

**2211 Harold Way Mixed-Use Project  
Infill Initial Study Checklist – Impacts and Mitigation Measures**

Impacts	Mitigation Measures
<b>I. AIR QUALITY</b>	
<p><b>AIR-2</b> This proposed project may expose sensitive receptors to TACs or odors through development of new residential units near non-residential development that may be sources of TACs or odors near existing residences or other sensitive receptors.</p>	<p><b>AIR-2 Buffer TAC and Odor Emission Sources and Sensitive Land Uses.</b> Consider potential air pollution and odor impacts from future development that may emit pollution and/or odors when locating (a) air pollution sources, and (b) residential and other pollution-sensitive land uses in the vicinity of air pollution sources (which may include areas where buses idle, diesel generators, parking garage vents, restaurants, and other similar uses). Buffer sensitive receptors from TACs whenever possible, and if buffering is not feasible, apply appropriate mitigation to reduce impacts to a less than significant level, such as air filtration systems or other technologies.</p>
<p><b>AIR-3</b> The proposed project would result in temporary emissions of dust and diesel exhaust that may result in both nuisance and health impacts.</p>	<p><b>AIR-3 Implement BAAMD-Recommended Measures to Control PM<sub>10</sub> Emissions during Construction.</b> Measures to reduce diesel particulate matter and PM<sub>10</sub> from construction are recommended to ensure that short-term health impacts to nearby sensitive receptors are avoided.</p> <p><b>Dust (PM<sub>10</sub>) Control Measures:</b></p> <ul style="list-style-type: none"> <li>• Water all active construction areas at least twice daily and more often during windy periods. Active areas adjacent to residences should be kept damp at all times.</li> <li>• Cover all hauling trucks or maintain at least two feet of freeboard.</li> <li>• Pave, apply water at least twice daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas.</li> <li>• Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas and sweep streets daily (with water sweepers) if visible soil material is deposited onto the adjacent roads.</li> <li>• Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (i.e., previously-graded areas that are inactive for 10 days or more).</li> <li>• Enclose, cover, water twice daily, or apply (non-toxic soil binders to exposed stockpiles.</li> <li>• Limit traffic speeds on any unpaved roads to 15 mph.</li> <li>• Replant vegetation in disturbed areas as quickly as possible.</li> <li>• Suspend construction activities that cause visible</li> </ul>

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	<p>dust plumes to extend beyond the construction site.</p> <p><b>Measures to Reduce Diesel Particulate Matter and PM<sub>2.5</sub>:</b></p> <ul style="list-style-type: none"> <li>• Clear signage at all construction sites will be posted indicating that diesel equipment standing idle for more than five minutes shall be turned off. This would include trucks waiting to deliver or receive soil, aggregate, or other bulk materials. Rotating drum concrete trucks could keep their engines running continuously as long as they were onsite or adjacent to the construction site.</li> <li>• Opacity is an indicator of exhaust particulate emissions from off-road diesel powered equipment. The project shall ensure that emissions from all construction diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately.</li> <li>• The contractor shall install temporary electrical service whenever possible to avoid the need for independently powered equipment (e.g., compressors).</li> <li>• Properly tune and maintain equipment for low emissions.</li> </ul>
<p><b>II. CULTURAL RESOURCES</b></p>	
<p><b>CR-3</b> The proposed project would result in the destruction or disturbance of unidentified subsurface archaeological resources, which would represent a potentially significant impact.</p>	<p><b>CR-3 Halt Work/Archaeological Evaluation/Site-Specific Mitigation.</b> If archaeological resources are uncovered during construction activities, all work within 50 feet of the discovery shall be redirected until a qualified archaeologist can be contacted to evaluate the situation, determine if the deposit qualifies as an archaeological resource, and provide recommendations. If the deposit does not qualify as an archaeological resource, then no further protection or study is necessary. If the deposit does qualify as an archaeological resource, then the impacts to the deposit shall be avoided by project activities. If the deposit cannot be avoided, adverse impacts to the deposit must be mitigated. Mitigation may include, but is not limited to, archaeological data recovery. Upon completion of the archaeologist's assessment, a report should be prepared documenting the methods, findings and</p>

