

2005 MASTER PLAN OF LAND USES

Long Beach Memorial Medical Center
Miller Children's Hospital



January 25, 2005



Table of Contents

1.0 Introduction	1
Opportunity	1
Goal	2
Long Beach Municipal Code Requirement	2
Applicability	2
Organization	3
Phasing	3
Methods	3
2.0 Master Planning Goals and Objectives	5
LBMMC and MCH Mission	5
Planning Horizon	6
Goals	6
Objectives	7
3.0 Existing Conditions	9
Overview	9
Location	9
General Plan Land Use Designation	10
Zoning	12
Land Uses	12
Design Setting	16
Landscaping	18
Signs	19
4.0 Master Plan Process and Analysis	27
Process	27
Trends Affecting Demand for Health Care Services	30
Conceptual Diagrams	30
Effective Property Utilization	32
Zoning	32
Circulation	32
Parking	34
Recommendations	34
Design Guidelines	35
5.0 2005 Master Plan	41
General Plan	41
Zoning	41
Recommendations	43
Project Entitlements	78
Design Guidelines	78
6.0 Acknowledgments	95



Table of Contents

FIGURES

1.01	Long Beach Memorial Medical Center and Miller Children's Hospital	1
1.02	Campus Boundaries	3
1.03	Proposed Master Plan of Land Uses	4
2.01	Comprehensive High-Quality Health Services	5
2.02	Inpatient Surgery Facilities	6
2.03	Imaging Services	6
2.04	Attractive Landscape Entrance to Long Beach Memorial Medical Center Campus	7
3.01	Vicinity of Long Beach Memorial Medical Center Campus	9
3.02	Property Ownership	10
3.03	General Plan Land Use Designation	11
3.04	2004 Zoning Districts	12
3.05	2004 Campus Land Uses	13
3.06	2004 Inpatient and Appurtenant Buildings	15
3.07	2004 Hospital-Owned Streets	16
3.08	2004 Hospital Entries	17
3.09	2004 Parking Facilities	18
3.10	Conditioned Structures	20
3.11	Landscaping	22
3.12	Signs and Monuments	24
4.01	Conceptual Development Flowchart	28
4.02	Conceptual Development Options	31
4.03	Circulation Patterns	33
4.04	Site Photographs	36
5.01	Proposed Zoning Districts	42
5.02	Effective Property Utilization	44
5.03.	Miller Children's Hospital Expansion	45
5.04A	Miller Children's Hospital Expansion Phase II, View of South and East Conceptual Massing Study	46
5.04B	Miller Children's Hospital Expansion Phase II, View of South and West Conceptual Massing Study	46
5.05	Master Plan of Land Uses	48
5.06A	Miller Children's Hospital Pediatric Inpatient Building North and East Elevations	49
5.06B	Miller Children's Hospital Pediatric Inpatient Building South and West Elevations	50
5.07	Todd Cancer Institute Conceptual Site Plan	51
5.08A	Todd Cancer Institute Conceptual North and South Elevations	52
5.08B	Todd Cancer Institute Conceptual West and East Elevations	52
5.09	Healing Garden	53
5.10A	Miller Children's Hospital Central Plant North and East Elevations	56
5.10B	Miller Children's Hospital Central Plant South and West Elevations	57



Table of Contents

5.11	Conceptual Central Plant Service Area	58
5.12	Roadway Realignment	59
5.13	Pedestrian Plan	60
5.14	On-Site Parking Opportunities	66
5.15	Off-Site Parking Opportunities	67
5.16A through 5.16J	Construction Scenarios Steps 1-10	69
5.17	Massing Diagram	81
5.18	MCH Conceptual Design	82
5.19	Parking Structure Screened with Landscaping	83
5.20	Conceptual Landscaping Plan	84
5.21	Campus Edge Landscaping	86
5.22	Primary Entry Landscaping	87
5.23	Edge Treatment of Interior Sidewalks	88
5.24	Edge Treatment of Surface Parking Lots	89
5.25	Building Edges and Courtyards	90
5.26	Conceptual Sign Program	91
5.27	Entry Sign for LBMMC on Atlantic Avenue	92
5.28	Neon Sign for MCH on Top of Main Building	92
5.29	Directional Signage	93

TABLES

3.01	Existing Conditions: Gross Floor Areas	14
3.02	City Code Parking Compliance for Existing Development	17
3.03	2004 Parking Census	19
5.01	Estimated Capital Improvement Costs	43
5.02	City Code Parking Requirements	61
5.03	Existing Parking Spaces Converted to Development	62
5.04	Additional Parkings Spaces Required During Construction	62
5.05	Parking Opportunities	63
5.06	Construction Parking Program	63
5.07	Operation Parking Program	64
5.08	Permit Requirements	80

Section 1

INTRODUCTION

OPPORTUNITY

The 2005 Long Beach Memorial Medical Center Master Plan of Land Uses (2005 Master Plan) provides the framework for development of the Long Beach Memorial Medical Center campus (Campus). The Campus includes two licensed inpatient hospitals, Long Beach Memorial Medical Center (LBMMC) and Miller Children's Hospital (MCH) (Figure 1.01, *Long Beach Memorial Medical Center and Miller Children's Hospital*). Outpatient services are currently provided within the two licensed hospitals and eight other medical office buildings located throughout the Campus, with additional outpatient services provided in off-site office buildings.

In addition to the general need to expand the capacity of the LBMMCC and MCH to meet state licensing requirements and California Senate Bill 1953 (SB 1953) requirements, special consideration was given to providing a dedicated facility to house the diverse treatment modalities of the Todd Cancer Institute (TCI), a programmatic component of the LBMMC. As of 2004, the TCI was operating from 24 disparate locations on and off the campus and had completely outgrown the available facilities. SB 1953 established seismic requirements for existing hospitals in California and was signed into law in September 1994. This bill requires existing general acute care hospital buildings that are not in compliance with the Alfred E. Alquist Hospital Seismic Safety Act of 1983 to be either seismically retrofitted, changed to non-acute care use, replaced, or demolished. This is to be accomplished for all California hospital facilities by year 2030. The combined resources made available through community fundraising, philanthropic donations, and the passage of the Children's Hospital Bond Act (Proposition 61) by the voters of California in November 2004 provide



FIGURE 1.01 - Long Beach Memorial Medical Center and Miller Children's Hospital



LBMCC and MCH with the unique opportunity to initiate a comprehensive program of capital improvements on the Campus.

GOAL

The LBMCC and MCH are committed to improving the health and well-being of individuals, families, and its communities through innovation and the pursuit of excellence and to make the Campus into Southern California's preferred, operationally excellent, and fiscally sound provider of comprehensive, high-quality health services. The 2005 Master Plan provides for refinements to the existing pattern of land uses and new development to meet the existing and anticipated demands of the Long Beach community for health care services through the year 2020. The Master Plan provides recommendations to organize the pattern of land uses and construct additional facilities to more effectively utilize the 54 acres of the Campus owned by Memorial Health Services within the City of Long Beach. The 2005 Master Plan identifies a series of capital improvements to provide expanded capacity for inpatient and outpatient services in conjunction with ambient population growth, in a manner that conforms to the requirements of SB 1953, and the state's licensing requirements. The Southern California Association of Governments (SCAG) and the Housing element of the City of Long Beach General Plan forecast a 6- to 9-percent growth rate to the year 2020, adding approximately 65,000 people to the City of Long Beach.

LONG BEACH MUNICIPAL CODE REQUIREMENT

This 2005 Master Plan was prepared by the operating institution, Memorial Health Services, to comply with the City of Long Beach Zoning Code, Section 21.34.020,¹ which requires that all sites zoned as Institutional and having an area of greater than 40,000 square feet in the City of Long Beach to submit a Long-Range Development Plan that includes all development of the site and site expansions (within a zone designated as Institutional or under the Institution's ownership, whichever is greater) anticipated over the next 20 years. The 2005 Master Plan is subject to review and approval by the City of Long Beach Planning Commission through the site plan review process.

APPLICABILITY

LBMCC and MCH propose to make significant changes to the previously adopted 1999 Master Plan; therefore, this revised 2005 Master Plan was developed. The 2005 Master Plan creates an opportunity to provide expanded state-of-the-art health care within a well-designed hospital campus. The 2005 Master Plan is applicable to development of the 54 acres located within the City of Long Beach (Figure 1.02, *Campus Boundaries*).

ORGANIZATION

Memorial Health Services is a private nonprofit organization responsible for administration and oversight of the two licensed hospitals (LBMCC and MCH), which are established, respected institutions in the Long Beach community, as well as an asset to the greater Long Beach area. This 2005 Master Plan includes a statement of goals and objectives, a description of the existing conditions as of year 2004, a description the process and analysis used to support development of the 2005 Master Plan, Long-Range Development Plan recommendations to meet anticipated needs through year 2020, and acknowledgment of the plan contributors.

This 2005 Master Plan provides a Master Plan of Land Uses, recommended capital improvements, and design guidelines to promote high-quality development within a single overall design concept that is compatible with the community that it is intended to serve. The 2005 Master Plan provides a conceptual framework for the reorganization of the pattern of the six primary land uses: (1) inpatient medical facilities, (2) outpatient medical facilities, (3) mixed-use facilities (nonresidential), (4) utilities, (5) circulation, and (6) parking (Figure 1.03, *Proposed Master Plan of Land Uses*). Within the conceptual framework, there are six capital improvements that would most likely be undertaken by LBMCC and MCH to provide expanded capacity for inpatient and outpatient services:

1. TCI
2. MCH Pediatric Inpatient Tower, Utility Trench, and Central Plant Building
3. MCH Pediatric Outpatient Building

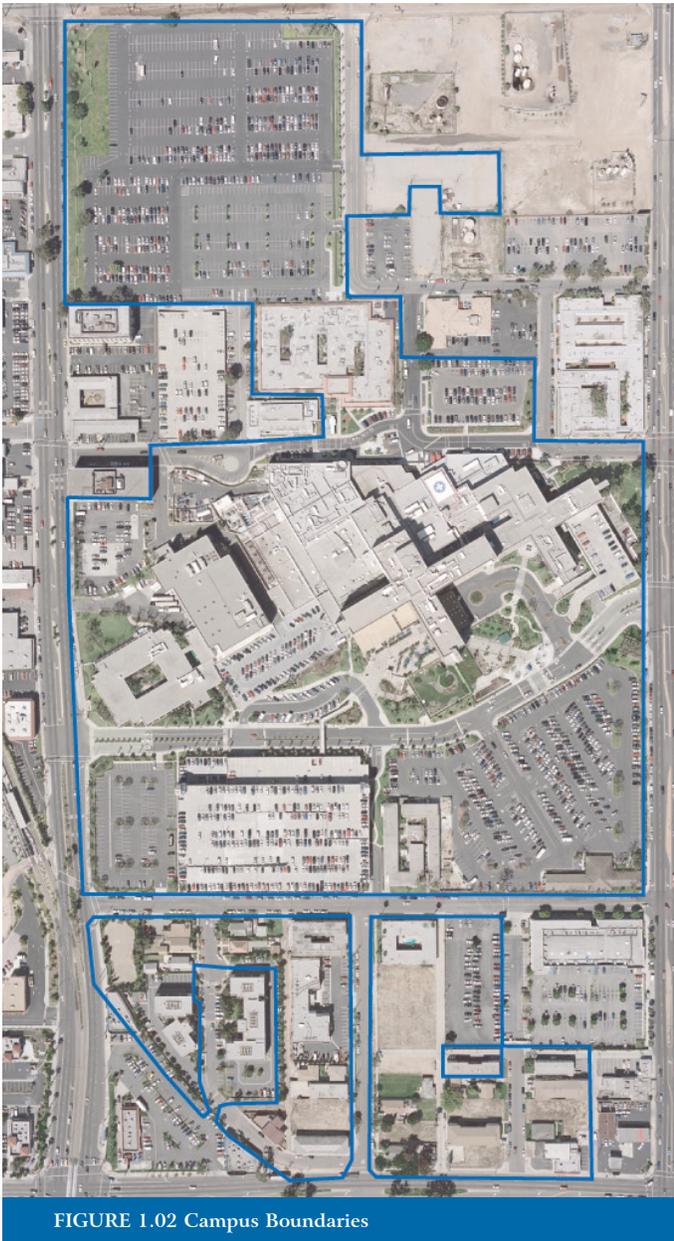


FIGURE 1.02 Campus Boundaries

4. MCH Link Building
5. Roadway Realignment
6. Parking Program

PHASING

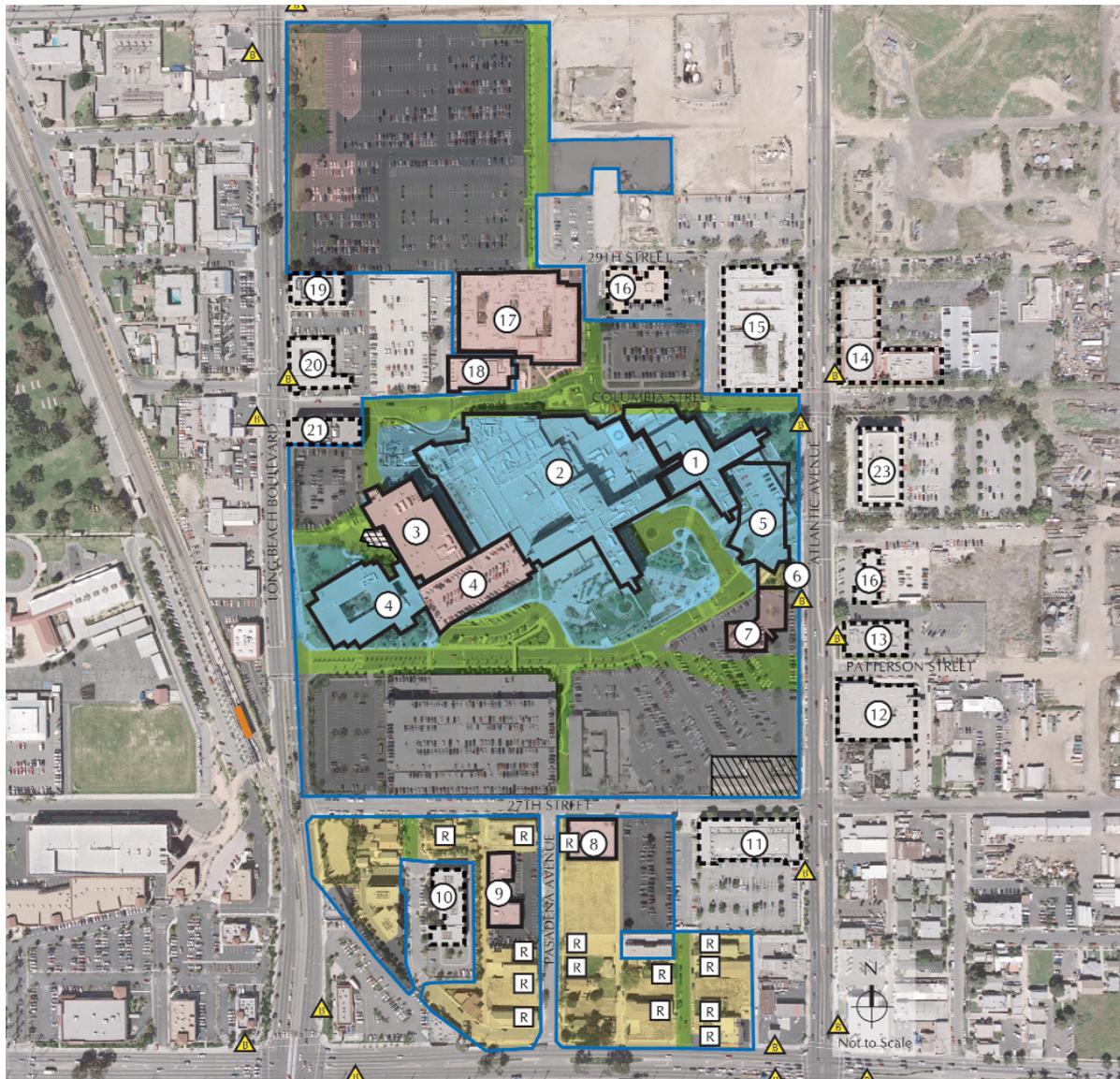
Project phasing is envisioned as a 10-step process to be completed in eight years between 2005 and 2013, where construction of certain elements is contingent on the availability of funding. Adoption and implementation of the 2005 Master Plan and related capital improvement projects require four actions by the City of Long Beach Planning Commission and require recommendations by the Long Beach City Council:

- Long-Range Development Plan (Master Plan) Approval
- Site Plan Review
- Zoning District Change
- Standard Variances

METHODS

Like the adopted 1999 Master Plan, this 2005 Master Plan provides a land use planning framework for capital improvements that are anticipated to be required to meet the need for health care services within the community. These recommendations for capital improvements incorporate the results of numerous meetings and workshops conducted with the LBMCC and MCH administration, medical staff, users, management, and board members. Extensive research has been undertaken to understand demographic trends that will affect anticipated demand for inpatient and outpatient health care services. In addition, LBMCC and MCH administrators have visited and benchmarked comparable facilities throughout the United States.

¹ City of Long Beach. 1982. City of Long Beach Municipal Code (Ord. C-5831 § 1, 1982), Chapter 21. Available at: <http://www.longbeach.gov/apps/cityclerk/lbmc/title-21/frame.htm>



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)
- 1 Miller Children's Hospital
- 2 Long Beach Memorial Medical Center
- 3 Administration Building
- 4 West Facility/Rehabilitation Building
Rehabilitation Gym/Parking
- 5 Pediatric Inpatient Tower

- 6 Link Building
- 7 Pediatric Outpatient Building
- 8 Memorial Guest Residence
- 9 Research Building
- 10 Elm Medical Plaza
- 11 3-Story Medical Office Building
- 12 Convalescent Home
- 13 MOB with CT & MRI Orthopedics
- 14 Hillside Medical Plaza

- 15 2-Story Atlantic MOB
- 16 Medical Office Building - 1 Story
- 17 Buffums Plaza - 1 Story
- 18 CT & MRI Center
- 19 Medical Office Building
- 20 Aloha Motel
- 21 Medical Office Building
- 23 4-Story Atlantic MOB
- R Residential Buildings

FIGURE 1.03 - Proposed Master Plan of Land Uses

Section 2

MASTER PLANNING GOALS AND OBJECTIVES

The 2005 Long Beach Memorial Medical Center Master Plan of Land Uses (2005 Master Plan) provides the framework for development of the Long Beach Memorial Medical Center campus (Campus). This 2005 Master Plan was prepared by the operating institution, Memorial Health Services, to comply with the City of Long Beach Municipal Code, which requires any site in the Institutional District with a lot area exceeding 40,000 square feet to submit a Long-Range Development Plan for the institution.

LBMHC AND MCH MISSION

The Long Beach Memorial Medical Center (LBMHC) and Miller Children's Hospital (MCH) are committed to improving the health and well-being of individuals, families, and their communities through innovation and the pursuit of excellence and to make the Campus into Southern California's preferred, operationally excellent, and fiscally sound provider of comprehensive, high-quality health services (Figure 2.01, *Comprehensive, High-Quality Health Services*; Figure 2.02, *Inpatient Surgery*



FIGURE 2.01 - Comprehensive, High-Quality Health Services



Facilities; Figure 2.03, *Imaging Services*; and Figure 2.04, *Attractive Landscape Entrance to Long Beach Memorial Medical Center Campus*).

PLANNING HORIZON

The ability to fulfill this mission requires the establishment of a Long-Range Development Plan for the Campus. The City of Long Beach Zoning Code, Section 21.34.020, requires the preparation of this 2005 Master Plan. As such, this 2005 Master Plan would normally be prepared to address planning needs through year 2025. However, the City of Long Beach General Plan provides planning and demographic data through the year 2020 planning horizon. Therefore, this 2005 Master Plan incorporates considerations from the previously adopted 1999 Master Plan and provides land use designations, recommended capital improvements, and design guidelines to provide for the orderly and compatible development of the Campus to meet the needs of the community through the year 2020 planning horizon, consistent with the City of Long Beach General Plan.

GOALS

The ability to support the mission of LBMMC and MCH through the year 2020 planning horizon is related to eight primary goals:

1. Maintain state licensing requirements for the LBMMC and MCH.
2. Provide sufficient inpatient and outpatient facilities accommodate anticipated population growth of 6 to 9 percent by year 2020.
3. Develop a Master Plan and site facility for the Campus that is consistent with the requirements of California Senate Bill 1953 (SB 1953).
4. Ensure that the Master Plan recommendations are cost-effective, feasible, and consistent with the strategic goals and objectives of the LBMMC.



FIGURE 2.02 - Inpatient Surgery Facilities



FIGURE 2.03 - Imaging Services



5. Maximize the effective utilization of the existing 54 acres owned by Memorial Health Services within the City of Long Beach.
6. Identify specific capital improvements and related infrastructure improvements to be undertaken to accommodate departmental needs, operational efficiency, and future workload, particularly in light of future health and practice changes.
7. Develop solutions that are consistent with goals and priorities established during the master planning process and that are conducive to a user friendly environment for patient, staff, and visitors.
8. Develop and apply unifying design principles that satisfy the LBMMC design guidelines for consistent landscaping, streetscape, pedestrian corridors, outdoor spaces, wayfinding and signage design treatments, and

processes that establish a stronger revival of the adjacent community and neighborhood.

9. Establish design guidelines to facilitate a cohesive Campus that is compatible and sensitive to the surrounding land use and development patterns.

OBJECTIVES

The master planning team, composed of representatives of LBMMC and MCH, health care professionals, architects, engineers, planners, and environmental compliance specialists, defined 12 objectives that would need to be achieved to support the overall master planning goals:

1. Continue the legacy of providing a high-quality environment that supports the health and well-being of patrons through the provision of a comprehensive system of programs and facilities that provide prevention, screening, diagnosis, treatment, and



FIGURE 2.04 - Attractive Landscape Entrance to Long Beach Memorial Medical Center Campus



monitoring services to meet existing and anticipated demand in the community through the year 2020.

2. Expand and reorganize the existing approximately 1,200,000 square feet of combined inpatient, outpatient, and appurtenant facilities by approximately 500,000 square feet to accommodate existing and anticipated demand through the year 2020.

3. Comply with the regulations developed by the Office of Statewide Health Planning and Development (OSHPD) as mandated by SB 1953 (Chapter 740, 1994), an amendment to and furtherance of the Alfred E. Alquist Hospital Seismic Safety Act of 1983.

4. Consolidate and relocate the 24 diverse outpatient treatment modalities of the Todd Cancer Institute (TCI), which are currently dispersed in 11 sites located on and off the Campus, to a single facility in proximity to the inpatient services provided at the LBMMC.

5. Provide a dedicated facility for the outpatient well care, screening, imaging, diagnosis, treatment, and monitoring of cancer and non-cancer patients to accommodate the anticipated need for 375 patients to be served per day by year 2007, and to accommodate approximately 500 patients per day to meet anticipated needs through year 2020.

6. In the immediate proximity of the MCH, provide a pediatric inpatient tower that would increase capacity for pediatric surgical cases that would satisfy a mandate from the California Department of Health Services to provide new, pediatric-dedicated operating rooms by January 2008. An additional three operating rooms may need to be provided between years 2008 and 2015 to meet anticipated demand through year 2020.

7. In the immediate proximity of the MCH, provide a pediatric inpatient tower that would increase capacity

for newborn intensive care services and general pediatric patients. The new pediatric inpatient tower will be sized to accommodate the 10-percent increase in the need for pediatric inpatient treatment of children under the age of 15 between years 2000 and 2003, and the projected additional increase of 1 percent per year through year 2020. The increase in capacity would require 72 additional beds by year 2008, and another 92 additional beds between years 2008 and 2015 to meet anticipated demand through year 2020.

8. Consolidate and relocate the diverse pediatric outpatient services, well care, screening, diagnosis, treatment, and monitoring into a single, dedicated building in close proximity to the MCH.

9. Within the Campus, provide a building designated for mixed uses to accommodate retail uses, such as a gift shop, florist, and food and beverage service, to serve MCH employees, patients, and visitors.

10. Provide adequate access and egress to the Campus from Long Beach Boulevard and Atlantic Avenue.

11. Provide adequate infrastructure to support circulation within the Campus. Provide adequate infrastructure to support internal and external circulation within the Campus that is consistent with the objectives set forth in the LBMMC design guidelines.

12. Provide sufficient parking capacity to comply with the City of Long Beach parking ordinance. Provide sufficient parking capacity that is differentiated by use (visitor, employee, and physician) to comply with the City of Long Beach parking ordinance.

13. LBMMC understands the importance of worker and senior housing, and will continue to work with the City of Long Beach to identify appropriate locations for these land uses within the Campus.



EXISTING CONDITIONS

OVERVIEW

Long Beach Memorial Medical Center (LBMCC) is an established, respected institution in the Long Beach community, as well as an asset to the greater Long Beach area. LBMCC is the second largest nonprofit community hospital in the western United States, serving the community since 1914. The LBMCC campus (Campus) includes two licensed hospitals: LBMCC and Miller Children’s Hospital (MCH). Related outpatient services are provided in the licensed hospitals and other medical office buildings located on and off the Campus, whereas other services are provided in leased spaces located off the Campus. The majority of patients served are City of Long Beach residents. A variety of inpatient and outpatient services are provided to indigent families at no cost. The Campus is the second largest employer in the City of Long Beach, including 1,200 physicians and more than 3,500 employees.

Section 3

LOCATION

The 2005 Long Beach Memorial Medical Center Master Plan of Land Uses (2005 Master Plan) addresses the 54-acre Campus located within the City of Long Beach, County of Los Angeles, California (Figure 3.01, *Vicinity of Long Beach Memorial Medical Center Campus*). The Campus is located less than 1 mile south of U.S. Interstate 405 (San Diego Freeway), approximately 1 mile east of U.S. Interstate 710 (Long Beach Freeway), and approximately 1 mile south

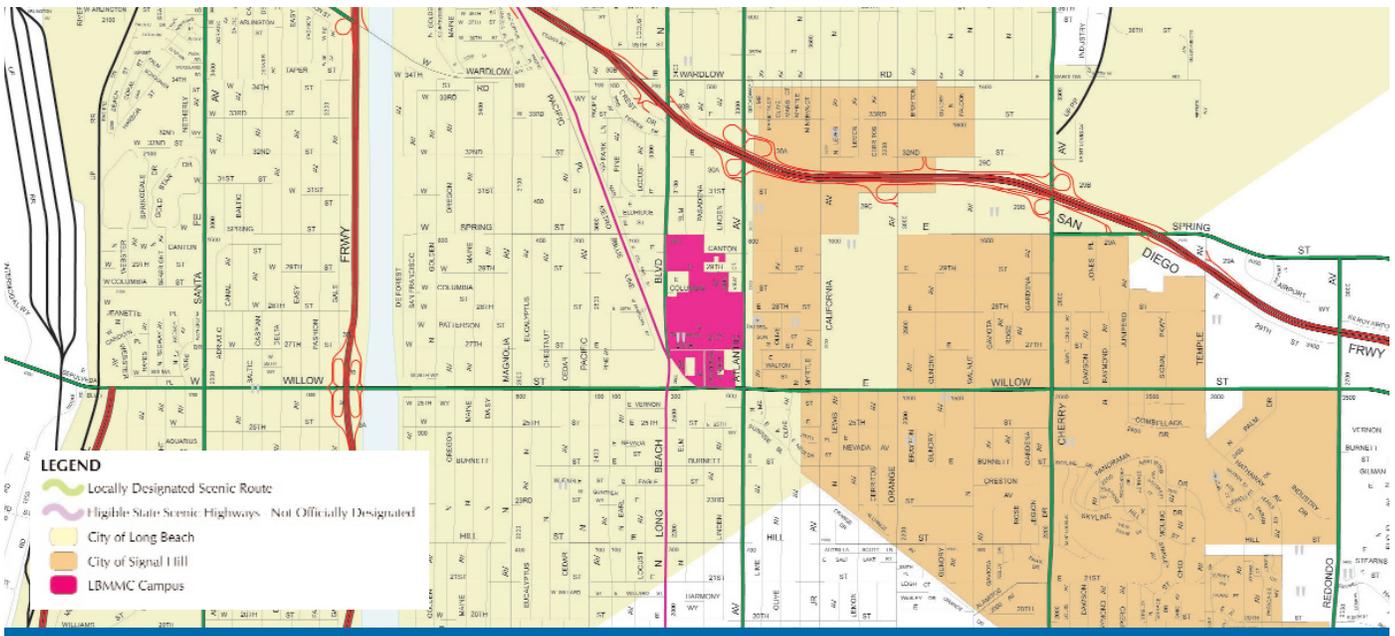


FIGURE 3.01 - Vicinity of Long Beach Memorial Medical Center Campus



of State Route 1 (Pacific Coast Highway). The Campus is located approximately 3.5 miles northeast of the Port of Long Beach, approximately 1 mile east of the Los Angeles River, and approximately 1 mile west of the Long Beach Airport. The elevation of the Campus ranges from 19 feet above mean sea level (MSL) to 67 feet above MSL.

The 54-acre Campus is bounded on the north by East Spring Street, on the east by Atlantic Avenue, on the south by Willow Street, and on the west by Long Beach Boulevard. The Campus owns additional properties in the adjacent City of Signal Hill that were not included in this 2005 Master Plan due to their separation from the main Campus by Atlantic Avenue and other known

environmental and planning constraints (Figure 3.02, *Property Ownership*). This Master Plan is limited to those properties that are owned by the LBMMC and MCH within the City of Long Beach.

GENERAL PLAN LAND USE DESIGNATION

The Campus is designated as Land Use Designation (LUD) No. 7 Mixed-Use District in the Land Use element of the City of Long Beach General Plan (Figure 3.03, *General Plan Land Use Designation*). This District is intended for use in large, vital activity centers such as medical facilities that, by their nature, involve mixed uses. The Master Plan area is located within and is consistent with the redevelopment goals of the Central Long Beach Redevelopment Area.

