

**CITY OF EL PASO, TEXAS**  
**AGENDA ITEM DEPARTMENT HEAD'S SUMMARY FORM**

**DEPARTMENT:** Development Services Department, Planning Division

**AGENDA DATE:** Introduction: September 30, 2008  
Public Hearing: October 7, 2008

**CONTACT PERSON/PHONE:** Ernesto Arriola, 541-4723

**DISTRICT(S) AFFECTED:** 3

**SUBJECT:**

An Ordinance approving the Medical Center of the Americas Master Plan as a study area plan to be incorporated into the City's comprehensive plan, "The Plan for El Paso", and that the 2025 General Land Use Map be amended to incorporate the modification. Applicant: City of El Paso and the Medical Center of the Americas Foundation (District 3)

**BACKGROUND / DISCUSSION:**

See attached report.

**PRIOR COUNCIL ACTION:**

N/A

**AMOUNT AND SOURCE OF FUNDING:**

N/A

**BOARD / COMMISSION ACTION:**

Development Coordinating Committee (DCC) – Unanimous Approval Recommendation  
City Plan Commission (CPC) –Recommendation pending (X-X)

\*\*\*\*\*REQUIRED AUTHORIZATION\*\*\*\*\*

**LEGAL:** (if required) N/A

**FINANCE:** (if required) N/A

**DEPARTMENT HEAD:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**APPROVED FOR AGENDA:**

**CITY MANAGER:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**ORDINANCE NO. \_\_\_\_\_**

**AN ORDINANCE APPROVING THE MEDICAL CENTER OF THE AMERICAS MASTER PLAN AS A STUDY AREA PLAN TO BE INCORPORATED INTO THE CITY'S COMPREHENSIVE PLAN, "THE PLAN FOR EL PASO", AND THAT THE 2025 GENERAL LAND USE MAP BE AMENDED TO INCORPORATE THE MODIFICATION**

**WHEREAS**, the Plan for El Paso was adopted by the El Paso City Council on April 27, 1999, and further ratified on March 13, 2001, pursuant to the provisions of Section 213.002 of the Texas Local Government Code as the comprehensive plan for the City; and

**WHEREAS**, the comprehensive plan serves as a general guide for the future growth and development of the City to promote public health, safety and welfare; and

**WHEREAS**, a specific recommendation of The Plan for El Paso is the creation of study area plans that will serve as separate policy documents that give general support to the objectives of the City's comprehensive plan; and

**WHEREAS**, the Medical Center of the Americas Master Plan serves as a study area and guide for the future growth and development of the area South of Interstate 10 Highway, North of Alameda Avenue, East of Boll Street, Radford Street, and Ledo Place, and West of Euclid Street to promote public health, safety, and welfare while supporting revitalization activities for redevelopment in the area; and,

**WHEREAS**, members of the community were invited to take part in the development of these study area plans to encourage community acceptance of this ongoing planning process and to establish a value for the goals and objectives enumerated in these plans; and

**WHEREAS**, the City and Medical Center of the Americas (MCA) Foundation Board has developed a study area plan for the area South of Interstate 10 Highway, North of Alameda

Avenue, East of Boll Street, Radford Street, and Ledo Place, and West of Euclid Street which identifies the concerns, objectives, guidelines and design standards that propose to position the greater Paso del Norte Region as the premier center of health delivery, education, and research for the Region's diverse and international population; and

**WHEREAS**, The Plan for El Paso addresses key components to be achieved in the revitalization of El Paso that include a focus on international connectivity, redevelopment opportunities, education, and border health; and

**WHEREAS**, the study area plan referred to as the Medical Center of the Americas Master Plan has been developed with these components as catalysts for revitalization and redevelopment of the area; and

**WHEREAS**, input from area residents and property owners and other interested parties in the community was received during numerous public meetings held as part of the various phases of the plan development; and

**WHEREAS**, the El Paso City Council finds that the adoption of the Medical Center of the Americas Master Plan as herein enumerated will have no negative impact upon the public health, safety, morals, and general welfare of the City, and that the study area plan will continue to carry out the purpose and spirit of the policies expressed in The Plan for El Paso;

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF EL PASO:**

1. **That**, the Medical Center of the Americas Master Plan is hereby adopted to add the area located South of Interstate 10 Highway, North of Alameda Avenue, East of Boll Street, Radford Street, and Ledo Place, and West of Euclid Street to the designated boundaries of the Medical Center of the Americas Master Plan, with said amendments attached hereto as Exhibit "A" and Exhibit "B" and incorporated herein by reference for all purposes; and,

2. **That**, the Medical Center of the Americas Master Plan be incorporated into the City's Comprehensive Plan, The Plan for El Paso, for all purposes, including amending the Year 2025 Projected General Land Use Map for the long-range development of the area described as South of Interstate 10 Highway, North of Alameda Avenue, East of Boll Street, Radford Street, and Ledo Place, and West of Euclid Street.

**PASSED AND APPROVED** this \_\_\_\_\_ day of \_\_\_\_\_, 2008.

**THE CITY OF EL PASO**

\_\_\_\_\_  
John F. Cook, Mayor

**ATTEST:**

\_\_\_\_\_  
Richarda Duffy Momsen, City Clerk

**APPROVED AS TO FORM:**

\_\_\_\_\_  
Lupe Cuellar  
Assistant City Attorney

**APPROVED AS TO CONTENT:**

*Patricia A. Adauto*  
\_\_\_\_\_  
Patricia D. Adauto, Deputy City Manager  
Development & Infrastructure Services

CITY CLERK DEPT.  
08 SEP 22 PM 3:10

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DEVELOPMENT SERVICES  
PLANNING DIVISION

MEMORANDUM

**DATE:** September 23, 2008  
**TO:** The Honorable Mayor and City Council  
Joyce A. Wilson, City Manager  
**FROM:** Ernesto Arriola, Planner  
**SUBJECT:** Medical Center of the Americas

CITY CLERK DEPT.  
08 SEP 25 PM 4:51

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The City Plan Commission (CPC), on September 23, 2008, voted **(5-0)** to recommend **APPROVAL** of the amendment to the City's Comprehensive Plan, "The Plan for El Paso" and the Projected 2025 General Land Use Map.

The CPC determined that this amendment protects the best interest, health, safety, and welfare of the public in general; that the proposal is compatible with adjacent land uses; and the amendment will not have negative effects on the natural environment, social economic conditions, and property values in the vicinity and the city as a whole.

City Plan Commission additional recommendations to the proposed plan:

1. To incorporate existing neighborhoods in the area into a larger comprehensive neighborhood plan.
2. Eminent domain should not be used, private property owners should retain the option to participate in the plan, and property rights should not be affected.
3. Access needs to be looked at in Phase II. The railroad should be addressed. Work with the railroad to move the tracks underground or out of sight and noise minimized. Provisions should be made to accommodate future light rail and mass transit.
4. To the MCA Foundation, Consider a neighborhood representative on the MCA Board.

There were no letters or telephone calls in support or opposition to this request.

**Attachment:** Staff Report, Medical Center of the Americas Boundary and District map, Medical Center of the Americas Master Plan



## City of El Paso – City Plan Commission Staff Report

**Case No:** CPA08-00001  
**Application Type:** Comprehensive Plan Amendment  
**CPC Hearing Date:** September 23, 2008  
**Staff Planner:** Ernesto Arriola, 915-541-4723, [arriolaea@elpasotexas.gov](mailto:arriolaea@elpasotexas.gov)

**Location:** South of Interstate 10 Highway, North of Alameda Avenue, East of Boll Street, Radford Street, and Ledo Road, and West of Euclid Street

**Acreage:** Approximately 25 acres  
**Rep District:** 3  
**Proposed Use:** Medical Center of the Americas

**Present Use:** Commercial, residential, and manufacturing uses  
**Request:** Applicant has requested to incorporate the proposed “*Medical Center of the Americas Master Plan*” (attachment) into the City of El Paso’s Comprehensive plan and 2025 General Land Use map.

### SURROUNDING LAND USE:

**North:** Interstate Highway 10

**South:** Jefferson/Silva Magnet High School, commercial uses

**East:** Commercial, industrial, and residential uses

**West:** Commercial, industrial, and residential uses



Aerial view of the proposed MCA area

**THE PLAN FOR EL PASO DESIGNATION:** Commercial, Industrial, Mixed Use (Central Planning Area)



2025 General Land Use Map

**NEIGHBORHOOD ASSOCIATIONS:** Pubic Notification was sent to the San Juan Neighborhood Improvement Association and the Pasadena Neighborhood Association.

**NEIGHBORHOOD INPUT:** Notice of Public Hearing was mailed out to all property owners within 300 feet of subject property. Planning Division did not receive any letters or phone calls in support or opposition of the comprehensive plan amendment request. Two public meetings have been held for citizen input.

**PLANNING DIVISION RECOMMENDATION:**  
The Planning Division recommends **approval**.

**DEVELOPMENT COORDINATING COMMITTEE:**  
The Development Coordinating Committee (DCC) provides the following comments:  
The DCC recommends **approval** of the comprehensive plan amendment request.

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CLERK DEPT.

**The Plan for El Paso:**

Land Use and City Form – Special strategy areas:

Special strategy areas are properties that have been identified to coordinate the development or redevelopment efforts due to the uniqueness of the area, the nature of the land uses, the potential for cooperative change, and the complexity of the land use linkages which warrant use of specific developmental strategies. These areas are generally designated for mixed-use development due to the integration of land use combinations requiring maximum flexibility and lending themselves to special opportunities. Site specific land use regulations may be required to overcome on-site considerations.

Implementation – Study area plans:

The El Paso City Council establishes the procedures for the creation and administration of study area plans, as well as the process and criteria for developing other separate policy documents. Approved plans are integrated into *The Plan* to help ensure consistency with the Land Use Goals and Policies, the Year 2025 General Land Use Maps, and to give general support to the objectives of *The Plan*. The Plan identifies study areas, in the form of activity centers, activity corridors, and special strategy areas, to be undertaken as part of the ongoing planning process.

**DEVELOPMENT COORDINATING COMMITTEE COMMENTS:**

Legal requests that clarification be made in regards to references made to zones in the plan (i.e. p. 51, p.52, and p. 53). Legal states that “zone” in the plan should be understood as a plan area or designation and not misinterpreted as a “Zoning District” as set forth in Title 20 of the El Paso Municipal Code.

**CITY PLAN COMMISSION COMMENTS:**

The City Plan Commission (CPC), on September 23, 2008, voted (5-0) to recommend **APPROVAL** of the amendment to the City’s Comprehensive Plan, “The Plan for El Paso” and the Projected 2025 General Land Use Map.

City Plan Commission additional recommendations to the proposed plan:

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4. To the MCA Foundation, Consider a neighborhood representative on the MCA Board.

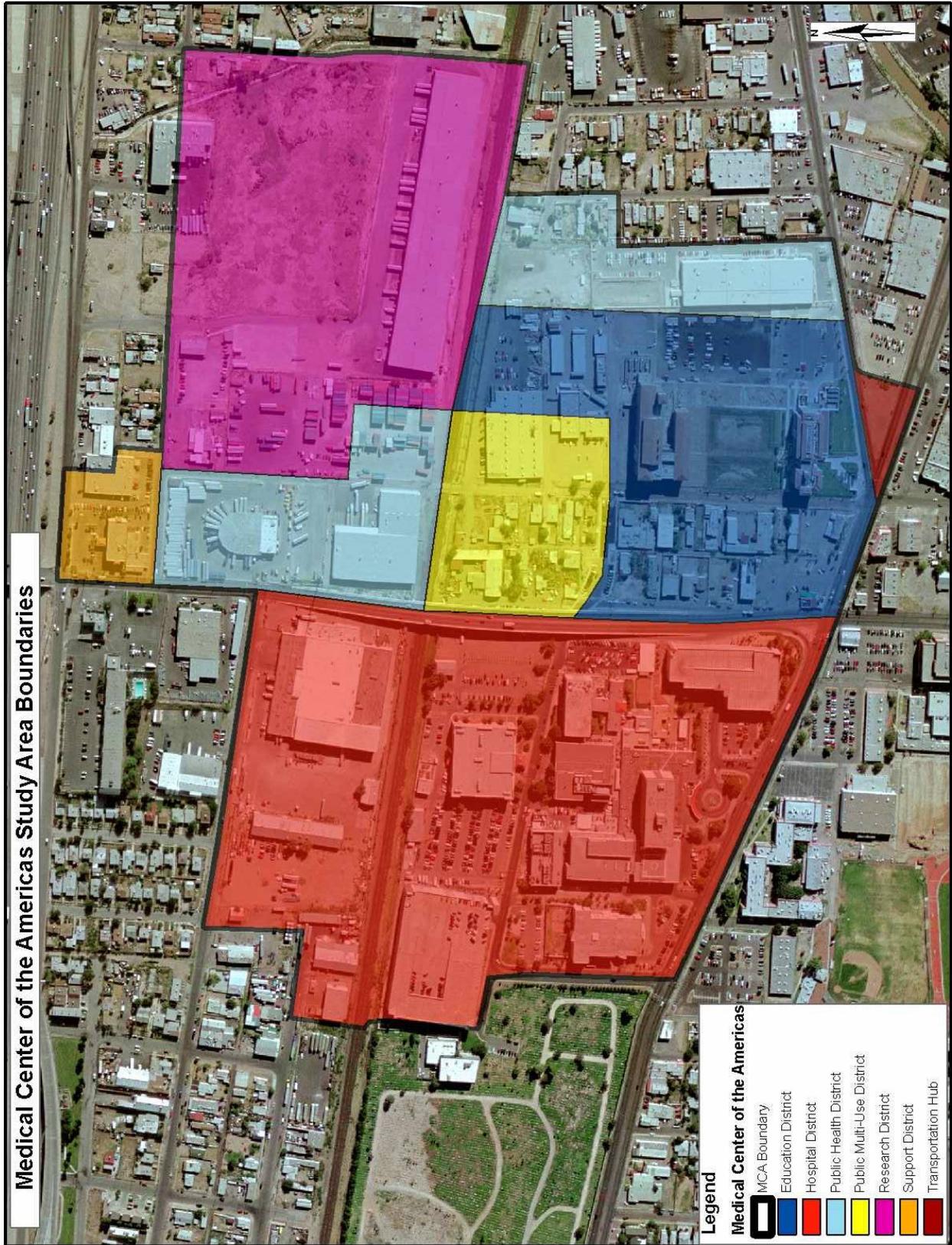
**Attachments:**

Attachment 1: Medical Center of the Americas Boundary and District map

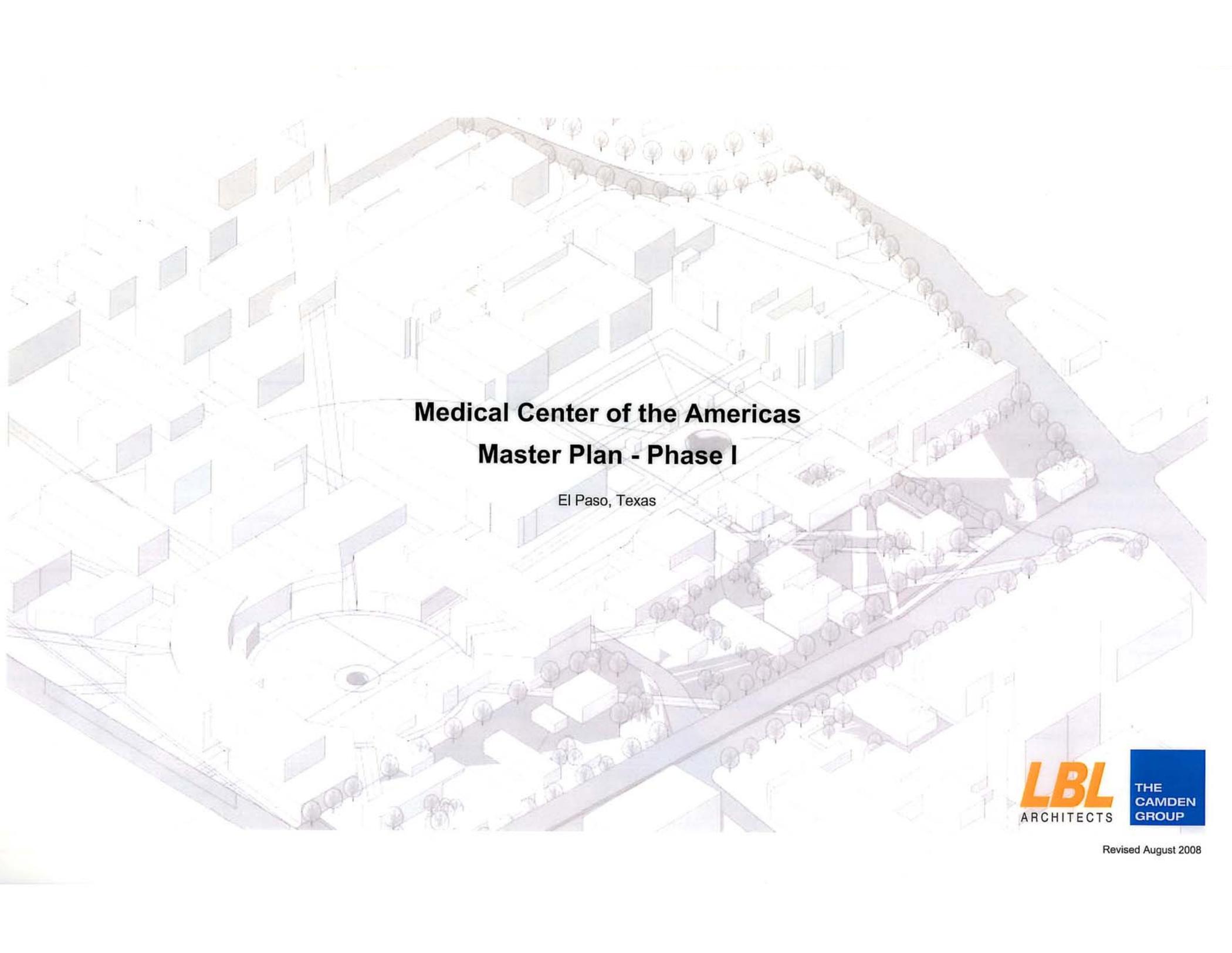
Attachment 2: Medical Center of the Americas Master Plan

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CITY CLERK DEPT.

# Attachment 1: Medical Center of the Americas Boundary and District map



## **Attachment 2: Medical Center of the Americas Master Plan**

An architectural rendering of a medical center master plan, showing a complex of interconnected buildings, courtyards, and walkways. The drawing is in a light, sketch-like style with some color washes. The buildings are arranged in a grid-like pattern with various courtyards and open spaces. A prominent circular feature is visible in the lower-left quadrant. The overall layout is dense and organized.

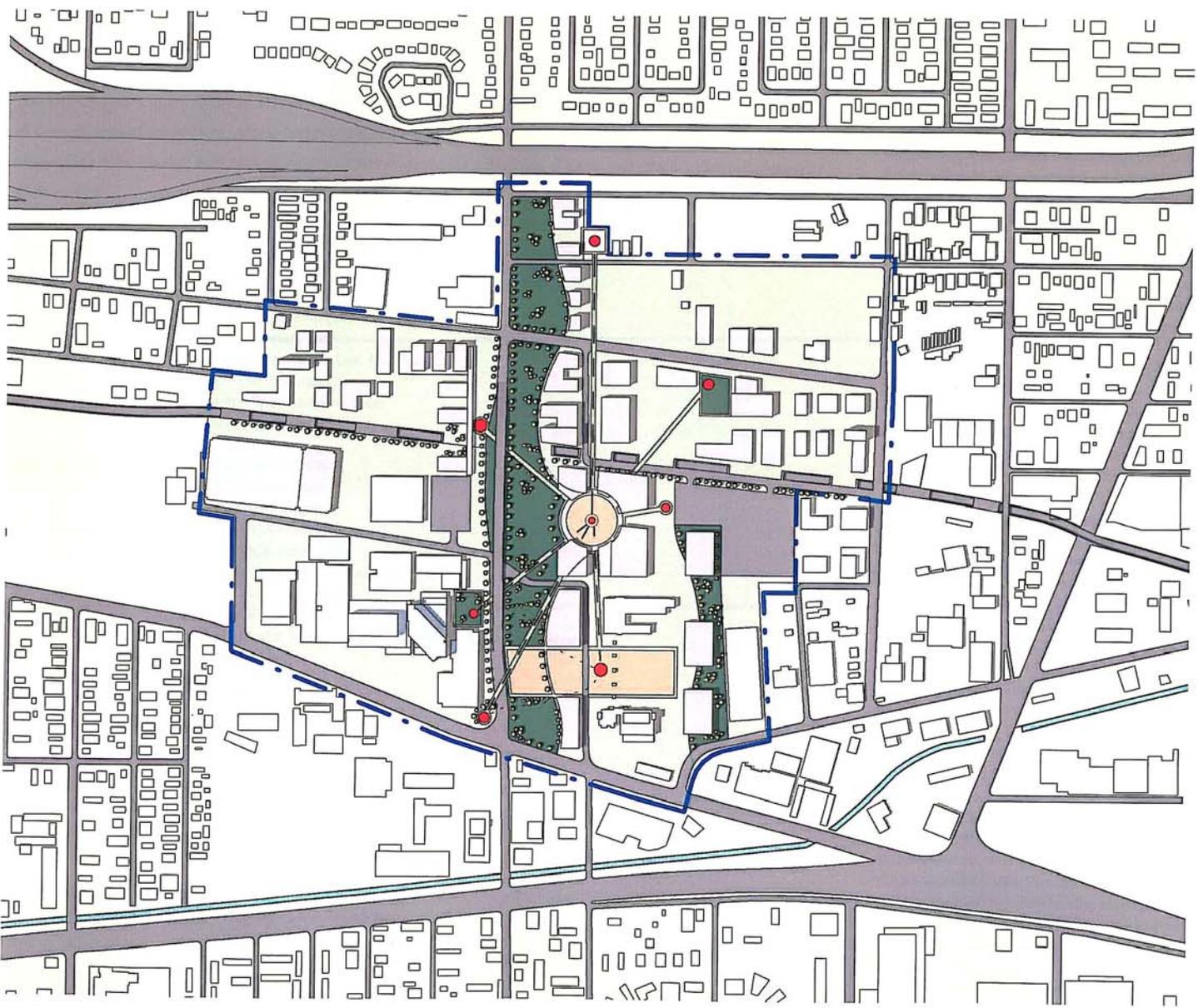
**Medical Center of the Americas**  
**Master Plan - Phase I**

El Paso, Texas

**LBL**  
ARCHITECTS

THE  
CAMDEN  
GROUP

Revised August 2008



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## Acknowledgements

This Medical Center of the Americas Master Plan could not have been completed without the commitment and participation of all committee members involved, prior to and throughout the data gathering and design portion of the Master Plan study. The Master Plan is the result of thoughtful consideration and evaluation of a multitude of ideas, and effective decision-making by those involved.

The committee members and consultant team included:

### LBL / THE CAMDEN GROUP

Jason Haim, AIA, Principal – Lee, Burkhart, Liu  
 Ken Liu, AIA, Principal – Lee, Burkhart, Liu  
 Sina Yerushalmi, AIA, Associate Principal – Lee, Burkhart, Liu  
 Steve Valentine, President – The Camden Group  
 Ron Spoltore, Vice President – The Camden Group  
 Carolyn S. Tung, Consultant – The Camden Group

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 J. Alejandro Lozano, City Council Representative, District 3 – City of El Paso  
 Eliot Shapleigh, Texas State Senator, District 29 – State of Texas

### MCA FOUNDATION STAFF

Emma Schwartz, Executive Director - MCA Foundation

### OTHER PARTICIPANTS

Alan Abbott, President - Lynwood Garden Investments, Inc.  
 Ron Acton, Chairman of the Board of Managers – El Paso County Hospital District  
 Pat Aduato, Deputy City Manager, Development & Infrastructure Services – City of El Paso  
 Richard Aduato, Vice President of Institutional Advancement – University of Texas at El Paso  
 Jerry Akin, AIA, Senior Project Manager – Jones Lang LaSalle  
 Valentine Arzola, Transportation Engineer / District Design – Texas Department of Transportation  
 Roberto Assael, MD, Physician – Clinica Medica Internacional de Juarez  
 Salvador Balcorta, Chief Executive Officer – Centro de Salud Familiar La Fe, Inc.  
 John C. Baldwin, MD, Texas Tech University Health Sciences Center – President  
 Pauline A. Ballesteros, RNC, MSN, ADN Director – El Paso Community College  
 Charles H. (Chuck) Berry, Jr., PE, District Engineer – Texas Department of Transportation  
 Terry Bilderback, Vice President – Parkhill, Smith & Cooper, Inc.  
 Jeffrey C. Brown, Attorney – Scott, Hulse, Marshall, Feuille, Finger, & Thurmond, P.C.  
 Dr. Dennis E. Brown, Vice President of Instruction – El Paso Community College  
 Henry Brutus, Jr., Chief Executive Officer – El Paso Diabetes Association  
 David Buchmueller, Principal – DPB Associates  
 Susie Byrd, City Council Representative, District 2 – City of El Paso  
 Paul Foster - Texas Tech University Health Sciences Center  
 Kelly Carpenter, AICP, Deputy Director, Development Services, Planning Division – City of El Paso  
 Angie Casarez, Constituent Services – Congressman Reyes  
 John Cook, Mayor – City of El Paso  
 Bob Cook, Chief Executive Officer – El Paso Regional Economic Development Corporation  
 Javier Cordova – Texas Department of Transportation  
 Erastro Cortez, MD, Physician, Society Member – El Paso County Medical Society  
 Bruce Crockford, Vice President Healthcare Practice – Jones Lang LaSalle – for Thomason Hospital  
 Richard Dayoub, Chief Executive Officer – Greater El Paso Chamber of Commerce  
 J. Manuel de la Rosa, MD, Founding Dean – Texas Tech University Health Sciences Center  
 Myrna Deckert, Interim President & CEO – Paso del Norte Health Foundation  
 Steve DeGroat, Director, Board of Managers – El Paso County Hospital District  
 Kathryn B. Dodson, Ph.D., Economic Development Director – City of El Paso  
 Alix Duchouquette, Director of Marketing & Communications – El Paso Regional Economic Development Corporation  
 Michael A. Ellicott, Vice Chancellor, Facilities Planning & Construction – Texas Tech University Health Sciences Center  
 Everrette Esparza, Transit Planning & Program Coordinator – Sun Metro  
 Mica Espinoza, Director, Healthcare Policy & Programs – Greater El Paso Chamber of Commerce  
 Richard Fleager, General Manager – Texas Gas Service  
 Bertha Gallardo, Public Affairs Officer – Las Palmas / Del Sol  
 Dr. Robert Galvan, PH, MPH, MS, DAAS, Interim Director – El Paso City County Health & Environmental District  
 L. Gomez, CRCC – El Paso Police Department  
 Michael Guerra, Vice President, Government Relations – Greater El Paso Chamber of Commerce  
 Hector Gutierrez, Vice President, Government Relations – El Paso Electric Company  
 Michael Herrera, Transit Planning Manager – Sun Metro  
 Jacob S. Heydemann, MD, Physician – El Paso County Medical Society  
 Terry Jordan, Assistant Superintendent – El Paso Independent School District  
 Dennee Knight, Director – Thomason Health Foundation, Project Director - Children's Hospital  
 Chuck Kooshian, Lead Planner – City of El Paso

**Acknowledgements (continued)**

Jon Law, Assistant Director – Center for Border Health Research  
 Gerardo Leos – Texas Department of Transportation  
 Jose Luna, Jr., MD, MBA, DABFP, Chief Medical Officer – San Vicente Clinic  
 Anthony Martinez, Communications Director – Office of Senator Eliot Shapleigh  
 Hector Martinez, Associate Superintendent – Operations – El Paso Independent School District  
 Michael Medina, Transportation & Urban Planning Manager – Metropolitan Planning Organization  
 Paula R. Mitchell, RNC, MSN, Ed.D., Dean, Health Occupation, Math & Science – El Paso Community College  
 Pat Morales, Executive Director – Cancer and Chronic Disease Consortium  
 Ross John Narvaeth, Project Manager – Texas Tech University Health Sciences Center  
 Diana Natalicio, PhD, President – University of Texas at El Paso  
 Laurance N. Nickey, MD, FAAP, Physician – El Paso County Medical Society  
 David Osborn, President of Board – Paso del Norte Health Foundation  
 Juana Padilla, Assistant to the Senator – Office of Senator Eliot Shapleigh  
 David Palafox, MD, Physician - Society member – El Paso County Medical Society  
 John A. Powell, MD, PhD, FACP, Commander – William Beaumont Army Medical Center  
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 Ali Razavi, Assistant to the Representative – Office of Senator Chavez  
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 Phillip Rivera, Chief Financial Officer – Thomason General Hospital  
 Alfonso Romero, Area Safety & Occupational Health Manager – Dept. of Homeland Security / US Customs & Border Protection  
 Veronica Rosales-Soto, Economic Development – City of El Paso  
 Pablo Salcido, Chief Operating Officer – The Paso del Norte Group  
 Bill Schlesinger, Executive Director – Project Vida Health Center  
 Sandra Shuya, VN Director – El Paso Community College  
 Richard Sinaiko, Chief Executive Officer – Sinaiko Healthcare Consulting  
 Dr. Heramb Singh, Physician - Society member – El Paso County Medical Society  
 Patsy Slaughter, Executive Director – El Paso County Medical Society  
 Marco Spalloni, Commander – Central Regional Command Center – El Paso Police Department  
 Eric Spier, MD, Physician – Physical Medicine & Rehabilitation Associates of El Paso, PA  
 Robert M. Suskind, MD, Professor of Pediatrics – Texas Tech University Health Sciences Center  
 David Taber, MD, Physician – El Paso County Medical Society  
 Dr. Lydia Tena Perez, Interim Dean, School of Nursing – El Paso Community College  
 Lawrence Thoenen, Project Manager – EP Electric Company  
 Patty Tiscareno, Executive Director – Rio Grande Cancer Foundation  
 Robert Turner, Municipal Finance, Healthcare, Higher Education, Non-Profit – Goldman Sachs  
 Luis Urrea, MD, Physician – El Paso County Medical Society  
 Jim Valenti, Chief Executive Officer – Thomason General Hospital  
 Godwin Wanyouwu – Texas Department of Transportation  
 Joyce Wilson, City Manager – City of El Paso  
 Maria Zampini, VP, Ancillary Support Services – Thomason General Hospital  
 Kathryn B. Zerbach, MD, Physician – El Paso County Medical Society

