

SECTION 2

ERRATA

ERRATA

INTRODUCTION

The Final Environmental Impact Report (EIR) is composed of the Draft EIR and Appendices (Volumes I and II); the Responses to Comments (Volume III); and the Findings, Statement of Overriding Considerations, Staff Reports, and Resolutions (Volume III). Any corrections to the Draft EIR text, generated either from responses to comments or independently by the City of Long Beach (City), are stated in this volume of the Final EIR. The Draft EIR text (Volumes I or II) has not been modified to reflect these errata.

This Errata is provided to clarify, refine, and provide supplemental information for the City of Long Beach Draft EIR. Changes may be corrections or clarifications to the text of the original Draft EIR. Other changes to the EIR clarify the analysis in the EIR based upon the information and concerns raised by commentators during the public comment period. None of the information contained in this EIR Errata constitutes significant new information or changes to the analysis or conclusions of the Draft EIR.

The information included in these errata resulting from the public comment process does not constitute substantial new information that requires recirculation of the Draft EIR. California Environmental Quality Act (CEQA) Guidelines Section 15088.5 states, in part:

- (a) A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term “information” can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not “significant” unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project’s proponents have declined to implement. “Significant new information” requiring recirculation includes, for example, a disclosure showing that:
 - (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
 - (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
 - (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project’s proponents decline to adopt it.
 - (4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

- (b) Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR.

The changes to the Draft EIR included in this Errata do not constitute “significant” new information because:

1. No new significant environmental impact would result from the project or from a new mitigation measure;
2. There is no substantial increase in the severity of an environmental impact that would result unless mitigation measures are adopted that reduce the identified significant impacts to a level of insignificance;
3. No feasible project alternative or mitigation measure considerably different from others previously analyzed has been proposed or identified that would clearly lessen the significant environmental impacts of the project; and
4. The Draft EIR is not fundamentally or basically inadequate or conclusory in nature such that meaningful public review and comment were precluded.

Therefore, recirculation of the Draft EIR is not required because the new information added to the EIR through this Errata clarifies or amplifies or makes insignificant modifications to the already adequate Draft EIR.

For simplicity, the errata below are in the same order as in the EIR. Changes in text are signified by strikeouts (~~strikeouts~~) where text has been removed and by underlining (underline) and a vertical line in the right hand margin where text has been added. The applicable page numbers from the Draft EIR are also provided where necessary for easy reference.

1.0 EXECUTIVE SUMMARY

4.5 BIOLOGICAL RESOURCES			
POTENTIALLY SIGNIFICANT IMPACTS OF THE PROPOSED PROJECT			
<p>Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service</p>	<p>Grading of the project site will result in the filling of 0.08 acre of riparian habitat in a concrete drainage course and 0.42<u>0.41</u> acre within the associated retention basin, both of which are subject to U.S. Army Corps of Engineers and California Department of Fish and Game jurisdiction. In addition, virtually all streambeds and associated plant communities are considered sensitive biological resources and are regulated by agencies as described in Section 4.5. Therefore, impacts to these areas will require mitigation.</p>	<p>4.5.3 Prior to the issuance of grading permits, the City of Long Beach Director of Planning and Building shall verify that authorization has been obtained from: (1) the U.S. Army Corps of Engineers (Corps) under the Section 404 Permit program for the discharge of fill material into the jurisdictional drainages; and (2) the California Department of Fish Game (CDFG) under Section 1602 of the California Fish and Game Code for the alteration of a streambed. In addition, standard conditions of the Corps permits require Section 401 water quality certification by the Regional Water Quality Control Board (RWQCB). In order to obtain these authorizations, the City shall develop a mitigation plan subject to review and approval by the appropriate resource agencies (Corps, CDFG, and RWQCB) to compensate for the loss of the riparian habitat. (See Mitigation Measure 4.5.4.)</p> <p>4.5.4 Prior to the issuance of certificates of occupancy, the City shall develop off-site mitigation for wetlands, including the restoration of 0.6 acre of riparian habitat (2:1 mitigation ratio for 0.08 acre of cattail marsh in the channel, and 1:1 mitigation ratio for the 0.41 acre of wetlands in the detention basin). The total wetlands mitigation requirement is 0.6 acre. The proposed mitigation site is located on the west bank of the San Gabriel River adjacent to El Dorado Park Golf Course and shall be made part of the Section 404 Permit required in Mitigation Measure 4.5.3. Off-site mitigation shall be constructed and maintained by the City of Long Beach, subject to verification by the Director of Planning and Building, in accordance with the mitigation plan approved by the appropriate resource agencies (Corps, CDFG, and RWQCB).</p> <p>4.5.5 Prior to issuance of grading permits, project plans subject to the approval of the City of Long Beach Director of Planning and Building shall specify that the on-site stilling basin will be planted with California native wetland species. The stilling basin will be subject to routine maintenance and cleaning. The planting of native wetland species in the stilling basin is provided in addition to the 0.6-acre off-site mitigation area.</p>	<p>Implementation of Mitigation Measures 4.5.3 through 4.5.5 will reduce project impacts to riparian habitat to a less than significant level.</p>

A typographical error was corrected in the EIR. There is 0.41 acre of riparian habitat within the retention basin. This change to the Draft EIR does not result in a significant impact and has no material effect on the findings of the EIR. Recirculation of a subsequent EIR is not required per Section 15088.5(a) of the State CEQA Guidelines.