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	recommendations. The report should be submitted to the City, the project proponent and the NWIC.
<p><b>CR-4</b> The proposed project could result in the destruction of unidentified subsurface paleontological resources.</p>	<p><b>CR-4 Halt Work/Paleontological Evaluation/Site-Specific Mitigation.</b> Should paleontological resources be encountered during construction or site preparation activities, such works shall be halted in the vicinity of the find. A qualified paleontologist shall be contacted to evaluate the nature of the find and determine if mitigation is necessary. All feasible recommendations of the paleontologist shall be implemented. Mitigation may include, but is not limited to, in-field documentation and recovery of specimen(s), laboratory analysis, the preparation of a report detailing the methods and findings of the investigation, and curation at an appropriate paleontological collection facility.</p>
<p><b>CR-5</b> The proposed project could result in the disturbance of unidentified subsurface human remains, which would represent a potentially significant impact.</p>	<p><b>CR-5 Halt Work/Coroner's Evaluation/Native American Heritage Consultation/Compliance with Most Likely Descendent Recommendations.</b> If human remains are encountered during construction activities, all work within 50 feet of the remains should be redirected and the County Coroner notified immediately. At the same time, an archaeologist shall be contacted to assess the situation. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and any associated grave goods. The archaeologist shall recover scientifically-valuable information, as appropriate and in accordance with the recommendations of the MLD. Upon completion of the archaeologist's assessment, a report should be prepared documenting methods and results, as well as recommendations regarding the treatment of the human remains and any associated archaeological materials. The report should be submitted to the City, the project proponent and the NWIC.</p>
<p><b>III. NOISE</b></p>	
<p><b>NOI-1</b> The proposed project under the DAP could be exposed to excessive noise levels, noise levels along many Downtown Area roadways would exceed those considered</p>	<p><b>NOI-1 Site-Specific Noise Studies/Site Planning/Noise Control Treatments.</b> Future residential units proposed under the DAP would be exposed to outdoor noise levels in excess of 60 dBA Ldn and indoor noise levels in excess of 45 dBA Ldn, which would exceed the City's and state's established land use compatibility thresholds. In</p>

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<p>compatible with exterior residential land uses. This would represent a potentially significant impact. Where exterior noise levels exceed 70 dBA Ldn, such as along University Avenue and Shattuck Avenue, residential units would not be able to meet the 45-dBA Ldn interior standard simply through typical construction methods. This would be a potentially significant impact. Retail units developed under the DAP along most of the area roadways would meet the exterior commercial land use compatibility guideline of 70 dBA Ldn established in the Noise Element. Exterior noise levels would exceed 70 dBA Ldn along University Avenue and Shattuck Avenue. This would be a potentially significant impact.</p>	<p>areas where residential development would be exposed to an Ldn of greater than 60 dBA, site-specific noise studies should be conducted to determine the area of impact and to present appropriate mitigation measures, which may include the following:</p> <ul style="list-style-type: none"> <li>• Utilize site planning to minimize noise in shared residential outdoor activity areas by locating these areas behind the buildings, in courtyards, or orienting the terraces to alleyways rather than streets, whenever possible.</li> <li>• The California Building Code and the City of Berkeley require project specific acoustical analyses to achieve interior noise levels of 45 dBA Ldn or lower in residential units exposed to exterior noise levels greater than 60 dBA Ldn. Building sound insulation requirements would need to include the provision of forced-air mechanical ventilation in noise environments exceeding 70 dBA Ldn so that windows could be kept closed at the occupant’s discretion to control noise. Special building construction techniques (e.g., sound-rated windows and building façade treatments) may be required where exterior noise levels exceed 65 dBA Ldn. These treatments include, but are not limited to, sound rated windows and doors, sound rated exterior wall assemblies, acoustical caulking, etc. The specific determination of what treatments are necessary will be conducted on a unit-by-unit basis during project design. Result of the analysis, including the description of the necessary noise control treatments, will be submitted to the City along with the building plans and approved prior to issuance of a building permit. Feasible construction techniques such as these would adequately reduce interior noise levels to 45 dBA Ldn or lower. Implementation of the above measure would reduce the impact to a level of less than significant.</li> </ul>
<p><b>NOI-5</b> The proposed project would intermittently expose businesses and residences throughout the Downtown Area to high levels of noise throughout the planning horizon. Construction would elevate noise levels at adjacent businesses and residences by</p>	<p><b>NOI-5 Develop Site-Specific Noise-Reduction Programs and Implement Noise Abatement Measures During Construction.</b> Prior to the issuance of building permits, the applicant shall develop a site specific noise reduction program prepared by a qualified acoustical consultant to reduce construction noise impacts to the maximum extent feasible, subject to review and approval of the Zoning Officer. The noise reduction program shall include appropriate time limits for construction (7:00 AM</p>