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 Hunt Family Foundation

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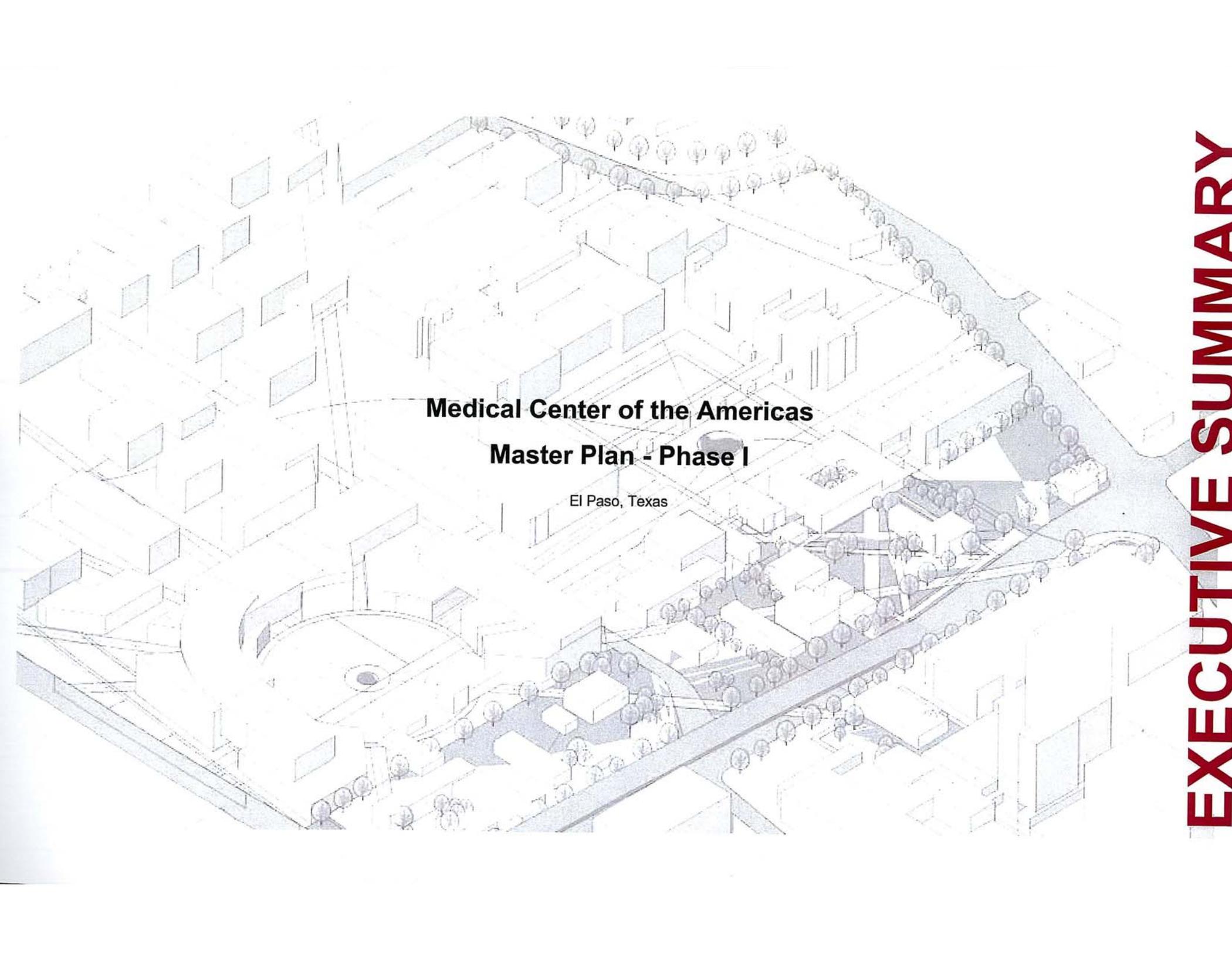
**In-Kind Contributions**

Goodman Financial Group  
 Southwest Land Development Services  
 OSGO Furniture  
 Huntleigh Technology Group  
 Mithoff Burton Partners  
 Scott, Hulse, Marshall, Feuille, Finger, & Thurmond, P.C.



***Vision Statement***

To create an integrated campus of facilities that will position the MCA as the premier center of health delivery, education and research for the population of tomorrow.



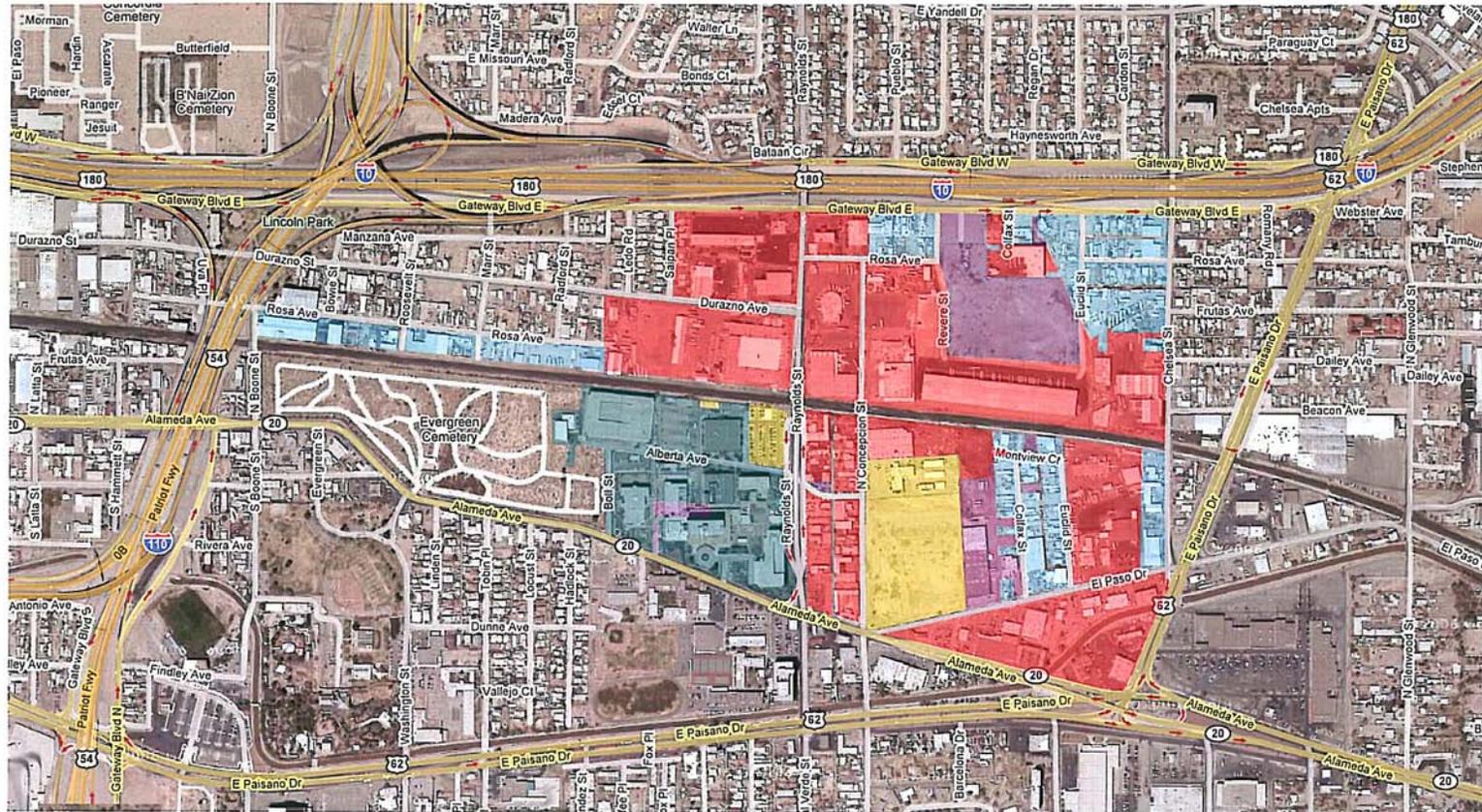
**Medical Center of the Americas  
Master Plan - Phase I**

El Paso, Texas

### Executive Summary

#### Introduction

On August 10, 2006, the Medical Center of the Americas (MCA) Foundation Board issued a request for proposal to develop an efficient land and facility use plan for the MCA. The MCA is proposed to be located in El Paso, Texas and is dedicated to health research, health delivery and health education for the community, the Paso del Norte Region and the Americas. The scope of services includes a master plan, initially defined as 25 acres, in the area bound by Alameda Avenue (to the south), I-10 (to the north), Chelsea Street (to the east) and Interstate 54 (to the west). The objective of the MCA is to position the greater Paso del Norte Region as the premier center of health delivery, education and research for the Region's diverse and international population.



#### Master Planning Process

The team of LBL Architects / Camden Group (LBL/ Camden) was selected as the master planning team for the project, given the healthcare and planning backgrounds of both firms. To supplement the team, LBL/Camden retained the services of Kimley-Horn (Civil Engineering) and the Vantage Group (Technology) to assist with specific elements listed in the MCA's request for proposal.

To assist LBL/Camden with input and oversight, the MCA Foundation Board created a Multidisciplinary Team which includes members of the MCA Board, Partner Organizations, the City of El Paso and Community Representatives to assist LBL/Camden with the master planning effort. A full list can be found in the Acknowledgements Section of this report.

Phase I	Phase II
<p><b>Project Kick-off</b></p> <ul style="list-style-type: none"> <li>1.1 Establish Project Protocol</li> <li>1.3 Data Collection</li> <li>1.5 Develop Existing Site Information</li> </ul> <p><b>Master Plan Development</b></p> <ul style="list-style-type: none"> <li>2.2 - Track 1: Demographic Projections/Campus Program</li> <li>2.3A - Track 2: Economic Development Strategy and Operational Planning</li> <li>2.4A - Track 3: Site / Facilities Master Plan Studies</li> <li>2.5 - Phasing and Implementation Plans</li> </ul>	<p><b>Master Plan Development</b></p> <ul style="list-style-type: none"> <li>2.3B - Track 2: Technology Use Plan</li> <li>2.4B - Zoning Plan (Included in Item 2.4A)</li> <li>2.4C - Land Acquisition Plan</li> <li>2.4D - Storm Water Utility Design</li> <li>2.4E - Parking, Traffic &amp; Pedestrian Plan</li> <li>2.6 - Cost Estimates (Use Local Estimator)</li> <li>2.7 - Financial Feasibility Model</li> </ul>

By design, the master plan developed for the MCA was divided into two distinct phases. Phase I, involving the programming and initial master planning effort, was developed over an eleven-month period. This portion of work included interviews of key community members, demographic research and validation of the volumes currently experienced, as well as projections looking forward to what the MCA service area may look like. This information was used as the basis for programming assumptions which have been converted into a square footage program. With such programming assumptions in place, Phase I included the master plan charrette process, which involved a wide range of community based organizations and individuals, for the purpose of identifying viable development options that would meet the needs of the community, the MCA and its partners. The goal was to identify a preferred scheme that could be used in Phase II as the basis for more detailed development.

*Phase I major tasks included:*

- Community and partner organization interviews
- Data gathering & evaluation
- Assessment of existing conditions
- Analysis and determination of vision for the future & campus components
- Establishment of planning parameters, key issues, concepts and relationships
- Development of comprehensive site programming elements
- Master plan site development

Phase II, which has not begun at the time this portion of the report was written, will look at the details of the preferred master plan option specific to major development issues. These include storm water management, future utility infrastructure, technology integration, architectural imagery and cost estimating, based on a phased implementation approach. All of these items will be reviewed and the final report will be modified with these findings.

*Phase II major tasks will include:*

- Architectural Theme Development
- Land Acquisition Planning
- Traffic and Pedestrian Control
- Technology Requirements
- Zoning and Utilities
- Environmentally Friendly Campus Design
- Timelines, Cost, Funding

### Project Guiding Principles

To ensure a productive and focused master planning effort, LBL / Camden defined the following master plan guiding principles as a goal of the process and eventual product. These guiding principles should be viewed as general and not specific to any one partner or organization. These general guiding principles are:

#### Planning Process

- Employs "Team-Centric," inclusive planning
- Responds to the cultural diversity of El Paso

#### Aesthetics

- Provides a solution that develops a "campus feel"
- Begins to define the MCA
- Promotes green/sustainable facility responses

#### Services

- Serves as a community resource
- Optimizes patient, physician and staff processes

#### Resources

- Creates flexibility for built space, technology and future growth



### Existing Conditions / Site Analysis

The site, provided to the Master Planning Consultant Team by the MCA Foundation Board, is proposed to be an approximately 25 square acre congruous or non-congruous campus of facilities located in El Paso, Texas. The current area identified as available for planning purposes is shown below, bound by Alameda Avenue (to the south), I-10 (to the north), Chelsea Street (to the east) and Interstate 54 (to the west). The site is a combination of privately held residential and commercial land, institutional land and City of El Paso owned land.

### Access

Access to the site occurs in a few locations. To the south is Alameda, the main access point to Thomason and Texas Tech. El Paso Drive also extends along the southern edge and is being modified by the City to tie into Alameda at a 90 degree angle to improve traffic. Access from Paisano is currently limited unless used as a means to reach El Paso or Alameda. The purple arrows indicate access across Reynolds Avenue 4 Lane overpass. Access onto the MCA site occurs at both ends of Reynolds prior to the elevation rise over the railroad tracks.



Circulation Diagram

### Site Bisectors

The existing site is bisected by the railroad (east/west) and Reynolds Avenue (north / south). Many of the existing internal site roads running north / south do not cross the railroad as shown with the red "x". Additionally, since Reynolds is a 4-lane overpass connecting Alameda and I-10, east / west access is limited to just a few locations.



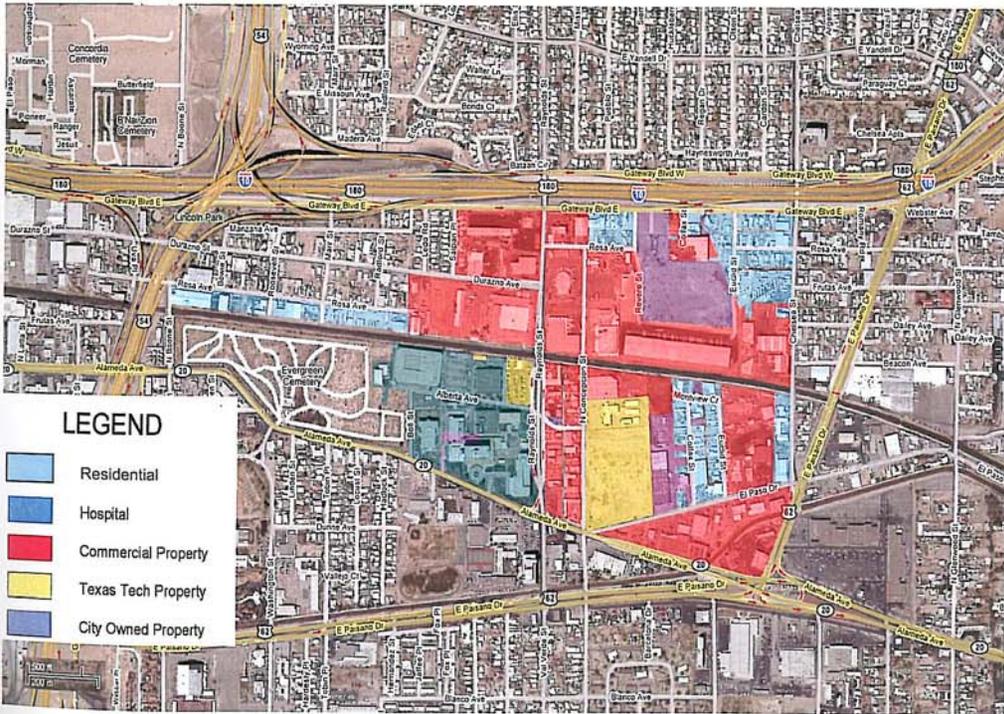
Access / Site Bisectors

### Visibility

Currently, the best visibility to the site occurs from I-10 or Alameda onto the MCA. Visibility from Paisano is limited, due to the lower scale of the buildings along the eastern edge of the MCA site.



Visibility Diagram



### Demographic Projections / Campus Program

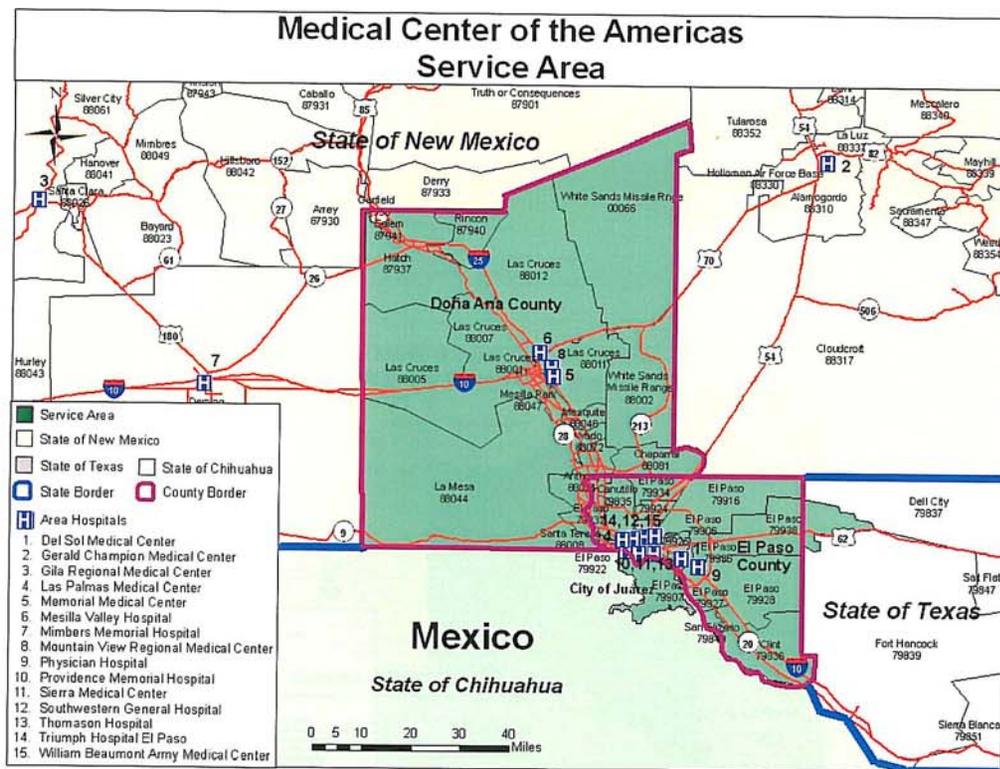
#### Demographic Projections Process

The Camden Group was asked to participate in a comprehensive evaluation of the infrastructure priorities, as well as engage in a review of the demographic and volume projections to support the healthcare enterprises of the Medical Centers of the Americas ("MCA"). Together, in conjunction with LBL Architects, the Master Plan Team undertook a wide-ranging interview process to speak with key stakeholders in the greater El Paso area as to their vision of services for, and integration with, the MCA site. Additionally, The Camden Group reviewed previously compiled information on population, demographics, healthcare professional needs, healthcare utilization rates, and bed needs of the City of El Paso, and to the extent possible, Ciudad Juarez.

To inform the evaluation process, LBL / Camden interviewed representatives of the MCA stakeholders during April and May, 2007. After the interviews were completed, our team determined potential funding sources and assigned priorities, taking into account the information from the interviews, the perceived momentum and support of the initiatives, and the likelihood of funding. In general, the expansion initiatives presented by Thomason Hospital, Texas Tech University School of Medicine program development, UTEP nurse training, and EPCC allied health program growth, were assigned the highest priority infrastructure attention.

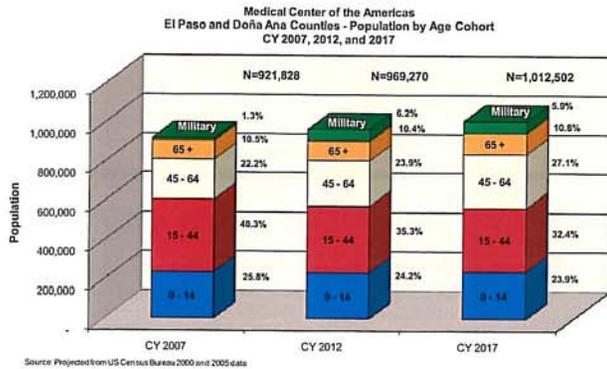
#### Service Area Definition

The map below shows the service area of the Medical Center of the Americas. It includes Doña Ana County in the State of New Mexico, El Paso County in the state of Texas, and Ciudad Juarez in Mexico.

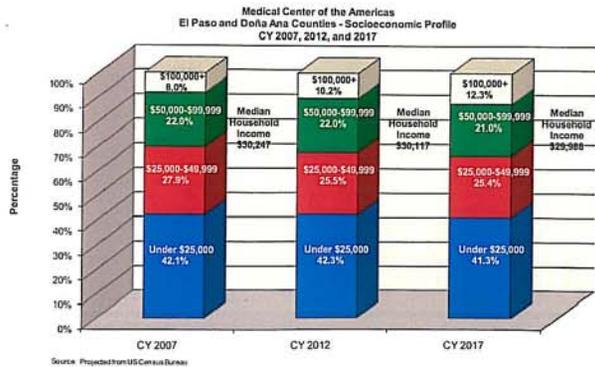


**Population and Demographics**

The population by age cohort was projected from the U.S. Census Bureau 2000 and 2005 data for Doña Ana and El Paso Counties. The total population is projected to grow at a compound annual rate of 1.0 percent per year between 2007 and 2012, from 922,000 to 969,000. The population projections include the expected military increase of 60,000 individuals at Fort Bliss Base between 2007 and 2011. It is likely that there will be high demand for primary care, emergency, obstetrics, and pediatrics services.

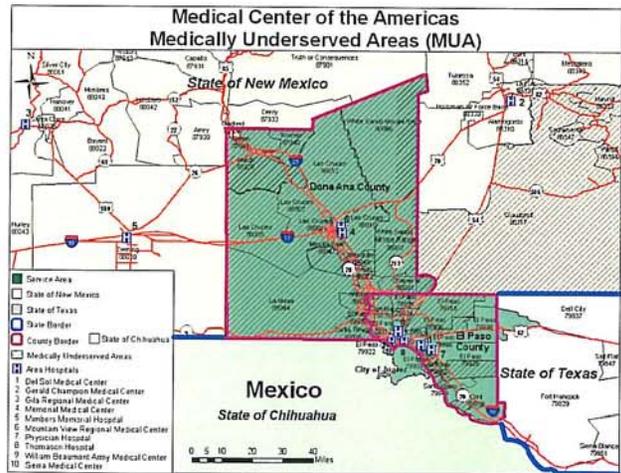


The socioeconomic profile was projected from the U.S. Census Bureau 2000 and 2005 data for Doña Ana and El Paso Counties. The service area's median household income of \$30,247 in 2007 is more than \$10,000 less than the median household income of both the State of New Mexico (\$40,878) and the State of Texas (\$42,982). This implies that the payer mix of the service area is more unfavorable than either the State of New Mexico or the State of Texas. The adverse payer mix situation will create a challenge for recruiting and retaining physicians and a workforce to the service area.



**Medically Underserved Area/Health Professional Shortage Area**

Significant portions of the MCA service area have been designated as a Medically Underserved Area, a Health Professional Shortage area, or both as shown on the maps below.



**Physician Supply Analysis**

An analysis of physician by specialty per 100,000 population for the City of El Paso and the State of Texas is shown in the attached table. For primary care as well as for medical and surgical specialties, the City of El Paso has fewer physicians per 100,000 population. This information, coupled with the adverse payer mix situation, indicate that the MCA will be challenged by the shortage of primary care physicians and other healthcare providers in its service area and will need to make plans to successfully recruit and retain physicians and other healthcare professionals to the service area in order to support the MCA vision. This implies that a well organized clinic system is needed to care for the population.

**Medical Center of the Americas  
Ratio of Physicians by Specialty per 100,000 Population - El Paso City and State of Texas  
CY 2006**

Specialty	City of El Paso		State of Texas		Difference in Ratios	Compared to State
	Num. Providers	Providers per 100,000	Num. Providers	Providers per 100,000		
<b>Primary Care</b>						
Family Practice or General Practice	131	21.9	8,990	40.4	18.5	Worse
Family Practice	112	18.7	7,675	34.5	15.8	Worse
General Practice	22	3.7	1,413	6.3	2.7	Worse
General Preventative	1	0.2	145	0.7	0.5	Worse
Internal Medicine	198	33.1	9,843	44.2	11.1	Worse
Pediatrics	110	18.4	5,284	23.7	5.4	Worse
Obstetrics & Gynecology	69	11.5	3,045	13.7	2.1	Worse
<b>Medical</b>						
Allergy & Immunology	9	1.5	485	2.2	0.7	Worse
Dermatology	9	1.5	788	3.5	2.0	Worse
Endocrinology, Diabetes and ME	11	1.8	437	2.0	0.1	Worse
Gynecology	8	1.3	493	2.2	0.9	Worse
Neonatal/Perinatal Medicine	12	2.0	532	2.4	0.4	Worse
Nephrology	17	2.8	720	3.2	0.4	Worse
Neurology	15	2.5	985	4.4	1.9	Worse
Pediatric Endocrinology	1	0.2	67	0.3	0.1	Worse
Child Neurology	3	0.5	102	0.5	(0.0)	Similar
<b>Surgical</b>						
Neurological Surgery	9	1.5	440	2.0	0.5	Worse
Ophthalmology	25	4.2	1513	6.8	2.6	Worse
Orthopedic Surgery	50	8.4	1989	8.9	0.6	Worse
Pediatric Surgery	3	0.5	106	0.5	(0.0)	Similar
Vascular Surgery	3	0.5	347	1.6	1.1	Worse

Source: Texas Medical Association database of practitioners purchased in 2006.

\\persus1\itcg\clients\Lee Burkhardt Liu\Med Ctr of the Americas\Physician Needs.xls|Physician Supply (2)

**Medical Center of the Americas  
El Paso County General Acute Care Hospital Utilization  
CY 2005**

Facility	Ownership	Staffed Beds	Admissions	Average Daily Census	Average Length of Stay	Staffed Occupancy Rate
<b>El Paso County</b>						
R.E. Thomason General Hospital	Public	282	16,181	195	4.4	69.2%
Del Sol Medical Center	For-Profit	293	14,867	225	5.5	76.7%
Las Palmas Medical Center	For-Profit	261	10,593	153	5.3	58.7%
Physicians Hospital	For-Profit	40	2,309	25	3.9	62.1%
Providence Memorial Hospital	For-Profit	359	19,649	254	4.7	70.8%
Sierra Medical Center	For-Profit	334	13,592	180	4.8	53.9%
Southwestern General Hospital	For-Profit	23	1,117	13	4.2	55.8%
<b>TOTAL</b>		<b>1,592</b>	<b>78,308</b>	<b>1,045</b>	<b>4.7</b>	<b>63.9%</b>
<b>El Paso County Use Rate</b>			<b>108.9</b>			
<b>State of Texas</b>		<b>61,097</b>	<b>2,587,530</b>	<b>37,879</b>	<b>5.3</b>	<b>62.0%</b>
<b>State of Texas Use Rate</b>			<b>113.2</b>			

Source: Texas Department of Health, Utilization Data for Texas Acute Care Hospitals By County, 2005

Note: Use rate is defined as admissions per 1,000 population

\\persus1\itcg\clients\Lee Burkhardt Liu\Med Ctr of the Americas\Hospital Utilization.xls|Utilization Table

**Use Rates**

Hospital utilization rates of El Paso County general acute care facilities indicate that the average staffed occupancy rate of El Paso County hospitals is 64 percent. This suggests that there is excess capacity in the County's hospitals as of 2005. Also, use rates (measured as admissions per 1,000 population) in El Paso County tend to be lower than the State of Texas as a whole. This is due to the large population of people under 45 who tend to use fewer healthcare services. The table above shows the utilization rates of the hospitals in El Paso County and the State of Texas as a whole.

