigation Measures TRANS-3a and TRANS-3b would reduce this significant impact, but not to a less-than-significant level. (DEIR 6-5 to 6-6)

4. **The Project in combination with other planned development would contribute to increased congestion on regional roadways** included in the Alameda County CMP. Specifically, conditions would degrade from LOS E or better to LOS F or increase the v/c ratio by 0.03 for segments already projected to operate at LOS F in 2040. The following six segments would be affected: • I-880 in the northbound direction between 23rd Avenue and Embarcadero • SR 24 in the eastbound direction between Broadway and State Route 13 • Posey Tube in the eastbound direction between the City of Alameda and the City of Oakland • Webster Tube in the westbound direction between the City of Oakland and the City of Alameda • Market Street in the northbound direction between 12th Street and 14th Street • Market Street in the southbound direction between Grand Avenue and 18th Street. No mitigation measures identified. (DEIR 6-6)

5. **With the grade separation in Alternative 3, there could be less congestion** when a freight train passes through, since vehicles would no longer have to wait for the train to pass; however, freight trains only occur approximately five times per day between the hours of 11 a.m. and 11 p.m. (DEIR 6-34)

Having acknowledged the "permanent or substantial transportation hazard" and other dangers and consequences of increased pedestrian and vehicle traffic across the railroad corridor, as well as the increased traffic congestion that will result from the Project but would be improved by grade separation, the DEIR remarkably fails to adopt grade separation as the most effective and permanent mitigation measure. This failure makes the DEIR deficient and must be corrected. While full grade separation is the only way to assure pedestrian, bicycle, and vehicle safety, the DEIR rejects this alternative without any meaningful consideration. The reason grade separation was rejected out-of-hand is revealed in the DEIR at Section 6.4.2, which states:

> "Provision of a grade-separated crossing prior to commencement of Project construction was deemed infeasible given the length of time it would take to design, get approval for, and construct a new grade-separated crossing and the stated Project objective to complete construction of the new ballpark, together with any infrastructure required within a desirable timeframe and to maintain the Oakland Athletics' competitive position within MLB."

