

# **UCI HEALTH SCIENCES**

# College of Medicine

The UCI College of Medicine is dedicated to advancing the knowledge and practice of medicine through scholarly research, physician education and the provision of high-quality medical care to patients. The College actively nurtures the development of scholars in the clinical and basic sciences and the dissemination of their research advances for the benefit of society.

The College of Medicine has 1,080 students (380 medical, 620 resident-physicians and fellows, and 80 graduate). It offers one of the country's largest residency training opportunities in primary care and internal medicine and houses some of the most advanced equipment in medical imaging and laser medicine in the world.

Faculty conduct innovative research in the following areas of emphasis: bioethics, biomolecular structure, oncology, cardiovascular and pulmonary diseases, geriatric medicine, immunology, molecular and human genetics, the neurosciences and perinatology. The College is awarded tens of millions of dollars annually due to its commitment to leading edge research.

The primary location for teaching activities is UCI Medical Center, located in the city of Orange. In addition to offering medical students and residents a broad range of clinical experiences, the College of Medicine has teaching affiliations with several other area hospitals, including the Long Beach VA Medical Center, and Long Beach Memorial Medical Center.

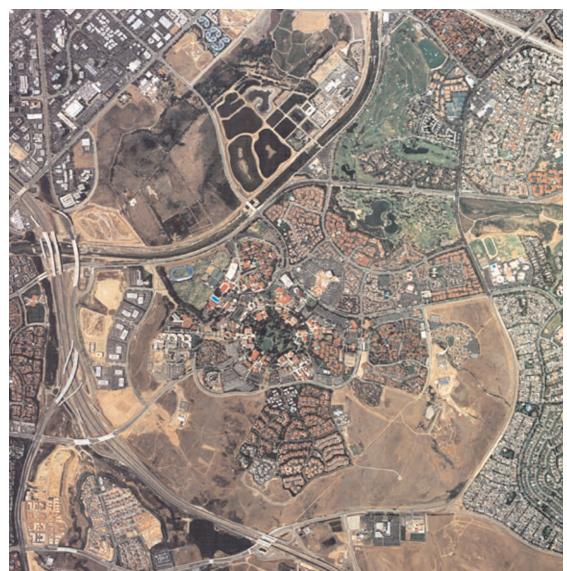


Figure 6: UCI Main Campus - Irvine, California (1999)

### **UCI Medical Center**

UCI Medical Center provides a unique and valuable healthcare resource for the Orange County community. UCIMC is a fully accredited hospital licensed for 453 beds and is the only university hospital in Orange County offering a full scope of specialty and general care services. UCIMC is at the forefront of medicine and is increasingly recognized for its provision of distinguished specialty care services including the following:

- The Chao Family Comprehensive Cancer Center is one of five National Cancer Institutes designated comprehensive cancer centers in California and the only one in Orange County.
- UCIMC operates Orange County's only Level I Trauma Center.
- The UCI Regional Burn Center was one of the nation's first burn facilities.
- UCIMC provides the only combined tertiary level perinatal and neonatal program in Orange County.
- UCIMC's Neuropsychiatric Center provides comprehensive inpatient and outpatient psychiatric programs for children, adolescent, adult and geriatric patients. The Center also has a distinguished clinical research program.
- The Division of Transplantation provides a full scope of clinical services including liver, pancreas, kidney and bone marrow transplantation.

- The UCI Ophthalmology Group provides a comprehensive range of eye services, representing every ophthalmologic subspecialty.
- The Antoci Center for Pediatric Urology and Nephrology specializes in the treatment of diseases of the genitourinary system in children including pediatric kidney, bladder and genital system disorders.
- The UCIMC Comprehensive Epilepsy Program specializes in the diagnosis and treatment of adults and children with epilepsy and is the first of its kind in Orange County.

UCIMC also plays a significant role as a primary care provider in Orange County, offering extensive family and preventative health services throughout the area. UCIMC outpatient health centers include:

- UCI Medical Pavilions on the UCIMC campus in Orange.
- UCI Family Health Center in Anaheim.
- UCI Family Health Center in Santa Ana.
- UCI Westminster Medical Center.
- Gottschalk Medical Plaza on the main UC Irvine campus in Irvine.

## **UCI Medical Group**

The UCI Medical Group operates as part of the UCI College of Medicine where all of the group's specialists and sub-specialists are faculty members of the College. The UCI Medical Group also has primary care physicians and a group of community-based physicians located throughout Orange County.



Chao Family Comprehensive Cancer Ctr.



UCI Neuropsychiatric Center



UCI Medical Plaza (Main Campus)

# **COMMUNITY ENVIRONMENT**

# City & County Profile

# Population & Growth

Orange County has experienced steady growth since the 1950's with nearly 3 million residents in the year 2000. The four major cities in UCIMC's primary service area (the cities of Orange, Anaheim, Garden Grove & Santa Ana) have also experienced substantial growth and have a total population of over 916,000 residents.

# **Ethnicity**

The four major cities in UCIMC's primary service area collectively have an ethnically diverse population with over 60% of all residents being either Hispanic or Asian / Pacific Islander. Hispanics account for the majority of this population at about 48% compared to 28% for all of Orange County. Garden Grove has 2 times the County representation of Asian / Pacific Islanders, and Santa Ana has 2½ times the County representation of Hispanics.