### MCA Infrastructure Priorities

After validation of the market conditions, both current and projected, the Camden Group evaluated and reviewed service lines and ranked them by priority (using rankings of High\*, High, Medium and Low). These infrastructure priorities were presented to the MCA Board on June 7, 2007. The categories included:

- General Acute Care
- Clinics
- Outpatient Services
- Medical Office Building
- Medical School
- Nursing School
- Allied Professional Education/Training
- Research
- Faculty and Student Housing
- Senior Services
- Support Services

The full list of findings are summarized in Section 2 – Demographics and Programming.

### Creation of an MCA Space Program

Upon completion of service line ranking and a more detailed look at certain existing and potential future anchor tenants, LBL/Camden began a high-level programming effort to try to identify space requirements for the MCA site over time. Through a number of meetings with the Master Planning Committee, its partner organizations and community representatives, the detailed use rate projections were presented and validated after careful evaluation of historical trend lines and future growth projections. These projections were then converted into square footage allocations and included in an overall site program for use in the master planning process using industry benchmarking.

### Extrapolating Growth to Future Milestones

LBL/Camden researched the growth pattern of other Medical School Campus Plans where square footage information is available since their inception. The examples cited, based on our ability to find information, were Duke, the University of Virginia, UCLA and Stanford. Using UCLA as an example, you will notice that an initial growth rate in square footage of 30% after inception of the school. After that, an average 8% growth rate in square footage (compounded every five years) became the norm. Interestingly, the averages when you compare multiple campuses together did not change substantially. Included is a comparative chart showing average growth in square footage over time for Stanford, the University of Virginia and UCLA and a projection of a future MCA program size extrapolating using these estimated percentages.

### All Campuses: Average Growth Rate over time

Time Period	Stanford Univ.	Univ. of Virginia	UCLA	Average
1st 5 years	35%	29%	27%	30%
2nd 5 years	6.4%	9.7%	5.2%	7%
3rd 5 years	8.1%	6.4%	6.5%	7%
4th 5 years	5.3%	13.5%	4.1%	8%
5th 5 years	4.6%	1.7%	9.2%	5%
6th 5 years	3.4%	5.3%	9.1%	2%
7th 5 years	8.1%	9.9%	8.2%	9%
8th 5 years	2.6%	4.5%	9.5%	6%
9th 5 years	9.0%	9.8%	9.0%	9%
10th 5 years	26.2%	8.3%	13.5%	16%
	8%	8%	8%	8%

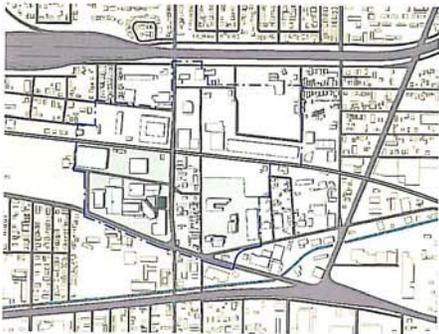
Average (1961-2007)

### MCA Future Building Area Estimate - 2007-2107

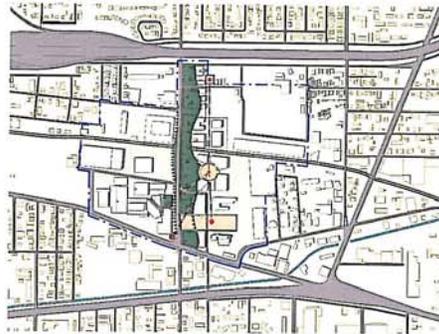
Time Period	Estimated Percentage	Building Area Added GSF	Cummulative Building Area
2007 Existing	-	1,200,000	1,200,000
2007-2015	30%	360,000	1,560,000
2016-2025	16%	249,600	1,809,600
2026-2030	16%	289,536	2,099,136
2031-2040	16%	335,862	2,434,998
2041-2050	16%	389,600	2,824,597
<b>2051-2060</b>	<b>50 Year</b>	<b>16%</b>	<b>451,936</b>
2061-2050	16%	524,245	3,800,778
2051-2060	16%	608,125	4,408,903
2061-2070	16%	705,424	5,114,327
2071-2080	16%	818,292	5,932,620
2081-2090	16%	949,219	6,881,839
2091-2100	16%	1,101,094	7,982,933
<b>2101-2110</b>	<b>100 Year</b>	<b>16%</b>	<b>1,277,269</b>
			9,260,202

**Estimating Land Use Over Time**

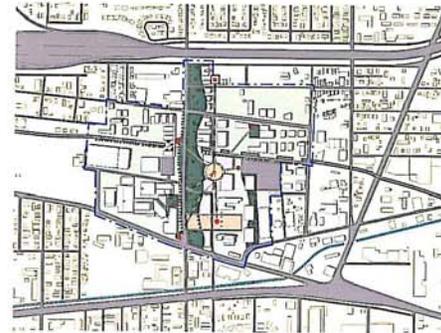
To try to quantify a land use number (in acres), LBL/Camden assumed an "average density" of two stories (an average between the majority of the site at one story compared to Thomason & Texas Tech with multi-story buildings). Using this assumption, 40,000 s.f. of development was allocated per acre. Based on the estimated projected MCA square footage, the MCA will expand to 82 acres in 50 years and 230 acres in 100 years. Again, acreage will be a function of built density but the images below indicate what the site may look like over the next 100 years.



Existing Condition



Phase 1 (10 – 15 Years)



Phase 2 (25 – 50 Years)



Final Phase (100 Years)

### Master Plan Development

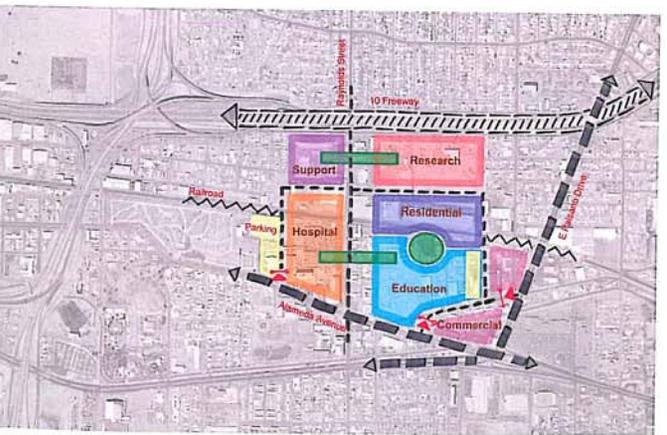
Several master plan schemes were developed that respond to a multitude of planning issues and to the program developed. Development ranged from conservative to aggressive in its planning approach, each utilizing different strategies for addressing existing site conditions; an example being the bisection of the site by both Reynolds Avenue and the railroad. Each option concluded with advantages and disadvantages which were reviewed by the Multidisciplinary Team, kept as a viable option, discarded or combined into new schemes. Examples of the options included:



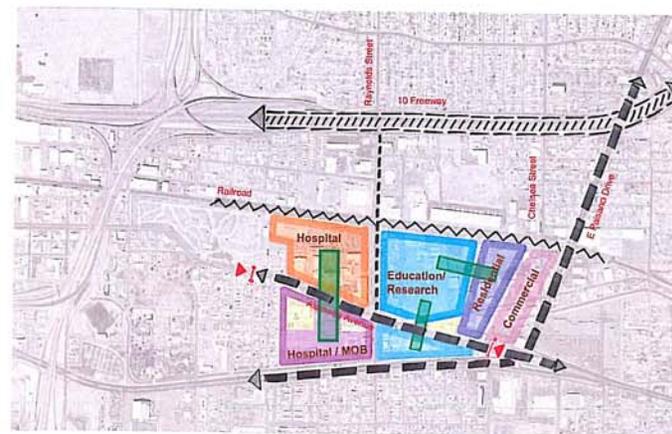
**Option #1**  
Reynolds Spine (Utilizes a strong, unifying, central zone)



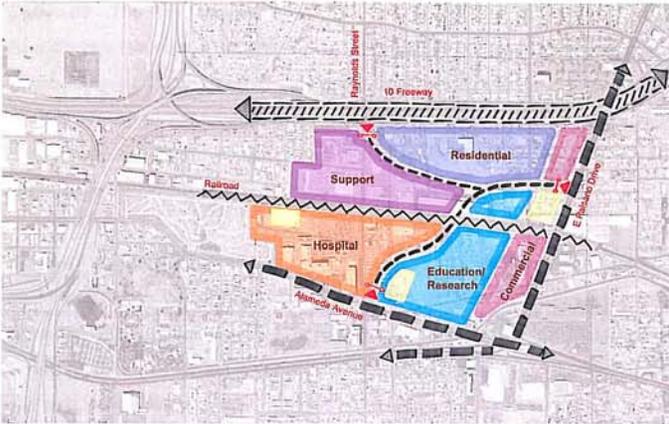
**Option #3**  
Southern Horseshoe (Promotes a strategy of development south of the railroad tracks with future development occurring to the north)



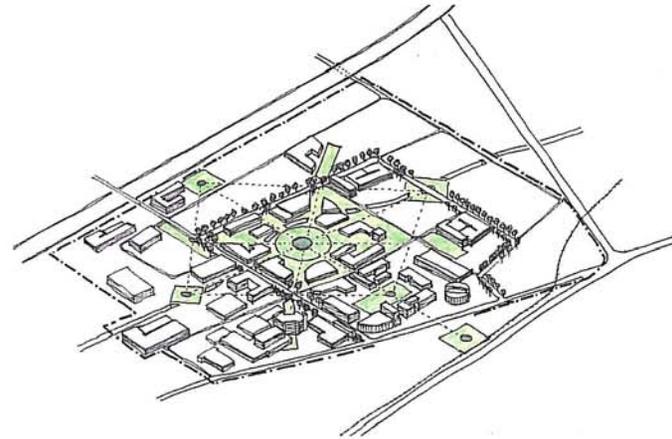
**Option #2**  
East / West (Development of circulation spines between Thomason and Texas Tech as well as connectors in the northern quadrant)



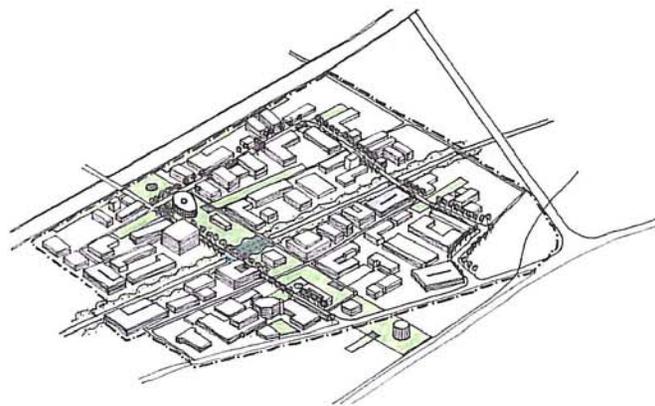
**Option #4**  
Alameda Span (Promotes a strategy of development south of the railroad tracks with a focus on Alameda as the main circulation spine)



**Option #5**  
Promenade (Utilizes a connection spine between Reynolds (at I-10), Paisano Drive and Alameda)



**Option #7**  
Campus Quad (Combines Options 1, 2 and 3 and based on a unifying, central plaza organization concept)



**Option #6**  
Central Park (Combines Options 1, 2 and 3 and based on the strong, unifying, linear organization concept)



**Option #8**  
Plaza Scheme (Combines the best attributes of Options 6 and 7 integrating a central plaza concept with a strong linear based scheme)

## Preferred Master Plan

### Option #9 – The Plaza Revised

As outlined in the Master Plan Development Section of the report, The Plaza Option #9 is a further development of the prior Option #8 based on comments by the MCA and partner organizations. The idea of a central, multi-use public zone resonated strongly with the entire Multidisciplinary Team, with the caveat that the plaza needed to be located more westerly to allow direct access from Thomason and Texas Tech. For other incoming services, like EPCC's School of Nursing, the same need / desire for access to the other key services is important.

Option #9 still recognizes the importance of gateways from Alameda and I-10 and supports the notion of a MCA spine running north / south along Reynolds Avenue. In this option, the plaza opens to the Reynolds spine, allowing for clear organization of elements north and south off of the access drive or radially around the Plaza once a final location is selected. As identified in Option #7, the Plaza can be comprised of buildings and open space, allowing for direct pedestrian flow from quadrants of the site back to this interactive zone. The "Plaza" could be the site for such services as a Conference Center, a Medical Mall (pharmacy, optical services, etc.), Commercial (coffee houses, restaurants, day care, and gym) and other employee, patient and visitor services. Secondary open space hubs would also be created for other areas of the site which could support development as it occurs on the MCA campus.

As with the prior options, this scheme utilizes an internal campus ring road that could be utilized for vehicular circulation around the site without having to utilize the perimeter arterials such as Alameda. Similar access to clear parking zones and a clear MCA arrival experience are consistent in this option.

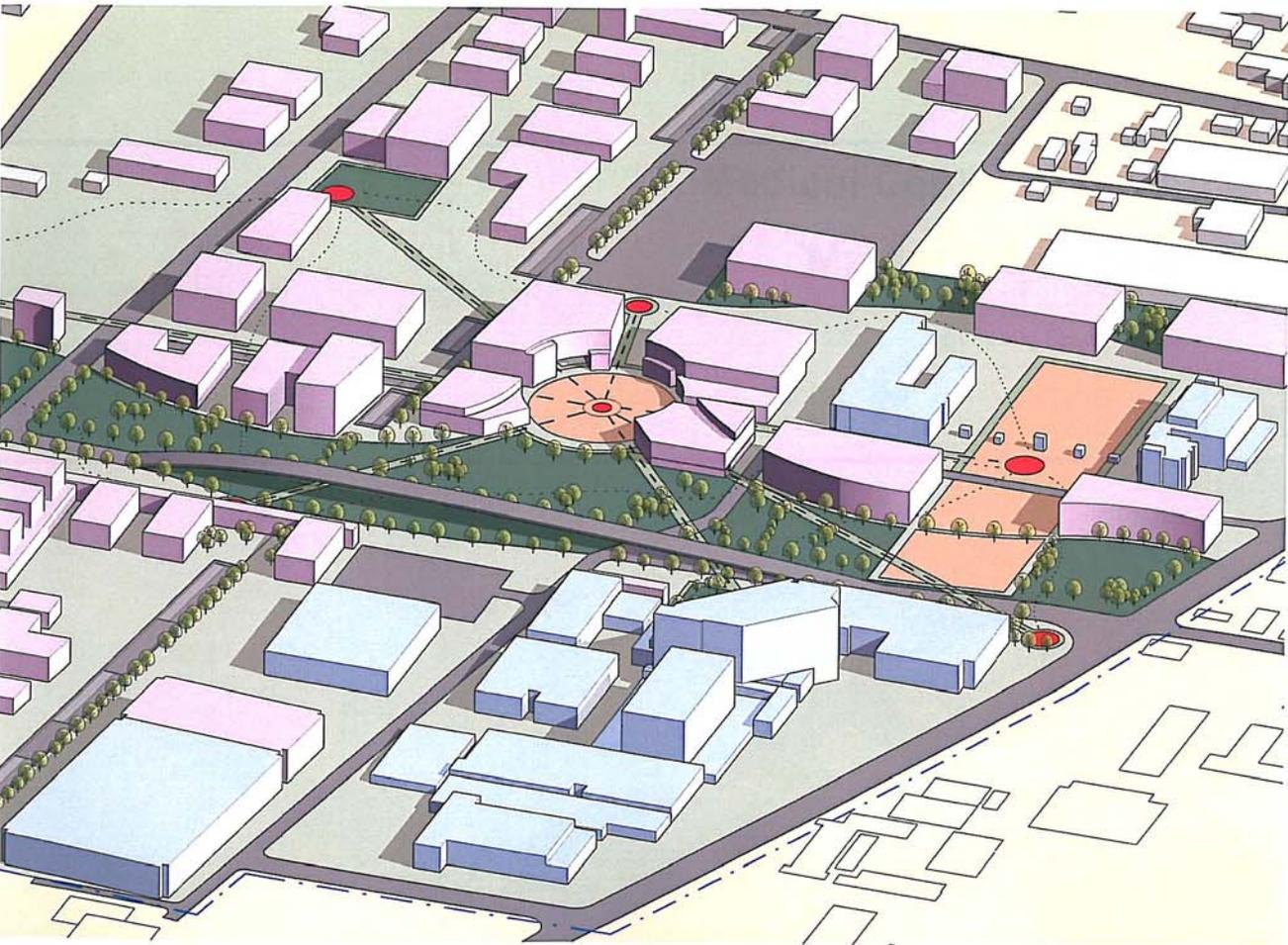
#### Key master planning concepts for this option include:

- Provide the flexibility to change over time.
- Plan for a balance of functionality and aesthetic quality within a cost-effective solution.
- Develop clear site organization with strong relationships between components.
- Identify arrival to the MCA.
- Provide good accessibility and way finding.
- Establish functional relationships that provide opportunity and efficiency.
- Design and implement an effective infrastructure.
- Promote an environment that is responsive and sensitive to the population it serves.

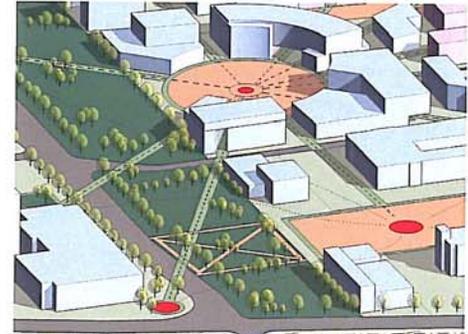


### Conclusion

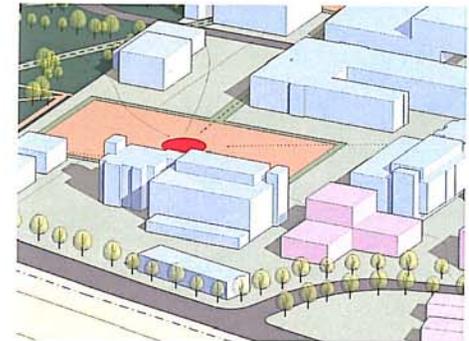
By thoughtful planning, it is the intent of this MCA Master Plan Committee to develop a plan for creating a premier center for health delivery that responds directly to required services for the region and is accomplished by development that can deliver the highest standard of care.



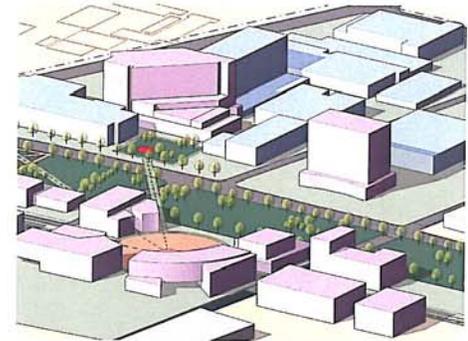
Option #9 Plaza Scheme Axonometric



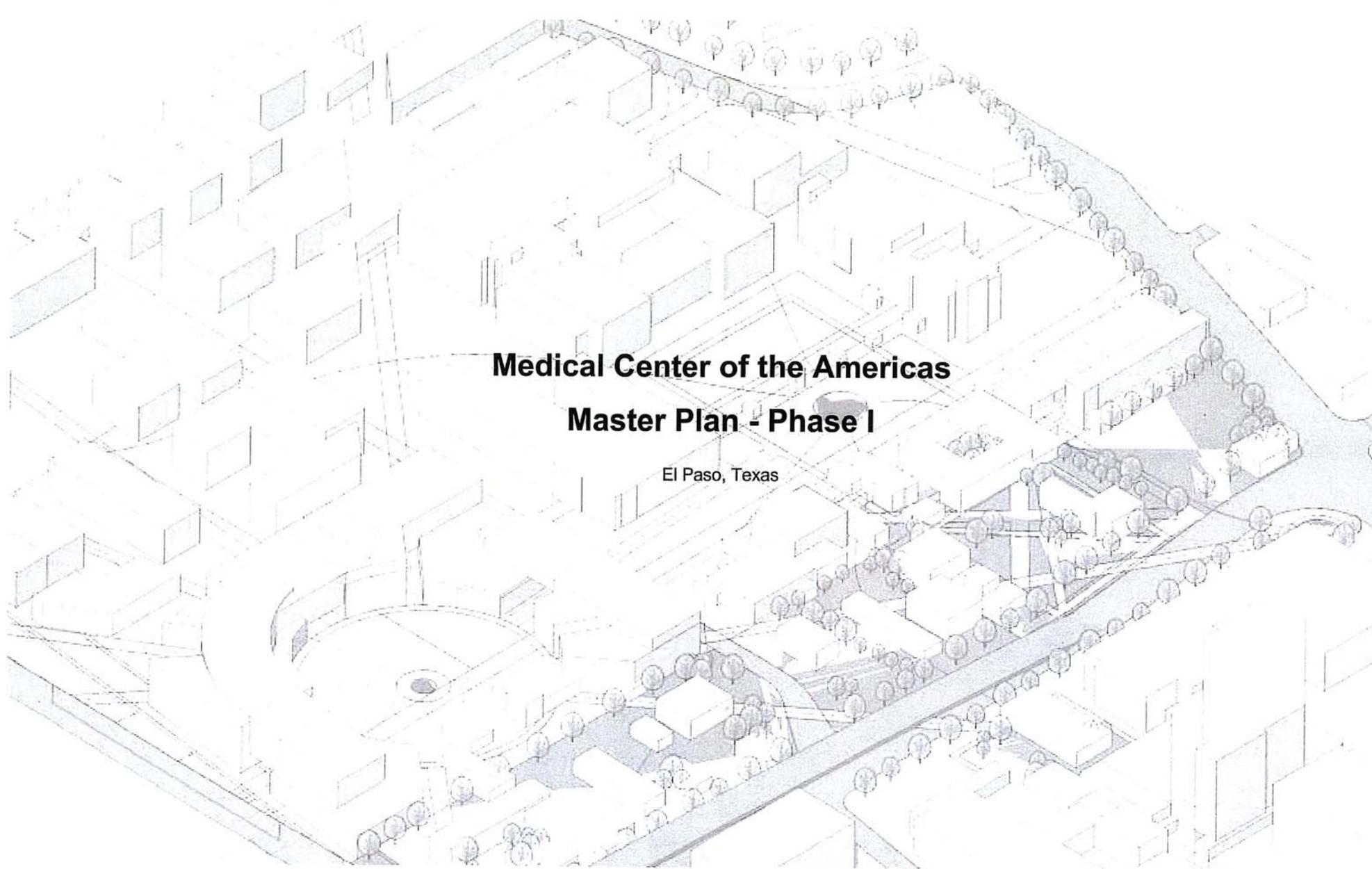
Plaza View from Southwest



Texas Tech View from Southeast



Plaza View from Northeast



**Medical Center of the Americas  
Master Plan - Phase I**

El Paso, Texas

**EXISTING CONDITIONS**

### Existing Conditions / Site Analysis

The site, provided to the Master Planning Consultant Team by the MCA Foundation Board, is proposed to be an approximately 25 square acre congruous or non-congruous campus of facilities located in El Paso, Texas. The current area identified as available for planning purposes is shown below, bound by Alameda Avenue (to the south), I-10 (to the north), Chelsea Street (to the east) and Interstate 54 (to the west). The site is a combination of privately held residential and commercial land, institutional land and City of El Paso owned land.



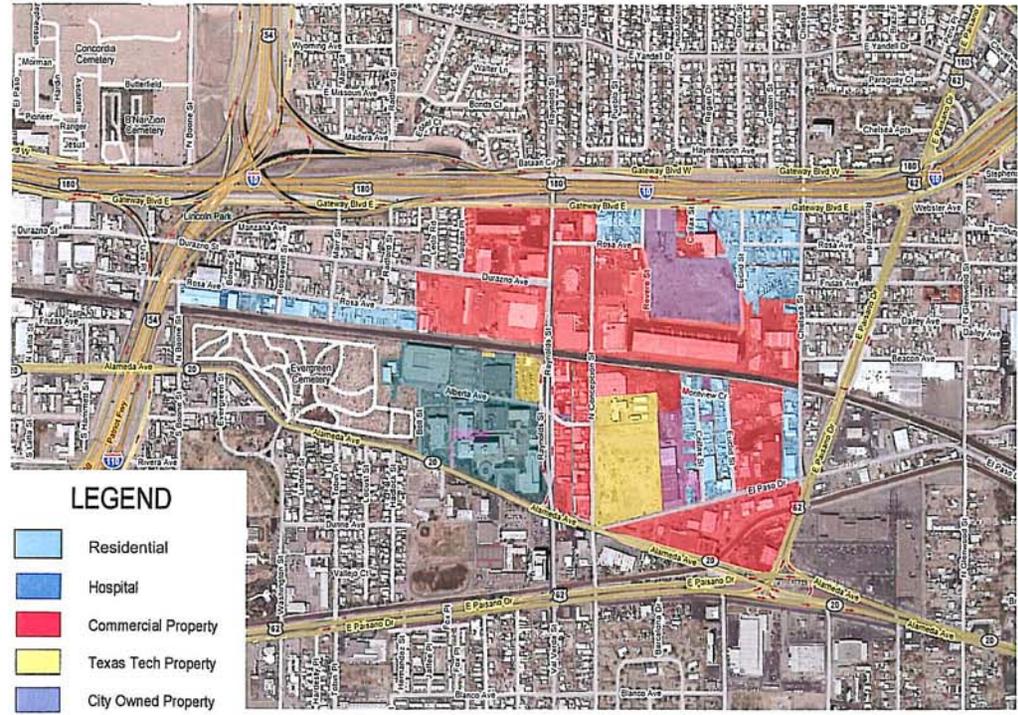
#### Campus Facilities & Zoning

The site, shown opposite, has been divided into its major functional zones. The existing Thomason Hospital and its related components comprise the Hospital Zone. This zone includes all inpatient, outpatient and support related functions.

Immediately surrounding Thomason is the Commercial Zone, made up primarily of commercial businesses with some small residential pockets mixed between.

The yellow area east of Thomason and at the north of the Thomason Campus is the existing Texas Tech Medical School. Texas Tech recently completed the second building of the medical school, which was recently accredited as a 4-year medical school. The purple zones are City owned properties which include the majority of the area north of Durazno, south of I-10 and west of Saipan Place. This area was flooded in 2007 and the families were relocated by the City.

The light blue areas are primarily residential and make up the last category indicated on the existing zoning diagram.