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<p>15 to 20 dBA or more, significant impact.</p>	<p>to 7:00 PM on weekdays and between the hours of 9:00 AM and 8:00 PM on weekends or holidays) as well as technically and economically feasible controls to meet the requirements of the Berkeley Municipal Code. The noise reduction program should include, but shall not be limited to, the following available controls to reduce construction noise levels as low as practical:</p> <ul style="list-style-type: none"> <li>• Construction equipment should be well maintained and used judiciously to be as quiet as practical.</li> <li>• Equip all internal combustion engine-driven equipment with mufflers, which are in good condition and appropriate for the equipment.</li> <li>• Utilize “quiet” models of air compressors and other stationary noise sources where technology exists. Select hydraulically or electrically powered equipment and avoid pneumatically powered equipment where feasible.</li> <li>• Locate stationary noise-generating equipment as far as possible from sensitive receptors when adjoining construction sites. Construct temporary noise barriers or partial enclosures to acoustically shield such equipment where feasible.</li> <li>• Prohibit unnecessary idling of internal combustion engines.</li> <li>• If impact pile driving is required, pre-drill foundation pile holes to minimize the number of impacts required to seat the pile.</li> <li>• Construct solid plywood fences around construction sites adjacent to operational business, residences or other noise-sensitive land uses where the noise control plan analysis determines that a barrier would be effective at reducing noise.</li> <li>• Erect temporary noise control blanket barriers, if necessary, along building facades facing construction sites. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling. Noise control blanket barriers can be rented and quickly erected.</li> <li>• Route construction related traffic along major roadways and away from sensitive receptors where feasible</li> <li>• Businesses, residences or other noise-sensitive</li> </ul>

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	<p>land uses within 500 feet of construction sites should be notified of the construction schedule in writing prior to the beginning of construction. Designate a “construction liaison” that would be responsible for responding to any local complaints about construction noise. The liaison would determine the cause of the noise complaints (e.g., starting too early, bad muffler, etc.) and institute reasonable measures to correct the problem. Conspicuously post a telephone number for the liaison at the construction site.</p>
<p><b>NOI-6</b> The proposed project would expose residences, businesses, and historic structures within or in the vicinity of the Downtown Area to construction-related vibration during the excavation and foundation work of the buildings constructed during the DAP, a significant impact.</p>	<p><b>NOI-6 Avoidance of Pile-Driving/Site-Specific Vibration Studies/Monitoring/ Contingency Planning.</b>          The following measures are recommended to reduce vibration from construction activities:</p> <ul style="list-style-type: none"> <li>• Avoid impact pile-driving where possible. Drilled piles causes lower vibration levels where geological conditions permit their use.</li> <li>• Avoid using vibratory rollers and tampers near sensitive areas.</li> <li>• In areas where project construction is anticipated to include vibration generating activities, such as pile-driving in close proximity to existing structures, site-specific vibration studies should be conducted to determine the area of impact and to present appropriate mitigation measures that may include the following:             <ul style="list-style-type: none"> <li>○ Identification of sites that would include vibration compaction activities such as pile-driving and that have the potential to generate groundborne vibration, and the sensitivity of nearby structures to goundborne vibration. Vibration limits should be applied to all vibration-sensitive structures located within 200 feet of the project. A qualified structural engineer should conduct this task.</li> <li>○ Development of a vibration monitoring and construction contingency plan to identify structures where monitoring would be conducted, set up a vibration monitoring schedule, define structure-specific vibration limits, and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions</li> <li>○ Construction contingencies would be identified for when vibration levels approached the</li> </ul> </li> </ul>

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	<p>limits.</p> <ul style="list-style-type: none"><li>○ At a minimum, vibration monitoring should be conducted during initial demolition activities and during pile-driving activities. Monitoring results may indicate the need for more or less intensive measurements.</li><li>○ When vibration levels approach limits, suspend construction and implement contingencies to either lower vibration levels or secure the affected structures.</li><li>○ Conduct post-survey on structure where either monitoring has indicated high levels or complaints of damage has been made. Make appropriate repairs or compensation where damage has occurred as a result of vibration.</li></ul>