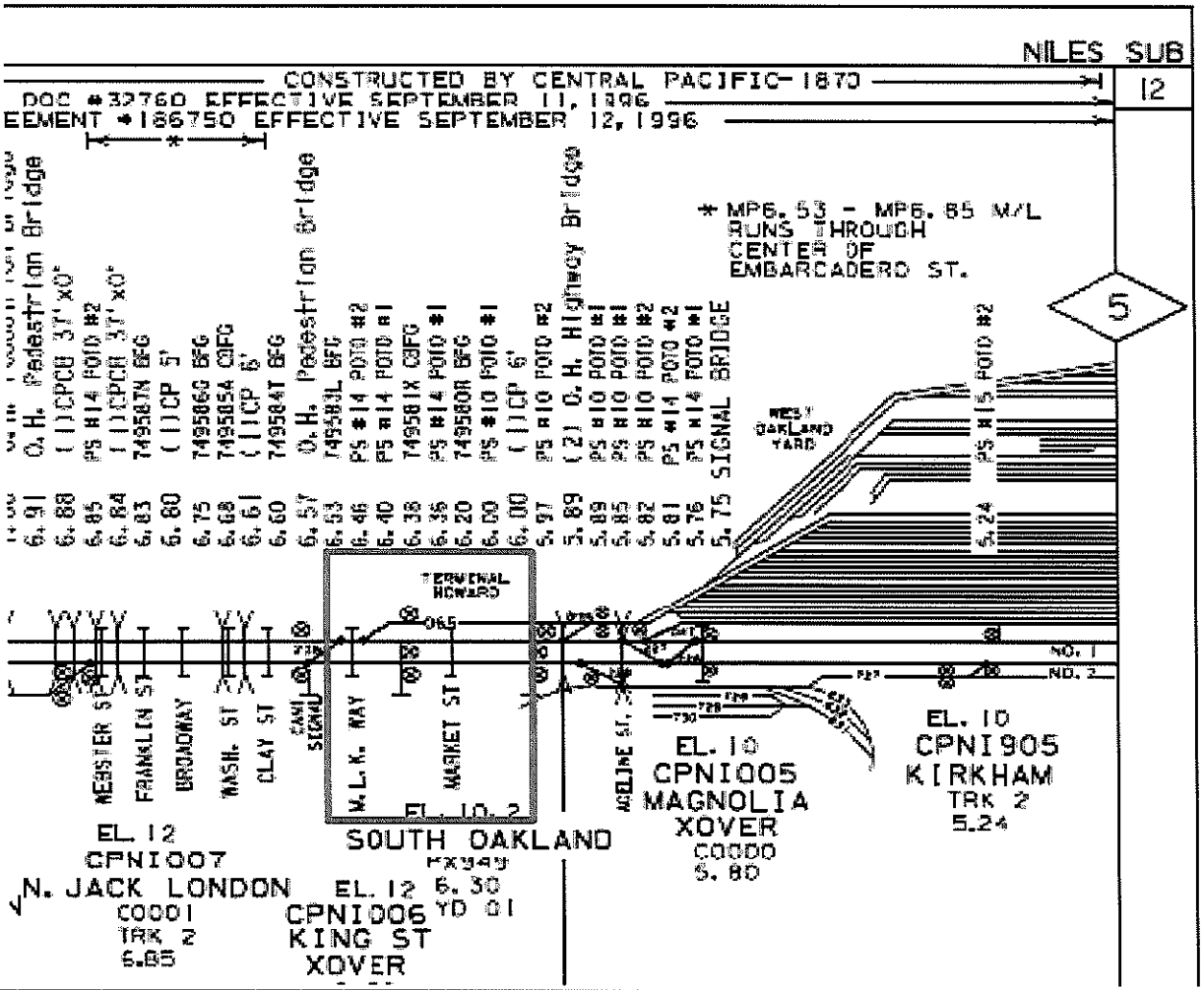
So, apparently it was the Oakland A's who made the decision to reject grade separation -- the only safe and effective means of protecting Oakland A's fans, as well as families residing in the Project area and other Oakland citizens, using Project facilities – as "infeasible" because of "the length of time it would take" to design and build, and would affect negatively "the Oakland Athletics' competitive position within MLB." However, the DEIR's evaluation of this alternative is deficient because it does not indicate how long it would take to permit and build the needed grade separation, and whether the A's decision to "maintain [its] competitive position within MLB" in exchange for the lives and well-being of those who will use Project amenities, truly makes grade separation "infeasible" as a matter of law.

Thank you for the opportunity to comment on the DEIR for this significant proposed Project. We hope that UP's concerns for rail safety generally, and for the safety of pedestrians, bicyclers, and drivers who use the Project site will be addressed in a permanent and comprehensive way through grade separation.