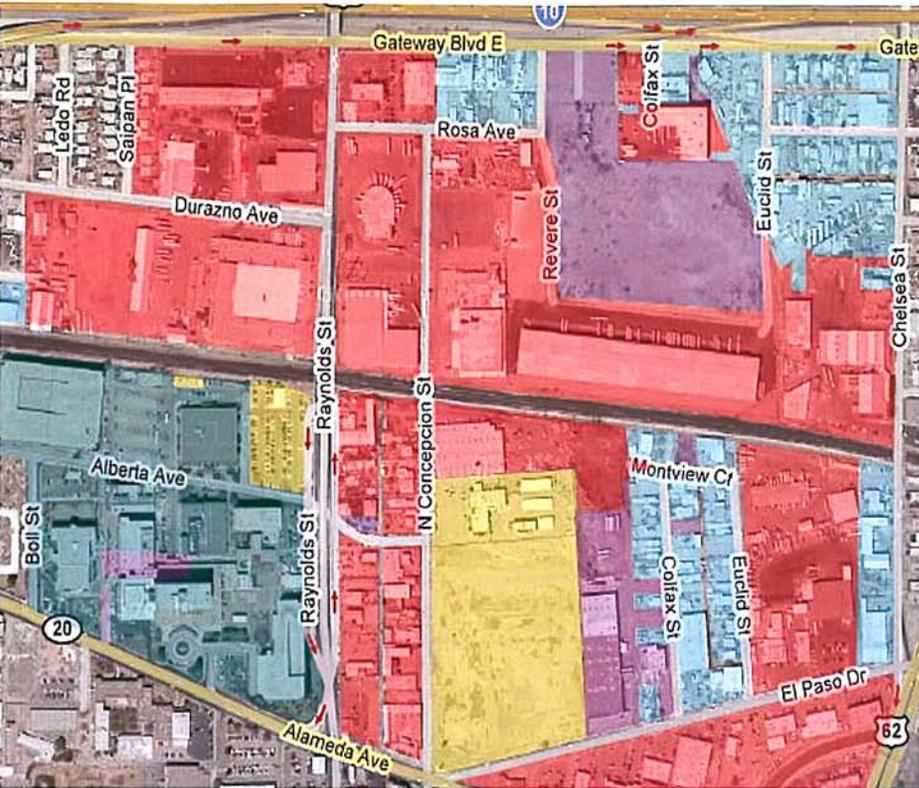
### Thomason Hospital



### Texas Tech Medical School & Clinics



### Commercial Zone

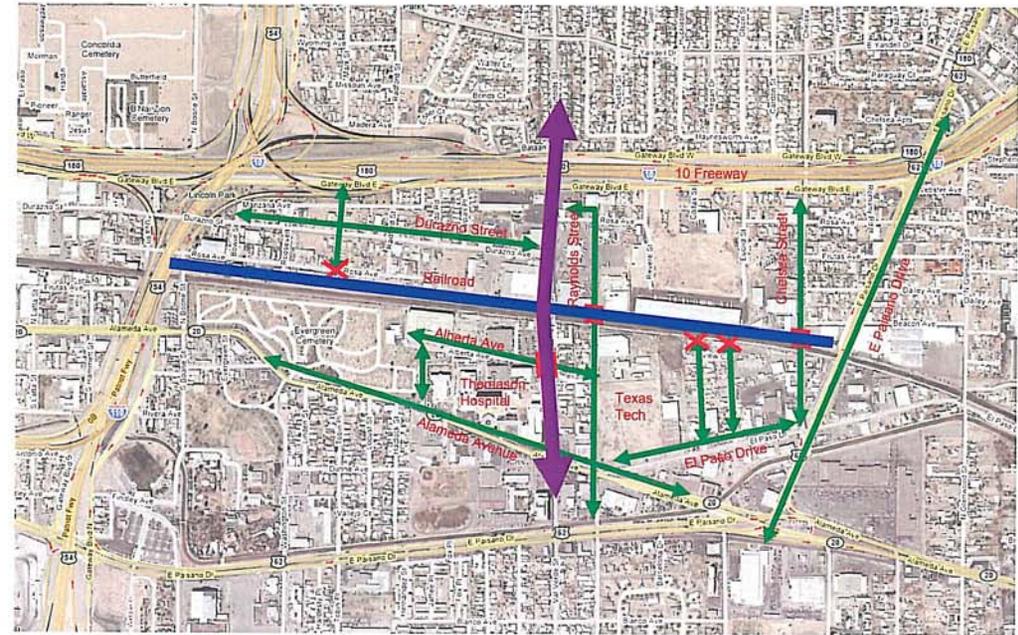


### Residential Zones



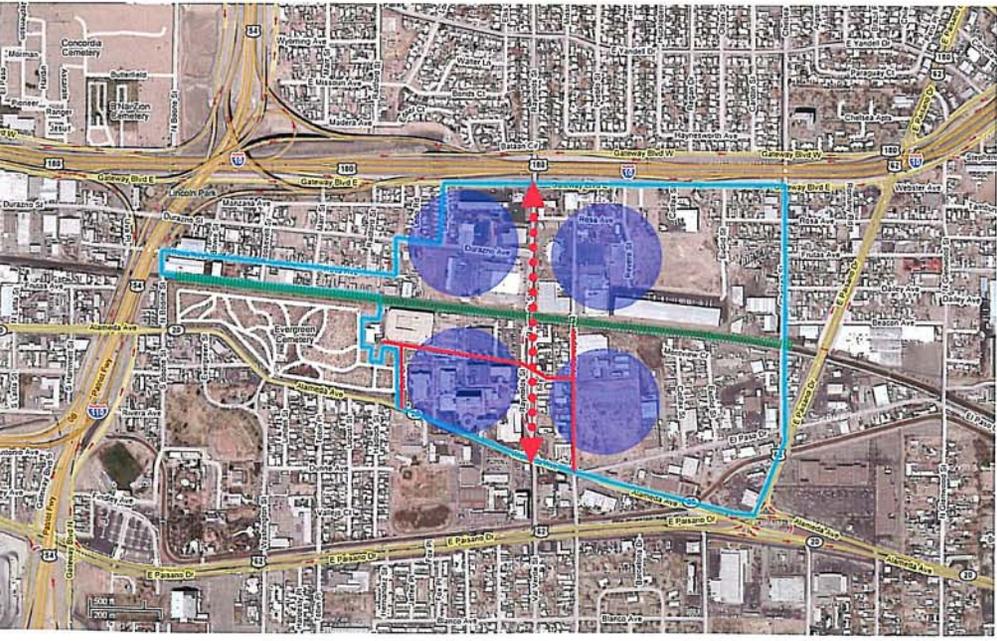
**The Site Bisectors**

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**Site Bisectors**

The existing site is bisected by the railroad (east / west) and Reynolds Avenue (north / south). Many of the existing internal site roads running north / south do not cross the railroad as shown with the red "x". Additionally, since Reynolds is a 4-lane overpass connecting Alameda and I-10, east west access is limited to just a few locations.



Reynolds looking North



Railroad looking West

**Access & Circulation**

Access to the site occurs in a few locations. To the south is Alameda, the main access point to Thomason and Texas Tech. El Paso Drive also extends along the southern edge and is being modified by the City to tie into Alameda at a 90 degree angle to improve traffic. Both of these southern access points are the main entry points to Thomason Hospital and Texas Tech as shown in the red dots on the image below.

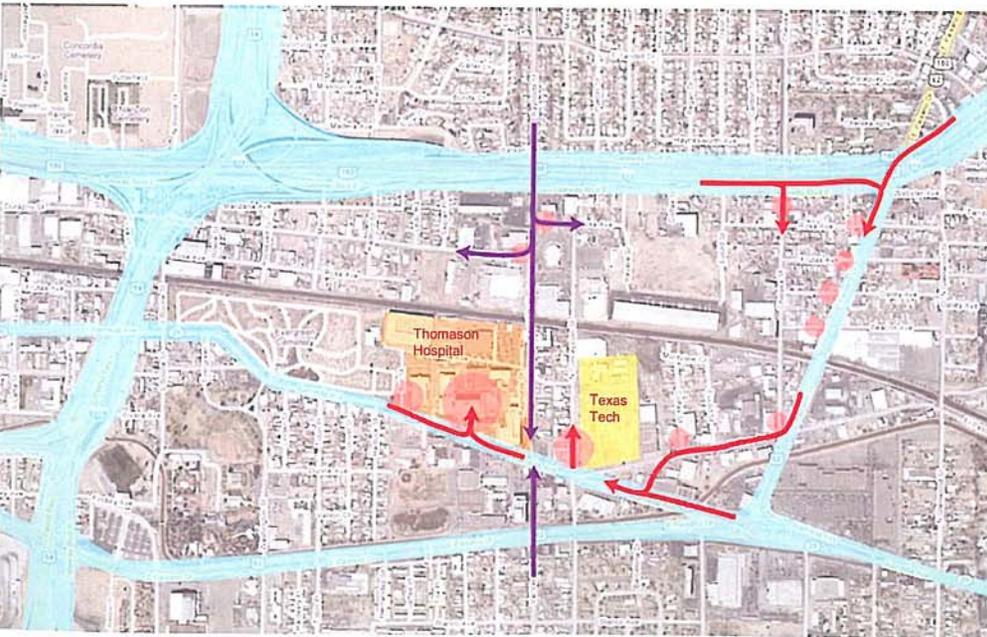
Access from Paisano is currently limited unless used as a means to reach El Paso or Alameda; however, Paisano is one of the main arterials from I-10 and is one of the direct exits from the Interstate.

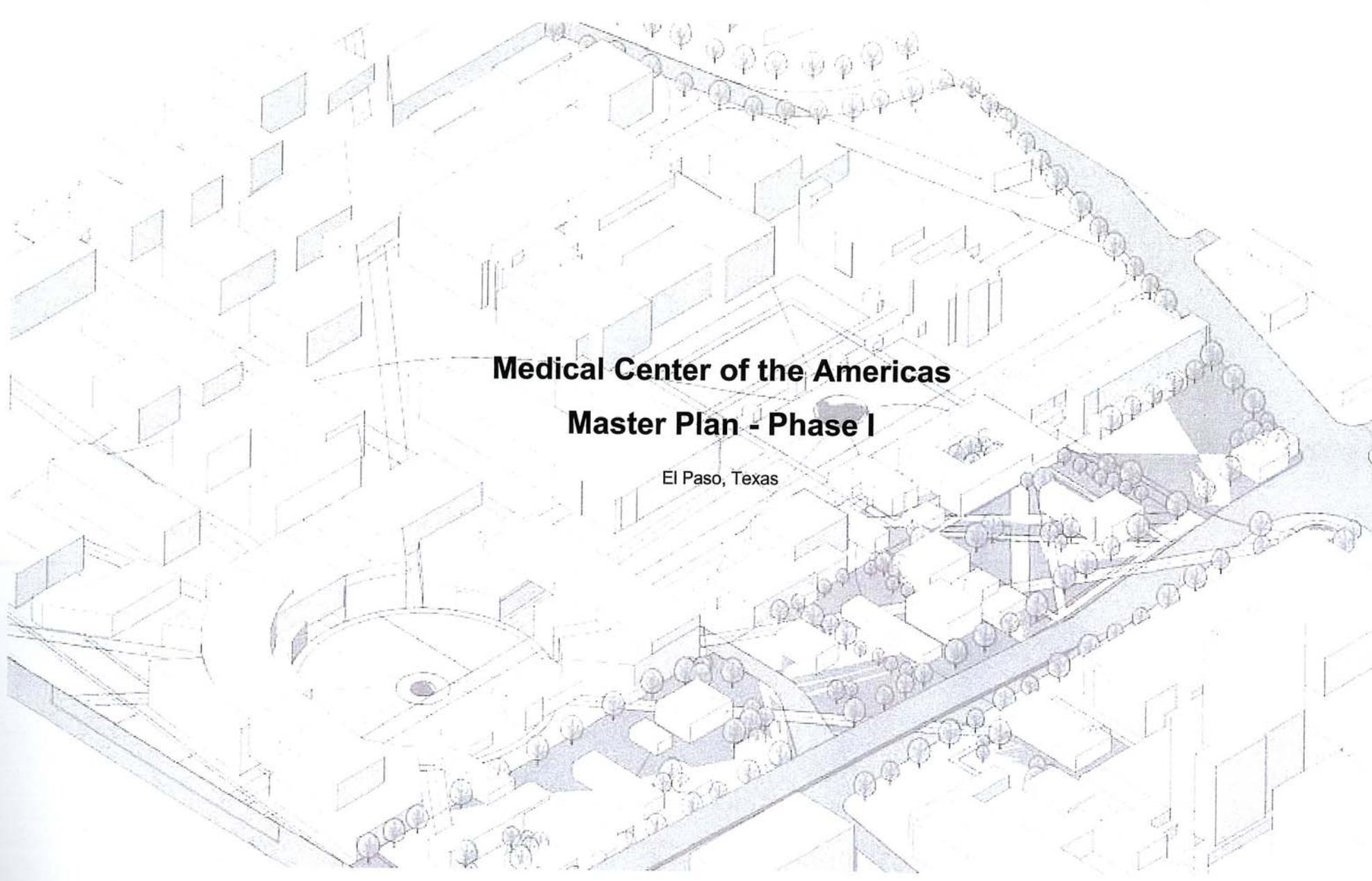
The purple arrows indicate access across Reynolds Avenue 4 Lane overpass. Access onto the MCA site occurs at both ends of Reynolds prior to the elevation rise over the railroad tracks; however, unless you are familiar with the area, it can be a daunting task to find your way around or under the Reynolds overpass.



**Existing Development Challenges**

Given the existing railroad and Reynolds overpass, future growth of the MCA will be challenging in both the east / west and north/south directions. It will be necessary to establish a strategy for either direction depending on the amount area required and the necessary access points across them.





**Medical Center of the Americas**

**Master Plan - Phase I**

El Paso, Texas

**DEMOGRAPHICS & PROGRAM**

## Demographic Projections / Campus Program

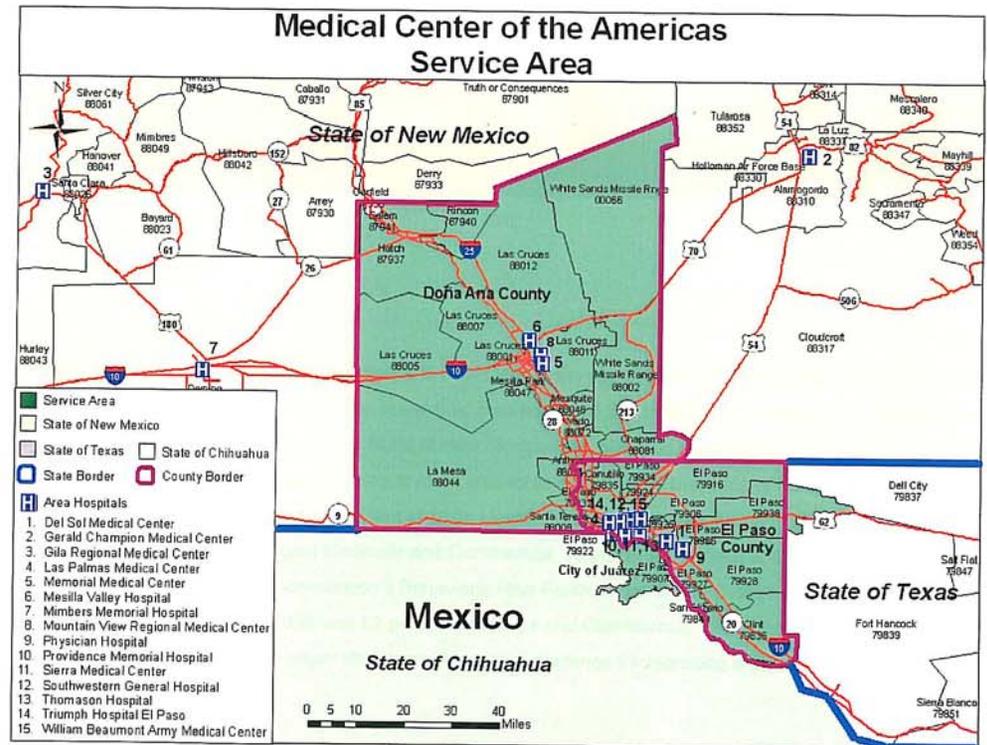
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After the interviews were completed, our team determined the potential funding sources and assigned priorities taking into account the information from the interviews, the perceived momentum and support of the initiatives, and the likelihood of funding. In general, the expansion initiatives presented by Thomason Hospital, Texas Tech University School of Medicine program development, UTEP nurse training, and EPCC allied health program growth, were assigned the highest priority infrastructure attention.

### Service Area Definition

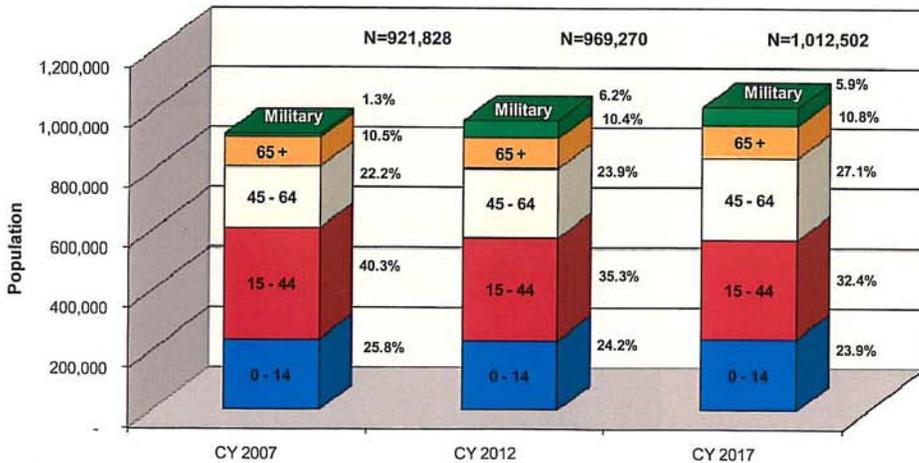
The map below shows the service area of the Medical Center of the Americas. It includes Doña Ana County in the state of New Mexico, El Paso County in the state of Texas, and Ciudad Juarez in Mexico.



**Population and Demographics**

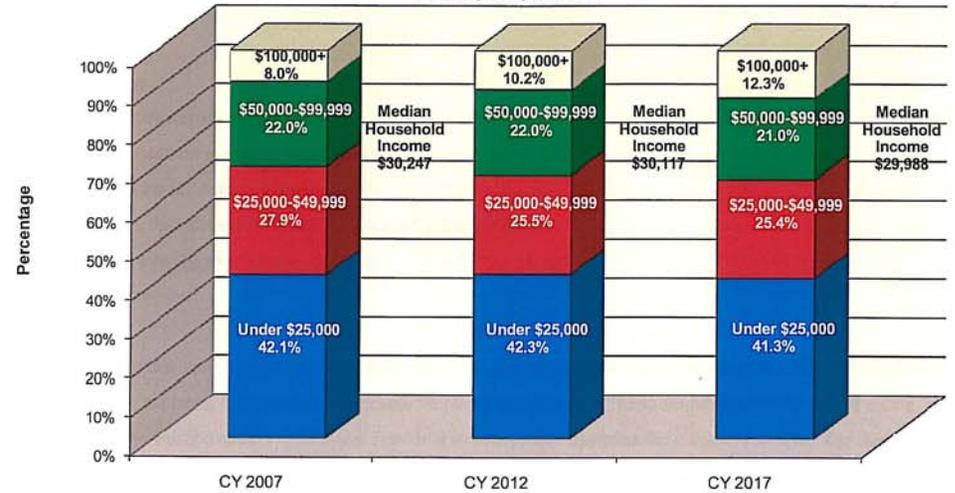
The population by age cohort was projected from the U.S. Census Bureau 2000 and 2005 data for Doña Ana and El Paso Counties. The total population is projected to grow at a compound annual rate of 1.0 percent per year between 2007 and 2012, from 922,000 to 969,000. The population projections include the expected military increase of 60,000 individuals at Fort Bliss Base between 2007 and 2011. It is estimated that 60 to 65 percent of the population will be younger than 44 during the period 2007 to 2012, which implies that the service area population will utilize fewer acute healthcare services than the State of Texas or State of New Mexico. However, it is likely that there will be high demand for primary care, emergency, obstetrics, and pediatrics services. A chart detailing the population projections is shown below:

**Medical Center of the Americas  
El Paso and Doña Ana Counties - Population by Age Cohort  
CY 2007, 2012, and 2017**



Source: Projected from US Census Bureau 2000 and 2005 data

**Medical Center of the Americas  
El Paso and Doña Ana Counties - Socioeconomic Profile  
CY 2007, 2012, and 2017**



Source: Projected from US Census Bureau

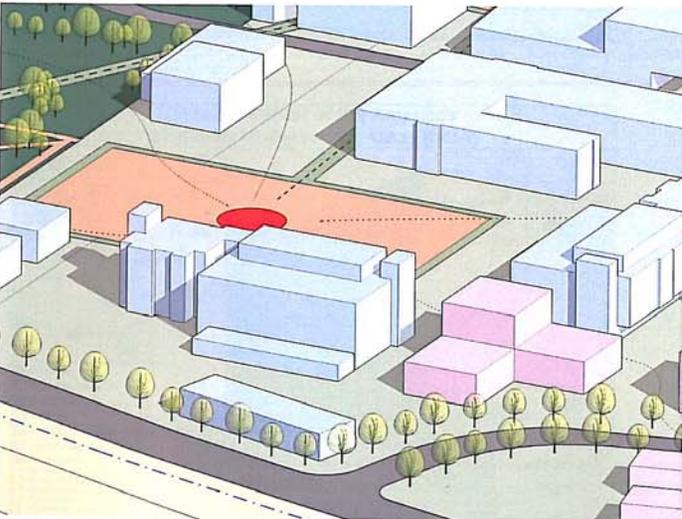
The socioeconomic profile was projected from the U.S. Census Bureau 2000 and 2005 data for Doña Ana and El Paso Counties. The service area's median household income of \$30,247 in 2007 is more than \$10,000 less than the median household income of both the State of New Mexico (\$40,878) and the State of Texas (\$42,982). This implies that the payer mix of the service area is more unfavorable than either the State of New Mexico or the state of Texas. According to the Texas Department of State Health Services, the payer mix in El Paso County in CY 2005 was projected to be 40 percent Medicare and Commercial, 19 percent Medicaid, and 41 percent uninsured. The New Mexico Health Policy Commission's Behavioral Risk Factor Surveillance System projected that the payer mix of Doña Ana County in CY 2005 was 52 percent Medicare and Commercial, 18 percent Medicaid, and 30 percent uninsured. The adverse payer situation will create a challenge for recruiting and retaining physicians and a workforce to the service area.

### Master Plan Process

Upon completion of the demographic evaluation and programming effort outlined in "Demographic Projections & Programming" Section, the Master Planning Design Team began the architectural evaluation and option development components of the Master Plan. This involved the translation of program elements to a physical plan that responds to a multitude of issues and requirements for different organizations and implemented over time in multiple phases.

Since the future development of the MCA will evolve and change over time, it was important for assumptions relative to potential development be tested by the Multidisciplinary Team established by the MCA. In bringing the ideas of all the potential partners and community representatives together, many potential hurdles could be avoided later in the process. To implement such a strategy, LBL/Camden initiated a process of four design charrettes (workshops) for review, input and discussion of issues related to each option development.

The Master Plan should be viewed as a living document that will be modified, expanded and redirected as future requirements become realized. The goal of Phase I was to move toward a Preferred Master Plan that could be further evaluated and developed based on more detailed criteria established in Phase II. By building consensus of the participants, the option selected as the Preferred Master Plan attempts to address the issues identified by those involved in the process.



View of Texas Tech from the Southeast

### Master Plan Development

At the beginning of the charrette process, LBL and the MCA Multidisciplinary Team identified key areas of focus that appeared to be most important for successful implementation of a Medical Center of the Americas Medical Center Campus. These were:

- MCA Image
- Campus Environment / Open Space
- Clear Organization of the MCA Components
- Visibility of the MCA from Alameda & I-10
- Vehicular & Pedestrian Accessibility / Clear MCA Entry Points
- MCA Bisectors (Raynolds & the Railroad)
- Future Expansion

Development of one preferred master plan began with a wide range of ideas that were summarized into five preliminary schemes; each exploring different global concepts for planning of the site. These schemes are each based on the evaluation of the existing site conditions and individual structures that comprise the current MCA site. The design team evaluated the strengths and weaknesses of each component as it relates to the full MCA development concept.

There is a unifying existing condition, in all schemes, worthy of discussion prior to describing the unique features of each option. This existing condition is the bisection of the site, both in the north/south and east/west directions due to the railroad and the related Raynolds Street overpass.

This condition is described in the "Existing Site Conditions" Section in detail and is a major contributing factor to the initial thinking around development of the MCA in this section of El Paso. Given that the railroad runs east/west through the center of the site, particular attention focused on future adjacencies on both sides of the tracks. There was substantial discussion, described later, around possibly depressing the railroad track over time; however each of the schemes listed below was designed to work either with or without a depressed railroad. Similarly, the north/west Raynolds Street 4-lane overpass was constructed to provide access over the railroad which could be maintained for the long term or eliminated if the railroad was depressed. For the purposes of the master plan, we have assumed the railroad and Raynolds may remain in their current configuration for the foreseeable future.

*On the following pages are summaries of the five preliminary schemes and the major concepts behind each.*

**Medically Underserved Area/Health Professional Shortage Area**

Significant portions of the MCA service area have been designated as a Medically Underserved Area, a Health Professional Shortage area, or both as shown on the maps below.



Medical Center of the Americas  
Ratio of Physicians by Specialty per 100,000 Population - El Paso City and State of Texas  
CY 2006

Specialty	City of El Paso		State of Texas		Difference in Ratios	Compared to State
	Num. Providers	Providers per 100,000	Num. Providers	Providers per 100,000		
<b>Primary Care</b>						
Family Practice or General Practice	131	21.9	8,990	40.4	18.5	Worse
Family Practice	112	18.7	7,675	34.5	15.8	Worse
General Practice	22	3.7	1,413	6.3	2.7	Worse
General Preventative	1	0.2	145	0.7	0.5	Worse
Internal Medicine	198	33.1	9,843	44.2	11.1	Worse
Pediatrics	110	18.4	5,284	23.7	5.4	Worse
Obstetrics & Gynecology	69	11.5	3,045	13.7	2.1	Worse
<b>Medical</b>						
Allergy & Immunology	9	1.5	485	2.2	0.7	Worse
Dermatology	9	1.5	788	3.5	2.0	Worse
Endocrinology, Diabetes and ME	11	1.8	437	2.0	0.1	Worse
Gynecology	6	1.3	493	2.2	0.9	Worse
Neonatal/Perinatal Medicine	12	2.0	532	2.4	0.4	Worse
Nephrology	17	2.8	720	3.2	0.4	Worse
Neurology	15	2.5	985	4.4	1.9	Worse
Pediatric Endocrinology	1	0.2	67	0.3	0.1	Worse
Child Neurology	3	0.5	102	0.5	(0.0)	Similar
<b>Surgical</b>						
Neurological Surgery	9	1.5	440	2.0	0.5	Worse
Ophthalmology	25	4.2	1513	6.8	2.6	Worse
Orthopedic Surgery	50	8.4	1989	8.9	0.6	Worse
Pediatric Surgery	3	0.5	106	0.5	(0.0)	Similar
Vascular Surgery	3	0.5	347	1.6	1.1	Worse

Source: Texas Medical Association database of practitioners purchased in 2006.  
\\pseu01\top\clients\Lee Burkhardt Liu\Med Ctr of the Americas\Physician Needs.xls\Physician Supply(2)

**Physician Supply Analysis**

An analysis of physician by specialty per 100,000 population for the City of El Paso and the State of Texas is shown in the table to the left. In primary care as well as for medical and surgical specialties, the City of El Paso has fewer physicians per 100,000 population.

This information coupled, with the adverse payer mix situation, indicates that the MCA will be challenged by the shortage of primary care physicians and other healthcare providers in its service area and will need to make plans to successfully recruit and retain physicians and other healthcare professionals to the service area in order to support the MCA vision.

This implies that a well organized clinic system is needed to care for the population.

**Use Rates**

Hospital utilization rates of El Paso County general acute care facilities indicate that the average staffed occupancy rate of El Paso County hospitals is 64 percent. This suggests that there is excess capacity in the County's hospitals as of 2005. Also, use rates (measured as admissions per 1,000 population) in El Paso County tend to be lower than the state of Texas as a whole. This is due to the large population of people under 45 who tend to use fewer healthcare services. The table to the right shows the utilization rates of the hospitals in El Paso County and the State of Texas as a whole.

Medical Center of the Americas  
El Paso County General Acute Care Hospital Utilization  
CY 2005

Facility	Ownership	Staffed Beds	Admissions	Average Daily Census	Average Length of Stay	Staffed Occupancy Rate
<b>El Paso County</b>						
R.E. Thomason General Hospital	Public	282	16,181	195	4.4	69.2%
Del Sol Medical Center	For-Profit	293	14,867	225	5.5	76.7%
Las Palmas Medical Center	For-Profit	261	10,593	153	5.3	58.7%
Physicians Hospital	For-Profit	40	2,309	25	3.9	62.1%
Providence Memorial Hospital	For-Profit	359	19,649	254	4.7	70.8%
Sierra Medical Center	For-Profit	334	13,592	180	4.8	53.9%
Southwestern General Hospital	For-Profit	23	1,117	13	4.2	55.8%
<b>TOTAL</b>		<b>1,592</b>	<b>78,308</b>	<b>1,045</b>	<b>4.7</b>	<b>63.9%</b>
<b>El Paso County Use Rate</b>			<b>108.9</b>			
<b>State of Texas</b>		<b>61,097</b>	<b>2,587,530</b>	<b>37,879</b>	<b>5.3</b>	<b>62.0%</b>
<b>State of Texas Use Rate</b>			<b>113.2</b>			

Source: Texas Department of Health, Utilization Data for Texas Acute Care Hospitals By County, 2005  
Note: Use rate is defined as admissions per 1,000 population  
\\pseu01\top\clients\Lee Burkhardt Liu\Med Ctr of the Americas\Hospital Utilization.xls\Utilization Table

## Demographics & Programming

### Creation of an MCA Space Program

Upon completion of service line ranking and a more detailed look at certain existing and potential future anchor tenants (Thomason, TTUHSC, EPCC), LBL/Camden began a high-level programming effort to try and identify space requirements for the MCA site over time. Through a number of meetings with the Master Planning Committee, its partner organizations and community representatives, the detailed use rate projections were presented and validated after careful evaluation of historical trend lines and future growth projections.

These projections were then converted into square footage allocations and included in an overall site program for use in the master planning process using industry benchmarking. To the right is the spreadsheet prepared by LBL converting current square footage into projected square footage for key future milestones.

	Existing	Projected Year		Notes/Questions/Comments
		2,015	2,025	
<b>Thomason Hospital</b>				
Inpatient Beds	294	423	450	
Square Footage (In & Outpatient/Clinics/Spt.)	600,000	865,000	920,000	
Added Physicians Requiring MOB Space	?	57	75	
Square Footage		114,000	150,000	
<b>Texas Tech University Health Science Center (TTUHSC)</b>				
Faculty Office Space	?	50,000	144,000	
Additional Teaching Space / Research Labs / Clinics		100,000	200,000	
<b>Community College Nursing Program</b>				
Facility Square Footage for Relocating Svcs	?	75,000	100,000	
<b>Research (Private)</b>				
Lab & Office Space		100,000	200,000	
<b>Residential</b>				
Staff/ Faculty/ Students/ Other		75,000	150,000	Assumes (480 Faculty + 320 Students + 300 Other) at 5% (2015)
<b>Commercial</b>				
Hotel/ Retail/ Restaurant		300,000	500,000	
Med. Mall/ Pharmacy/ Optometry/ etc.		25,000	40,000	
<b>Support</b>				
Loading/ Warehouse/ Storage/ Facility Services		250,000	400,000	
Irrigation/ Trash/ Recycling/ Flood Control/ Shipping/				
<b>Parking</b>				
<b>Others</b>				
Outside Clinics		20,000	30,000	
Emergency Services/ Police/ Fire Dept.		20,000	30,000	
Employee Services/ Day Care/ Gym		20,000	40,000	
<b>Total</b>		<b>2,014,000</b>	<b>2,904,000</b>	Driven by Development (Hospital: 2/Bed, Outpatient: 6/1000 s.f., Retail: 1/200 s.f., etc.)