Table 1: Year 2000 Population

	Population
Orange County	2,853,757
Orange	129,400
Anaheim	310,654
Garden Grove	158,300
Santa Ana	317,700

Source: Center for Demographic Research, CSUF

**Table 2: Historical Population Growth** 

	Orange County	Orange	Anaheim	Garden Grove	Santa Ana
1950's	69%	62%	86%	31%	55%
1960's	50%	66%	38%	31%	23%
1970's	27%	16%	24%	1%	4%
1980's	20%	17%	18%	14%	31%
1990's	15%	14%	14%	10%	8%

Source: Center for Demographic Research, CSUF

Table 3: Ethnicity (1998)

	Orange County	Orange	Anaheim	Garden Grove	Santa Ana
White, Non Hispanic	58%	59%	46%	44%	17%
Hispanic	28%	30%	40%	30%	71%
Asian & Pacific Islander	12%	9%	11%	24%	10%
African American	2%	2%	3%	2%	2%
Other Races	<1%	<1%	<1%	<1%	<1%

Source: Center for Demographic Research, CSUF

### <u>Age</u>

The median age of 34.3 years for Orange County is higher than for all four of the major cities in UCIMC's primary service area. The median age in these cities ranges from 27.3 in Santa Ana to 33.5 in Orange. The percentage within the age distribution groups (i.e., 0-4, 5-14, etc.) for Orange, Anaheim and Garden Grove, aligns closely to Orange County. Santa Ana, however, is significantly younger with 67% between 0-34 compared to Orange County at 53%.

#### Income

Three of the four major cities in UCIMC's primary service area have a lower median income level compared to all of Orange County. The City of Orange is slightly higher than the County and Santa Ana is considerably lower.

## Health Insurance

In Orange County, about 21% of the population between the ages of 0 - 64 lack any type of private or public health insurance. This compares to about 24% of California residents between the ages of 0 - 64 who are uninsured.

Refer to Section 3 – UCI Health Sciences Strategic Plan for FY 2000 payor mix of UCIMC inpatients.

Table 4: Age Distribution (1998)

	Orange County	Orange	Anaheim	Garden Grove	Santa Ana
0 - 4	9%	8%	10%	9%	12%
5 - 14	15%	15%	16%	16%	20%
15 - 24	12%	12%	13%	13%	14%
25 - 34	17%	18%	18%	17%	21%
35 - 54	30%	30%	28%	29%	24%
55 - 64	8%	8%	7%	7%	5%
65 - 74	5%	6%	5%	5%	3%
75 +	4%	4%	3%	4%	2%
Median Age	34.3	33.5	31.0	31.9	27.3

Source: Center for Demographic Research, CSUF

**Table 5: Income (1990)** 

	Orange County	Orange	Anaheim	Garden Grove	Santa Ana
Median Household	\$45,922	\$46,539	\$39,620	\$39,822	\$35,162
Median Family	\$40,599	\$52,164	\$43,133	\$41,930	\$34,760
Per Capita	\$16,409	\$19,064	\$15,746	\$13,976	\$10,019

Source: Center for Demographic Research, CSUF

Table 6: Health Insurance Population Ages 0 - 64 (1999)

	Orange County	California
Uninsured	21%	24%
Insured	79%	76%
- Medi-Cal	7%	
- Job-Based Coverage	66%	
- Private & Other	6%	

Source: Center for Demographic Research, CSUF

## Vital Health Statistics - Births & Deaths

Anaheim, Garden Grove and especially Santa Ana are experiencing a higher birth rate (23, 18.7 & 27.6 respectively) than the County (at 18 per 1,000 population). Orange, Anaheim and Garden Grove exceed Orange County's death rate of 6 per 1,000 population with Garden Grove having the highest death rate at 6.6.

# Vital Health Statistics – Major Causes of Death

The top three incidents of Orange County deaths in 1997 included coronary heart disease, stroke and lung cancer. All but one of the listed major causes of death in 1997 for Orange County were above the Healthy People 2010 target.\*\* Excluding homicide and suicide, the top causes of death that deviated from the Healthy People 2010 target included coronary heart disease, cancer (colon and breast) and stroke.

\*\* Healthy People 2010 is a prevention agenda developed by the U.S. Department of Health and Human Services that identifies the most significant preventable threats to national health and establishes goals to reduce these threats by the year 2010.

### Summary

The population within UCIMC's primary service area generally has a higher median age, lower median income, higher birth rates, and higher death rates when compared to Orange County as a whole. Current demographic standing and related health indicators, coupled with the fact that Orange County pre-

dominantly falls short of the Department of Health Services - Healthy People 2010 target, suggests that UCIMC will be of critical importance in the improvement of health care conditions within the County.