Very truly yours,

Robert C. Bylsma

EXHIBIT 1


NILES SUB
CONSTRUCTED BY CENTRAL PACIFIC-1870
12
DOC #32760 EFFECTIVE SEPTEMBER 11, 1996
EEMENT #186750 EFFECTIVE SEPTEMBER 12, 1996
* MP6.53 - MP6.85 M/L RUNS THROUGH CENTER OF EMBARCADERO ST.
5
O.H. Pedestrian Bridge
O.H. Pedestrian Bridge
O.H. Highway Bridge
SIGNAL BRIDGE
WEST OAKLAND YARD
TERMINAL BOWARD
OAK
WEBSTER ST
FRANKLIN ST
BROADWAY
WASH. ST
CLAY ST
CANAL SIGNAL
W.L.K. WAY
MARKET ST
ADELINE ST.
NO. 1
NO. 2
EL. 12
CPNI007
N. JACK LONDON
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TRK 2
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CPNI905
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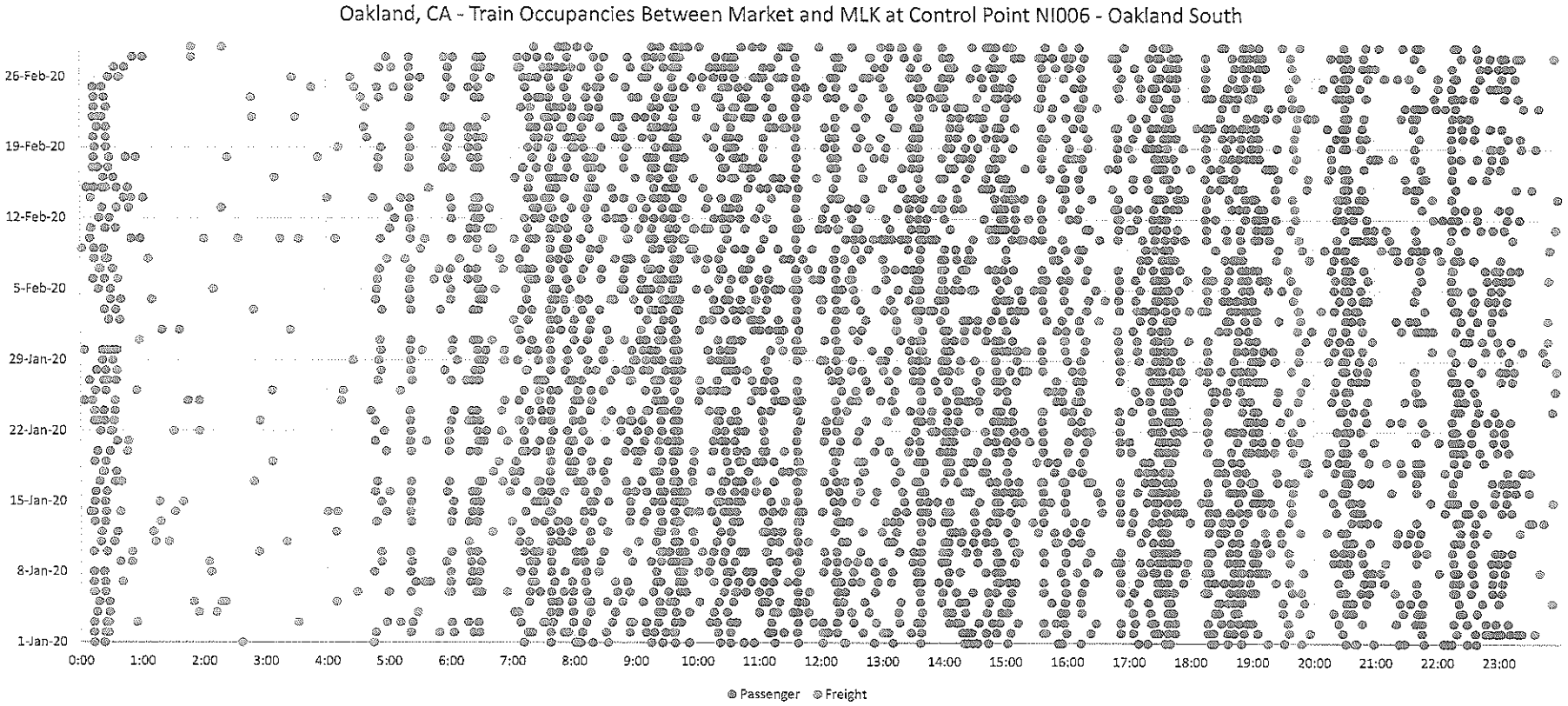
EXHIBIT 2


Oakland, CA - Train Occupancies Between Market and MLK at Control Point NI006 - Oakland South
26-Feb-20
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12-Feb-20
5-Feb-20
29-Jan-20
22-Jan-20
15-Jan-20
8-Jan-20
1-Jan-20
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EXHIBIT 3

RAILPROS

To: Peggy Ygbuhay, UPRR

From: Karen Hankinson, PE, TE

Subject: Waterfront Ballpark District at Howard Terminal
Draft Environmental Impact Report Review

Date: April 27, 2021

Per Union Pacific Railroad's request, RailPros has reviewed Chapter 4.15: Transportation and Circulation, and Chapter 6: Alternatives, of the Waterfront Ballpark District at Howard Terminal Draft Environmental Impact Report (DEIR), which was released for public comment on February 26, 2021. Chapter 4.15 evaluates the transportation-related impacts resulting from the proposed Howard Terminal Ballpark development. Chapter 6 evaluates other alternatives that were studied as part of the environmental process. Additional transportation reference materials were released for review by the City of Oakland on March 26, 2021. RailPros has also reviewed the relevant documents from those reference materials which include the Oakland A's Howard Terminal Project Railroad Corridor and Grade Crossing Improvements study, referred to as the "Railroad Study" in the DEIR, the Howard Terminal – Collision History Analysis memo, and the Howard Terminal – CMP and MTS Analysis memo. The following summarizes our findings related to the project's transportation analysis.