1.0 EXECUTIVE SUMMARY

4.9 TRAFFIC AND CIRCULATION			
POTENTIALLY SIGNIFICANT IMPACTS OF THE PROPOSED PROJECT			
<p>The project results in an undesirable peak-hour level of service (i.e., LOS E or LOS F) at any of the key intersections and the project increases traffic demand at the key signalized study intersection by 2 percent of capacity (ICU increase ≥ 0.02), causing or worsening LOS E or LOS F (ICU > 0.90). At unsignalized intersections, a significant adverse traffic impact is defined as a project that: adds 2 percent or more traffic to delay (seconds per vehicle) at an intersection operating at LOS E or LOS F.</p>	<ul style="list-style-type: none"> The proposed project cumulatively impacts the intersections of Atlantic Avenue at Spring Street, Orange Avenue at Spring Street, and 32nd Street at Orange Avenue, causing these three intersections' adverse service levels to further deteriorate. The three intersections operate at acceptable levels of service with implementation of the required mitigation. The addition of project traffic at Orange Avenue and the I-405 SB ramps cumulatively impacts this unsignalized intersection, causing the LOS F condition of the minor street (I-405 SB off-ramp) to further deteriorate. Implementation of required mitigation will reduce project traffic impacts at this intersection to a less than significant level. All five project driveways are forecast to operate at LOS A in the 2006 background condition with project traffic during the weekday p.m. peak hour and the weekend day midday peak hour. However, the minor approach of Project Driveway No. 3 is projected to operate at LOS E during the weekday p.m. peak hour and weekend day midday peak hour, with delays of 35.7 seconds per vehicle and 41.1 seconds per vehicle, respectively. However, by restricting access at Driveway Nos. 3 and 5 to "right-turns only" and re-routing left-turn project traffic at this location to Driveway No. 4 (Orange Avenue at 28th Street), as stipulated in Mitigation Measure 4.9.6, acceptable service levels are maintained on all approaches to this project access point. To minimize delays for vehicles exiting the project site at Project Driveway # 4 (Orange Avenue at 28th Street), a five-phase traffic signal with protected northbound and southbound left-turns along Orange Avenue is required at this location and has been included in the project description and as Mitigation Measure 4.9.7. Implementation of this traffic signal will minimize vehicular delays for vehicles entering and exiting the project site and improve safety conditions at this project driveway. The construction impacts that will result from the activities of equipment transport and construction and construction equipment operators will include a 	<p>4.9.1 Prior to issuance of the first grading permit, the City of Long Beach, under the direction of the Director of Public Works, shall execute an agreement with the City of Signal Hill to contribute a fair share portion of the total costs for street improvements identified in Mitigation Measures 4.9.2 through 4.9.5. These fees shall be paid incrementally per lot or development site, prior to issuance of certificates of occupancy for such structures. Fees shall be provided by the City of Long Beach Director of Public Works.</p> <p>4.9.2 Atlantic Avenue at Spring Street: Prior to issuance of any certificates of occupancy, the City of Long Beach, under the direction of the Director of Public Works, shall widen Atlantic Avenue to provide a separate northbound right-turn lane to proceed eastbound on Spring Street. Alternatively, in the event that needed right-of-way cannot be acquired, it is recommended that the traffic signal be modified to provide protected/permissive southbound left-turn phasing on Atlantic Avenue. Projected year 2006 p.m. peak-hour traffic volumes warrant the installation of separate left-turn phasing on Atlantic Avenue. The project's fair-share responsibility to implement this improvement totals 12.5 percent.</p> <p>4.9.3 Orange Avenue at Spring Street: Prior to issuance of any certificates of occupancy, the City of Long Beach, under the direction of the Director of Public Works, shall convert the existing southbound right-turn lane to provide a second through lane on Orange Avenue, and restripe Orange Avenue south of Spring Street to provide two southbound departure lanes. Prior to issuance of any certificates of occupancy, the City of Long Beach shall also provide a separate eastbound right-turn lane on Spring Street to proceed northbound on Orange Avenue and modify the traffic signal per City of Signal Hill requirements. The project's fair-share responsibility to implement this improvement totals 39.1 percent. Implementation of this improvement is subject to approval of the City of Signal Hill.</p>	<p>The significant traffic impacts of the proposed project can be mitigated to below a level of significance with implementation of the mitigation measures identified above. However, implementation of Mitigation Measures 4.9.3, 4.9.4, 4.9.5, 4.9.6, and 4.9.7 requires <u>action-approval</u> by one or more public agencies other than the City of Long Beach. Since implementation of these measures is completely or partially within the control of other jurisdictional agencies (i.e., Caltrans, City of Signal Hill), implementation cannot be ensured by the City of Long Beach. Should the City of Signal Hill and/or Caltrans choose not to <u>implement-approve the implementation of</u> these measures, the <u>related-project project-related</u> impacts may remain significant and adverse.</p> <p>For the purposes of this EIR, project impacts to the following intersections will remain significant and adverse until the appropriate Responsible Agency approves and implements Mitigation Measures 4.9.3, 4.9.4, 4.9.5, and 4.9.7 <u>and these Mitigation Measures are implemented by the City of Long Beach or other willing agency</u>:</p> <ul style="list-style-type: none"> Orange Avenue at Spring Street (Mitigation Measure 4.9.3) I-405 SB Ramps at Orange Avenue (Mitigation Measure 4.9.4) 32nd Street at Orange Avenue (Mitigation Measure 4.9.5) Orange Avenue at 28th Street/Project Driveway No. 4 (Mitigation Measure 4.9.7). <p>Approval from the City of Signal Hill is also required to install street improvements and signage restricting access to "right in/right out" at Project Driveway Nos. 3 and 5 per Mitigation Measure 4.9.6. Until the appropriate Responsible Agency approves <u>and implements</u> Mitigation Measure 4.9.6, <u>and this Mitigation Measure is implemented by the City of Long Beach or other willing agency</u>, project impacts to the minor street approach (28th and Project Driveway</p>