Table 7: Vital Health Statistics - Births & Deaths (1997)

	Orange County	Orange	Anaheim	Garden Grove	Santa Ana
Total Births	47,132	2,223	6,954	2,969	8,665
Birth Rate*	18	17.1	23	18.7	27.6
Total Deaths	15,961	793	1,862	1,039	1,452
Death Rate*	6	6.1	6.2	6.6	4.6

Source: Center for Demographic Research, CSU Fullerton

\*Births & Deaths are per 1,000 population

Table 8: Vital Health Statistics - Major Causes of Death (1997)

	Per	100,000 Popula	ntion
Cause of Death	Orange County	Healthy People 2010 Target**	Delta: Orange County & HP 2010
Coronary Heart Disease	227.1	166	61.1
Stroke	60.1	48	12.1
Lung Cancer	50.1	44.8	5.3
Breast Cancer (Female)	28.1	22.2	5.9
Colon Cancer	18.8	13.9	4.9
Unintentional Injury	13	20.8	-7.8
Vehicle Injuries	9.3	9	0.3
Suicide	8.9	6	2.9
Homicide	4.9	3.2	1.7

Source: National Center for Health Statistics

# **Surrounding Areas**

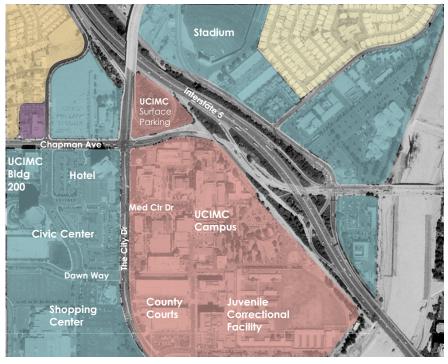
## Land Use

The City of Orange's General Plan designates the area immediately surrounding UCIMC as primarily high-density commercial use and public/quasi public use. Public land use is located to the south of the campus and commercial use is located to the west. North of the site is designated commercial use although some of this property in this area belongs to Cal-Trans. Immediately to the east of the campus is Interstate 5.

Land use beyond properties immediately adjacent to UCIMC is primarily designated as commercial and includes a portion classified as office professional. Also nearby is low-density to low/medium-density residential zoning. To the east, beyond Interstate 5, is the old town district, a mixed-use area containing the City of Orange Civic Center.

## **Facilities**

Located immediately to the south of UCIMC are the County Courts and Juvenile Correctional Facility. Immediately to the west of the campus is a large shopping & entertainment center, a high rise hotel, and several office buildings. This includes UCIMC's Building 200, which houses financial services, business office, human resources, information services, some outpatient services and other services. Located further to the west is the Crystal Cathedral, a major landmark facility for the community.



University of California Irvine Medical Center Long Range Development Plan



FIGURE 7

# SURROUNDING AREA

LEGEND

Public Facilities / Quasi Public

Low Density Residential

Low Medium Density Residential

Commercial

Office / Professional



UCIMC Aerial Photo (View from north)



View from north-west



View from north-east

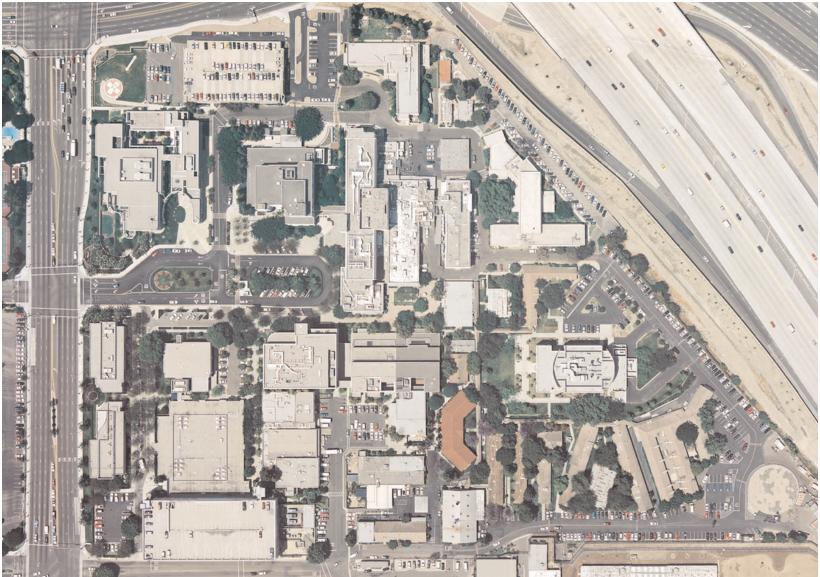


Figure 8: UCIMC Photo (2001) North 🔨

# UCI MEDICAL CENTER

## **Physical Setting & Site Characteristics**

### Location & Boundaries

At the center of Orange County, UCIMC is situated in the western portion of the City of Orange adjacent to the Cities of Anaheim, Santa Ana and Garden Grove. The 33-acre site is bounded by roadways on the front and sides of the property (The City Drive to the west, Chapman Ave. to the north, Dawn Way to the south) and Interstate 5 along the back of the site. Visibility of the site is provided along the entire front of the property at the west and along much of the northern side. Many of the taller buildings can be seen traveling in both directions from the adjacent freeway.

# Topography

The campus is situated on the Santa Ana River flood plain next to the Santa Ana River channel. The site is relatively flat with elevations ranging from 129 to 135 feet above mean sea level. The slope direction is generally from north to south.