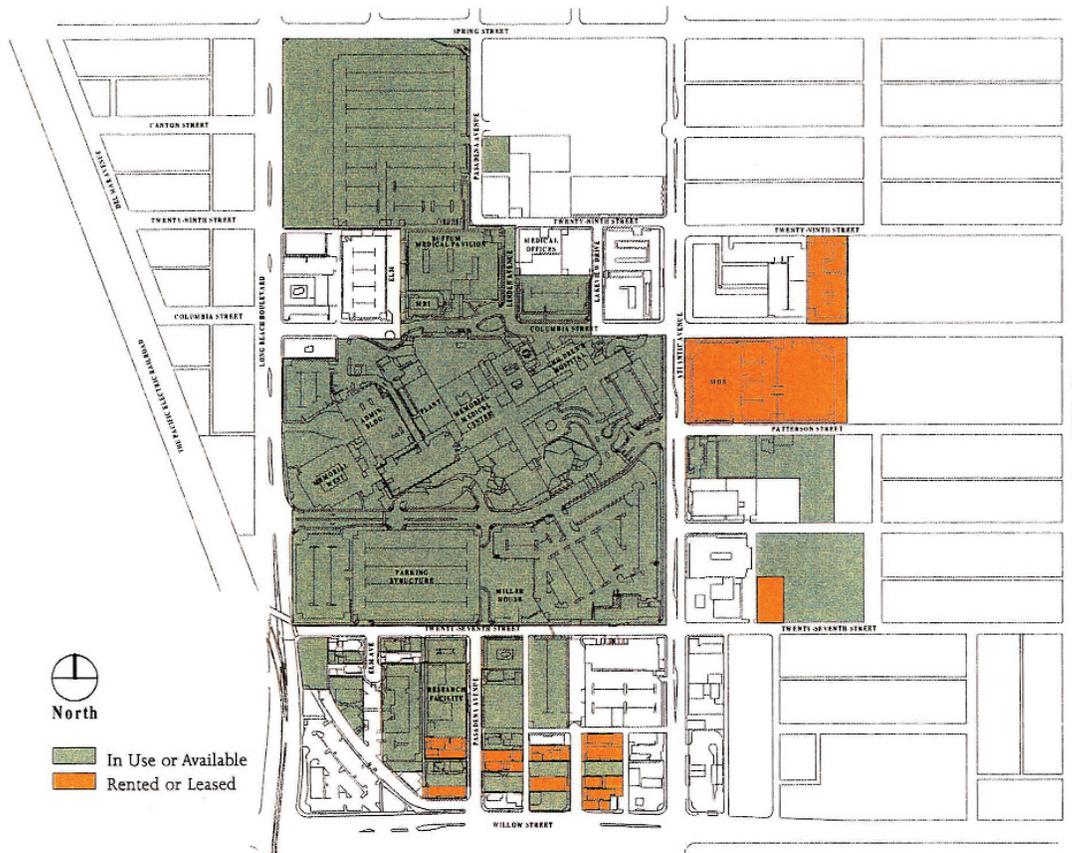


FIGURE 3.02 - Property Ownership

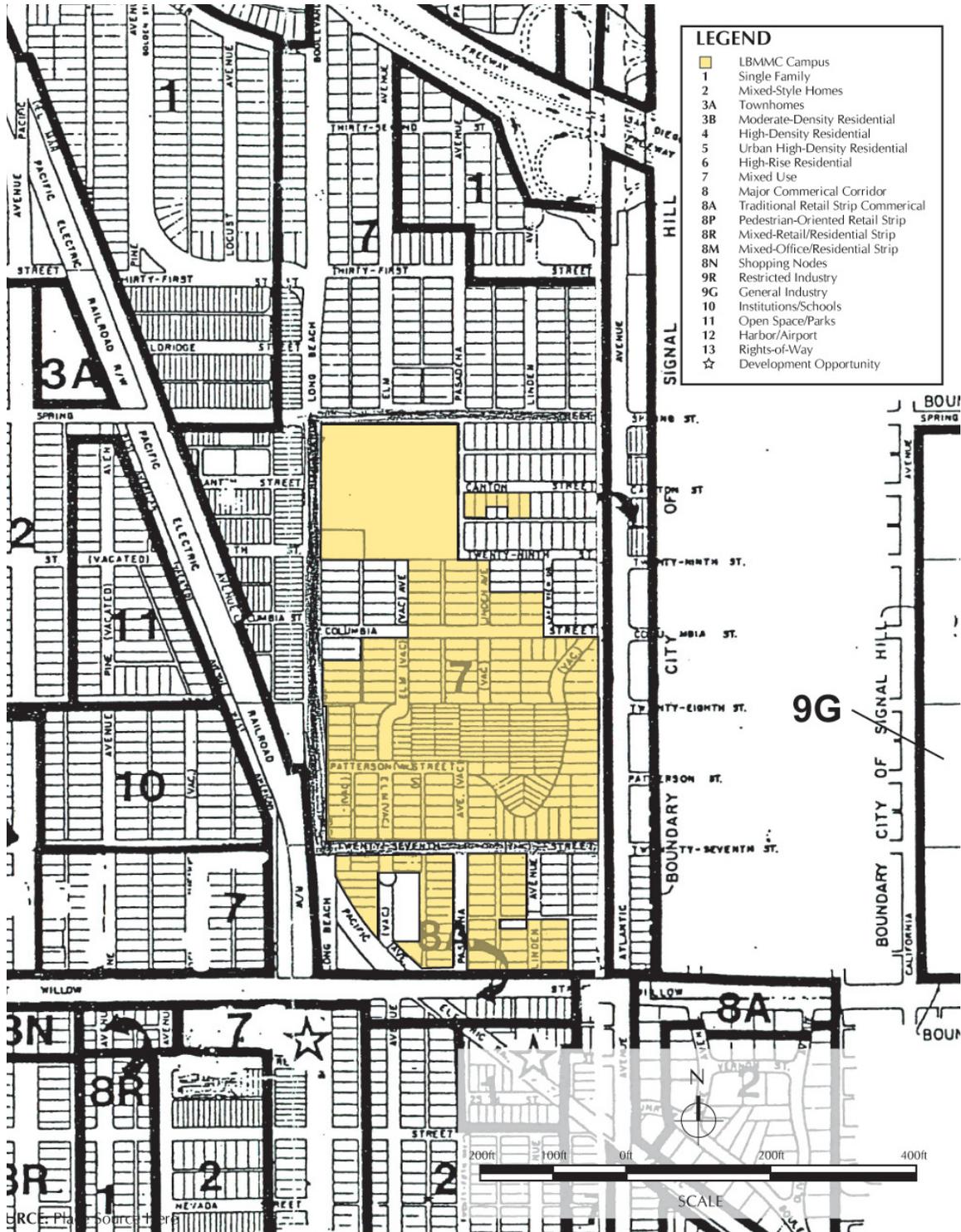


FIGURE 3.03 - General Plan Land Use Designation



ZONING

In 2004, there were four zoning designations in place on LBMMC-owned properties within the Campus (Figure 3.04, *2004 Zoning Districts*):

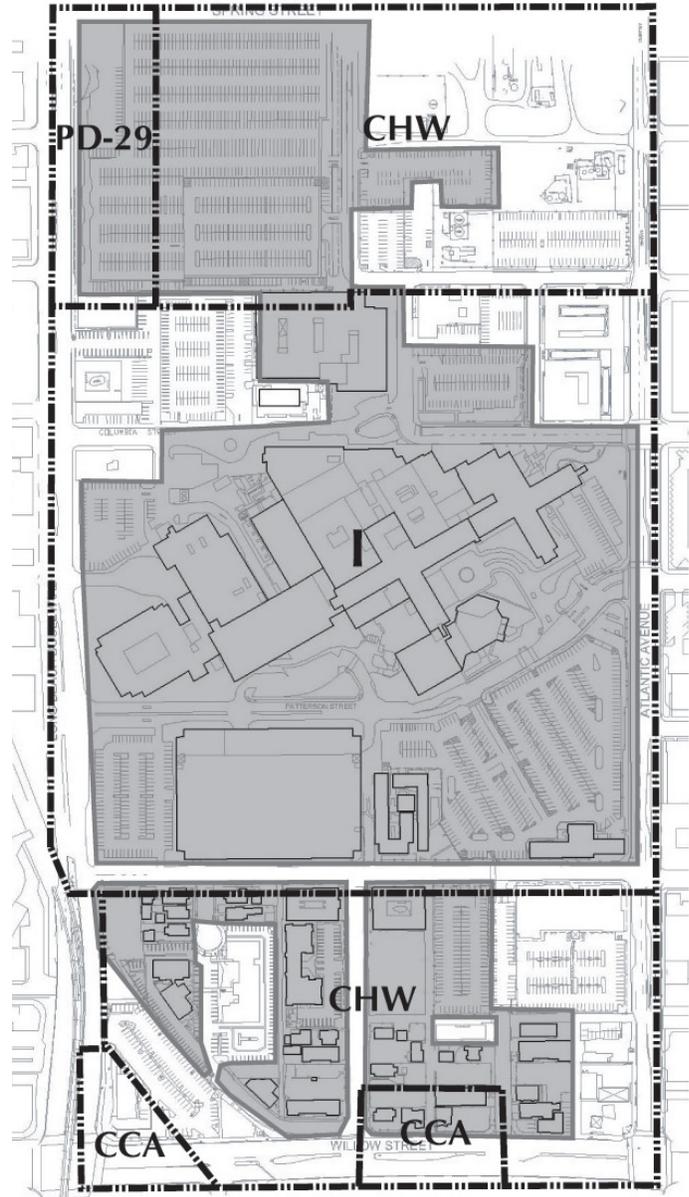
- I: Institutional
- CCA: Community Automobile-Oriented
- CHW: Regional Highway Commercial
- PD-29: Long Beach Boulevard Planned Development District

The core of the existing inpatient services within the Campus, bounded by East 29th Street to the north, Atlantic Avenue on the east, East 27th Street on the south, and Long Beach Boulevard on the west, is zoned Institutional (I). The majority of the adjacent parcels to the north and south of the core area of inpatient services are zoned as Regional Highway Commercial (CHW) Districts, which also allow for Institutional land uses. The CHW District is a commercial use district for mixed-scale commercial uses along major arterial streets and regional traffic corridors. There are two areas adjacent to Willow Street that are zoned as Community Automobile-Oriented (CCA) Districts, which permit retail and service uses that serve the entire community, including convenience and shopping goods and associated services. The northwest corner of the Campus is zoned as a Long Beach Boulevard Planned Development (PD-29) District. The PD-29 District was established to allow flexible development plans to be prepared for areas of the City of Long Beach that may benefit from the formal recognition of unique or special land use and the definition of special design policies and standards not otherwise possible under conventional zoning district regulations.

LAND USES

The 54-acre Campus is completely developed and characterized by six general land uses (Figure 3.05, *2004 Campus Land Uses*):

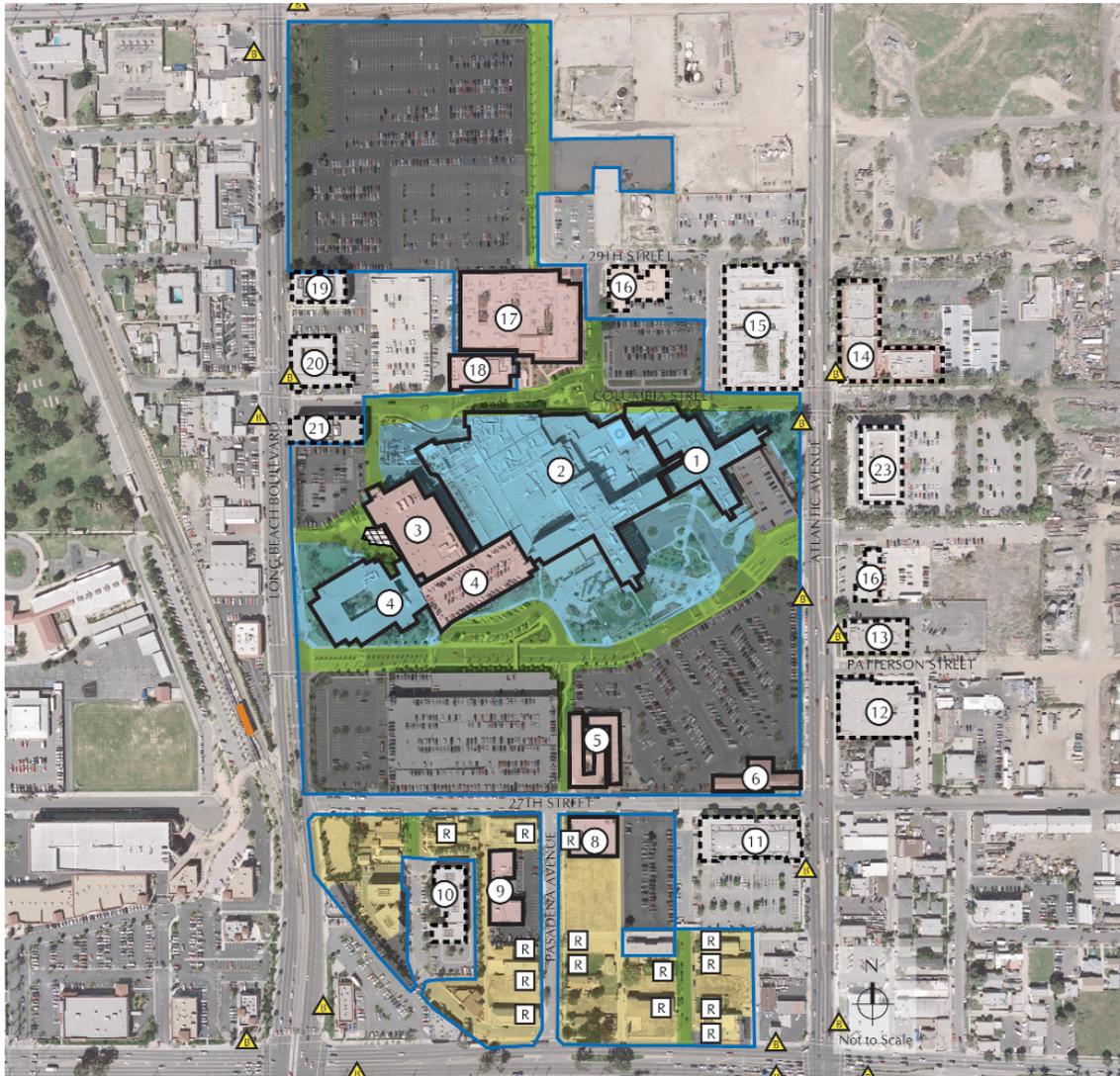
- Inpatient
- Outpatient
- Mixed Use
- Utilities
- Circulation
- Parking



LEGEND

- | | |
|---|---|
|  Zoning Districts |  Institutional |
|  LBMMC Campus |  Community Automobile-Oriented |
|  PD-29 Planned Development | |
|  CHW Regional Highway Commercial | |

FIGURE 3.04 - 2004 Zoning Districts



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)
- 1 Miller Children's Hospital
- 2 Long Beach Memorial Medical Center
- 3 Administration Building
- 4 West Facility/Rehabilitation Building
- 5 Rehabilitation Gym/Parking
- 6 Miller House

- 7 Ranch House / WIC Medical Center
- 8 Memorial Guest Residence
- 9 Research Building
- 10 Elm Medical Plaza
- 11 3-Story Medical Office Building
- 12 Convalescent Home
- 13 MOB with CT & MRI Orthopedics
- 14 Hillside Medical Plaza

- 15 2-Story Atlantic MOB
- 16 Medical Office Building - 1 Story
- 17 Buffums Plaza - 1 Story
- 18 CT & MRI Center
- 19 Medical Office Building
- 20 Aloha Motel
- 21 Medical Office Building
- 23 4-Story Atlantic MOB
- R Residential Buildings

FIGURE 3.05 - 2004 Campus Land Uses



As of August 20, 2004, there are approximately 1,213,945 square feet of conditioned space located within the Campus (Table 3.01, *Existing Conditions: Gross Floor Areas*). There are two licensed hospitals within the Campus, LBMMC and MCH, which provide a combined total of 743 licensed beds. These facilities are centrally located on the Campus, north of 27th Street, east of Long Beach Boulevard, south of Columbia Street, and west of Atlantic Avenue. In addition to inpatient services, outpatient services are provided in the eight structures located north and south of the LBMMC and MCH, including a child care center, nutrition programs, and outpatient clinics. The southern portion of the campus is characterized by mixed use, including residential properties. Approximately 1.93 acres are dedicated to circulation within the Campus, not including public right-of-ways. Parking is provided for physicians, employees, patients, and visitors in parking structures and surface parking lots.

INPATIENT

The two licensed hospitals, LBMMC and MCH, comprise 11 buildings constructed between 1960 and 1994 (Figure 3.06, *2004 Inpatient and Appurtenant Buildings*):

1. Main Tower: This was constructed in 1960 as a six-story building, with two stories added in 1970.
2. Memorial West: This was constructed in 1965. The two-story building was originally designed for two additional stories.

3. Rehabilitation Unit: This is a one-story building at the lower level of the hospital, with doctor parking above. It was constructed in 1965.
4. Miller Children’s Hospital: This is a four-story building constructed in 1969.
- 4a. Old Pathology: This building was constructed within a courtyard created by existing buildings.
5. X-Ray Addition: This is a three-story building.
6. Center for Health Education: This is a one-story building at the lower level of hospital, with a plaza and landscaping above. It was constructed in 1973.
7. Surgery Addition: This was constructed in 1975 as a two-story building, with one story added in 1985 and another in 1994.
8. Doctor’s Dining and Administration: This three-story building was constructed in 1985.
- 8a. Original Coffee Shop: This two-story building was constructed in 1962.
9. Outpatient Surgery: Three stories were originally constructed in 1985, and one story was added in 1994.

Building Number per Existing Building Plan ¹	Building	Gross Floor Areas (Square Foot)
1	Miller Children’s Hospital	175,162
2	Long Beach Memorial Medical Center	697,630
3	Administration Building	129,531
4	Memorial West Facility (Rehab) ²	107,622
5	Miller House	25,000
6	Ranch House / WIC Medical Center	12,000
8	Memorial Guest Residence Hotel	12,000
9	Research Building	20,000
17	Buffums Plaza	35,000
	Total	1,213,945

NOTE:

¹ Building numbers as shown on diagram. Source: Taylor, July 2004. “Existing Buildings.” Contact: Taylor, 2220 University Drive, Newport Beach, CA 92660.

² Gross floor area of the Memorial West Facility includes the Rehab center (31,167 square feet).

Table 3.01 - Existing Conditions: Gross Floor Areas



10. Cancer Center: This one-story building is located at the lower level of the LBMMC, with a plaza and landscaping above. It was constructed in 1985.

11. Emergency Power Area: This was originally constructed in 1984, with additions in 1994.

OUTPATIENT

Six additional buildings located north and south of two licensed hospitals support outpatient services: Miller House, Ranch House/WIC Center, Memorial Guest Residence Hotel, Research Building, Buffum’s Plaza, and Rehab.

MIXED USE

The portion of the Campus located between 27th Street and Willow Street is characterized by mixed use. The Memorial Guest Residence is located southeast of the intersection of 27th Street and Pasadena Avenue. The Research Building is located southwest of that same intersection. This area includes 15 residential land use parcels (70 residential dwelling units) and 18 vacant lots.

UTILITIES

Utility support for LBMMC and MCH is partially located within the footprint of the buildings. Additional utilities are

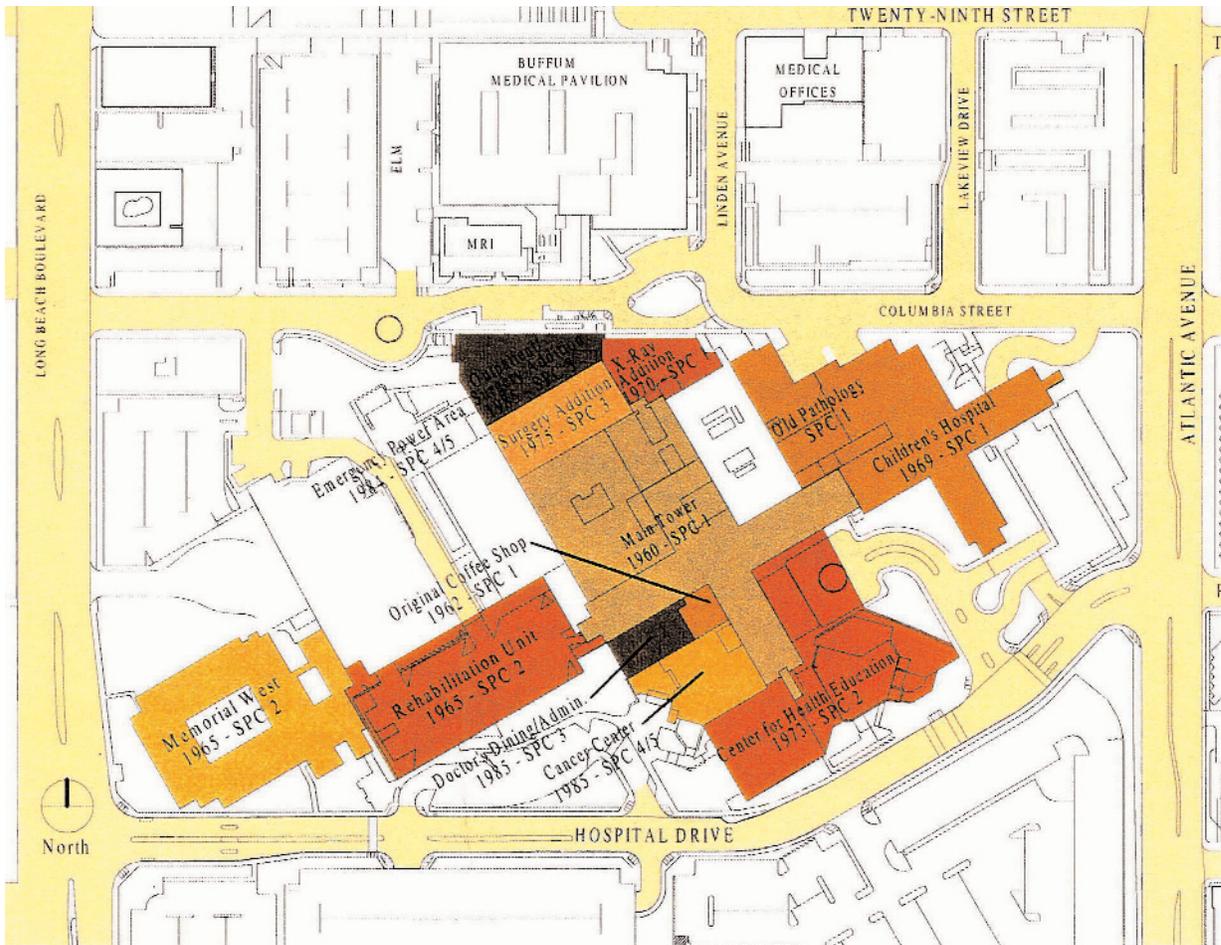


FIGURE 3.06 - 2004 Inpatient and Appurtenant Buildings



located north of the West Facility and west of the Administration Building.

CIRCULATION

The Campus is equally accessible from the two major north-south adjacent public roadways: Atlantic Avenue on the east and Long Beach Boulevard on the west. Vehicular and pedestrian circulation within the Campus is supported by a network of public streets and sidewalks, further augmented by landscaped and lighted private driveways and sidewalks maintained by the LBMMC (Figure 3.07, *2004 Hospital-Owned Streets*). There are opportunities to apply this same approach to future development to facilitate safe paths of travel for patients, patrons, visitors, medical staff, and employees.

There are 13 major public/patient entries into the Campus facilities (Figure 3.08, *2004 Hospital Entries*). These entries provide convenient access to inpatient and outpatient services from parking areas, surrounding public sidewalks, and nearby public transit stops.

PARKING

The Campus currently provides 259 parking spaces in excess of the City of Long Beach Code parking requirement (Table 3.02, *City Code Parking Compliance for Existing Development*). There are a total of 3,452 parking spaces located in 11 locations, 2 parking structures, and 9 surface parking lots throughout the Campus (Figure 3.09, *2004 Parking Facilities*; Table 3.03, *2004 Parking Census*).

DESIGN SETTING

BUILDINGS

There are 10 conditioned structures within the Campus that provide a wide variety of inpatient, outpatient, and appurtenant health care services (Figure 3.10, *Conditioned Structures*). The buildings where health care services are provided were constructed between 1956 and 1985; modifications to some buildings were undertaken in the 1990s. The visual character of the Campus is dominated by the eight-story main tower of LBMMC (1960, modified in

1970) and the four-story MCH (1960), which are characteristic of the architecture of public buildings constructed in the Kennedy-Johnson-Nixon-Ford years.¹ The two cruciform buildings are set back from the two nearest primary arterials, Long Beach Boulevard and Atlantic Avenue. This practice was common for the time period and a departure from earlier periods where public buildings were often aligned with, and the primary facade faced, the primary street. The strong geometric lines, glass,

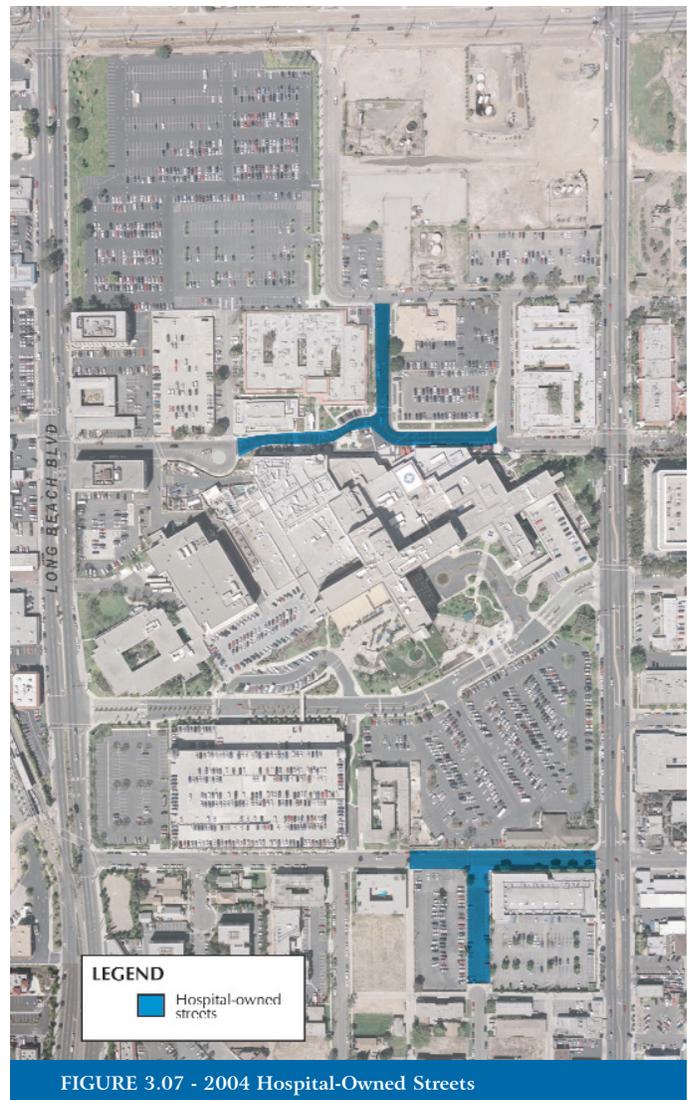


FIGURE 3.07 - 2004 Hospital-Owned Streets

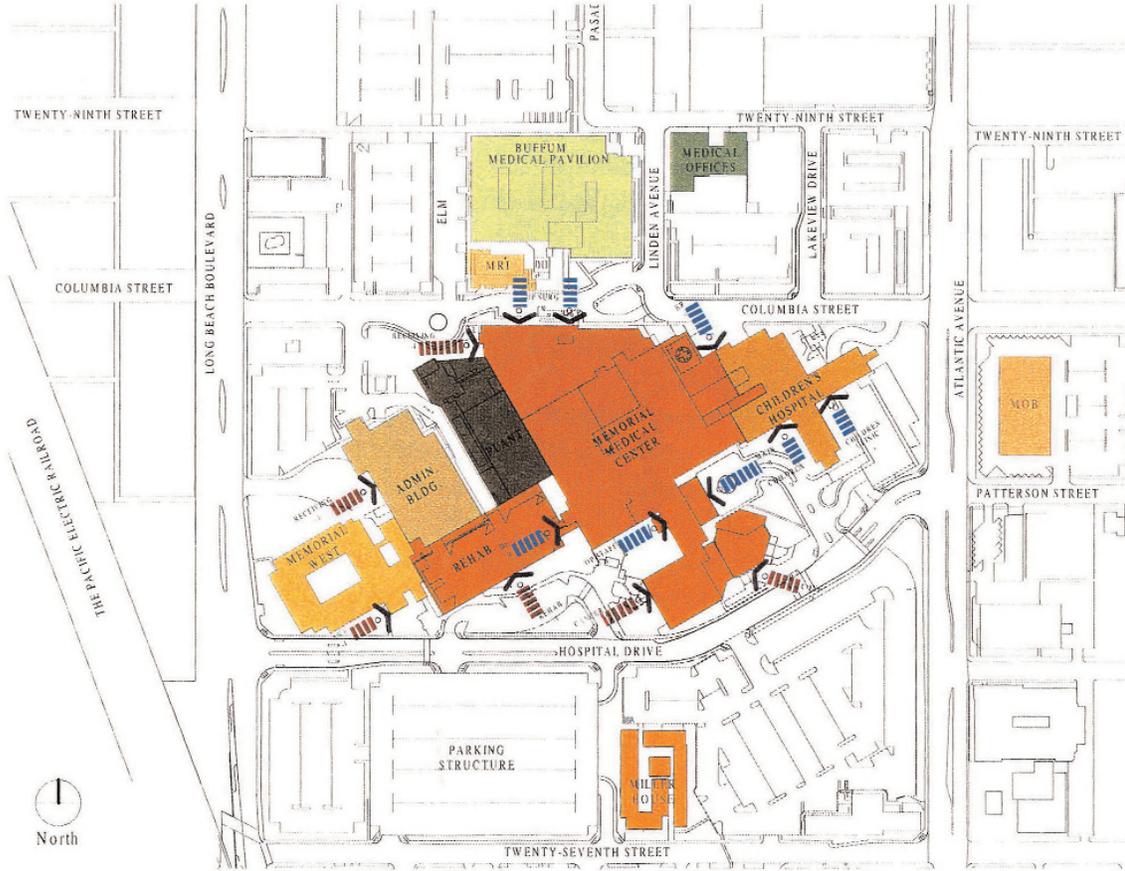
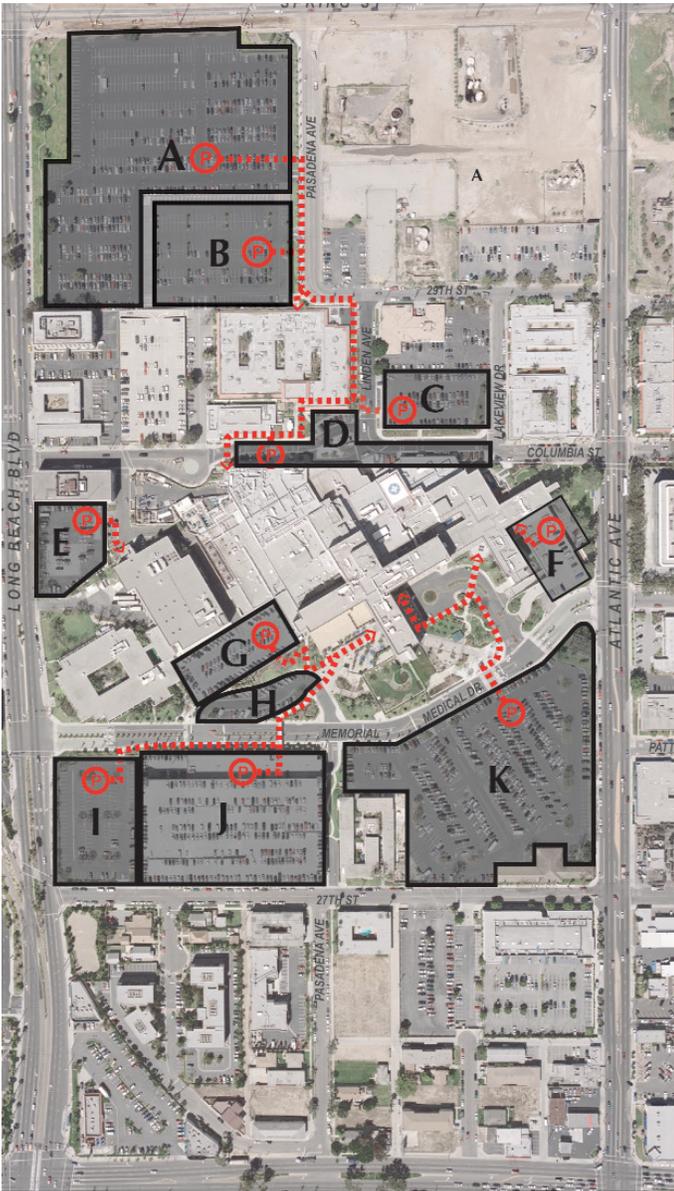


FIGURE 3.08 - 2004 Hospital Entries

Building	Size	City of Long Beach Code Parking Ratio	Spaces Required
1. Miller Children's Hospital (284 licensed beds)	175,162 SF	2 spaces per bed	568
2. Long Beach Memorial Medical Center (459 licensed beds)	697,630 SF	2 spaces per bed	918
3. Administration Building	129,531 S1'	5 spaces per 1,000 S1'	648
4. Memorial West Facility	76,515 S1'	5 spaces per 1,000 S1'	383
5. Miller House	25,000 S1'	5 spaces per 1,000 S1'	125
6. Ranch House / WIC Medical Center	12,000 S1'	5 spaces per 1,000 S1'	60
8. Memorial Guest Residence Hotel	12,000 S1'	5 spaces per 1,000 S1'	60
9. Research Building	20,000 S1'	5 spaces per 1,000 S1'	100
17. Buffums Plaza Rehabilitation	35,000 S1' 31,107 S1'	5 spaces per 1,000 S1' 5 spaces per 1,000 S1'	175 156
Total Project Square Footage	1,213,945 SF	Total Parking Requirement	3,193
		Existing Parking Supply	3,452
		Parking Surplus/Deficiency (+/-)	259

Table 3.02 - City Code Parking Compliance for Existing Development



LEGEND

-  Accessible Pedestrian Path from Parking Lot to Building Entry
-  Parking
-  Staff/Employee
-  Patient/Visitor
-  Patient
-  Doctors
-  Staff/Employee
-  Patient
-  Doctor
-  Patient/Visitor
-  Staff/Employee
-  Staff/Employee and Patient/Visitor
-  Patient/Visitor

FIGURE 3.09 - 2004 Parking Facilities

and exterior sheathing of the buildings are also characteristic of public buildings constructed during this time period. There are an additional 14 residential structures that were constructed at various times between 1909 and 1959. None of the buildings on the Campus have been identified as significant architectural features in the City of Long Beach.²

There is a wide variety in massing within the Campus buildings, from the eight-story, 697,630-square-foot LBMCC to the one-story, 122,000-square-foot Ranch House/WIC Medical Center. The massing of the buildings is largely related to three factors: the diversity of services provide, equipment requirements, and medical service capacity. The inpatient facilities vary in height from two to eight stories. Outpatient facilities are typically one to two stories (Figure 3.10). Public building entrances are readily identifiable from parking areas and linkages to adjacent streets.