	<p>temporary increase in traffic activities during the construction phase of the project. Construction impacts are temporary during the period of construction, and the number of construction workers will vary depending on the specific construction activities over time. To reduce the impact of construction traffic, implementation of a construction management plan will be required to minimize traffic impacts upon the local circulation system in the area (Mitigation Measure 4.9.7). Based on the location of the site, and the proximity of the I-405 Freeway, it is anticipated that a majority of the construction-related traffic will utilize the freeway to gain regional access to the site. Traffic impacts to the adjacent roadway network will be minimal and not long-term.</p> <ul style="list-style-type: none"> In conjunction with the Long Beach Sports Park development, roadway improvements to Spring Street, Orange Avenue, and California Avenue will be completed. To ensure that implementation of these improvements takes place in a timely manner, they are shown on project plans and are also included as Mitigation Measures 4.9.10 and 4.9.11. 	<p>4.9.4 I-405 SB ramps at Orange Avenue: Prior to issuance of any certificates of occupancy, the City of Long Beach, under the direction of the Director of Public Works, shall install a three-phase traffic signal at the I-405 southbound ramps and Orange Avenue intersection. The project's fair-share responsibility to implement this improvement totals 42.2 percent. Implementation of this improvement is subject to the approval of Caltrans.</p> <p>4.9.5 32nd Street at Orange Avenue: Prior to issuance of any certificates of occupancy, the City of Long Beach, under the direction of the Director of Public Works, shall upgrade the existing signal from a pretimed (fixed time) signal to an actuated signal. The project's fair-share responsibility to implement this improvement totals 28.0 percent. Implementation of this improvement is subject to the approval of the City of Signal Hill.</p> <p>4.9.6 Project Driveway Nos. 3 and 5: Prior to issuance of certificates of occupancy, the City of Long Beach, under the direction of the Director of Public Works, shall install street improvements and signage restricting access to "right in/right out" at Project Driveway Nos. 3 and 5. The City of Long Beach may also install a "pork chop" in the Project Driveways to restrict the turning movements of vehicles exiting the project site as determined by the City of Long Beach Traffic Engineer. Implementation of these improvements is subject to the approval of the City of Signal Hill.</p> <p>4.9.7 Orange Avenue at 28th Street/Project Driveway No. 4: Prior to the issuance of any certificate of occupancy, the City of Long Beach, under the direction of the Director of Public Works, shall install a traffic signal at the intersection of Orange Avenue and 28th Street per the City of Signal Hill requirements. Implementation of this improvement is subject to the approval of the City of Signal Hill.</p> <p>4.9.8 Prior to the issuance of a grading permit, the City of Long Beach shall, under the direction of the City of Long Beach Traffic Engineer, design and implement a construction area traffic management plan. The plan shall be designed by a registered Traffic Engineer and shall address traffic control for any street closure,</p>	<p>No. 3) to of the intersection of Orange and 28th Street will remain significant and adverse.</p> <p>While operating within the limits of the interjurisdictional decision-making processes, the City of Long Beach is committed to working with Caltrans and the City of Signal Hill to implement these mitigation measures to the best of its ability.</p>
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In the Response to Comments, clarifications were made regarding the level of significance of traffic impacts after implementation of mitigation. These changes were made at the request of the City of Signal Hill and further clarify the relationship between the City of Long Beach and Responsible Agencies as it pertains to the approval of traffic mitigation. These changes to the Draft EIR do not result in a significant impact and have no material effect on the findings of the EIR. Recirculation of a subsequent EIR is not required per Section 15088.5(a) of the State CEQA Guidelines.

CHAPTER 3.0 PROJECT DESCRIPTION

Table 3.B: Future Actions by Responsible Agencies

Responsible Agency	Action
1. Los Angeles County Department of Public Works—Flood Control District	Approve plans for modification of and connection with on-site and off-site drainage facilities. Operation and maintenance of on-site drainage systems with the exception of City owned and controlled retention basin.