## Seismicity

Southern California is a seismically active region and UCIMC is in proximity of several surface faults that are presently zoned as active or potentially active. Regional faults include:

•	Norwalk	6 miles away
•	Whittier	10 miles away
•	Newport-Inglewood	11 miles away
•	San Jacinto	38 miles away
•	San Andreas	41 miles away

## Geology

The site is underlain by soils in the Metz series, consisting primarily of sandy soils. The Metz series consists of somewhat excessively drained soils typically found on floodplains and alluvial fans. The soil profile is generally one to six feet of fill soils (silty-sands) overlying interbedded native and silty sands.

### Climate

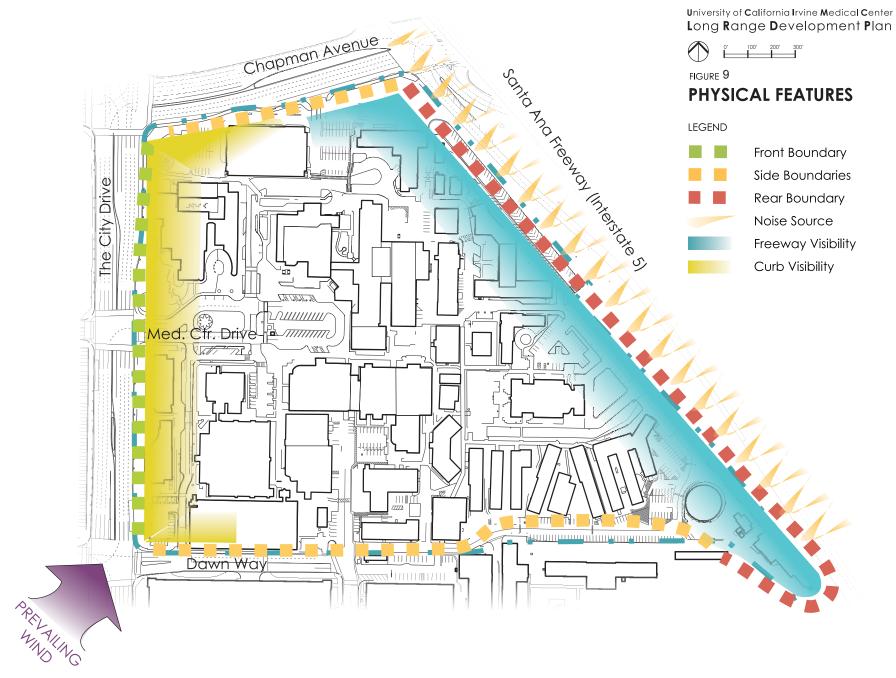
The area experiences generally dry conditions with mild winters. Average temperature ranges from a winter low of about 52° to a summer high of about 76°. Average rainfall in the region is about 13 inches. Prevailing winds blow in a north-east direction.

## Landscape & Vegetation

UCIMC's use of landscape elements has been an important factor in the development of a welcoming, hospitable healthcare setting within an urban environment. The western half of the site has a well-developed mature landscape framework which was guided by a master plan. Distinct landscape palettes have been selected to distinguish entrances, perimeter edges, streets, pedestrian paths and open spaces and gardens. Throughout the site a mix of trees, shrubs, ground covers/grasses and flowers have been arranged in formal and informal designs to emphasize and distinguish these elements of the landscape structure and reinforce a unique pedestrian oriented atmosphere on the site. A range of scales of plant materials exist with a majority of the taller trees

being located along The City Drive and Medical Center Drive. Site design guidelines for outdoor furnishings, lighting, and signs have been carefully established and implemented.





### **Current Land Use**

Land use on the Orange campus is organized into four major zones - Inpatient, Ambulatory Care, Academic/Research/Administrative, and Service. Structured parking is located within the Inpatient and Ambulatory Care zones.

A majority of the patient care activity is concentrated at the front of the site to the west with non-patient activity situated to the back of the site. Several of the zones overlap in use such as Inpatient overlapping Academic/Research/Admin and Ambulatory Care overlapping Service. These "transition areas" developed primarily due to evolving program expansion/contraction and the need to have functionally related activities located together.

The campus ranges from medium-density use to low-density use with the inpatient zone having the greatest density. The abundance of single story facilities results in a site with high site coverage but low density. Open space on campus is minimal due to the high level of site coverage.

