

LONG BEACH MEMORIAL MEDICAL CENTER EXPANSION  
VOLUME III, ENVIRONMENTAL IMPACT REPORT  
SCH NO. 2004081142

PREPARED FOR:

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# VOLUME III

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In response to concerns related to the construction staging impacts to parking, Long Beach Memorial Medical Center relocated the central plant building, thus removing the need to construct a utility trench through Parking Lot K, and thus reducing impacts to existing parking spaces. Four tables in the parking analysis were revised to reflect these refinements to the parking analysis.

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Included in Section 12 of this Vol. III of the EIR are several figures that appeared in the Draft EIR and were later revised to correct the northeastern boundary of the Long Beach Memorial Medical Center campus, revised central plant building location, and refinements to the conceptual site plan for the Todd Cancer Institute.

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**REVISED TECHNICAL APPENDICES**

Three of the technical appendices included in Vol. II were revised in response to public comments:

1. **Appendix R.A:** The Master Plan was revised to correct the northeastern boundary of the Long Beach Memorial Medical Center campus, revised central plant building location, and refinements to the conceptual site plan for the Todd Cancer Institute. The Revised Appendix A and replaces Appendix A.
2. **Appendix R.C:** The URBEMIS air quality modeling data were transmitted to the South Coast Air Quality Management District and has been included as Revised Appendix C, a supplement to EIR Appendix C. The summary sheets are provided in Revised Appendix C, but it does not replace Appendix C. The complete data sheets are available for review at the City of Long Beach and at Sapphos Environmental, Inc. by appointment.
3. **Appendix R.F:** The title of the Environmental Summary Report was revised to Site Characterization Report. The Removal Action Workplan (RAW) will be finalized and approved by the Department of Toxic Substances Control in May 2005. The RAW will be available for review at the City of Long Beach and at Sapphos Environmental, Inc. by appointment only. The Revised Appendix R.F did not substantially change the scope of environmental impacts that have been analyzed or the mitigation measures regarding these issues. The Revised Appendix F replaces Appendix F.

R.A	Master Plan
R.C	URBEMIS Air Quality Modeling Data
R.F	Health Risk Assessment and Site Characterization Report
L	Voluntary Clean-up Agreement
M	Traffic Analysis Cover
N	Résumés
O	Affordable Housing Memorandum for the Record

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**SECTION 12.0**  
**CLARIFICATIONS AND REVISIONS TO THE**  
**DRAFT ENVIRONMENTAL IMPACT REPORT**

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**Note to reader:**

Section 12.0 consists of clarifications and revisions to the Draft Environmental Impact Report (EIR), which have resulted from responses to comments received from agencies and the public. All clarifications and revisions to the Draft EIR were made to increase the understanding of the EIR. The Draft EIR was released for a 45-day public review period between January 25 and March 10, 2005, and the City of Long Beach received 19 letters of comment on the Draft EIR.

## **SECTION ES EXECUTIVE SUMMARY**

### **ES.2.1 Todd Cancer Institute**

Page ES-2 Please delete the following phrase from the last sentence in the second paragraph:

...and would accentuate the healing and medicinal properties of certain plants.

Page ES-2 Please delete the following phrase from the first sentence in the third paragraph:

...and an atrium featuring a 70-foot-high skylight.

### **Table ES.5-1, *Summary of Impacts***

Please replace Table ES.5-1, *Summary of Impacts*, with the following revised Table RES.5-1, *Summary of Impacts*.

**TABLE RES.5-1  
SUMMARY OF IMPACTS**

Impact	Mitigation Measure	Level of Significance After Mitigation
<b>Aesthetics</b>		
Implementation of the proposed project has the potential to increase the amount of glare reflected from the structural elements.	<p><b>Aesthetics-1</b> The City of Long Beach (City) shall ensure that the potential increase in the amount of light and glare produced due to implementation of the security lighting provided for each element of the proposed project shall be reduced to below the threshold of significance by mandating the design type of the light fixtures, light standard height, and light fixture and standard orientation. The City of Long Beach shall ensure that prior to completion of final plans and specifications for each structural element of the proposed project, lighting plans and specifications shall be submitted to the City of Long Beach Department of Public Works to ensure that all light fixtures shall use glare control visors, arc tube suppression caps, and a photometric design that maintains 70 percent of the light intensity in the lower half of the light beam, or comparable design or technology, to achieve those criteria. The City of Long Beach shall ensure that this requirement applies to all elements of the proposed project: Todd Cancer Institute Phases I and II; Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, and central plant building; MCH pediatric outpatient building; MCH link building; roadway realignment; and parking improvements. Completion of this mitigation measure shall be monitored and enforced by the City of Long Beach Department of Public Works.</p>	Implementation of mitigation measure Aesthetics-1 would reduce significant impacts related to the potential increase in the amount of glare reflected from the structural elements to below the level of significance.
Implementation of the proposed project has the potential to increase the amount of light and glare due to increased security lighting.	<p><b>Aesthetics-2</b> The City of Long Beach shall ensure that the potential increase in the amount of glare produced due to implementation of the structural elements of the proposed project shall be reduced to below the threshold of significance by mandating the design type of the reflective surface of the buildings, careful selection of exterior building materials, and window glass treatments. The City of Long beach shall also ensure that prior to the completion of final plans and specifications for each structural element of the proposed project, plans and specifications shall be submitted to the City of Long Beach Department of Public Works to ensure that the selection of exterior building materials and window glass treatments would not create uncomfortable levels of glare on public roadways or surrounding redirected areas for the structural elements of the proposed project: Todd Cancer Institute Phases I and II, Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, MCH pediatric outpatient building, and MCH link building. Completion of this mitigation measure shall be monitored and enforced by the City of Long Beach Department of Public Works.</p>	Implementation of mitigation measure Aesthetics-2 would reduce significant impacts related to daytime and nighttime light and glare to below the level of significance.
<b>Air Quality</b>		
Implementation of the proposed project has the potential to impact air quality during construction and operation.	<p><b>Air-1</b> As part of the request for the demolition permit for the 86-car parking structure, the WIC Building, and existing structures located in areas specified for development of surface parking areas Q, R, S, and T, the Long Beach Memorial Medical Center shall demonstrate that asbestos-containing materials (ACM) in these structures have been identified and adequately abated, or that the contractor has been informed of the need to identify and abate ACM consistent with the requirements of South Coast Air Quality Management District (SCAQMD) Rule 1403. Specifically, all ACM shall be removed and encapsulated prior to demolition, such that no asbestos fibers are released.</p> <p><b>Air-2</b> Prior to advertising for construction bids for each structural element of the proposed proposed project, the plans and specifications shall be reviewed by the lead agency to ensure that the requirement to comply with South Coast Air Quality Management District (SCAQMD) regulations, including Rule 1403, Rule 402, and Rule 403, is included. The</p>	Implementation of mitigation measures Air-1 through Air-13 would reduce inputs on air quality for construction and operation of the proposed project to the maximum extent feasible, in accordance with the guidance provided by the

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>Office of Statewide Health Planning and Development shall be the lead agency for the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench. The City of Long Beach shall be the lead agency for the Todd Cancer Institute Phases I and II, the MCH pediatric outpatient building, the MCH link building, the roadway realignment, and the parking facilities. The specifications shall require the construction contractor to present a Rule 402/Rule 403 compliance plan at the construction start-up meeting, prior to demolition, construction staging, or grading. The Rule 402/Rule 403 compliance plan shall include mitigation measures Air-2 through Air-12, or comparable measures to prevent nuisance dust and visible emissions. The construction activities related to the proposed project shall comply with SCAQMD regulations, including Rule 1403, Rule 402, and Rule 403. Rule 402 specifies that there shall be no dust impacts off site that would be sufficient to cause a nuisance. Rule 403 specifies that construction activities shall restrict visible emissions from occurring. The contractor’s Rule 402/Rule 403 compliance plan shall be subject to approval by the City of Long Beach. Weekly inspections shall be undertaken by the City of Long Beach to ensure conformance with the approved Rule 402/Rule 403 compliance plan.</p> <p><b>Air-3</b> Soil moistening shall be required to treat exposed soil during construction of each element of the proposed project to avoid fugitive dust emissions, ensure compliance with current air quality standards, and avoid contributions to cumulative increases in criteria pollutants. Prior to advertising for construction bids for each element of the proposed project, the plans and specifications shall be reviewed by the lead agency to ensure that the requirement for the construction contractor to ensure that soil is moistened prior to grading and that soil moisture content is maintained at a minimum of 12 percent for all grading activities is included. The Office of Statewide Health Planning and Development shall be the lead agency for the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench. The City of Long Beach shall be the lead agency for the Todd Cancer Institute Phases I and II, the MCH pediatric outpatient building, the MCH link building, the roadway realignment, and the parking facilities. The construction contractor shall demonstrate compliance with this measure through the submission of weekly monitoring reports to the lead agency. At a minimum, active operations shall utilize one or more of the applicable best available control measures to minimize fugitive dust emissions from each fugitive dust source type that is part of the active operation.</p> <p><b>Air-4</b> Soil moistening shall be required to treat grading areas during construction of each element of the proposed project to avoid fugitive dust emissions, ensure compliance with current air quality standards, and avoid contributions to cumulative increases in criteria pollutants. Prior to advertising for construction bids for each element of the proposed project, the lead agency shall ensure that the plans and specifications for each element of the proposed project include the requirement for the construction contractor to ensure that soil shall be moistened not more than 15 minutes prior to the daily commencement of soil-moving activities and three times a day, or four times a day under windy conditions, in order to maintain a soil moisture content of 12 percent. The Office of Statewide Health Planning and Development shall be the lead agency for the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench. The City of Long Beach shall be the lead agency for the Todd Cancer Institute Phases I and II, MCH pediatric outpatient building, MCH link building, roadway realignment, and parking facilities.</p>	<p>SCAQMD. However, impacts to air quality from construction emissions of NO<sub>x</sub> would remain significant.</p>



**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p><b><i>Air-5</i></b> Application of water or a chemical stabilizer shall be required to treat grading areas during construction of each element of the proposed project to avoid fugitive dust emissions, ensure compliance with current air quality standards, and avoid contributions to cumulative increases in criteria pollutants. Prior to advertising for construction bids for each element of the proposed project, the lead agency shall ensure that the plans and specifications for each element of the proposed project include the requirement for the construction contractor to apply water or a chemical stabilizer to maintain a stabilized surface on the last day of active operations prior to a weekend or holiday. The Office of Statewide Health Planning and Development shall be the lead agency for the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench. The City of Long Beach shall be the lead agency for the Todd Cancer Institute Phases I and II, the MCH pediatric outpatient building, the MCH link building, the roadway realignment, and the parking facilities.</p> <p><b><i>Air-6</i></b> Moistening or covering of excavated soil piles shall be required to treat grading areas during construction of each element of the proposed project to avoid fugitive dust emissions, ensure compliance with current air quality standards, and avoid contributions to cumulative increases in critical pollutants. Prior to advertising for construction bids for the proposed project, the lead agency shall ensure that the plans and specifications for each element of the proposed project include the requirement for the construction contractor to ensure that excavated soil piles are watered hourly for the duration of construction or covered with temporary coverings. The Office of Statewide Health Planning and Development shall be the lead agency for the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench. The City of Long Beach shall be the lead agency for the Todd Cancer Institute Phases I and II, the MCH pediatric outpatient building, the MCH link building, roadway realignment, and the parking facilities.</p> <p><b><i>Air-7</i></b> Discontinuing grading activities during windy conditions shall be required to treat grading areas during construction of each element of the proposed project to avoid fugitive dust emissions, ensure compliance with current air quality standards, and avoid contributions to cumulative increases in critical pollutants. Prior to advertising for construction bids for each element of the proposed project, the lead agency shall ensure that the plans and specifications for each element of the proposed project include the requirement for the construction contractor to cease grading during periods when winds exceed 25 miles per hour. The Office of Statewide Health Planning and Development shall be the lead agency for the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench. The City of Long Beach shall be the lead agency for the Todd Cancer Institute Phases I and II, the MCH pediatric outpatient building, the MCH link building, the roadway realignment, and the parking facilities.</p> <p><b><i>Air-8</i></b> Moistening excavated soil prior to loading on trucks shall be required at all grading areas during construction of each element of the proposed project to avoid fugitive dust emissions, ensure compliance with current air quality standards, and avoid contributions to cumulative increases in critical pollutants. Prior to advertising for construction bids for the proposed project, the lead agency shall ensure that the plans and specifications for each element of the proposed project include the requirement for the construction contractor to moisten excavated soil prior to loading on trucks. The Office of</p>	

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>Statewide Health Planning and Development shall be the lead agency for the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench. The City of Long Beach shall be the lead agency for the Todd Cancer Institute Phases I and II, the MCH pediatric outpatient building, the MCH link building, the roadway realignment, and the parking facilities.</p> <p><b>Air-9</b> Transport of soils to and from the proposed project site for each element of the proposed project shall be conducted in a manner that avoids fugitive dust emissions, ensures compliance with current air quality standards, and avoids contributions to cumulative increases in criteria pollutants. Prior to advertising for construction bids for each element of the proposed project, the lead agency shall ensure that the plans and specifications for each element of the proposed project include the requirement for the construction contractor to cover all loads of dirt leaving the site or to leave sufficient freeboard capacity in the truck to prevent fugitive dust emissions en route to the disposal site. The Office of Statewide Health Planning and Development shall be the lead agency for the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench. The City of Long Beach shall be the lead agency for the Todd Cancer Institute Phases I and II, the MCH pediatric outpatient building, the MCH link building, the roadway realignment, and the parking facilities.</p> <p><b>Air-10</b> Washing of wheels leaving the construction site during construction of each element of the proposed project shall be required to avoid fugitive dust emissions, ensure compliance with current air quality standards, and avoid contributions to cumulative increases in criteria pollutants. The lead agency shall ensure that the plans and specifications for each element of the proposed project include the requirement for the construction contractor to clean adjacent streets of tracked dirt at the end of each workday or install on-site wheel-washing facilities. The Office of Statewide Health Planning and Development shall be the lead agency for the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench. The City of Long Beach shall be the lead agency for the Todd Cancer Institute Phases I and II, the MCH pediatric outpatient building, the MCH link building, the roadway realignment, and the parking facilities.</p> <p><b>Air-11</b> Turning off engines and equipment when not in use shall be required to reduce vehicular emissions during construction of each element of the proposed project. Prior to advertising for construction bids for the proposed project, the lead agency shall ensure that the plans and specifications for each element of the proposed project include the requirement for the construction contractor to reduce idling emissions by turning off equipment and truck engines when not in use for five minutes or more. The Office of Statewide Health Planning and Development shall be the lead agency for the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench. The City of Long Beach shall be the lead agency for the Todd Cancer Institute Phases I and II, the MCH pediatric outpatient building, the MCH link building, the roadway realignment, and the parking facilities.</p>	