3.4.4 Infrastructure Improvements and Extensions to the Site

Storm Drain System. A comprehensive surface drainage/storm drain system has been developed to collect and convey runoff on the project site into the existing and planned City storm drain system. A Preliminary Hydrology Study has been prepared for the project and is included in Appendix H of this EIR. Storm runoff from on-site development and slopes will be collected by a new on-site storm drain system and conveyed to inlet structures. Storm water runoff is then conveyed into a storm drain pipe connected to a 54-inch storm drain located at the southwest corner of the site. On-site drainage will be discharged via outlet structures into existing City and County storm drain facilities and public streets. The project is subject to the new Los Angeles County Standard Urban Storm Water Mitigation Plan and is required to implement structural or treatment control Best Management Practices (BMPs) as required (refer to Section 4.4, Water Resources). A Preliminary SUSMP is included in the project and is included in its entirety in Appendix I.

In response to the comments received in the Draft EIR, clarifications were made regarding ownership of the existing detention basin on the project site. These changes to the Draft EIR do not result in a significant impact and have no material effect on the findings of the EIR. Recirculation of a subsequent EIR is not required per Section 15088.5(a) of the State CEQA Guidelines.

4.4 HYDROLOGY AND WATER QUALITY

4.4.1 INTRODUCTION

This section addresses potential impacts to hydrology and water quality resulting from implementation of the proposed project. This project is required to meet drainage and water quality requirements for dry and storm water runoff. Documents reviewed and incorporated as part of this analysis include the *Onsite Hydrology Report for Long Beach Sports Park* (PBS&J Engineering, Inc. 2004) (Appendix C) and the *Geotechnical Evaluation for the Sports Park* (AMEC Earth and Environmental, Inc. ~~2003~~2004) (available for review at the City of Long Beach, Community Development Department).

Clarifications were made to the citations found in Section 4.4, Hydrology and Water Quality. These changes were made as clarifications and refinements to the text; no new citations were added. These changes to the Draft EIR do not result in a significant impact and have no material effect on the findings of the EIR. Recirculation of a subsequent EIR is not required per Section 15088.5(a) of the State CEQA Guidelines.

4.5 BIOLOGICAL RESOURCES

Potentially Significant Impacts

Drainage Course Impacts Requiring Permits. Grading of the project will result in filling of 0.08 acre of riparian habitat in a concrete drainage course and ~~0.420.41~~ 0.41 acre within the associated retention basin, both of which are subject to Corps of Engineers and California Department of Fish and Game jurisdiction. In addition, virtually all streambeds and associated plant communities are considered sensitive biological resources and are regulated by agencies as described in the Regulatory Setting Section. Therefore, impacts to these areas will require mitigation.

A typographical error was corrected in the EIR. There is 0.41 acre of riparian habitat within the retention basin. This change to the Draft EIR does not result in a significant impact and has no material effect on the findings of the EIR. Recirculation of a subsequent EIR is not required per Section 15088.5(a) of the State CEQA Guidelines.

4.6 CULTURAL AND PALEONTOLOGICAL RESOURCES

4.6.1 INTRODUCTION

This section provides a discussion of the existing cultural, scientific, historic, archaeological, and paleontological resources on the site and an analysis of potential impacts from implementation of the proposed project. The cultural, historic, and archaeological resource sections include the results of (1) two archival reviews to identify previously recorded cultural resource sites and areas sensitive for potentially important cultural resources, as well as (2) a field survey of the parcel to identify previously unrecorded cultural resources. The entire proposed project area (55.5 acres) has been surveyed, and the results are included in this report. Two historic properties (determined eligible for the National Register of Historic Places [National Register] per letter dated November 7, 1989, from the State Historic Preservation officer) were recorded on Orange Avenue ([Archaeological Information Center of the California Historic Resource Information System. July 23, 1999, April 8, 2003. Records Search conducted by LSA Associates, Inc. LSA-1999, 2003](#)). The paleontological section is based on a paleontology locality search conducted within a one-half mile radius of the project site prepared by LSA. The paleontological locality search included a review of area geology and any known paleontological resources recovered from the surrounding area and from the geologic formations that will likely be encountered during excavation activities. The purpose of the locality search was to establish the status and extent of previously recorded paleontological resources within and adjacent to the project area. With this knowledge, LSA could make an informed assessment of the potential effects of the proposed project on paleontological resources and evaluate the kinds of resources that might be expected to be encountered during ground-disturbing activities. Much of the geological information presented, including all of the subsurface data, was obtained from the geotechnical report prepared by AMEC Earth and Environmental, Inc. (AMEC [20032004](#)).

4.6.2 EXISTING ENVIRONMENTAL SETTING

Geologic Setting

The proposed project site is located at the northern end of the Peninsular Range geomorphic province, a 900-mile (1,450 km) northwest-southeast trending structural block that extends from the tip of Baja California to the Transverse Ranges and includes the Los Angeles Basin (Norris and Webb 1976). The total width of the province is approximately 225 miles (362 km), with a maximum landbound width of 65 miles (105 km) (Sharp 1976). It contains extensive pre-Cretaceous (> 65 million years ago) igneous and metamorphic rock covered by limited exposures of post-Cretaceous sedimentary deposits. Within Orange County, these post-Cretaceous sedimentary deposits are believed to be one of the most important Tertiary marine fossil producing areas in the world due to the completeness of the geologic record and general abundance of the fossils (Raschke 1984). Belyea and Minch (1994) report that the Santa Ana Mountains contain exposures of the most complete section of Late Mesozoic and Cenozoic (approximately 150 million years ago to the present) stratigraphy in the entire Peninsular Ranges.

