

**ATTACHMENT E:**

**Measure DD DEIR: Summary of Impacts and Mitigation Measures**

Levels of Significance Key: SU = Significant and Unavoidable		S = Significant	LTS = Less-Than-Significant
Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
<b>A. Land Use</b>			
LAND-1 (Group 2): Installation of the Hanson Aggregate Trail Connection could result in a land use compatibility conflict.	S	LAND-1(Group 2): A steel canopy shall be designed by a registered professional engineer, the design shall be reviewed by a safety professional, and the canopy shall be installed by the City under the conveyor belt to protect pedestrians using the trail. The canopy shall be installed prior to the opening of this segment of the Waterfront Trail. Implementation of this mitigation measure would reduce Impact LAND-1 to a less-than-significant level. However, this measure is dependent upon the City successfully entering into an agreement with the property owner to construct the steel canopy. Because the mitigation measure is needed to prevent a safety hazard as well as a land use conflict, the City shall not construct the trail across the property without including the protective canopy in the project design while the conveyor is in operation on the site. Should the property owner decline to allow the City to construct the canopy, the City shall not construct the trail on the property and instead reroute it onto City streets until such time as the use of the conveyor ceases or the property owner agrees to allow the City to construct the canopy.	LTS
<b>B. Planning Policy</b>			
<i>There are no significant Planning Policy impacts.</i>			
<b>C. Transportation, Circulation and Parking</b>			
TRANS-1 (Group 1): For Existing Conditions Plus the Project, the Santa Clara Avenue/Grand Avenue intersection would degrade to LOS E during the PM peak hour.	S	TRANS-1(Group 1): The City shall optimize the signal timing at the Santa Clara Avenue/Grand Avenue intersection to improve traffic operations during the PM peak hour. Signal optimization is expected to improve the intersection to LOS D.	LTS
TRANS-2 (Group 1): For Existing Conditions Plus the Project, the average vehicle delay at the Lake Park Avenue/Lakeshore Avenue intersection would increase by 38.6 seconds during the AM peak hour to a LOS F.	S	TRANS-2 (Group 1): The City shall make the following modifications at the Lake Park Avenue/Lakeshore Avenue intersection to improve traffic operations: 1. Convert the center northbound lane on Lakeshore Avenue from a through movement to a left turning movement and provide split signal phasing for eastbound and westbound Lakeshore Avenue traffic movements; and 2. Optimize traffic signal timing. This mitigation measure would reduce the total intersection average vehicle delay by 51.6 seconds during the AM peak hour, although the intersection would remain at LOS E, as it is under the existing condition. After project mitigation, the intersection would operate at a total average vehicle delay that would be 13 seconds lower than the delay with no project and no mitigation.	LTS

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<p><u>TRANS-3 (Group 1)</u>: For Existing Conditions Plus the Project, the average vehicle delay at the MacArthur Boulevard/Lakeshore Avenue intersection would increase by 13.8 seconds during the PM peak hour where the LOS is rated F without the project.</p>	S	<p><u>TRANS-3 (Group 1)</u>: The City shall make the following modifications at the MacArthur Boulevard/Lakeshore Avenue intersection to improve traffic operations:</p> <ol style="list-style-type: none"> <li>1. Convert the combination left-through lane on eastbound MacArthur Boulevard to a through-only lane, resulting in one left-turn lane, two through lanes and one combination through-right turn lane;</li> <li>2. Convert the center southbound lane on Lakeshore Avenue from a through movement to a combined through-left turning movement and provide split signal phasing for Lakeshore Avenue traffic movements; and</li> <li>3. Optimize traffic signal timing.</li> </ol> <p>This mitigation measure would reduce the total intersection average vehicle delay by 39.3 seconds during the PM peak hour, and the intersection would operate at LOS E. After project mitigation, the intersection would operate at a total average vehicle delay that would be 25.5 seconds lower than the delay with no project and no mitigation.</p>	LTS
<p><u>TRANS-4 (Group 1)</u>: For Existing Conditions Plus the Project, the average vehicle delay at the 27<sup>th</sup> Street/Bay Place/Harrison Street intersection would increase by 4.6 seconds during the AM peak hour where the LOS is rated F without the project.</p>	S	<p><u>TRANS-4 (Group 1)</u>: The City shall optimize the signal timing at the 27<sup>th</sup> Street/Bay Place/Harrison Street intersection to reduce the total intersection average vehicle delay by 49.9 seconds during the AM peak hour. Although with mitigation the intersection would remain at LOS F, it would operate at a total average vehicle delay that would be 45.3 seconds lower than the delay with no project and no mitigation.</p>	LTS
<p><u>TRANS-5 (Group 1)</u>: Under Cumulative Plus Project Conditions, the Santa Clara Avenue/Grand Avenue intersection would degrade to LOS F during the PM peak hour.</p>	S	<p><u>TRANS-5 (Group 1)</u>: Implementation of Mitigation Measure TRANS-1 would optimize the signal timing at the Santa Clara Avenue/Grand Avenue intersection and improve traffic operations to LOS E (73.9 seconds average delay) during the PM peak hour for the project under cumulative conditions. No other feasible mitigation measures were identified at this intersection as further improvements would entail widening of the roadway and require acquisition of right of way. Widening would also have adverse impact on the pedestrian environment at this heavily used intersection. After mitigation, the cumulative impact would remain significant and unavoidable.</p>	SU