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p><b>Air-12</b> Concurrent use of multiple pieces of heavy equipment beyond the levels described in the construction scenarios shall be prohibited to the maximum extent feasible to reduce vehicular emissions. Prior to advertising for construction bids for each element of the proposed project, the lead agency shall ensure that the plans and specifications include the requirement to minimize to the maximum extent practicable the concurrent use of multiple pieces of heavy equipment for each element of the proposed project during construction activities. The Office of Statewide Health Planning and Development shall be the lead agency for the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench. The City of Long Beach shall be the lead agency for the Todd Cancer Institute Phases I and II, the MCH pediatric outpatient building, the MCH link building, the roadway realignment, and the parking facilities.</p> <p><b>Air-13</b> Carpooling and use of public transportation shall be encouraged to reduce vehicular emissions. The lead agency shall ensure that the plans and specifications include the requirement for the construction contractor to encourage construction workers to use public transit and carpools. The Office of Statewide Health Planning and Development shall be the lead agency for the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench. The City of Long Beach shall be the lead agency for the Todd Cancer Institute Phases I and II, the MCH pediatric outpatient building, the MCH link building, the roadway realignment, and the parking facilities.</p>	
<b>Cultural Resources</b>		
<p>Implementation of the proposed project has the potential to significantly impact paleontological resources.</p>	<p><b>Cultural-1</b> The potential impact to cultural resources related directly or indirectly to the destruction of a unique paleontological resource or unique geologic feature from the proposed project shall be reduced to below the level of significance by the presence of a qualified paleontological monitor during all ground-disturbing activities. The City of Long Beach shall ensure that any paleontological discoveries shall be removed in accordance with standards for such recovery established by the Society of Vertebrate Paleontology.</p> <p>Where the qualified vertebrate paleontologist identifies the potential for the grading plan to result in impacts to sites recorded to contain unique paleontological resources or sediments with a medium or high potential to contain significant paleontological resources, the City of Long Beach shall require a program for the recovery of the resources. This program must include, but not be limited to, the following:</p> <ul style="list-style-type: none"> <li>• The program must include monitoring of excavation in areas likely to contain paleontologic resources by a qualified vertebrate paleontologic monitor. The monitor shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments that are likely to contain the remains of small fossil vertebrates.</li> <li>• The program must include preparation of recovered specimens to a point of identification, including washing of sediments to recover small fossil vertebrates.</li> </ul>	<p>Implementation of mitigation measure Cultural-1 would be expected to reduce potential significant impacts related to paleontological resources to below the level of significance.</p>

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<ul style="list-style-type: none"> <li>• The program must include identification and curation of specimens into a museum repository with retrievable storage.</li> <li>• The program must include preparation of a report of findings with an appended, itemized inventory of the specimens. The report and inventory, when submitted to the appropriate lead agency, signifies the completion of the program to mitigate impacts to paleontologic resources.</li> </ul>	
<p>Implementation of the proposed project has the potential to significantly impact archaeological resources.</p>	<p><b>Cultural-2</b> The impact to cultural resources related directly or indirectly to the destruction of a unique archaeological resource from the proposed project shall be reduced to below the level of significance by the presence of a qualified archaeological monitor during all ground-disturbing activities within native soils identified as Qal. The City of Long Beach shall ensure that impacts to cultural resources as a result of the potential for earthmoving activity to uncover previously unrecorded archeological resources is below the level of significance through monitoring by a qualified archaeologist of all subsurface operations undertaken in native soils identified as Qal, including but not limited to grading, excavation, trenching, and recording of any previously unrecorded archeological resources encountered during construction. The plans and specifications for all ground-disturbing activities shall identify the need for archeological monitoring and data recovery. The archaeologist shall be on site during any activity when soil is to be moved or exported. The archaeologist shall be authorized to halt the proposed project in the area of a finding, and mark, collect, and evaluate any archaeological materials discovered during construction. In addition, an exploratory archaeological excavation shall be made (i.e., a sample test pit) to assess the presence of cultural resources.</p> <p>In the event that archaeological resources are encountered by the monitoring archaeologist, the archaeologist shall contact the Gabrielino/Tongva Tribal Council and arrange for a Native American monitor to be present on site during the remainder of excavation activities related to the proposed project.</p> <p>Copies of any archaeological surveys, studies, or reports of field observation during grading and land modification shall be prepared and certified by the attendant archaeologist and submitted to the South Central Coastal Information Center at California State University Fullerton. Any artifacts recovered during mitigation shall be deposited in an accredited and permanent scientific or educational institution for the benefit of current and future generations.</p>	<p>Implementation of mitigation measure Cultural-2 would be expected to reduce potential significant impacts related to archaeological resources to below the level of significance.</p>

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
<p>Implementation of the proposed project has the potential to impact human remains.</p>	<p><b>Cultural-3</b> The City of Long Beach shall ensure that impacts to cultural resources related to the unanticipated discovery of human remains be reduced to below the level of significance by ensuring that, in the event human remains are encountered, construction in the area of finding shall cease and the remains shall stay in-situ pending definition of an appropriate plan. The Los Angeles County Coroner (Coroner) shall be contacted to determine whether investigation of the cause of death is required. In the event that the remains are of Native American origin, the Native American Heritage Commission shall be contacted to determine necessary procedures for protection and preservation of remains, including reburial, as provided in the State CEQA Guidelines, Section 15064.5(e), "CEQA and Archaeological Resources," CEQA Technical Advisory Series.<sup>1</sup></p> <p>In the event of accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps shall be taken:</p> <p style="padding-left: 40px;">There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <p style="padding-left: 80px;">(A) The Coroner must be contacted to determine that no investigation of the cause of death is required, and</p> <p style="padding-left: 80px;">(B) If the Coroner determines the remains to be Native American:</p> <ol style="list-style-type: none"> <li>1. The Coroner shall contact the Native American Heritage Commission within 24 hours.</li> <li>2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.</li> <li>3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.</li> <li>4. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods, with appropriate dignity, in the property in a location not subject to further subsurface disturbance:</li> </ol>	<p>Implementation of mitigation measure Cultural-3 would be expected to reduce potential significant impacts related to the unanticipated discovery of human remains to below the level of significance.</p>

<sup>1</sup> California Resources Agency. 16 September 2004. California Environmental Quality Act, Article 5, §15064.5(e): "Determining the Significance of Impacts to Archeological and Historical Resources." Available at: [http://ceres.ca.gov/topic/env\\_law/ceqa/guidelines/art5.html](http://ceres.ca.gov/topic/env_law/ceqa/guidelines/art5.html)

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>(a) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.</p> <p>(b) The descendant in identified fails to make a recommendation.</p> <p>(c) The landowner or his/her authorized representative rejects the recommendation of the descendent, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.</p>	
<b>Geology and Soils</b>		
<p>Implementation of the proposed project has potential to result in impacts associated with substantial ground shaking, and thus a degree of seismic hazard risk.</p>	<p><b>Geology-1</b> The City of Long Beach shall reduce the exposure of people or property to potentially adverse effects, including the risk of loss or injury, involving seismic ground shaking from the operation of the Miller Children’s Hospital (MCH) pediatric inpatient tower, Phases I and II, and the central plant building. Exposure shall be minimized through conformance with California Geological Survey’s Guidelines for Evaluating and Mitigating Seismic Hazards in California and all applicable City of Long Beach codes and regulations related to seismic activity. The MCH shall ensure that the site-specific geotechnical investigations for the MCH pediatric inpatient tower, Phases I and II, and the central plant building are incorporated into proposed project plans and specifications. Prior to approval of final plans and specifications for the MCH pediatric inpatient tower, Phases I and II, and the central plant building, the Office of Statewide Health Planning and Development shall review and ensure that all recommendations of the site-specific geotechnical recommendations are incorporated into the final plans and specifications.</p> <p><b>Geology-2</b> The City of Long Beach shall reduce the exposure of people or property to potentially adverse effects, including the risk of loss or injury, involving seismic ground shaking from the operation of the Miller Children’s Hospital (MCH) pediatric outpatient building, the MCH link building, the Todd Cancer Institute (TCI) Phases I and II, and the parking structure. Exposure shall be minimized through conformance with California Geological Survey’s Guidelines for Evaluating and Mitigating Seismic Hazards in California and all applicable City of Long Beach codes and regulations related to seismic activity. The Long Beach Memorial Medical Center (LBMMC) and the MCH shall ensure that the site-specific geotechnical investigations for the MCH pediatric outpatient building, the MCH link building, the TCI Phases I and II, and the parking structure are incorporated into proposed project plans and specifications. Prior to approval of final plans and specifications for the MCH pediatric outpatient building, the MCH link building, the TCI Phases I and II, and the parking structure, the City of Long Beach Department of Public Works shall review and ensure that all recommendations of the site-specific geotechnical recommendations are incorporated into the final plans and specifications.</p>	<p>Implementation of mitigation measures Geology-1 and Geology-2 would be expected to reduce potential significant impacts related to the seismic hazard risk to the least extent possible.</p>
<p>Implementation of the proposed project has potential to result in impacts associated</p>	<p><b>Geology-3</b> The City of Long Beach shall reduce the exposure of people or property to potentially adverse effects, including the risk of loss or injury, involving geologic hazards related to liquefaction from seismic ground shaking from the operation of the Miller Children’s Hospital (MCH) pediatric inpatient tower, Phases I and II, and the central plant building. Exposure shall</p>	<p>Implementation of mitigation measures Geology-3 and Geology-4 would be</p>

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
<p>with geologic hazards related to liquefaction.</p>	<p>be minimized through conformance with all applicable State of California and City of Long Beach codes and regulations. The MCH shall ensure that the site-specific geotechnical investigations for the MCH pediatric inpatient tower, Phases I and II, and the central plant building are incorporated into proposed project plans and specifications. Prior to approval of final plans and specifications for the MCH pediatric inpatient tower, Phases I and II, and the central plant building, the Office of Statewide Health Planning and Development shall review and ensure that all recommendations of the site-specific geotechnical recommendations are incorporated into the final plans and specifications.</p> <p><b>Geology-4</b> The City of Long Beach shall reduce the exposure of people or property to potentially adverse effects, including the risk of loss or injury, involving geologic hazards related to liquefaction from seismic ground shaking from the operation of the Miller Children’s Hospital (MCH) pediatric outpatient building, the MCH link building, the Todd Cancer Institute (TCI) Phases I and II, and the parking structure. Exposure shall be minimized through conformance with all applicable State of California and City of Long Beach codes and regulations. The Long Beach Memorial Medical Center (LBMMC) and the MCH shall ensure that the site-specific geotechnical investigations for the MCH pediatric outpatient building, the MCH link building, the TCI Phases I and II, and the parking structure are incorporated into proposed project plans and specifications. Prior to approval of final plans and specifications for the MCH pediatric outpatient building, the MCH link building, the TCI Phases I and II, and the parking structure, the City of Long Beach Department of Public Works shall review and ensure that all recommendations of the site-specific geotechnical recommendations are incorporated into the final plans and specifications.</p>	<p>expected to reduce potential significant impacts related to liquefaction to below the level of significance.</p>
<p>Implementation of the proposed project has potential to result in impacts related to a substantial increase in soil erosion.</p>	<p><b>Geology-5</b> The City of Long Beach Department of Planning and Building shall require the construction contractor to implement best management practices that are consistent with the National Pollution Discharge Elimination System (NPDES) Permit No. CAS 004003 to avoid soil erosion during construction of the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, and the central plant building. Prior to approval of final plans and specifications, the Office of Statewide Health Planning and Development (OSHDP) shall ensure that the requirement to comply with NPDES Permit No. CAS 004003 is included in the specifications. The OSHPD Inspector of Record shall monitor construction to ensure compliance with NPDES Permit No. CAS 004003.</p> <p><b>Geology-6</b> The City of Long Beach Department of Planning and Building shall require the construction contractor to implement best management practices that are consistent with the National Pollution Discharge Elimination System (NPDES) Permit No. CAS 004003 to avoid soil erosion during construction of the Todd Cancer Institute (TCI) Phases I and II, the Miller Children’s Hospital (MCH) pediatric outpatient building and utility trench, the MCH link building, the roadway realignment, the on-site parking areas (Lots N, P, Q, R, S, and T), and the parking structure. Prior to approval of final plans and specifications, the City of Long Beach Department of Planning and Building shall ensure that the requirement to comply with NPDES Permit No. CAS 004003 is included in the specifications. The City of Long Beach Department of Planning and Building shall monitor construction to ensure compliance with NPDES Permit No. CAS 004003.</p>	<p>Implementation of mitigation measures Geology-5 and Geology-6 would manage the erosion potential during construction to the maximum extent practicable.</p>

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
<b>Hazards and Hazardous Materials</b>		
<p>Implementation of the proposed project has the potential to result in significant impacts related to the accidental release of hazardous materials during construction.</p>	<p><b>Hazards-1</b> The Office of Statewide Health Planning and Development shall ensure avoidance of exposure to asbestos-containing materials (ACMs) and lead-based paints (LBPs) during demolition, construction, and remediation activities, the City of Long Beach and the Office of Statewide Health Planning and Development shall require that all such materials and wastes be identified and that an Operations and Maintenance (O&amp;M) Plan be developed prior to the issuance of demolition permits for each structure constructed prior to 1979. The O&amp;M Plan shall ensure compliance with all applicable federal, state, and local requirements and specify all work to be done, including lead and asbestos surveys of structures to be demolished, proper handling and storage of lubricants and fuels for construction equipment, and methods for remediation of ACMs and LBPs, if necessary. The O&amp;M Plan must be submitted to the City of Long Beach Department of Health for review and approval prior to initiation of construction and demolition activities for the Miller Children’s Hospital pediatric inpatient tower and central plant building, and the construction of parking lots requiring the demolition of pre-1979 constructed buildings. The O&amp;M Plan shall, as appropriate and necessary, conform to the requirements of the Los Angeles County Department of Health Services (Local Enforcement Agency for landfills), South Coast Air Quality Management District, the Los Angeles Regional Water Quality Control Board, and the Department of Toxic Substances Control. Compliance with the O&amp;M Plan shall be monitored by the City of Long Beach Department of Planning and Building throughout construction and demolition.</p> <p><b>Hazards-2</b> The Office of Statewide Health Planning and Development shall require that petroleum hydrocarbon–contaminated soils and water be tested, treated, and disposed as necessary under the oversight of the Department of Toxic Substances Control (DTSC) to reduce the potential for exposure of people or property to petroleum hydrocarbon–contaminated soils and water. The OSHPD shall review plans and specifications for those elements of the proposed project to be constructed over unclassified fill: the Miller Children’s Hospital (MCH) pediatric inpatient tower Phase I, the central plant building, and the utility trench. The OSHPD shall ensure that the proposed project plans and specifications disclose the potential to encounter petroleum hydrocarbon–contaminated soils and water, and require the construction contractor to remove petroleum hydrocarbon–contaminated soils and water within the construction zone, in accordance with all applicable federal, state, and local statutes and regulations and consistent with specifications of the Voluntary Clean-up Agreement between the Long Beach Memorial Medical Center and DTSC.</p> <p><b>Hazards-3</b> The City of Long Beach shall require that petroleum hydrocarbon–contaminated soils and water be tested, treated, and disposed of as necessary under the oversight of the Department of Toxic Substances Control (DTSC). The City of Long Beach shall review plans and specifications for those elements of the proposed project to be constructed over unclassified fill: the Miller Children’s Hospital (MCH) pediatric outpatient building, the MCH link building, and the Todd Cancer Institute Phases I and II. The City of Long Beach shall ensure that the proposed project plans and specifications disclose the potential to encounter petroleum hydrocarbon–contaminated soils and water, and require the construction contractor to remove petroleum hydrocarbon–contaminated soils and water within the construction zone, in accordance with all applicable federal, state, and local statutes and regulations and consistent with specifications of the Voluntary Clean-up Agreement between the Long Beach Memorial Medical Center and DTSC.</p>	<p>Implementation of mitigation measures Hazards-1 through Hazards-3 would be expected to reduce potentially significant impacts related to the accidental release of hazardous materials during construction to below the level of significance.</p>