Specifically, the project site is located within the Los Angeles coastal plain at the northwest extremity of a ridge-like topographic high that extends for approximately three miles across the Cities of Signal Hill and Long Beach. This topographic high reaches a maximum elevation of 340 feet at the crest of Signal Hill to the southeast. It is part of a larger northwesterly trending alignment of low hills and mesas that extend across the Los Angeles coastal plain between Newport Beach and Beverly Hills.

These hills were formed by tectonic forces associated with the Newport-Inglewood structural/fault zone that caused these sediments to be uplifted. A branch of the Newport-Inglewood structural/fault zone, known as the Cherry Hill Fault, crosses the project's southwest corner (AMEC ~~2003~~2004).

On the northeast side of the Newport-Inglewood structural/fault zone, the Los Angeles coastal plain is underlain by Recent or Holocene age alluvial sediment. These sediments were deposited less than 10,000 years ago and have a typical thickness of about 100 to 200 feet. These alluvial sediments consist of sand, gravel, silt, and clay that were deposited in layers, lenses, and/or channels by the Los Angeles, San Gabriel, and Santa Ana Rivers. This Recent alluvium is in turn underlain by a much thicker succession of sedimentary strata and unconsolidated sediments of Pleistocene age (1.8 million to 10,000 years ago), locally up to 3,000 feet thick (Poland ~~and Piper~~et. al. 1956).

Within the project area, tectonically uplifted Pleistocene age deposits are now exposed at the surface (AMEC ~~2003~~2004). These Pleistocene deposits extend to depths on the order of 200 to 500 feet beneath the project site (Poland ~~and Piper~~et. al. 1956). A thin mantle of Recent or Holocene age deposits, typically less than 5 to 10 feet thick, is also present covering the Pleistocene sediments in some areas. These Recent to Holocene deposits generally occur as a thin mantle of slope wash on the project's slopes or as a narrow band of sediment beneath the now mostly buried natural drainages (AMEC ~~2003~~2004). In addition, AMEC (~~2003~~2004) reports that man-made fills, from less than 1 foot up to 70 feet thick, occur throughout the project area. All of the geologic units that occur within the project boundaries are described in more detail below. However, only the two Pleistocene units that AMEC (~~2003~~2004) reports as occurring within the project area, the San Pedro Formation and undifferentiated terrace deposits, are old enough to potentially contain fossils.

San Pedro Formation. The San Pedro Formation (also known as the San Pedro Sand) was deposited during the Lower to Middle Pleistocene, approximately 1.8 million to 700,000 years ago. It consists of generally unconsolidated to semiconsolidated mixtures of silt and sand, with minor local clay and gravel that were deposited in a nearshore marine, lagoonal, and/or fluvial environment. It is usually massive to crudely stratified; however, thinly interbedded siltstones and sandstones are known to exist (AMEC ~~2003~~2004). Vertebrate and invertebrate fossils are well known from this and related formations (Conkling 1988, Miller 1971, Grant and Gale 1931, Arnold 1903).

The San Pedro Formation will be exposed by almost all earthwork within the project area. AMEC (~~2003~~2004) reports that most finished ground surfaces will consist of the San Pedro Formation, either within the bedrock unit itself or contained in sediments derived from the Formation that will be used as engineered fill. In addition, the San Pedro Formation will be the foundation for all engineered fill once any unsuitable material has been removed.

Undifferentiated Terrace Deposits. The undifferentiated terrace deposits (also known locally as the Lakewood Formation) were deposited during the Middle to Upper Pleistocene, approximately 700,000 to 10,000 years ago. Like the San Pedro Formation, this Formation consists of massive to crudely stratified sediments containing unconsolidated to semiconsolidated mixtures of silt and sand, with minor local clay and gravel. However, exposures tend to have a slightly higher clay content than the San Pedro Formation. This Formation was deposited on an ancient coastal plain and/or wave cut platform within a marine environment (Poland ~~and Perry~~et. al. 1956). Vertebrate and invertebrate

fossils are well known from this unit, especially at the contact between the undifferentiated terrace deposits and the underlying San Pedro Formation (Poland ~~and Perryet. al.~~ 1956, Grant and Gale 1931, Arnold 1903). Fossils are also known from similar contemporaneous geologic units (Conkling 1988, Miller 1971).

The contact between the San Pedro Formation and the undifferentiated terrace deposits, within the project area, is not very well defined because of similarities in composition and lack of distinguishing characteristics between the two Formations. In addition, the fossil-rich, marine terrace sand that is common at the base of this geologic unit was not observed on the project site (AMEC ~~20032004~~). AMEC (~~20032004~~) believes that this unit is mainly exposed on the upper portion of the prominent hill on the southeastern side of the project between the elevations of 105 to 115 feet. However, because of the lack of distinguishing characteristics between this unit and the San Pedro Formation, within the project, it may be present elsewhere as a cap on top of the underlying San Pedro Formation. Proposed grading involves removal of the prominent hill where AMEC (~~20032004~~) has mapped the undifferentiated terrace deposits below an elevation of 105 feet; thus, this Formation will be entirely removed during grading activities and will be used as fill.