1.0 The Transportation Analysis is Deficient

The DEIR Transportation Analysis and accompanying appendix documents are deficient in the following areas:

- The DEIR crash evaluation does not include non-train related incidents. In the past 5 years, 2016-2021, there have been two vehicle/traffic accidents, non-train related, one at Webster Street and one at Broadway. The crash evaluation also does not account for incidents with trains between crossings. In the past 5 years, 2016-2021, there was one such incident near Market Street. Given that the trains operate in the middle of the roadway from Clay Street to Webster Street there are likely to be crashes that are not reported on the FRA incident report, which are still relevant to the railroad safety analysis. Furthermore, UPRR data includes reports of vehicles on the tracks, which includes any vehicle stuck on the tracks that does not result in an incident, but which impacts train operations. In the last 5 years there have been 214 vehicle-on-track reports from Market Street to Broadway. The crash analysis should account for all incidents along the track corridor and reference surrogate safety data, where available, to accurately represent the existing safety issues along this corridor.
- The DEIR railroad analysis evaluates peak conditions for ball games, defined as 11 AM to 11 PM, but does not evaluate other peaks that would occur due to the proposed mixed-use

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nature of the project. The weekday AM peak, 7 AM to 9 AM is also worth analyzing because of the other proposed uses on the site and adjacent land uses.

- The DEIR study conducted a week-long observation of railroad gate activities at the Market Street and Martin Luther King Jr. Way crossings, but not at the other crossings east of the site, which are also expected to experience an increase in use and are listed as study intersections for the motor vehicles evaluation (i.e. Clay Street, Washington Street and Broadway). The analysis should be consistent in its evaluation of impacts between modes of transportation and include all railroad crossings that are expected to experience significant impacts due to the proposed development.
- Median gate down times are reported to exceed 3 minutes. According to UPRR signal records, UPRR has approximately 70 occupations of traffic intersections per day with gates down ranging from 6 minutes up to 2.5 hours for train switching moves. The analysis should review the accuracy of the data collection and ensure existing conditions are accurately reported in the DEIR.
- The study does not evaluate the total gate down time during the peak hours which may significantly impact the effective capacity of study intersections. An accurate representation of capacity should be analyzed to most accurately indicate existing conditions and identify the impacts of the proposed development.
- The DEIR Gate down time data is summarized for a period of one week. Such data is not granular enough to account for the high traffic peaks anticipated after events. This data should be evaluated at least by hour or by 15-minute increments to determine actual intersection capacity during peak roadway demand times.
- The statement in Chapter 6 of the DEIR that freight trains pass next to the project site only five times per day does not account for train switching operations in Union Pacific's adjacent West Oakland Yard. Such switching operations impact traffic and should be included in any evaluation of transportation-related impacts of the project.
- The capacity analysis in the appendix uses a default per-lane capacity of 800 vehicles per hour (vph) for surface streets. However, some of these surface streets include railroad crossings that are regularly occupied by trains. The analysis should consider the reduced capacity caused by occupied crossings.
- The capacity analysis results presented for Market Street in the appendix start at 6th Street. The capacity analysis of impacted roadways should account for impacts from the project site to the outer limits of the project, and therefore should include the segment from Embarcadero West to 6th Street.
- The capacity analysis at Broadway shows available vehicle capacity that could be used if other crossings were closed, and traffic was diverted to Broadway. The analysis should review the feasibility of crossing consolidation, given some north-south roadways in the area have available capacity.
- The proposed traffic signals and queue prevention system at Market Street and Martin Luther King Jr. Way will extend the length and duration of railroad approaches, further reducing the capacity of these intersections for the throughput of vehicles, and also will

require interconnection to the railroad's signals system. The effective capacity of intersections controlled by these proposed signals should be evaluated to determine adequate mitigation strategies.