**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
<p>Implementation of the proposed project has the potential to result in significant impacts related to the presence of undocumented abandoned wells.</p>	<p><b>Hazards-4</b> The proposed project applicant and remediation contractor shall identify oil wells underlying the Miller Children’s Hospital (MCH) pediatric inpatient tower Phase I, the central plant building, and the utility trench. The oil wells shall be properly abandoned to the current standards of the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR). The proposed project applicant shall ensure that coordination with the DOGGR and proper remediation be incorporated into the construction plans, prior to final approval of plans for the MCH pediatric inpatient building Phase I, the central plant building, and the utility trench. If the oil wells cannot be identified through site survey by a licensed surveyor, excavation shall be undertaken to locate the wells under the oversight of the DOGGR and/or the Office of Statewide Health Planning and Development. If the abandoned oil wells are determined to be leaking, remediation shall be conducted to seal all leaks or venting systems shall be required to transmit gas safely away from the proposed project site, in accordance with specifications of the Voluntary Clean-up Agreement between the Long Beach Memorial Medical Center and the Department of Toxic Substances Control.</p> <p><b>Hazards-5</b> The remediation contractor shall identify oil wells underlying the Miller Children’s Hospital (MCH) pediatric outpatient building, the MCH link building, and the Todd Cancer Institute Phases I and II. The oil wells shall be properly abandoned to the current standards of the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR). The proposed project applicant shall ensure that coordination with the DOGGR and proper remediation be incorporated into the construction plans, prior to final approval of plans for the MCH pediatric outpatient building, the MCH link building, and the Todd Cancer Institute Phases I and II. If the oil wells cannot be identified through site survey by a licensed surveyor, excavation shall be undertaken to locate the wells under the oversight of the DOGGR and/or the City of Long Beach. If the abandoned oil wells are determined to be leaking, remediation shall be conducted to seal all leaks or venting systems shall be required to transmit gas safely away from the proposed project site, in accordance with specifications of the Voluntary Clean-up Agreement between the Long Beach Memorial Medical Center and the Department of Toxic Substances Control.</p>	<p>Implementation of mitigation measures Hazards-4 and Hazards-5 would be expected to reduce potentially significant impacts related to the discovery of undocumented abandoned wells to below the level of significance.</p>
<p>Implementation of the proposed project has the potential to result in significant impacts related to the release of hazardous subsurface gases.</p>	<p><b>Hazards-6</b> The Office of Statewide Health Planning and Development (OSHPD) shall require the installation of vapor barriers (i.e., high-density polyethylene membrane liners) and passive venting systems in the foundations of the Miller Children’s Hospital pediatric inpatient tower and central plant building, if determined to be required by the Health Risk Assessment to mitigate potential accumulation of methane, hydrogen sulfide, or other petroleum-related gases into underground areas (i.e., basements) or inside buildings. Prior to the issuance of building permits for the specified buildings, the OSHPD shall review the plans and specifications to ensure that the appropriate vapor barriers or passive venting systems have been incorporated into the design and are consistent with specifications of the Voluntary Clean-up Agreement between the Long Beach Memorial Medical Center and the Department of Toxic Substances Control.</p> <p><b>Hazards-7</b> The City of Long Beach shall require the installation of vapor barriers (i.e., high-density polyethylene membrane liners) and passive venting systems in the foundations of the Miller Children’s Hospital (MCH) pediatric outpatient building and the Todd Cancer Institute Phases I and II, if determined to be required by the Health Risk Assessment to mitigate potential accumulation of methane, hydrogen sulfide, or other petroleum-related gases into underground areas (i.e., basements) or</p>	<p>Implementation of mitigation measures Hazards-6 and Hazards-7 would be expected to reduce potentially significant impacts related to the release of hazardous subsurface gases.</p>

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	inside buildings. The City of Long Beach shall review the plans and specifications to ensure that the appropriate vapor barriers or passive venting systems have been incorporated into the design and are consistent with specifications of the Voluntary Clean-up Agreement between the Long Beach Memorial Medical Center and the Department of Toxic Substances Control prior to the issuance of building permits for the specified buildings.	
Implementation of the proposed project has the potential to result in significant impacts related to the encounter of USTs during grading activities.	<p><b>Hazards-8</b> The Office of Statewide Health Planning and Development shall review the grading plans to ensure that there is a note requiring the construction contractor to stop work and notify the Certified Unified Program Agency of the unanticipated encounter of underground storage tanks (USTs) during grading activities prior to the issuance of grading permits for the Miller Children’s Hospital pediatric inpatient tower, central plant building, and utility trench. The UST shall be remediated in accordance with County of Los Angeles guidelines and consistent with specifications of the Voluntary Clean-up Agreement between the Long Beach Memorial Medical Center and the Department of Toxic Substances Control.</p> <p><b>Hazards-9</b> The City of Long Beach shall review the grading plans to ensure that there is a note requiring the construction contractor to stop work and notify the Certified Unified Program Agency of the unanticipated encounter of underground storage tanks (USTs) during grading activities prior to the issuance of grading permits for the permits for the Miller Children’s Hospital (MCH) pediatric outpatient building, the MCH link building, and the Todd Cancer Institute Phases I and II. The City of Long Beach shall review the grading plans to ensure that the UST shall be remediated in accordance with County of Los Angeles guidelines and consistent with specifications of the Voluntary Clean-up Agreement between the Long Beach Memorial Medical Center and the Department of Toxic Substances Control.</p>	Implementation of mitigation measures Hazards-8 and Hazards-9 would be expected to reduce potentially significant impacts related to the encounter of USTs during grading activities.
Implementation of the proposed project has the potential to result in significant impacts related to exposure to hazardous materials during routine transport and disposal.	<p><b>Hazards-10</b> The City of Long Beach shall require that the construction contractor and the Long Beach Memorial Medical Center (LBMMC) store, use, and transport all hazardous materials in compliance with all relevant regulations and guidelines to avoid exposure to asbestos-containing materials, lead-based paints, petroleum hydrocarbon–contaminated soils, biomedical waste, and radiological waste during routine transport and disposal for both the construction phase and operational phase of the proposed project. The routine transport of hazardous materials to and from the LBMMC campus during construction and operation of the elements of the proposed project shall be accomplished via Atlantic Avenue, Spring Street, Columbia Street, Patterson Street, 27th Street, and Willow Street. Compliance shall be determined by monitoring by regulatory agencies. Transport, storage, and handling of construction-related hazardous materials shall be consistent with the guidelines provided by the California Department of Transportation, Los Angeles Regional Water Quality Control Board, the South Coast Air Quality Management District, and the Certified Unified Program Agency. Each agency shall regulate and enforce, through permitting and record keeping, the monitoring and enforcement of this mitigation measure.</p>	Implementation of mitigation measure Hazards-10 would be expected to reduce potentially significant impacts related to exposure to hazardous materials during routine transport and disposal.

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
<p>Implementation of the proposed project has the potential to result in significant impacts related to the emergency response and evacuation plan.</p>	<p><b>Hazards-11</b> The City of Long Beach shall require the identification of an alternative emergency water supply source, evacuation routes, and emergency response vehicle routes during roadway realignment and upon expansion of the Miller Children’s Hospital facility to avoid impacts on the existing emergency response and evacuation plan. The revised emergency response and evacuation plan shall be updated by the construction contractor prior to initiation of construction activities.</p>	<p>Implementation of mitigation measure Hazards-11 would be expected to reduce potentially significant impacts related to the emergency response and evacuation plan.</p>
<p>Implementation of the proposed project has the potential to result in significant impacts related to exposure to COPCs.</p>	<p><b>Hazards-12</b> The Office of Statewide Health Planning and Development shall require that volatile organic compounds (VOCs) be monitored during excavation requested for the Miller Children’s Hospital pediatric inpatient tower, central plant building, and utility trench, in compliance with the South Coast Air Quality Management District Rule 1166 or Rule 1150, which sets requirements to control the emission of VOCs from excavating, grading, handling, and treating VOC-contaminated soil to avoid exposure to chemicals of potential concern (COPCs) in the soil. The procedures for removing, handling, and disposing of petroleum hydrocarbon–contaminated soil and water shall include and require adherence to health and safety protocols (e.g., no eating in the construction zone, use of personal protective equipment) as provided in a site health and safety plan, as well as monitoring and control of emissions of COPCs that may occur during the construction work.</p> <p><b>Hazards-13</b> The City of Long Beach shall require that volatile organic compounds (VOCs) be monitored during excavation requested for the Miller Children’s Hospital (MCH) pediatric outpatient building, the MCH link building, and the Todd Cancer Institute Phases I and II, in compliance with the South Coast Air Quality Management District Rule 1166 or Rule 1150, which sets requirements to control the emission of VOCs from excavating, grading, handling, and treating VOC-contaminated soil. The procedures for removing, handling, and disposing of petroleum hydrocarbon–contaminated soil and water shall include and require adherence to health and safety protocols (e.g., no eating in the construction zone, use of personal protective equipment) as provided in a site health and safety plan, as well as monitoring and control of emissions of COPCs that may occur during the construction work.</p> <p><b>Hazards-14</b> The Office of Statewide Health Planning and Development shall review final plans and specifications for the Miller Children’s Hospital pediatric inpatient tower, central plant building, and utility trench, and provide comments on the plans and specifications to ensure compliance with all requirements resulting from the Voluntary Clean-up Agreement between the Long Beach Memorial Medical Center and the Department of Toxic Substances Control at least 30 days prior to approval. At a minimum, the Office of Statewide Health Planning and Development shall send the plans and specifications for the Miller Children’s Hospital pediatric inpatient tower, central plant building, and utility trench to the Long Beach Water Department and Long Beach Department of Health and Human Services Cross-Connection/Water Program to ensure compliance with the cross-connection requirements, inspections, and the separation criteria.</p>	<p>Implementation of mitigation measures Hazards-12 through Hazards-15 would be expected to reduce potentially significant impacts related to exposure to COPCs.</p>

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p><b>Hazards-15</b> The City of Long Beach shall review the plans and specifications to ensure compliance with all requirements resulting from the Voluntary Clean-up Agreement between the Long Beach Memorial Medical Center and the Department of Toxic Substances Control. Prior to approval of final plans and specifications for the Miller Children’s Hospital link building and the Todd Cancer Institute Phases I and II, the City of Long Beach shall send the plans and specifications for the Miller Children’s Hospital pediatric outpatient building, link building, and Todd Cancer Institute to the Long Beach Water Department and Long Beach Department of Health and Human Services’ Cross-Connection/Water Program to ensure compliance with the cross-connection requirements, inspections, and the separation criteria.</p>	
<b>Hydrology and Water Quality</b>		
<p>Implementation of the proposed project has the potential to increase the amount of erosion, transport of pollutants, and siltation during construction of all elements of the proposed project.</p>	<p><b>Hydro-1</b> The Office of Statewide Health Planning and Development (OSHPD) shall require the construction contractor to avoid erosion, transport of pollutants, and siltation during construction of the Miller Children’s Hospital pediatric inpatient tower Phases I and II, utility trench, and central plant building. Prior to final grading plans, the OSHPD shall ensure that the plans and specifications require the construction contractor to comply with the revised General Construction Activity Storm Water Permit. Such compliance measures would, at a minimum, include the preparation of a Notice of Intent and the implementation of a Local Storm Water Pollution Prevention Plan (SWPPP) and a Wet Season Erosion Control Plan (for work between October 15 and April 15). These plans shall incorporate all applicable best management practices (BMPs), as described in the California Storm Water Best Management Practice Handbook, Construction Activity, into the construction phase of the proposed project. Prior to construction, temporary measures must be implemented to prevent transport of Pollutants of Concern from the construction site to the storm drainage system. The BMPs shall apply to both the actual work areas and contractor staging areas. Selection of construction-related BMPs would be in accordance with the requirements of the City of Long Beach Storm Water Program, Development Best Management Practices Handbook.</p>	<p>Implementation of mitigation measure Hydro-1 would be expected to reduce impacts to hydrology and water quality from the increased amount of erosion, transport of pollutants, and siltation during construction of all elements of the proposed project.</p>
<p>Implementation of the proposed project has the potential to increase the amount of erosion, transport of pollutants, and siltation during construction of all elements of the proposed project.</p>	<p><b>Hydro-2</b> The City of Long Beach Department of Public Works shall require the construction contractor to avoid erosion, transport of pollutants, and siltation during construction of the Miller Children’s Hospital (MCH) pediatric outpatient building, the MCH link building, the Todd Cancer Institute Phases I and II, the roadway realignment, and the parking areas. Prior to final grading plans, the City of Long Beach Department of Public Works shall ensure that the plans and specifications require the construction contractor to comply with the revised General Construction Activity Storm Water Permit. Such compliance measures would, at a minimum, include the preparation of a Notice of Intent and the implementation of a Local Storm Water Pollution Prevention Plan (SWPPP) and a Wet Season Erosion Control Plan (for work between October 15 and April 15). These plans shall incorporate all applicable best management practices (BMPs), as described in the California Storm Water Best Management Practice Handbook, Construction Activity, into the construction phase of the proposed project. Prior to construction, temporary measures must be implemented to prevent transport of Pollutants of Concern from the construction site to the storm drainage system. The BMPs shall apply to both the actual work areas and contractor staging areas. Selection of construction-related BMPs would be in accordance with the requirements of the City of Long Beach Storm Water Program, Development Best Management Practices Handbook.</p>	<p>Implementation of mitigation measure Hydro-2 would be expected to reduce impacts to hydrology and water quality from the increased amount of erosion, transport of pollutants, and siltation during construction of all elements of the proposed project.</p>

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
<p>Implementation of the proposed project has the potential to increase the amount of erosion, transport of pollutants, and siltation during construction of all elements of the project, but specifically during the final grading plans.</p>	<p><b>Hydro-3</b> The Office of Statewide Health Planning and Development shall review the final grading plans for the Miller Children’s Hospital pediatric inpatient tower Phases I and II, utility trench, and central plant building to ensure that the plans and specifications require the construction contractor to prepare a Standard Urban Storm Water Management Plan (SUSMP) for construction activities and to implement best management practices (BMPs) for construction, materials, and waste-handling activities, which include the following:</p> <ul style="list-style-type: none"> <li>• Schedule excavation, grading, and paving activities for dry weather periods.</li> <li>• Control the amount of runoff crossing the construction site by means of berms and drainage ditches to divert water flow around the site.</li> <li>• Identify potential pollution sources from materials and wastes that will be used, stored, or disposed of on the job site.</li> <li>• Inform contractors and subcontractors about the clean storm water requirements and enforce their responsibilities in pollution prevention.</li> </ul> <p>The construction contractor shall incorporate SUSMP requirements and BMPs to mitigate storm water runoff that include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>• The incorporation of bioretention facilities located within the proposed project area</li> <li>• The incorporation of catch basin filtration systems</li> <li>• The use of porous pavements to reduce runoff volume</li> </ul>	<p>Implementation of mitigation measure Hydro-3 would be expected to reduce impacts to hydrology and water quality due to final grading to below the level of significance.</p>
<p>Implementation of the proposed project has the potential to increase the amount of erosion, transport of pollutants, and siltation during construction of all elements of the project, but specifically during the final grading plans.</p>	<p><b>Hydro-4</b> The City of Long Beach Department of Public Works shall review the final grading plans prior to grading for the Miller Children’s Hospital (MCH) pediatric outpatient building, the MCH link building, the Todd Cancer Institute Phases I and II, the roadway realignment, and the parking areas to ensure that the plans and specifications require the construction contractor to prepare a Standard Urban Storm Water Management Plan (SUSMP) for construction activities and to implement best management practices (BMPs) for construction, materials, and waste-handling activities, which include the following:</p> <ul style="list-style-type: none"> <li>• Schedule excavation, grading, and paving activities for dry weather periods.</li> <li>• Control the amount of runoff crossing the construction site by means of berms and drainage ditches to divert water flow around the site.</li> <li>• Identify potential pollution sources from materials and wastes that will be used, stored, or disposed of on the job site.</li> <li>• Inform contractors and subcontractors about the clean storm water requirements and enforce their responsibilities in pollution prevention.</li> </ul>	<p>Implementation of mitigation measure Hydro-4 would be expected to reduce impacts to hydrology and water quality due to final grading to below the level of significance.</p>