Source: LBL and The Camden Group

C:\Documents and Settings\jasonh\Desktop\Program Matrix.xls\Matrix

**Extrapolating Growth to Future Milestones**

LBL / Camden researched the growth pattern of other Medical School Campus Plans where square footage information is available since their inception. The examples cited, based on our ability to find information, were Duke, the University of Virginia, UCLA and Stanford. Using UCLA as an example, you will notice that an initial growth rate in square footage of 30% after inception of the school. After that, an average 8% growth rate in square footage (compounded every five years) became the norm. Interestingly, the averages when you compare multiple campuses together did not change substantially. Included is a comparative chart showing average growth in square footage over time for Stanford, the University of Virginia and UCLA.

**All Campuses: Average Growth Rate over time**

Time Period	Stanford Univ.	Univ. of Virginia	UCLA	Average
1st 5 years	35%	29%	27%	30%
2nd 5 years	6.4%	9.7%	5.2%	7%
3rd 5 years	8.1%	6.4%	6.5%	7%
4th 5 years	5.3%	13.5%	4.1%	8%
5th 5 years	4.6%	1.7%	9.2%	5%
6th 5 years	3.4%	5.3%	9.1%	2%
7th 5 years	8.1%	9.9%	8.2%	9%
8th 5 years	2.6%	4.5%	9.5%	6%
9th 5 years	9.0%	9.8%	9.0%	9%
10th 5 years	26.2%	8.3%	13.5%	16%
	8%	8%	8%	8%

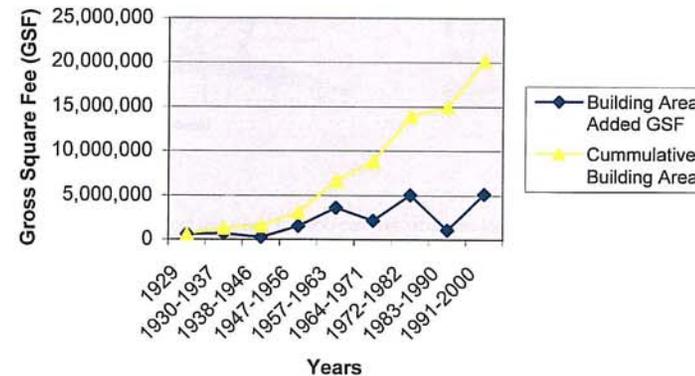
Average (1961-2007)

**Building Area of UCLA, 1929-2007**

Time period	Building Area Added (GSF)	Cummulative Building Area	
1929-1960	6,000,000	6,000,000	26%
1961-1965	1,200,000	7,200,000	5.2%
1966-1970	1,500,000	8,700,000	6.5%
1971-1975	950,000	9,650,000	4.1%
1976-1980	2,150,000	11,800,000	9.2%
1981-1985	2,125,000	13,925,000	9.1%
1986-1990	1,900,000	15,825,000	8.2%
1991-1995	2,216,622	18,041,622	9.5%
1996-2000	2,083,625	20,125,247	9.0%
2001-2007	3,130,255	23,255,502	13.5%
	<b>23,255,502</b>		<b>8%</b>

Average (1961-2007)

**Incremental and Total Building Area, 1929-2002**



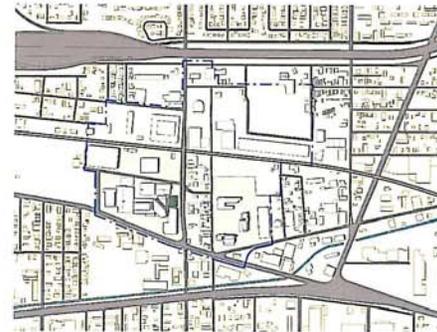
LBL/Camden then applied similar percentages to the MCA, the only difference being that 10 year intervals were used instead of 5 year since the development horizon we are looking at is much longer. You will notice in the chart below that a current 2007 estimated square footage of 1.2 million square feet (including all MCA functions) was used as the baseline for extrapolating forward with milestone square footages of 50 years and 100 years being highlighted.

**MCA Future Building Area Estimate - 2007-2107**

Time Period	Estimated Percentage	Building Area Added GSF	Cummulative Building Area
2007 Existing	-	1,200,000	1,200,000
2007-2015	30%	360,000	1,560,000
2016-2025	16%	249,600	1,809,600
2026-2030	16%	289,536	2,099,136
2031-2040	16%	335,862	2,434,998
2041-2050	16%	389,600	2,824,597
<b>2051-2060</b>	<b>16%</b>	<b>451,936</b>	<b>3,276,533</b>
2061-2050	16%	524,245	3,800,778
2051-2060	16%	608,125	4,408,903
2061-2070	16%	705,424	5,114,327
2071-2080	16%	818,292	5,932,620
2081-2090	16%	949,219	6,881,839
2091-2100	16%	1,101,094	7,982,933
2101-2110	16%	1,277,269	9,260,202
		9,260,202	

**Estimating Land Use Over Time**

To try and quantify a land use number (in acres), LBL/Camden assumed an "average density" of two stories (an average between the majority of the site at one story compared to Thomason & Texas Tech with multi-story buildings). Using this assumption, 40,000 s.f. of development was allocated per acre. Based on the estimated projected MCA square footage, the MCA will 82 acres in 50 years and 230 acres in 100 years. Again, acreage will be a function of built density but the images below indicate what the site may look like over the next 100 years.



Existing Condition



Phase 1 (10 - 15 Years)

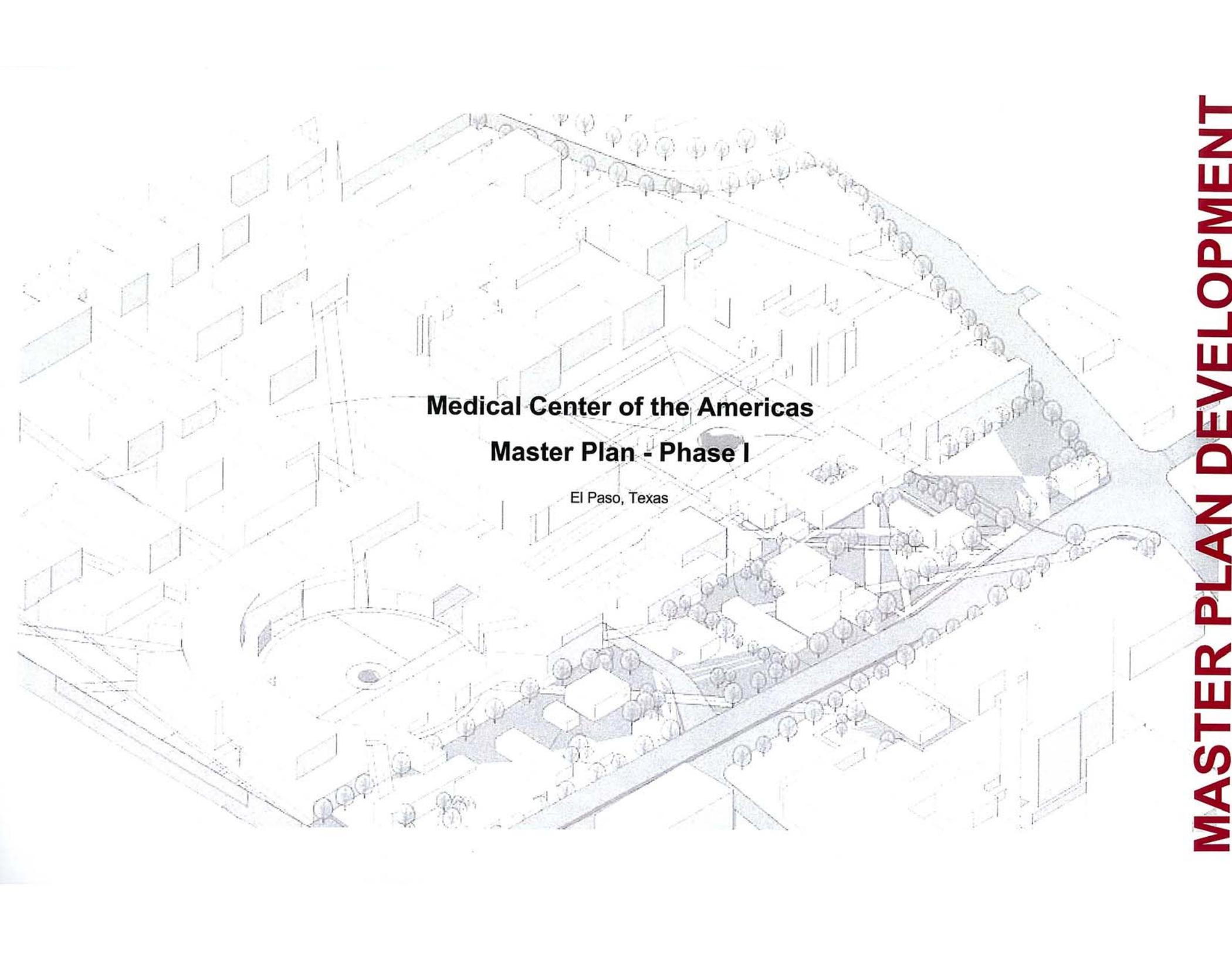


Phase 2 (25 - 50 Years)



Final Phase (100 Years)

Again, density of the site would affect this need but you can see what this looks like in the phasing portion in the "Preferred Master Plan Section" of the report.



**Medical Center of the Americas  
Master Plan - Phase I**

El Paso, Texas

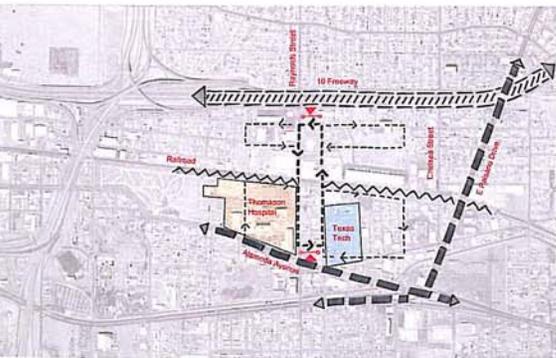
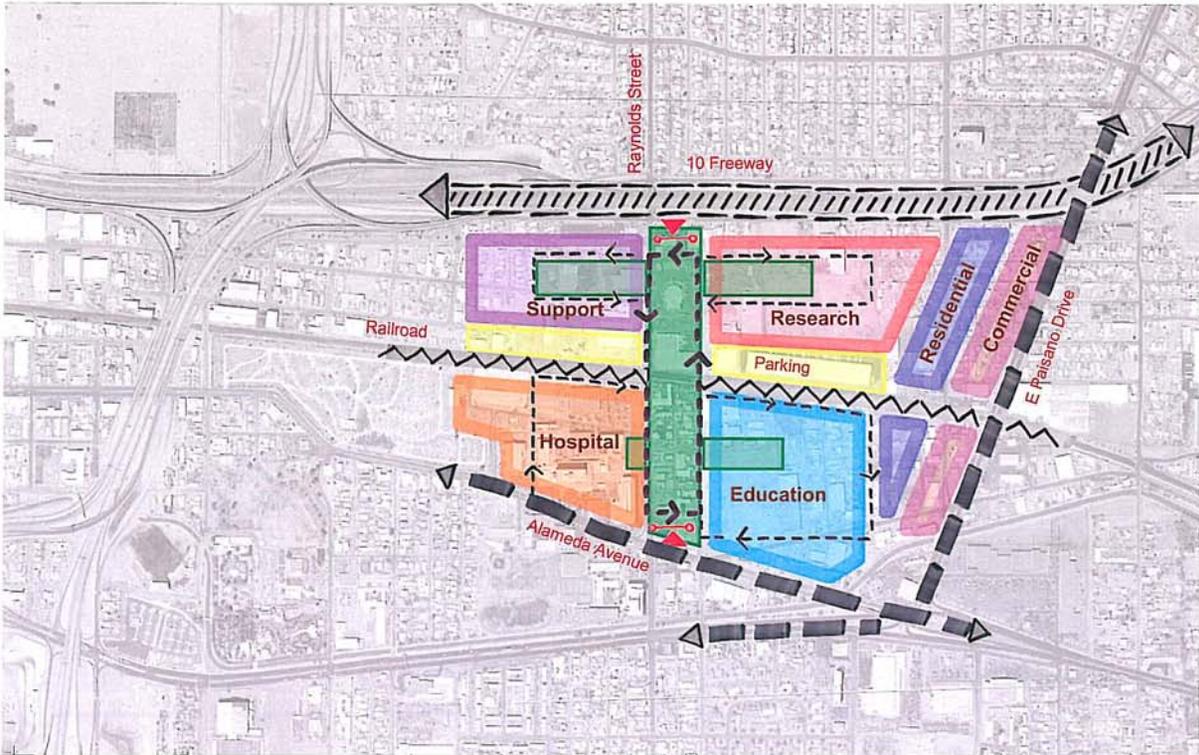
**Option #1 – Reynolds Spine**

The concept of the first option expanded the current and future MCA development elements along a main, central organizing spine of the site congruent with Reynolds Street. Although diagrammatic, the option shows open/green space extending from I-10 to Alameda. This is intended to suggest a visual and access connection under the Reynolds overpass between the building elements. Within the central spine is clear vehicular and pedestrian access with additional access loops extending off of the main spine in each of the four quadrants created by the bisection of the site by the railroad and Reynolds.

Zoning was then created for each of the anticipated future elements of the MCA based on proven relationships for a medical center campus. A hospital zone remained where Thomason currently resides. East of that zone opposite the spine, a complete education zone was created for the expansion functions of Texas Tech and other education and public health functions.

Research and support were established to the north in support of the other health related functions with clear access and visibility from I-10. Commercial and possible future residential zones were included adjacent to Paisano to provide commercial opportunities in support of housing and to buffer existing residential areas from more public health center development.

The following Reynolds Spine diagrams show the existing elements, the proposed circulation diagram and proposed zoning.



Multidisciplinary Comments:

The Reynolds Spine Scheme was well received; however, the multidisciplinary team reviewing the schemes questioned what functions would be located within the open/green space. It was discussed that perhaps this area should be minimized, still allowing for the spine but limiting the width of this area. Additionally, the group felt that extension of the master plan to Paisano was too aggressive and not needed. In future schemes, the master plan extends only to Chelsea as originally shown in the RFP issued by the MCA Foundation Board.

**Option #2 – East / West**

This option developed the concept of an east/west connection across the zone currently dividing Thomason and related hospital functions from Texas Tech, other education, public health and research functions. In addition to the development of connection parkways from east to west, this option developed the concept of an internal campus ring road that could be utilized for internal vehicular circulation. The development of the ring road can occur with or without depression of the railroad or removal of the Reynolds overpass. However, it was this scheme that began to identify the advantages associated with a long-term strategy to address the railroad and overpass.

The zoning diagram of this option relied on northern expansion in the future with a relationship between the east and west zones and their interconnection at particular access points. Another organizing idea of creating a plaza between the residential and education zones served as the impetus of future schemes. The expansion of residential and commercial zones to Paisano was also pulled back to Chelsea in this scheme.

The following East / West diagrams show the existing elements, the proposed circulation diagram and proposed zoning.



Multidisciplinary Comments:

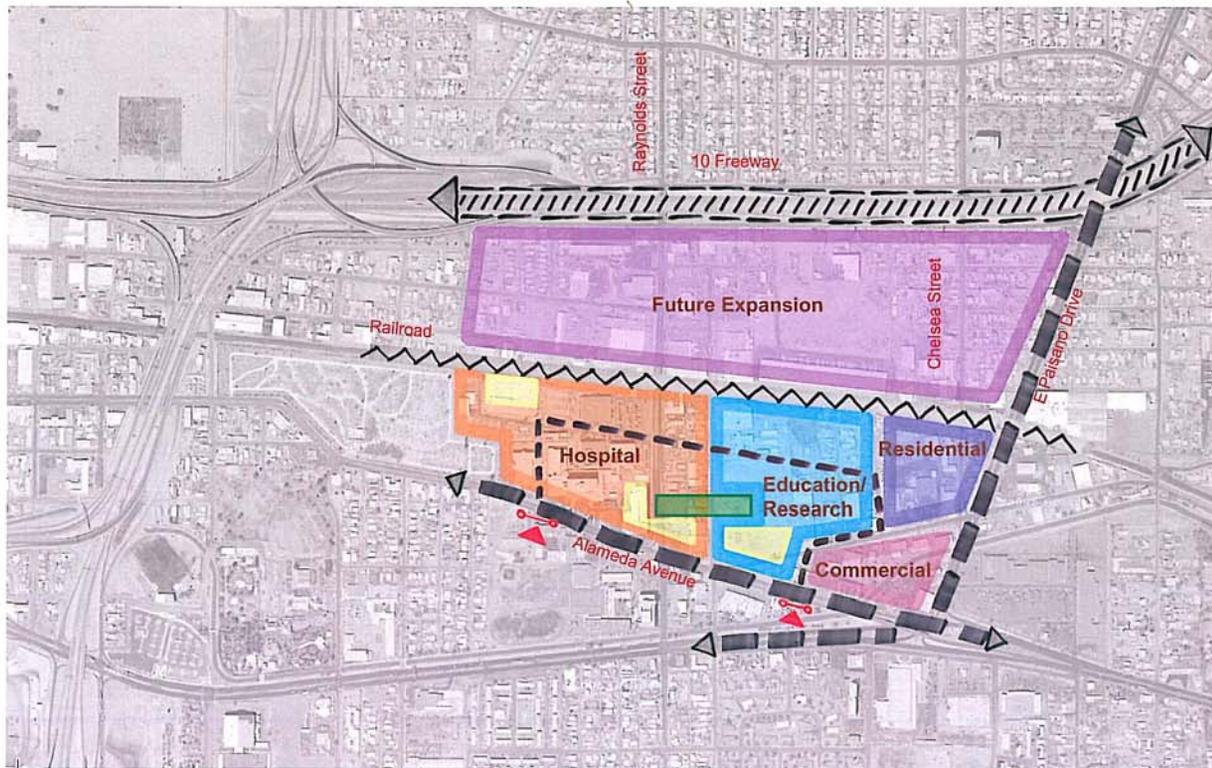
Certain elements of East / West Scheme were well received; specifically, the idea of an internal ring road, stronger connections between Thomason, Texas Tech and other future services. Extensive discussion about the benefits and challenges, primarily cost, of addressing the railroad were also key elements of this scheme. The plaza idea or central public zone within the site began an important discussion that carried forward into future options.

**Option #3 – Southern Horseshoe**

Given the issues associated with the bisection of the site by the railroad, the concept of this scheme was to limit development south of the railroad. To do this, expanding the width of Alberta and creating an internal ring, similar to the East/West Scheme, was designed to allow access between elements. It was assumed that eventually, development would need to move north; however limiting expansion to a smaller area in the immediate future could limit the size of the MCA to a more manageable size for initial development.

The zoning diagram was simplified in this scheme and research was assumed to be integral with education. The connection between Thomason and Texas Tech was also emphasized, given their current locations and that all components will need to link across this east/west corridor.

The following Southern Horseshoe diagrams show the proposed circulation diagram and proposed zoning.



Multidisciplinary Comments:

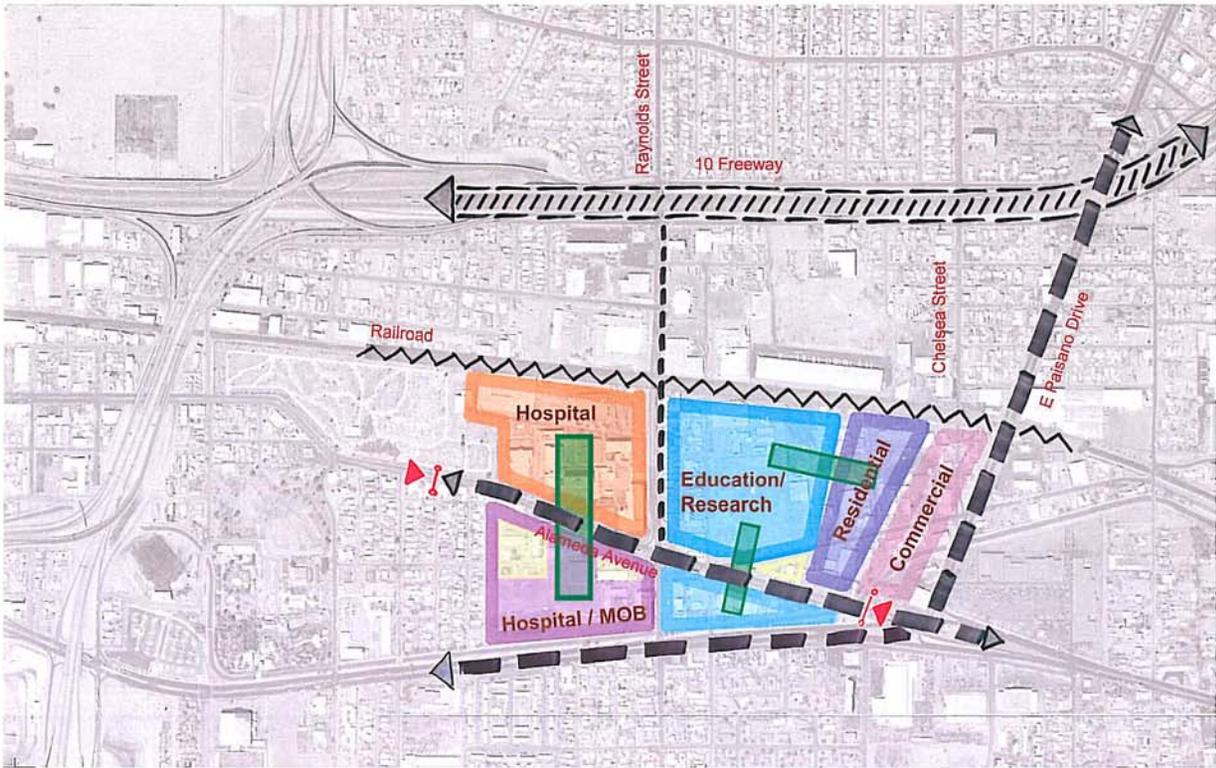
The Multidisciplinary Team understood and appreciated the development of the southern quadrants relative to the current plans for expansion of Thomason and Texas Tech but was concerned about the available area and future expansion, especially of other functions that currently do not exist on the site of the MCA. This scheme would initially require expansion of this zone all the way to Paisano, which would affect a large existing residential area. This was also a source of concern and an issue that adjacency must be addressed.

**Option #4 – Alameda Span**

The concept of the Alameda Span was similar to the Southern Horseshoe with respect to the idea of keeping development south of the railroad. The Alameda Span concept focused the main spine and entry points to each of the key anchor tenants off of Alameda. This idea is partially realized given the fact that Thomason and Texas Tech are currently accessed directly from Alameda. The other major idea explored in this option was to include the Jefferson High School site as part of the master plan, while leaving the magnet school portion intact. This would allow access to substantial areas that requires one acquisition instead of the need to acquire smaller, individually owned parcels.

In this option, outpatient functions could be located across Alameda with direct adjacency to the hospital. Different strategies could be employed for the connection of these services across Alameda and could be designed into the proposed expansion of Alameda currently being developed by the City of El Paso. Additionally, the education and research zone could also expand to the south, integrating the magnet school into future development that works with the education functions. Commercial and residential zones could still occur to the east and buffer Paisano.

The following Alameda Span diagrams show the proposed circulation diagram and proposed zoning.



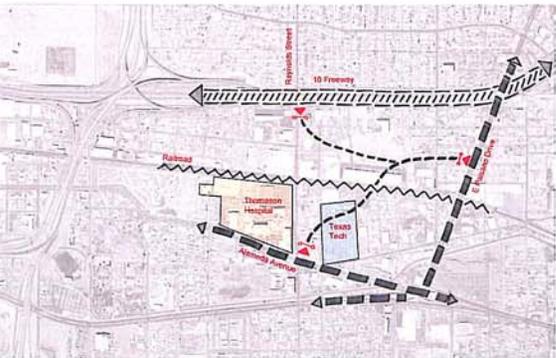
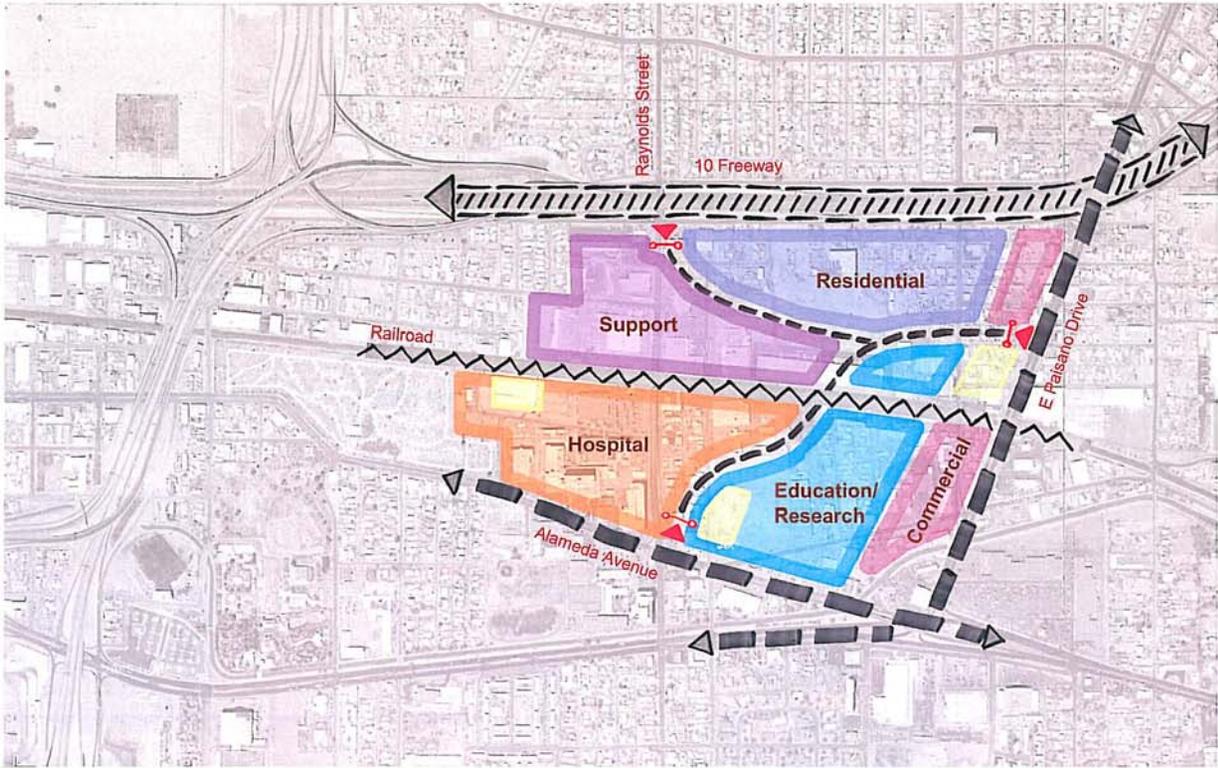
Multidisciplinary Comments:

The Multidisciplinary Team was divided on this scheme. The pro's included access to Alameda and the property gain from one client, assuming Jefferson was eventually closed or relocated. The opposite argument is the idea that community functions (schools and churches) are the right community services that support a hospital and medical center such as the MCA. Access across Alameda was also of concern, especially to the Thomason representatives who see the current danger of crossing.

**Option #5 – Promenade**

The Promenade Option is based on the creation of intersecting access arterials connecting Alameda to the south, Raynolds to the north and Paisano from the East. The plan is such that only one major crossing would be required at the railroad tracks. The zones created between arterials would be zoned appropriately for functional adjacencies similar to the prior four schemes. The major challenge with this type of development scheme is that the infrastructure associated with the arterials would need to be established all together with significant up-front costs. The Multidisciplinary Team felt this type of development was not feasible, given the overall strategy for development, and the scheme was subsequently eliminated.

The following Promenade diagrams show the proposed circulation diagram and proposed zoning.



Multidisciplinary Comments:

The Multidisciplinary Team eliminated the Promenade Scheme as a potential option.

**Development of Option #6 & #7**

Upon review and comments by the MCA Board, the partner organizations and community representatives, there was consensus that LBL Architects should explore additional options taking the best ideas and concepts from Options #1, #2 and #3.

Option #4 (Alameda Span), although not uniformly supported, was still deemed a viable option and one that should remain as a potential option.

Option #5 (Promenade) was eliminated as a potential option.

Given that direction from the MCA Board and Steering Committee, LBL explored additional options and returned with Options #6 and #7 described on the following pages.