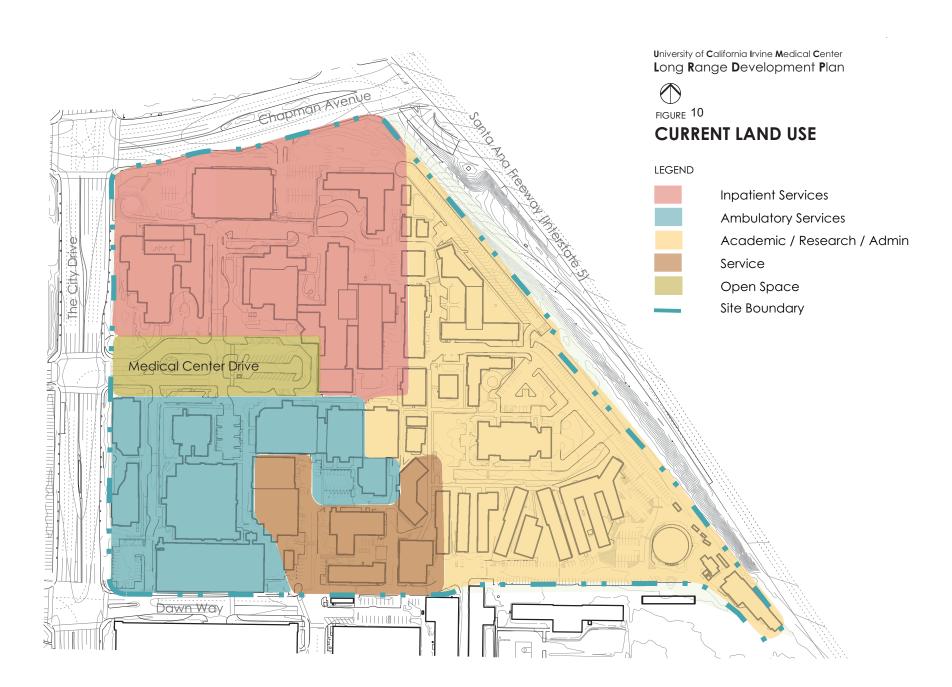
Medical Center Drive provides vehicular and pedestrian circulation to the Inpatient and Ambulatory Care zones and is the central organizing element on the site.

Current land use at UCIMC has both positive and negative aspects. The location of patient/public functions at the front of the campus is beneficial for access and wayfinding. The separation of patient/public from non-patient/public is a good overall site planning approach for circulation, design character and environmental qualities.

The separation of inpatient services from specific ambulatory services presents several problems. First, there are patient care issues associated with unenclosed transportation of inpatients. In addition, there are operational inefficiencies resulting from not having some inpatient and outpatient services integrated.

The Service zone is in a good location for service vehicle access, yet it is in a poor location relating to Plant services since it is neither central nor near the Inpatient zone which it primarily serves.

Refer to page 30 for current Parking conditions.



# **Facility Evaluation**

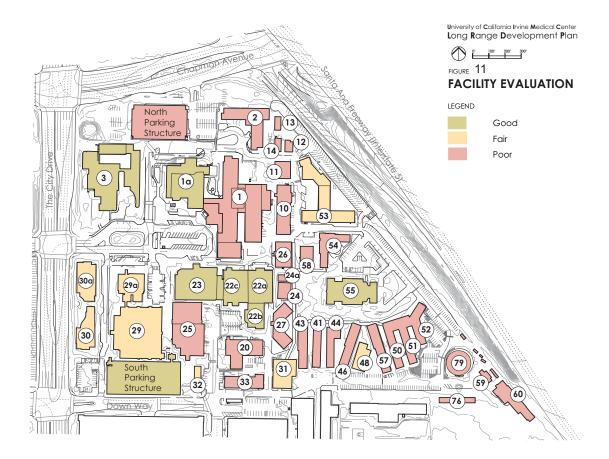
An evaluation was performed for all buildings on the UCIMC campus in order to determine the potential of using facilities in the future. Each building was rated based on the following criterion (listed from highest to lowest priority):

- Seismic status (SB-1953 & UC standards)
- General condition
- Age
- Construction type
- Number of floors / density
- Building efficiency (usable area vs. gross area
- Image

Results were categorized into good, fair, and poor facilities:

Good: 8 facilities
Fair: 9 facilities
Poor: 28 facilities

A majority of the facilities are currently beyond their useful lives (60% are rated poor), and many more will reach this stage over the next several years. Facilities classified as Good typically had favorable seismic ratings, were more recently built (ranging from 1982 To 1997), were in good condition and provided increased site density.



## **Facility Space Use**

### Inpatient Services

Inpatient services currently account for the largest functional use category on the site at 374,695 gsf, equating to about 41% of the entire campus. Patient care activities for Inpatient Services are primarily provided in three facilities including the main hospital facility (Building 1), the adjacent and connected bilding (Building 1A), and the freestanding UCI Neuropsychiatric Center (Building 3).

Building 1, built in 1962, houses 205 beds including all adult critical care units, all pediatric and infant beds, several Medical/Surgical units, the Burn Unit, and the Acute Rehabilitation Unit. Other "Basic" and "Supplementary" services include Surgery/Recovery, Cardiac Cath, Nuclear Medicine, Laboratory, Pharmacy, Dietary, Administration, etc.

Building 1A, built in 1981, houses 102 beds including Perinatal Services, Progressive Care (monitored unit), Oncology beds, and several Medical/Surgical units. This building also contains the Emergency Department, Urgent Care, Occupational Medicine and Diagnostic Imaging Services.

UCI Neuropscyhiatric Center, built in 1993, houses 84 beds including adolescent, adult, geriatric and research units, and also provides outpatient psychiatric care services.

In addition to the three primary facilities providing direct inpatient care, several other adjacent "non-acute care" facilities such as Building 10 and Building 2, contain hospital support functions including Anatomical Pathology, Respiratory Therapy core space,

Radiology support, Case Management, Trauma support, etc. These mixed-use facilities also provide Academic and Administrative services.