There are a wide variety of exterior building finishes; however, the primary exterior finishes are poured concrete, stucco, metal, and glass. Most of the exterior facades are painted in light, earth-toned facades with low potential for glare. All health care buildings are equipped with exterior lighting.

LANDSCAPING

The Campus is landscaped with selective plantings of mature trees and shrubs to create a pleasant and secure environment for medical staff, employees, patients, and visitors (Figure 3.11, *Landscaping*). Most recently, in the mid-1990s, LBMCC completed \$16.5 million dollars in streetscape and landscape improvements. Typical trees consist of palm, ficus, Brazilian pepper, and eucalyptus. A variety of evergreen shrubs are planted throughout the Campus. Plantings are maintained to provide a level of transparency at eye level that allows viewing from adjacent areas around or on the Campus.

There are five general categories of landscape treatment at the Campus: (1) Campus edge, (2) primary entries, (3) edge treatment of interior sidewalks, (4) edge treatment of surface parking lots, and (5) building edges and courtyards.



	Staff/Employee Spaces	Patient/Visitor Spaces	Doctor Spaces	Total Spaces
Existing Parking Demand				3,193
Existing Parking Supply				3,452
Lot A	675	—	—	675
Lot B		217		217
Lot C	—	74	—	74
Lot D	—	—	28*	28
Lot E	85			85
Lot F **	—	26	60	86
Lot G **	—	—	87	87
Lot H		29		29
Lot I	150	—	—	150
Lot J **	1,430	164	—	1,594
Lot K	—	427	—	427
Subtotal	2,340	937	175	3,452
Existing Parking Surplus				259

NOTE:

* Spaces shared with patients and visitors.

** Structural parking areas

Table 3.03 - 2004 Parking Census

The Campus edge and streetscape along Long Beach Boulevard and Atlantic Avenue is treated with a white wrought-iron fencing set back with groundcover consisting of low-lying shrubs or grass and trees in the foreground (Figure 3.11). Primary Campus entries on Memorial Center Drive/Patterson Street are treated with alternating pine and ficus trees, flowering shrubs, groundcover, and turf (Figure 3.11). The edges of pedestrian walkways located interior to the Campus are treated turf, occasional trees, hedges, and occasional hardscape such as concrete masonry walls to separate walkways from adjacent buildings (Figure 3.11). Plantings are organized such that security lighting is not impeded. The edges of surface parking lots receive comparable treatment to interior walkways with some combination of turf, shrubs, and trees (Figure 3.11). In addition, lighting is provided within parking lots and structures in accordance with the security plan on file with the City of Long Beach Police Department. Larger buildings typically have some area dedicated to landscaping between the sidewalk edge and the building. These building landscape area typically consist of turf, groupings of trees such as ficus and palm, and groupings of shrubs (Figure 3.11). The health care buildings and vacant lots located between 27th Street and Willow Street have limited landscape material and are relatively austere, comparable to

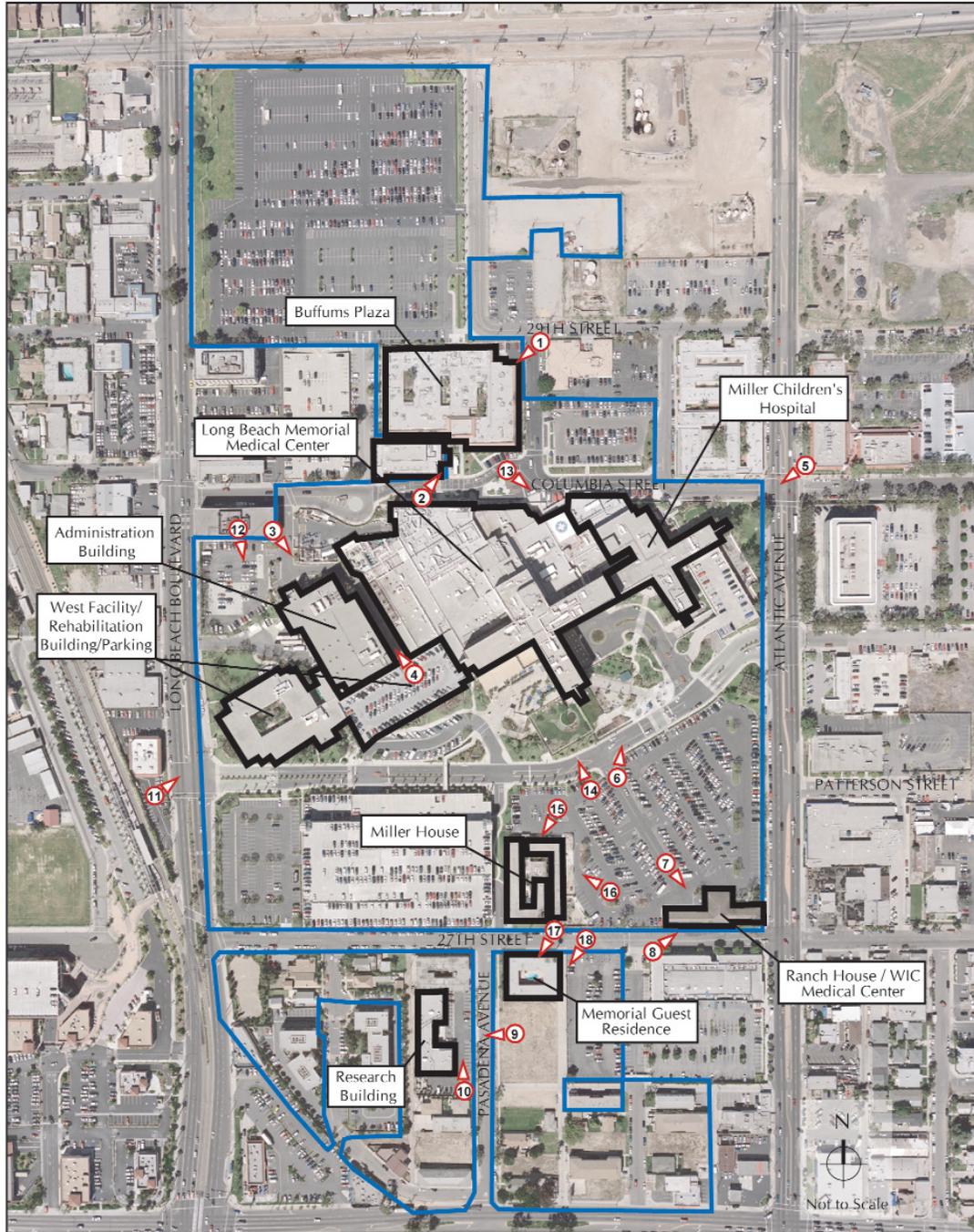
other commercial properties located in the vicinity of the Campus on Willow Street.

SIGNS

In 2004, LBMMC installed additional signs and improved existing signs throughout the Campus to facilitate site recognition and wayfinding by patients and visitors (Figure 3.12, *Signs and Monuments*). There are generally three types of signs within the Campus: (1) gateway signs, (2) building signs, and (3) directional signs. Large signs identify the primary entrances to the Campus from Long Beach Boulevard and Atlantic Avenue. The entry signs are large, rectangular stone or concrete placards approximately 4 feet in height, with “Long Beach Memorial Medical Center” annotated in raised san serif font lettering. These signs are highlighted with landscape treatment and lighting. The two licensed hospitals have commercial-grade backlit signs near the building cornice identifying the building as “Long Beach Memorial Medical Center” or “Miller Children’s Hospital” (Figure 3.12). Directional signs are located along each edge of the Campus directing vehicles to parking areas. (Figure 3.12) Additional signs are located within the Campus to direct pedestrians from parking areas to buildings dedicated to inpatient and outpatient treatment centers (Figure 3.12).

¹Carole Rifkind. 1998. *A Field Guide to Contemporary American Architecture*. New York, NY: Penguin Group.

²David Gebhard and Robert Winter. 1994. *Los Angeles: An Architectural Guide*. Salt Lake City, UT: Gibb Smith Publisher.



LEGEND

- LBMCC Boundary
- Buildings Controlled by LBMCC
- ⑩ Photo Points

FIGURE 3.10 - Conditioned Structures



BUFFUMS PLAZA



WEST FACILITY/ REHABILITATION BUILDING/PARKING



ADMINISTRATION BUILDING



LONG BEACH MEMORIAL MEDICAL CENTER



MILLER CHILDREN'S HOSPITAL



MILLER HOUSE



RANCH HOUSE / WIC MEDICAL CENTER

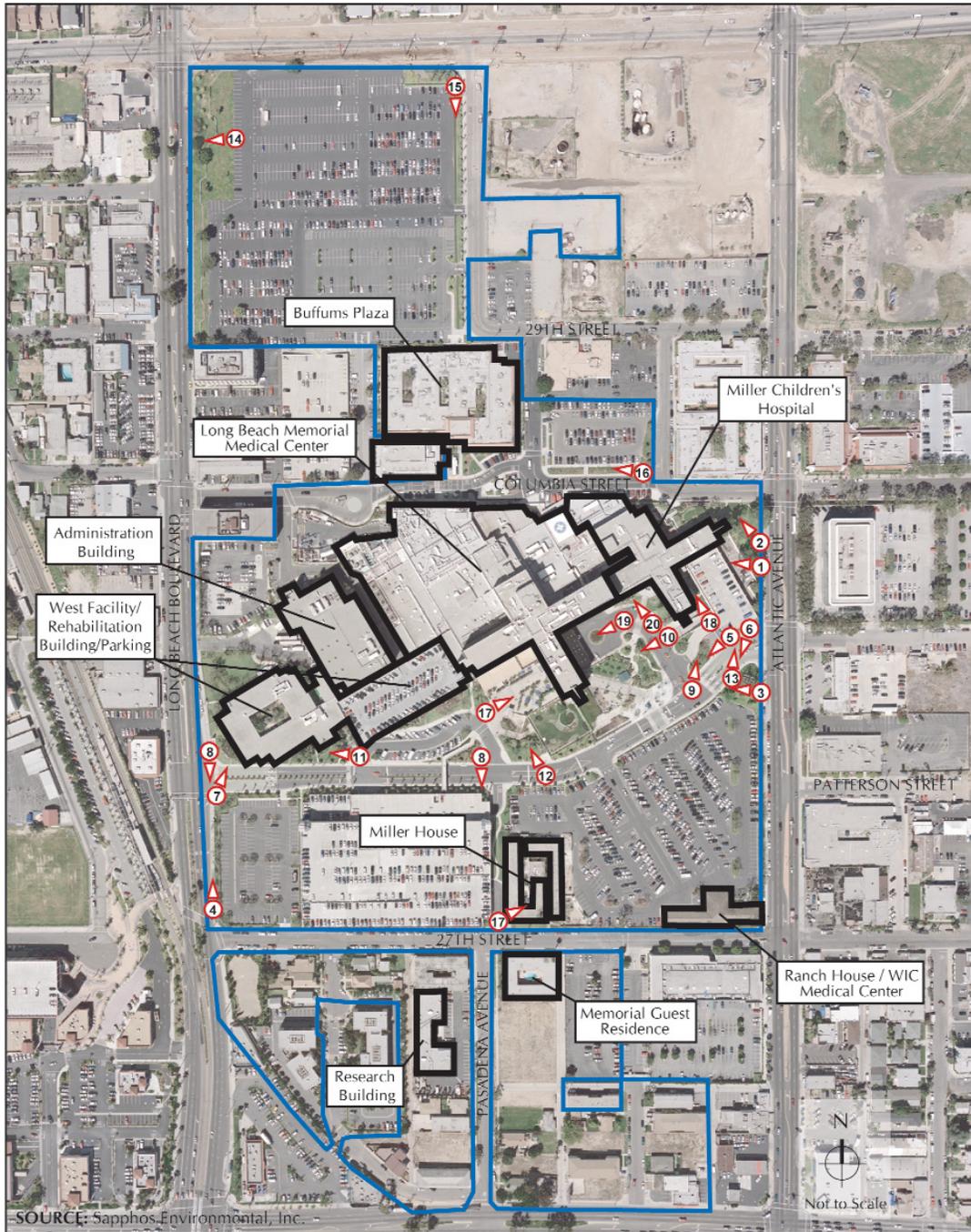


MEMORIAL GUEST RESIDENCE



RESEARCH BUILDING





SOURCE: Sapphos Environmental, Inc.

LEGEND

- LBMCC Boundary
- Buildings Controlled by LBMCC
- ◀10 Photo Points

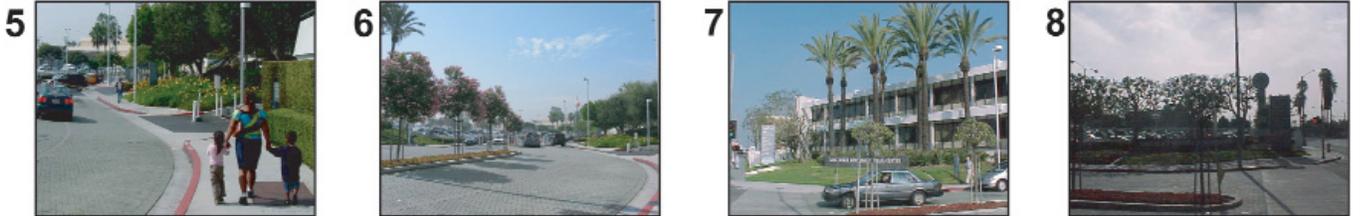
FIGURE 3.11 - Landscaping



EXTERIOR BOUNDARY OF THE CAMPUS



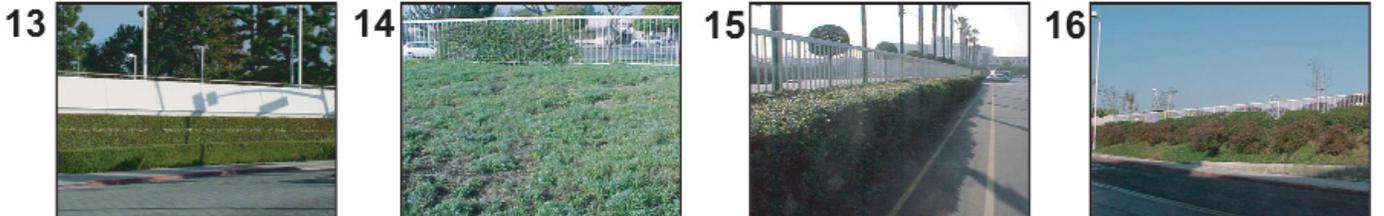
PRIMARY ENTRIES



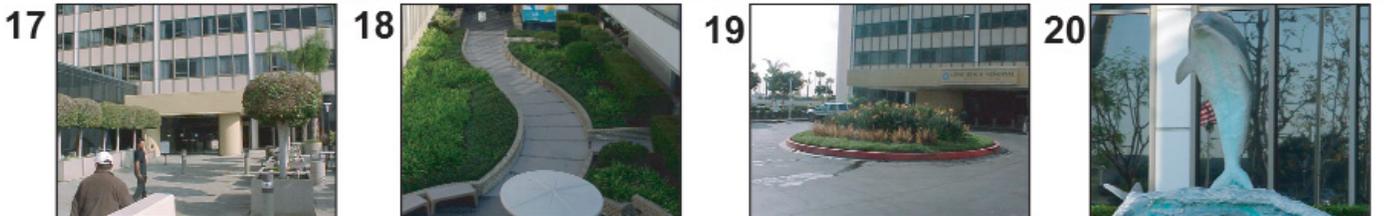
INTERIOR SIDEWALK EDGE TREATMENTS

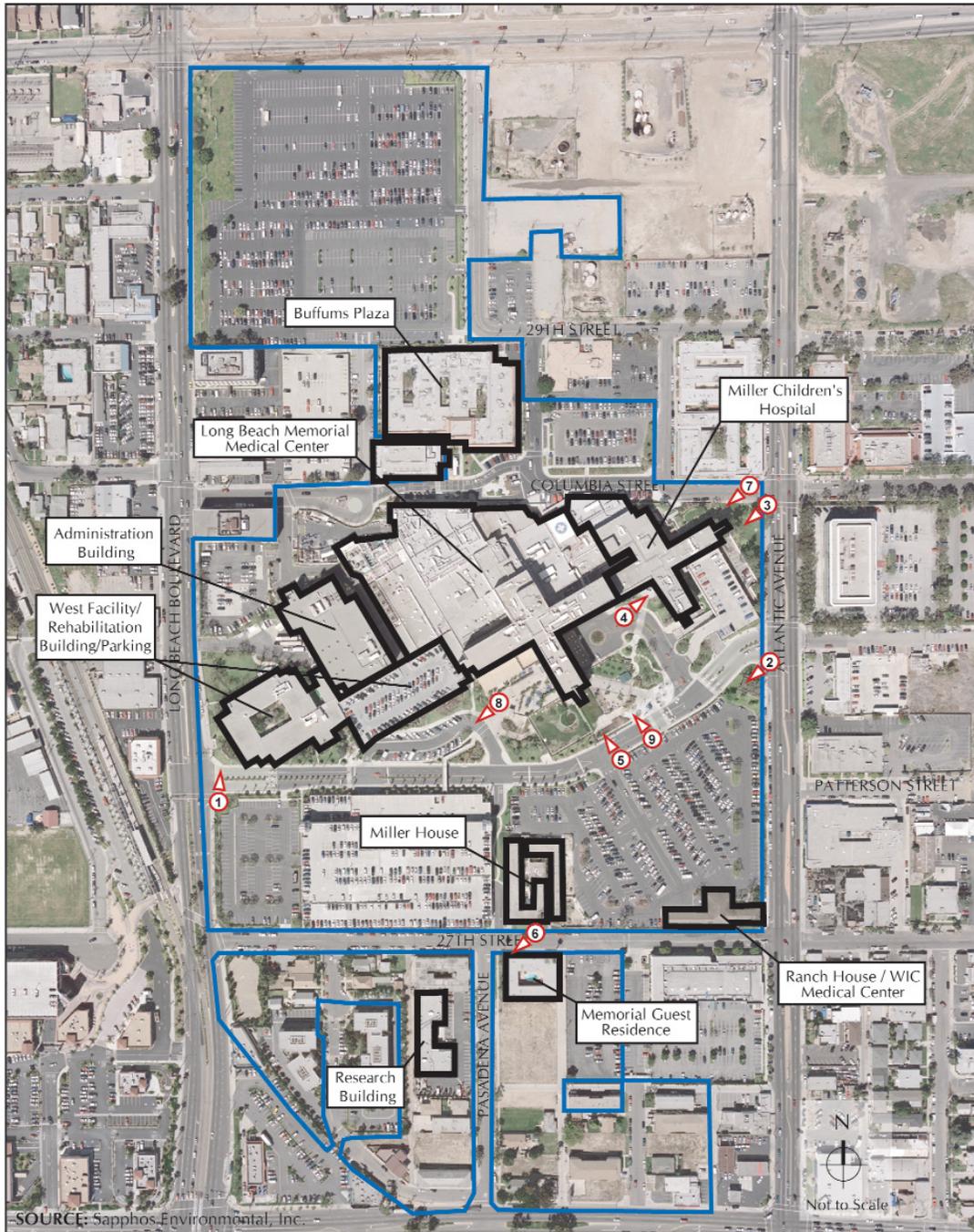


PARKING LOT EDGE TREATMENTS



BUILDING FACADES AND COURTYARDS





LEGEND

- LBMCC Boundary
- Buildings Controlled by LBMCC
- ⑩ Photo Points

FIGURE 3.12 - Signs and Monuments



GATEWAY SIGNS



BUILDING SIGNS



DIRECTIONAL SIGNS





Section 4

MASTER PLAN PROCESS AND ANALYSIS

PROCESS

The 2005 Long Beach Memorial Medical Center Master Plan of Land Uses (2005 Master Plan) was prepared through an interactive process involving the project management team for the Long Beach Memorial Medical Center (LBMMC) and the Miller Children's Hospital (MCH), the hospital leadership, and the strategic infrastructure study teams. The 2005 Master Plan builds on both the existing adopted 1999 Master Plan prepared by Bobrow/Thomas and Associates (BTA) and the Kaplan McLaughlin Diaz (KMD) strategic planning process for year 2030 initiated by the LBMMC in 2001 (Figure 4.01, *Conceptual Development Flowchart*).

The LBMMC and MCH retained the services of KMD to develop a 2030 visioning master plan to meet the requirements of the Office of Statewide Health Planning and Development (OSHPD). As part of the 2030 visioning process, LBMMC and MCH undertook extensive analysis of existing and anticipated trends for demographics and related health care requirements. This process included an evaluation of existing surrounding properties that would be potentially suitable for expanding the footprint of the existing LBMMC campus (Campus). The decision was made to work within the existing linear framework of the Campus. In addition, LBMMC and MCH evaluated long-term conceptual development options for the Campus and determined that better utilizing the existing 54-acre Campus would be the most cost-effective means of meeting existing and anticipated future demand for health care services.

As a result of the 2030 visioning process, LBMMC and MCH identified the need for reorganization of land uses within the Campus and additional capital improvements not anticipated by the adopted 1999 Master Plan. As a result, LBMMC and MCH determined to prepare this 2005 Master Plan to distill the relevant information resulting from the 2030 visioning process, which could guide reorganization of the Campus and funding, design, construction, and operation of capital improvements to be pursued to meet anticipated community needs for the year 2020 planning horizon. This 2005 Master Plan includes a recommended Master Plan of Land Uses developed to accommodate the capital improvements that could reasonably be expected to be funded and undertaken to meet the anticipated needs of the Long Beach community by year 2020. This 2005 Master Plan addresses a

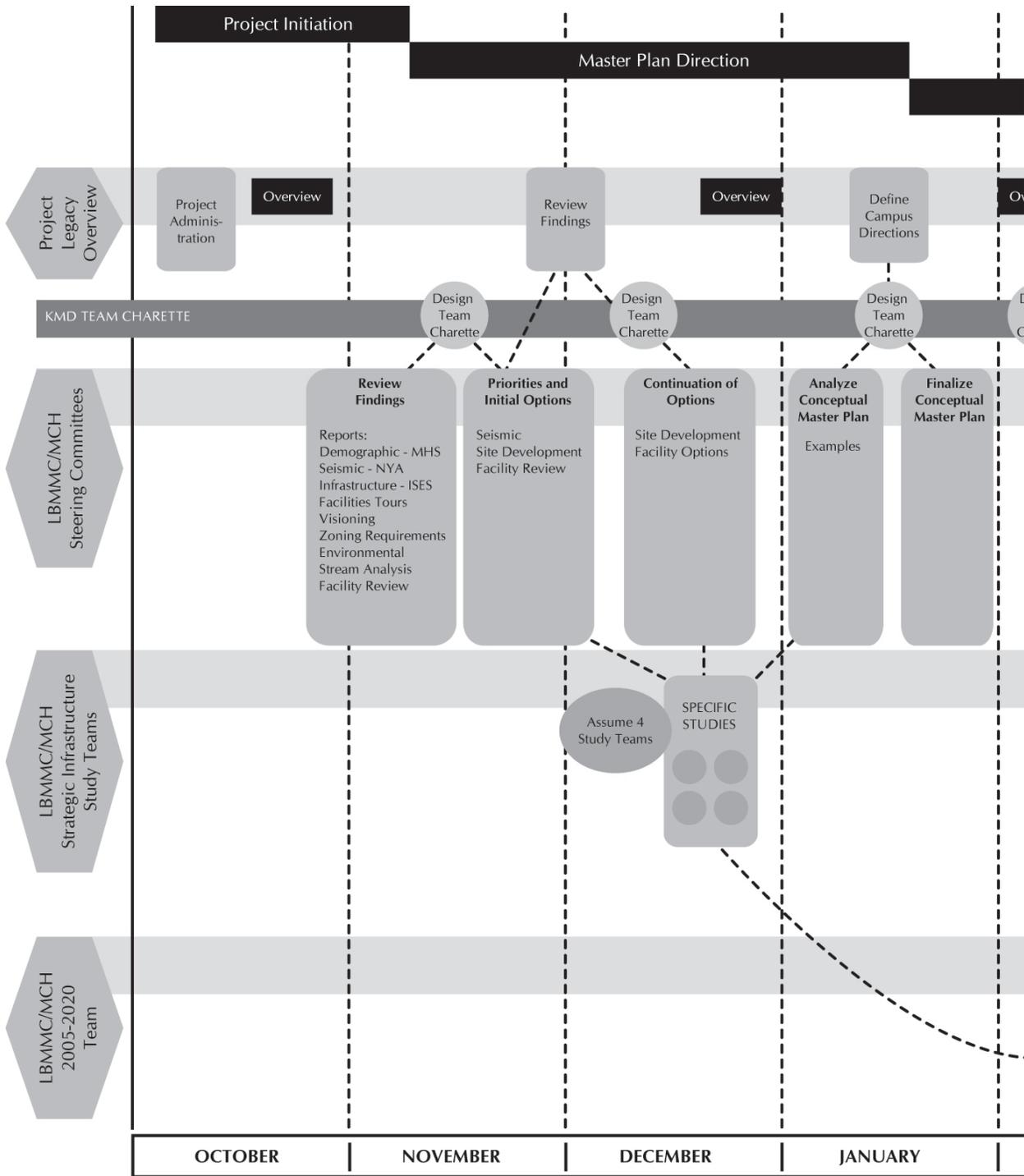
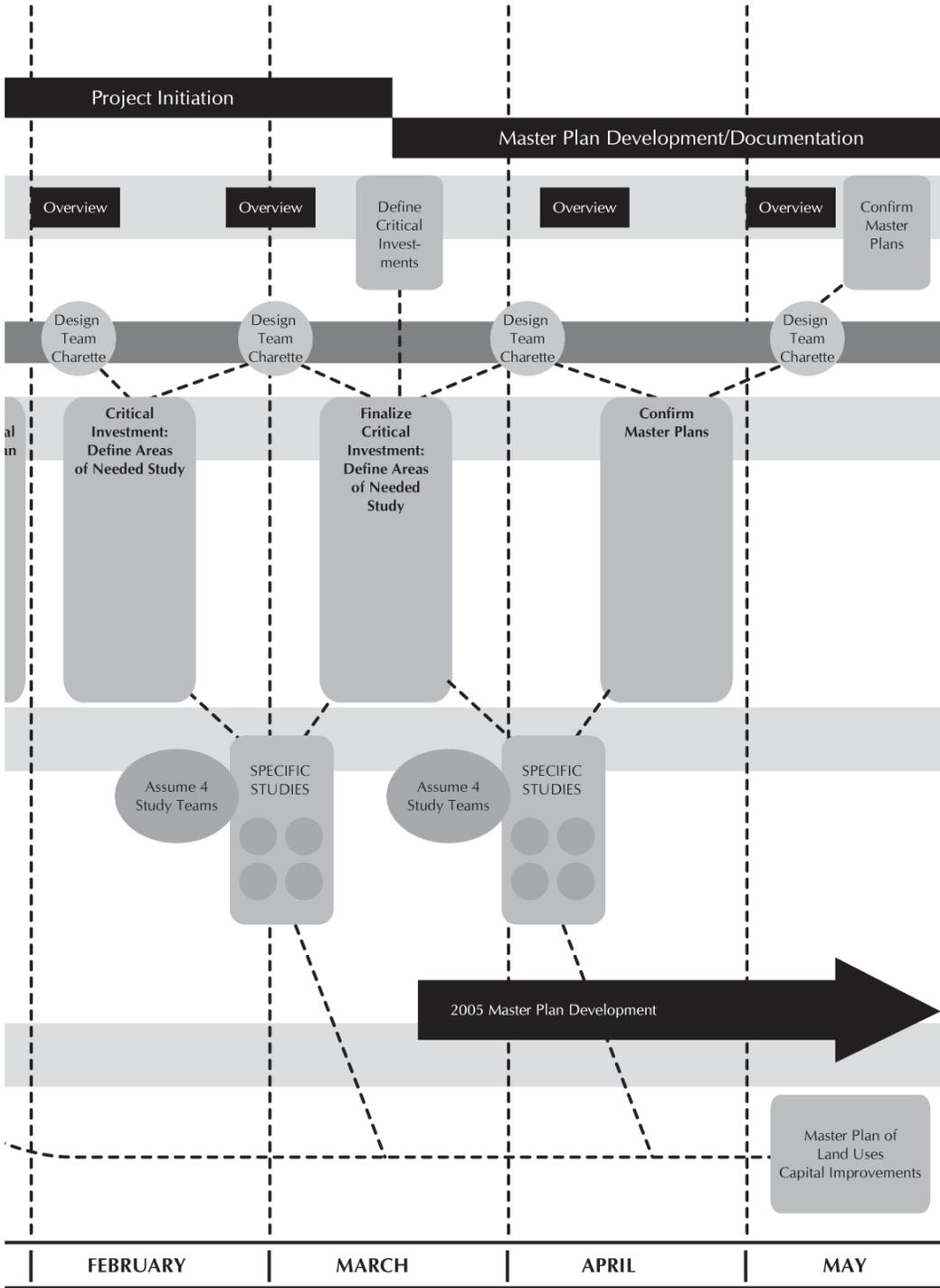


FIGURE 4.01 - Conceptual Development Flowchart





subset of 9 of the 13 goals, identified in the 1999 Master Plan, that remain to be accomplished.

The recommended 2005 Master Plan keeps all development to meet year 2020 needs on hospital-owned property. It sites the Todd Cancer Institute (TCI) at the northwest corner of the Campus, invigorating this corner of the Campus. MCH is expanded along Atlantic Avenue, allowing joint operation with the existing adjacent facilities. Adequate parking is contemplated in a series of new surface parking lots located within and immediately adjacent to the Campus, with possibly an on-site parking structure to accommodate the later phases of development.

TRENDS AFFECTING DEMAND FOR HEALTH CARE SERVICES

The LBMMC anticipates that the demand for outpatient cancer services provided by the current TCI, a programmatic element of LBMMC, will exceed population growth projections due to several key national and local demographic trends:

- Population of high-risk (over age 65) individuals for cancer in the Los Angeles–Long Beach primary metropolitan statistical area will increase from 12 percent to 16 percent between years 2000 and 2020.
- The overall five-year survival rate for cancer will increase from 63 percent in 1998 to 75 percent in 2010. Cancer patients will not undergo complete remission; instead, they will live longer and require ongoing medical care in the form of outpatient services.
- Between the years 2005 and 2010, 90 percent of all cancer care will be delivered in the outpatient setting.

The MCH experienced a 10-percent increase in the demand for pediatric inpatient and outpatient services between years 2001 and 2004. Several factors are expected to result in a

continued increase in demand at a rate of approximately 1 percent per year between 2005 and 2020.

- Anticipated annual population growth of the population under age 15
- Regional trend in closure of hospitals
- Need to absorb pediatric inpatient and outpatient services as a result of the closure of Martin Luther King trauma center

In addition, California Senate Bill 1953 (SB 1953) requires that all buildings used for inpatient care within general acute care hospitals in California meet designated standards within specified deadlines.

CONCEPTUAL DIAGRAMS

In discussing options for Master Plan development for the LBMMC and MCH, several conceptual models for the plan were developed to illustrate the advantages and disadvantages that each potential direction would present. In response to particular site limitations and constraints, two concepts were selected. Even though these were considered to be concepts best suited to the particular site, they were conceived as abstract diagrams that could be implemented under ideal conditions on a “green field” site in order to demonstrate the pure concept (Figure 4.02, *Conceptual Development Options*).

Open Square Development: Advantages to this development type are that it is focused on a central connecting point, minimizing travel distances and providing ease of expansion into an adjacent square. Disadvantages include difficulty in clearing the next square when space is unavailable.