**#1 Reynolds Spine**



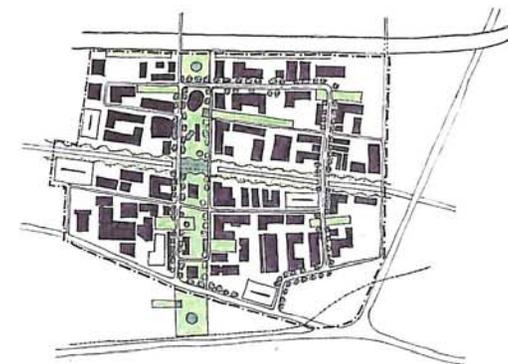
**#2 East/West**



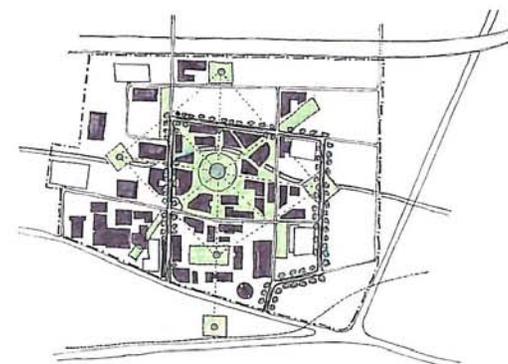
**#3 Southern Horseshoe**



Combine Schemes 1, 2 & 3 into two new schemes incorporating the best ideas of all three



**#6 Central Park**



**#7 Campus Quad**

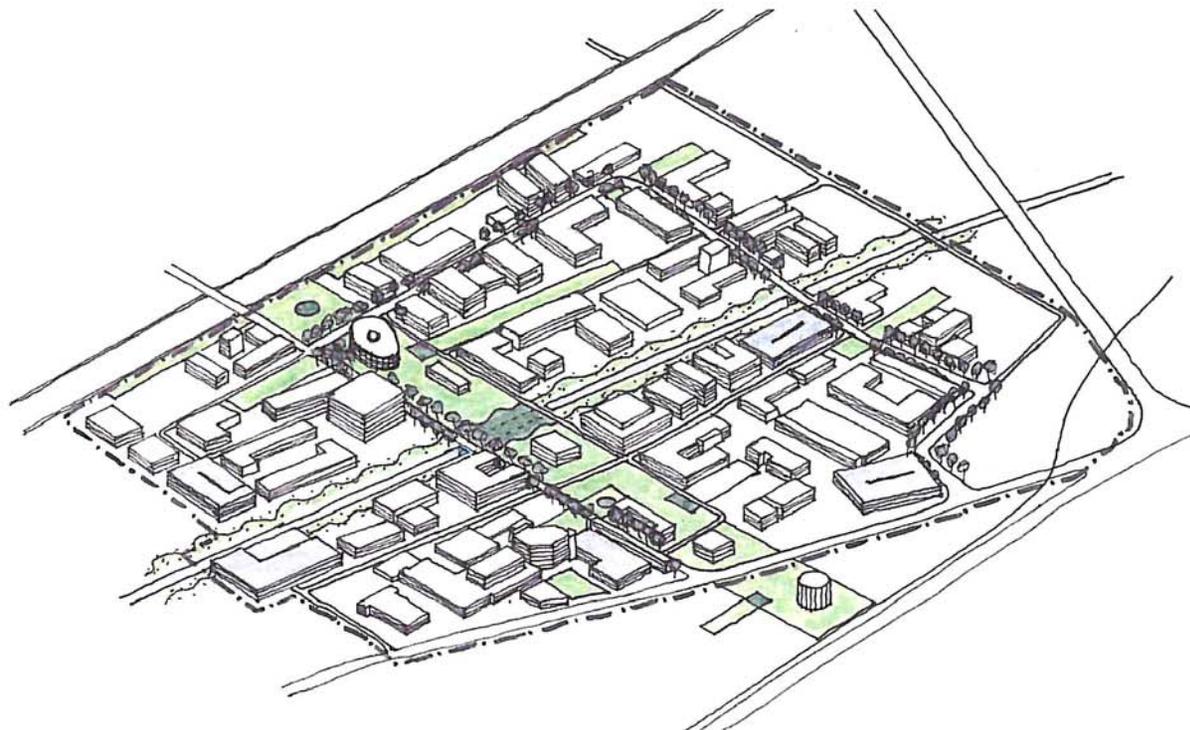
**Option #6 – Central Park**

Option #6 further developed the original Option #1 – Reynolds Scheme with a few additions. The main linear greenbelt still remains as the main organizing concept. In addition to the main spine, open space between building clusters has been provided which doubles as a secondary link back to other portions of the site. As with the prior schemes, depression of the railroad would be a tremendous advantage to the openness and north south flow of this scheme; however it is not essential to its implementation. Some connections, new or existing, would be required to connect the two portions of site currently bisected by the railroad.

A further modification to Option #6 was the addition of a campus ring road, allowing access to a larger area of the site. This idea was well supported in some of the other early master plan schemes. This circulation would connect to key "gateways" to the site that would serve as points of arrival to the MCA. Parking has been located off of the main circulation roads to provide easy access for patients, visitors and staff and improve overall access to MCA elements.

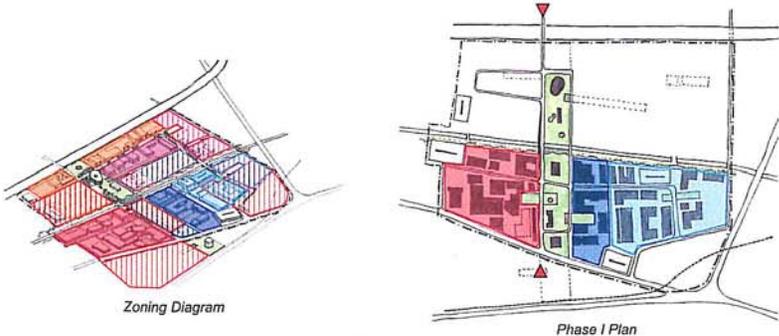
Given the existing relationship between Thomason Hospital and Texas Tech, this scheme is a logical extension of existing conditions at the MCA site. The zoning diagram of this option is similar to Options 1, 2 and 3 but the boundary of the site was adjusted back from Piasano to Chelsea with the goal to minimally impact the residential areas.

The following Central Park diagrams show the existing elements, the proposed circulation diagram and proposed zoning of this scheme.



In addition to development currently planned for both Thomason and Texas Tech, other related functions can be developed in close proximity to implement the concepts embodied in this scheme. The Multidisciplinary Team agreed with this methodology. Option #7, shown on the next page, also was popular and offered additional benefits. The comments listed below are actual statements by the Multidisciplinary Team for Option #6:

- I like option 6.5. Option 6 is more "organic" but Option 7 gives great magnetism and organization.
- Option 6 is a better short term plan. Option 6 uses more of the current infrastructure (roads, etc.) and will be less costly.
- The green belt seems to be a better connector (especially from the Texas Tech / Thomason perspective).
- Look at the nursing program location again. EPCC wants to be closer to Texas Tech and Thomason
- Quick implementation is very important. If the plan goes stale it will die. Make the central park more of a quad.
- As a native El Pasonan, I like the green space idea, but we aren't planning a park. We are planning a medical campus.
- One of these days, Thomason may have a rehab hospital or the VA may require a hospital. We need to think in those longer term ideas.
- Move the quad to the middle of the Central Park



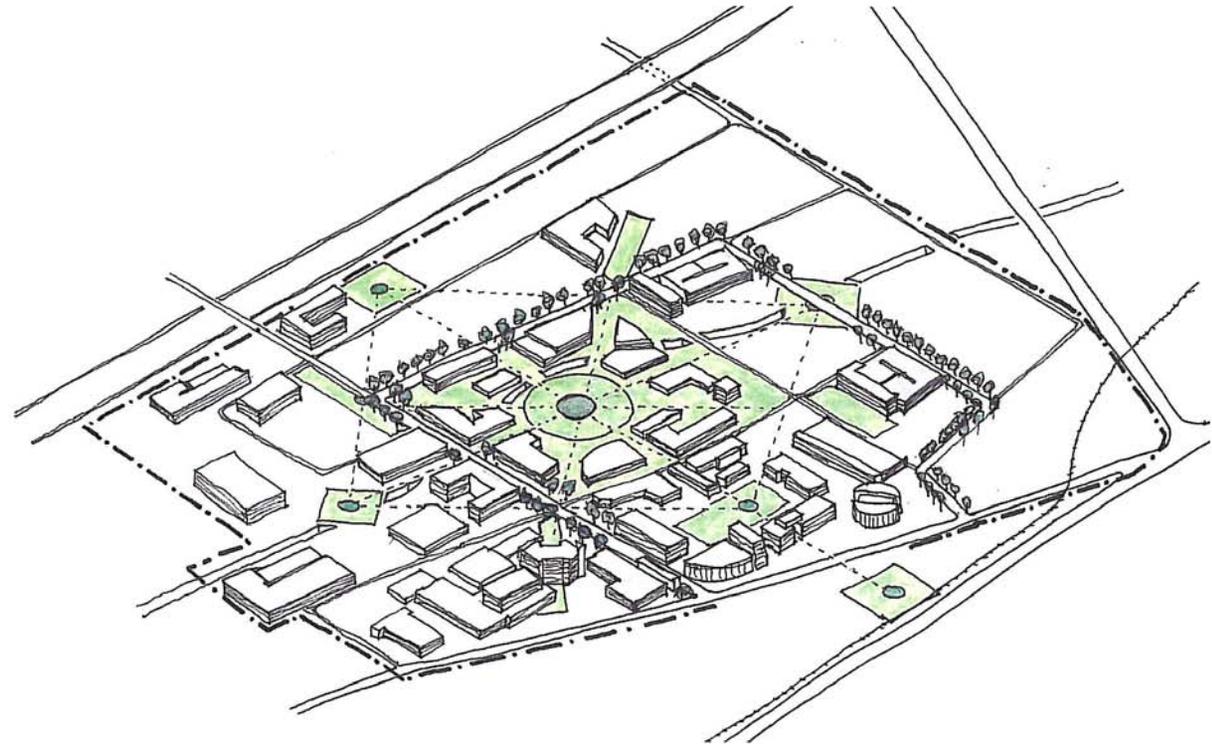
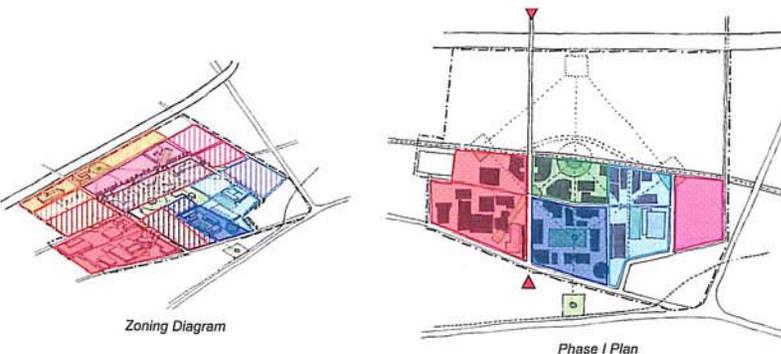
### Option #7 – Campus Quad

Option #7 was developed around the concept of a new, central, multi-use public zone – the Campus Quad – created to act as the organizing element of the site located further east to provide an anchor to services located elsewhere on the MCA site. Circulation links radiate from the central quad, comprised of buildings and open space, allowing for direct pedestrian flow from quadrants of the site back to the more public zone. The "Plaza" could be the site for such services as a Conference Center, a Medical Mall (pharmacy, optical services, etc.), Commercial (coffee houses, restaurants, day care, and gym) and other employee, patient and visitor services. Secondary open space hubs would also be created for other areas of the site which could support development as it occurs on the MCA campus.

As with Option #6, this option utilizes an internal campus ring road that could be utilized for vehicular circulation around the site without having to utilize the perimeter arterials such as Alameda. Similar access to clear parking zones and a clear MCA arrival experience are consistent in this option.

The zoning diagram relies heavily on future development to the north to support the concept of a "central" organizing element. This is also the basic challenge of this option, since realization of the final product is somewhat dependent on substantial development surrounding the central plaza area. You will notice that in the Phase I development, shown below, the central plaza concept is not fully realized should Phase I development stay primarily to the south of the railroad.

The following Central Park diagrams show the proposed zoning and Phase I development of this scheme.

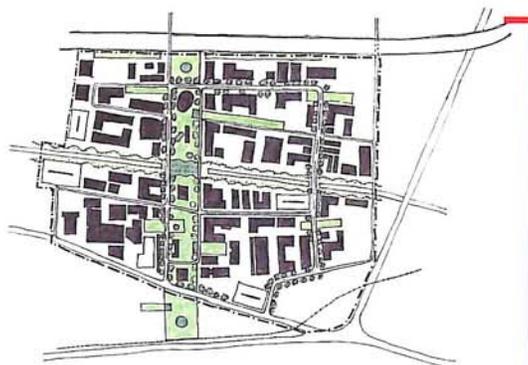


There was a tremendous amount of support for this scheme for development of the site. Similar to Option #6, the multidisciplinary Team had the following comments articulating the benefits of Option #7 to Option #6:

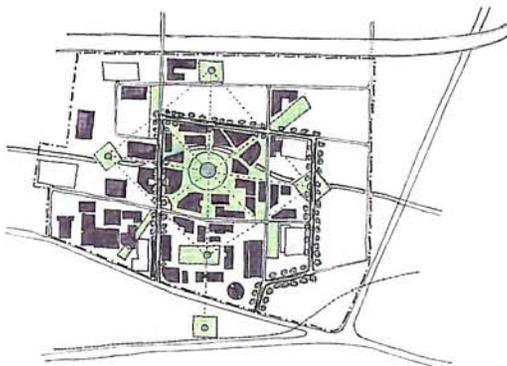
- As a planner, I like Option 7 better. Call it the "commons or plaza."
- Option 6 may be more feasible but Option 7 is my choice, especially looking at the long term.
- Option 7 makes Thomason somewhat inconsequential, but I really like the Quad idea. Perhaps the quad can be moved, even on a smaller scale, to be inclusive of Thomason.
- I like the concept of the Quad, but think that Option 6 has the Quad in it, just not highlighted. I worry about implementation. We can get both concepts if the Quad is moved into Option 6.
- Option 7 allows for more growth on the overall MCA campus over time.
- Option 7 is more romantic but less realistic.
- Move the quad to the middle of the Central Park

**Development of Option #8**

It became clear after reviewing Option #6 and #7 that there was strong support for both master plans. The Multidisciplinary Team felt it was appropriate to look at an option that attempted to combine the best ideas of both schemes into one; essentially moving the quad to the west and integrating it with the linear organizing element extending north/south.

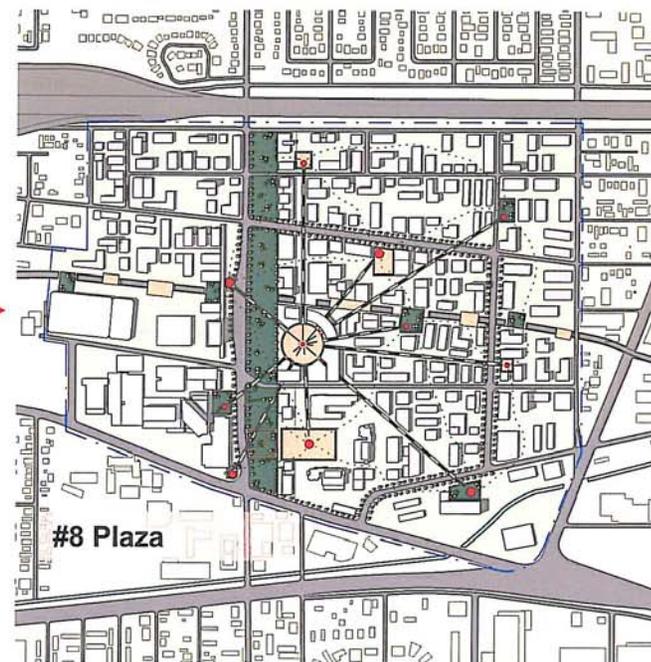


**#6 Central Park**

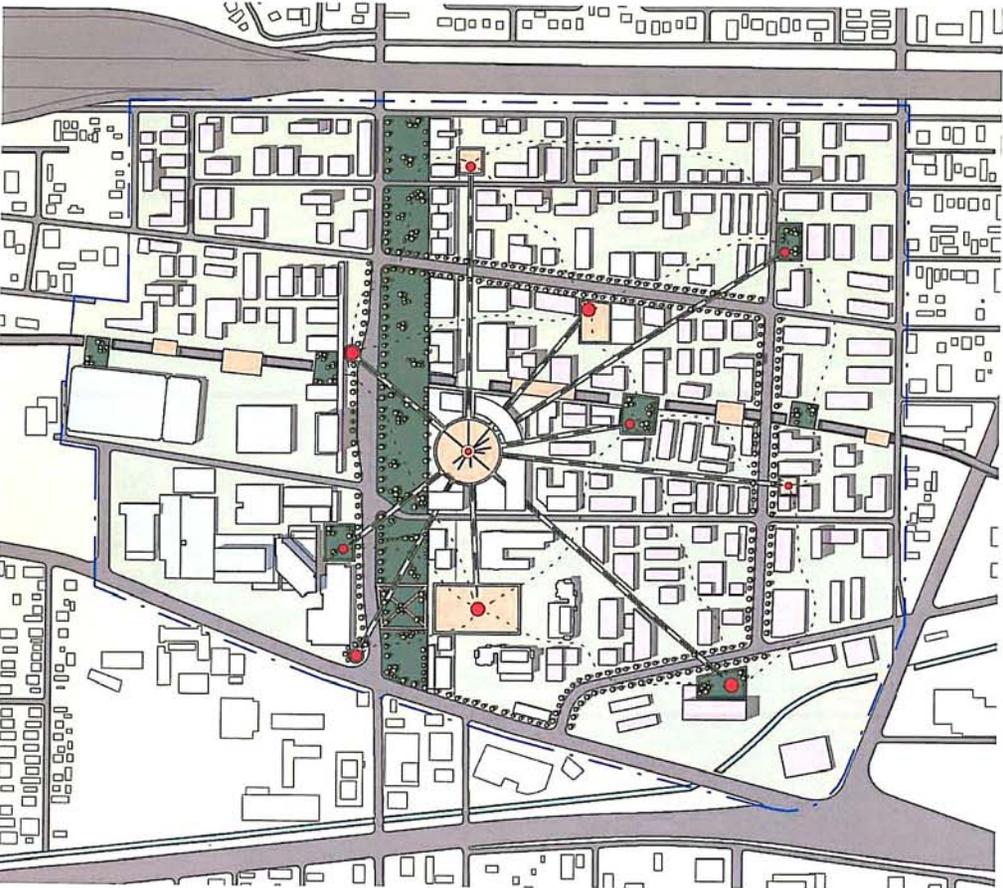


**#7 Campus Quad**

Combines Schemes #6 and #7 into one new scheme



**#8 Plaza**

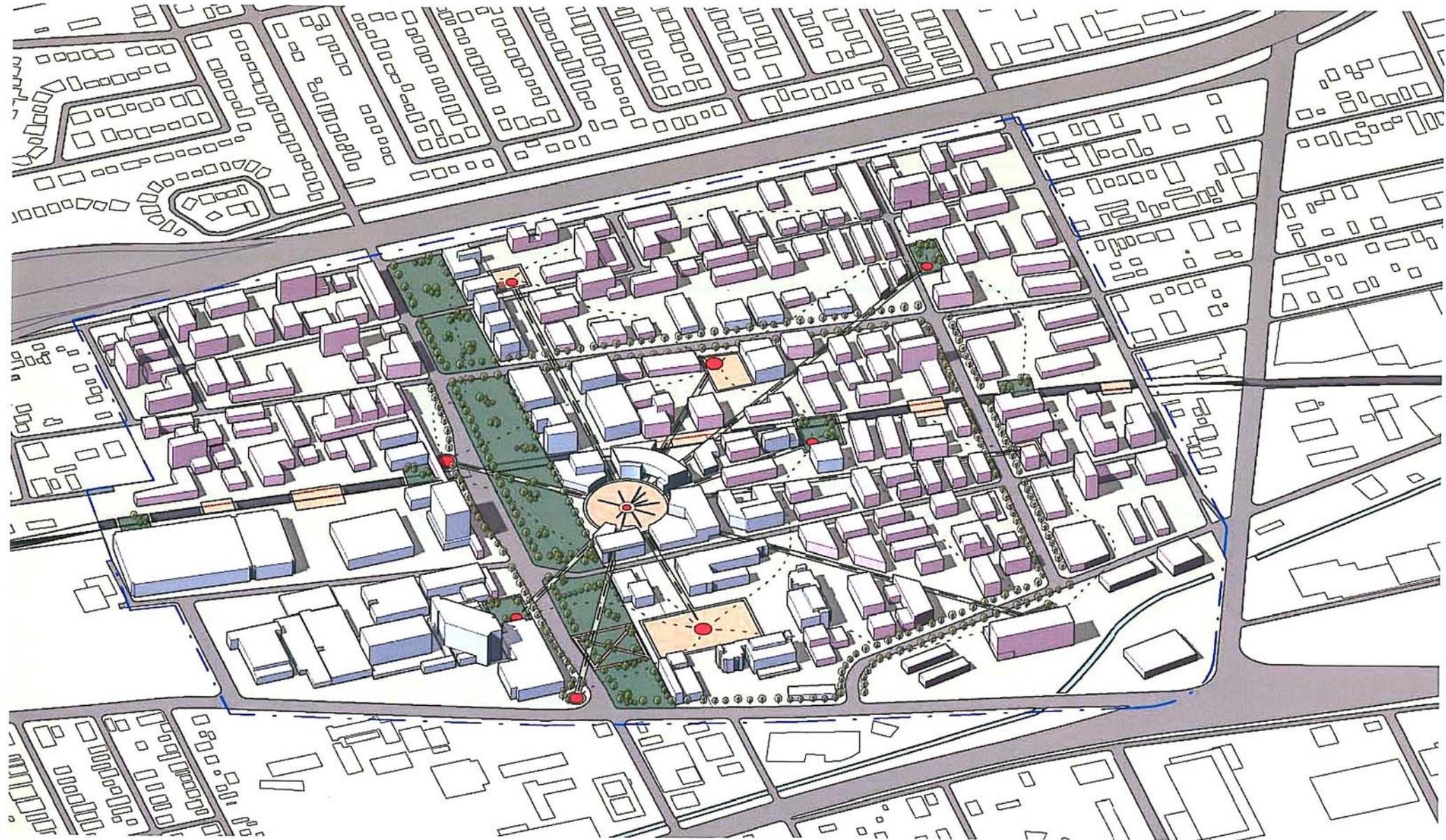


**Option #8 – The Plaza Scheme**

As outlined in the Master Plan Development Section of the report, The Plaza Option was developed as a combination of the Central Park (Option 6) and Campus Quad (Option 7) concepts. The idea of a central, multi-use public zone resonated strongly with the entire Multidisciplinary Team, with the caveat that it needed to be located more westerly to allow direct access from Thomason and Texas Tech, whose programs are already established. For other incoming services, like EPCC's School of Nursing, the same is true.

*Key master planning concepts for this option include:*

- Provide the flexibility to change over time.
- Plan for a balance of functionality and aesthetic quality within a cost-effective solution.
- Develop clear site organization with strong relationships between components.
- Identify arrival to the MCA.
- Provide good accessibility and way finding.
- Establish functional relationships that provide opportunity and efficiency.
- Design and implement an effective infrastructure.
- Promote an environment that is responsive and sensitive to the population it serves.



Option #8 - Plaza 100 Year Axonometric

**Education Zone**

There are currently three education identities located within or immediately adjacent to the MCA. Currently, the Texas Tech University School of Medicine, Jefferson High School and the Magnet High School reside adjacent to Thomason Hospital. In addition, El Paso Community College (EPCC) is interested in moving their Nursing School adjacent to Thomason Hospital. The image to the right shows Texas Tech University School of Medicine as the possible expansion zones westward toward Thomason and to the north.



El Paso Community College (EPCC) is interested in relocating their nursing program services adjacent to Thomason and have the funds to construct buildings. EPCC is looking for assistance from the MCA for land with which to construct a home for this program. With input from Dr. Rhodes (EPCC President) and others on the EPCC team, a zone was identified that is adjacent to Thomason, the Plaza and Texas Tech and can be acquired or donated by one individual. This is a key issue since other portions of the site, populated by multiple properties with different owners, may not be possible to obtain in one land purchase.



Jefferson and the Magnet High School are existing schools that occupy the land directly south of Thomason Hospital across Alameda. The schools, especially the Magnet, are viewed as direct leaders to many of the programs that will be located on the MCA over time. With the hope that local recruiting could keep future health care professionals practicing in El Paso, it was deemed important to keep these schools and functioning and supported by the MCA for the future of El Paso.



**Hospital Zone**

The hospital zone identified considers the full land bank controlled by Thomason plus a similar size area to the north. This future area could provide expansion or eventual replacement of certain older buildings of Thomason over time. There was also discussion that the VA may be interested in establishing a hospital in El Paso, given Fort Bragg's growth, which would also require a substantial amount of land.



The option also still exists for Hospital functions to move east toward Texas Tech's land. This is a logical expansion zone and will be tested as each program grows.

The second image outlines an inpatient / outpatient strategy for Thomason given the existing location of the Texas Tech Clinic and future need for expansion of outpatient services. In this model, a zone for outpatient development could be saved to allow for easy access for patients from anywhere on the site as well as a planned support zone around it with other critical services.



**Public Multi-Use Zone – “The Plaza”**

The Public Zone is envisioned to be the main “interaction space” includes patient, visitor and staff functions. The central location for this group of services acts as a main organizing element of the site and will allow for direct access to/from many of the larger anchor tenants. Public conference, day care, medical mall functions (pharmacy, vision services, etc.), restaurants, coffee houses and a potential future tie to rail or other public transportation hubs could all occur in this zone.



**Hotel / Retail / Support Zone**

As with any development, as the service lines grow, the necessary support functions will need to be in place to support the additional growth. Hotels, motels, retail and support functions (both public and private) will need to be provided.



**Public Health Zone**

The City of El Paso already has some public health functions located within the MCA. This zone could include both patient care and support functions for a variety of services and clinics in support of the community.



**Residential / Mixed-Use Zone**

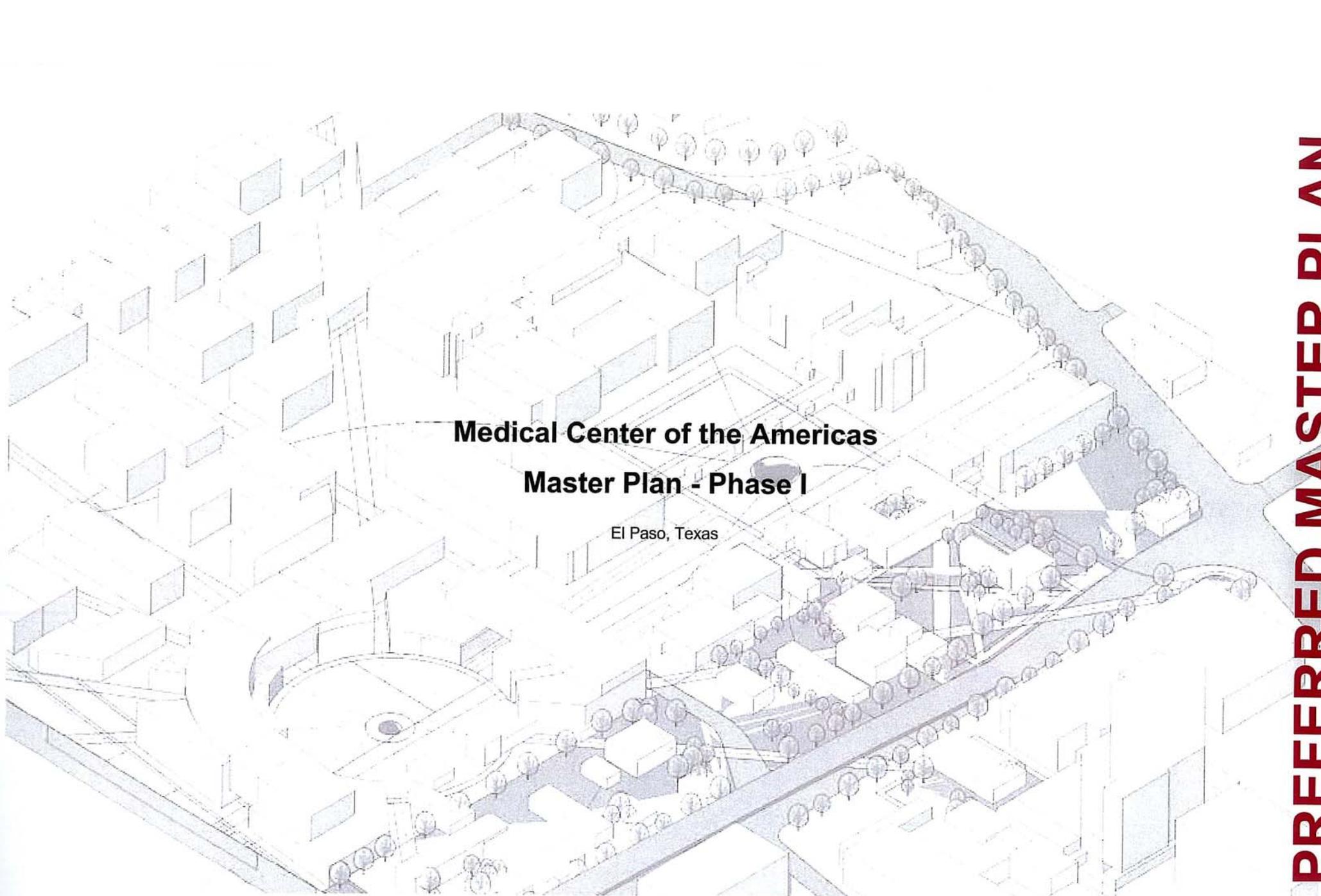
Although not expected to be a critical need in the immediate future, the MCA can become an attractive location for housing assuming a revitalization of the area.