Alluvium and Colluvium. Alluvium and/or colluvium are nearsurface soils that have been deposited or have accumulated due to local fluvial processes or from erosion and downslope movement of soils from adjacent highlands. Residual soils that have developed in situ from deep weathering of the underlying bedrock units are also included as alluvium/colluvium. The alluvium/colluvium on the project site consists of massive to thinly interfingered layers and lenses of fine silty and clayey sand with local intervals of clay and silt that contain abundant decaying plant material (i.e., peat). These alluvial/colluvial soils were deposited during Recent or Holocene time (i.e., extending from the present to approximately 10,000 years ago). Scattered traces of decaying wood fragments and other decomposed plant material are characteristic of this unit (AMEC ~~20032004~~). Dry density and moisture content testing of several peat rich samples from the project site suggest that more than half of the sample consisted of organic debris. The peat rich areas on the project site are believed to be associated with former marshlands that previously existed along the now mostly buried drainage course that meanders across the central portion of the project site. Because of the young age of these sediments (< 10,000 years), not enough time has passed to fossilize any remains that might be present. Therefore, they are not considered sensitive for paleontological resources.

The major surface exposure of colluvium is in the slopes around the prominent hill in the southeast corner of the project. Exposures of alluvium/colluvium were also encountered buried beneath artificial fill in many of the geotechnical borings done by AMEC (~~20032004~~), including what AMEC interprets as an old marsh in the central portion of the project. Thickness of the alluvial/colluvial sediments ranged from less than 1 foot to a maximum of 28 feet.

4.6.5 IMPACTS AND MITIGATION MEASURES

Potentially Significant Impacts

Unknown Archaeological, Historical, or Paleontological Resources. Highly disturbed and scattered marine shell is present within the project area. It may represent a prehistoric archaeological resource, but more likely, it was introduced for the import of fill soil. Previously recorded

archaeological shell deposits are located within 0.4 km (0.25 mile) east and northwest of the project area, suggesting that prehistoric cultural resources may also exist within the project area. As such, it is possible that unknown buried prehistoric archaeological resources will be encountered during ground disturbing activities. Potentially unique unknown archaeological resources on the project site, if any, could be significantly impacted by the project if monitoring and mitigation are not provided.

Pleistocene fossils are known from research and construction-related excavations in the Los Angeles Basin in deposits similar to those that occur within the project (Arnold 1903, Grant and Gale 1931, Poland ~~and Perryet. al.~~ 1956, Miller 1971, Conkling 1988). Remains of invertebrates such as bivalves, gastropods, sand dollars, barnacles, and crabs are common. Less common, but more significant, are the remains of marine vertebrates such as bony fish, sharks, whales, dolphins, and seals. In addition, RanchoLabrean-type terrestrial animals such as elephants, horses, bison, camels, saber tooth cats, deer, and sloths are known from these sediments. The potential exists to encounter similar fossils during ground-disturbing activities whenever these sediments are encountered.

Clarifications were made to the citations found in Section 4.6, Cultural and Paleontological Resource. These changes were made as clarifications and refinements to the text; no new citations were added. These changes to the Draft EIR do not result in a significant impact and have no material effect on the findings of the EIR. Recirculation of a subsequent EIR is not required per Section 15088.5(a) of the State CEQA Guidelines.

4.9 TRAFFIC AND CIRCULATION

4.9.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The significant traffic impacts of the proposed project can be mitigated to below a level of significance with implementation of the mitigation measures identified above. However, implementation of Mitigation Measures 4.9.3, 4.9.4, 4.9.5, 4.9.6, and 4.9.7 requires ~~action~~approval by one or more public agencies other than the City of Long Beach. Since implementation of these measures is completely or partially within the control of other jurisdictional agencies (i.e., Caltrans, City of Signal Hill), implementation cannot be ensured by the City of Long Beach. Should the City of Signal Hill and/or Caltrans choose not to ~~implement~~approve the implementation of these measures, the ~~related project~~project-related impacts may remain significant and adverse.

For the purposes of this EIR, project impacts to the following intersections will remain significant and adverse until the appropriate Responsible Agency approves ~~and implements~~ Mitigation Measures 4.9.3, 4.9.4, 4.9.5, and 4.9.7 and these Mitigation Measures are implemented by the City of Long Beach or other willing agency:

- Orange Avenue at Spring Street (Mitigation Measure 4.9.3)
- I-405 SB Ramps at Orange Avenue (Mitigation Measure 4.9.4)
- 32nd Street at Orange Avenue (Mitigation Measure 4.9.5)
- Orange Avenue at 28th Street/Project Driveway No. 4 (Mitigation Measure 4.9.7).

Approval from the City of Signal Hill is also required to install street improvements and signage restricting access to “right in/right out” at Project Driveway Nos. 3 and 5 per Mitigation Measure 4.9.6. Until the appropriate Responsible Agency approves ~~and implements~~ Mitigation Measure 4.9.6, and this Mitigation Measure is implemented by the City of Long Beach or other willing agency, project impacts to the minor street approach (28th and Project Driveway No. 3) ~~to~~of the intersection of Orange and 28th Street will remain significant and adverse.