Linear Development: Advantages to the linear development pattern are that it is easily appended and that it allows for a small condition under which disparate parts can be

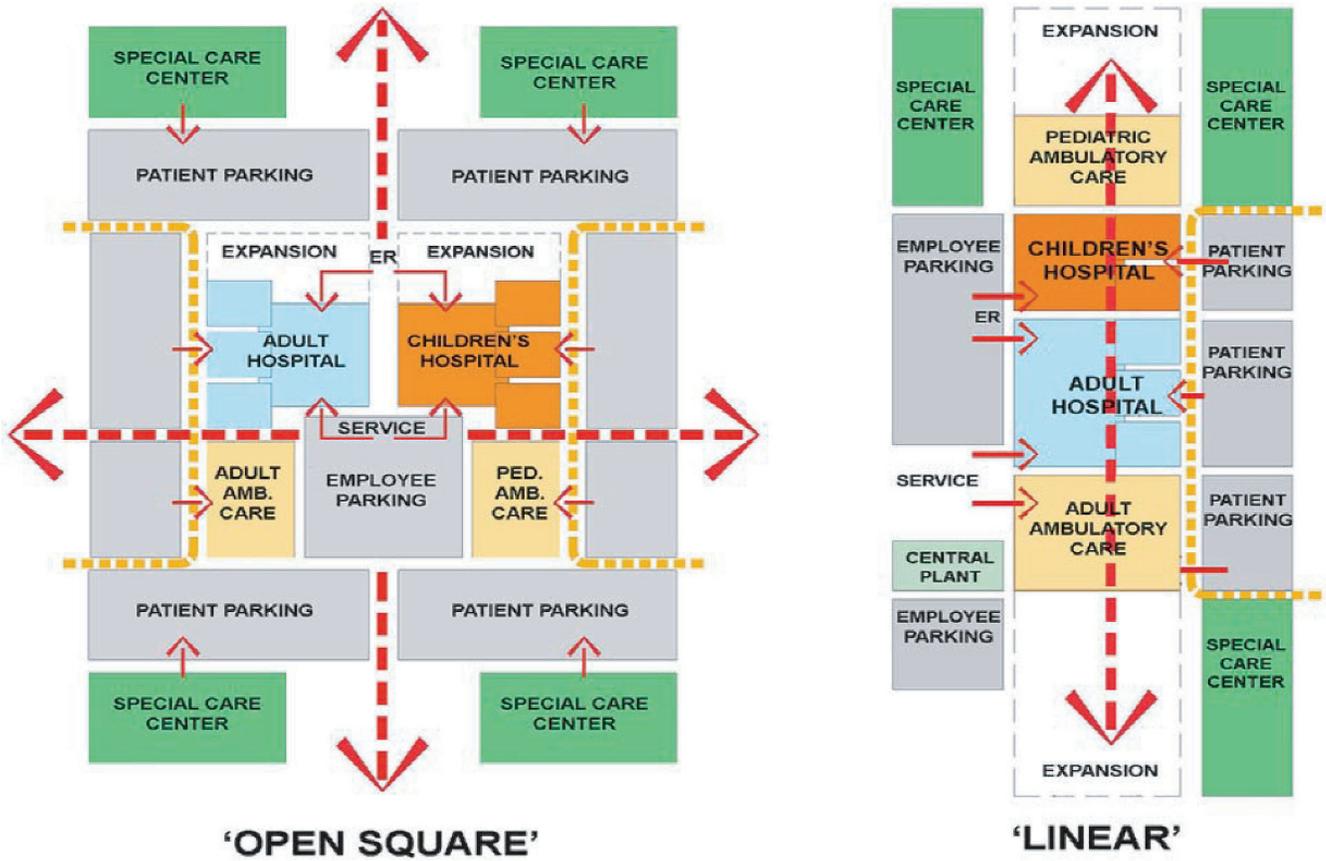


FIGURE 4.02 - Conceptual Development Options



connected. Disadvantages include increased travel distances and potential disruption due to building construction and reconstruction.

EFFECTIVE PROPERTY UTILIZATION

Several areas are available for development, located both to the north and south of the existing Campus. The potential uses on these sites range from hospital parking, medical office buildings, and hospital housing, to private residential developments.

The lot to the immediate south, currently used for hospital parking, is the site of a former landfill and will require remediation to accommodate development. These properties would be suitable for development of land uses that could be undertaken with the site conditions, such as parking and utility infrastructure, including development of a central plant building to support the MCH. The southernmost property is, in large part, owned by the hospital and available for development, but it is currently occupied by multiple structures. These buildings would need to be demolished to accommodate future development recommended by this 2005 Master Plan.

The sites to the immediate north are currently occupied by hospital-owned and non-hospital-owned buildings. These buildings and existing adjacent pedestrian and vehicular paths of travel need to be considered in establishing linkages to redevelopment of existing underutilized properties located south of Spring Street.

There are several non-hospital-owned properties located within the general footprint of hospital-owned properties within the City of Long Beach. In addition, there are several non-hospital-owned properties located between the existing Campus and other hospital-owned properties east of

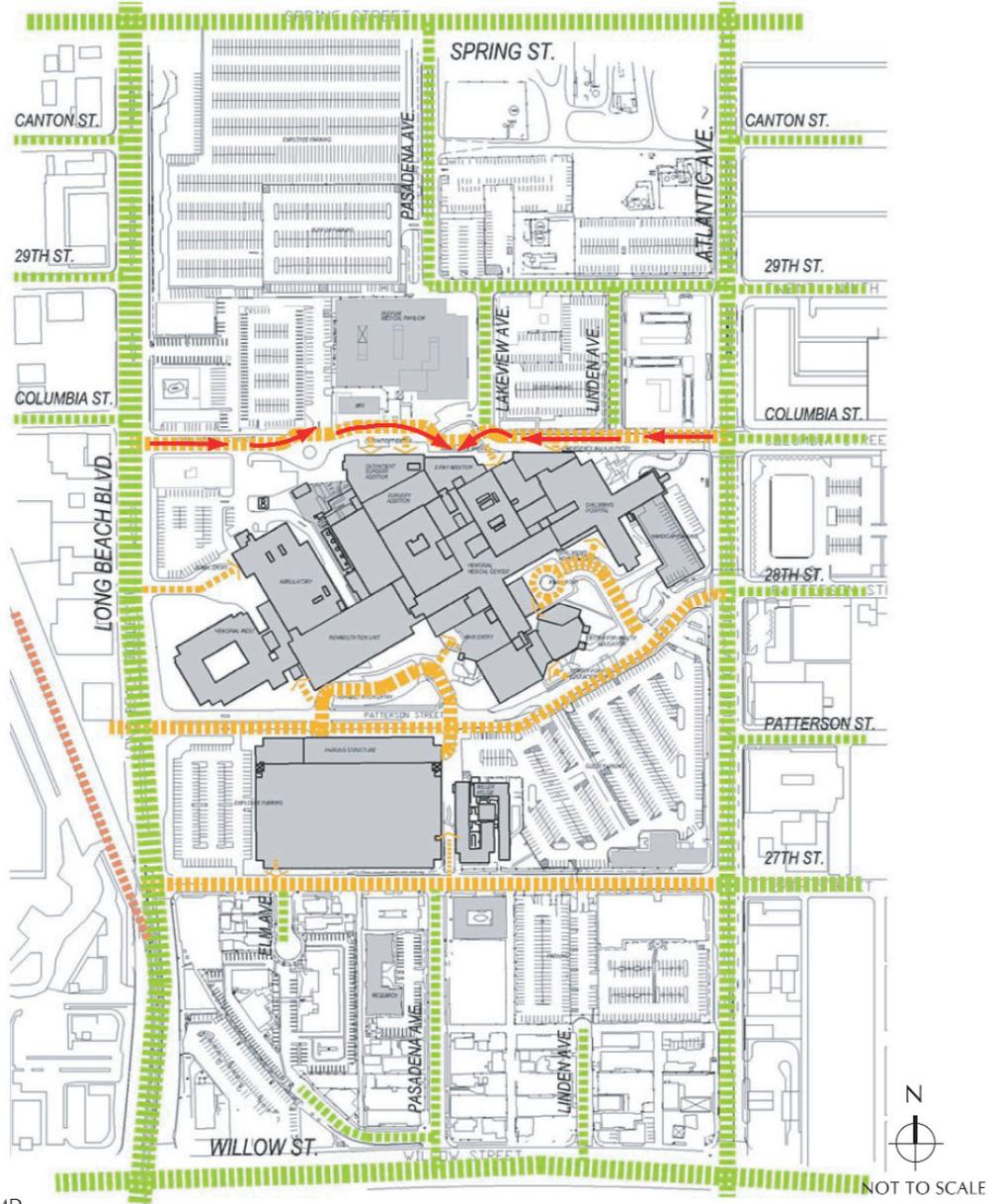
Atlantic Avenue in the City of Signal Hill. Although the LBMMC has determined that the development of existing underutilized hospital-owned properties is the most effective means of accommodating the year 2020 anticipated needs of the community for health care services, opportunities for amassing additional key properties will continue to be evaluated on a case-by-case basis.

ZONING

The expansion of the Planned Development (PD-29) District zoning that exists in the northwestern area of the Campus would provide the ideal location to construct a new building or buildings to accomplish multiple objectives of this Master Plan. The height limitations associated with the PD-29 District zoning allow for the development of an outpatient building of sufficient height to accommodate the existing gross floor area occupied by the programmatic functions of the TCI within the existing dispersed locations, as well as providing sufficient space to accommodate anticipated future demands.

CIRCULATION

The development of the Master Plan must be undertaken in a manner that recognizes the existing major circulation patterns and local circulation to and from existing hospital access points (Figure 4.03, *Circulation Patterns*). The 405 Freeway is several blocks to the north of the Campus and provides access to the two main arteries serving the LBMMC and MCH: Long Beach Boulevard and Atlantic Avenue. Columbia, 28th, and 27th Streets all provide secondary access to the Campus. Columbia Street is the main access to the emergency room and the surgery center, 28th Street is the main access to the main hospital and MCH entrances and drop offs, and 27th Street is the main entrance to the employee parking structure.



SOURCE: KMD

LEGEND

- General Traffic
- Campus Traffic

- Emergency Response Vehicles Route of Travel

FIGURE 4.03 - Circulation Patterns



All of these streets are major roads and should have sufficient capacity to accommodate new trips into and from the Campus.

Service vehicle access improvements should receive special attention to ensure that there will be no conflicts with patient traffic and pedestrians.

PARKING

Although there are 259 excess parking spaces available within the Campus, it is anticipated that an increase of more than 125 licensed beds or addition of more than 51,000 square feet or any comparable combination would require the development of additional parking.

Parking will be lost due to the demolition of the existing 86-car parking structure located immediately adjacent to the MCH, and the realignment of Patterson Street/Memorial Drive to the south would create an area of sufficient size to accommodate the construction of new structures for the projected need for inpatient and outpatient pediatric services. Additional parking will be lost to the footprint of the TCI.

There is insufficient space to accommodate the additional need for parking solely through the development of surface parking. However, landowners for adjacent properties to the northeast of the Campus have identified their intention to develop these properties as surface parking areas on an interim basis. The ability to enter into a five-year lease for surface parking with adjacent property owners would allow the LBMMC and MCH to prioritize funding for capital improvements to directly address the immediate need for expanded capacity for inpatient and outpatient services. City approvals to construct and operate Campus buildings will be contingent on LBMMC and MCH's ability to demonstrate the availability of long-term parking. It is anticipated that development of a parking structure within the Campus or a nearby property would be required to support the full build-out of the Campus anticipated by this Master Plan.

RECOMMENDATIONS

As part of the 1999 master planning process, the LBMMC management facilitated workshops that included the LBMMC administration, medical staff, users, and board members. The focus of these workshops was to develop lists of pressing LBMMC facility issues and prioritize them into a list of planning goals. Subsequent to that effort, the LBMMC retained KMD in 2003 to develop facilities strategies to meet SB 1953 mandates, as well as to modernize the existing LBMMC and MCH facilities to meet current and projected needs. The following recommendations are derived from these previous planning efforts and the site and building analysis.

Of the 13 issues identified in the 1999 Master Plan, 9 are relevant to the current master planning effort.

1. **Customer Service/Patient Flow/Access**
Make LBMMC more patient focused and patient friendly. The intent is to personalize service and make the entire hospital experience convenient to patients and their families.
2. **Infrastructure**
Enhance hospital operations, efficiency, and employee satisfaction and meet code requirements, including those mandated by SB 1953. Accomplish hospital improvement in a cost-effective manner.
3. **Miller Children's Hospital**
Enhance the operations, flow, and identity of the MCH, including licensing issues, inpatient units, impacted neonatal intensive care unit (NICU) facilities, inpatient overflow, and emergency flow.
4. **Outpatient**
Develop outpatient services, including continued reorientation of services to outpatient delivery. Consolidate outpatient functions into easily accessed locations, including outpatient surgery, diagnostic and testing areas, and outpatient clinics.



5. Community Image

Redefine and enhance the LBMMC's image in the local community. Consider the impact of changing community demographics and the LBMMC's role as a provider of community health education.

6. Amenities

Enhance the LBMMC's services and patient-focus through the provision and/or development of amenities, including accommodations for family members, wellness/fitness facilities, and a children's playground. Consider a hotel to support visiting family members.

7. Services

Provide support services that will enhance hospital operations and efficiency. Consider the location of the lab, transcription services, the location and flow of sterile processing, and the provision of 23-hour beds for observation and reduced patient admissions.

8. Master Plan

Provide the LBMMC with a clear plan that will allow for future growth and expansion, including the identification of opportunities to provide for more efficient and patient friendly use of space.

9. Tertiary Services

Identify and develop tertiary services to be provided at the LBMMC, in conjunction with its role in the community. Further define the role of oncology services, enhance surgical operating rooms, and create interventional service recovery areas.

DESIGN GUIDELINES

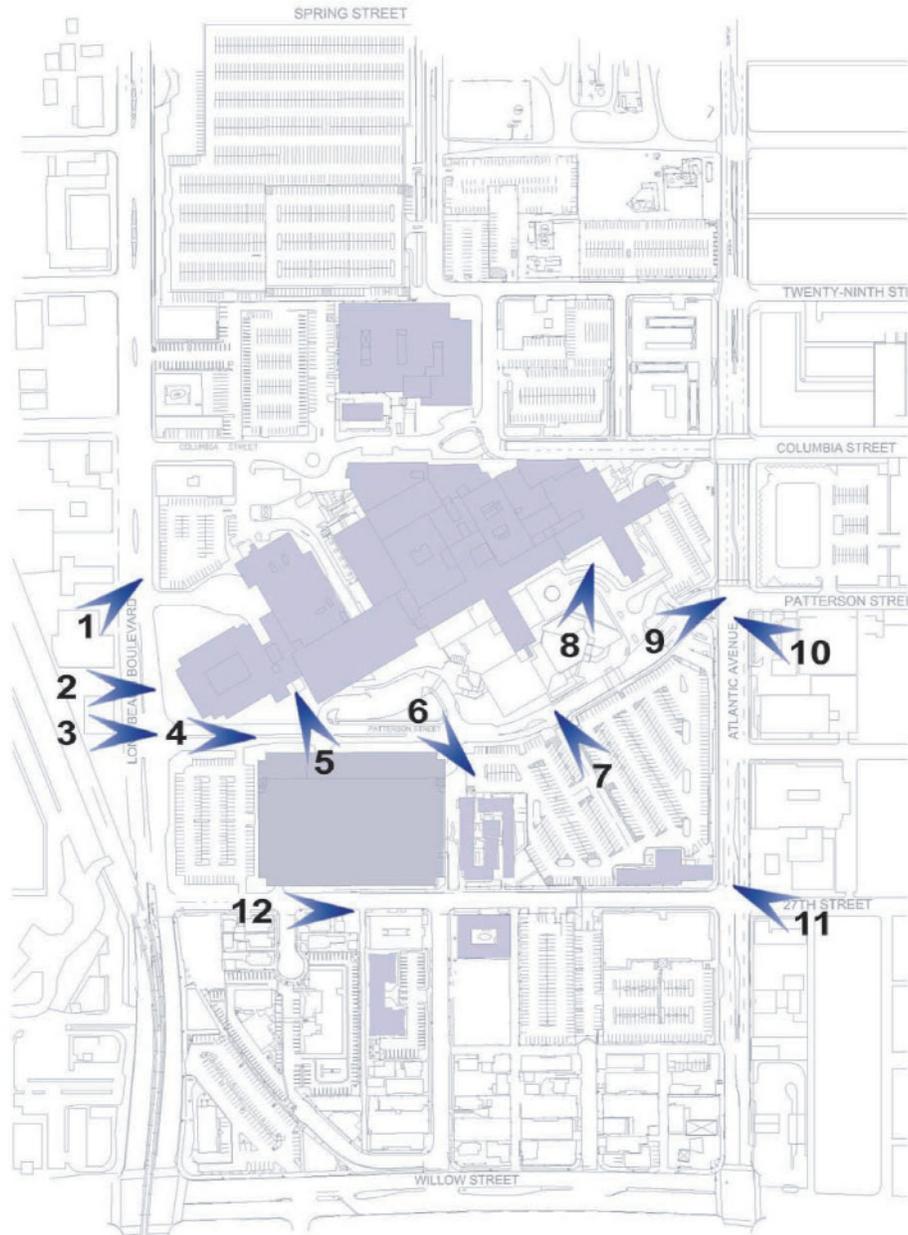
As part of the development of this Master Plan, photographic documentation of the existing facilities and public areas of the Campus was undertaken (Figure 4.04, *Site Photographs*). The LBMMC and MCH used the existing successful landscape treatments, lighting plans, and sign program as the basis for developing the Campus-wide design guidelines.



LEGEND

- 13.** Long Beach Boulevard looking northeast
- 14.** Administration building west elevation
- 15.** Patterson Street entrance from Long Beach Boulevard
- 16.** Patterson Street looking east
- 17.** Administration building entry
- 18.** Miller House north elevation
- 19.** LBMCC from south parking lot
- 20.** Entry to Miller Children's Hospital
- 21.** Atlantic Avenue at Patterson Street
- 22.** Memorial Drive entrance off Atlantic Avenue
- 23.** Looking southwest across southeast corner of the Campus
- 24.** Looking east along 27th Street

FIGURE 4.04 - Site Photographs

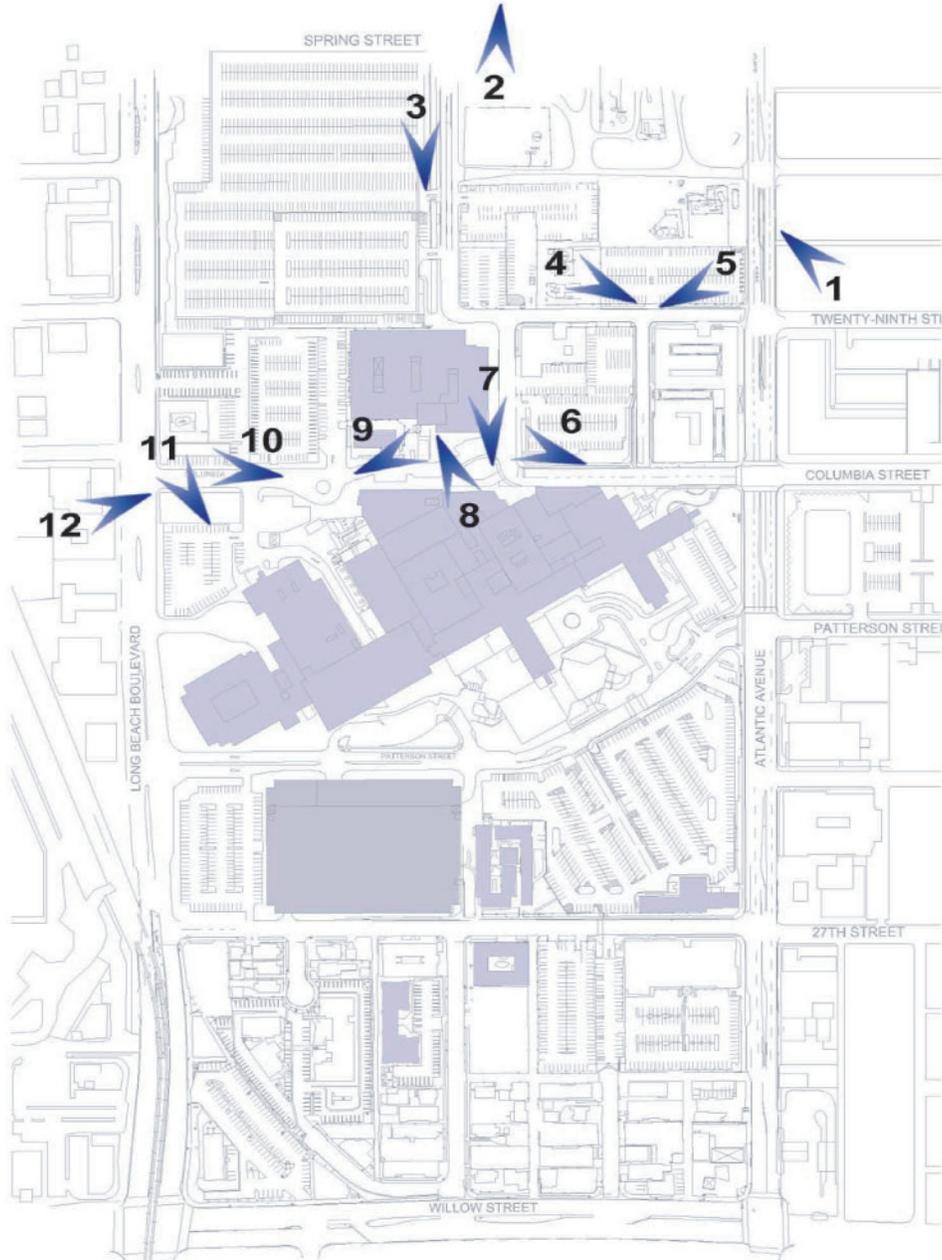




LEGEND

- 1.** Atlantic Avenue looking northwest
- 2.** View north across Spring Street
- 3.** Campus entry from Spring Street
- 4.** 29th Street looking southeast
- 5.** 29th Street looking eastwest
- 6.** Columbia Street looking east
- 7.** Emergency access on Columbia Street
- 8.** CT and MRI Center on Columbia Street
- 9.** Columbia Street looking west
- 10.** Columbia Street looking east
- 11.** Administration Building northwest corner
- 12.** Medical office building on (in the background) Long Beach Boulevard

FIGURE 4.04 - Site Photographs





Section 5

2005 MASTER PLAN

The 2005 Long Beach Memorial Medical Center Master Plan of Land Uses (2005 Master Plan) provides for refinements to the existing pattern of land uses that accommodate a new building to house the Todd Cancer Institute (TCI), a component of Long Beach Memorial Medical Center (LBMMC), and the comprehensive expansion of the Miller Children's Hospital (MCH) through construction of new buildings to house inpatient and outpatient services. These improvements would address the existing and anticipated demands of the Long Beach community for health care services through the year 2020. The Southern California Association of Governments (SCAG) and the Housing element of the City of Long Beach General Plan forecast a 6- to 9-percent growth rate to the year 2020, adding approximately 65,000 people to the City of Long Beach. The 2005 Master Plan identifies a series of capital improvements to provide expanded capacity for inpatient and outpatient services in conjunction with ambient population growth, in a manner that conforms to the requirements of California Senate Bill (SB) 1953 and the state's health care licensing requirements. Although compliance with the City of Long Beach Zoning Code would normally require the Long-Range Development Plan for the institution to address a 20-year planning horizon, this 2005 Master Plan was undertaken consistent with the census data provided by SCAG and the General Plan, which provide information through the year 2020 planning horizon. The 2005 Master Plan incorporates the work that was undertaken between years 2000 and 2005, pursuant to the adopted 1999 Master Plan.

GENERAL PLAN

The 2005 Master Plan is consistent with the land used designation (LUD) for the 54-acre LBMMC campus (Campus) as LUD No. 7 Mixed-Use District, as specified in the City of Long Beach General Plan (Figure 3.03, *General Plan Land Use Designation*).

ZONING

The proposed land uses are consistent with the existing Institutional (I) zoning that applies to the portion of the Campus bounded by 29th Street on the north, Atlantic Avenue on the east, 27th Street on the south, and Long Beach Boulevard on the west (Figure 3.04, *2004 Zoning Districts*). The proposed expansion of the MCH and a new parking structure are allowable uses within the I zoning. LBMMC has requested that the City of Long Beach extend the eastern edge of the Planned Development (PD-29) zoning, between Spring Street (on the north) and 29th Street (on the south), from its current location approximately 100 feet east of Long Beach Boulevard to the western edge of Pasadena Avenue in order to accommodate the construction of a new building to house the TCI (Figure 5.01, *Proposed Zoning Districts*). That land is currently zoned as a Regional

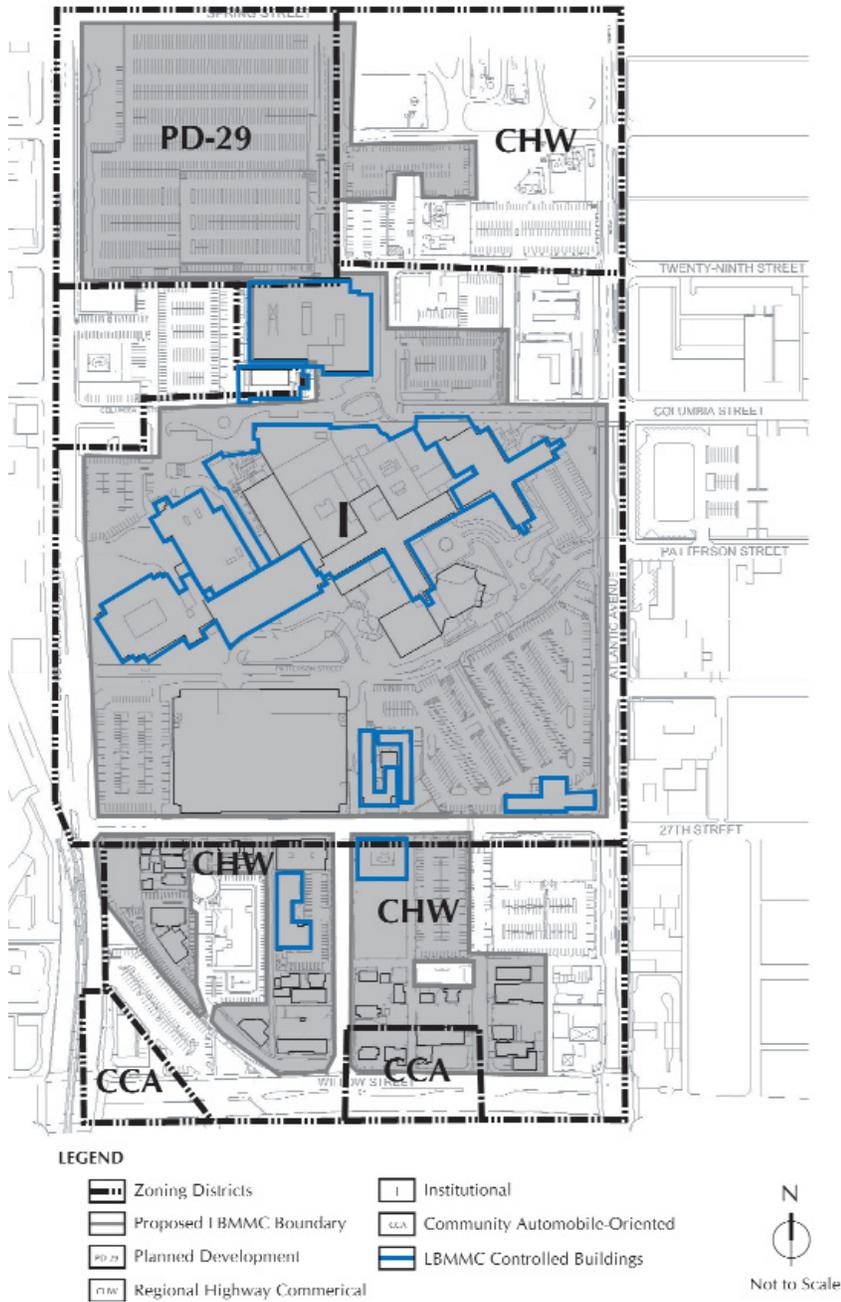


FIGURE 5.01 - Proposed Zoning Districts



Highway (CHW) District. The proposed inpatient, outpatient, and mixed-use development within the Campus would require the development of additional surface parking lots. LBMMC proposes to demolish mixed-use properties, including residential units and vacant lots, to create additional surface parking lots south of 27th Street. This use would be consistent with the existing zoning between 27th Street (to the north) and Willow Street (to the south), as a CHW District and as a Community Automobile-Oriented (CCA) District (Figure 3.04).

RECOMMENDATIONS

This 2005 Master Plan addresses the priority improvements identified by LBMMC and MCH to achieve the goals and objectives identified to support the continued mission of improving the health and well-being of individuals, families, and the community through innovation and the pursuit of excellence, and to making LBMMC into Southern California’s preferred, operationally excellent, and fiscally sound provider of comprehensive, high-quality health services. The total estimated cost of capital improvements described in this 2005 Master Plan is in excess of \$276 million (Table 5.01, *Estimated Capital Improvement Costs*).

EFFECTIVE PROPERTY UTILIZATION

The site evaluation identified existing underutilized property southeast of the intersection of Spring Street and Long Beach Boulevard, east of Long Beach Boulevard and south of the MCH, in the western portion of Parking Lot K, and in the mixed-use properties located south of 27th Street (Figure 5.02, *Effective Property Utilization*). The area located south of the MCH was identified as the most suitable to accommodate the need for additional pediatric inpatient and outpatient facilities. Specifically, the MCH pediatric inpatient tower Phases I and II, the MCH pediatric outpatient building, and the MCH link building would be best placed immediately south of the existing MCH because the pediatric inpatient tower needs to be placed immediately adjacent to and be connected to the existing MCH to maintain operational efficiencies related to patient care, staffing, and equipment (Figure 5.03, *Miller Children’s Hospital Expansion*).

The parking lot on the northwest corner of the Campus provides the most suitable location for the development of a dedicated structure for consolidating the TCI programming functions, currently located in 24 diverse locations (Figure 5.02). This location would allow the

Project Element	Total Cost in Million
Todd Cancer Institute, Phase I	\$34.30
Todd Cancer Institute, Phase II	\$17.30
Miller Children’s Hospital—Pediatric Inpatient Tower, Phase I	\$92.00
Miller Children’s Hospital—Pediatric Inpatient Tower, Phase II	\$61.30
Utility Trench	\$1.00
Central Plant Building	\$5.00
Miller Children’s Hospital—Pediatric Outpatient Building	\$19.00
Miller Children’s Hospital—Link Building	\$14.20
Roadway Realignment	\$3.00
Parking Program	
• On-site parking (N, P, Q, R, S, and T) 515 spaces at \$10,000 per car space	\$5.15
• 1,700 space structure at \$14,000 per car space	\$23.80
TOTAL COST	\$276.05

NOTE:
All costs are at 2004 dollar value.
Above costs include equipment.

TABLE 5.01 - Estimated Capital Improvement Costs

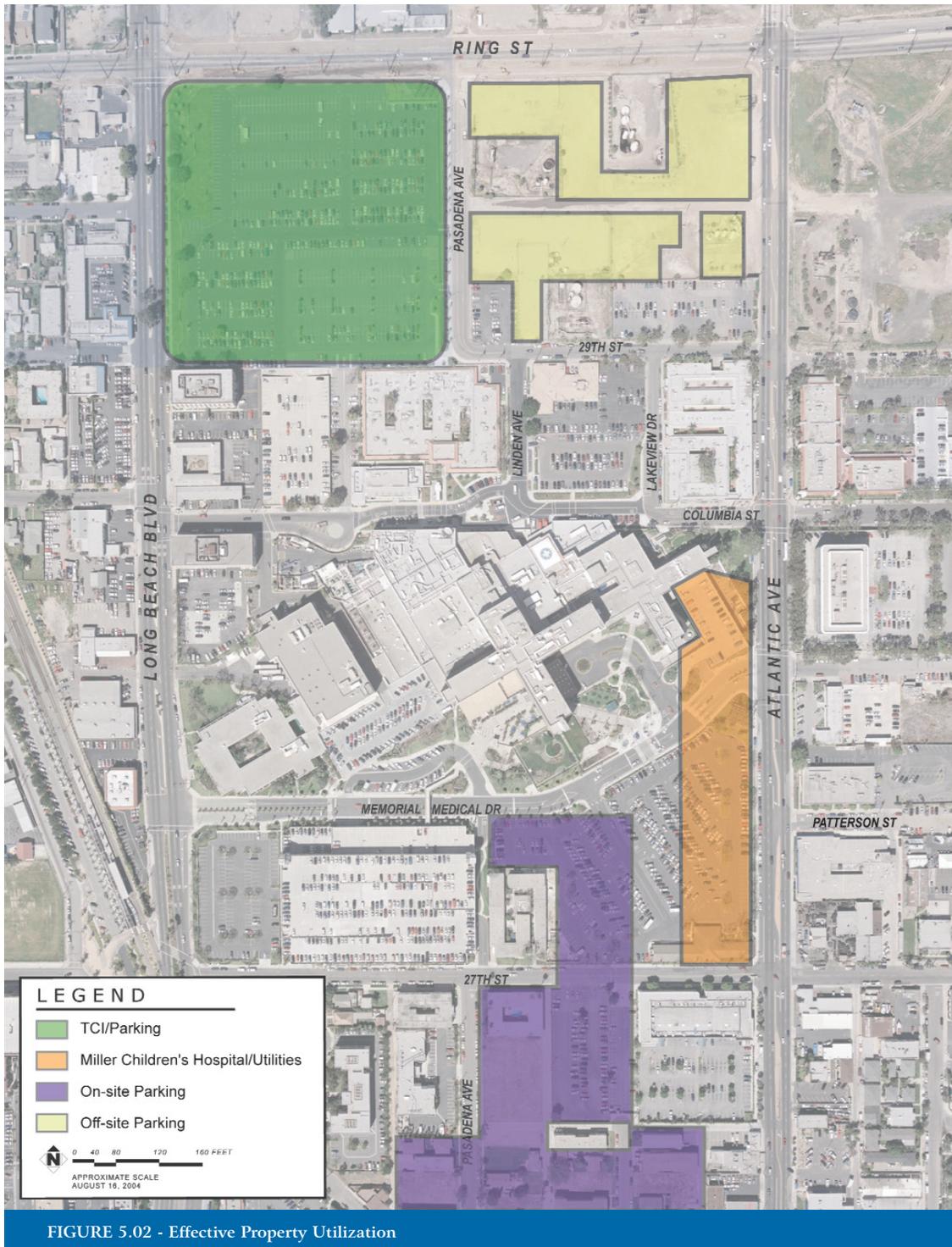


FIGURE 5.02 - Effective Property Utilization



FIGURE 5.03 - Miller Children's Hospital Expansion

building to serve as a gateway to the Campus. There is sufficient space at this location to promote sufficient on-site parking and allow for future (Phase II) expansion of the facility to accommodate projected population growth and health care demographic trends.