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>The construction contractor shall incorporate SUSMP requirements and BMPs to mitigate storm water runoff that include, but are not limited to, the following:</p> <ul style="list-style-type: none"> <li>• The incorporation of bioretention facilities located within the proposed project area</li> <li>• The incorporation of catch basin filtration systems</li> <li>• The use of porous pavements to reduce runoff volume</li> </ul>	
<p>Implementation of the proposed project has the potential to increase the amount of degradation of water quality during construction.</p>	<p><b>Hydro-5</b> The Office of Statewide Health Planning and Development (OSHPD) shall require the construction contractor to undertake daily street sweeping and trash removal throughout the construction of the Miller Children’s Hospital pediatric inpatient tower Phases I and II, utility trench, and central plant building. The purpose of the street sweeping and trash removal shall be to avoid degradation of water quality. Prior to the completion of final plans and specifications, the OSHPD shall review the plans and specifications to ensure that the construction documents include a requirement that the construction contractor provide daily street sweeping and trash removal to prevent degradation of water quality.</p>	<p>Implementation of mitigation measure Hydro-5 would be expected to reduce impacts to hydrology and water quality to below the level of significance.</p>
<p>Implementation of the proposed project has the potential to increase the amount of degradation of water quality during construction.</p>	<p><b>Hydro-6</b> The City of Long Beach Department of Public Works shall require the construction contractor to undertake daily street sweeping and trash removal throughout the construction of the Miller Children’s Hospital (MCH) pediatric outpatient building, the MCH link building, the Todd Cancer Institute Phases I and II, the roadway realignment, and the parking areas. The purpose of the street sweeping and trash removal shall be to avoid degradation of water quality. Prior to the completion of final plans and specifications, the City of Long Beach Department of Public Works shall review the plans and specifications for the proposed project to ensure that the construction documents include a requirement that the construction contractor provide daily street sweeping and trash removal to prevent degradation of water quality.</p>	<p>Implementation of mitigation measure Hydro-6 would be expected to reduce impacts to hydrology and water quality to below the level of significance.</p>
<p>Implementation of the proposed project has the potential to increase the amount of degradation of water quality during construction.</p>	<p><b>Hydro-7</b> The City of Long Beach shall identify potential impacts to hydrology and water quality related to the construction of the proposed project. Degradation of water quality during construction of the proposed project shall be reduced to below the level of significance through the requirement to conduct a detailed hydrology study based on the final site plans and to implement the recommendations, or comparable measures, into the plans and specifications for each proposed project element prior to final approval by the City of Long Beach Department of Public Works. The hydrology study shall be prepared by a certified civil engineer, and a draft report, including recommendations, shall be submitted to the City of Long Beach Department of Public Works for review. The City of Long Beach Department of Public Works shall provide comments, if any, within 14 days of receiving the draft hydrology study. Monitoring and enforcement shall be the responsibility of the City of Long Beach Department of Public Works.</p>	<p>Implementation of mitigation measure Hydro-7 would be expected to reduce impacts to hydrology and water quality to below the level of significance.</p>

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
Implementation of the proposed project has the potential to increase the amount of degradation of water quality during construction.	<p><b>Hydro-8</b></p> <p>If perched groundwater that requires dewatering is encountered during construction of the Miller Children’s Hospital (MCH) pediatric inpatient tower, MCH pediatric outpatient tower, MCH link building, or central plant building, the California Regional Water Quality Control Board, Los Angeles Region (RWQCB) shall require the construction contractor to comply with general waste discharge requirements and national pollutant discharge elimination system (NPDES) permit requirements. If analytical results from the perched groundwater indicate that pollutants are present at levels above the NPDES thresholds, then treatment and proper disposal, under approval and oversight by the RWQCB, shall be conducted prior to discharge of groundwater to surface waters.</p>	Implementation of mitigation measure Hydro-7 would be expected to reduce impacts to hydrology and water quality to below the level of significance.
<b>Land Use and Planning</b>		
The analysis undertaken for this EIR determined that no significant impacts related to Land Use and Planning would arise from implementation of the proposed project. Therefore, no mitigation measures are required.		
<b>National Pollution Discharge Elimination System</b>		
Implementation of the proposed project has the potential to result in impacts to NPDES.	<p><b>NPDES-1</b></p> <p>The City of Long Beach Planning and Building Department shall require the construction contractor to implement best management practices (BMPs) consistent with National Pollution Discharge Elimination System (NPDES) Permit No. CAS 004003 to reduce transport of Pollutants of Concern from the construction site to the storm drainage and waterway system for each construction element of the proposed project: Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench; the MCH pediatric outpatient building; the MCH link building; the Todd Cancer Institute Phases I and II; the roadway alignment; and the parking areas. Prior to completion of final plans and specifications for each construction element of the proposed project, the City of Long Beach Planning and Building Department shall ensure that the plans and specifications require compliance with NPDES Permit No. CAS 004003. The construction contractor for each element of the proposed project shall be required to submit a Standard Urban Storm Water Management Plan to the City of Long Beach for review and approval at least 30 days prior to the anticipated need for a grading permit. The City of Long Beach Planning and Building Department shall monitor construction to ensure compliance with NPDES Permit No. CAS 004003. The Office of Statewide Health Planning and Development has jurisdiction over inpatient facilities, and the City of Long Beach would have jurisdiction over outpatient facilities.</p>	Implementation of mitigation measure NPDES-1 would be expected to reduce impacts to NPDES to below the level of significance.
<b>Noise</b>		
Implementation of the proposed project has the potential to result in impacts related to construction noise.	<p><b>Noise-1</b></p> <p>The City of Long Beach shall minimize the potential for construction noise levels to exceed the City of Long Beach Noise Ordinance by requiring the construction contractor to properly maintain all heavy equipment used for construction of each element of the proposed project: the Todd Cancer Institute Phases I and II; the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench; the MCH pediatric outpatient building; the MCH link building; the road realignment; and the parking areas. Prior to the completion of final plans and specifications, the City of Long Beach shall ensure that the plans and specifications include a requirement that all construction equipment shall be properly maintained. All vehicles and compressors shall utilize exhaust mufflers. Engine enclosure covers as designed by the manufacturer shall be in place at all times. The City of Long Beach shall monitor the</p>	Implementation of mitigation measures Noise-1 through Noise-3 would be expected to reduce impacts related to construction noise to below the level of significance.

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>use of heavy equipment during construction to ensure conformance with the requirements of properly maintained heavy equipment.</p> <p><b>Noise-2</b> The City of Long Beach shall minimize the potential for construction noise levels to conflict with the City of Long Beach Noise Ordinance by requiring the plans and specifications to specify restricted periods for grading and construction for each element of the proposed project: the Todd Cancer Institute Phases I and II; the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench; the MCH pediatric outpatient building; the MCH link building; the road realignment; and the parking areas. Prior to the completion of final plans and specifications, the City of Long Beach shall ensure that the plans and specifications include a provision that restricts grading and construction activities to daily operation from 7:00 a.m. to 7:00 p.m., Monday through Friday, and from 8:00 a.m. to 5:00 p.m. on Saturdays. There should be no work on Sundays or federal holidays.</p> <p><b>Noise-3</b> The City of Long Beach shall require that the plans and specifications for the Miller Children’s Hospital pediatric inpatient tower and the central plant building require that construction equipment shall be equipped with state-of-the-art noise-muffling devices. Barriers or curtains shall be required to be installed close to equipment to shield the equipment from the receiver. The height and length of the barriers or curtains shall be determined based on location of construction activity and receiver.</p> <p>Because of the close proximity of the source and receiver, the impact would be dependent on the location of the noise sources. Prior to the start of construction, the contractor shall develop a noise control plan based on actual equipment to be used and location of various activities. If actual equipment noise levels are not available, equipment noise levels shall be measured in the field. The plan should predict the noise levels with the actual equipment and with the barriers or curtains in place. The plan shall take into consideration the order of construction and equipment mix. Equipment mix and/or the number of equipment operating shall be considered in reducing the noise levels.</p>	
<b>Public Services</b>		
<p>Implementation of the proposed project has the potential to result in impacts related to exposure of persons or property to security-related issues, vandalism, and safety hazards during operation of these facilities.</p>	<p><b>Public Services-1</b> The City of Long Beach shall ensure that the exposure of people or property to security-related issues from the operation of the Miller Children’s Hospital pediatric inpatient tower Phases I and II, central plant building, pediatric outpatient building, and link building; the Todd Cancer Institute (TCI) Phases I and II; and all new parking facilities within the Long Beach Memorial Medical Center (LBMMC) campus be minimized through an amendment of the existing security plan prior to the operation of each proposed project element. The LBMMC shall submit to the City of Long Beach an amendment to the security plan that identifies the existing measures that shall be applied to each element of the proposed project at least 30 days prior to the anticipated need for an occupancy permit.</p> <p><b>Public Services-2</b> The City of Long Beach shall ensure that the exposure of property to vandalism and of people to safety hazards from the operation of the Miller Children’s Hospital pediatric inpatient tower Phases I and II, central plant building, pediatric outpatient building, and link building; the Todd Cancer Institute (TCI) Phases I and II; and all new parking facilities within</p>	<p>Implementation of mitigation measures Public Services-1 and Public Services-2 would be expected to reduce impacts related to public services to below the level of significance.</p>



**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>the Long Beach Memorial Medical Center (LBMMC) campus shall be minimized through an amendment to the existing lighting plan prior to the operation of each proposed project element. The LBMMC shall submit to the City of Long Beach an amendment to the lighting plan that documents the location of all exterior lighting on structures, within parking areas, and along pedestrian and vehicular routes of travel. The amended lighting plan shall be submitted to the City of Long Beach at least 30 days prior to the anticipated need for an occupancy permit.</p>	
<b>Traffic and Transportation</b>		
<p>Implementation of the proposed project has the potential to result in significant impact to traffic and transportation.</p>	<p><b>Transportation-1</b></p> <p>The following improvements are potential recommendation measures identified to mitigate significantly impacted intersections. The proposed project can be expected to pay a fair share of the construction costs to implement these mitigation measures.</p> <ol style="list-style-type: none"> <li>1) Atlantic Avenue/Spring Street <ul style="list-style-type: none"> <li>• Modify existing median and restripe Spring Street to provide a second eastbound (EB) left-turn lane and a second westbound (WB) left-turn lane.</li> <li>• Modify the traffic signal as needed.</li> </ul> </li> <li>2) Atlantic Avenue/East 29th Street <ul style="list-style-type: none"> <li>• Restrict EB left-turn movements from 29th Street to northbound (NB) Atlantic Avenue.</li> </ul> </li> <li>6) Atlantic Avenue/East 27th Street <ul style="list-style-type: none"> <li>• Restrict EB left-turn movements from 27th Street to NB Atlantic Avenue.</li> </ul> </li> <li>7) Atlantic Avenue/Willow Street <ul style="list-style-type: none"> <li>• No physical mitigation measure is feasible; any additional turn lanes would require widening and additional right-of-way.</li> </ul> </li> <li>9) Long Beach Boulevard/Willow Street <ul style="list-style-type: none"> <li>• No physical mitigation measure is feasible; any additional turn lanes would require widening and additional right-of-way.</li> </ul> </li> <li>13) Long Beach Boulevard/Spring Street <ul style="list-style-type: none"> <li>• Widen and/or restripe to provide an exclusive NB and southbound (SB) right-turn lane.</li> <li>• Modify the traffic signal, as needed.</li> </ul> </li> <li>21) Long Beach Boulevard/Wardlow Road <ul style="list-style-type: none"> <li>• No physical mitigation measure is feasible; any additional turn lanes would require widening and additional right-of-way.</li> </ul> </li> </ol>	<p>Implementation of mitigation measures Transportation-1 and Transportation-2 would reduce significant impacts related to traffic and transportation to below the level of significance. The study area intersections are projected to operate at LOS D or better with a V/C ratio less than 1.00 during the peak hours if all of the recommended off-site improvements for the interim year 2008 and 2014 are accomplished. The impacts to 3 of 10 intersections would not be mitigated to below the level of significance for the year 2008 planning horizon. The impacts to 3 of 10 intersections would not be mitigated to below the level of significance for the year 2014 planning horizon.</p>

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>22) Long Beach Boulevard/I-405 NB Ramps</p> <ul style="list-style-type: none"> <li>• Install a traffic signal.</li> </ul> <p>23) I-405 SB Ramps/Crest Drive</p> <ul style="list-style-type: none"> <li>• Restripe to provide an exclusive WB right-turn lane.</li> </ul> <p>29) Pasadena Avenue/Spring Street</p> <ul style="list-style-type: none"> <li>• Widen and/or restripe to provide an exclusive NB left-turn lane and an EB right-turn lane.</li> <li>• Install a traffic signal.</li> </ul> <p><b>Transportation-2</b></p> <p>The following improvements are potential recommendation measures identified to mitigated significantly impacted intersections. The proposed project can be expected to pay a fair share of the construction costs to implement these mitigation measures.</p> <p>1) Atlantic Avenue/Spring Street</p> <ul style="list-style-type: none"> <li>• Widen and/or restripe to provide an exclusive northbound (NB) and southbound (SB) right-turn lane.</li> <li>• Widen and/or restripe to provide a second eastbound (EB) and westbound (WB) left-turn lane.</li> <li>• Modify the traffic signal, as needed.</li> </ul> <p>7) Atlantic Avenue/Willow Street</p> <ul style="list-style-type: none"> <li>• No physical mitigation measure is feasible; any additional turn lanes would require widening and additional right-of-way.</li> </ul> <p>9) Long Beach Boulevard/Willow Street</p> <ul style="list-style-type: none"> <li>• No physical mitigation measure is feasible; any additional turn lanes would require widening and additional right-of-way.</li> </ul> <p>13) Long Beach Boulevard/Spring Street</p> <ul style="list-style-type: none"> <li>• Widen and/or restripe to provide an exclusive NB, SB, and EB right-turn lane.</li> <li>• Widen and/or restripe to provide a second EB through lane.</li> <li>• Modify the traffic signal, as needed.</li> </ul> <p>21) Long Beach Boulevard/Wardlow Road</p> <ul style="list-style-type: none"> <li>• No physical mitigation measure is feasible; any additional turn lanes would require widening and additional right-of-way.</li> </ul> <p>Impacts would be mitigated through the specified scenario or other comparable scenarios that adhere to the same performance standards.</p>	