While operating within the limits of the interjurisdictional decision-making processes, the City of Long Beach is committed to working with Caltrans and the City of Signal Hill to implement these mitigation measures to the best of its ability.

In the Response to Comments, clarifications were made regarding the level of significance of traffic impacts after implementation of mitigation. These changes were made at the request of the City of Signal Hill and further clarify the relationship between the City of Long Beach and Responsible Agencies as it pertains to the approval of traffic mitigation. These changes to the Draft EIR do not result in a significant impact and have no material effect on the findings of the EIR. Recirculation of a subsequent EIR is not required per Section 15088.5(a) of the State CEQA Guidelines.

4.13 PUBLIC HEALTH AND SAFETY

4.13.1 INTRODUCTION

The following is an evaluation of potential impacts to public health and safety as a result of the proposed project. This evaluation was based on environmental conditions of the project site set forth in several reports that documented site soil, soil gas, and groundwater investigations and health risk evaluations. These reports included:

- ~~Draft~~ *Geotechnical Evaluation in Support of Conceptual Design and Environmental Impact Report (EIR), Long Beach Sports Park, South and West of Spring Street and Orange Avenue, Long Beach, California*; prepared by AMEC Earth and Environmental, Inc., August 4, ~~2003~~2004;
- *Final Report, Preliminary Site Characterization, Long Beach Auto Mall, for the Redevelopment Agency, City of Long Beach*, Dames and Moore, May 18, 1988;
- *Proposed Long Beach Sports Park, Response to LA County DHS Letter dated December 3, 1999*, prepared by Mearns Consulting Corp., March 10, 2003;
- *Results of Subsurface Soil Sampling during a Geophysical Investigation at the Proposed Two-acre Lomita Site*, prepared by ESE, October 28, 1993;
- *Site Characterization Report, Proposed Retention Basin within the South Block of the LB/405 Retail Center in Long Beach, California*, prepared by ESE, February 22, 1994;
- *Health Risk Assessment for Soil and Vadose Zone within the Proposed Hilltop Sports Park, City of Long Beach, Long Beach, California*; prepared by QST Environmental, Inc., August 6, 1998; and
- *Site Assessment Summary and Cost Estimate to Perform Demolition and Soil Remediation at the Exxon Property in Long Beach, California*, prepared by ESE, November 11, 1999.

These reports are available for review at the City of Long Beach. The Existing Setting portion of this section includes a summary of the methodologies and results of previous investigations conducted on the proposed project site.

Additionally, a *Draft Human Health Risk Assessment, Proposed Long Beach Sports Park, Long Beach California*, Volume 1 of 6, was prepared by Mearns Consulting Corp in August 2003. For this report, 168 soil borings at varying depths, were placed on site in 2002 and 2003. Figure 4.13.1 provides the location of soil borings placed on site as part of the Human Health Risk Assessment prepared for the proposed project. Over 330 soil samples were collected from these borings. The analytical results were assessed in a Human Health Risk Assessment (HRA). The HRA evaluated the potential for human health to be affected due to exposure to residual concentrations of chemicals detected in site soils under existing site conditions. The HRA assessed potential risk via three possible exposure routes: ingestion, dermal contact, and inhalation.

The soil sampling was done in accordance with a Sampling and Analysis Plan approved by the U.S. Environmental Protection Agency (U.S. EPA), which provided funding for and oversight of the soil sampling through its Brownfield Assessment Grant program. Additional information on the methodology used in the HRA for the proposed project is found in the Existing Setting portion of this section.

Potential fire hazards as a result of the operation of active oil wells, while considered separately from the HRA, are also addressed in this section.

4.13.2 EXISTING ENVIRONMENTAL SETTING

Historic Environmental Setting

A review of historic files, topographic maps, and aerial photographs was performed by AMEC Earth and Environmental, Inc. (AMEC), a geotechnical consulting firm. The following information is summarized from the *Draft Geotechnical Evaluation in Support of Conceptual Design and Environmental Impact Report (EIR), Long Beach Sports Park, South and West of Spring Street and Orange Avenue, Long Beach, California*; dated ~~August 4, 2003~~ May 14, 2004; (prepared by AMEC Earth and Environmental, Inc.)

AMEC, the geotechnical consultant for the proposed project, provided information regarding historic on-site grading and fill placement after a review of historic files, topographic maps, and aerial photographs (AMEC ~~2003~~2004). AMEC determined that the first significant grading of the site occurred in conjunction with construction of the Los Angeles Terminal Railway prior to 1896. AMEC reviewed a 1925 topographic map of the site and determined that this grading was accomplished by cutting an approximately 100-foot-wide slot through the topographic high area in the northwestern portion of the site and constructing a narrow fill embankment to support the tracks along the southwest side of the site, adjoining California Avenue. It was determined that the fill embankment for the railway is still present along the southwesterly portion of the site, but the original railway excavation has been obscured by subsequent fill.