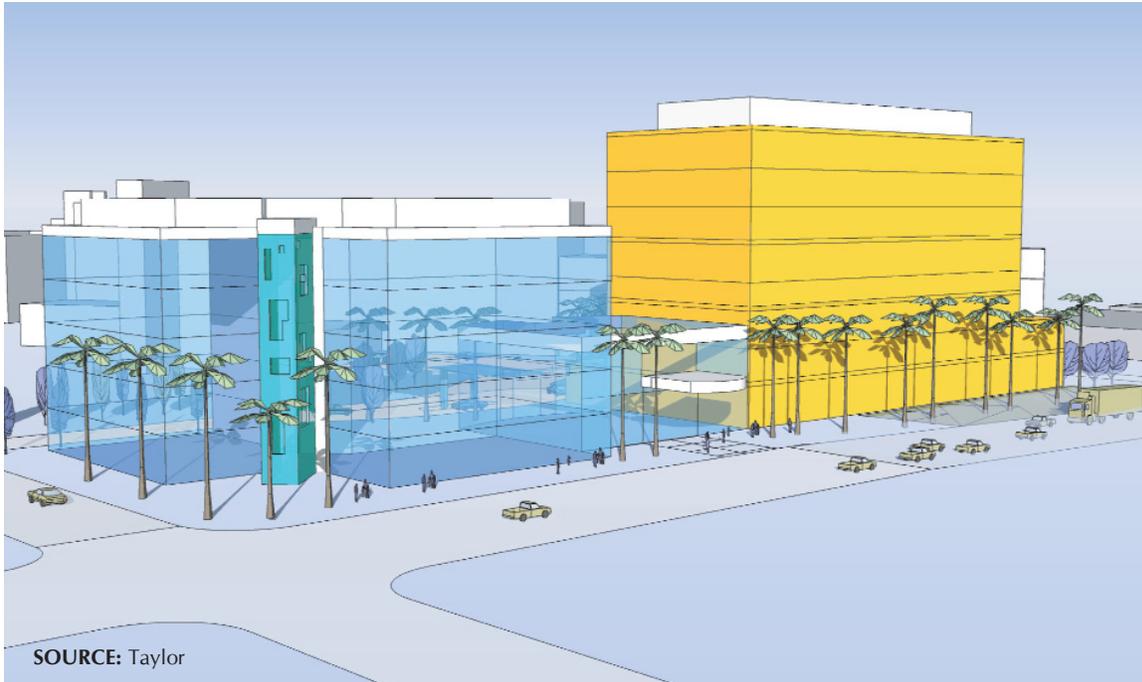
PRIORITIES

Miller Children's Hospital

MCH proposes to expand its services through the development of a new pediatric inpatient tower, a pediatric outpatient building, and a third building that would link these first two buildings and be suitable for the provision of appurtenant retail services for medical staff, employees, outpatients, and visitors (Figure 5.04A, *Miller Children's Hospital Expansion Phase II, View of South and East Conceptual Massing Study*, and Figure 5.04B, *Miller Children's Hospital Expansion Phase II, View of South and West Conceptual Massing*

Study). The need to construct a new building to support pediatric inpatient services (beds and operating rooms) emerged as a priority that must be achieved by December 2007 to conform to State of California licensing requirements for MCH. Pursuant to the SB 1953 regulations of the Office of Statewide Health and Planning Development (OSHPD), a new central plant building would be required to support the pediatric inpatient services facility.

MCH recognized that the quality of pediatric health care services could ultimately be improved through the development of a dedicated facility to house pediatric outpatient services in close proximity to the proposed inpatient services. Given the large medical professional staff, several thousand employees, and nearly a thousand inpatient beds that will ultimately be present on the Campus, MCH identified the need for space to



SOURCE: Taylor

FIGURE 5.04A - Miller Children's Hospital Expansion Phase II, View of South and East Conceptual Massing Study



SOURCE: Taylor

FIGURE 5.04B - Miller Children's Hospital Expansion Phase II, View of South and West Conceptual Massing Study



accommodate appurtenant mixed uses such as food services and a gift shop. The ability to accommodate these facilities in close proximity to the existing and proposed inpatient services requires realignment of the easterly portion of Memorial Drive to the south to align with Patterson Street. The parking required to support these improvements would exceed the existing excess 259 parking spaces within the Campus and would require additional parking to be secured or developed.

Todd Cancer Institute

The ability to consolidate the TCI treatment modalities from the existing 24 locations on and off the Campus into a single dedicated facility emerged as a second immediate priority. Demographic data for cancer treatment clearly demonstrate that there will be an increasing segment of the population that will require treatment for cancer and that a greater number of those treated will be likely to survive; thus, there will be a continually expanding population of patients requiring outpatient services including long-term treatment and monitoring. Therefore, the building constructed for TCI services would need to be placed at a location that could accommodate expansion within the year 2020 planning horizon. It is anticipated that the spaces vacated by TCI services within LBMHC would be backfilled with other inpatient and appurtenant services; thus, the TCI would require additional parking to be secured or developed.

MASTER PLAN OF LAND USES

This 2005 Master Plan provides a conceptual framework for the reorganization of the six existing land uses: (1) inpatient medical facilities, (2) outpatient medical facilities, (3) mixed-use facilities, (4) utilities, (5) circulation, and (6) parking (Figure 5.05, *Master Plan of Land Uses*). Within this conceptual framework, six capital improvements could be constructed between years 2005 and 2013.

MCH Pediatric Inpatient Tower

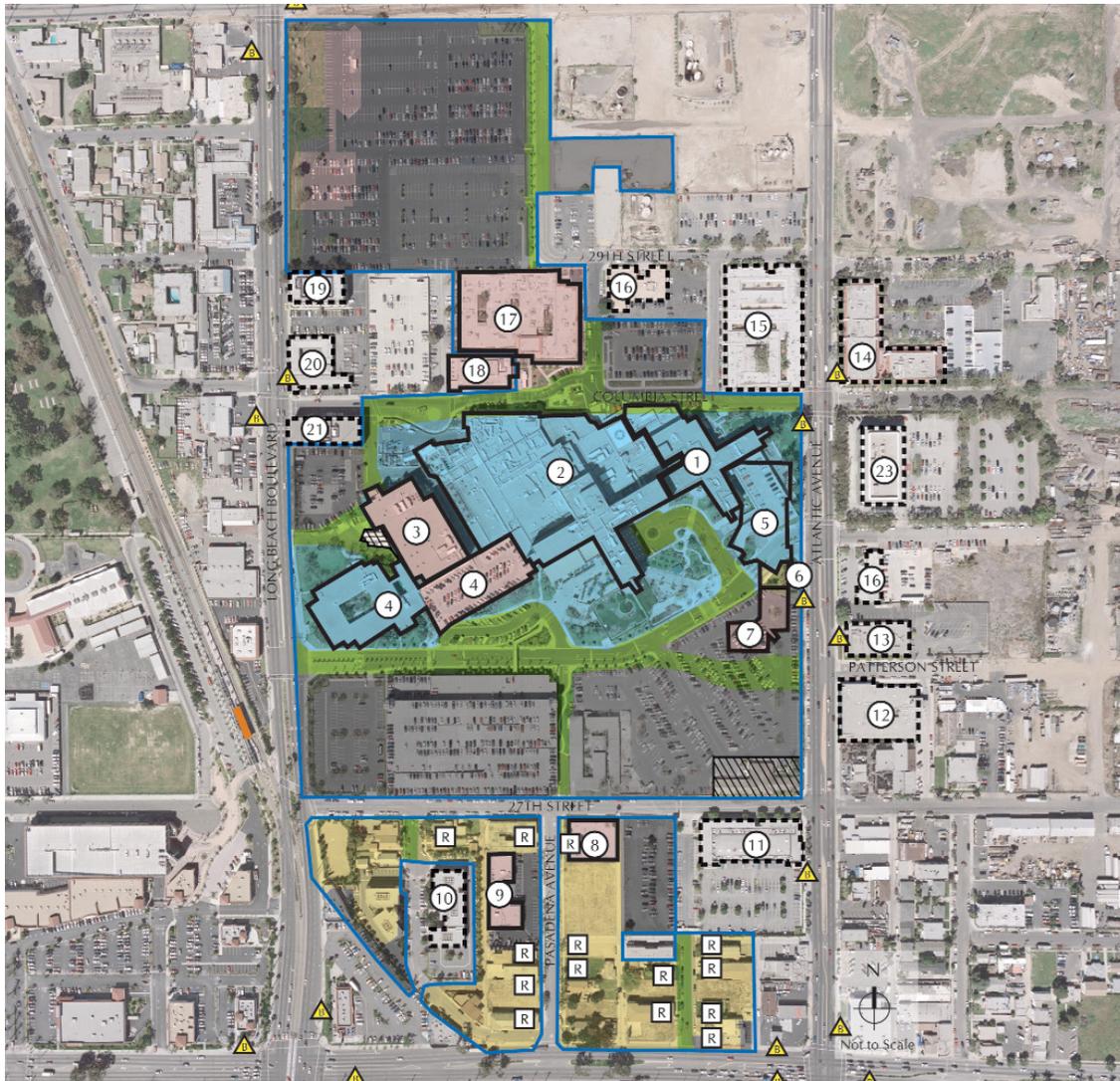
Operation of the MCH pediatric inpatient tower by January 2008 would allow the hospital to meet the state-mandated licensing requirements for operating rooms and pediatric beds. The pediatric inpatient tower expansion of MCH would be located immediately adjacent to and connected to the existing MCH facility, southwest of the intersection of Atlantic Avenue and Columbia Street (Figures 5.02 and

5.05). The existing land use at this location is an 86-stall, multilevel parking structure. The parking structure would be demolished to accommodate the additional area dedicated to the proposed pediatric inpatient tower. Access to the pediatric inpatient tower would be provided on multiple floors of the existing MCH facility and by a new pedestrian entrance on the west facade of the building. At build-out, the MCH would provide 205,250 gross square feet.

Phase I of the MCH pediatric inpatient tower would provide approximately 129,220 square feet of new space for pediatric surgical services, imaging, lobby, newborn intensive care services, and general pediatric inpatient care services. Phase I would consist of a four-story building with one story below grade and three stories above grade (Figure 5.06A, *Miller Children's Hospital Pediatric Inpatient Building North and East Elevations*, and Figure 5.06B, *Miller Children's Hospital Pediatric Inpatient Building South and West Elevations*). The highest point of the Phase I structure would be 84 feet above grade. The Phase I portion of the building would require 144 parking spaces. Phase I of the new pediatric inpatient tower is proposed to initiate construction in October 2005, with completion in January 2008. Phase II would provide approximately 86,030 square feet in a vertical expansion of the Phase I structure. The highest point of the combined Phase I and Phase II structure would be approximately 148 feet above grade. The Phase II portion of the building would require 192 parking spaces. Construction of Phase II is contingent on the growth of inpatient pediatric cancer services, the needs of the Long Beach community, and philanthropy. The likely dates to initiate and complete construction of Phase II of the MCH pediatric inpatient tower are January 2012 and June 2013, respectively.

The MCH pediatric inpatient tower would be served by the existing service area and loading dock for the LBMHC and MCH.

The MCH pediatric inpatient building design would conform to the design specifications for the Campus provided in this 2005 Master Plan. The building would be identified by three illuminated building signs reading "Miller Children's Hospital" and by ground-level monument signs. All signs would conform to the design guidelines for signs



LEGEND

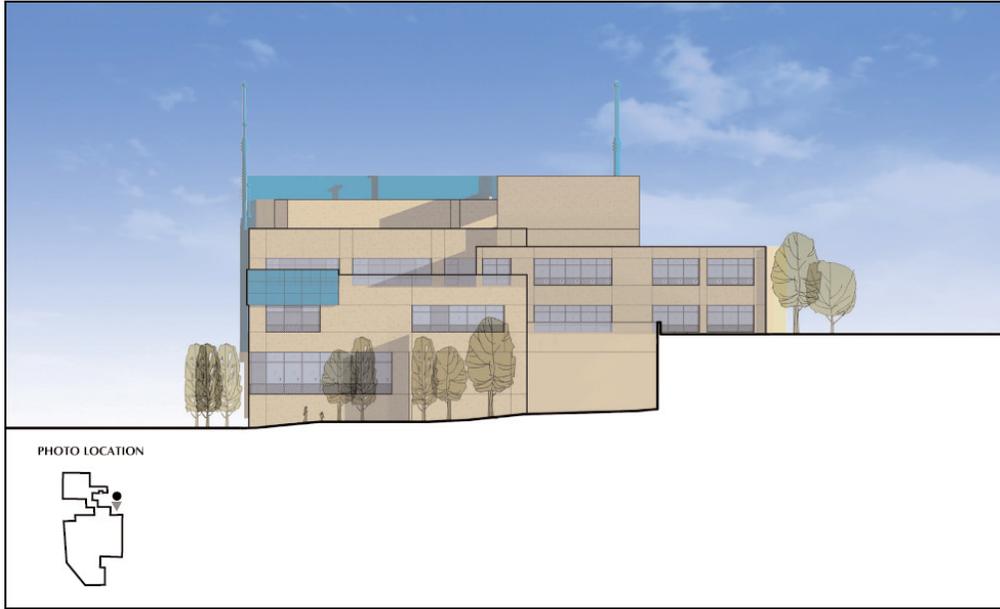
- Inpatient
- Outpatient
- Mixed Use
- Utilities
- Circulation
- Parking
- LBMCC Boundary
- Buildings Controlled by LBMCC

- Buildings Controlled by Others
- Blue Line (Willow Station)
- Bus Stop (Long Beach Transit)
- 1 Miller Children's Hospital
- 2 Long Beach Memorial Medical Center
- 3 Administration Building
- 4 West Facility/Rehabilitation Building
- 5 Pediatric Inpatient Tower

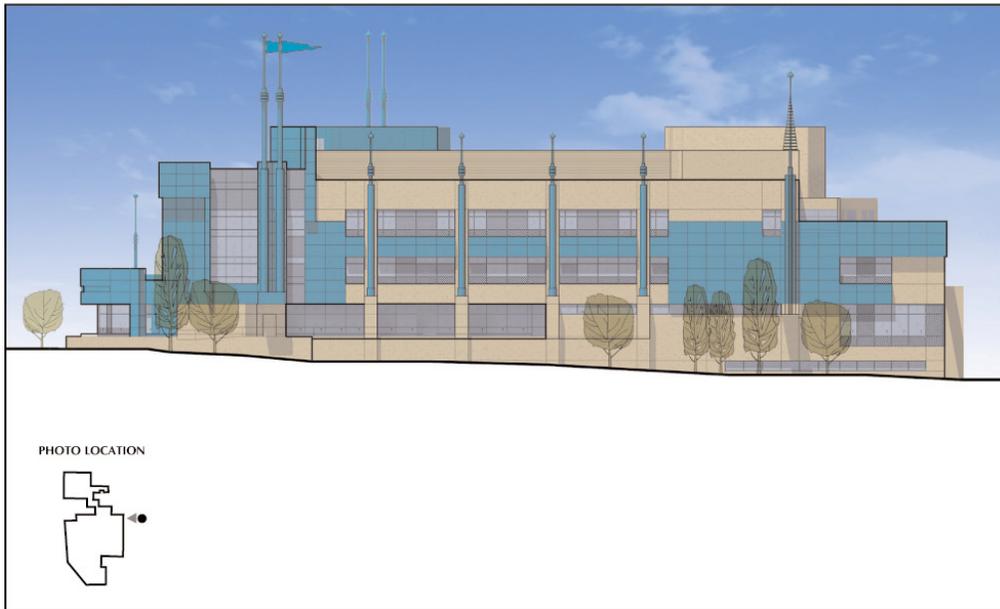
- 6 Link Building
- 7 Pediatric Outpatient Building
- 8 Memorial Guest Residence
- 9 Research Building
- 10 Elm Medical Plaza
- 11 3-Story Medical Office Building
- 12 Convalescent Home
- 13 MOB with CT & MRI Orthopedics
- 14 Hillside Medical Plaza

- 15 2-Story Atlantic MOB
- 16 Medical Office Building - 1 Story
- 17 Buffums Plaza - 1 Story
- 18 CT & MRI Center
- 19 Medical Office Building
- 20 Aloha Motel
- 21 Medical Office Building
- 23 4-Story Atlantic MOB
- R Residential Buildings

FIGURE 5.05 - Master Plan of Land Uses



North Elevation
As seen from Columbia Street



East Elevation
As seen from Atlantic Avenue

FIGURE 5.06A - Miller Children's Hospital Pediatric Inpatient Building North and East Elevations



South Elevation

As seen from Memorial Drive/Patterson Street



West Elevation

As seen from Miller Children's Hospital Courtyard

FIGURE 5.06B - Miller Children's Hospital Pediatric Inpatient Building South and West Elevations



contained in this 2005 Master Plan. Landscaping would be provided along Atlantic Avenue and 27th Street frontages consistent with the design guidelines for landscaping as contained in this 2005 Master Plan.

Outpatient

The ability to address the continued increase in demand for outpatient services through the year 2020 planning horizon would be addressed by designating existing underutilized property in Parking Lots A and K as outpatient (Figure 5.05). These areas would then be designated for development of the TCI and the MCH pediatric outpatient building.

Todd Cancer Institute

LBMCC seeks to create, through the development of a dedicated facility to house the TCI, a center crafted to improve both patient and family experience while going through the long process of cancer treatment. The design of the building would depart from a traditional health care

environment, with architecture reflective of a warm, inviting, and comfortable space to create a relaxing, familiar atmosphere for the patients who it would serve. Infusion bays and family spaces would be organized in relation to an outdoor healing garden, embracing nature as part of the therapeutic healing environment.

The TCI would be located on the northwestern corner of the Campus, southeast of the intersection of Long Beach Boulevard and Spring Street (Figure 5.07, *Todd Cancer Institute Conceptual Site Plan*; Figure 5.08A, *Todd Cancer Institute Conceptual North and South Elevations*; and Figure 5.08B, *Todd Cancer Institute Conceptual West and East Elevations*). The existing land use at this location is an 872-stall surface parking lot. The TCI building would provide comprehensive outpatient cancer services in a single facility designed for the unique requirements of cancer patients and their families. These services are currently provided in approximately 24 distinct locations distributed throughout the Campus and in nearby, leased facilities. The TCI

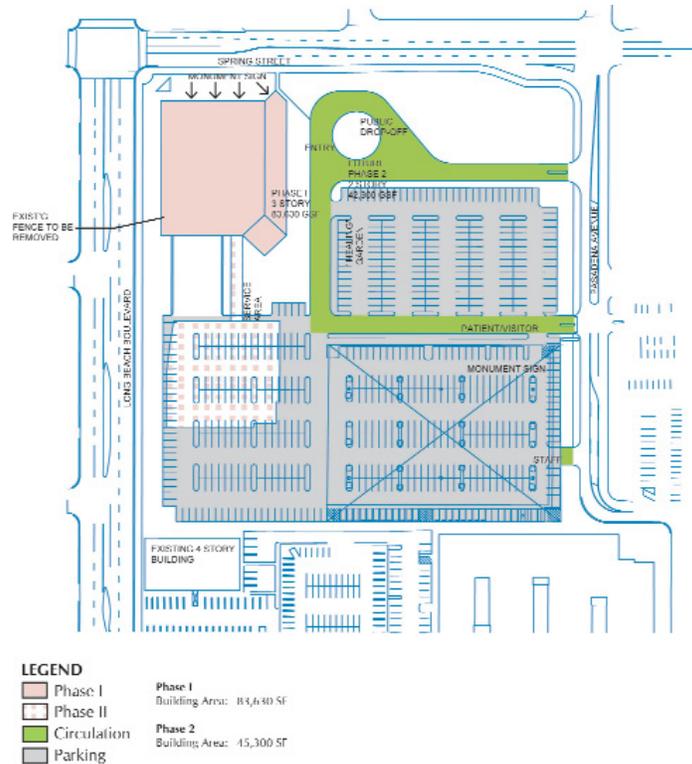


FIGURE 5.07 - Todd Cancer Institute Conceptual Site Plan

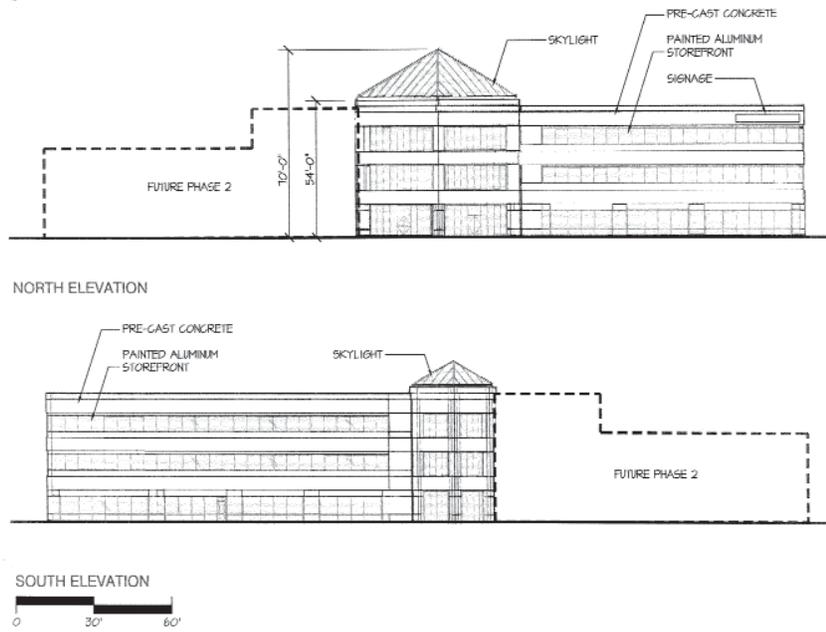


FIGURE 5.08A - Todd Cancer Institute Conceptual North and South Elevations

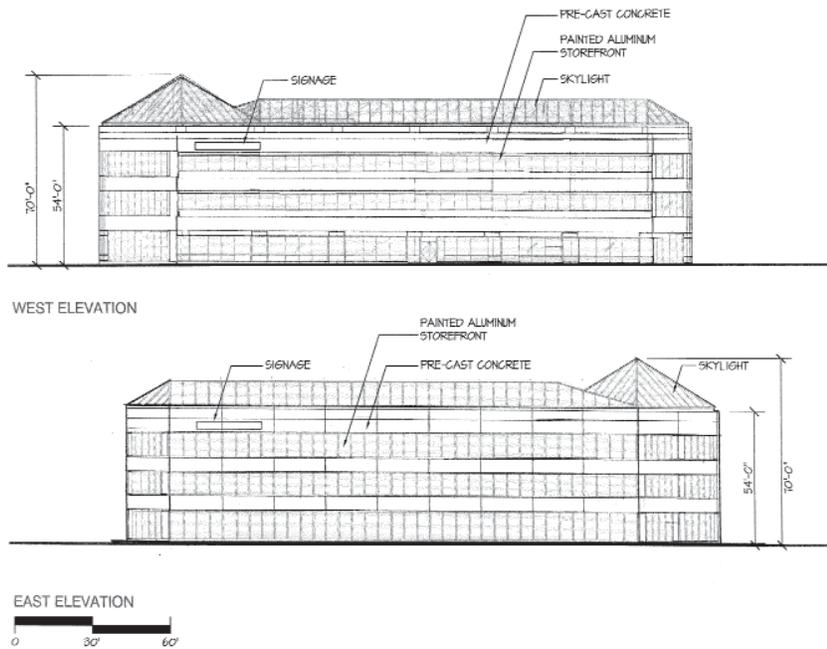


FIGURE 5.08B - Todd Cancer Institute Conceptual West and East Elevations



building would also be designed to reinforce a sense of arrival and activate this corner of the Campus. Visitors would access the TCI from entry driveways located on Pasadena Avenue. The entry driveways would also provide staff and service access. Outpatient cancer services would ultimately encompass approximately 125,930 gross square feet of new space constructed in two phases.

Phase I of the TCI would provide 83,630 gross square feet in a 54-foot-high, three-story building and an atrium featuring a 70-foot-high skylight. The Phase I portion of the building would require 419 parking spaces. It is anticipated that there would be a maximum of approximately 120 employees working in the building at one time. Phase I of the TCI is proposed to initiate construction in July 2005. Upon completion of Phase I in September 2006, the undeveloped portions of the site would accommodate approximately 700 parking stalls.

Phase II of the TCI would provide an additional 42,300 gross square feet in a new 33-foot-high, two-story horizontal expansion. The Phase II portion of the building would require 212 parking spaces. Upon completion of Phase II, the undeveloped portions of the site would accommodate approximately 642 parking stalls. Construction of Phase II of the TCI is contingent on the

growth of outpatient cancer services, the needs of the Long Beach community, and philanthropy. The likely dates to initiate and complete construction are July 2010 through June 2011.

The TCI would be designed to include a service area and loading dock on the south side of the Phase I building. It would be screened from Long Beach Boulevard through the use of a screen wall and landscape material.

The TCI outpatient building design would conform to the design specifications for the Campus provided in this 2005 Master Plan. Landscaping would be provided along Long Beach Boulevard and Spring Street frontages consistent with the design guidelines for landscaping contained in this 2005 Master Plan. A healing garden would be developed adjacent to the TCI on the east side of the building (Figure 5.09, *Healing Garden*). Amenities and plant selections would be sensitive to the needs of cancer patients and would accentuate the healing and medicinal properties of certain plants. Landscaped pedestrian pathways would link the TCI to LBMCC and MCH. The building would be identified by two illuminated building signs reading “Todd Cancer Institute” and by ground-level monument signs. All signs would conform to the design guidelines for signs contained in this 2005 Master Plan.



FIGURE 5.09 - Healing Garden



Miller Children's Hospital Pediatric Outpatient Building

A new pediatric outpatient building would be located south of the existing MCH facility, west of Atlantic Avenue, and approximately midway between the realigned section of Memorial Drive/Patterson Street and 27th Street (Figures 5.03, 5.04A, and 5.04B). The existing land use at this location is a portion of Parking Lot K. Approximately 43 parking spaces would be demolished to accommodate the proposed pediatric outpatient building. Pedestrian access to the pediatric outpatient building would be provided from an entrance on the northwest facade of the building. The MCH pediatric outpatient building would house an array of pediatric care clinics and support services in an approximately 80,000-gross-square-foot, five-story, B-occupancy, medical office building. It is anticipated that there would be a maximum of approximately 140 employees working in the building at one time. The highest point of the building would be approximately 84 feet above grade. The MCH pediatric outpatient building is proposed to initiate construction in June 2006 and finish construction in December 2007. The building would be developed as a shell building, with internal tenant improvements for MCH-operated services and private physician practices. Four types of uses and clinics are under consideration for the pediatric outpatient building: (1) dental clinic, (2) pediatric rehabilitation, (3) children's and specialty care clinic, and (4) support space, including physician's offices. Building design would be consistent with the City of Long Beach–approved design guidelines for the Campus.

The pediatric outpatient building would require approximately 400 parking spaces. Construction of the pediatric outpatient building is contingent on the identification of funding, philanthropy, and lease agreements with private physician groups.

The MCH pediatric outpatient building design would conform to the design specifications for the Campus provided in this 2005 Master Plan. Landscaping would be provided along the Atlantic Avenue frontage consistent with the design guidelines for landscaping contained in this 2005 Master Plan. The building would be identified by two illuminated building signs reading “Miller Children's Hospital” and by ground-level monument signs. All signs

would conform to the design guidelines for signs contained in this 2005 Master Plan.

MIXED USE

Approximately 0.5 to 1.0 acre between the proposed location of the MCH pediatric inpatient tower and the MCH pediatric outpatient building would be dedicated for mixed use (Figure 5.05).

The City of Long Beach and the LBMMC recognize the value and importance of senior and worker housing in close proximity to major employment centers and public transit. The LBMMC will continue to work with the City of Long Beach to discuss opportunities for senior and worker housing.

Miller Children's Hospital-Link Building

A new mixed-use building connecting the pediatric inpatient tower and the pediatric outpatient building would be located southwest of the intersection of Atlantic Avenue and Patterson Street (Figures 5.03, 5.04A, and 5.04B). The existing land use at this location is the main vehicular entrance from Atlantic Avenue. Access to the mixed-use building would be provided on multiple floors from the proposed inpatient hospital addition to the north and the outpatient building to the south. Grade-level pedestrian entrances would also be provided on the east and west facades. The MCH link building would provide approximately 20,000 gross square feet. The link building would consist of a 50-foot-high, three-story building that would contain retail spaces, offices, and retail food service for users of the adjacent pediatric inpatient tower and pediatric outpatient building. The MCH link building is proposed to initiate construction in July 2010 and finish construction in June 2011.

The mixed-use building would require 10 parking spaces. Construction of the link building is contingent on the identification of a funding source.

The MCH link building design would conform to the design specifications for the Campus provided in this 2005 Master Plan. Landscaping would be provided along the



Atlantic Avenue frontage consistent with the design guidelines for landscaping contained in this 2005 Master Plan. The building would be identified by a ground-level monument sign conforming to the design guidelines contained in this 2005 Master Plan.

UTILITIES

In accordance with OSHPD requirements, a new central plant building would need to be constructed in conjunction with the MCH pediatric inpatient tower. A central plant building designed to support Phases I and II of the MCH pediatric inpatient tower would be constructed northwest of the intersection of Atlantic Avenue and 27th Street (Figures 5.03, 5.04A, and 5.04B). The existing land use at this location is a small, wood-framed building referred to as the WIC Building and Ranch House on the southeastern portion of the surface parking lot located north of 27th Street. The uses currently provided at the Ranch House, including women's, children's, and infant food and nutrition programs, would be relocated elsewhere on the Campus prior to the initiation of demolition activities. Development of the central plant building within a portion of the existing surface parking lot would displace 14 parking spaces. The central plant building would consist of a single-level structure of approximately 3,500 square feet, an open yard of approximately 5,000 gross square feet, and eight parking stalls (Figure 5.10A, *Miller Children's Hospital Central Plant North and East Elevations*, and Figure 5.10B, *Miller Children's Hospital Central Plant South and West Elevations*). The central plant building would have a dedicated service area that would be screened from 27th Street and Atlantic Avenue by the central plant building itself and by landscape materials (Figure 5.11, *Conceptual Central Plant Service Area*). 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, chilled water, and bulk medical oxygen for the pediatric inpatient tower. 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 from within the existing parking area.

The MCH pediatric inpatient tower would be served by the central plant building via a 1,000-linear-foot underground utility trench along the eastern edge of the Campus, parallel to Atlantic Avenue. Utility piping between the central plant building and the pediatric inpatient tower would be direct-buried within a protected, slurry back-filled trench. The utility trench would be a permanent, underground facility that would not generate any additional demand for parking.