**Research Zone**

A Research Zone has been provided as part of the Master Plan for discussion purposes. El Paso’s population makes it an ideal location for medical research related to conditions affecting the Hispanic population.





**Medical Center of the Americas**

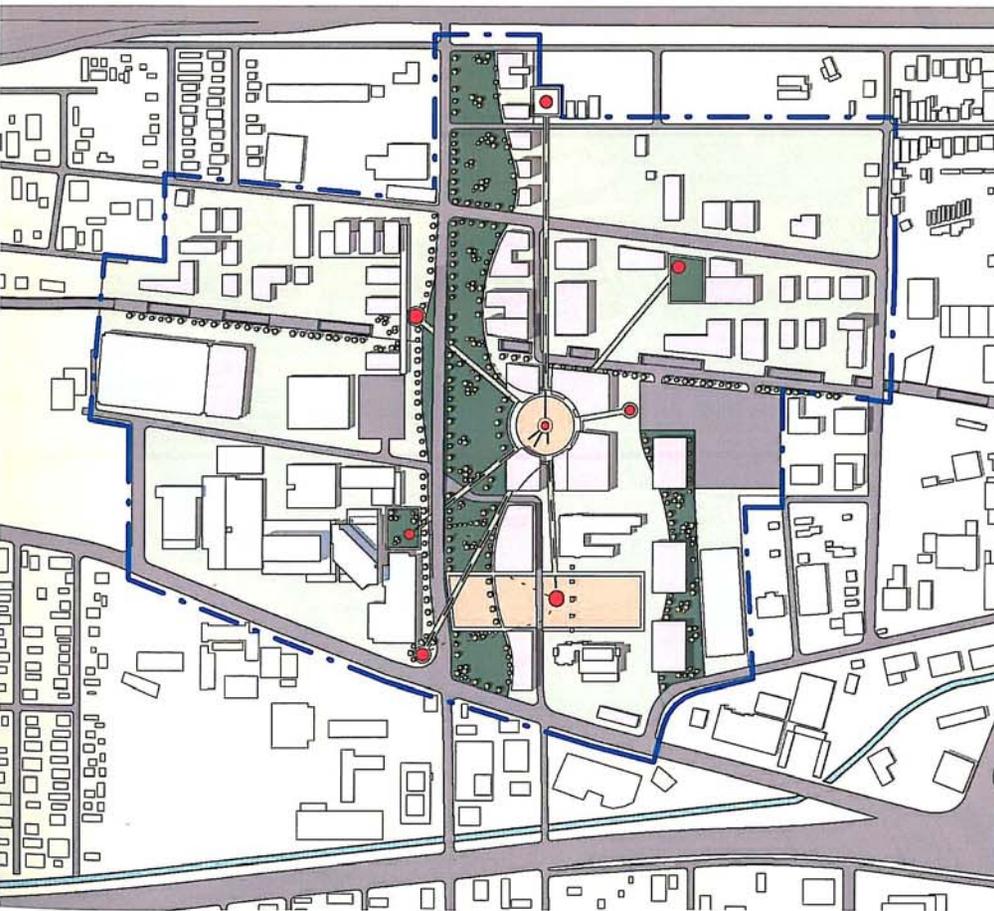
**Master Plan - Phase I**

El Paso, Texas

**PREFERRED MASTER PLAN**

### Preferred Master Plan – Plaza Option #9

The Recommended Master Plan is intended to be the start of a roadmap to the future for the Medical Center of the Americas (MCA). Although controlled by external factors such as available land, cost and multiple approvals by various entities, the design team worked with the Master Plan Steering Committee, partner organizations and community representatives to develop a plan that could support future medical center functions expanding in this location, or, allow the integration of other partners not located on the site.



### Option #9 – The Plaza Scheme Revised

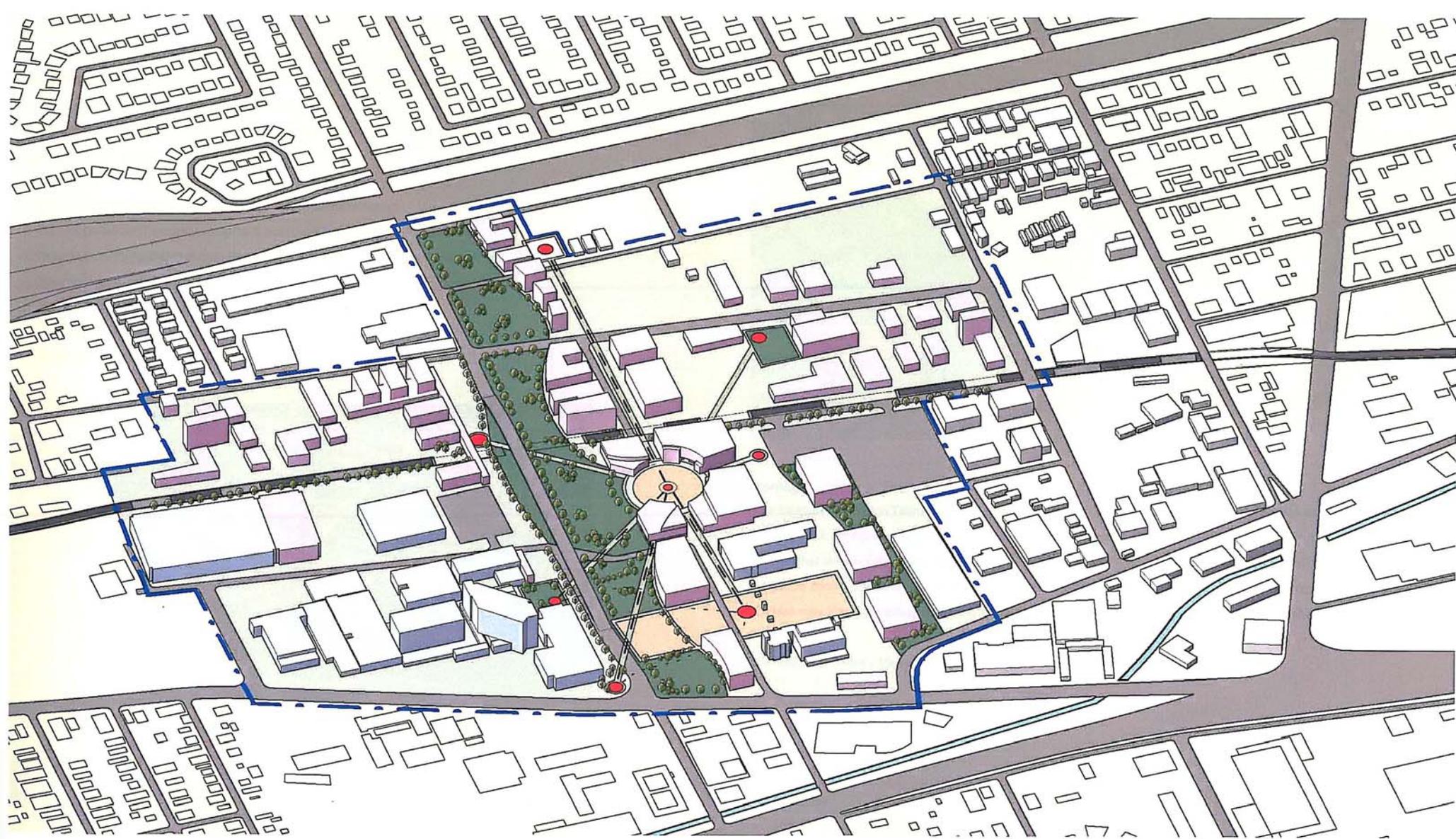
As outlined in the Master Plan Development Section of the report, Option #9 is the further development of Option #8 based on input from the MCA and other partner organizations and community members. The idea of a central, multi-use public zone resonated strongly with the entire Multidisciplinary Team, with the caveat that it needed to be located more westerly to allow direct access from Thomason and Texas Tech, whose programs are already established. For other incoming services, like EPCC's School of Nursing, the same is true. Integration of this multi-use public zone has been further developed in this scheme.

Option #9 still recognizes the importance of gateways from Alameda and I-10 and supports the notion of a MCA spine running north south along Reynolds Avenue. In this option, the plaza opens to the Reynolds spine, allowing for clear organization of elements north and south off of the access drive or radially around the Plaza once a final location is selected. As identified in Option #7, the Plaza can be comprised of buildings and open space, allowing for direct pedestrian flow from quadrants of the site back to this interactive zone. The "Plaza" could be the site for such services as a Conference Center, a Medical Mall (pharmacy, optical services, etc.), Commercial (coffee houses, restaurants, day care, and gym) and other employee, patient and visitor services. Secondary open space hubs would also be created for other areas of the site which could support development as it occurs on the MCA campus.

As with the prior options, this scheme utilizes an internal campus ring road that could be utilized for vehicular circulation around the site without having to utilize the perimeter arterials such as Alameda. Similar access to clear parking zones and a clear MCA arrival experience are consistent in this option.

#### Key master planning concepts for this option include:

- Provide the flexibility to change over time.
- Plan for a balance of functionality and aesthetic quality within a cost-effective solution.
- Develop clear site organization with strong relationships between components.
- Identify arrival to the MCA.
- Provide good accessibility and way finding.
- Establish functional relationships that provide opportunity and efficiency.
- Design and implement an effective infrastructure.
- Promote an environment that is responsive and sensitive to the population it serves.



Plaza Scheme 50 Year Axonometric

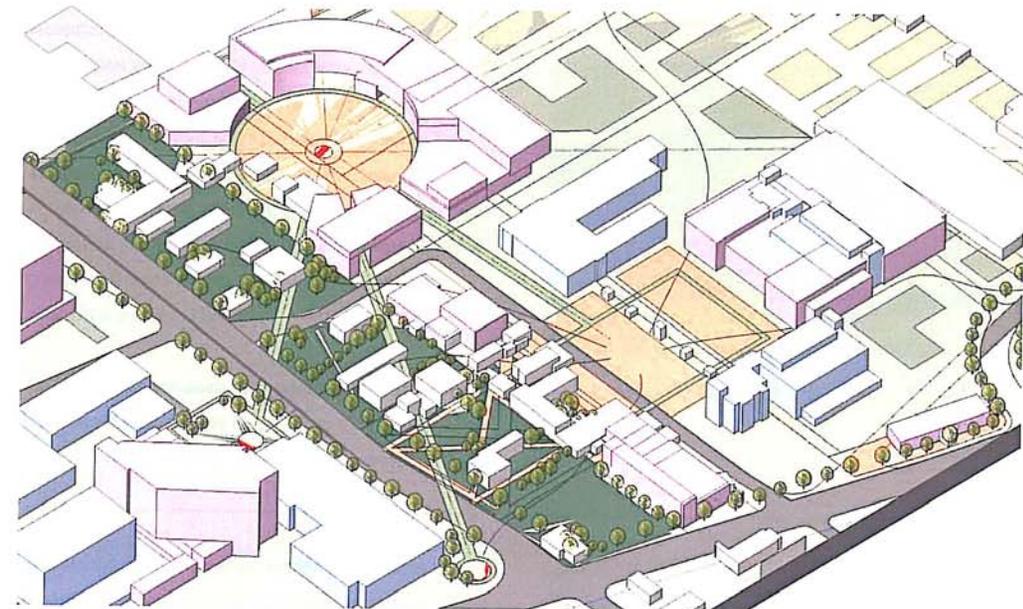
### Master Plan Elements

The recommended master plan is intended to be a glimpse into the future for the Medical Center of the Americas. Although controlled by external factors such as available land, cost and multiple approvals by various entities, the design team worked with the Master Plan Committee to develop a plan that solved many of the existing challenges for organization of the site as identified by the MCA Board, its Partner Organizations and the community representatives. Some of the items identified included are but are not limited to the following:

- The Creation of Texas Tech, El Paso as a 4-year Medical School
- Current Growth of Thomason Hospital & Approved Bond Measure Construction
- Relocation of El Paso Community College (EPCC) School of Nursing to the site
- Potential VA Hospital Establishment in El Paso
- Public Health Function Growth
- Commercial Growth
- Potential Private Research Development



Plaza Scheme looking from West



Plaza Scheme looking from Southwest

### Zoning

The Master Plan Design Team began the master planning exercise by identifying the new campus zoning by function. The existing MCA zoning is contained in the Existing Conditions section of this document. In addition to the two main anchor tenants that already exist within the MCA area, Thomason Hospital and Texas Tech University Medical School, the following additional zone types have been identified for discussion purposes. In some cases, the final zoning approved by the City of El Paso may allow for multi-use allowing some flexibility for services not yet known or identified within the MCA area.

Currently, the Phase I Master Plan is divided into the following functional zones:

- Public Multi-Use Zone
- Hospital Zone
- Education
- Public Health
- Research
- Hotel / Retail / Support
- Residential / Mixed Use

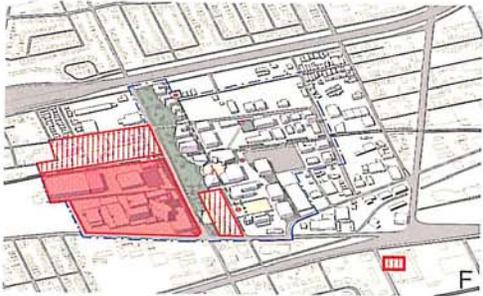
**Education Zone**

There are currently three education identities located within or immediately adjacent to the MCA. Currently, the Texas Tech University School of Medicine, Jefferson High School and the Magnet High School reside adjacent to Thomason Hospital. In addition, El Paso Community College (EPCC) is interested in moving their Nursing School adjacent to Thomason Hospital. The image to the right shows Texas Tech University School of Medicine and the possible expansion zones westward toward Thomason and to the north.



**Hospital Zone**

The hospital zone identified considers the full land bank controlled by Thomason plus a similar size area to the north. This future area could provide expansion or eventual replacement of certain older buildings of Thomason over time. There was also discussion that the VA may be interested in establishing a hospital in El Paso, given Fort Bragg's growth, which would also require a substantial amount of land.



The option also still exists for Hospital functions to move east toward Texas Tech's land. This is a logical expansion zone and will be tested as each program grows.

**Non-Profit / Public Health / Future MOB Zone**

The MCA has identified support services for public health functions, physician offices, general support offices and miscellaneous services that need to be provided in support of a larger medical center concept. These services have been identified where currently residing as well as a future zone to the north.



The second image outlines an inpatient / outpatient strategy for Thomason given the existing location of the Texas Tech Clinic and future need for expansion of outpatient services. In this model, a zone for outpatient development could be saved to allow for easy access for patients from anywhere on the site as well as a planned support zone around it with other critical services.



Jefferson and the Magnet High School are existing schools that occupy the land directly south of Thomason Hospital across Alameda. The schools, especially the Magnet, are viewed as direct leaders to many of the programs that will be located on the MCA over time. With the hope that local recruiting could keep future health care professionals practicing in El Paso, it was deemed important to keep these schools and functioning and supported by the MCA for the future of El Paso.



**Public Multi-Use Zone – “The Plaza”**

The Public Zone is envisioned to be the main “interaction space” includes patient, visitor and staff functions. The central location for this group of services acts as a main organizing element of the site and will allow for direct access to/from many of the larger anchor tenants. Public conference, day care, medical mall functions (pharmacy, vision services, etc.), restaurants, coffee houses and a potential future tie to rail or other public transportation hubs could all occur in this zone.



**Hotel / Retail / Support Zone**

As with any development, as the service lines grow, the necessary support functions will need to be in place to support the additional growth. Hotels, motels, retail and support functions (both public and private) will need to be provided.



**Research Zone**

A Research Zone has been provided as part of the Master Plan for discussion purposes. El Paso’s population makes it an ideal location for medical research related to conditions affecting the Hispanic population.

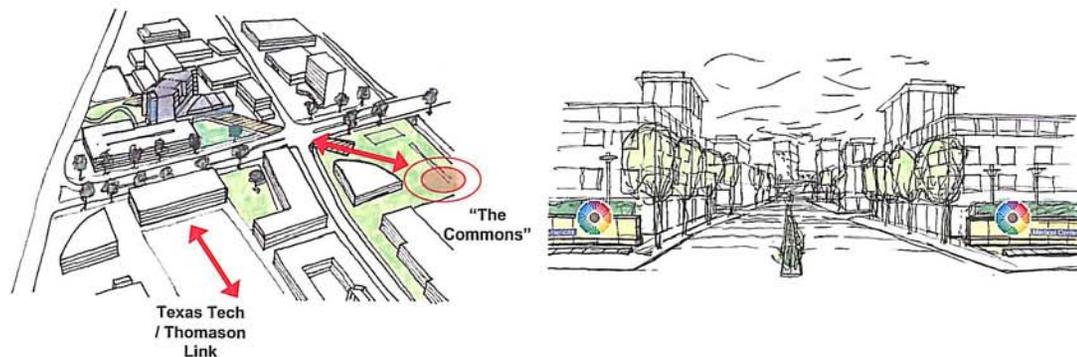


**Site Gateways / Circulation and Parking**

Some of the key goals to the master plan were establishing a sense of arrival (image) to the MCA as well as clear wayfinding and circulation on the site. To do this, the design team provided clear entry points to the site off of Alameda, I-10 at Reynolds and at El Paso Street. The architectural language and design elements of these gateways will be studied in detail as part of the Phase II Master Plan development.

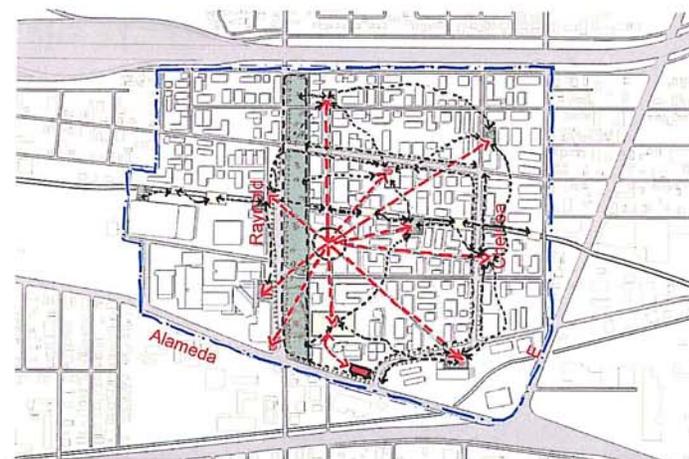
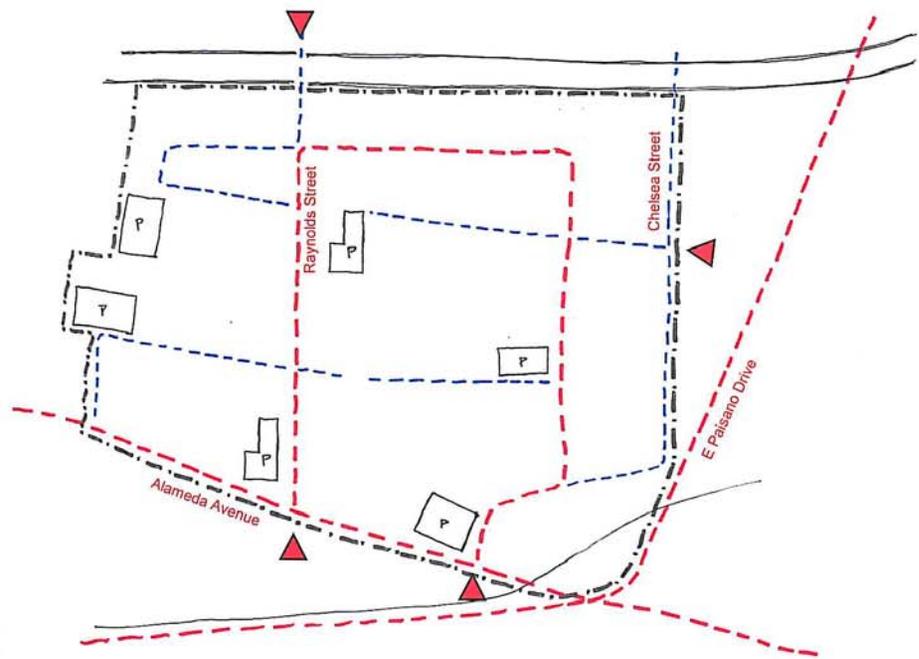
Once on the campus, an internal ring-road has been identified which could be implemented over time. Parking structures would be constructed in close proximity to the main circulation spines, allowing for easy access from the main entry points of the site and could be adjacent to the functions or quadrants they serve. It should be noted that the master plan document shows revisions to El Paso Street which will be modified by the City in the coming months as part of the Alameda Corridor Improvements.

*Below are circulation drawings showing major vehicular circulation within the MCA area.*



Another consideration of this scheme is the pedestrian circulation that will occur between components as the campus grows. The dashed red lines below indicate major links between the central public plaza and secondary open spaces, similar to what you would find at a major medical or university setting. The dashed black lines indicate the need to provide direct pedestrian paths between buildings to allow patients, visitors and staff to move between structures. Although it is nearly impossible to plan without knowing what type of buildings will be created, the location and order of development, it is the intent of this document to underscore its importance so that development that occurs is responsive to this issue.

The second image below is an example of how Thomason, with its current development of future phases, can provide linkages back to a main plaza development now in support of future development.



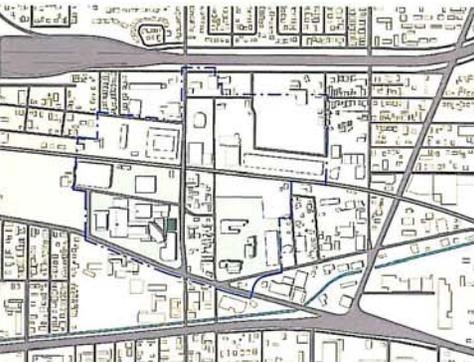
### Option #9 - Plaza Scheme Revised

#### Phasing

Based on the assumptions outlined in the Demographics and Program Section of this document, it is important that the Preferred Master Plan respond to growth of the MCA over time. It was important to the MCA Board and the Design Team that the final master plan be organized and address the goals of the MCA but that the concept also be achievable in the immediate future. To do this it was necessary to think through the phasing of the project based on the known and estimated growth within specific periods of time.

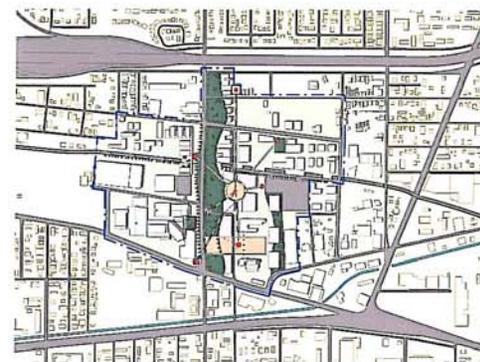


Phase 1 Diagram



#### Existing Site

The existing MCA site is primarily comprised of Thomason Hospital and the Texas Tech School of Medicine. These structures exist now and clearly identify the start of development of the MCA. These areas are highlighted in green left.



#### Phase II Development

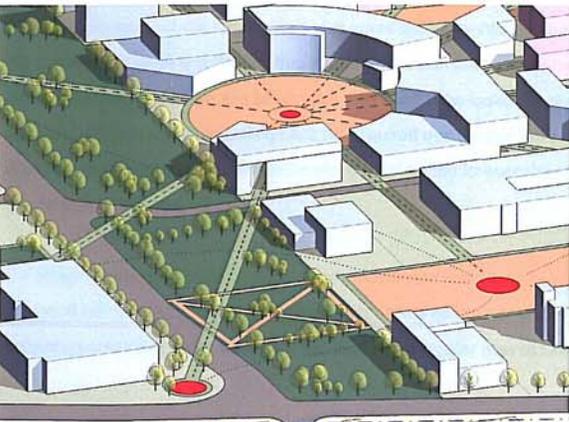
Phase II Development was identified by the MCA board as the 50-year plan extending 25 - 50 years out. During this period there is planned expansion of both Thomason Hospital and Texas Tech.



#### Phase I Development

Phase I development was identified by the MCA board as the more immediate future (10 - 15 Years). During this period there is planned expansion of both Thomason Hospital and Texas but may include the addition of other new components on the campus such as a new building for the El Paso Community College School of Nursing (EPCC) and the start of development of the public plaza area. It would be a goal of the MCA to begin development of the gateways at Alameda and I-10 to begin to identify the MCA.

Site 3D Perspectives



Plaza from South



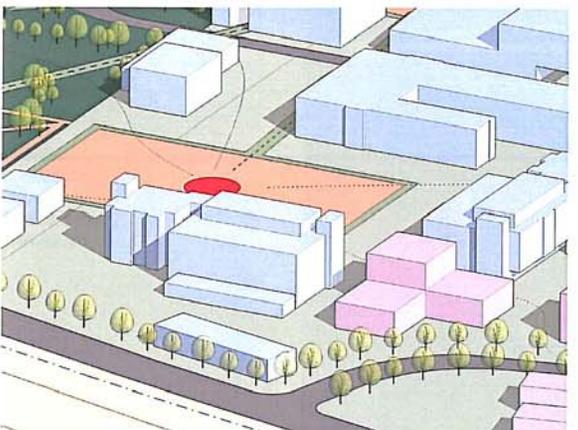
Plaza from North



Reynolds Spine from South



Plaza from Northwest



Texas Tech from South



Option 8 from West

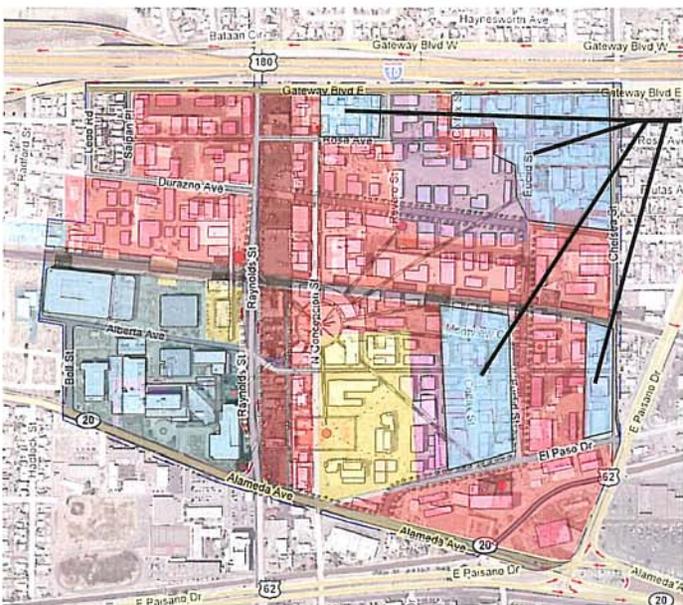
Conclusion

By thoughtful planning, it is the intent of this master plan to develop a facility that emphasizes patient focused care but utilizes sound operational efficiencies for key services and staff. This is accomplished by the creation of new operational models that provide the ability to deliver the highest standard of care.

**Preferred Master Plan Challenges**

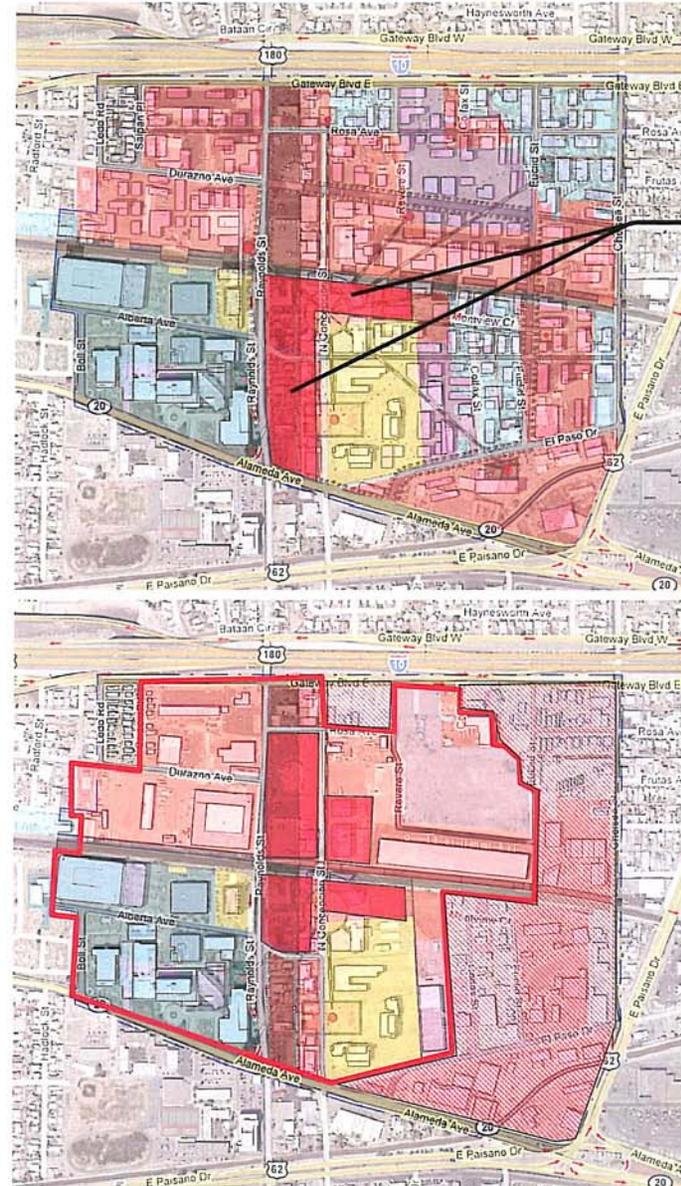
The following images indicate some of the challenges associated with the implementation of the Preferred Master Plan. In the image below, some of the larger residential areas are highlighted in blue. These areas will be more difficult to develop given the number of homes and the fact that individuals are emotionally connected to their homes. The reality of relocation and challenges associated with this activity will also need to be looked at closely. To avoid a tremendous amount of required relocations, LBL suggested pulling back the required master plan area as shown in the image in the lower right corner. In doing so, the requirements of the MCA can be met for the foreseeable future and the majority of dedicated residential streets can remain untouched.

