
VI. ENVIRONMENTAL IMPACT ANALYSIS

D. GEOLOGY/SEISMIC HAZARDS

2003 EIR Environmental Findings

The 2003 EIR provided an analysis of impacts related to seismicity hazards such as fault rupture, ground shaking, landsliding, and liquefaction based on readily available geotechnical and seismic information and the findings and recommendations presented in prior geotechnical investigations including a report prepared for the renovation of the Los Angeles Memorial Coliseum by Law/Crandall, Inc., (December, 1991). Smith Emery Company prepared a report of Compacted Fill for the Coliseum, dated July 2, 1993, documenting earthwork activities during the preparation of the site for future renovation. Following this report, the Coliseum suffered extensive damage during the 1994 Northridge earthquake. Law/Crandall subsequently prepared additional geotechnical and structural analysis as contained in the Report of Foundation Investigation for the Los Angeles Memorial Coliseum Repair, dated April 1, 1994 and the Draft Report of Pile Load Testing for the Los Angeles Memorial Coliseum, dated August 18, 1994. These technical reports were incorporated into the EIR by reference and remain on file at the Los Angeles Memorial Coliseum Commission offices at 3939 S. Figueroa Street, Los Angeles California.

Geology

The 2003 EIR stated that the Original Proposed Project's effects on the Project Site's geologic formations, inclusive of the near surface alluvial deposits, would be expected to be minimal. Laboratory testing indicated that the surface soils within the foundation area of the Original Proposed Project were not expansive, collapsible, or compressible. Therefore, implementation of the Original Proposed Project would not be expected to produce any adverse impacts relative to non-seismic geotechnical issues.

Grading and Excavation

The 2003 EIR established that dust raised during grading would have a short-term adverse impact on local and regional air quality (also discussed under the "air quality" Section of this Addendum). In addition, the excavation and hauling of earth materials would temporarily increase noise levels in the immediate area for the expected 18-22 month duration of project construction activities (See "noise" Section of this Addendum). Discarded building and/or earth materials containing any hazardous materials, primarily asbestos, would be disposed of in accordance with all applicable local, state, and federal regulations.

Groundwater

The 2003 EIR stated that groundwater would not be expected to be encountered during grading or construction of the Original Proposed Project; however, perched groundwater or saturated soil conditions may exist in scattered areas underneath the site. Implementation of the Original Proposed Project would not be expected to produce any adverse impacts relative to groundwater.

Liquefaction

Due to the depth of the groundwater table and the relatively high density of the soils underlying the site area, the 2003 EIR found that the potential for soil liquefaction would be very remote. Therefore, the Original Proposed Project would not be subject to significant impacts caused by seismically-induced liquefaction.

Seismicity

Since no known or mapped active, potentially active, or inactive faults, if projected, would trend toward or directly through the Project Site, and the Coliseum does not lie in an Alquist-Priolo Special Study Zone, the 2003 EIR found that impacts associated with implementation of the Original Proposed Project relative to the seismic displacement of structures on the site would be less than significant.

Ground Shaking

Eleven faults were identified in the 2003 EIR that could influence the Original Proposed Project relative to earthquake ground shaking. Additional faults outside the local area, such as the San Andreas, would also have the potential to create moderately strong ground motion effects in the project area. A significant impact posing an increased threat to public safety or destruction of property by ground shaking would not be expected to occur with the development of the Original Proposed Project. Construction practices in strict compliance with the Uniform Building Code would reduce these inherent risks to acceptable standards. Impacts associated with seismic hazards would be less than significant.

Overall, with the implementation of the mitigation measures identified in the 2003 EIR, the document found that impacts to geology/seismic hazards would be less than significant.

Mitigation Measures

The 2003 EIR adopted several mitigation measures in order to effect a reduction in the severity of potential on-site impacts resulting from seismic events occurring on Southern California faults. These mitigation measures are reproduced below:

1. All structures to be constructed or renovated as part of the Proposed Project shall be designed as required by either the Uniform Building Code for structures within Seismic Zone 4, or other pertinent State and/or City building codes (such as Division 23, Section 91.2305 of the City of Los Angeles Building Code), to withstand the expected ground motions.
2. A comprehensive geotechnical investigation shall be prepared to the satisfaction of the responsible State and/or City reviewing agencies. The investigation shall verify the soil conditions under the proposed structures and derive the pile capacities.
3. All grading activities shall be in compliance with specific recommendations and requirements provided in the geotechnical report prepared for the Proposed Project, subject to review and approval by the appropriate State and/or City responsible agencies.