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<p><u>TRANS-6 (Group 1)</u>: Under the Cumulative Plus Project Conditions, the MacArthur Boulevard/Grand Avenue intersection would degrade to LOS F during the PM peak hour.</p>	S	<p><u>TRANS-6 (Group 1)</u>: The City shall make the following modifications at the MacArthur Boulevard/Grand Avenue to improve traffic operations:</p> <ol style="list-style-type: none"> <li>Convert the center southbound lane on Grand Avenue from a through movement to a combined through-left turning movement and provide split phasing for northbound and southbound Grand Avenue traffic movements; and</li> <li>Optimize traffic signal timing for both AM and PM peak periods.</li> </ol> <p>The modifications at the MacArthur Boulevard/Grand Avenue intersection described above would reduce the delay from 120.2 seconds to 81.7 seconds under the Cumulative Plus Project Conditions, but the intersection would remain at LOS F during the PM peak hour. No other feasible mitigation measures were identified at this intersection as further improvements would entail widening of the roadway and require acquisition of right of way. Widening would also have adverse consequence for pedestrians. After mitigation, the cumulative impact of would remain significant and unavoidable.</p>	SU
<p><u>TRANS-7 (Group 1)</u>: Under the Cumulative Plus Project Conditions, the Lake Park Avenue/Lakeshore Avenue intersection would degrade to LOS F during the AM peak hour.</p>	S	<p><u>TRANS-7 (Group 1)</u>: The City shall implement Mitigation Measure TRANS-2 and make the following modifications at the Lake Park Avenue/Lakeshore Avenue intersection to improve traffic operations:</p> <ol style="list-style-type: none"> <li>Add a left-turn lane from the freeway off-ramp on the westbound Lake Park Avenue approach to the intersection; and</li> <li>Optimize traffic signal timing.</li> </ol> <p>The modification at the Lake Park Avenue/Lakeshore Avenue intersection described above would reduce the total intersection average vehicle delay by 115.3 seconds during the AM peak hour, although the intersection would operate at LOS E. After the project mitigation, the intersection would operate at a total average vehicle delay that would be 12.3 seconds lower than the delay under existing conditions with no project and no mitigation. Implementation of this mitigation measure would reduce the impact to a less-than-significant level. However, the City's ability to add the left-turn lane from the freeway ramp depends upon acquisition of right-of-way and an encroachment permit from Caltrans. Because the City cannot guarantee Caltrans' approval, the City is taking the conservative approach of considering this impact significant and unavoidable until sufficient right-of-way can be acquired and Caltrans approves an encroachment permit.</p>	SU