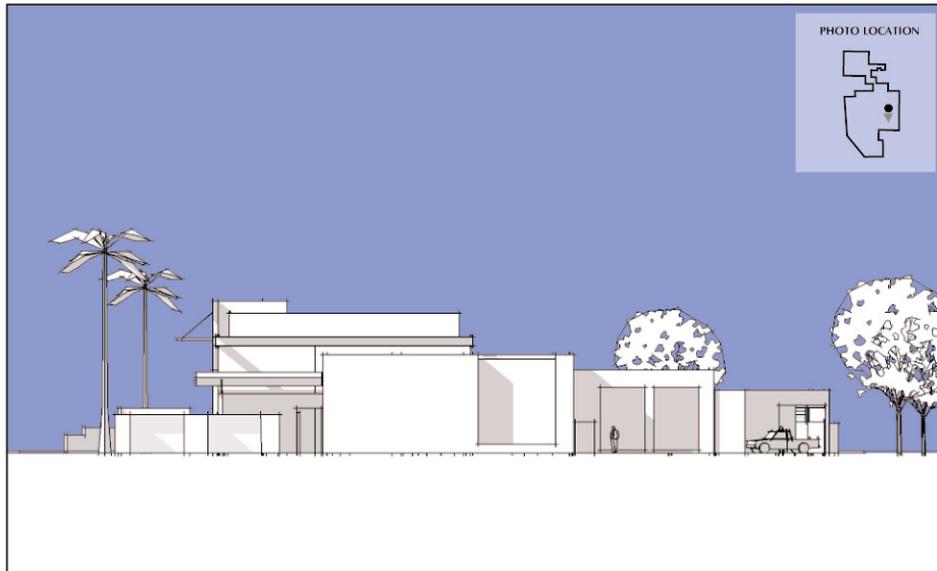
The central plant building design would conform to the design specifications for the Campus provided in this 2005 Master Plan. Landscaping would be provided along the Atlantic Avenue frontage consistent with the design guidelines for landscaping contained in this 2005 Master Plan. The building would be identified by a ground-level monument sign conforming to the design guidelines contained in this 2005 Master Plan.

CIRCULATION

The Campus is equally accessible from two adjacent public roadways: Atlantic Avenue on the east and Long Beach Boulevard on the west. As with LBMMC and MCH, the TCI and MCH expansion would be served by a network of public streets and sidewalks, further augmented by landscaped and lighted private driveways and sidewalks. Proposed entries provide convenient access to inpatient and outpatient services from parking areas, surrounding public sidewalks, and nearby public transit stops. The proposed expansion of the MCH requires realignment of Memorial Drive/Patterson Street within the Campus. The vehicular entrance at Pasadena Avenue and Spring Street would provide access to the TCI.

Roadway Realignment

Vehicular circulation patterns would be improved through the realignment of selected internal roadways (Figure 5.12, *Roadway Realignment*). Specifically, a 520-linear-foot section of the alignment of Memorial Drive/Patterson Street as it extends through the Campus would be realigned southward by approximately 300 feet from its current intersection, at Atlantic Avenue near 28th Street on the east side of the Campus, to make a connection with the existing alignment of Patterson Street at Atlantic Avenue. As a result, 28th Street westbound would terminate at Atlantic Avenue as a



North Elevation
As seen from Parking Lot K



East Elevation
As seen from Atlantic Avenue

FIGURE 5.10A - Miller Children's Hospital Central Plant North and East Elevations



South Elevation
As seen from 27th Street



West Elevation
As seen from Parking Lot K

FIGURE 5.10B - Miller Children's Hospital Central Plant South and West Elevations

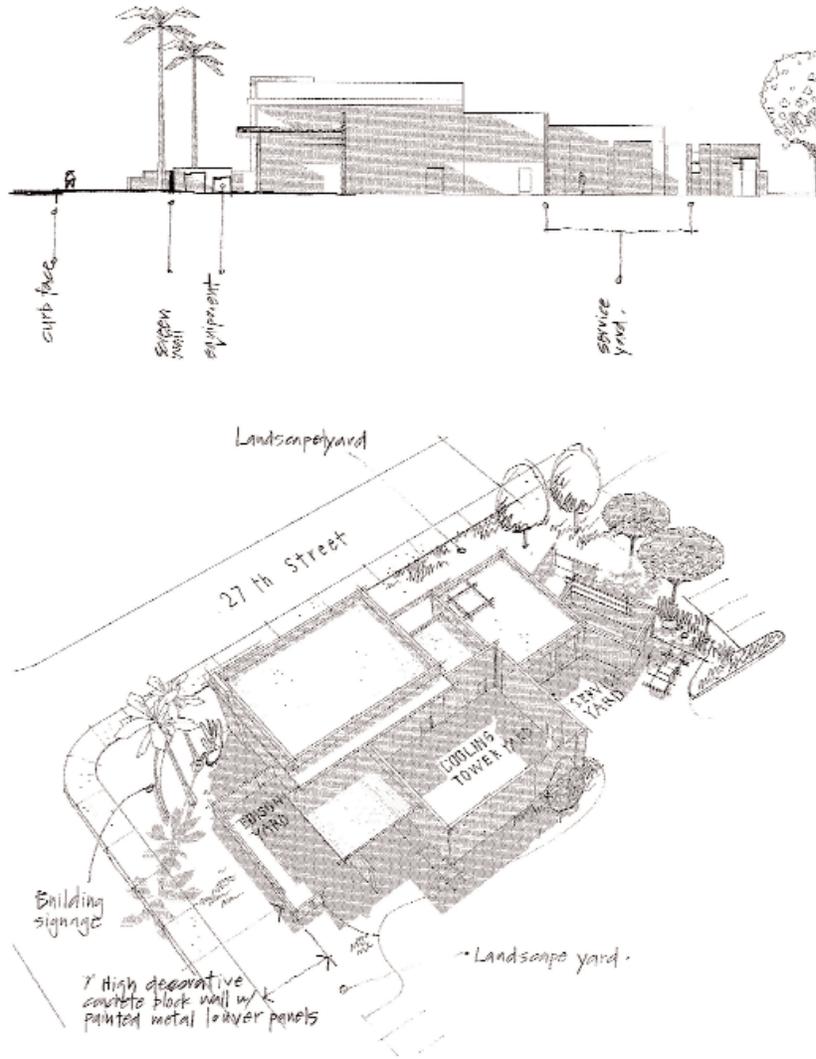


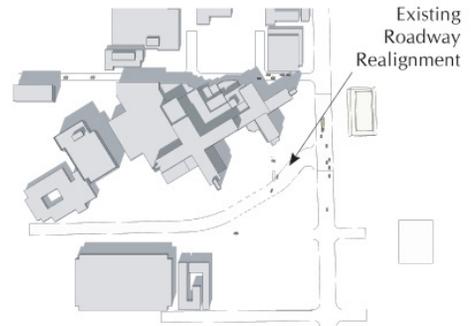
FIGURE 5.11 - Conceptual Central Plant Service Area

T-intersection. The realigned roadway would consist of two site entry lanes and three site exit lanes with an automated traffic control gate for each lane. The present roadway is approximately 85 feet wide at Atlantic Avenue. The roadway would narrow to 40 feet where it transitions to the existing alignment of Patterson Street near Pasadena Avenue. The road curvature has a radius of approximately 500 feet to transition from Patterson Street to the existing roadway

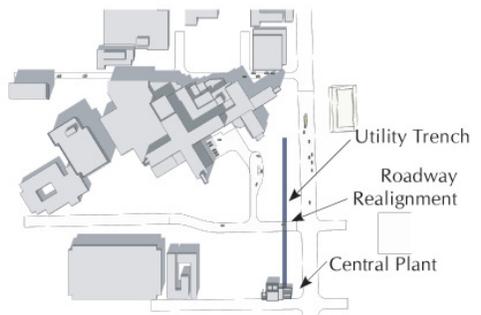
alignment. The roadway realignment would result in the loss of 195 parking spaces from the surface parking lot located north of 27th Street. The existing T-intersection at Atlantic Avenue and Patterson Street would be replaced by a signalized through intersection. The grading and realignment would be undertaken such that the roadway and curbs are adjusted to provide access to adjacent buildings at the first-floor level. The roadway realignment is



Existing Condition



Roadway Realignment



Final Configuration

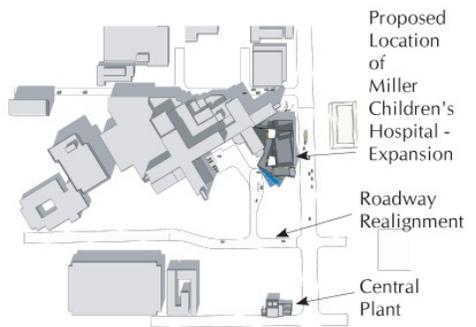


FIGURE 5.12 - Roadway Realignment



proposed to initiate construction in July 2005 and finish construction in October 2005.

Pedestrian Plan

Existing pedestrian routes of travel would be improved to provide safe paths of travel between the TCI; designated parking areas; and other inpatient, outpatient, and mixed-use areas within the Campus (Figure 5.13, *Pedestrian Plan*). Clearly identified on-site pedestrian pathways would link the Campus medical facilities to neighboring off-campus destinations such as medical office buildings, retail complexes, and public transit facilities.

The pedestrian plan provides unobstructed and direct pathways between arrival areas (e.g., parking areas and mass-transit stations) and destinations such as building entrances. Complementary spaces may be developed along the pathways. Each space would have a defined function, and some space would directly relate to a major service or clientele of the Campus. For example, facilities focusing on the treatment of cancer patients may employ exterior “healing gardens” or other outdoor spaces in which patients, family members, and staff can relax. The medicinal value of certain plants might be described by signs or special displays, adding a unique educational element. Other areas may employ seating areas in which patients, visitors, and staff may gather and interact. A “courtyard oasis” may provide an opportunity for staff to conduct a meeting outdoors rather than in a crowded indoor conference room. Some degree of flexibility in the use of such spaces will be preserved. The pedestrian plan provides safe, well-lit connections between parking facilities and hospital buildings.

PARKING

A net increase of 1,159 parking spaces would be required in conjunction with the capital improvements anticipated in conjunction with this 2005 Master Plan, to conform to the City of Long Beach Code parking requirements, beyond the existing 259 excess parking spaces (Table 5.02, *City Code Parking Requirements*). Parking requirements were calculated in accordance with the City of Long Beach standards for inpatient, outpatient, and mixed-use land uses.

A phased parking program would be designed to offset the 1,394 parking stalls displaced by the proposed project and accommodate the additional demand for 1,418 parking stalls resulting from the 2005 Master Plan capital improvements. A total of 577 parking spaces would be permanently lost due to development of five project elements: (1) TCI Phase I; (2) MCH patient inpatient tower Phase I, central plant building, and utility trench; (3) roadway realignment; (4) MCH pediatric outpatient building; and (5) TCI Phase II (Table 5.03, *Existing Parking Spaces Converted to Development*). Concurrent staging for TCI Phase I and the MCH pediatric inpatient tower, central plant building, and utility trench would be expected to result in temporary impacts to an additional 207 parking spaces (Table 5.04, *Additional Parking Spaces Required During Construction*). In recognition of the demand for parking generated by the elements of the proposed project, LBMMC has identified opportunities to accommodate additional parking within and immediately adjacent to the Campus (Table 5.05, *Parking Opportunities*). LBMMC has defined a parking program to accommodate the parking demand resulting from construction and operation of the elements of the proposed project (Table 5.06, *Construction Parking Program*, and Table 5.07, *Operation Parking Program*).

It is anticipated that the phased parking program would consider the development of surface parking areas on property owned by the LBMMC (Figure 5.14, *On-Site Parking Opportunities*), nearby off-site surface parking areas (Figure 5.15, *Off-Site Parking Opportunities*) that is lot L and M that could be leased by the LBMMC for a period of five year or longer. Construction of hospital buildings on the Campus would not take place until adequate parking is secured. Possible future construction of one or more parking structures when justified by demand. All on-site parking would be developed in areas designated for interim or permanent use of parking in this 2005 Master Plan. If determined necessary, a multilevel parking structure capable of accommodating up to 400 spaces per level would be sited in an area designated for long-term parking.

LBMMC is requesting a variance from the City of Long Beach ordinance that requires the planting of one 24-inch



FIGURE 5.13 - Pedestrian Plan



Project Description	Size (square footage or number of beds)		City of Long Beach Code Parking Ratio	Spaces Required
Existing Development				
LBMCC	462	Beds	2 spaces per bed	924
Miller Children's Hospital	281	Beds	2 spaces per bed	562
LBMCC remaining medical facilities	341,153	SI'	5 spaces per 1,000 SI'	1,707
Subtotal—Existing Development Code Parking Requirement:				3,193
Existing Parking Supply:				3,452
Parking Surplus/Deficiency (+/-):				+259
Proposed Development				
Todd Cancer Institute	125,930	SF	5 spaces per 1,000 SF	630
Miller Children's Hospital Pediatric Inpatient Tower	164	Beds	2 spaces per bed	328
Miller Children's Hospital Pediatric Outpatient Building	80,000	SF	5 spaces per 1,000 SF	400
Miller Children's Hospital Link Building	20,000	SF	—	50
Central Plant Building	3,500	SI'	—	10
Subtotal—Proposed Development Code Parking Requirement:				1,418
Total Code Parking Requirement (Existing 3,193 spaces + Proposed 1,418 spaces):				4,611
Existing Parking Supply:				3,452
Net Parking Surplus/Deficiency (+/-) per Code:				-1,159

NOTE:

SF = square feet

SOURCE:

City of Long Beach, Department of Planning and Building, 1988. Title 21, Zoning Regulations, Chapter 21.41: "Off-Street Parking and Loading Requirements." Prepared by: City of Long Beach, Department of Planning and Building, City Hall, 333 West Ocean Boulevard, Long Beach, CA 90802. Available at: <http://www.longbeach.gov/apps/cityclerk/lbmc/title-21/frame.htm>

TABLE 5.02 - City Code Parking Requirements

Project Element	Construction Schedule	Parking Spaces Removed
Construction Parking Requirements July 2005 to December 2007		
Todd Cancer Institute Phase I	Jul 2005 to Dec 2007	171
Miller Children's Hospital pediatric inpatient tower Phase I, utility trench, and central plant building	Jul 2005 to Dec 2007	100
Roadway realignment	Jul 2005 to Jun 2006	195
Total Parking Converted During Construction July 2005 to December 2007		466
Construction Parking Requirements January 2006 to June 2007		
Miller Children's Hospital pediatric outpatient building	Jan 2006 to Jun 2007	43
Total Parking Converted During Construction January 2006 to June 2007		43
Construction Parking Requirements January 2010 to June 2011		
Todd Cancer Institute Phase II	Jul 2010 to Jun 2011	68
Miller Children's Hospital link building	Jul 2010 to Jun 2011	—
Total Parking Converted During Construction July 2010 to June 2011		68
Construction Parking Requirements January 2012 to June 2013		
Miller Children's Hospital pediatric inpatient tower Phase II	Jan 2012 to Jun 2013	—
Total Parking Converted During Construction July 2010 to June 2011		—
Net Reduction of Existing Parking Spaces		577

TABLE 5.03 - Existing Parking Spaces Converted to Development



Project Element	Construction Schedule	Temporary Construction Impacts to Parking Spaces
Construction Parking Requirements July 2005 to December 2007		
Todd Cancer Institute Phase I	Jul 2005 to Dec 2007	135
Miller Children's Hospital pediatric inpatient tower Phase I, utility trench, and central plant building	Jul 2005 to Dec 2007	55
Roadway realignment	Jul 2005 to Jun 2006	—
Total Additional Parking Required During Construction July 2005 to December 2007		190
Construction Parking Requirements January 2006 to June 2007		
Miller Children's Hospital pediatric outpatient building	Jan 2006 to Jun 2007	—
Total Additional Parking Required During Construction January 2006 to June 2007		—
Construction Parking Requirements January 2010 to June 2011		
Todd Cancer Institute Phase II	Jul 2010 to Jun 2011	207
Miller Children's Hospital link building	Jul 2010 to Jun 2011	—
Total Additional Parking Required During Construction July 2010 to June 2011		207
Construction Parking Requirements January 2012 to June 2013		
Miller Children's Hospital pediatric inpatient tower Phase II	Jan 2012 to Jun 2013	20
Total Additional Parking Required During Construction July 2010 to June 2011		20
Maximum Temporary Construction Impacts to Parking		207

TABLE 5.04 - Additional Parking Spaces Required During Construction

Proposed Parking Site	Potential Surface Parking
Off-Site Lease Opportunities	
Site L	296
Site M	238
Capacity of Off-Site Lease Opportunities	534
On-Site Conversion to Surface Parking	
Site N	121
Site P	68
Site Q	71
Site R	96
Site S	72
Site T	87
Capacity of On-Site Conversion to Surface Parking	515
Total Available Parking Opportunities	1,049

TABLE 5.05 - Parking Opportunities



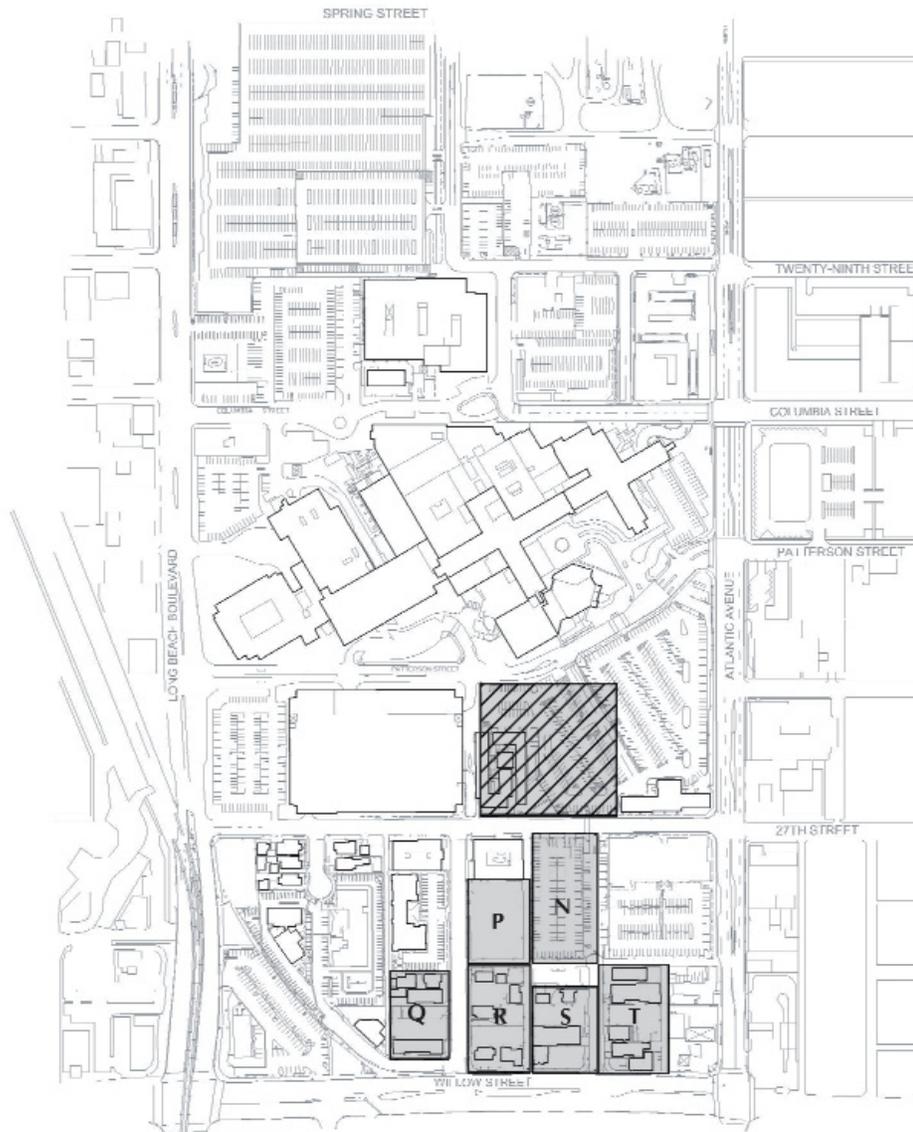
	Period	Parking Required	Parking Program
STEP A	Roadway realignment: July 2005 to October 2005	195	
	Existing available capacity (259)		195
	MCH pediatric inpatient tower Phase I, central plant building, and utility trench: October 2005 to January 2008	155	
	Existing available capacity (259)		64
	On-site Parking Lot N (121)		91
	TCI Phase I: July 2005 to December 2006	306	
	Off-site Parking Lot L(296)		163
	Off-site Parking Lot M (238)		143
STEP B	MCH pediatric outpatient building: October 2005 to May 2007	43	
	On site Parking Lot R (68)		43
STEP C	TCI Phase II: July 2010 to June 2011	275	
	Parking structure at Lot K (1,404)		275
	MCH link building: July 2010 June 2011	0	
STEP D	MCH pediatric inpatient tower Phase II: January 2012 to June 2013	20	
	Parking Structure at Lot K (1,404)		20

TABLE 5.06 - Construction Parking Program



	Period	Parking Required	Parking Program
STEP A	Roadway realignment: November 2005	195	
	Existing available capacity (259)		195
	MCH pediatric inpatient tower Phase I, Central Plant Building, and Utility Trench: January 2008	254	
	Existing available capacity (259)		64
	On-site Parking Lot N (121)		121
	Off-site Parking Lot L (296)		59
	Central plant building parking (10)		10
	TCI Phase I: January 2007	589	
	Lot L		237
	Lot M		238
STEP B	MCH pediatric outpatient building: June 2007	443	
	On site Parking Lot Q (71)		25
	On-site Parking Lot R (96)		96
	On-site Parking Lot S (72)		72
	On-site Parking Lot T (87)		87
	Parking structure at Lot K (1,410)		161
STEP C	TCI Phase II: July 2011	280	
	Parking structure at Lot K (1,410)		280
	MCH link building: July 2011	50	
Parking structure at Lot K (1,410)		50	
STEP D	MCH pediatric inpatient tower Phase II: July 2013	184	
	Parking structure at Lot K (1,410)		184

TABLE 5.07 - Operation Parking Program



LEGEND

- | | | |
|------------------------------------|-----------------|-----------------|
| Proposed On-Site Surface Parking | Patient/Visitor | Patient/Visitor |
| Proposed On-Site Parking Structure | Patient/Visitor | |
| Patient/Visitor | Patient/Visitor | |
| Staff/Doctor/Visitor/Patient | Patient/Visitor | |

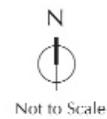
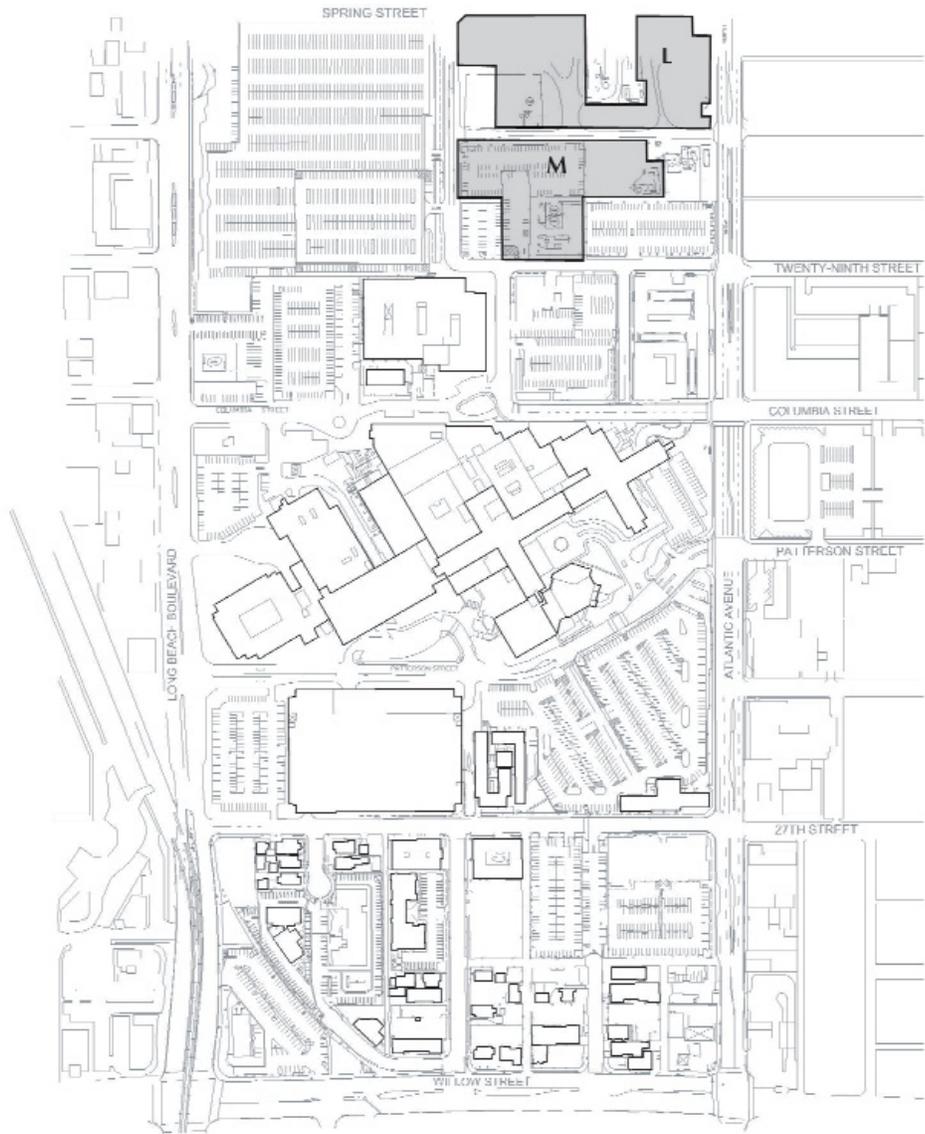


FIGURE 5.14 - On-Site Parking Opportunities



- LEGEND**
-  Proposed Off-Site Leased Parking
 -  Patient/Visitor
 -  Patient/Visitor

N

Not to Scale

FIGURE 5.15 - Off-Site Parking Opportunities



box tree per four surface parking spaces. The exterior design of parking structures would be sensitive to and compatible with adjacent buildings and design guidelines. All parking facilities constructed by the LBMMC would incorporate best management practices consistent with the requirements of the Regional Water Quality Control Board.

PROJECT PHASING

Project phasing is envisioned as a 10-step process to be completed in eight years between 2005 and 2013, where construction of certain elements is contingent on the availability of funding (Figures 5.16A through 5.16J, *Construction Scenarios, Steps 1–10*).

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

The 198,000-gross-square-foot pediatric inpatient tower would be constructed in two phases. Phase I of the pediatric inpatient tower consists of the construction of 124,500 gross square feet. Construction of Phase I would be anticipated to be initiated in July 2005 and completed by December 2007. Phase II consists of 73,500 gross square feet. Construction of Phase II would be undertaken on an as-needed basis that is anticipated to occur no sooner than year 2012. The estimated duration of construction for Phase II is two years. The pediatric inpatient tower requires construction of a central plant building concurrently with Phase I of the pediatric inpatient tower. The central plant building would be constructed with sufficient capacity to support the anticipated ultimate build-out of Phase II pediatric inpatient services. The central plant building would also provide redundant support to other inpatient services on the Campus. The link building and the pediatric outpatient building would be constructed with their own utility connections and would function independently of the hospital buildings. The central plant building would consist of a single-level structure of approximately 5,014 gross square feet, an open yard of approximately 4,571 gross square feet, and eight parking stalls. The pediatric inpatient tower would be served by the central plant building via a 1,000-linear-foot underground utility trench along the eastern edge of the Campus, parallel to Atlantic Avenue, which would be constructed concurrently with the pediatric inpatient tower.

Phase I Pediatric Inpatient Tower

Construction of Phase I of the pediatric inpatient tower would be anticipated to be initiated in July 2005 and completed by December 2007. Construction of Phase I of the pediatric inpatient tower would require connection to existing utilities, sewer facilities, and storm water drain facilities; paving; building construction; landscaping; and fencing. Approximately 144 workers would be expected to be on site during peak construction activity periods. Fewer than 140 workers would be expected to be on site during nonpeak construction activity periods. Construction staging would be accomplished within the parking area of Phase I of the pediatric inpatient tower.

Phase II Pediatric Inpatient Tower

Construction of Phase II of the pediatric inpatient tower would require connection to existing utilities, sewer facilities, and storm water drain facilities; paving; and building construction. Approximately 85 workers would be expected to be on site during peak construction activity periods. Fewer than 85 workers would be expected to be on site during nonpeak construction activity periods. Construction staging would be accomplished within the parking and the build-out area of Phase II of the pediatric inpatient tower.

Utility Trench

Construction of Phase I would be anticipated to be initiated in August 2006 and completed by March 2007. Construction of the utility trench to support the MCH expansion would require connection to existing utilities, sewer facilities, and storm water drain facilities; paving; and building construction. Approximately 20 workers would be expected to be on site during peak construction activity periods. Fewer than 20 workers would be expected to be on site during nonpeak construction activity periods. Construction staging would be accomplished within the parking and build-out areas of the MCH.