- The study states "Mitigation Measures TRANS-3a and TRANS-3b would improve safety at existing at-grade crossings but would not reduce the impact to less than significant and are subject to review and approval by another agency – the CPUC." The DEIR does not indicate what improvements have been explored and which improvements could reduce the impacts to less than significant?
- The analysis does not address the fact that there are multiple rail uses in this corridor that could occur simultaneously because of the multiple tracks, e.g. freight and/or passenger at speed, and freight switching. Simultaneous multiple uses could result in a "second train" scenario in which vehicle or pedestrian users think the crossing activation signals only one train. This scenario was the cause of a 2017 incident. The description of that incident states, "2 trespassers went around gates in front or behind 1st train, struck by 2nd train." The analysis should consider the consequences of, and potential mitigation measures for, incidents that can occur with multiple railroad uses and multiple tracks, especially with the significant increase in the number of pedestrian and bike users anticipated at these crossings.
- The pedestrian/bicycle/vehicle volumes in Table 4.15-42 present arrival volumes; However, the true worst-case condition would be departure following an event because patrons tend to exit in mass within a short period of time after the event. Arrivals to an event typically occur over several hours. Additionally, crowds following an event can be expected to include persons who have consumed alcohol and are impaired and less able to make critical-thinking decisions. The bottom line is that expected departure volumes should be studied, to analyze more realistically the likely number of departing patrons and their condition, so that the true magnitude of impacts of the proposed development are known and appropriately studied and mitigated.
- As parking at Howard Terminal transitions to off-site for full project buildout conditions, pedestrian traffic over the crossings along Embarcadero West will increase. However, the analysis and improvements described in the DEIOR for pedestrian traffic seem to be focused on near-term impacts. The analysis should further evaluate how full buildout conditions may call for different mitigation measures.
- The analysis does not evaluate how to utilize existing or proposed pedestrian overcrossings to reduce railroad safety hazards. As an example, the Howard Terminal Pedestrian Routing (Figure 4.15-19) figure does not show the existing or proposed pedestrian bridges. Washington Street is shown in Table 4.15-42 as having a peak hour pedestrian volume of 4,350, but the study shows these pedestrians crossing at-grade despite having a nearby pedestrian bridge. Furthermore, the same table shows 240 pedestrians in the peak hour at Clay Street and does not show Jefferson Street at all, yet a pedestrian bridge is proposed at Jefferson Street or Clay Street. The analysis should evaluate how the existing and proposed pedestrian overcrossings can be used to maximize safety of the corridor.

- Pursuant to FHWA (https://safety.fhwa.dot.gov/hsip/xings/com_roaduser/fhwasa18040/chp3.cfm), "Closure of a crossing provides the highest level of crossing safety compared to other alternatives, because the point of intersection between highway and railroad is removed. However, the effects of closure on highway and railroad operations may not always be completely beneficial. The major benefits of crossing closure include reductions in certain types of collisions and decreased delays to highway and rail traffic, as well as lowered maintenance costs:
  - "The following four types of delay can occur on highway traffic by crossings:
    - "Presence of crossing–This delay occurs regardless of whether a train is approaching or occupying the crossing. Motorists usually slow in advance of crossings so that they can stop safely if a train is approaching. This is a required safe driving practice in conformance with the Uniform Vehicle Code, which states '...vehicles must stop within 15 to 50 feet from the crossing when a train is in such proximity so as to constitute an immediate hazard.' Therefore, the existence of a crossing may cause some delays to motorists who slow to look for a train.
    - "Traffic control devices–Road users are subject to delay at passive crossings with STOP or YIELD signs as well as at active crossings when traffic control devices are actuated.
    - "Trains blocking crossings–Trains may stop and block a crossing in response to a train signal indication or during switching operations.
    - "Special vehicles–Under the Federal Motor Carrier Safety Administration (FMCSA) regulations, all vehicles transporting passengers and trucks carrying many types of hazardous materials must stop prior to crossing tracks at a highway-rail crossing (49 CFR 392.10). If following vehicles do not anticipate such stops and/or fail to maintain safe stopping distance, collisions may result."
  - The analysis of this corridor should fully review the applicability of the FHWA guidance INCREA for grade separation. Specifically, the following characteristics presented in the FHWA Highway-Rail Crossing Handbook, Third Edition should be reviewed for relevance in this corridor: 1) Annual Average Daily Traffic exceeds 30,000; 2) An average of 30 or more trains per day; 3) The expected accident frequency for active devices with gates, as calculated by the USDOT Accident Prediction Formula including five-year accident history, exceeds 0.5 (per year). 4) Vehicle delay exceeds 30 vehicle hours per day with consideration for cost effectiveness.
- The Railroad Study analysis is unclear on how future increased rail service was forecasted.
- The Railroad Study states, "These proposed changes are intended to move the vehicles in and out of the development area as safely and efficiently as possible." The proposed improvements from that study seem to be carried over to the DEIR. The analysis and proposed improvements should address the safety of all users (pedestrians and bicycles).
- The Railroad Study describes a pedestrian overpass that is 18-20 feet wide. Such a pedestrian bridge does not seem sufficient for the pedestrian volumes that are expected

to use the facility. The analysis should further review the capacity of such a structure, measured specifically against post-game pedestrian volume peaks.