AMEC reviewed historic engineering documentation available on microfiche at the City of Long Beach and determined that prior to 1921 a water reservoir was constructed at the current location of the existing detention basin near the center of the site. The reservoir structure is located at the bottom of the natural drainage course that formerly traversed the central portion of the site and has essentially the same footprint as the existing detention basin.

Construction of the reservoir was determined by AMEC to have consisted primarily of placing two fill embankments across the drainage course, probably using soils excavated from the intervening basin area. Excavation of the basin area also appears to have included grading of an ascending cut slope on the south side of the basin area. AMEC interpreted the topographic contours to indicate that the structure would have impounded surface drainage to the north, along the upstream portion of the previously existing drainage course. Small local marsh areas and stands of willow trees are noted on the 1921 map in the upstream area. A small dam or wall is shown on the 1925 USGS topographic map at the location of the downstream side of the reservoir. The covered reservoir is clearly visible in the 1927 and 1928–29 aerial photographs. In the next available historic aerial photograph, dated 1945, the reservoir is no longer covered and presumably had been converted to the existing storm water detention basin. These aerial photographs are reproduced in the Geotechnical Evaluation, available for review at the City of Long Beach, Community Development Department.

AMEC determined that grading associated with oil field activities, which began in the early 1920s, included construction of roads, drill pads, building pads, sumps, and the installation of numerous

pipelines. This grading affected essentially the entire site to some degree, but the associated depth of excavation and thickness of fill does not appear to typically exceed about 10 to 20 feet. This observation is based primarily on a comparison of the USGS topographic maps of the area dated 1925, 1949, and 1968 and a review of the more current topographic plots and boring logs available for the site.

Producing wells were completed in Huntington Beach, Long Beach/Signal Hill, Dominguez, Rosecrans, Seal Beach, and Inglewood after the oil-producing potential of the Newport-Inglewood structural/fault zone was discovered in the early 1920s (AMEC ~~2003~~2004). There are 48 existing oil wells on site. Currently 15 of these wells are active. An additional four wells will be reactivated during project implementation, resulting in 19 active wells on or adjacent to the project site (see Section 4.1 for more information). Essentially the entire site was affected by grading and construction associated with the on-site oil field operations that have continued for approximately 80 years.

Clarifications were made to the citations found in Section 4.13, Public Health and Safety. These changes were made as clarifications and refinements to the text; no new citations were added. These changes to the Draft EIR do not result in a significant impact and have no material effect on the findings of the EIR. Recirculation of a subsequent EIR is not required per Section 15088.5(a) of the State CEQA Guidelines.

8.0 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Traffic and Circulation

The significant traffic impacts of the proposed project can be mitigated to below a level of significance with implementation of the mitigation measures identified above. However, implementation of Mitigation Measures 4.9.3, 4.9.4, 4.9.5, 4.9.6, and 4.9.7 requires ~~action~~approval by one or more public agencies other than the City of Long Beach. Since implementation of these measures is completely or partially within the control of other jurisdictional agencies (i.e., Caltrans, City of Signal Hill), implementation cannot be ensured by the City of Long Beach. Should the City of Signal Hill and/or Caltrans choose not to ~~implement~~approve the implementation of these measures, the related project impacts may remain significant and adverse.

For the purposes of this EIR, project impacts to the following intersections will remain significant and adverse until the appropriate Responsible Agency approves and implements Mitigation Measures 4.9.3, 4.9.4, 4.9.5, and 4.9.7 and these Mitigation Measures are implemented by the City of Long Beach or other willing agency:

- Orange Avenue at Spring Street (Mitigation Measure 4.9.3)
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- Orange Avenue at 28th Street/Project Driveway No. 4 (Mitigation Measure 4.9.7).

Approval from the City of Signal Hill is also required to install street improvements and signage restricting access to “right in/right out” at Project Driveway Nos. 3 and 5 per Mitigation Measure 4.9.6. Until the appropriate Responsible Agency approves ~~and implements~~ Mitigation Measure 4.9.6, and this Mitigation Measure is implemented by the City of Long Beach or other willing agency, project impacts to the minor street approach (28th and Project Driveway No. 3) ~~to~~of the intersection of Orange and 28th Street will remain significant and adverse.

While operating within the limits of the interjurisdictional decision-making processes, the City of Long Beach is committed to working with Caltrans and the City of Signal Hill to implement these mitigation measures to the best of its ability.

In the Response to Comments, clarifications were made regarding the level of significance of traffic impacts after implementation of mitigation. These changes were made at the request of the City of Signal Hill and further clarify the relationship between the City of Long Beach and Responsible Agencies as it pertains to the approval of traffic mitigation. These changes to the Draft EIR do not result in a significant impact and have no material effect on the findings of the EIR. Recirculation of a subsequent EIR is not required per Section 15088.5(a) of the State CEQA Guidelines.

11.0 REFERENCES

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Clarifications were made to the Chapter 11.0, References, to include citations made in the Chapter 4.0 of the Draft EIR. These changes were made as clarifications and refinements to the text; only references that were included as citations in Chapter 4.0 were added to Chapter 11.0. No new citations have been added. These changes to the EIR do not result in a significant impact and have no material effect on the findings of the EIR. Recirculation of a subsequent EIR is not required per Section 15088.5(a) of the State CEQA Guidelines.