## **Ambulatory Care Services**

Ambulatory care services currently account for 167,633 asf, representing approximately 19% of the entire campus. A majority of the outpatient visits are concentrated in Pavilions I, II & III, built from 1973 - 1989. Services include primary and secondary care clinics. Due to growth of ambulatory care services over the past decades, outpatient care on the Orange campus is provided in many facilities. The majority of outpatient activity is located within the ambulatory zone, yet there are many outpatient services located within the hospital setting (e.g., Imaging, Urgent Care, Pediatric Urology, specific surgeries and procedures, etc.), and some outpatient services located within the academic zone (e.g., dialysis, rehabilitation, etc.).

The Diagnostic Services Center, built in 1986, provides specialized services including Cardiodiagnostics, Neurophysiology, Endoscopy, and others. When required, inpatients are transported from the hospital along an unenclosed route to this building.

The Chao Family Comprehensive Cancer Center, built in 1991, is a National Cancer Institute designated facility offering full outpatient oncology services including medical and surgical sub-specialty clinics, an infusion center, radiation therapy, a breast center, outpatient surgery, etc. In addition to oncology surgery, the Cancer Center is where many general ambulatory surgeries are performed. The facility also includes faculty offices and research labs.

Table 9: Current Space Use (Summary)

Service	Existing Area (GSF)
Inpatient Care (391 Avail. Beds)	374,695
Ambulatory Care	167,633
Academic / Research	264,203
Administrative	56,440
Service	47,393
Total	910,365



Aerial: Inpatient Services



Ambulatory Care Facilities

### Academic / Research

Academic/Research facilities currently account for 264,203 gsf, or approximately 29% of the entire campus. A large number of existing buildings on-site contain these functions. Academic functions generally include instructional space (i.e., classrooms, conference rooms, workrooms, etc.) and office space. Research functions generally consist of wet laboratories, dry laboratories (computer based research) and supporting areas.

The College of Medicine Office Building (Building 53) was built in 1958 and contains instructional space and offices as does a portion of Buildings 2 and 10. Many of the older buildings, largely built in the 1940's, contain academic/research functions, including some wet laboratories. The most recently built research building on campus is the UCI Health Sciences Laboratory (Building 55) constructed in 1997.

# <u>Administrative Services</u>

Administrative services currently account for 56,440 gsf, equating to about 6% of the entire campus. The majority of administrative services is provided in Building 200 located a block away from the Orange Campus off of Chapman Avenue. This houses business and financial services, marketing, information services, and many other functions. On-site administrative services occur in various buildings across several zones, yet a majority is located within the Academic zone.

### Service

Service currently accounts for 47,393 gsf, or about 5% of the entire campus. The service category generally consists of those facilities that support the entire campus including mechanical, electrical, plumbing systems, storage facilities and also functions such as materials management and facilities maintenance.

Plant services include the Steam Plant built in 1959 and the Primary Electrical Facility built in 1981. Materials Management functions are primarily provided via an off-site service center warehouse that supports the entire UCI health system network. On-site staging & distribution of materials occurs in Building 25, built in 1948. Facilities Maintenance is located in Building 33 which was built in 1943. Other service facilities are listed in the Plant/Utility Infrastructure.



Building 53



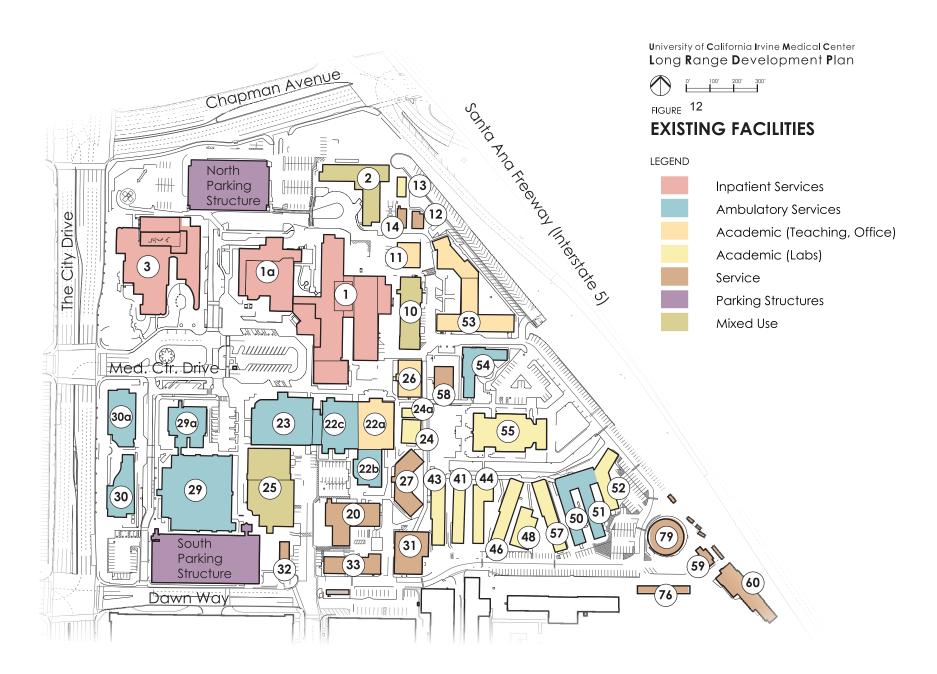
UCI Health Sciences Laboratory



Building 2



Steam Plant



## **Transportation, Circulation & Access**

### Freeway System

The Orange campus has excellent access off of major interstate and local freeways, including the Santa Ana Freeway (I-5), the Garden Grove Freeway (22), the 55 Freeway and the Orange Freeway (57).