- In the Railroad Study, the "count of gate down time" data is unclear. UPRR records show 100 activations per day while the data in the report appears to show 150 activations in a week. This data should be reviewed for accuracy.
- The existing data reported in the Railroad Study shows no bicycle and pedestrian traffic at Market Street and Martin Luther King Jr. Way. This is unrealistic. Furthermore, the Railroad Study, projects 40% of bicycle and pedestrian trips shifting to these crossings despite non-existent to low existing volumes. The DEIR should justify assumed changes in trip distribution before incorporating the improvements proposed by the Railroad Study.
- The queuing figures presented in the appendix of the Railroad Study show queuing only at Market Street and do not show Martin Luther King Jr. Way. The DEIR should evaluate queuing at Martin Luther King Jr. Way prior to incorporating the improvements proposed by the Railroad Study.
- The 2017 "second train" accident reported at Washington Street (which actually occurred at Clay Street) highlights one of UPRR's primary concerns with the project as currently proposed. The analysis should evaluate how to prevent this type of incident in the future given that pedestrian traffic is predicted to increase with the proposed development.
- The DEIR and appendix do not sufficiently address the potential for crossing closures to reduce impacts. A more detailed closure analysis should be conducted in accordance with the California Manual on Uniform Traffic Control Devices, 2014 Edition, Part 8, 8A.05, Grade Crossing Elimination.
- Chapter 6 of the DEIR states, "The ability to access the site via an overcrossing could mean that more vehicles would choose this route to travel to the site...." The statement misrepresents the potential use of an overcrossing. Although an overcrossing could make vehicular access more attractive, the project site's ability to accommodate additional vehicles is at least partially dependent on available parking which is proposed to move off-site following full buildout.
- The analysis of a "no at-grade crossings" alternative in Chapter 6 evaluates removal of only one at-grade crossing via a grade separation at Market Street. This falls short of a true "no at-grade crossing analysis," which should include evaluation of how grade crossings can be consolidated, and overcrossings prioritized as the safest means of accessing the site. The analysis should include evaluation of how circulation patterns might change if grade crossings are eliminated through closure or grade separation.
- The analysis of a "no at-grade crossings" alternative in Chapter 6 deems elimination of both Market St and Martin Luther King Jr. Way as infeasible, but only considers grade separation of both. It does not consider closure of one and grade separation of the other.
- Chapter 6 states that providing two grade separations at Market Street and Martin Luther King Jr. Way would result in increased pedestrian and bicycle use at other crossings on the corridor. This does not consider the possibility of closing some or all at-grade crossings

through Broadway to make a multi-modal overpass at Market Street and/or Martin Luther King Jr. Way more attractive to bicycles and pedestrians.

2.0 The Comparison of Alternatives Does Not Accurately Reflect the Benefits of Grade Separations and Crossing Closures

- Under the comparison of alternatives in Chapter 6, the DEIR concludes that emissions would not be reduced with a grade separation. This conclusion fails to account for the increased emissions generated by vehicles stopping at occupied crossings.

- Under the comparison of alternatives in Chapter 6, the conclusion that grade separation would reduce emissions but still be significant and unavoidable fails to recognize the effectiveness of a grade separation if other accesses are appropriately controlled.

3.0 The Embarcadero West Corridor Poses Major Access Concerns

The proposed project will increase existing Embarcadero West Corridor access challenges in the following ways:

- Market Street is identified as a primary vehicle access point, but it is also occupied regularly by trains. The analysis should further evaluate access to/from the site when trains occupy this crossing.
- Middle Harbor Road is identified as an emergency access/egress route. However, this emergency access/egress analysis is flawed given the access is over Port-owned Embarcadero West as well as Port-owned private at-grade crossings. Alternative access routes should be considered that are not likely to be blocked by trains, such as grade separated crossings.