Central Plant Building

Construction of the central plant building would be anticipated to be initiated in March 2007 and completed by December 2007. Construction of the central plant building to support the MCH expansion would require connection

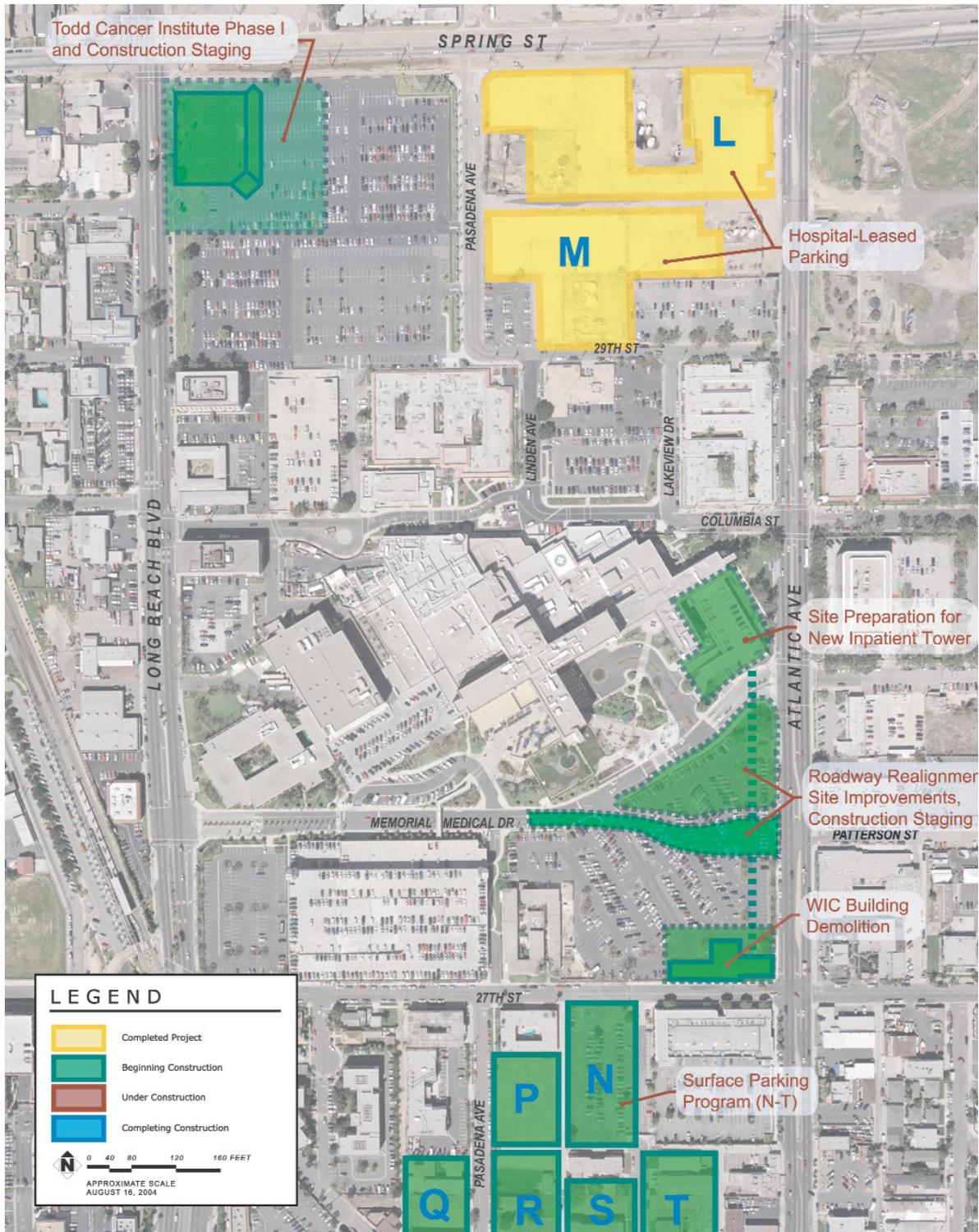
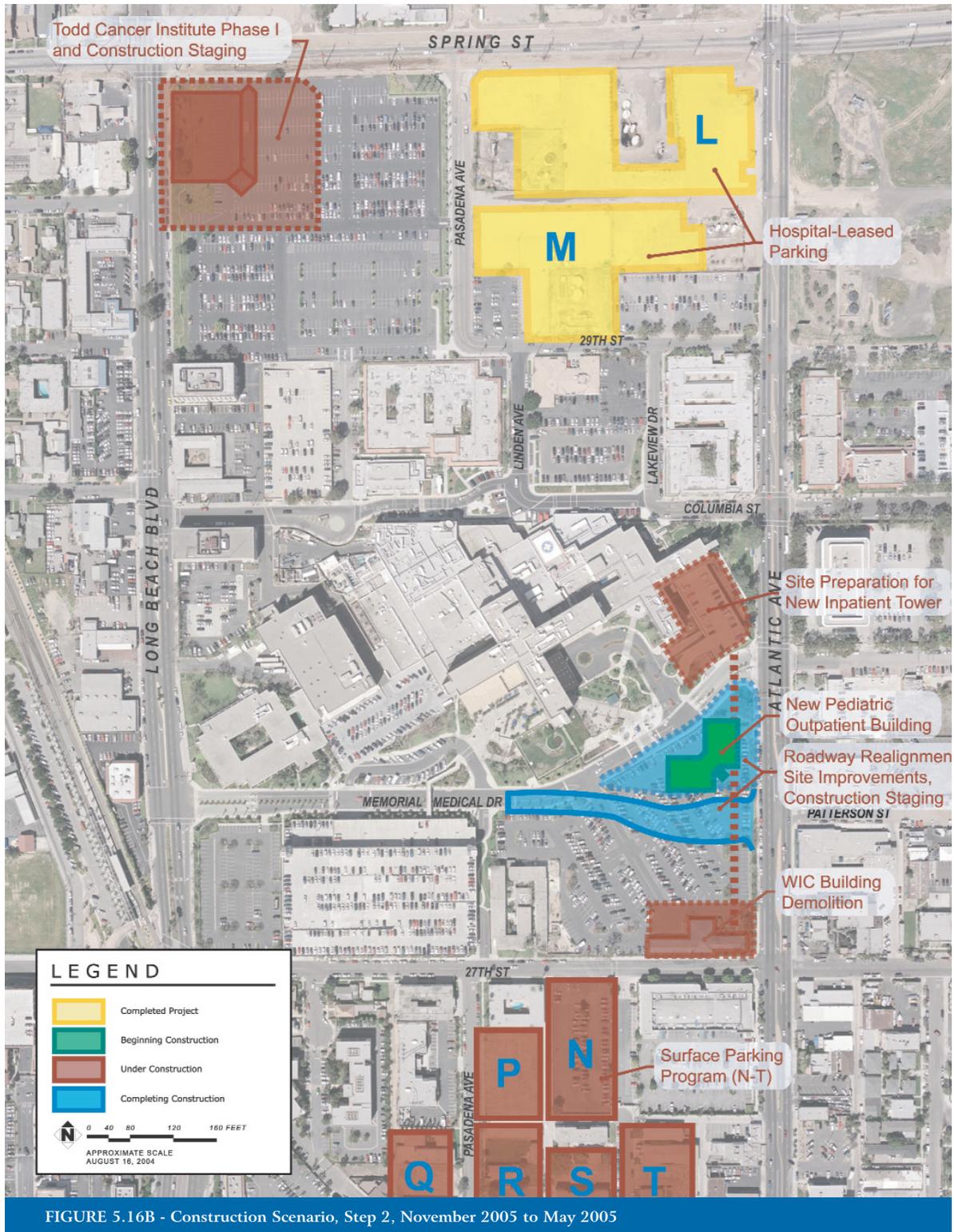


FIGURE 5.16A - Construction Scenario, Step 1, July 2005 to October 2005



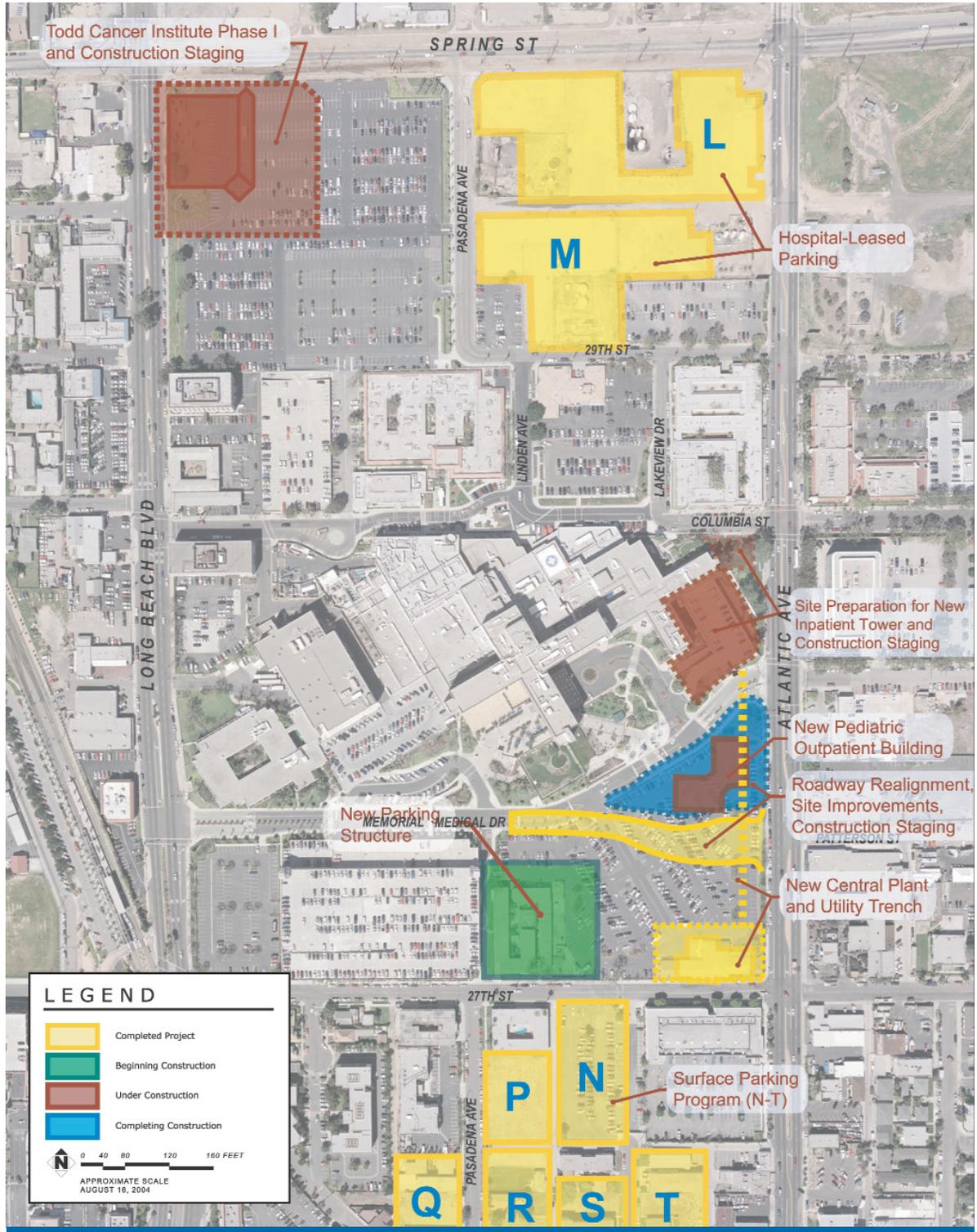


FIGURE 5.16C - Construction Scenario, Step 3, June 2006 to September 2006

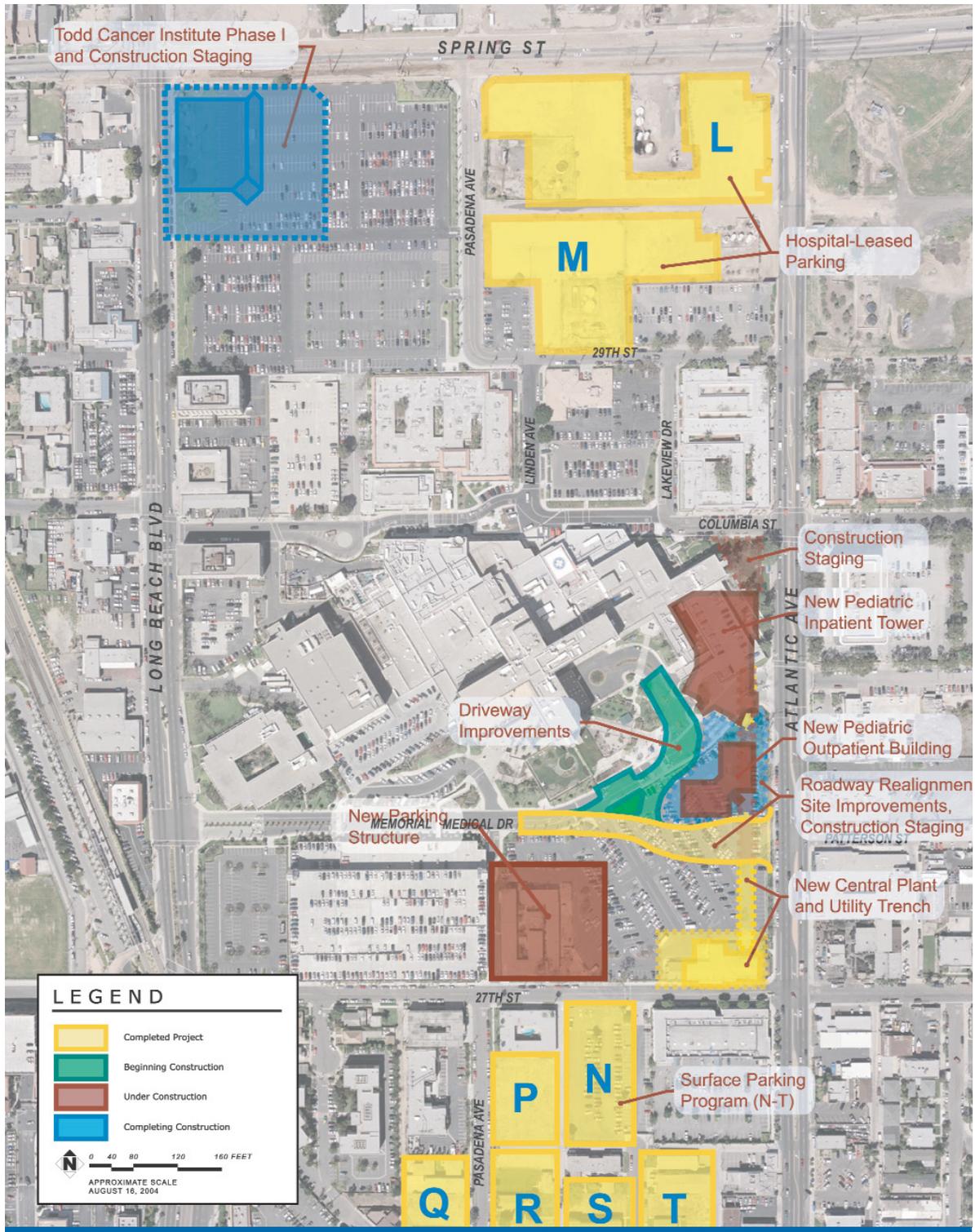


FIGURE 5.16D - Construction Scenario, Step 4, October 2006 to May 2007

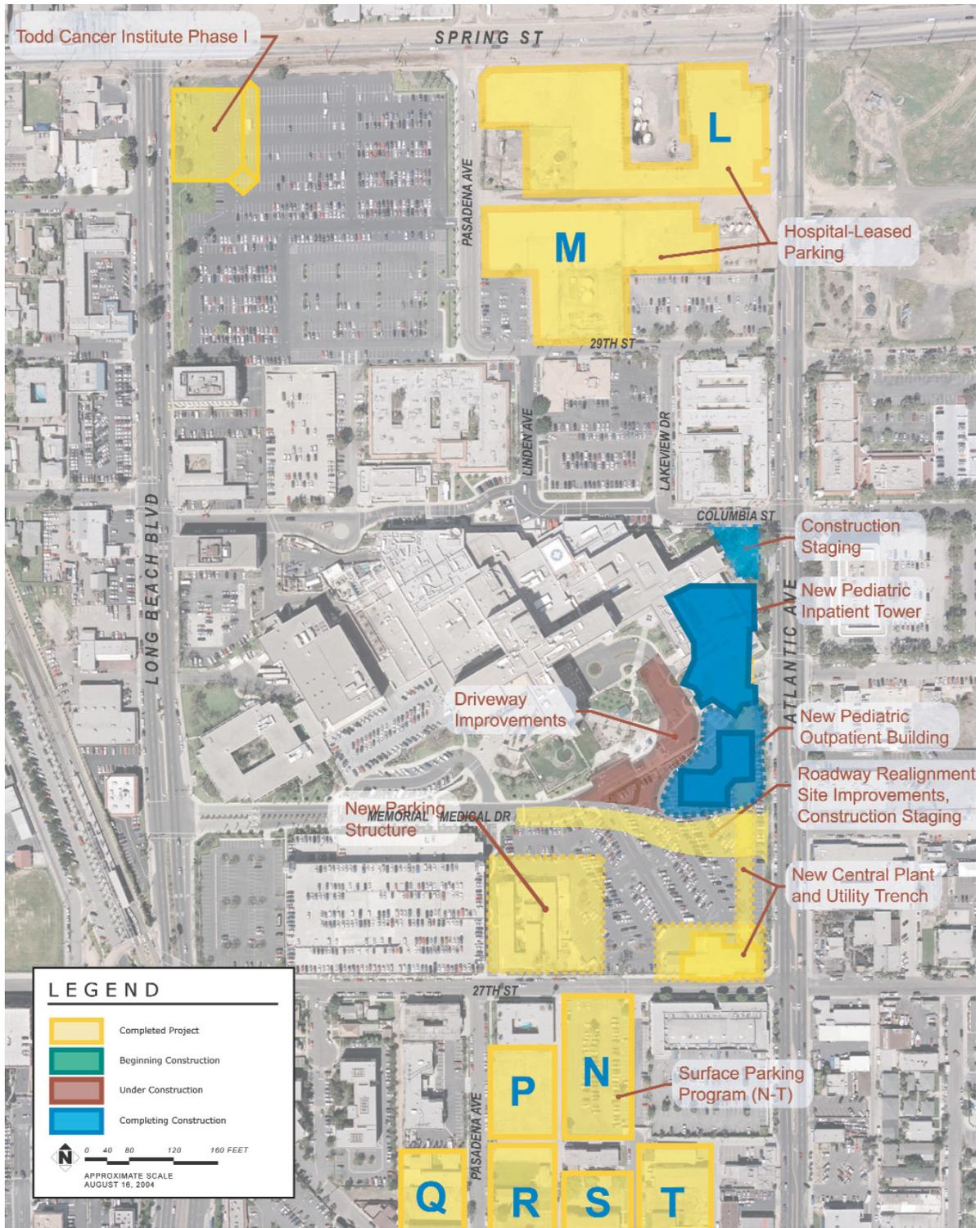


FIGURE 5.16E - Construction Scenario, Step 5, February 2008 to June 2010

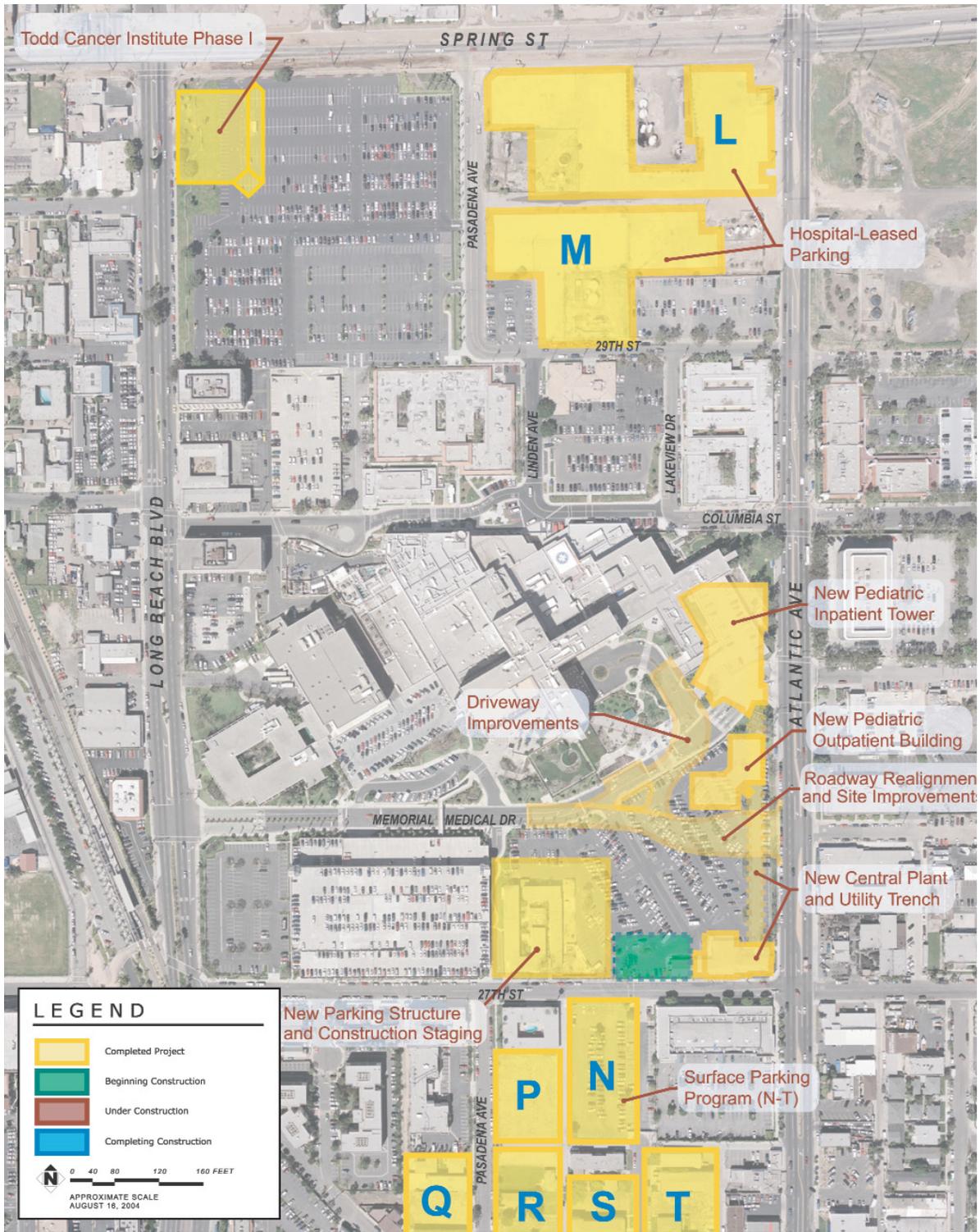


FIGURE 5.16F - Construction Scenario, Step 6, February 2008 to June 2010

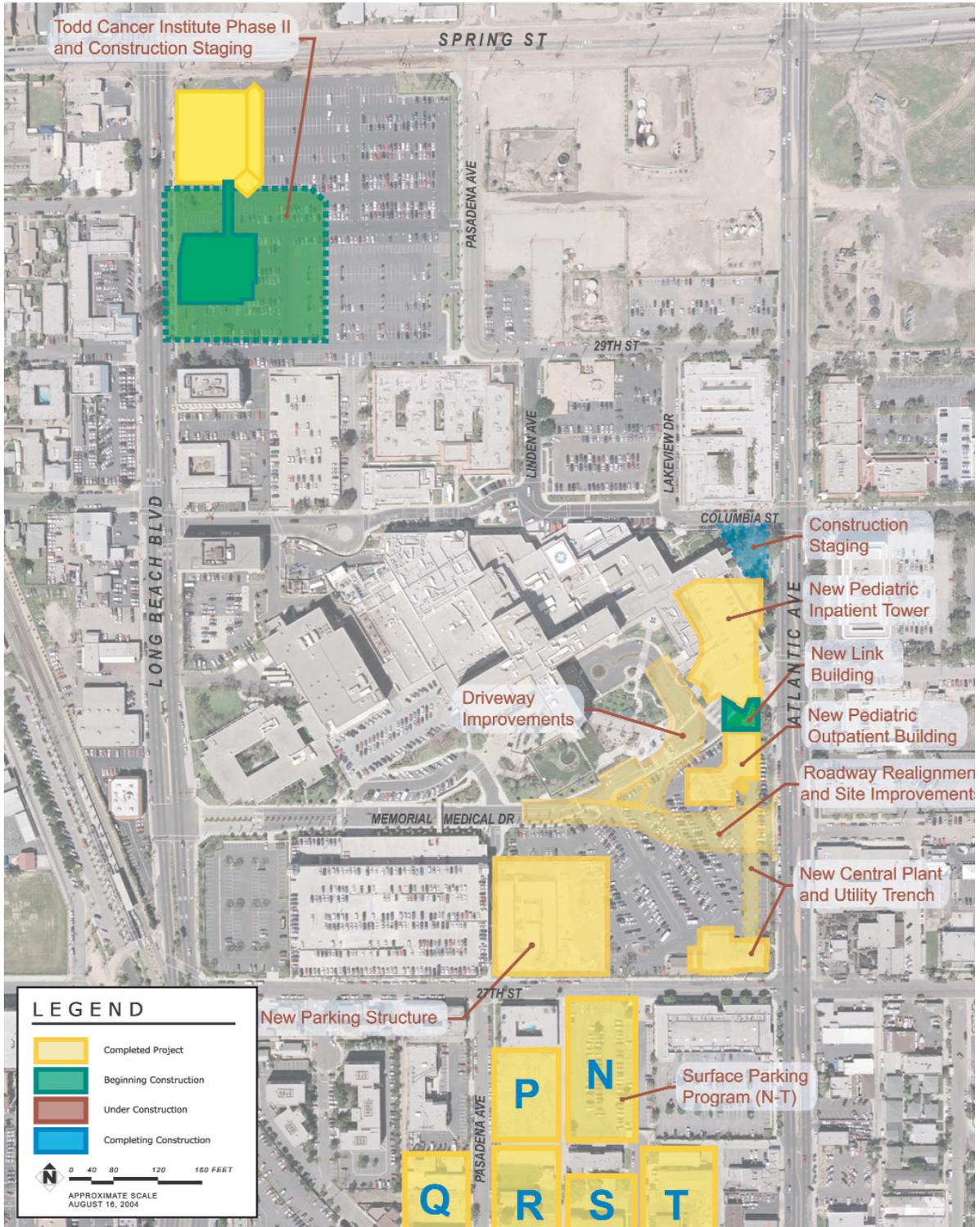


FIGURE 5.16G - Construction Scenario, Step 7, July 2010 to June 2011

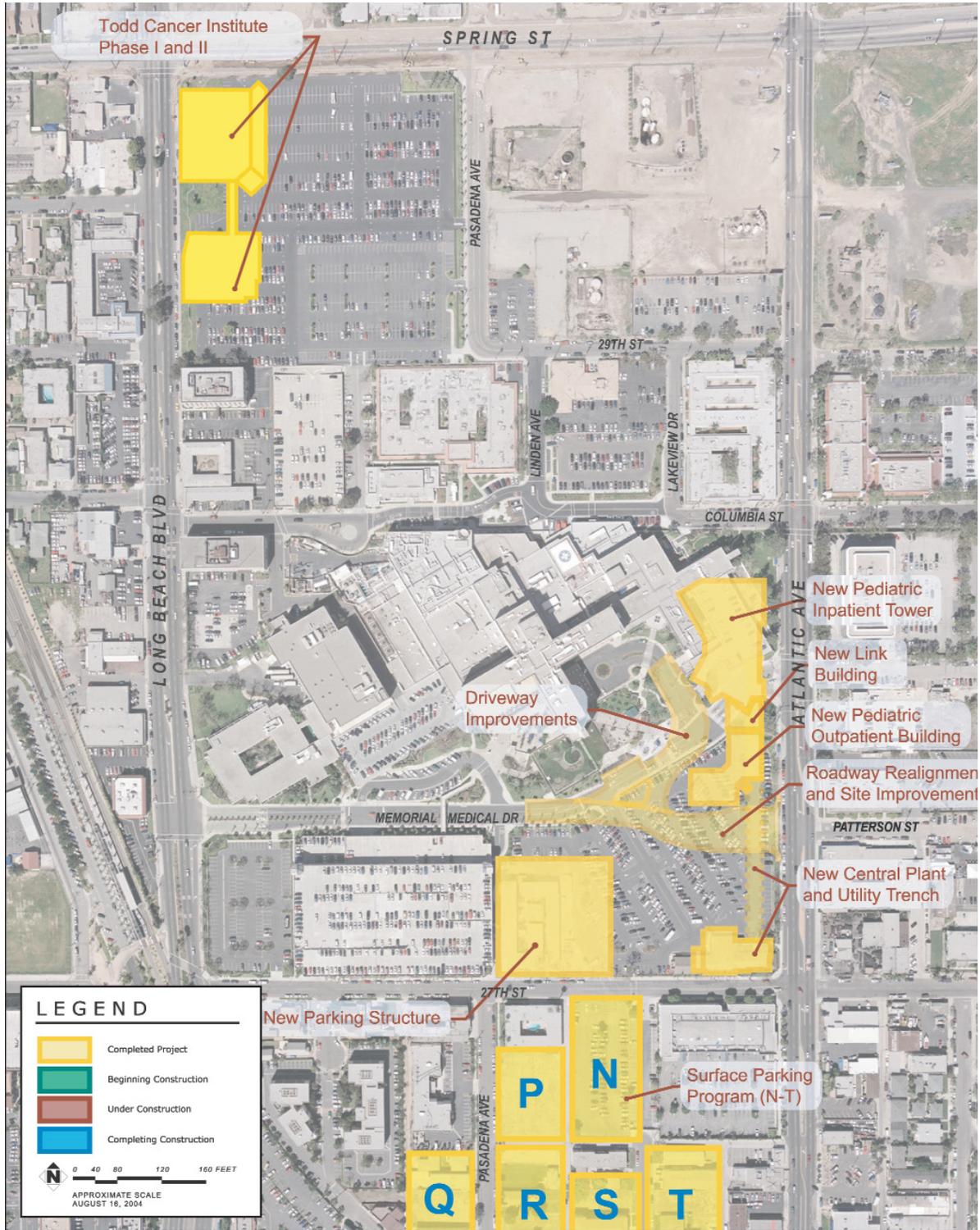


FIGURE 5.16H - Construction Scenario, Step 8, Completed by December 2011

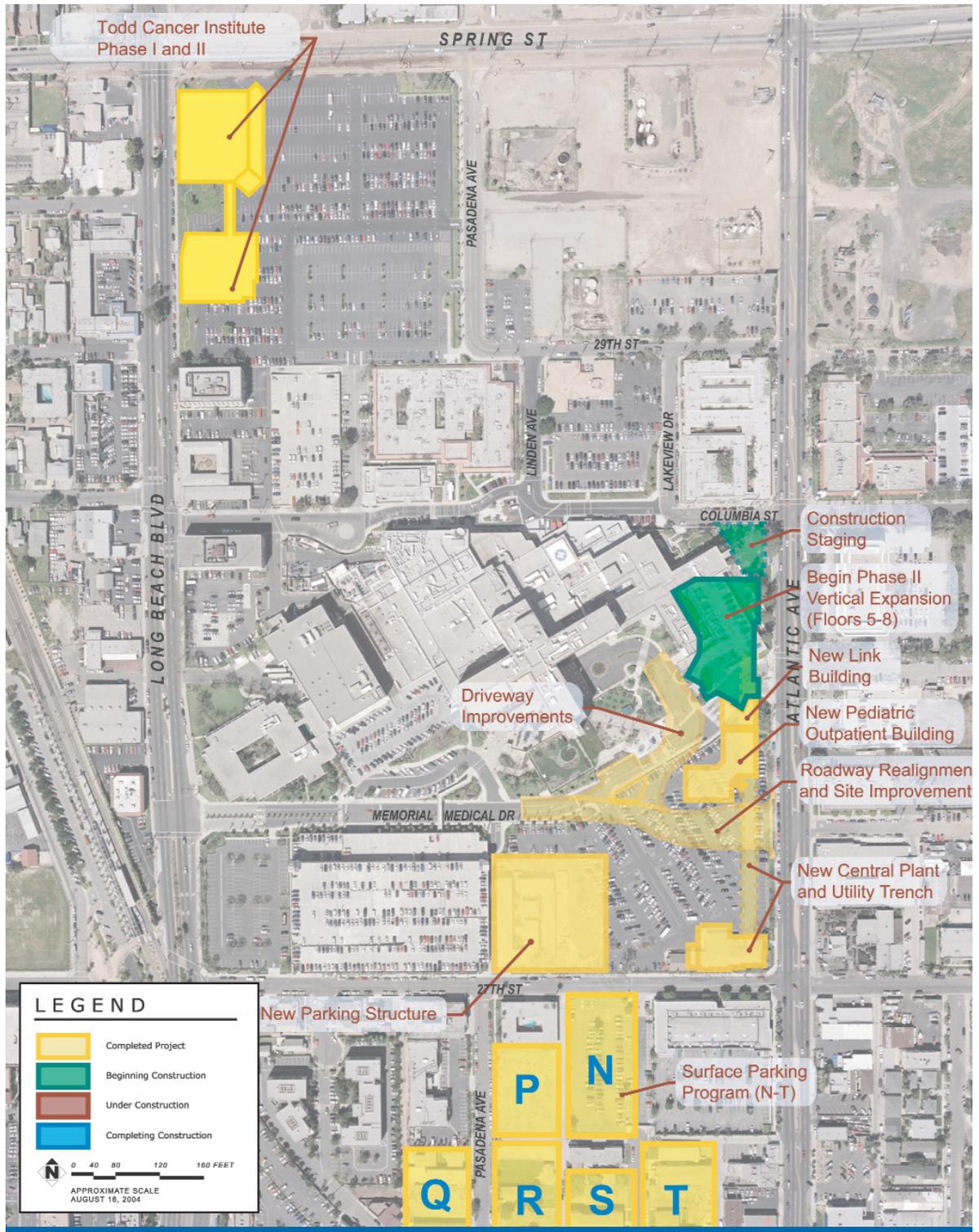


FIGURE 5.161 - Construction Scenario, Step 9, January 2012 to June 2013

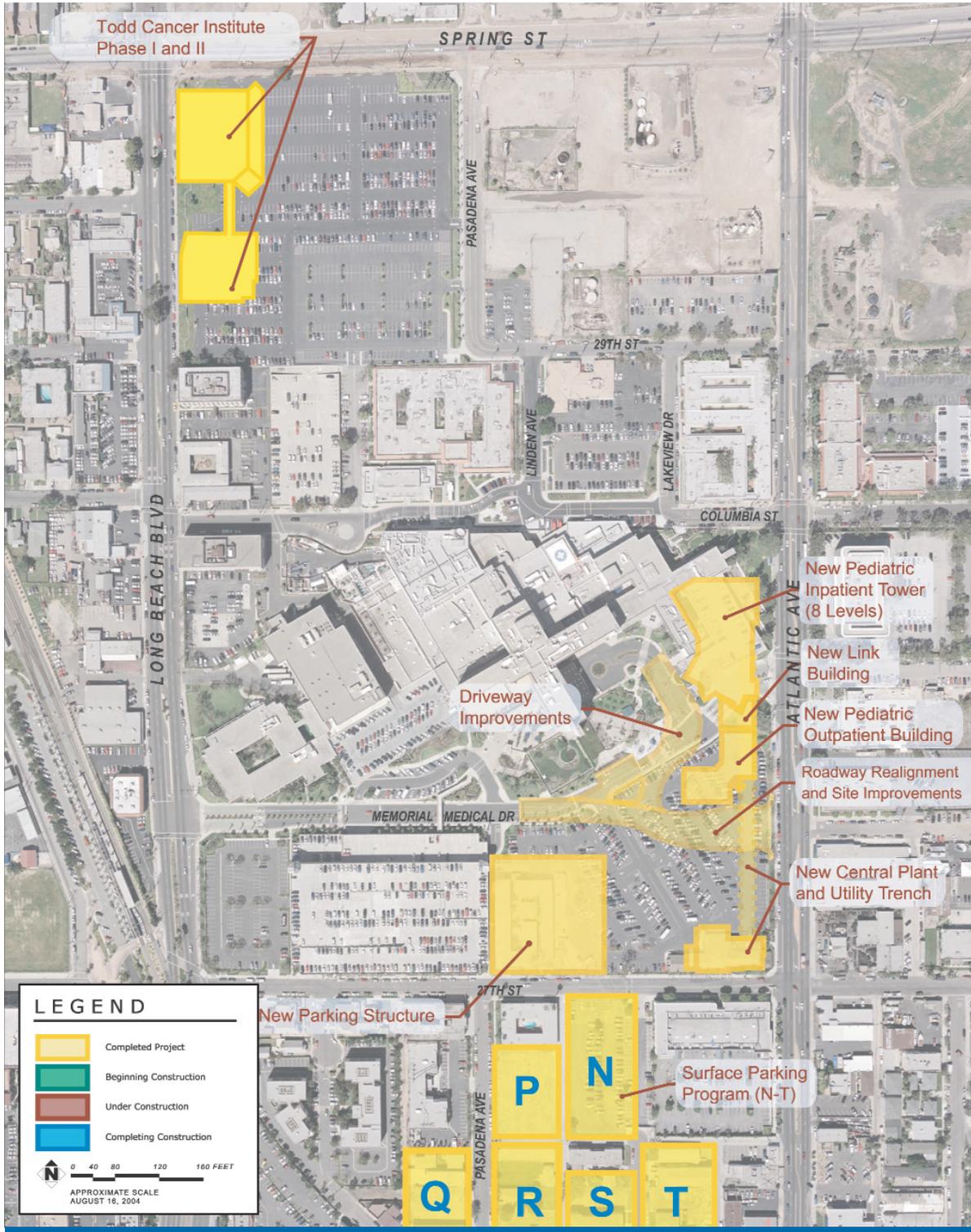


FIGURE 5.16J - Construction Scenario, Step 10, Completed by June 2013



to existing utilities, sewer facilities, and storm water drain facilities; paving; and building construction. Approximately 50 workers would be expected to be on site during peak construction activity periods. Fewer than 50 workers would be expected to be on site during nonpeak construction activity periods. Construction staging would be accomplished within the parking area of the MCH.