# Roadways & Public Transportation

The site is bounded to the east by the Santa Ana Freeway, Chapman Avenue to the north, Dawn Way to the south and The City Drive to the west. The City Drive and Chapman Avenue are public transportation corridors providing local City and County-wide bus routes.

# **Recent Improvements**

Roadway and highway improvements include the widening of The City Drive and recent Interstate 5 freeway enhancements, including additional lanes and the reconfiguration of on-ramps and off-ramps for improved access.

## Access & On-Site Vehicular System

Primary access onto the site is from The City Drive onto Medical Center Drive. Dawn Way is located on County property, but provides access to UCIMC via agreement with the County. It is mainly used for patient/public/staff parking and service vehicle circulation. Chapman Avenue generally provides access for emergency vehicles and staff parking. Currently, there is limited circulation access to the eastern portion of the campus and routes that do exist through this area are circuitous.

### Patient Care Vehicular Access

Medical Center Drive provides direct drop-off and pick-up access to all of the patient care facilities that are located in the inpatient zone and the ambulatory care zone. Several patient care functions are located at the back of the site in the Academic/Research/Administrative zone and access to these is indirect and difficult.

# **Emergency**

There are two emergency access routes for the public. The primary route uses the main campus entry along Medical Center Drive and the secondary route is off of Chapman Avenue.

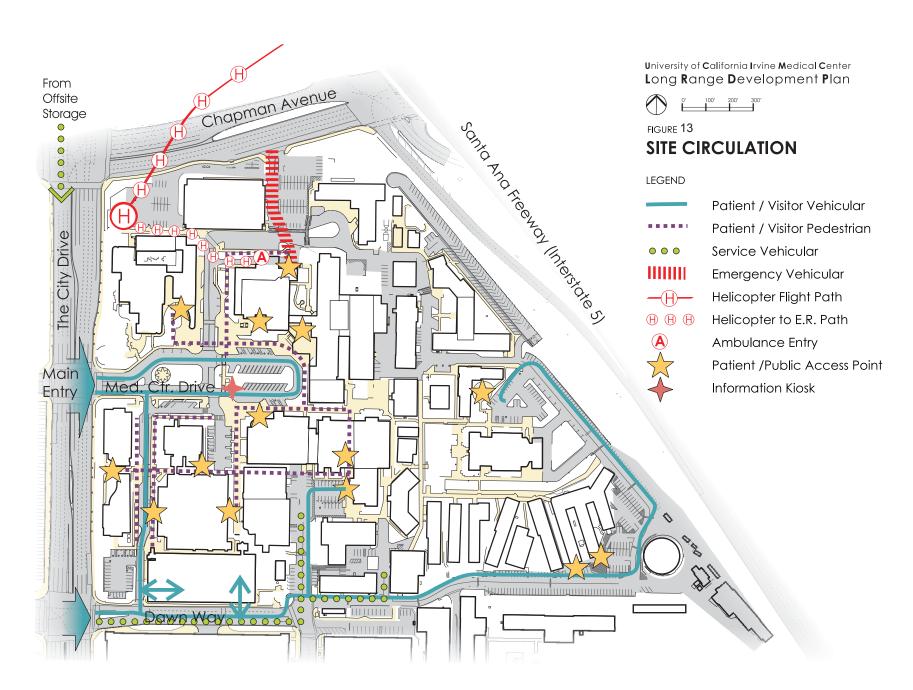
Ambulances and other emergency vehicles generally access the campus from Chapman Avenue since it has the most direct route to the Emergency Department. There is currently no dedicated emergency access driveway on site.

UCIMC is Orange County's only Level I designated Trauma Center. Essential to this is the helistop for emergency helicopter access. UCIMC currently averages about 4-6 flights per month. The helistop is located on-grade near the corner of The City Drive and Chapman Avenue and it is a Caltrans approved helistop complying with FAA regulations. The approved flight path is from the north-east which is straight into the prevailing wind direction. Upon arrival, patients are transported along an exterior path to a controlled access point within the Emergency Department.

## Pedestrian Circulation

Pedestrian paths on the UCIMC site help to tie the campus together. Primary paths are provided in north-south and east-west directions, linking the south parking structure and the ambulatory zone to the inpatient facilities. Similar to the vehicular system, pedestrian circulation is more circuitous moving in an eastwest direction.

There is significant pedestrian circulation between the campus and surrounding development. Staff regularly travel to and from UCIMC's Building 200 located a block away across The City Drive. Also, many pedestrians cross The City Drive to visit "The Block", a large commercial development consisting of restaurant, entertainment, and retail services.



# **Parking**

UCIMC currently has 2,465 total spaces on site, with additional parking located at Building 200 and the off-site Service Center. About two-thirds of the parking spaces are provided on-site and about one-third of the spaces are provided via lease contracts off-site. Off-site leased spaces are in the County Structure, located to the south of Dawn Way, and in the Manchester Lot located on Chapman Avenue. A majority of on-site parking is within the south structure and the north structure.