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TRANS-8 (Group 1): Under the Cumulative Plus Project Conditions, the 10 <sup>th</sup> Street/Oak Street intersection would degrade to LOS F during the AM peak hour.	S	TRANS-8 (Group 1): The City shall optimize the signal timing (modify the phase splits) at the 10 <sup>th</sup> Street/Oak Street intersection to improve traffic operations. Implementation of the recommended mitigation would improve the intersection to LOS D during the AM peak hour.	LTS
TRANS-9 (Group 1): Under the Cumulative Plus Project Conditions, the 7 <sup>th</sup> Street/Oak Street intersection would degrade to LOS F during the PM peak hour.	S	TRANS-9 (Group 1): The City shall optimize the signal timing (modify the phase splits) at the 7 <sup>th</sup> Street/Oak Street intersection to improve traffic operations. Implementation of the recommended mitigation would improve the intersection to LOS D during the PM peak hour.	LTS
<b>D. Air Quality</b>			
<i>There are no significant Air Quality impacts.</i>			
<b>E. Noise</b>			
NOISE-1 (Group 1): Pile driving would generate noise levels that exceed the City's long-term construction noise standards.	LTS/S	The City's Standard and Uniformly Applied Conditions of Approval would reduce the impacts to less-than-significant levels. However, not all noise-reducing measures may be feasible in all cases and, if not, the impact would be significant and unavoidable.	SU
<b>F. Biological Resources</b>			
BIO-1 (Group 2): Construction of an observation structure at the 66 <sup>th</sup> Avenue Gateway site may impact state or federally listed tidal marsh species.	S	BIO-1a (Group 2): Ground disturbance in the vicinity of Damon Marsh shall be conducted only when high tides are not at their winter or summer extremes, to reduce the likelihood that tidal marsh rails and SMHM will be present in the construction footprint. Ground disturbance shall be avoided during the highest tides of June-July and December-January (± one week each month).	LTS
		BIO-1b (Group 2): Prior to ground disturbance, a qualified biologist experienced with SMHM exclusion procedures shall prepare a site-specific SMHM avoidance plan. At a minimum, the plan shall include (1) the installation of silt fencing around the entire portion of the work area (that is within 100 feet from the edge of the marsh) to exclude SMHM from entering, (2) the clearing of all ground vegetation within the fenced area, and (3) the relocation to Damon Marsh of any SMHM found during the vegetation removal effort. Construction work shall start as soon as possible (and no longer than one week) after vegetation has been cleared. All exclusion measures and initial ground disturbance activities shall be monitored by a biologist, who has the necessary state and federal permits to handle and relocate SMHM.	

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BIO-1 <i>Continued</i>		<b>BIO-1c (Group 2):</b> To avoid potential disturbance to nesting tidal marsh rails, construction of the observation structure shall be conducted during the non-breeding season (September 1 through January 31), unless prior surveys indicate that marsh habitat within 100 feet of the construction footprint is not part of an active rail breeding territory. Such surveys must be conducted in accordance with a project-specific survey protocol prepared in accordance with the USFWS and CDFG guidelines.	
<b>BIO-2 (Group 2):</b> Construction of the pile-supported boardwalks along the Waterfront Trail may impact fisheries resources within the Oakland Inner Harbor.	S	<b>BIO-2 (Group 2):</b> To avoid adverse impacts to Pacific herring, federally listed salmonids (chinook salmon, coho salmon, and steelhead), and EFH, pile driving shall occur within the June 1 to November 30 work window in accordance with NMFS guidelines. <sup>1</sup> Any pile driving occurring outside this period will require informal or formal consultation with the NMFS (for listed salmonids and EFH) and CDFG (for Pacific herring) prior to the Corps' issuance of a Section 404 permit for impacts to waters of the U.S.	LTS
<b>BIO-3 (Groups 1, 2, and 4):</b> Construction of some components within the Lake Merritt and Lake Merritt Channel, Waterfront Trail, and City-wide Creeks groups may impact waters of the U.S. and State.	S	<b>BIO-3a (Groups 1, 2, and 4):</b> All Measure DD-funded activities within jurisdictional waters shall first obtain authorization from the appropriate agencies (Corps, Water Board, CDFG, and BCDC). At a minimum, each activity will likely require a Section 404 Corps permit and Section 401 water quality certification from the Water Board. Creek restoration activities may also require a CDFG Lake or Streambed Alteration Agreement, depending on site-specific conditions. Construction of the fixed pier boardwalks along the Waterfront Trail will require BCDC approval since it proposes construction over and filling of Bay waters (i.e., concrete piers).	LTS

<sup>1</sup> National Marine Fisheries Service (NMFS). San Francisco Bay Project Impact Evaluation System (PIES) website.

<<http://mapping.orr.noaa.gov/website/portal/pies/faqs.html>> Accessed April 12, 2007.