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
<p>Implementation of the proposed project has the potential to result in significant impact to traffic and transportation, specifically the amount of available parking spaces.</p>	<p><b><i>Transportation-3</i></b>            Construction and operation impacts to parking for each element of the proposed project shall be mitigated through the implementation of a parking program or comparable measure that provides sufficient long-term parking to meet City of Long Beach (City) code requirements. Long Beach Memorial Medical Center (LBMMC) shall keep the City informed of any modifications to the parking program for the proposed project. Construction parking plans shall be submitted to the City at least 30 days prior to the anticipated issuance of a grading permit for each element of the proposed project. Operation parking plans shall be submitted to the City at least 30 days prior to the anticipated issuance of occupancy permits or operation of the specified element of the proposed project.</p> <p><i>Roadway Realignment</i></p> <p><u>Construction</u></p> <p>Miller Children’s Hospital (MCH) shall submit a construction parking plan to address the 200 parking spaces that are expected to be removed from Parking Lot K as a result of the construction of the roadway realignment element of the proposed project. The parking analysis identified the availability of 259 excess parking spaces available within the Long Beach Memorial Medical Center campus (Campus). It is anticipated that the loss of the 200 parking spaces shall be offset through the use of 200 of the existing available 259 parking spaces. LBMMC will dedicate an increased number of parking spaces in Parking Lot A to visitors to compensate for parking spaces removed from Parking Lot K.</p> <p><u>Operation</u></p> <p>MCH shall submit an operation parking plan to address the permanent need for 200 parking spaces to replace parking spaces that are expected to be removed from Parking Lot K as a result of the roadway realignment element of the proposed project. The parking analysis identified the availability of 259 excess parking spaces available within the Campus. During construction, it is anticipated that the permanent loss of the 200 parking spaces shall be offset through the use of 200 of the existing available 259 parking spaces.</p> <p><i>MCH–Pediatric Inpatient Tower Phase I, Utility Trench, and Central Plant Building</i></p> <p><u>Construction</u></p> <p>MCH shall submit a construction parking plan to address the 86 parking spaces that are expected to be removed from the demolition of Parking Lot F for the construction of this element of the proposed project. The parking analysis identified the availability of 259 excess parking spaces available within the Campus. It is anticipated that the loss of the 86 parking spaces shall be offset through the use of 59 of the existing available 259 parking spaces, and the remaining 27 spaces shall be offset through the use of 27 of the 121 available spaces in Parking Lot N.</p>	<p>Implementation of mitigation measure Transportation-3 would reduce construction and operation impacts on parking to below the level of significance.</p>

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p><u>Operation</u></p> <p>MCH shall submit an operation parking plan to address the permanent need for 240 additional parking spaces (86 from demolition of Parking Lot F, 144 for operation of Phase I of the MCH, and 10 for operation of the central plant building). The parking analysis identified the availability of 259 excess parking spaces available within the Campus. It is anticipated that the permanent loss of the 240 parking spaces shall be offset through the use of 59 existing available parking spaces, Parking Lot N (121 spaces), and lease of off-site parking spaces in Parking Lot L (60 spaces).</p> <p><i>MCH–Pediatric Outpatient Building</i></p> <p><u>Construction</u></p> <p>Not required.</p> <p><u>Operation</u></p> <p>MCH shall submit an operation parking plan to address the permanent need for 400 additional parking spaces for the operation of the MCH pediatric outpatient building. It is anticipated that the permanent need for 400 parking spaces shall be offset through the use of 71 spaces in Parking Lot Q, 96 spaces in Parking Lot R, 72 spaces in Parking Lot S, 87 spaces in Parking Lot T, and 74 spaces provided by development of a 1,174-space parking structure within the existing footprint of Parking Lot K, which would also accommodate the 41 parking spaces removed as a result of construction of the parking structure itself.</p> <p><i>MCH–Link Building</i></p> <p><u>Construction</u></p> <p>Not required.</p> <p><u>Operation</u></p> <p>MCH shall submit an operation parking plan to address the 50 parking spaces to support operation of the MCH link building. It is anticipated that the 50 parking spaces required to support the operation of the MCH link building shall be provided in the 1,174-space parking structure to be constructed within the existing footprint of Parking Lot K.</p> <p><i>MCH–Pediatric Inpatient Tower Phase II</i></p> <p><u>Construction</u></p> <p>Not required.</p>	

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p><u>Operation</u></p> <p>MCH shall submit an operation parking plan to address the 184 parking spaces required to support the operation of the MCH pediatric inpatient tower Phase II. It is anticipated that the 184 parking spaces, required to operate the MCH pediatric inpatient tower Phase II, shall be provided in the 1,174-space parking structure to be constructed within the existing footprint of Parking Lot K.</p> <p><i>Todd Cancer Institute Phase I</i></p> <p><u>Construction</u></p> <p>LBMMC shall submit a construction parking plan to address the 253 parking spaces that are expected to be removed from Parking Lot A, including 104 spaces permanently removed by the footprint of the building and additional 149 parking spaces to be temporarily removed as a result of construction staging. It is anticipated that the loss of the 253 parking spaces shall be offset through the lease of 253 off-site parking spaces at Parking Lot L.</p> <p><u>Operation</u></p> <p>LBMMC shall submit an operation parking plan to address the permanent need for 522 additional parking spaces (replace 104 spaces lost as a result of construction and provide 418 spaces for the operation of Todd Cancer Institute Phase I). It is anticipated that the need for 522 parking spaces shall be offset through the use of 236 spaces to be leased off site at Parking Lot L, 238 spaces to be leased off site at Parking Lot M, and 48 spaces to be provided through development of Parking Lot P on site.</p> <p><i>Todd Cancer Institute Phase II</i></p> <p><u>Construction</u></p> <p>LBMMC shall submit a construction parking plan to address the 211 parking spaces that would be lost to construction (79 parking spaces) and construction staging (132 parking spaces). It is anticipated that the loss of the 211 parking spaces shall be offset through the provision of 211 parking spaces in a 1,174-space parking structure to be developed within the existing footprint of Parking Lot K.</p> <p><u>Operation</u></p> <p>LBMMC shall submit a construction parking plan to address the 291 parking spaces that would be lost to construction (79 parking spaces) and operation of the Todd Cancer Institute Phase II (212 parking spaces). It is anticipated that the loss of the 291 parking spaces shall be offset the provision of 291 parking spaces in the 1,174-space parking structure to be developed within the existing footprint of Parking Lot K.</p>	

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
<b>Utilities and Service Systems</b>		
Implementation of the proposed project has the potential to result in significant impacts related to the increased solid waste generation.	<b>Utilities-1</b> The City of Long Beach Shall divert at least 50 percent of the construction solid waste generated to ensure compliance with applicable federal, state, and local statutes related to solid waste and reduce direct and cumulative impacts from construction to below the level of significance. Prior to advertising for construction bids for the Miller Children’s Hospital (MCH) pediatric inpatient tower Phases I and II, central plant building, and utility trench, the Office of Statewide Health Planning and Development (OSHDP) shall ensure that the plans and specifications include the requirement for the construction contractor to comply with the Solid Waste Management Act of 1989. To ensure conformance with the Solid Waste Management Act of 1989, the OSHPD shall require the construction contractor to manage the solid waste generated during construction of each element of the proposed project by diverting at least 50 percent of it from disposal in landfills, particularly Class III landfills, through source reduction, reuse, and recycling of construction and demolition debris. The construction contractor shall submit a construction solid waste management plan to the OSHPD for approval prior to initiation of demolition activities for the MCH pediatric inpatient tower Phase I, central plant building, and utility trench. The construction contractor shall demonstrate compliance with the solid waste management plan through the submission of monthly reports during demolition activities that estimate total solid waste generated and diversion of 50 percent of the solid waste.	Implementation of mitigation measure Utilities-1 would reduce significant impacts related to solid waste from the construction of the MCH pediatric inpatient tower Phases I and II, central plant building, and utility trench to below the level of significance.
Implementation of the proposed project has the potential to result in significant impacts related to the increased solid waste generation.	<b>Utilities-2</b> The City of Long Beach shall divert at least 50 percent of the construction solid waste to ensure compliance with applicable federal, state, and local statutes related to solid waste and reduce direct and cumulative impacts from construction to below the level of significance. Prior to advertising for construction bids for the Todd Cancer Institute (TCI) Phases I and II, the Miller Children’s Hospital (MCH) pediatric outpatient building, the MCH link building, the roadway realignment, and the parking facilities, the City of Long Beach shall ensure that the plans and specifications include the requirement for the construction contractor to comply with the Solid Waste Management Act of 1989. To ensure conformance with the Solid Waste Management Act of 1989, the City of Long Beach shall require the construction contractor to manage the solid waste generated during construction of each element of the proposed project by diverting at least 50 percent of it from disposal in landfills, particularly Class III landfills, through source reduction, reuse, and recycling of construction and demolition debris. The construction contractor shall submit a construction solid waste management plan to the City of Long Beach for approval prior to initiation of demolition activities for the TCI Phases I and II, the MCH pediatric outpatient building, the MCH link building, the roadway realignment, and the parking facilities. The construction contractor shall demonstrate compliance with the solid waste management plan through the submission of monthly reports during demolition activities that estimate total solid waste generated and diversion of 50 percent of the solid waste.	Implementation of mitigation measure Utilities-2 would reduce significant impacts related to solid waste from the construction of the TCI Phases I and II, MCH pediatric outpatient building, MCH link building, roadway realignment, and parking facilities to below the level of significance.
Implementation of the proposed project has the potential to increase the amount of trash produced at the site.	<b>Utilities-3</b> The Office of Statewide Health Planning and Development (OSHDP) shall review the plans and specifications for the Miller Children’s Hospital pediatric inpatient tower Phases I and II and central plant building to ensure that the existing Long Beach Memorial Medical Center service area has adequate trash and recycling receptacles for compliance with applicable federal, state, and local statutes related to solid waste and to reduce direct and cumulative impacts from project operation and maintenance to below the level of significance. Such compliance may be partially attained through the provision of a service area for the central plant building. Prior to advertising for construction bids for each new	Implementation of mitigation measure Utilities-3 would reduce significant impacts related to solid waste generated by the operation of the MCH

**TABLE RES.5-1  
SUMMARY OF IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>building, the OSHPD shall ensure that the plans and specifications designating locations for trash receptacles and recycling receptacles are in conformance with the California Solid Waste Reuse and Recycling Access Act of 1991. Wherever trash receptacles are provided throughout the proposed project site, a recycling receptacle for plastic, aluminum, and metal shall also be provided. Signs encouraging patrons to recycle shall be posted near each recycling receptacle.</p>	<p>pediatric inpatient tower Phases I and II and central plant building to below the level of significance.</p>
<p>Implementation of the proposed project has the potential to increase the amount of trash produced at the site.</p>	<p><b>Utilities-4</b> The City of Long Beach shall review the plans and specifications for the Todd Cancer Institute Phases I and II, the Miller Children’s Hospital (MCH) pediatric outpatient building, the MCH link building, and the parking facilities to ensure that adequate service areas are provided for trash and recycling receptacles for compliance with applicable federal, state, and local statutes related to solid waste and to reduce direct and cumulative impacts from project operation and maintenance to below the level of significance. Prior to advertising for construction bids for each new building, the City of Long Beach shall ensure that the plans and specifications designating locations for trash receptacles and recycling receptacles are in conformance with the California Solid Waste Reuse and Recycling Access Act of 1991. Wherever trash receptacles are provided through the project site, a recycling receptacle for plastic, aluminum, and metal shall also be provided. Signs encouraging patrons to recycle shall be posted near each recycling receptacle.</p>	<p>Implementation of mitigation measure Utilities-4 would reduce significant impacts related to solid waste generated by the operation of the TCI Phases I and II, MCH pediatric outpatient building, MCH link building, and parking facilities to below the level of significance.</p>
<p>Implementation of the proposed project has the potential to increase the amount of trash produced at the site.</p>	<p><b>Utilities-5</b> To meet both the City of Long Beach and the Long Beach Memorial Medical Center (LBMMC) intention to protect the 54-inch-diameter storm drain below portions of the LBMMC campus expansion area, due to potential effects of the existing pipe leaking discharge into ground, or existing groundwater leaking into the existing storm drain, the City of Long Beach shall install a plastic lining within the 54-inch reinforced-concrete piping (RCP) beneath the Miller Children’s Hospital (MCH) of the current LBMMC expansion area. Much of the length of the existing 54-inch storm drain pipe under the LBMMC campus has been replaced with 54-inch double-gasketed RCP. The Long Beach Water Department’s Maintenance Department inspection of all sections of the RCP piping was found to be operational, intact, and in good visual condition. Therefore, lining the portions of the 54-inch RCP that are outside the limits of the LBMMC expansion area of the MCH should not be needed. However, it is still the LBMMC’s intention to protect the 54-inch RCP storm drain beneath the MCH. To accomplish this, the City of Long Beach shall process an easement for the storm drain because one does not currently exist. Two strategies shall be implemented:</p> <ol style="list-style-type: none"> <li>1. The interior of the drain line that lies beneath the MCH shall be retrofitted with a polyvinyl chloride (PVC) liner.</li> <li>2. A protective structural concrete slab bridge shall be constructed above the drain with a Styrofoam cushioning layer. This shall serve to protect the pipe from any excessive loads from the building above.</li> </ol>	<p>Implementation of mitigation measure Utilities-5 would reduce significant impacts related to solid waste generated by the operation of the TCI Phases I and II, MCH pediatric outpatient building, MCH link building, and parking facilities to below the level of significance.</p>

## **2.0 PROJECT DESCRIPTION**

### **2.1 Project Location**

Page 2-1 The northeastern boundary of the Long Beach Memorial Medical Center campus (Campus) was revised in Figure 2.1-2 and replaced by Figure R2.1-2.

In the first sentence of the second paragraph under this heading, please replace the reference to (Figure 2.1-2, *Long Beach Memorial Medical Center Location*) with the following:

(Figure R2.1-2, *Long Beach Memorial Medical Center Location*)

Page 2-1 The northeastern boundary of the Campus was revised in Figure 2.1-3 and replaced by Figure R2.1-3.

In the first sentence of the third paragraph under this heading, please replace the reference to (Figure 2.1-3, *Topographic Map*) with the following:

(Figure R2.1-3, *Topographic Map*)

### **2.2 Existing Conditions**

Page 2-1 The northeastern boundary of the Campus was revised in Figure 2.2-1 and replaced by Figure R2.2-1.

In the first sentence of the first paragraph under this heading, please replace the reference to (Figure 2.2-1, *Existing Conditions*) with the following:

(Figure R2.2-1, *Existing Conditions*)

Page 2-1 The northeastern boundary of the Campus was revised in Figure 2.2-2 and replaced by Figure R2.2-2.