4. A copy of the foundation report and/or supplements and approval letter shall be attached to the State and/or City office and field sets of plans, with one copy of the foundation report and/or supplements submitted to the State and/or City plan checker prior to the issuance of the permit.
5. During construction, all grading shall be carefully observed, mapped, and tested by the project engineer. All grading shall be performed under the supervision of a certified engineering geologist and/or soils engineer in accordance with the applicable provisions of the State and/or City Building Codes to the satisfaction of the State and/or City building and safety authorities. The responsible engineer shall review and approve the foundation plan and/or the excavation/shoring plan prior to the issuance of any permits.
6. Artificial fills in the existing 35-foot earth berm shall not be considered suitable for the support of foundations unless excavated, recompacted, and tested to be in compliance with the applicable State and/or City Grading Codes.
7. The geologist or the soils engineer shall inspect and approve all fill and subdrain placement areas prior to placing fill.
8. Haul route approval for the transport of graded and excavated earth materials and removed building materials to receptor sites and/or local landfills shall be obtained from the City of Los Angeles Department of Building and Safety and/or other responsible City agencies. Haul routes for the transport of such materials shall be established, where possible, through non-residential areas so as to minimize the effects of noise, and shall maximize, where possible, the distance traveled on major arterials.
9. Discarded building and/or earth materials containing any hazardous materials, primarily asbestos, shall be disposed of in accordance with all applicable local, state, and federal regulations.
10. To the maximum extent feasible, uncontaminated graded materials shall be transported off-site to a receptor site needing imported fill material. Landfills shall only be considered as a last resort disposal option for materials from the site.
11. Prior to the issuance of building permits, if the soils and/or perched groundwater beneath the site are found to be contaminated, the City of Los Angeles Fire Department shall be notified and provided with a summary of all local, state, county, and federally required remediation activities and submit evidence of compliance.
12. Where encountered on the site, perched groundwater or saturated soils should be removed to the extent feasible or necessary.
13. During the construction plan and haul route approval process, the project contractor shall consult with the LAUSD Transportation Branch (tel: (323) 342-1400), to address potential impacts upon existing pedestrian and school bus routes. Contractors must guarantee that safe and convenient pedestrian routes to school are maintained. The project contractor shall

install appropriate traffic controls (signs and signals) as needed to ensure pedestrian and vehicular safety. The project contractor shall fund crossing guards for safety of students, as needed, during construction activities at impacted crossings.

Environmental Impacts of the Revised Project

With respect to the architectural design modifications proposed under the Revised Project, the geology and soils analysis of the certified EIR remains valid for determining the geotechnical feasibility of renovating the Coliseum structure for future use. .

Geology

The implementation of the Revised Project would not alter the site's underlying soils or geologic formations. Therefore, the 2003 EIR's findings that the Original Proposed Project would have minimal effects on the site's geologic formations would remain true. Therefore, implementation of the revised Project would also not be expected to produce any adverse impacts relative to non-seismic geotechnical issues.

Grading and Excavation

The only substantial change worthy to note with respect to geology and soils is the revised change to the field level plan, which proposes to renovate the north side to provide underground facilities support space and locker rooms. In addition, under the revised plan more of the berms surrounding the Coliseum structure would be removed as compared to the prior stadium design. As a result, the total amount of excavating and grading would increase from an estimated 250,000 cubic yards (cy) of soil to approximately 600,000 cy of soil. All of the soil would be exported from the site and disposed of at either a regional inert landfill or an alternative site. The duration of project construction activities is expected to be approximately 30-36 months for the Revised Project, as compared to 18-22 months for the Original Project. While the amount of grading and excavation would increase under the revised Project, such changes would not result in any new adverse environmental impacts.

Groundwater

The 2003 EIR stated that groundwater would not be expected to be encountered during grading or construction of the Original Proposed Project; however, perched groundwater or saturated soil conditions may exist in scattered areas underneath the Project Site. The newly expanded field level areas on the north side of the stadium would be constructed at the same field level elevation as the existing locker rooms and support facility areas that are currently located on the south side of the stadium. Thus, the Revised Project would include grading to approximately the same depth as the Original Proposed Project and would not impact the groundwater table. Therefore, implementation of the Revised Project would not be expected to produce any adverse impacts relative to groundwater.

Liquefaction

Due to the depth of the groundwater table and the relatively high density of the soils underlying the site area, the 2003 EIR found that the potential for soil liquefaction would be very remote. As the revised Project would not alter the Project Site's underlying geology or soils, the 2003 findings remain valid. Therefore, the Revised Project would similarly not be subject to significant impacts caused by seismically-induced liquefaction.

Seismicity

The 2003 EIR found that impacts associated with implementation of the Original Proposed Project relative to the seismic displacement of structures on the Project Site would be less than significant. Therefore, the impacts associated with the Revised Project on seismic displacement of structures would remain less-than-significant with the mitigation measures identified in the 2003 EIR.

Ground Shaking

As discussed above, eleven faults were identified in the 2003 EIR that could influence the Project relative to earthquake ground shaking. Additional faults outside the local area, such as the San Andreas, would also have the potential to create moderately strong ground motion effects in the project area. These geological facts remain unchanged for the Revised Project. Therefore, as with the Original Proposed Project, a significant impact posing an increased threat to public safety or destruction of property by ground shaking would not be expected to occur with the development of the Revised Project.

With regard to the criteria set forth in CEQA Section 15162 (a), the changes proposed by the 2006 Architectural Scheme would not result in any new significant geologic or seismic hazards impacts or result in a substantial increase in the severity of those effects previously identified. Therefore, the preparation of a subsequent environmental analysis is not warranted.

Mitigation Measures

The 2003 EIR included several mitigation measures designed to reduce on-site impacts resulting from seismic events occurring on Southern California faults. As no new changes or significant impacts were identified, the Revised Project would implement these same mitigation measures (identified above and in Section VII, Mitigation Monitoring and Reporting Program).