4.0 The Embarcadero West Corridor Poses Major Safety Concerns Especially for Pedestrians and Bicycles

The existing Embarcadero West Corridor presents safety concerns, especially for pedestrian and bicycle traffic. These concerns may be exacerbated by the proposed project if not appropriately mitigated. The following summarizes our concerns:

- The designated bicycle/pedestrian routes are not routed over existing and/or proposed pedestrian overcrossings. The analysis should review how pedestrians and bicyclists could be channelized to the safest paths of travel, i.e., overcrossings.
- Fencing is proposed from Martin Luther King Jr. Way to Washington Street, but at-grade crossings remain. This fencing mitigates the trespassing issue between crossings but does not address the safety issues at the grade crossings. It would be safer to close crossings in this section to all non-train modes, and use existing, proposed and additional pedestrian overpass bridges to facilitate the safe movement of pedestrians and bicycles.

- The project is expected to increase significantly pedestrian traffic, but the DEIR calls for pedestrians to continue to cross the railroad tracks at-grade. The analysis should evaluate alternatives that would allow pedestrians of all abilities safe access to and egress from the site.
- Martin Luther King Jr. Way is identified as a primary route of bicycle and pedestrian access. It is also routinely occupied by trains. Furthermore, a cycle track is included at this crossing adding complexity to a regularly occupied crossing. The analysis should evaluate how pedestrians and bicyclists may behave at a crossing that is occupied by trains for extended periods and consider alternative, safer access.
- Switching operations at West Oakland Yard west of the project site and Amtrak trains stopped at the station have the potential to activate crossings without trains being present at the crossing. This can lead to bicycles and pedestrians violating railroad signals. At other locations where crossings are frequently occupied, pedestrians have been observed crossing between stopped or slowly moving trains. The analysis should evaluate how pedestrians and bicyclists may behave at a crossing that is occupied for extended periods and consider alternative, safer access.
- Recent research has found that pedestrian behavior at or adjacent to railroad tracks can be characterized as risky. See Engineering Design for Pedestrian Safety at Highway-Rail Grade Crossings Report (2016), Cambridge, MA: Volpe National Transportation Systems Center.
- As proposed, the access issues surrounding the site could make parking along Middle Harbor Road and Adeline Street and walking to the site a desirable access route for patrons. Although Middle Harbor Road is designated as an emergency access/egress for vehicles, nothing would prevent pedestrians from using the private roadway and private crossings to access the site from Adeline Street. The analysis should evaluate how to prevent or restrict pedestrian access through private property and over private crossings.
- The proposed pedestrian overpass concepts described in the DEIR would require users to climb stairs or ramps on both sides of the pedestrian bridge. Although this concept is likely the safest path over the tracks, it may be viewed by many pedestrians as too difficult or indirect, leaving patrons to choose to cross the railroad tracks at grade. The analysis should review options to overcome the potential inconvenience of a pedestrian overpass.

5.0 The Proposed Improvements Create Safety Concerns

Our evaluation of the proposed concepts indicates that some of the improvements may increase existing and/or introduce new safety concerns in the following ways:

- The proposed configuration of the Martin Luther King Jr. Way crossing creates an unsafe situation. The concept would limit sight distance of traffic signals, railroad signals and eastbound trains. Mitigations proposed by the project should consider designs that address existing safety issues without creating new ones.

- The concepts presented in the Railroad Study, which appear to be incorporated into the DEIR, show westbound Embarcadero West inside the gates on the north side of the crossings at Clay Street, Washington Street and Broadway. Although the channelizing island directs vehicles away from the crossing, drivers could still circumvent the gates and turn left through the crossing. Furthermore, the proposed layout creates a pathway inside the warning devices for non-vehicular crossing users to bypass all warning devices. These layouts should not be considered a supplemental safety measure for the proposed quiet zone. The analysis should evaluate potential closure of some or all these crossings.
- The study states, "Market Street, Martin Luther King Jr. Way, Jefferson Street, Clay Street, Washington Street, Broadway, Franklin Street, Webster Street and Oak Street were categorized as Tier 1 crossings, the highest priority for improvement to address safety," yet they are not considered for closure in a project that will increase their exposure. Furthermore, they are considered for quiet zone status, which is inappropriate for a mandatory railroad safety element, i.e., train horns. The analysis should evaluate the safest possible options for the highest priority crossings.