In the third sentence of the first paragraph under this heading, please replace the reference to (Figure 2.2-2, *Site Photographs*) with the following:

(Figure R2.2-2, *Site Photographs*)

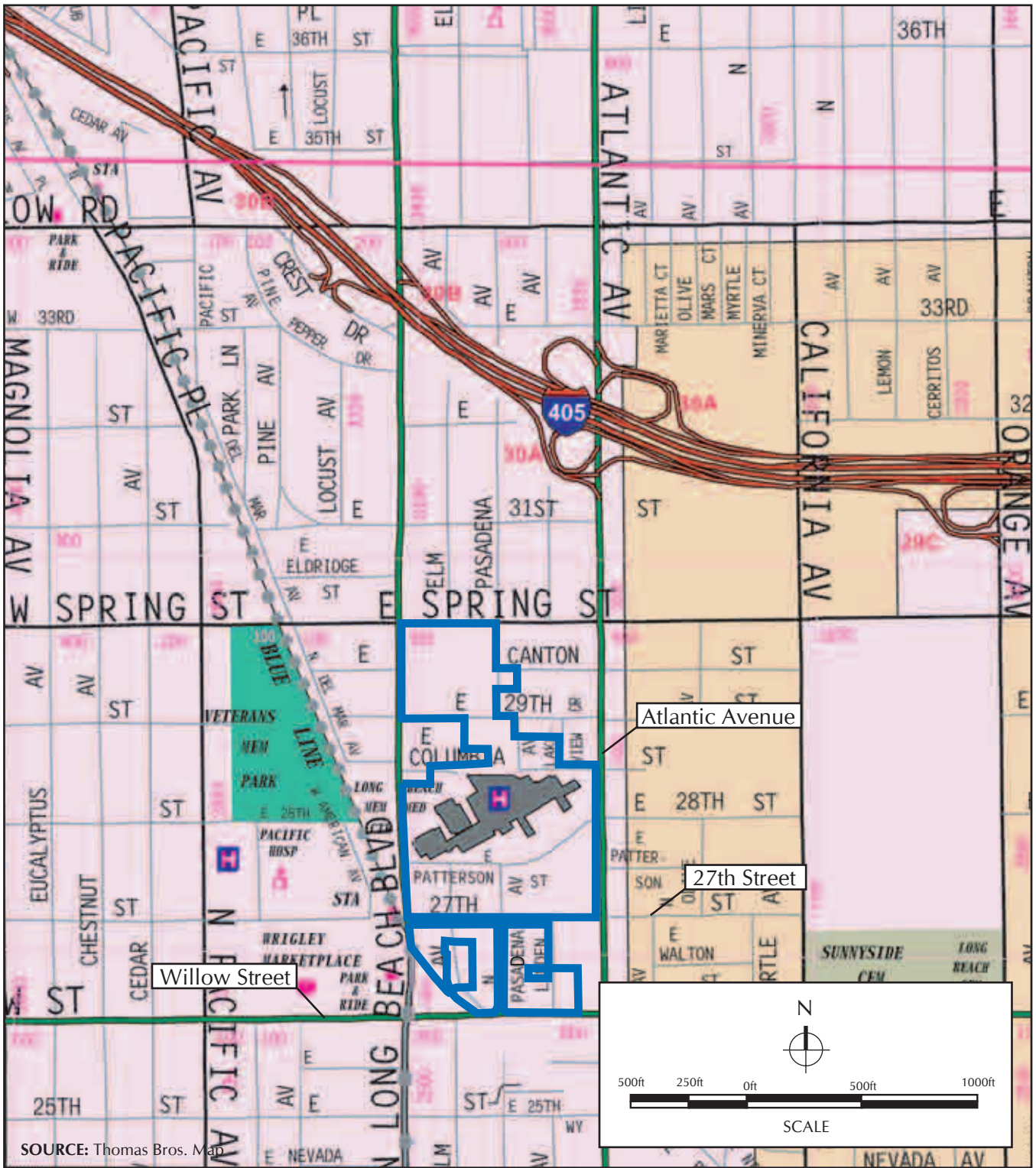
Page 2-4 Please insert the following after Table 2.2-3, *Existing Parking*:

Regarding the potential disproportionate impact that extra traffic and air pollution resulting from construction may have on the health of African Americans, demographic data were obtained from the U.S. Census Bureau<sup>1</sup> for census tracts pertaining to the proposed project area. Table R2.2-4, *Year 2000 U.S. Census Data*, shows the racial distribution of Census Tract 572202, where the proposed project site is located. In addition, all of the surrounding census tracts have been included. Please refer to the Figure

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<sup>1</sup> U.S. Census Bureau. 2000. U.S. Census Data. (Web site.) Available at: <http://www.census.gov/>





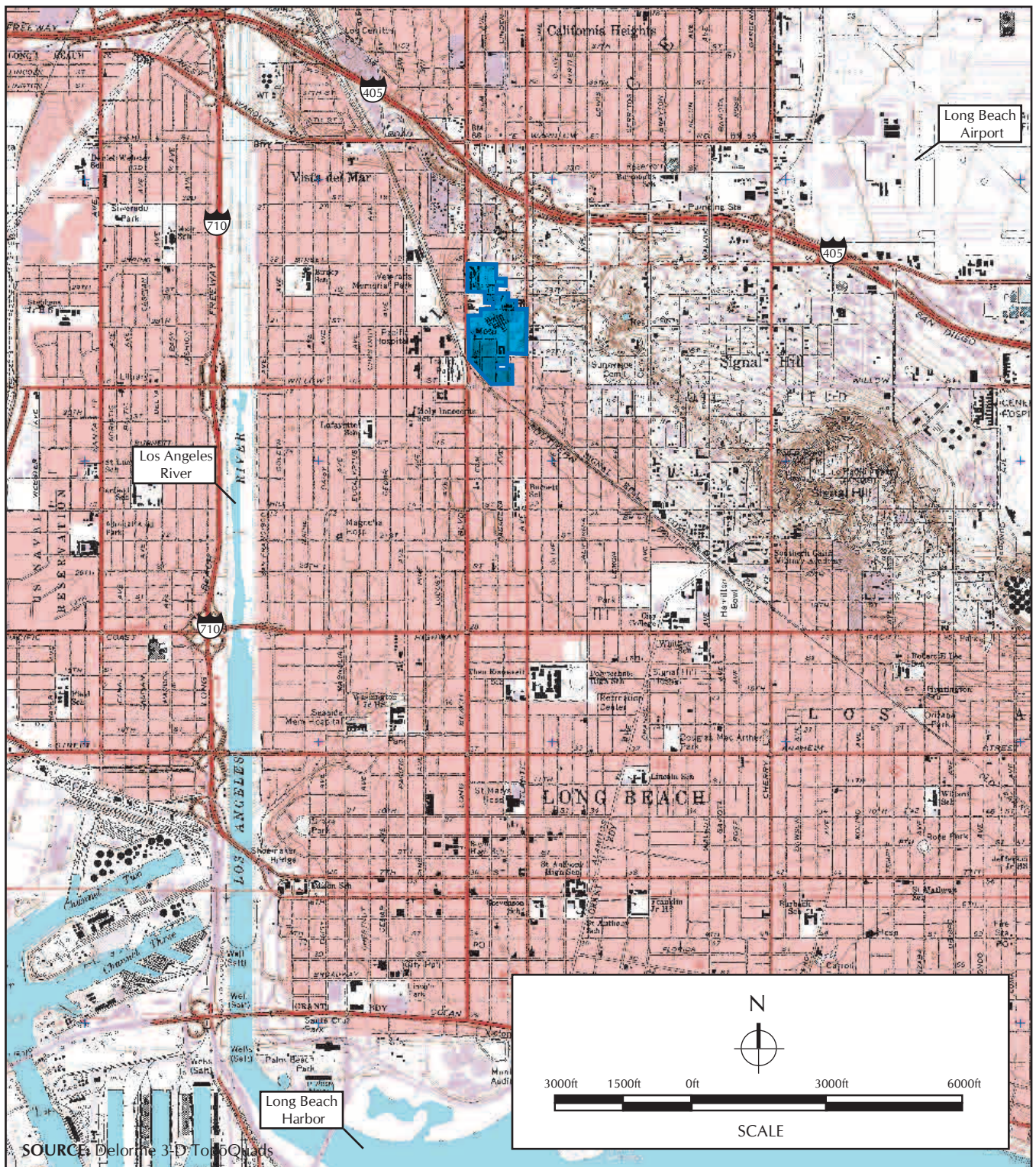
SOURCE: Thomas Bros. Map



**LEGEND**

-  Long Beach Memorial Medical Center Campus Boundary



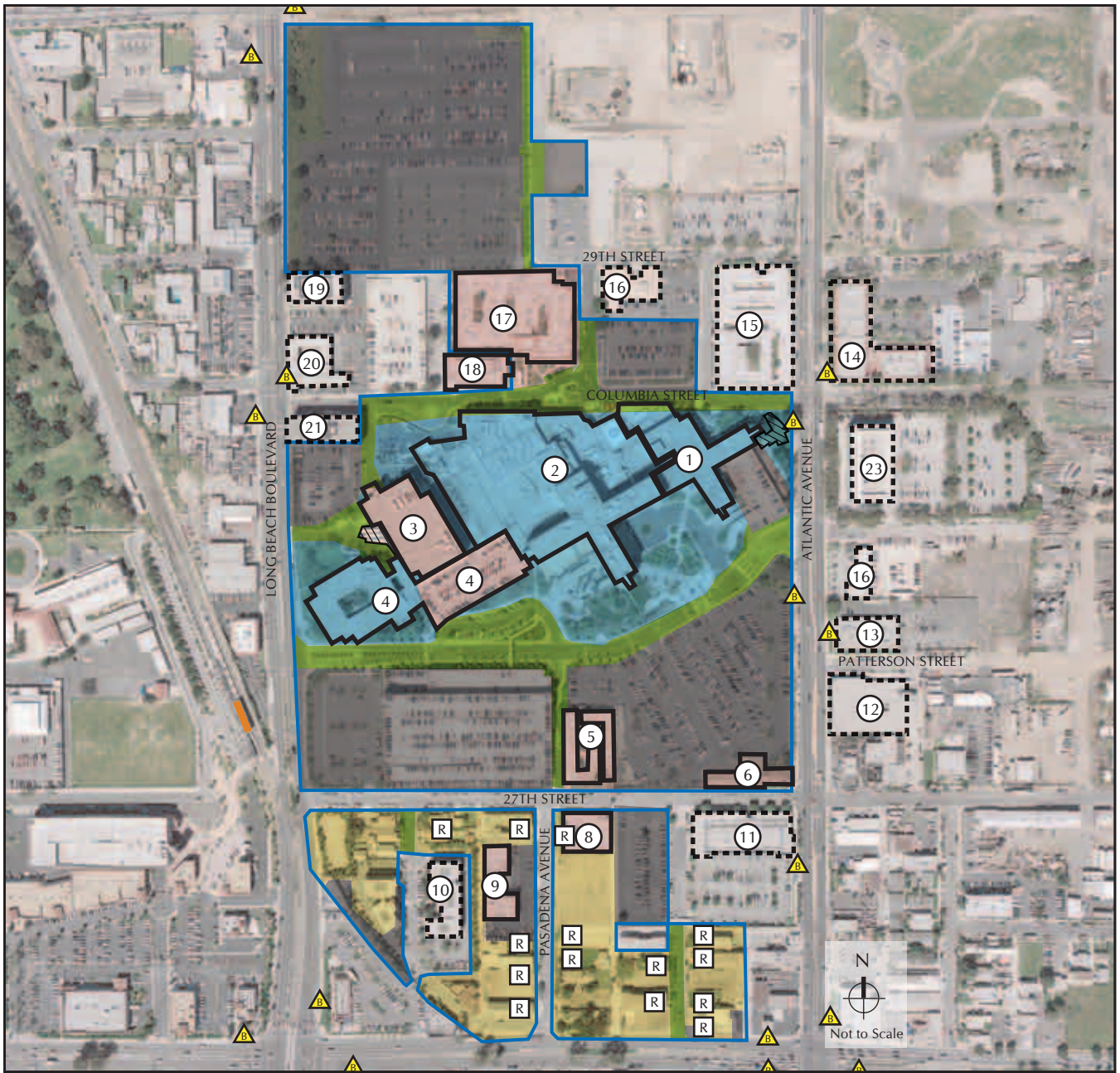
**FIGURE R2.1-2**  
Long Beach Memorial Medical Center Location



LEGEND	
	Long Beach Memorial Medical Center Campus Boundary
	Long Beach Memorial Medical Center Campus



**FIGURE R2.1-3**  
Topographic Map



LEGEND	
	Inpatient
	Outpatient
	Mixed Use
	Utilities
	Circulation
	Parking
	LBMMC Boundary
	Buildings Controlled by LBMMC
	Buildings Controlled by Others
	Blue Line (Willow Station)
	Bus Stop (Long Beach Transit)
	Miller Children's Hospital
	Long Beach Memorial Medical Center
	Administration Building
	West Facility/Rehabilitation Building
	Rehabilitation Gym/Parking
	Miller House
	Ranch House / WIC Medical Center
	Memorial Guest Residence
	Research Building
	Elm Medical Plaza
	3-Story Medical Office Building
	Convalescent Home
	MOB with CT & MRI Orthopedics
	Hillside Medical Plaza
	2-Story Atlantic MOB
	Medical Office Building - 1 Story
	Buffums Plaza - 1 Story
	CT & MRI Center
	Medical Office Building
	Aloha Motel
	Medical Office Building
	4-Story Atlantic MOB
	Residential Buildings



**FIGURE R2.2-1**  
Existing Conditions



**PHOTO 1**

View of entrance to Long Beach Memorial Medical Center from intersection of Atlantic Avenue and 28th Street looking northwest



**PHOTO 2**

View of Long Beach Memorial Medical Center from intersection of Atlantic Avenue and Spring Street



**FIGURE R2.2-2**  
Site Photographs

R2.2-4, Long Beach Memorial Medical Center Adjacent Census Tracts, for census tract location.

**TABLE R2.2-4  
YEAR 2000 U.S. CENSUS DATA**

Census Tract	Total Population	White (%)	Black (%)	Native American (%)	Asian (%)	Hawaiian/Pacific Islander (%)	Other (%)	Multi-Race (%)	Hispanic (%)
572201	8,082	24	15	1	22	1	12	5	20
<b>572202</b>	<b>4,700</b>	<b>24</b>	<b>15</b>	<b>0</b>	<b>22</b>	<b>2</b>	<b>11</b>	<b>4</b>	<b>21</b>
573100	10,258	18	21	1	10	1	17	4	29
573201	7,997	14	12	1	10	1	22	4	37
573401	1,875	35	8	1	11	1	13	6	25

Within the five census tracts, the African American population accounts for an average of 14 percent of the total population. According to the year 2000 U.S. Census, the African American population for the entire City of Long Beach accounts for 15 percent of the population. The data obtained from the U.S. Census Bureau reveal that the African American population would not be disproportionately impacted by the extra traffic and air pollution that may result from construction.

On April 18, 2005, the City of Long Beach Redevelopment Agency/Community Development (Barbara Kaiser), LBMMC (Richard DiCarlo and Susan Crockett), and Sapphos Environmental, Inc. (Juliana R. Prospero) coordinated to discuss the proposed project and affordable housing opportunities in the City of Long Beach Redevelopment Area (Appendix O, *Affordable Housing Memorandum for the Record*).