Miller Children's Hospital Pediatric Outpatient Building

The MCH pediatric outpatient building would provide approximately 80,000 gross square feet. The pediatric outpatient building would consist of a five-story, B-occupancy, medical office building housing an array of pediatric care clinics and support services. Construction of the pediatric outpatient building is contingent on the identification of funding, philanthropy, and lease agreements with private physician groups that would be anticipated to be constructed in an 18-month time period initiated for construction no sooner than January 2006. Construction of the pediatric outpatient building would require connection to existing utilities, sewer facilities, and storm water drain facilities; paving; building construction; landscaping; and fencing. Approximately 144 workers would be expected to be on site during peak construction activity periods. Fewer than 140 workers would be expected to be on site during nonpeak construction activity periods. Construction staging would be accomplished within the parking area of the MCH.

Parking Program

A phased parking program would be designed to accommodate up to 2,986 parking stalls in surface parking areas on property owned by LBMMC, nearby off-site surface parking areas that could be leased by LBMMC, and possible future construction of one or more parking structures when justified by total demand. If it is determined to be necessary, a multilevel parking structure capable of accommodating up to 400 spaces per level would be sited in an area designated for long-term parking. For each element of the proposed project, sufficient parking would be constructed to accommodate any existing parking spaces displaced by construction, and sufficient additional parking would also be constructed to accommodate the parking demand generated by the construction of the proposed project element.

Construction of parking facilities would require connection to existing utilities, sewer facilities, and on-site storm water pollution prevention devices; paving; and possible construction of a parking structure. Approximately 75 workers would be expected to be on site during peak construction activity periods. Fewer than 75 workers would be expected to be on site during nonpeak construction activity periods. Construction staging would be accomplished within the parking area of the MCH.

PROJECT ENTITLEMENTS

The City of Long Beach is the Lead Agency under the California Environmental Quality Act (CEQA). This 2005 Master Plan is subject to review and recommendation by the Planning Commission, subject to final action by the Long Beach City Council, including consideration of related entitlements:

- Long-Range Development Plan (Master Plan) Approval
- Site Plan Review
- Zoning District Change
- Conditional Use Permit (utility relocation)
- Parking Variance

Specific capital improvements may be subject to additional permits (Table 5.08, *Permit Requirements*).

DESIGN GUIDELINES

These design guidelines promote high-quality development within a single overall design concept in the long-range development of the Campus. These design guidelines provide for continued integration of affordable and pragmatic building design and aesthetically pleasing landscape, streetscape, pedestrian corridors, outdoor spaces, and wayfinding and signs that serve the community's needs for health care and well-being. These design guidelines are intended to protect and enhance the Campus's clear identity in a manner that is compatible with the surrounding community it serves, strengthening adjacent neighborhoods and stimulating revival of adjacent areas.

The overall concept is centered on well-designed public buildings, strategically placed within the 54-acre Campus to provide convenient and efficient health care to serve the



needs of the community. The overall experience of patients, visitors, medical staff, and employees is further enhanced through the use of landscaping and signs that create an inviting and readily navigable Campus.

BUILDINGS

The two primary buildings where inpatient services are provided, LBMMC and MCH, set the architectural tone for the Campus. As with many public buildings constructed during the Kennedy-Johnson-Nixon-Ford years, LBMMC, MCH, and the other existing buildings of the Campus have a variety of forms that were developed to meet the code and health care delivery needs at that time when they were constructed. Thus, patient and visitor wayfinding is best facilitated by well-designed buildings that are easily distinguishable. The recommended capital improvements have been designed to retain the primary height and massing in the center of the Campus, bounded by Columbia Street to the north, Atlantic Avenue to the east, 27th Street to the south, and Long Beach Boulevard to the west (Figure 5.17, *Massing Diagram*).

Building Setbacks

Building setbacks will conform to applicable specifications of the City of Long Beach Zoning Code.

Building Materials

This 2005 Master Plan envisions construction of structures in four locations within the Campus: (1) expansion of the MCH through the construction of three buildings south of the existing MCH, southwest of the intersection of Columbia Street and Atlantic Avenue; (2) construction of a central plant building to support the pediatric inpatient tower, northwest of the intersection of Atlantic Avenue and 27th Street; (3) construction of a new dedicated outpatient building, southeast of the intersection of Spring Street and Long Beach Boulevard; and (4) construction of a parking structure adjacent to the existing parking structure located on 27th Street. The conceptual design of the expansion of the MCH integrates key design features of the existing LBMMC and MCH, including strong geometric lines, glass, and exterior sheathing (Figure 5.18, *MCH Conceptual Design*). The pediatric inpatient tower will be

Agency	Permits and Approvals	How to Obtain Permit
U.S. EPA	Asbestos and Lead-Based Paint Abatement	Application
Cal/OSHPD	Plan Approval	Application
Cal/OSHA	Demolition Permit	Application
Cal/OSHA	Asbestos Worker Notification	Application
California EPA, Department of Toxic Substances Control	Asbestos Abatement Notification	Application
California Department of Toxics Substance Control	Health Risk Assessment and Work Plan	Application
State Department of Oil and Gas Resources	Oil Well Abandonment Permits	Application
Regional Water Quality Control Board	NPDES Permit	Application
South Coast Air Quality Management District	Notification	Application
City of Long Beach	Demolition Permit	Application
City of Long Beach	SWPPP Drainage Permit	Application
City of Long Beach	Road Encroachment Permit	Application
City of Long Beach	Truck Haul Permit	Application
City of Long Beach	Grading Permit	Application
City of Long Beach	Building Permit	Application

NOTES:
 Cal/OSHA = California Division of Occupational Safety and Health
 Cal/OSHPD = California Office of Statewide Health Planning and Development
 EPA = Environmental Protection Agency
 NPDES = National Pollutant Discharge Elimination System
 SWPPP = Storm Water Pollution Prevention Plan

TABLE 5.08 - Permit Requirements



FIGURE 5.17 - Massing Diagram

distinguished from the existing MCH building through the use of architectural details, including distinct patterning of glass and sheathing, flagpoles and banners, exterior artwork featuring children and children's activities, sculpture, and gardens. The MCH link building and pediatric outpatient buildings would use similar architectural details to provide compatible, yet distinguishable, exterior building facades.

The central plant building would be designed with massing, geometry, and exterior finish comparable to other secondary buildings within the Campus, such as the Buffum's Plaza (Figures 5.10A and 5.10B).

Like the MCH pediatric inpatient tower, the design of the TCI would include the use of strong geometric lines, glass, and exterior sheathing (Figure 5.18); however, the massing of the building and relation to the landscaping would be comparable to other existing secondary buildings within the Campus such as the West Facility.

It is anticipated that a parking structure may be constructed east of the existing parking structure, located south of

Memorial Drive/Patterson Street (Figure 5.19, *Parking Structure Screened with Landscaping*). It is anticipated that the parking structure will be comparable in design and massing to the existing parking structure. Parking areas shall be differentiated by use (e.g., visitor, employee, and physician). The location for the parking structure was selected to support the primary facilities, LBMCC and MCH, with the greatest number of related trips.

Service Areas

The design of the MCH central plant building and its location has been developed in a manner that is consistent with the concerns of the City of Long Beach. In regard to the location of a utility building in proximity to the major streets, the building design strives to put its best face toward Atlantic Avenue and 27th Street. The building masses are broken up into several smaller forms with varying heights and finishes, reducing the apparent overall scale and humanizing the elements and form of the building (Figure 5.11). Another benefit of this design approach is that it allows the buildings to be clad in various complementary finishes. Landscaped setbacks soften the building. The



View of MCH Expansion
from Intersection of
Columbia Street and Atlantic Avenue



View of MCH Expansion
from Atlantic Avenue



View of MCH Expansion
from Parking Lot K



View of MCH Expansion
from LBMCC



FIGURE 5.18 - MCH Conceptual Design



FIGURE 5.19 - Parking Structure Screened with Landscaping

combination of landscaped setbacks and proposed monument signage at the corner help to establish this building as an anchoring element of the Campus.

LANDSCAPING

The capital improvements recommended in conjunction with this 2005 Master Plan will be integrated into Campus with landscaping, including selective plantings of mature trees and shrubs to create a pleasant and secure environment for medical staff, employees, patients, and visitors. As with the existing landscaped elements of the Campus, the proposed capital improvements will be designed to define the Campus boundaries, reinforce pedestrian and vehicular entry points, provide pleasant paths of travel for pedestrians, screen parking area, and treat building edges and courtyards to provide attractive

vistas from the surrounding community and public right-of-ways (Figure 5.20, *Conceptual Landscaping Plan*).

Five general categories of landscape treatment will be applied to capital improvements, recommended as part of this 2005 Master Plan: (1) Campus edge, (2) primary entries, (3) edge treatment of interior sidewalks, (4) edge treatment of surface parking lots, and (5) building edges and courtyards. The edge of the MCH expansion building, pediatric inpatient tower, link building, pediatric outpatient building, and central plant building will be treated in a manner that is comparable to the existing Campus edge and streetscape along Long Beach Boulevard and Atlantic Avenue. The Campus edge will be treated with a white, wrought-iron fencing set back with groundcover consisting of low-lying shrubs or grass and trees in the foreground

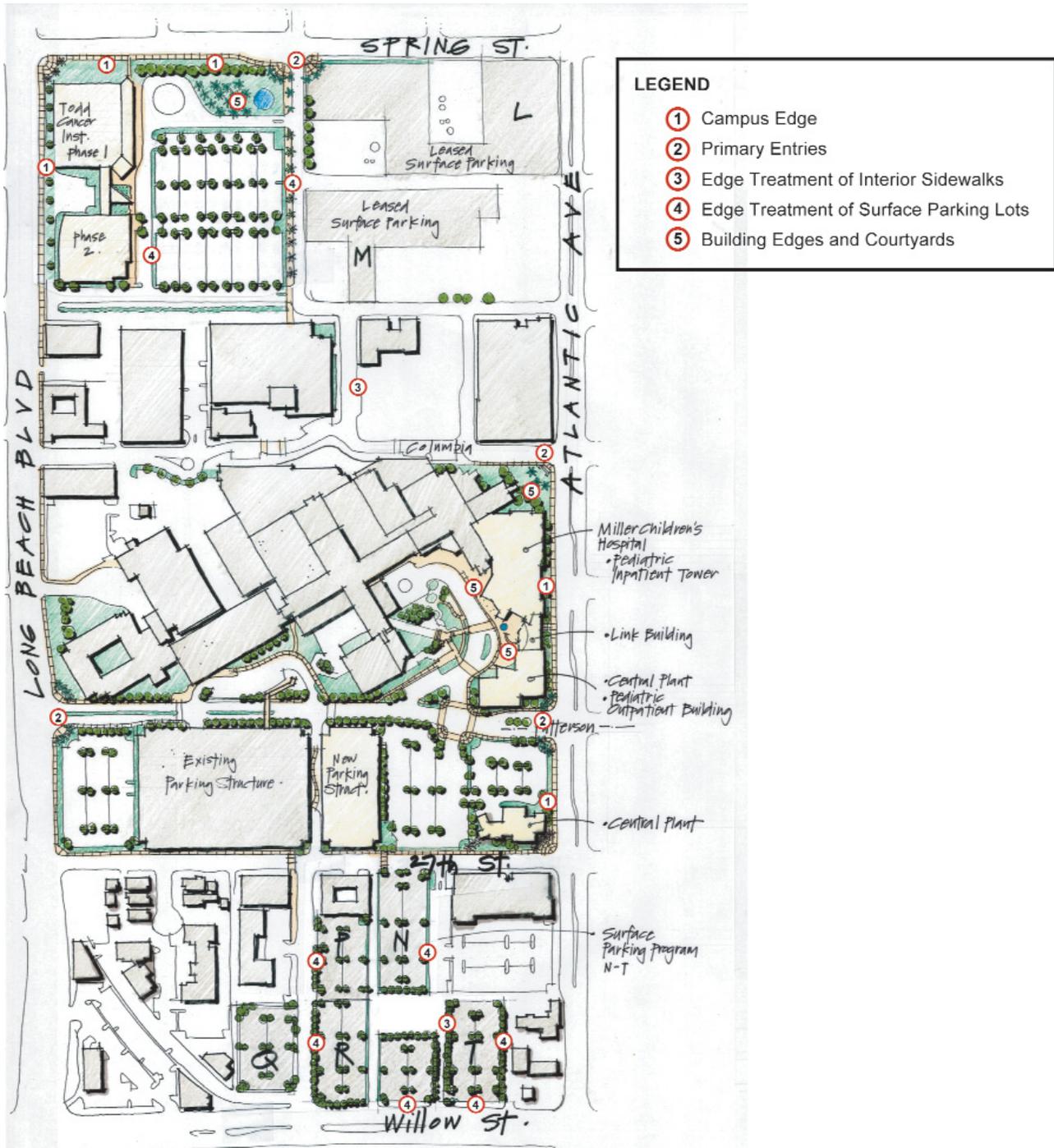


FIGURE 5.20 - Conceptual Landscaping Plan



(Figure 5.21, *Campus Edge Landscaping*). The relocated primary Campus entrance on Memorial Center Drive/Patterson Street at Atlantic Avenue will be treated with tubular fencing landscaped with alternating pine and ficus trees, flowering shrubs, groundcover, and turf (Figure 5.22, *Primary Entry Landscaping*). The edges of pedestrian walkways linking the TCI and surface parking areas to the interior of the Campus will be treated with turf, occasional trees, hedges, and occasional hardscape such as concrete masonry walls to separate walkways from adjacent buildings (Figure 5.23, *Edge Treatment of Interior Sidewalks*). Planting will be organized such that security lighting is not impeded. The edges of surface parking lots will receive comparable treatment to interior walkways with some combination of turf, shrubs, and trees (Figure 5.24, *Edge Treatment of Surface Parking Lots*). In addition, lighting will be provided within parking lots and structures in accordance with the security plan on file with the City of Long Beach Police Department. New buildings, including the MCH pediatric inpatient tower, link building, MCH outpatient building, central plant building, and TCI will have landscaping between the sidewalk edge and the building, as well as landscaped courtyards (Figure 5.25, *Building Edges and Courtyards*). These building landscape areas will typically consist of turf, clusters of trees such as ficus and palm, and clusters of shrubs.

SIGNS

The proposed capital improvements will be integrated into the Campus through the application of the existing three-tiered sign program: (1) gateway signs, (2) building signs, and (3) directional signs. Gateways will be identified through the installation of large, rectangular stone or concrete placards approximately 4 feet in height, with

“Long Beach Memorial Medical Center” annotated in raised san serif lettering. It is anticipated that gateway monuments will be installed at three locations in conjunction with this 2005 Master Plan: (1) the realigned intersection of Memorial Drive/Patterson Street and Atlantic Avenue, (2) the intersection of Columbia Street and Atlantic Avenue, and (3) the intersection of Spring Street and Long Beach Boulevard (Figure 5.26, *Conceptual Sign Program*). The monument at the realigned roadway will be completed prior to operation of the roadway. The monument of the intersection of Columbia Street and Atlantic Avenue will be completed prior to operation of the MCH pediatric inpatient building. The monument at the intersection of Spring Street and Long Beach Boulevard will be installed prior to the operation of the TCI (Figure 5.27, *Entry Sign for LBMMC on Atlantic Avenue*). The three additional primary inpatient and outpatient treatment buildings will be treated with commercial-grade backlit signs identifying the respective buildings as part of the “Miller Children’s Hospital” or the “Todd Cancer Institute.” Identification signs will be mounted near the cornice of the building, at a location where the sign will be visible from surrounding public routes of travel. The signs will be finished in san serif lettering. The signs will be uplit or backlit to facilitate nighttime identification of the facilities (Figure 5.28, *Neon Sign for MCH on Top of the Main Building*). Directional signs will be installed to direct drivers to on-site and leased off-site parking areas and to direct pedestrians from parking areas to the TCI and MCH expansion (Figure 5.29, *Directional Signage*). Directional signs will be placed at locations that are readily visible from a distance of 100 feet. The signs will be completed with san serif lettering in a color that creates a distinctive contrast to the background color.

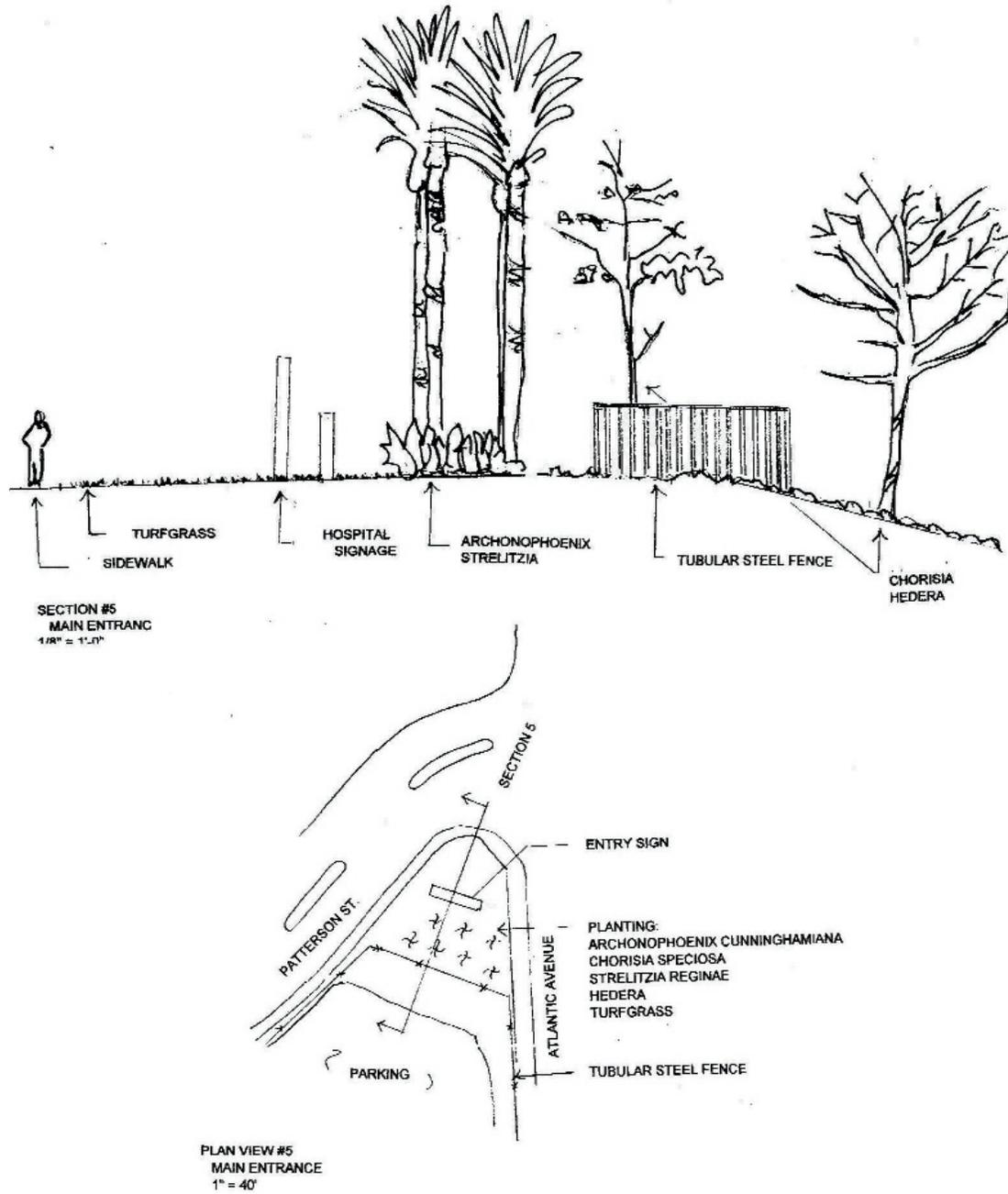


FIGURE 5.21 - Campus Edge Landscaping

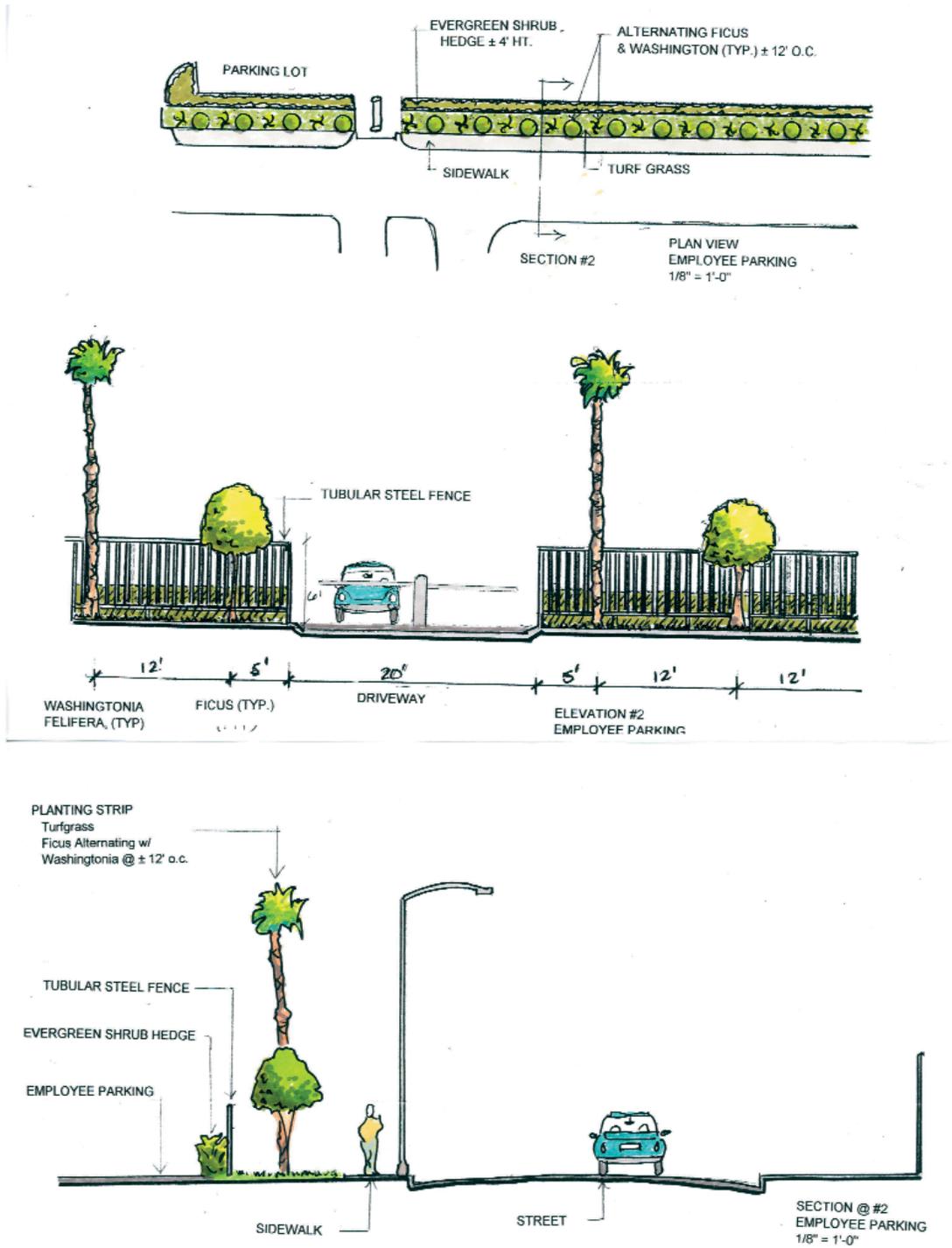


FIGURE 5.22 - Primary Entry Landscaping



FIGURE 5.23 - Edge Treatment of Interior Sidewalks

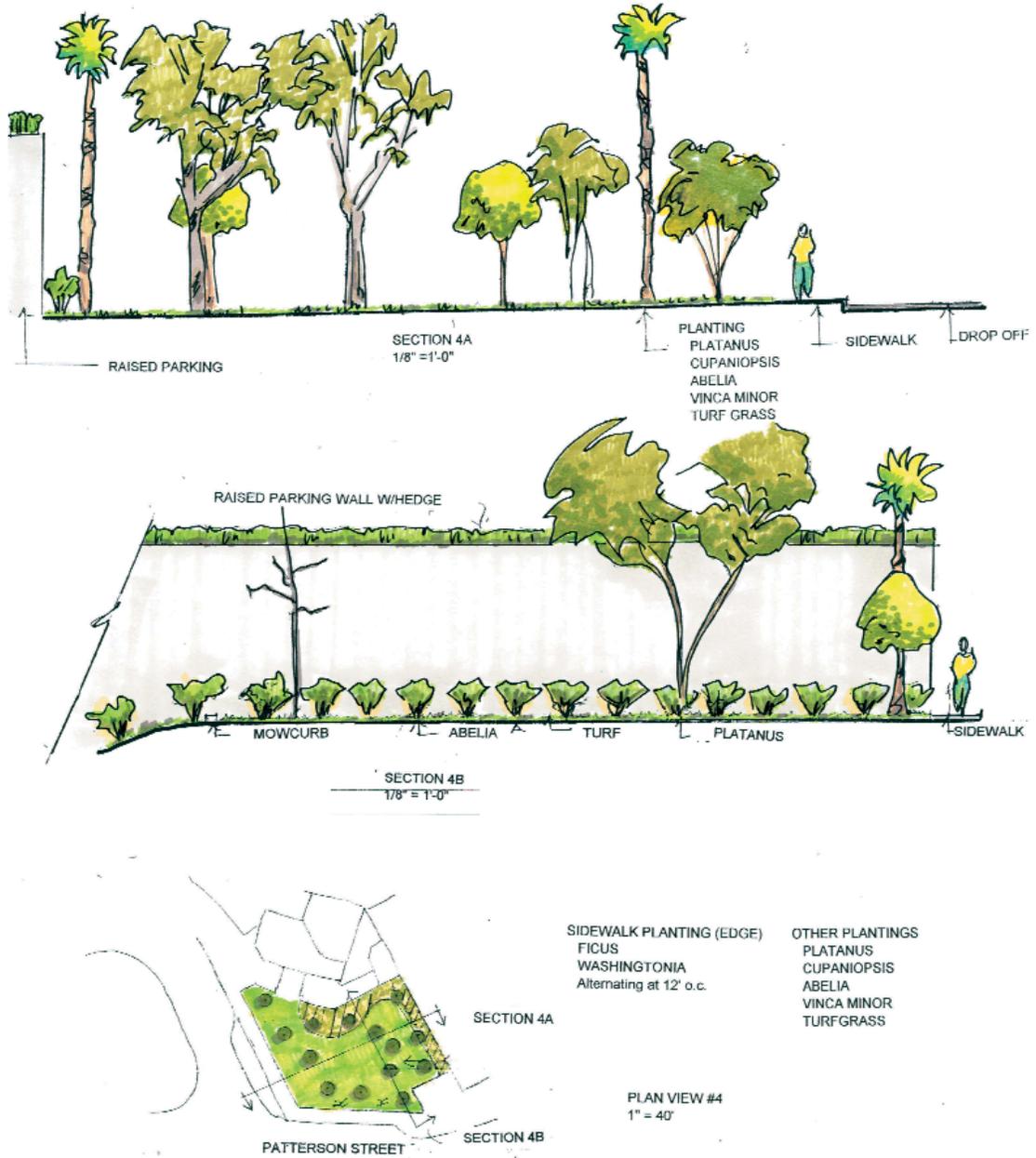


FIGURE 5.24 - Edge Treatment of Surface Parking Lots

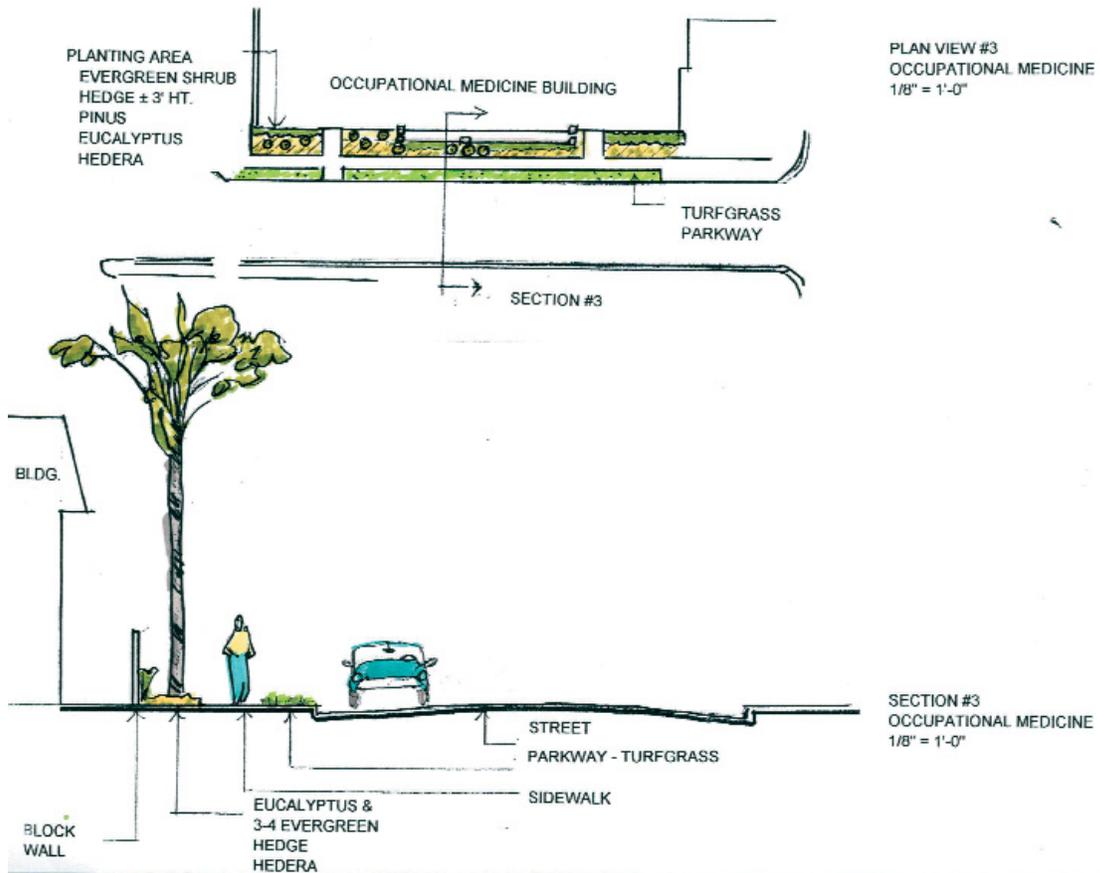


FIGURE 5.25 - Building Edges and Courtyards



FIGURE 5.26 - Conceptual Sign Program



FIGURE 5.27 - Entry Sign for LBMCC on Atlantic Avenue



FIGURE 5.28 - Neon Sign for MCH on Top of the Main Building



FIGURE 5.29 - Directional Signage



Section 6

ACKNOWLEDGMENTS

This section of the Master Plan acknowledges the extensive team of health care and consulting professionals that contributed to its development.

Meetings were held with ISES Corporation and ADAMS Project Management Consulting, LLC to review the study and findings of the Facilities Condition Analysis Reports. The ISES Corporation reports were used to establish the scope of work relating to the infrastructure for the facilities. Reports prepared by Nabih Youssef and Associates and Linscott, Law & Greenspan Engineers were provided by the hospital and were used to establish direction for the structural status and parking analysis of the hospital. Existing project information was provided by the architects working on those projects and by the hospital. All relevant information resulting from preparation of the Draft Environmental Impact Report (EIR) and supporting technical appendices was integrated into this 2005 Master Plan.

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