6.0 The Proposed Improvements Are Infeasible

The concepts presented are potentially infeasible given the constraints of the Embarcadero West Corridor in the following ways:

- Four-quad gates are proposed at several crossings. This improvement is infeasible due to the required offset from the tracks unless Embarcadero West is narrowed in both directions or east-west traffic is eliminated. Specifically, placing railroad warning devices north of Embarcadero West will not work with UPRR's railroad signaling system. The study should evaluate the feasibility of proposed mitigation measures.
- Proposed fencing along the tracks must be placed off of the railroad right-of-way and must not restrict UPRR's ability to maintain its tracks/equipment. The analysis should evaluate how to minimize impacts to railroad maintenance and operations.
- In accordance with the Union Pacific Railroad-BNSF Railway Guidelines for Railroad Grade Separation Projects (2016), The Railroad does not allow Trails parallel to the track on Railroad right-of-way and does not permit the use of Railroad Access Roads for trail use.

7.0 Draft Environmental Impact Report Is Inconsistent

The Draft Environmental Impact Report presents inconsistencies in the following ways:

- The document appears to have switched the Martin Luther King Jr. Way and Market Street crossing summaries. The analysis should ensure that existing conditions are correctly reflected in the document.
- The study states that Embarcadero West will be closed between Market Street and Martin Luther King Jr. Way which is inconsistent with the concept presented in Figure 4.15-35 that

shows East/West movements along Embarcadero West connecting to North/South Martin Luther King Jr. Way. The document should accurately state the intentions of the project.

- The crossing concept for Market Street is substandard and should be updated to show greatest impact. The concept shows:
  - Substandard median width for median gates. UPRR's standard width is 10' minimum.
  - Gates parallel to the tracks rather than perpendicular to the roadway.

  These substandard elements result in a concept that does not reflect the true impacts of the proposed improvements. If substandard design is being proposed, the DEIR must account for the worst-case impacts.
- The DEIR states that there have been no train crashes at the Market Street crossing between 2015 and 2019. However, the Collision History Memo states that there was one collision at this crossing in 2019. The analysis should review and accurately address all crashes in the corridor.

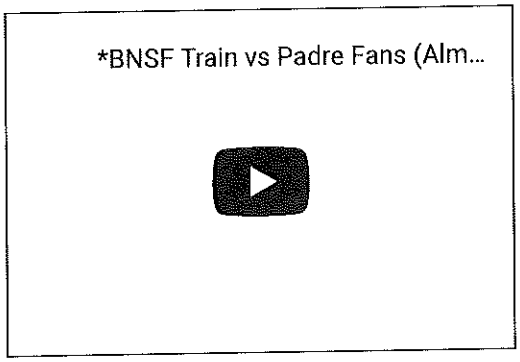
EXHIBIT 4

Video shows Padres fans make risky railroad track crossings

By DEBBI BAKER

SEP. 8, 2010 10:13 AM PT

Padres fans not deterred by train on tracks



Padres fans aren't stopped by a train that stopped on the tracks in front of Petco Park during a game this summer. Police are working to educate pedestrians about the dangers of crossing over and under the trains, which are required to stop periodically for train operations.

As the Padres game got underway Wednesday evening, police conducted an education blitz to warn the public about the dangers of illegally crossing railroad tracks near the stadium downtown.

From 5:30 to 7:30 p.m., officers with San Diego and Harbor police and BNSF Railway Company targeted trespassers who use the 5th Avenue railroad crossing and often go around, under and over trains that are stopped on the tracks, said Harbor Police Sgt. Dave Fouser.

The highly-trafficked crossing is across from the convention center and near the Gaslamp trolley station. It is especially busy during Padres home games when thousands of baseball fans head to Petco Park.

BNSF train operations require that the freight trains stop on the tracks for a short time everyday, which blocks the crossing, Fouser said.

People who don't want to wait find other means to go around and ignore the warnings lights, crossing gates and bells creating hazards for themselves and others.

Officers on Wednesday handed out rail safety material. No citations were issued. There was also an informational booth at the stadium.

The effort is the project of Operation Lifesaver, a nonprofit organization aimed at reducing the number of incidents at rail crossings.