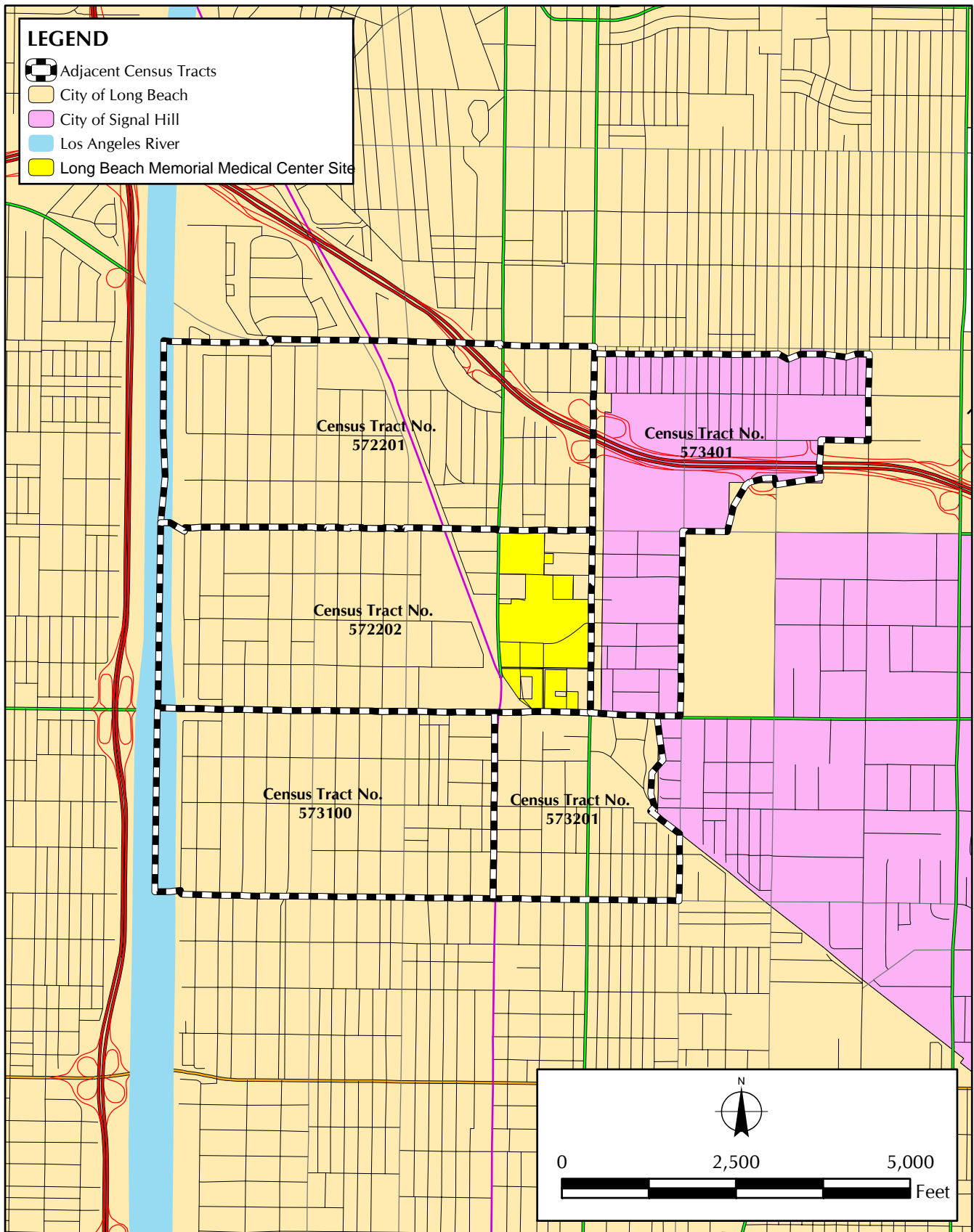
## 2.4 Proposed Project

Page 2-6 The Master Plan was revised to correct the northeastern boundary of the Campus, revised central plant building location, and refinements to the conceptual site plan for the Todd Cancer Institute. The Master Plan is included as Revised Appendix A and replaces Appendix A.

In the first sentence of the first paragraph following this header, please replace the reference to (Appendix A, *Master Plan*) with the following:

(Appendix R.A, *Master Plan*)

Page 2-6 The northeastern boundary of the Campus, the proposed location of the central plant building, and the conceptual footprint for the Todd Cancer Institute were revised in Figure 2.4-1 and replaced by Figure R2.4-1.



SOURCE: ESRI, US Census

**FIGURE R2.2-4**

Long Beach Memorial Medical Center Adjacent Census Tracts

In the first sentence of the first paragraph under this heading, please replace the reference to (Figure 2.4-1, *Proposed Master Plan of Land Uses*) with the following:

(Figure R2.4-1, *Proposed Master Plan of Land Uses*)

#### **2.4.1 Master Plan of Land Uses**

Page 2-7 The Master Plan was revised to correct the northeastern boundary of the Campus, revised central plant building location, and refinements to the conceptual site plan for the Todd Cancer Institute. The Master Plan is included as Revised Appendix A and replaces Appendix A.

In the first sentence of the first paragraph following this header, please replace the reference to (Appendix A) with the following:

(Appendix R.A)

Page 2-8 The northeastern boundary of the Campus, the proposed location of the central plant building, the conceptual footprint for the Todd Cancer Institute, and the conceptual footprint of the proposed parking structure were revised in Figure 2.4.1-1 and replaced by Figure R2.4.1-1. Additional detail from the Master Plan, regarding the types of landscape treatments to be applied to the project elements, is also provided in Figure R2.4.1-1.

In the last sentence of the second paragraph under this heading, please replace the reference to (Figure 2.4.1-1, *Landscape Plan*) with the following:

(Figure R2.4.1-1, *Landscape Plan*)

Page 2-8 The northeastern boundary of the Campus, the proposed location of the central plant building, the conceptual footprint for the Todd Cancer Institute, and the conceptual footprint of the proposed parking structure were revised in Figure 2.4.1-2 and replaced by Figure R2.4.1-2. Additional detail from the Master Plan, regarding pedestrian routes of travel from temporary leased parking lots to the project elements, is also provided in Figure R2.4.1-2.

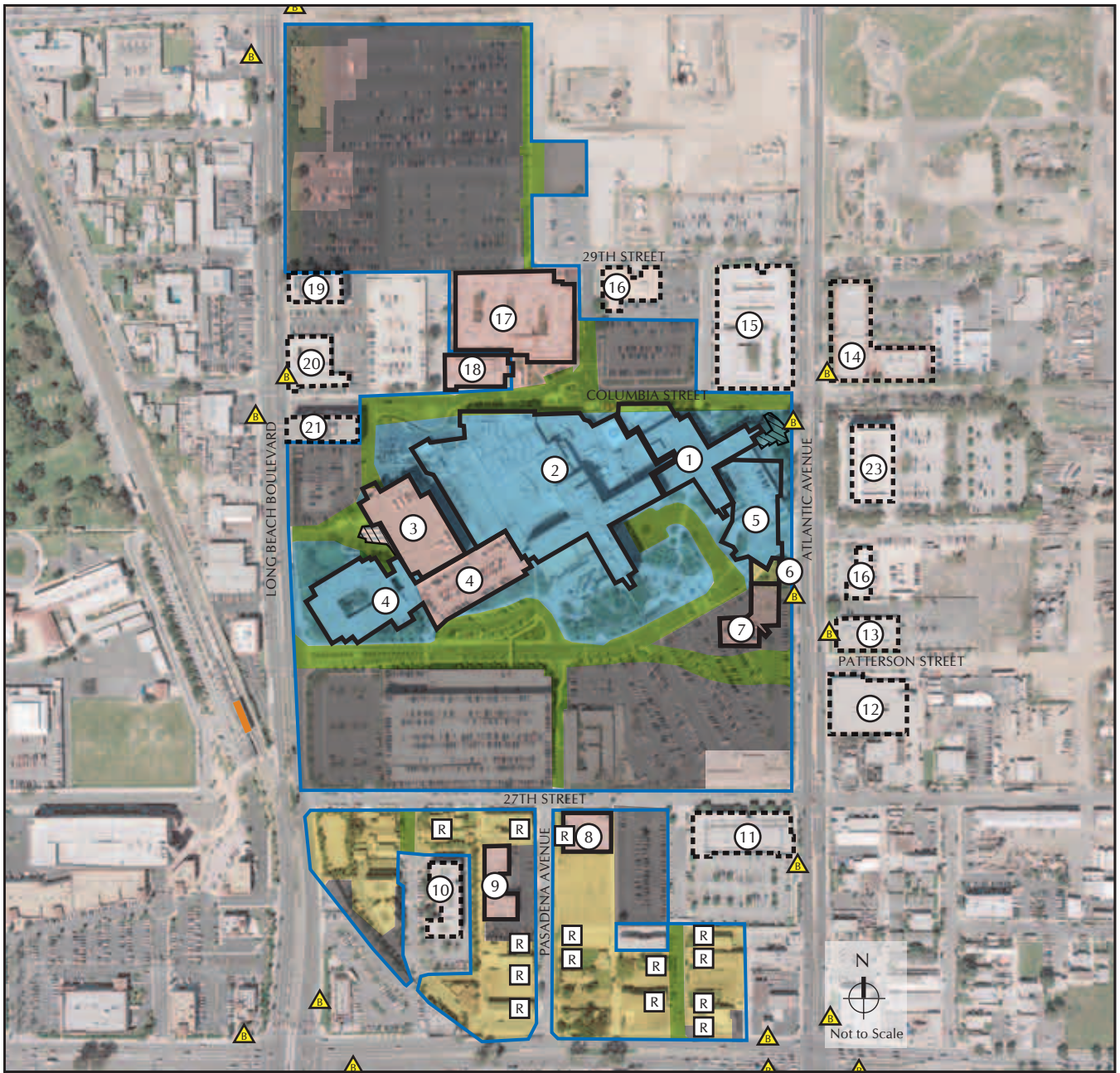
In the last sentence of the second paragraph under this heading, please replace the reference to (Figure 2.4.1-2, *Pedestrian Plan*) with the following:

(Figure R2.4.1-2, *Pedestrian Plan*)

Page 2-8 In Table 2.4.1-1, *2005 Master Plan Anticipated Projects*, under the column "Total Square Feet/Number of Stories," please make the following changes:

In the row "MCH pediatric inpatient tower Phase II," please replace "3 stories" with "4 stories."

In the row "Utility Trench," please replace the phrase 1,000 linear feet with N/A.



LEGEND	
	Inpatient
	Outpatient
	Mixed Use
	Utilities
	Circulation
	Parking
	LBMCC Boundary
	Buildings Controlled by LBMCC
	Buildings Controlled by Others
	Blue Line (Willow Station)
	Bus Stop (Long Beach Transit)
	Miller Children's Hospital
	Long Beach Memorial Medical Center
	Administration Building
	West Facility/Rehabilitation Building
	Rehabilitation Gym/Parking
	Pediatric Inpatient Tower
	Pediatric Outpatient Building
	Memorial Guest Residence
	Research Building
	Elm Medical Plaza
	3-Story Medical Office Building
	Convalescent Home
	MOB with CT & MRI Orthopedics
	Hillside Medical Plaza
	2-Story Atlantic MOB
	Medical Office Building - 1 Story
	Buffums Plaza - 1 Story
	CT & MRI Center
	Medical Office Building
	Aloha Motel
	Medical Office Building
	4-Story Atlantic MOB
	Residential Buildings



**FIGURE R2.4-1**  
Proposed Master Plan of Land Uses





FIGURE R2.4.1-1  
Landscape Plan

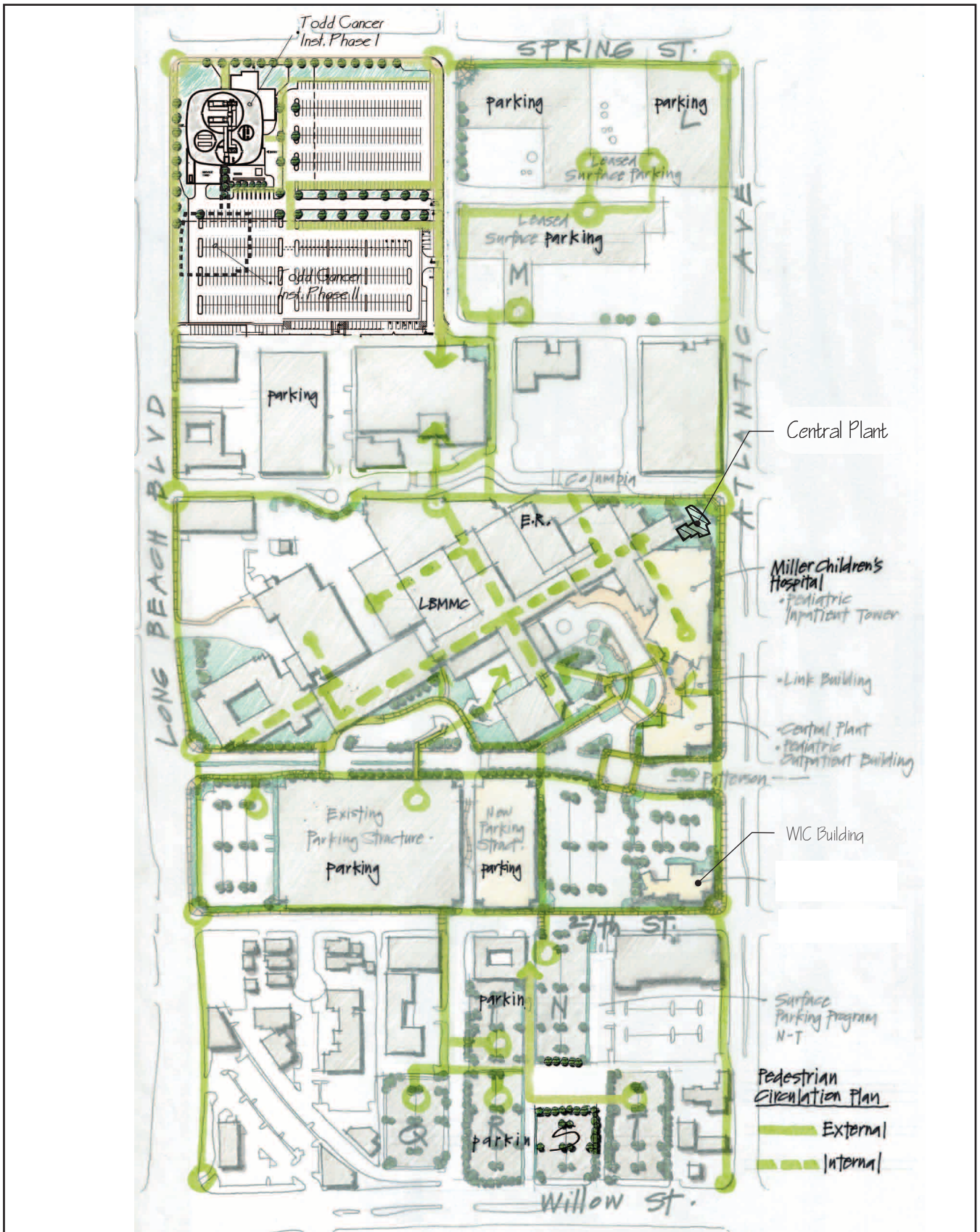


FIGURE R2.4.1-2  
Pedestrian Plan

## 2.4.2 Todd Cancer Institute

Page 2-9 The conceptual footprint for the Todd Cancer Institute was revised in Figure 2.4.2-1 and replaced by Figure R2.4.2-1.

In the first sentence of the first paragraph under this heading, please replace the reference to (Figure 2.4.2-1, *Todd Cancer Institute Conceptual Site Plan*) with the following:

(Figure R2.4.2-1, *Todd Cancer Institute Conceptual Site Plan*)

Page 2-9 The conceptual north and south elevations and west and east elevations for the Todd Cancer Institute depicted in Figure 2.4.2-2A and Figure 2.4.2-2B, respectively, were revised to reflect input received by the Long Beach Memorial Medical Center and replaced by Figure R2.4.2-2.