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BIO-3 <i>Continued</i>		BIO-3b (Groups 1, 2, and 4): Impacts to jurisdictional wetlands shall be mitigated at a minimum replacement ratio of 1:1 (i.e., one acre created [and preserved] for every acre impacted). If feasible, replacement habitat shall be created/preserved in the same general area as the original impact. Off-site mitigation may be approved if the amount of required replacement habitat exceeds that which is available near a given impact site. A wetland mitigation and monitoring plan (MMP) shall be developed for each mitigation site, detailing the mitigation design, wetland planting design, adaptive management, maintenance and monitoring requirements, reporting requirements, and success criteria for the created wetland(s).	
BIO-4 (Group 1): The introduction of small boat traffic to the Lake Merritt Channel would result in increased disturbance levels to wintering migratory ducks and other waterbirds.	S	BIO-4 (Group 1): Small boat use of the Lake Merritt Channel shall be restricted to the non-wintering period of April–September, when waterbird abundance is low. During the closure period, booms shall be placed across the outlet to the Channel from Lake Merritt and at the 7 <sup>th</sup> Street dam to prevent boat access and signs shall be posted indicating that the Channel is closed to recreational users. This would reduce the impact to a less-than-significant level.	LTS
<b>G. Cultural Resources</b>			
CULT-1 (Group 1): Project activities within the Lake Merritt and Lake Merritt Channel group may impact subsurface prehistoric archaeological materials that may qualify as historical resources under CEQA.	S	CULT-1 (Group 1): A qualified archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards CFR 66, Appendix C, (48 FR 44738-9) and the certification requirements of the Register of Professional Archaeologists shall monitor initial project construction ground disturbing activities, such as trenching or excavating with a backhoe or bulldozer, in the 12th Street reconstruction area. The protocols for monitoring and data recovery outlined in the Archaeological Monitoring and Discovery Plan, 12th Street Reconstruction Project (AMDP) <sup>2</sup> shall be implemented. Monitoring shall continue as deemed necessary by the monitor based on the initial observations. If the monitor observes subsurface prehistoric archaeological materials during excavation, such as those associated with CA-ALA-5 or P-01-010694, the monitor shall ensure that appropriate actions are taken as described in the following paragraphs.	LTS

<sup>2</sup> William Self Associates, Inc., 2005:4-9. *Archaeological Monitoring and Discovery Plan, 12<sup>th</sup> Street Reconstruction Project*. William Self Associates, Inc., Orinda, California.

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CULT-1 <i>Continued</i>		<p>In the event that archaeological materials are identified (e.g., obsidian, heat-affected rock, faunal bone, and midden), the archaeologist will immediately notify the Construction Manager, who will temporarily stop construction to permit an examination of the find. Should the monitoring archaeologist determine that the cultural object or feature is significant (i.e., appears eligible for listing in the California Register of Historical Resources), a determination will be made as to the areal extent of the find, and the time required to mitigate (i.e., record and remove or collect all or part of) the discovery. Once the archaeological monitor has made a determination as to the time required to mitigate the find, and has sufficient supporting information, the monitor will take the following steps: 1) record, but not remove materials if non-cultural or non-significant, and allow work to progress, or 2) record and remove the isolated or limited cultural materials and permit work to progress.</p> <p>If the above steps do not apply (i.e., in those instances where the cultural materials are significant and not isolated or spatially limited), then the Construction Manager shall be notified and recovery of the materials shall occur. Diagnostic artifacts, as well as those classes of artifacts for which an adequate sample has not yet been recovered, shall be collected and bagged following photographing and recording of provenience. Mapping of deposits would be coordinated using existing engineering survey controls, and elevation accuracy will be maintained during the excavation to permit provenience controls for artifact recording. All information needed, including soil color or type, elevation, location, photographs, and sketch maps will be gathered as quickly as conditions permit to allow resumption of construction activities. All recovered cultural materials shall be cleaned as appropriate, preserved if necessary, bagged, and tagged or marked so as to permit its identification in an acceptable record system, and in accordance with recognized professional standards. All recovered cultural material shall be analyzed sufficiently to permit identification in accordance with recognized professional standards and submitted to a curation facility, as appropriate. A Final Monitoring Report shall be prepared, describing the results of monitoring, data recovery, and analysis.</p>	LTS