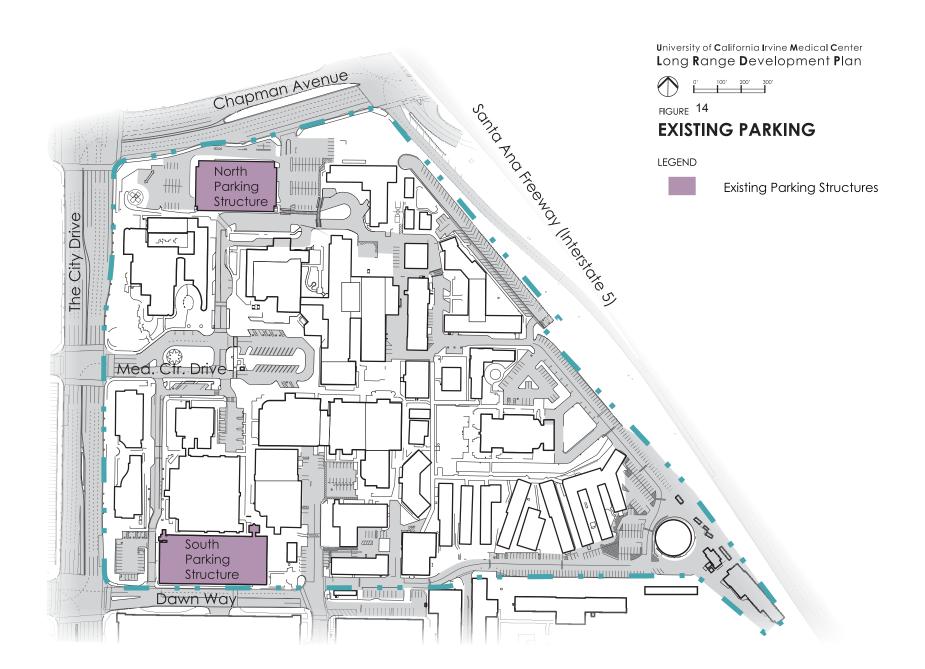
The parking structures that currently exist are fairly well situated at the perimeter of the site and in close proximity to campus access points. The south structure is located within the ambulatory care zone and serves all patient/visitor parking for the campus as well as some staff parking. The north structure is reserved for staff and physicians only. Emergency Department visitors can use the designated spaces to the north of Building 1A or the north structure.

Current primary parking deficiencies include:

- Insufficient staff parking on-site
- Lack of patient/visitor parking within the inpatient zone
- Seismically poor north structure
- Difficult access in and out of the south structure

**Table 10: Current Parking** 

Category	Existing # of Spaces
On Site	
North Parking Structure	318
South Parking Structure	675
Surface (Medical Center)	597
Subto	tal 1,590
Off Site	
200 Building (Surface)	Not Included
Warehouse (Service Center)	Not Included
County Lease (Up in 2004)	375
Manchester Lease (Monthly)	500
Subto	tal 875
Total	2,465



## Plant / Utility Infrastructure

Utilities on the UCIMC campus are currently provided from a combination of centralized plant facilities and decentralized services. Centralized plant facilities include the Steam Plant (Building 31) and the Primary Electrical Facility (Building 32). Chilled water is currently provided decentrally at each building.

#### Steam Plant

Building 31, constructed in 1959, provides highpressure steam to most buildings on campus for heating and domestic hot water. The hospital uses steam for sterilization and humidification. There is currently significant excess capacity.

## **Electrical Power**

The Primary Electrical Facility (Building 32), constructed in 1979, currently supplies normal and emergency power to the entire campus via 5kV service.

### Distribution System

Utilities are distributed via two routes - the underground utility tunnel and an overhead canopy distribution system. The utility tunnel was constructed in 1959 and runs from the plant facilities in the south to the northern portion of the site. The overhead canopy distribution system provides service primarily to the eastern portion of the site.

### **Medical Gases**

Medical gases are currently located at the northern area of the campus adjacent to the main hospital.

# Natural Gas

UCIMC is served by the Southern California Gas Company.

# <u>Water</u>

The domestic water system is comprised of a public and private system. The public water system is provided by the City of Orange and connects to the off-site mains at four locations, two at The City Drive and two at the southerly boundary of the campus. The City of Orange owns and operates water mains (varying from 8-inch to 16-inch lines) and various facilities within the UCI Medical Center campus including a one million gallon reservoir at the southeastern corner of the campus.

### Sanitary Sewer

The sanitary sewer system within the UCI Medical Center campus is a private system which is connected to the City of Orange local sewer lines and discharges into The Orange County Sanitation District's (OCSD) sewer trunk system.

## Storm Drainage

The UCI Medical Center campus is currently a fully developed site with storm water run-off conveyed through an underground system which discharges into the Santa Ana River.

### IS/Communication Systems

UCI's Data Center is within Building 200 located one block away on the corner of Chapman Avenue and Manchester Avenue. Network connections to the Medical Center are provided via two trunk lines of multi-mode fiber from Chapman Avenue, through the north parking structure then into the utility tunnel.

Phone service is provided by Pacific Bell. The main point of entry is from The City Drive where it travels along Dawn Way then into the utility tunnel. A redundant connection is provided via a T1 line to Building 200.