In the third sentence of the first paragraph under this heading, please replace the reference to Figure 2.4.2-2A, *Todd Cancer Institute North and South Elevations*, and Figure R2.4.2-2B, *Todd Cancer Institute West and East Elevations*, with the following:

(Figure R2.4.2-2, *Todd Cancer Institute Conceptual Drawing*)

Page 2-9 Please insert the following before the last sentence of the first paragraph:

The development of the TIC would include the installation of a two-phase traffic signal at the 11th intersection, Pasadena Avenue and Willow Street, which would avoid impacts on traffic and circulation.

Page 2-9 Please delete the following phrase from the last sentence in the second paragraph:

...and would accentuate the healing and medicinal properties of certain plants.

Page 2-9 Please delete the following phrase from the first sentence in the third paragraph:

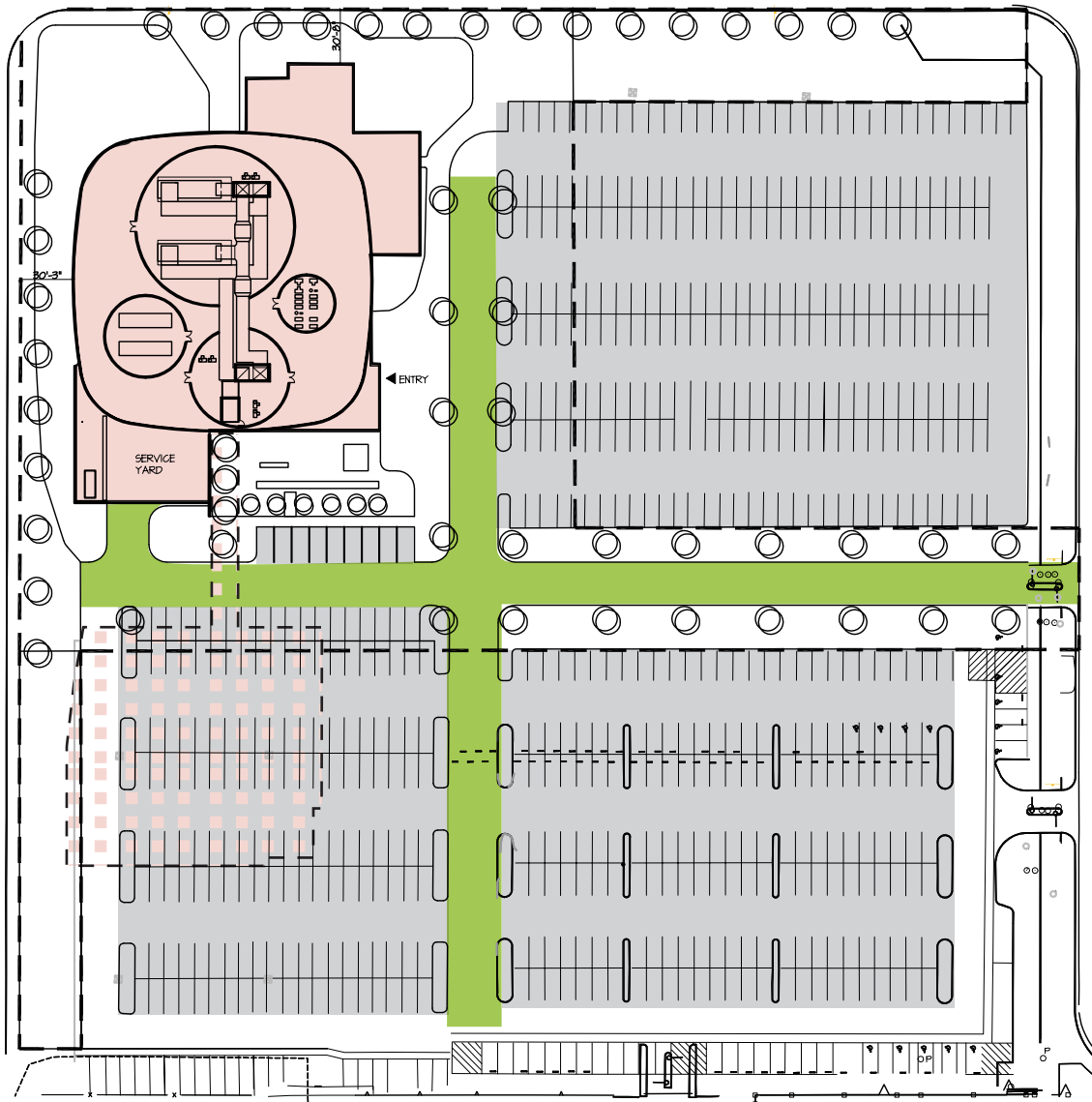
...and an atrium featuring a 70-foot-high skylight.

## 2.4.3 Miller Children's Hospital—Pediatric Inpatient Tower, Utility Trench, and Central Plant Building

Page 2-9 The central plant building and utility trench were relocated from the Parking Lot L location shown in Figure 2.4.3-1 to an area southwest of the intersection of Columbia Street and Atlantic Avenue as depicted in Figure R2.4.3-1.

In the first sentence of the first paragraph under this heading, please replace the reference to (Figure 2.4.3-1, *Miller Children's Hospital Expansion*) with the following:

(Figure R2.4.3-1, *Miller Children's Hospital Expansion*)



**Phase I**  
 Building Area: 83,630 SF

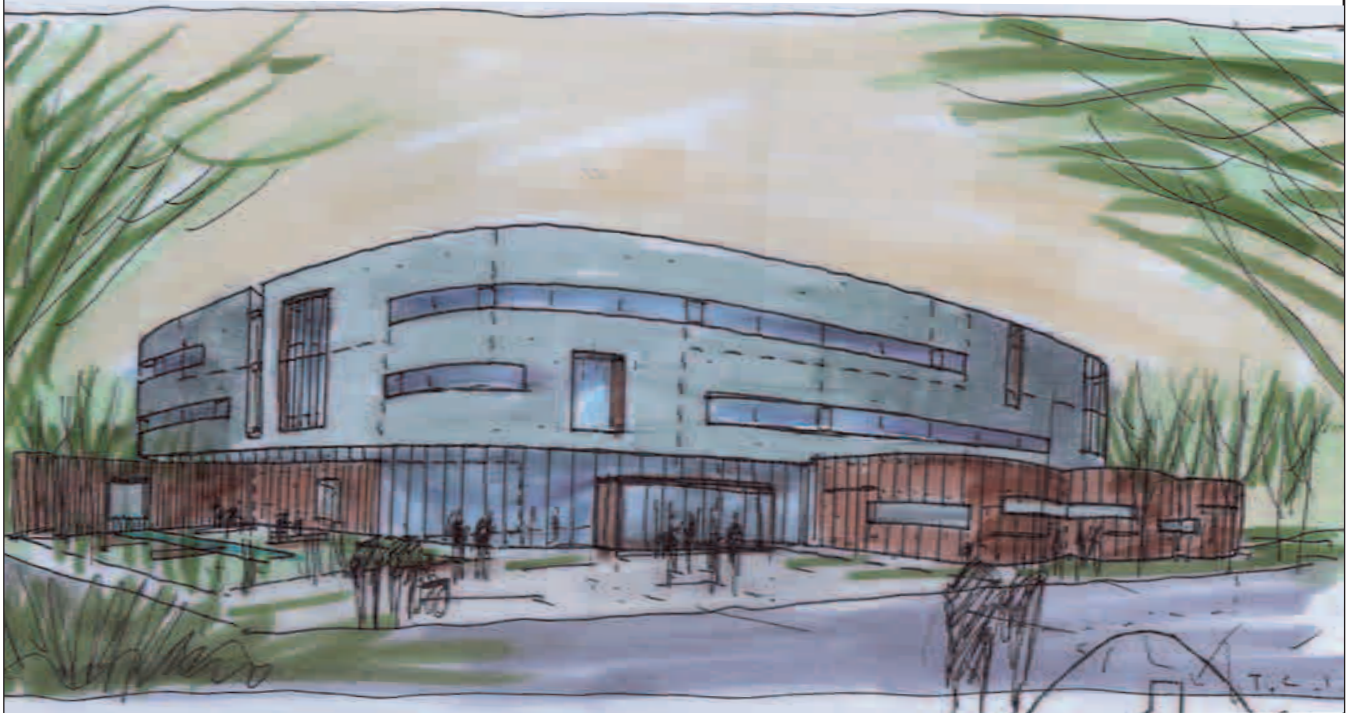
**Phase 2**  
 Building Area: 45,300 SF

**LEGEND**

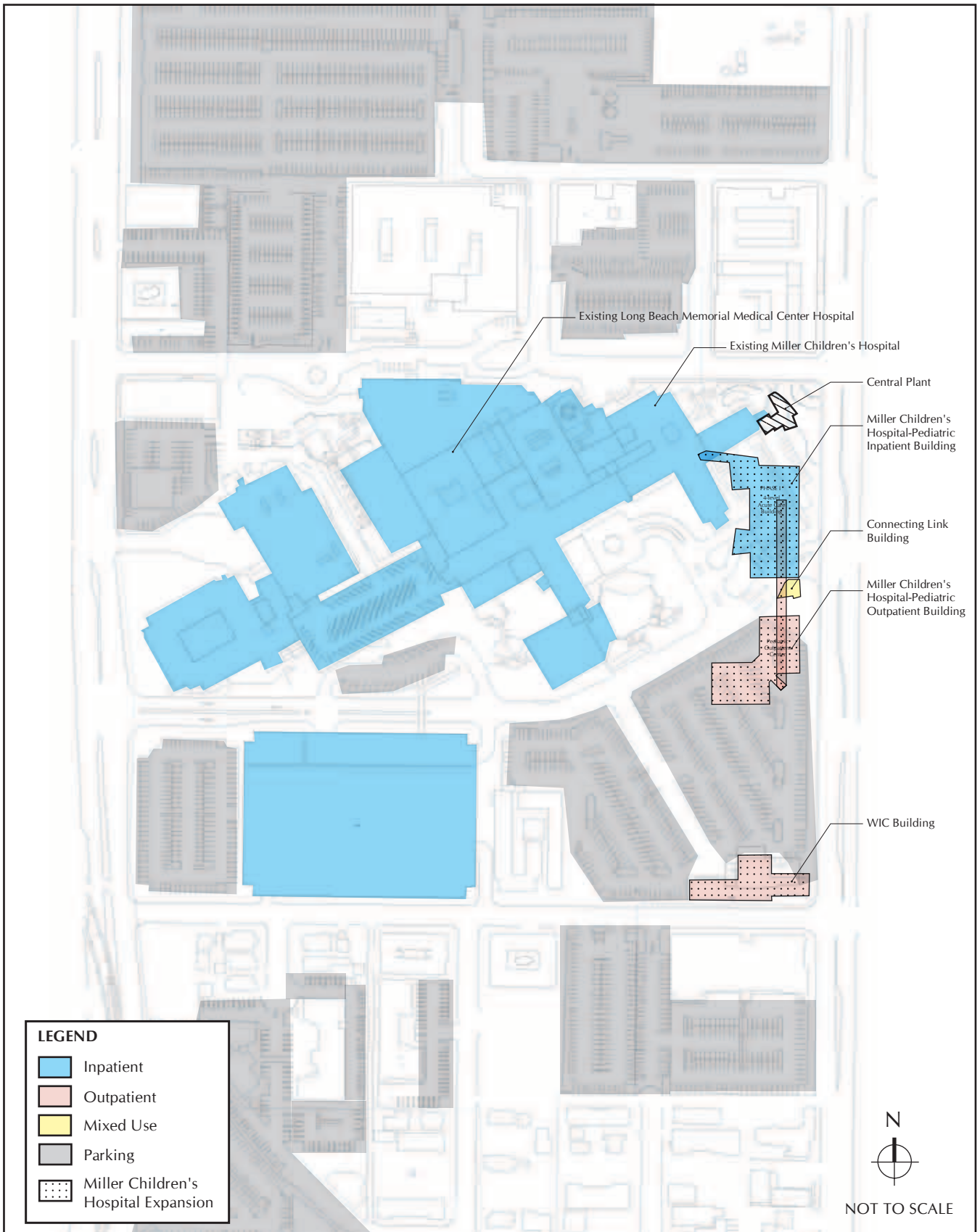
- Phase I
- Phase II
- Circulation
- Parking



**FIGURE R2.4.2-1**  
 Todd Cancer Institute Conceptual Site Plan



**FIGURE R2.4.2-2**  
Todd Cancer Institute Conceptual Drawing



**FIGURE R2.4.3-1**  
Miller Children's Hospital Expansion

Page 2-9 In the first sentence of the second paragraph under this heading, please replace the number 129,220 with 124,500 gross square feet.

Page 2-10 In the eighth sentence of the second paragraph under this heading, please replace the number 86,030 with 73,500 gross square feet.

Page 2-10 The northeastern boundary of the Campus was revised in Figure 2.4.3-2A and replaced by Figure R2.4.3-2A.

In the last sentence of the first paragraph under this heading, please replace the reference to (Figure 2.4.3-2A, *Miller Children's Hospital Pediatric Inpatient Building, North and East Elevations*) with the following:

(Figure R2.4.3-2A, *Miller Children's Hospital Pediatric Inpatient Building, North and East Elevations*)

Page 2-10 The northeastern boundary of the Campus was revised in Figure 2.4.3-2B and replaced by Figure R2.4.3-2B.

In the last sentence of the first paragraph under this heading, please replace the reference to (Figure 2.4.3-2B, *Miller Children's Hospital Pediatric Inpatient Building, South and West Elevations*) with the following:

(Figure R2.4.3-2B, *Miller Children's Hospital Pediatric Inpatient Building, South and West Elevations*)

Page 2-10 Please replace the fourth paragraph under this heading with the following:

A central plant building designed to support Phases I and II of the new pediatric inpatient tower would be constructed southwest of the intersection of Atlantic Avenue and Columbia Street (Figure R2.4.3-3, *Miller Children's Hospital Pediatric Inpatient Building, Central Plant: North and East Elevations*). The existing land use at this location is landscape and hardscape associated with the edge treatment of the existing Miller Children's Hospital. Development of the central plant building would not require displacement of any parking spaces. The central plant building would consist of a single-level structure of approximately 3,500 square feet. Construction of the central plant building is proposed to begin in June 2006 and finish in August 2007. The central plant building would contain equipment and storage for the provision of emergency power, and chilled water. Provision for the storage of bulk medical oxygen for the pediatric inpatient tower would be accommodated in conjunction with the existing parking lot north of Columbia Street and east of Pasadena Avenue. The central plant building would be staffed by existing engineering staff. Therefore, no additional parking would be required for the central plant building. Vehicular access to the central plant building would be via a curb cut on Columbia Street.



**North Elevation**  
As seen from Columbia Street



**East Elevation**  
As seen from Atlantic Avenue



**FIGURE R2.4.3-2A**  
Miller Children's Hospital Pediatric Inpatient Building North and East Elevation





**South Elevation**  
As seen from Memorial Drive/Patterson Street



**West Elevation**  
As seen from Miller Children's Hospital Courtyard



**FIGURE R2.4.3-2B**  
Miller Children's Hospital Pediatric Inpatient Building South and West Elevation



**North Elevation**  
As seen from Parking Lot K



**East Elevation**  
As seen from Atlantic Avenue



**FIGURE R2.4.3-3**  
Miller Children's Hospital - Pediatric Inpatient Building  
Central Plant: North and East Elevation