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CULT-2 (Group 4): Project activities associated with the City-wide Creeks group may impact historical resources.	S	<p>CULT-2 (Group 4): A preconstruction cultural resources study by a qualified person shall be done for the City-wide Creeks project sites, unless the proposed activities at the site would involve minimal (or no) ground disturbance, such as weeding, hand planting, sign placement, or pruning. For this non-intrusive or minimally intrusive work no mitigation would be needed. For all other work, the preconstruction study will be used to determine whether cultural resource(s) will be adversely affected by project activities and will ensure that, if a cultural resource(s) is present within a City-wide Creek restoration site, impacts to this resource will be avoided or mitigated.</p> <p>The first phase of the study will assess the prehistoric and historical sensitivity for each City-wide Creeks restoration site (or group of sites) and will review project plans to assess the potential for project activities to impact cultural resources at a creek restoration site. The study will include a literature review and a records search at the Northwest Information Center, Rohnert Park, and a site visit to determine the likelihood of recorded or surface-exposed cultural resources at a creek restoration site. A brief letter report shall be prepared for the City that includes the results of the background research and, based on the results of the background research, a determination of whether additional study for cultural resources at a given location will be necessary. If no cultural resources that would be disturbed by the project activities are identified in this phase, the City's Standard Conditions of Approval, which address accidental discoveries, shall be implemented and would reduce the impact to a less-than-significant level. If cultural resources that could be disturbed by the project activities are tentatively identified, additional study, construction monitoring, and mitigation, as appropriate, shall be performed.</p>	LTS

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<i>CULT-2 Continued</i>			
		If cultural resources that could be disturbed by the project activities are tentatively identified, a field survey shall be conducted to identify the cultural resources and an archaeological excavation shall be performed, as necessary, to determine whether archaeological deposits are present. The excavation phase may be conducted during the initial ground disturbing work at the site(s). If the excavation phase is conducted during the initial ground disturbing work, the monitoring protocols described in CULT-1 shall be followed. If no cultural resources are identified in this phase, the City's Standard Conditions of Approval, which address accidental discoveries, shall be implemented and would reduce the impact to a less-than-significant level. If cultural resources are identified, the cultural resources shall be preserved, mapped and otherwise documented as described in CULT-1. Implementation of these measures will reduce the impact to a less-than-significant level.	
<b>H. Hydrology and Water Quality</b>			
<u>HYD-1 (Groups 1 – 4):</u> Existing groundwater well(s), that may be encountered and/or damaged by proposed project activities, could act as conduits for migration of pollutants to the underlying groundwater aquifer.	S	<u>HYD-1 (Groups 1 – 4):</u> Any existing wells discovered during the implementation of Measure DD shall be either: 1) properly abandoned in compliance with the California Department of Water Resources California Well Standards and Alameda County Environmental Health Department requirements prior to final approval of the grading plan; or 2) inspected by a qualified professional to determine whether each well is properly sealed at the surface to prevent infiltration of water-borne contaminants into the well casing or surrounding gravel pack. The California Well Standards require an annular surface seal of at least 20 feet. If the wells are found not to comply with this requirement, the City shall retain a qualified well driller to install the required seal.	LTS
<b>I. Geology, Soils and Seismicity</b>			
<i>There are no significant Geology, Soils and Seismicity impacts.</i>			
<b>J. Hazards and Hazardous Materials</b>			
<u>HAZ-1 (Group 1):</u> The Reconstruction of 12 <sup>th</sup> Street would temporarily close a designated emergency evacuation route. (S)	S	<u>HAZ-1 (Group 1):</u> In advance of construction, the City shall prepare detour plans for the emergency evacuation route along 12 <sup>th</sup> Street in accordance with the City's Office of Emergency Services requirements. The plans shall be reviewed and approved by the Office of Emergency Services prior to the start of construction. The implementation of the plans during construction would ensure that alternative emergency evacuation routes are identified and available during project construction and would reduce the impact to a less-than-significant level.	LTS

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<b>K. Public Services and Recreation</b>			
<i>There are no significant Public Services and Recreation impacts.</i>			
<b>L. Utilities and Infrastructure</b>			
<i>There are no significant Utilities and Infrastructure impacts.</i>			
<b>M. Aesthetics</b>			
<i>There are no significant Aesthetics impacts.</i>			