For those commercial areas, already clearly located between the newer components of Texas Tech and Thomason, the stage has been set for speculative buying of property. It will be the responsibility of the MCA Foundation Board to acquire the necessary parcels up front for implementation of the master plan or to obtain this land later using other means.



**Master Plan Implementation Challenges**

- Residential
- Multiple Owners
- Emotionally Invested



**Master Plan Implementation Challenges**

- Residential
- Multiple Owners
- Emotionally Invested
- Rooted Commercial
- Developer Speculation

**Master Plan Implementation Challenges**

- Residential
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- Developer Speculation

**Possible Solutions**

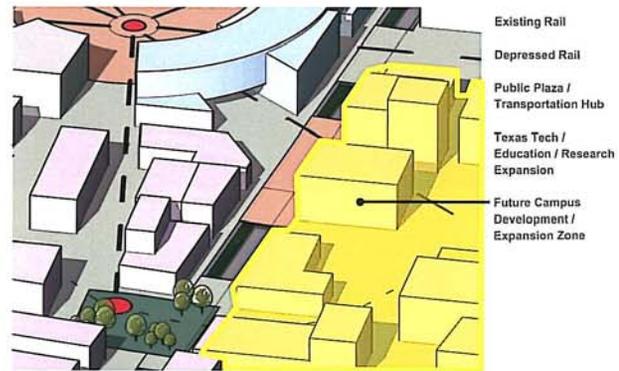
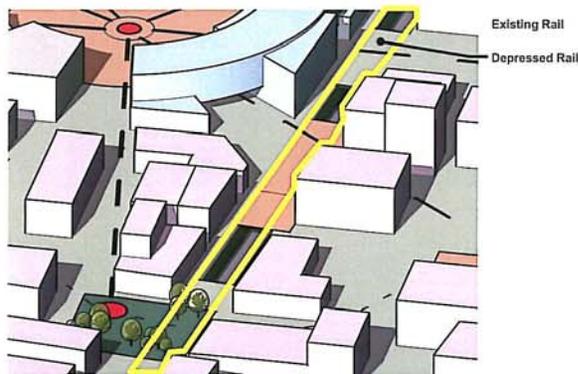
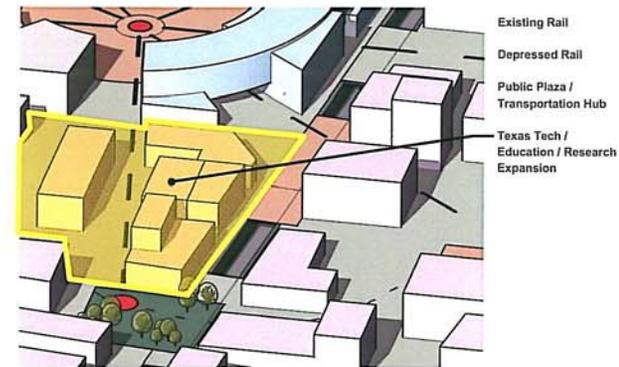
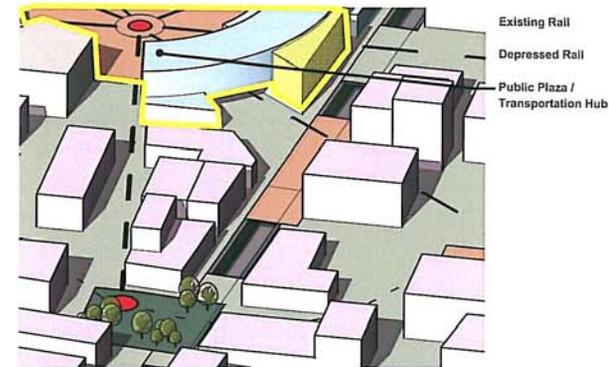
- Limit Development area to exclude residential areas
- Concentrate land acquisition to key areas or larger parcels
- Present different options that require different land options

**The Railroad**

There was a tremendous amount of discussion regarding addressing the railroad in the future. Similar to other areas El Paso, the generally supported idea is to depress the railroad over time, allowing the MCA to grow north without a barrier. The attached diagrams help illustrate the flexibility gained should the railroad be able to depress below grade.

In doing this, there was also discussion about what happens to the Reynolds Avenue overpass. There are now two options available to the Master Planning Committee; one is to eliminate it over time and the other is to allow it to remain. If the overpass were to remain with the railroad depressed, the entire MCA site, at grade, would be open for vehicular and pedestrian circulation. The faster traffic trying to get from Alameda to 1-10 would still use the overpass, keeping the site roads serving the MCA only.

If the overpass is removed, that same traffic may need to be relocated around the site on Alameda or Paisano to make the same connection north.

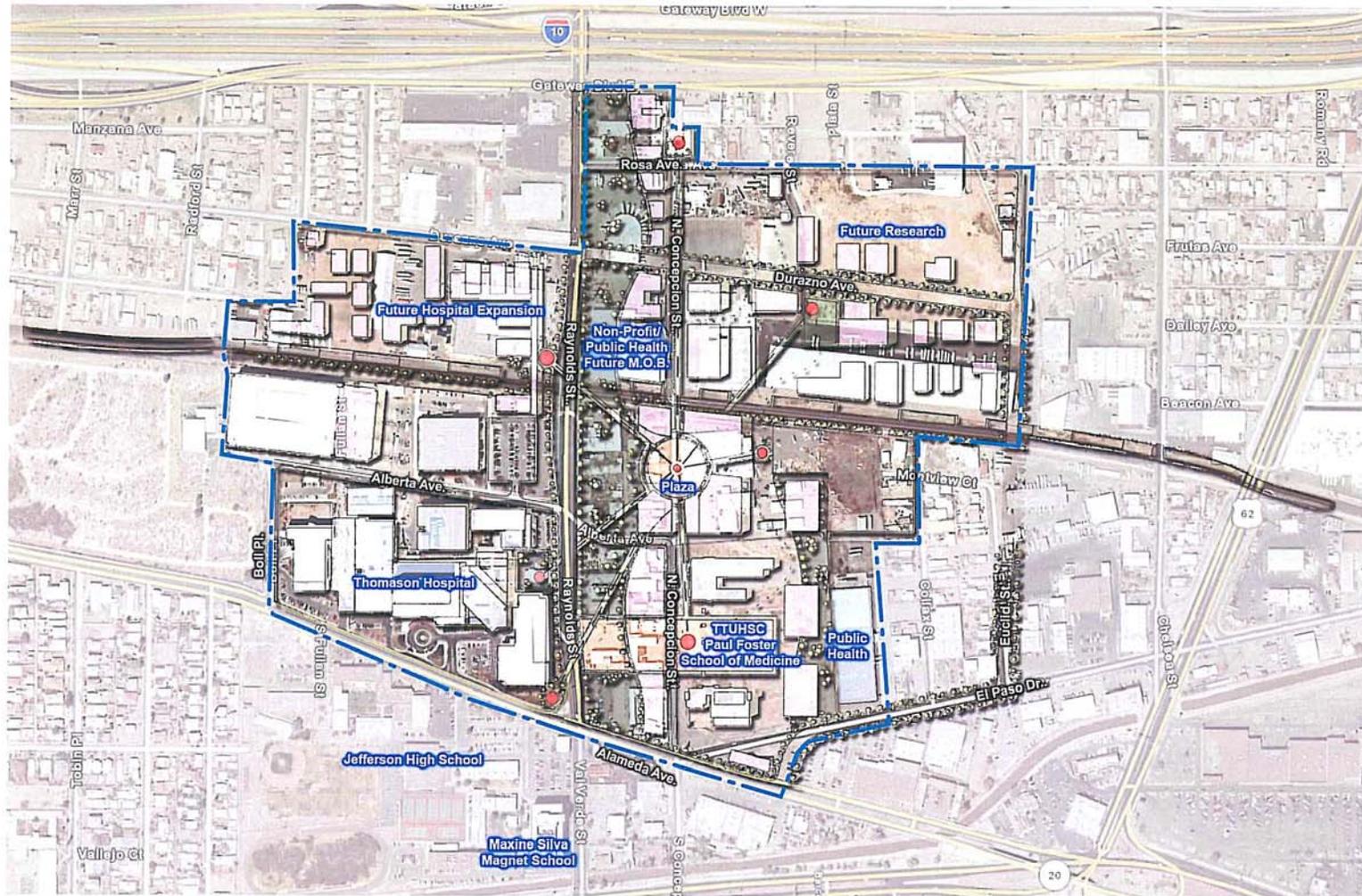


**Conclusion**

Upon completion of Option #9 The revised Plaza Scheme, it was determined that a 100 Year Plan was so far in the future that it would not be necessary to indicate any potential zoning beyond 50 years.

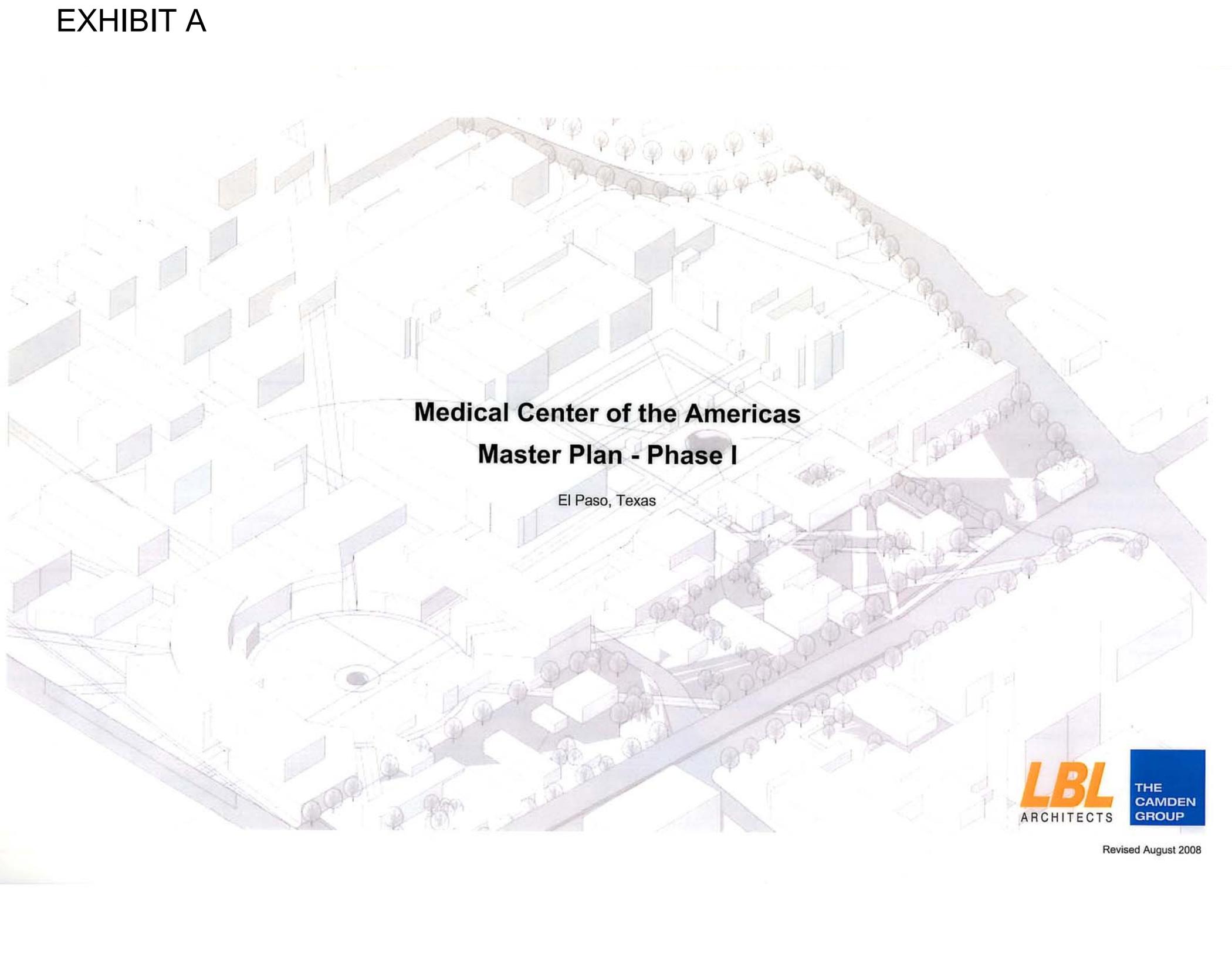
The following master plan image indicates the 50 year development area currently being presented to the City for adoption into the general plan. Further work is still required in the subsequent master plan phase to address specific issues related to traffic, utilities and flood mitigation.

The Phase II work associated with the master plan will follow approval by the City of El Paso to proceed.



**EXHIBIT “A”**

**Medical Center of the Americas Master Plan**



## Medical Center of the Americas Master Plan - Phase I

El Paso, Texas

**LBL**  
ARCHITECTS

THE  
CAMDEN  
GROUP

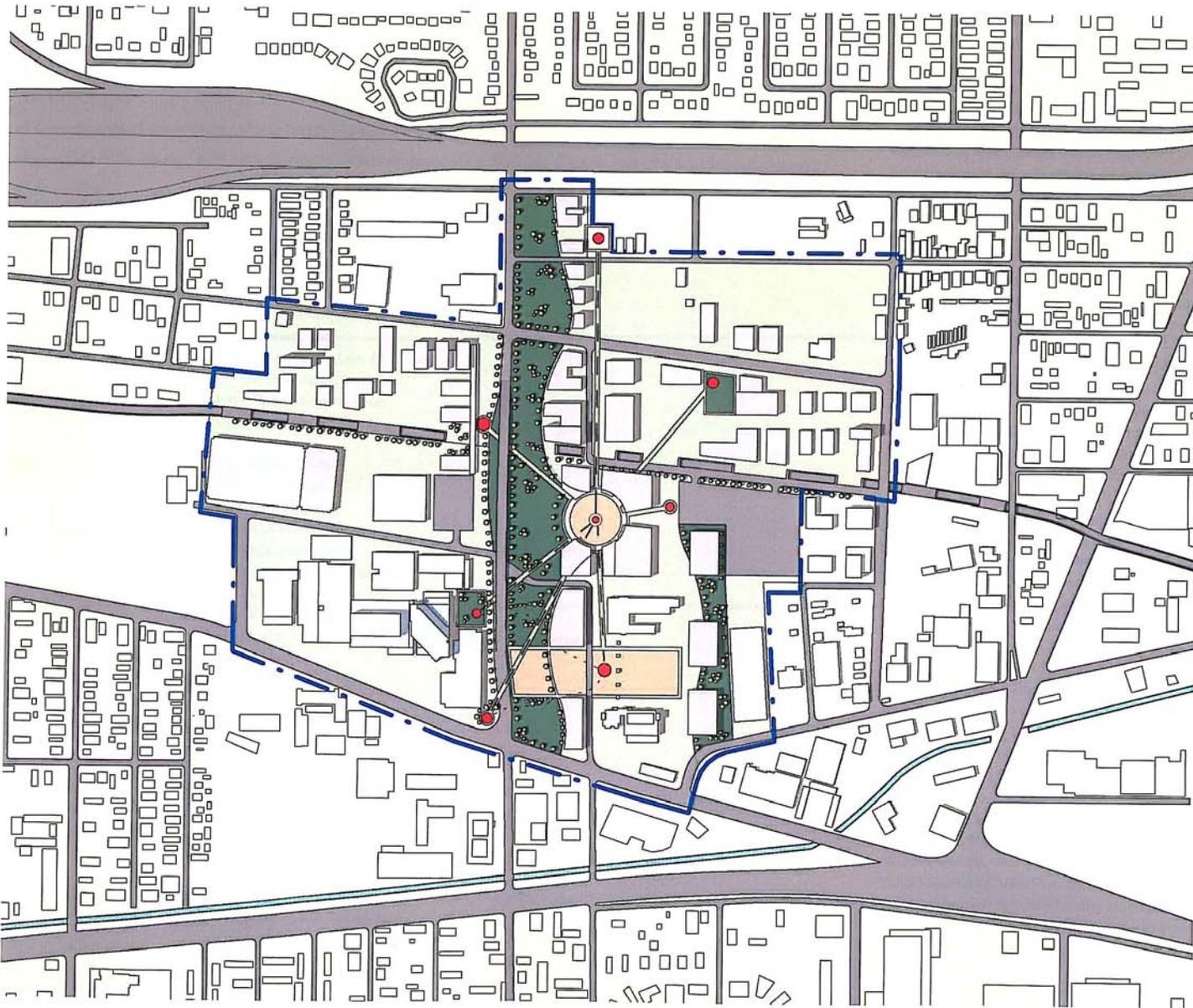
Revised August 2008

# EXHIBIT A

Revised August 2008

Medical Center of the Americas Master Plan - Phase I

Lee, Burkhart, Liu Architects / Camden Group



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## Acknowledgements

This Medical Center of the Americas Master Plan could not have been completed without the commitment and participation of all committee members involved, prior to and throughout the data gathering and design portion of the Master Plan study. The Master Plan is the result of thoughtful consideration and evaluation of a multitude of ideas, and effective decision-making by those involved.

The committee members and consultant team included:

### LBL / THE CAMDEN GROUP

Jason Haim, AIA, Principal – Lee, Burkhart, Liu  
Ken Liu, AIA, Principal – Lee, Burkhart, Liu  
Sina Yerushalmi, AIA, Associate Principal – Lee, Burkhart, Liu  
Steve Valentine, President – The Camden Group  
Ron Spoltore, Vice President – The Camden Group  
Carolyn S. Tung, Consultant – The Camden Group

### MCA FOUNDATION BOARD OF DIRECTORS

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Eliot Shapleigh, Texas State Senator, District 29 – State of Texas

### MCA FOUNDATION STAFF

Emma Schwartz, Executive Director - MCA Foundation

### OTHER PARTICIPANTS

Alan Abbott, President - Lynwood Garden Investments, Inc.  
Ron Acton, Chairman of the Board of Managers – El Paso County Hospital District  
Pat Aduato, Deputy City Manager, Development & Infrastructure Services – City of El Paso  
Richard Aduato, Vice President of Institutional Advancement – University of Texas at El Paso  
Jerry Akin, AIA, Senior Project Manager – Jones Lang LaSalle  
Valentine Arzola, Transportation Engineer / District Design – Texas Department of Transportation  
Roberto Assael, MD, Physician – Clinica Medica Internacional de Juarez  
Salvador Balcorta, Chief Executive Officer – Centro de Salud Familiar La Fe, Inc.  
John C. Baldwin, MD, Texas Tech University Health Sciences Center – President  
Pauline A. Ballesteros, RNC, MSN, ADN Director – El Paso Community College  
Charles H. (Chuck) Berry, Jr., PE, District Engineer – Texas Department of Transportation  
Terry Bilderback, Vice President – Parkhill, Smith & Cooper, Inc.  
Jeffrey C. Brown, Attorney – Scott, Hulse, Marshall, Feuille, Finger, & Thurmond, P.C.  
Dr. Dennis E. Brown, Vice President of Instruction – El Paso Community College  
Henry Brutus, Jr., Chief Executive Officer – El Paso Diabetes Association  
David Buchmueller, Principal – DPB Associates  
Susie Byrd, City Council Representative, District 2 – City of El Paso  
Paul Foster - Texas Tech University Health Sciences Center  
Kelly Carpenter, AICP, Deputy Director, Development Services, Planning Division – City of El Paso  
Angie Casarez, Constituent Services – Congressman Reyes  
John Cook, Mayor – City of El Paso  
Bob Cook, Chief Executive Officer – El Paso Regional Economic Development Corporation  
Javier Cordova – Texas Department of Transportation  
Erastro Cortez, MD, Physician, Society Member – El Paso County Medical Society  
Bruce Crockford, Vice President Healthcare Practice – Jones Lang LaSalle – for Thomason Hospital  
Richard Dayoub, Chief Executive Officer – Greater El Paso Chamber of Commerce  
J. Manuel de la Rosa, MD, Founding Dean – Texas Tech University Health Sciences Center  
Myrna Deckert, Interim President & CEO – Paso del Norte Health Foundation  
Steve DeGroat, Director, Board of Managers – El Paso County Hospital District  
Kathryn B. Dodson, Ph.D., Economic Development Director – City of El Paso  
Alix Duchouquette, Director of Marketing & Communications – El Paso Regional Economic Development Corporation  
Michael A. Ellicott, Vice Chancellor, Facilities Planning & Construction – Texas Tech University Health Sciences Center  
Everrette Esparza, Transit Planning & Program Coordinator – Sun Metro  
Mica Espinoza, Director, Healthcare Policy & Programs – Greater El Paso Chamber of Commerce  
Richard Fleager, General Manager – Texas Gas Service  
Bertha Gallardo, Public Affairs Officer – Las Palmas / Del Sol  
Dr. Robert Galvan, PH, MPH, MS, DAAS, Interim Director – El Paso City County Health & Environmental District  
L. Gomez, CRCC – El Paso Police Department  
Michael Guerra, Vice President, Government Relations – Greater El Paso Chamber of Commerce  
Hector Gutierrez, Vice President, Government Relations – El Paso Electric Company  
Michael Herrera, Transit Planning Manager – Sun Metro  
Jacob S. Heydemann, MD, Physician – El Paso County Medical Society  
Terry Jordan, Assistant Superintendent – El Paso Independent School District  
Dennece Knight, Director – Thomason Health Foundation, Project Director - Children's Hospital  
Chuck Kooshian, Lead Planner – City of El Paso

## Acknowledgements (continued)

Jon Law, Assistant Director – Center for Border Health Research  
 Gerardo Leos – Texas Department of Transportation  
 Jose Luna, Jr., MD, MBA, DABFP, Chief Medical Officer – San Vicente Clinic  
 Anthony Martinez, Communications Director – Office of Senator Eliot Shapleigh  
 Hector Martinez, Associate Superintendent – Operations – El Paso Independent School District  
 Michael Medina, Transportation & Urban Planning Manager – Metropolitan Planning Organization  
 Paula R. Mitchell, RNC, MSN, Ed.D., Dean, Health Occupation, Math & Science – El Paso Community College  
 Pat Morales, Executive Director – Cancer and Chronic Disease Consortium  
 Ross John Narvaeth, Project Manager – Texas Tech University Health Sciences Center  
 Diana Natalicio, PhD, President – University of Texas at El Paso  
 Laurance N. Nickey, MD, FAAP, Physician – El Paso County Medical Society  
 David Osborn, President of Board – Paso del Norte Health Foundation  
 Juana Padilla, Assistant to the Senator – Office of Senator Eliot Shapleigh  
 David Palafox, MD, Physician - Society member – El Paso County Medical Society  
 John A. Powell, MD, PhD, FACP, Commander – William Beaumont Army Medical Center  
 Hector Puente, Vice President T&D – EP Electric Company  
 Ali Razavi, Assistant to the Representative – Office of Senator Chavez  
 Richard M. Rhodes, PhD, President – El Paso Community College  
 Phillip Rivera, Chief Financial Officer – Thomason General Hospital  
 Alfonso Romero, Area Safety & Occupational Health Manager – Dept. of Homeland Security / US Customs & Border Protection  
 Veronica Rosales-Soto, Economic Development – City of El Paso  
 Pablo Salcido, Chief Operating Officer – The Paso del Norte Group  
 Bill Schlesinger, Executive Director – Project Vida Health Center  
 Sandra Shuya, VN Director – El Paso Community College  
 Richard Sinaiko, Chief Executive Officer – Sinaiko Healthcare Consulting  
 Dr. Heramb Singh, Physician - Society member – El Paso County Medical Society  
 Patsy Slaughter, Executive Director – El Paso County Medical Society  
 Marco Spalloni, Commander – Central Regional Command Center – El Paso Police Department  
 Eric Spier, MD, Physician – Physical Medicine & Rehabilitation Associates of El Paso, PA  
 Robert M. Suskind, MD, Professor of Pediatrics – Texas Tech University Health Sciences Center  
 David Taber, MD, Physician – El Paso County Medical Society  
 Dr. Lydia Tena Perez, Interim Dean, School of Nursing – El Paso Community College  
 Lawrence Thoenen, Project Manager – EP Electric Company  
 Patty Tiscareno, Executive Director – Rio Grande Cancer Foundation  
 Robert Turner, Municipal Finance, Healthcare, Higher Education, Non-Profit – Goldman Sachs  
 Luis Urrea, MD, Physician – El Paso County Medical Society  
 Jim Valenti, Chief Executive Officer – Thomason General Hospital  
 Godwin Wanyiouwu – Texas Department of Transportation  
 Joyce Wilson, City Manager – City of El Paso  
 Maria Zampini, VP, Ancillary Support Services – Thomason General Hospital  
 Kathryn B. Zerbach, MD, Physician – El Paso County Medical Society

## CONTRIBUTORS

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# EXHIBIT A

Revised August 2008

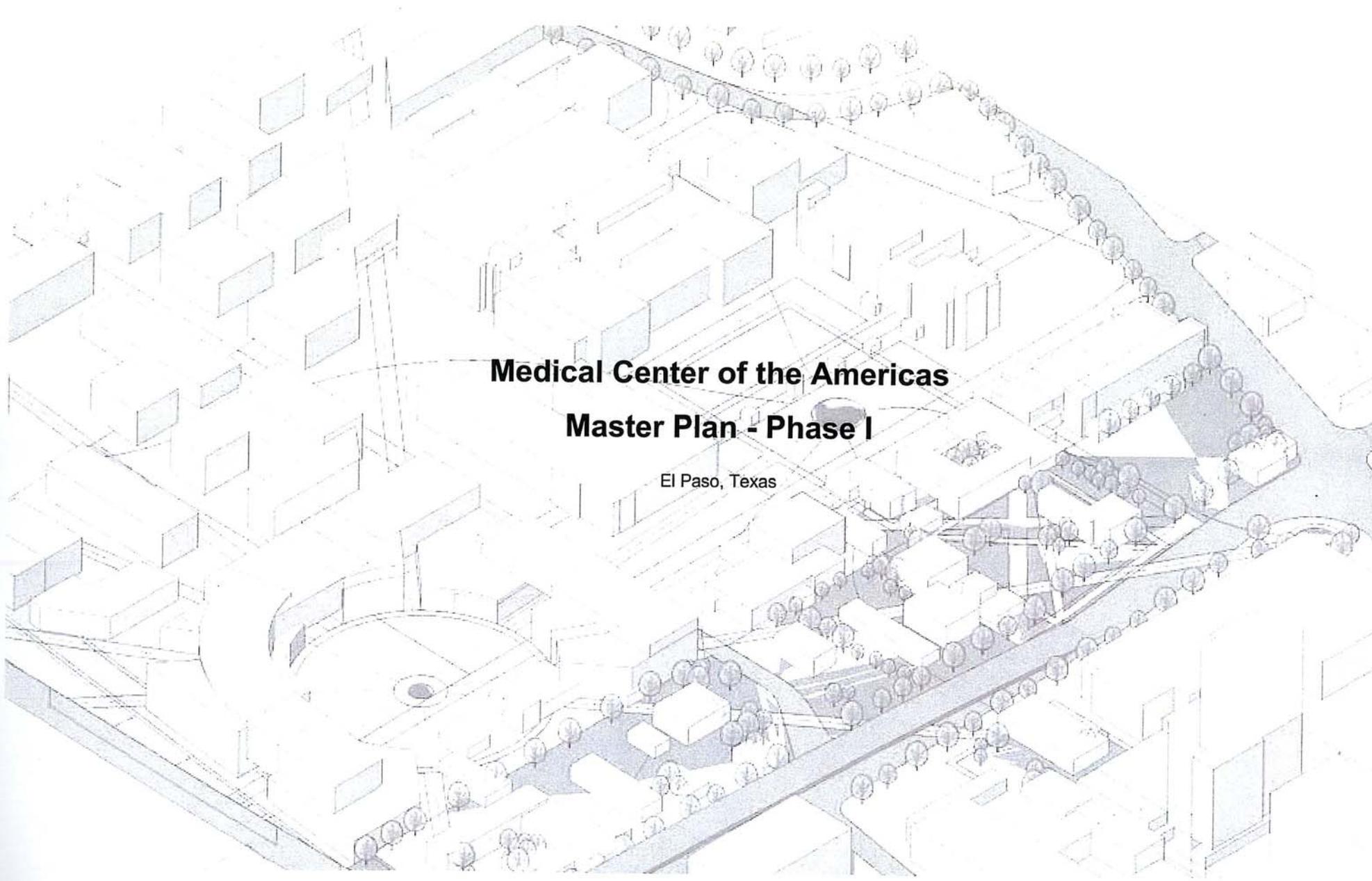
Medical Center of the Americas Master Plan - Phase I

Lee, Burkhart, Liu Architects / Camden Group

## ***Vision Statement***

To create an integrated campus of facilities that will position the MCA as the premier center of health delivery, education and research for the population of tomorrow.





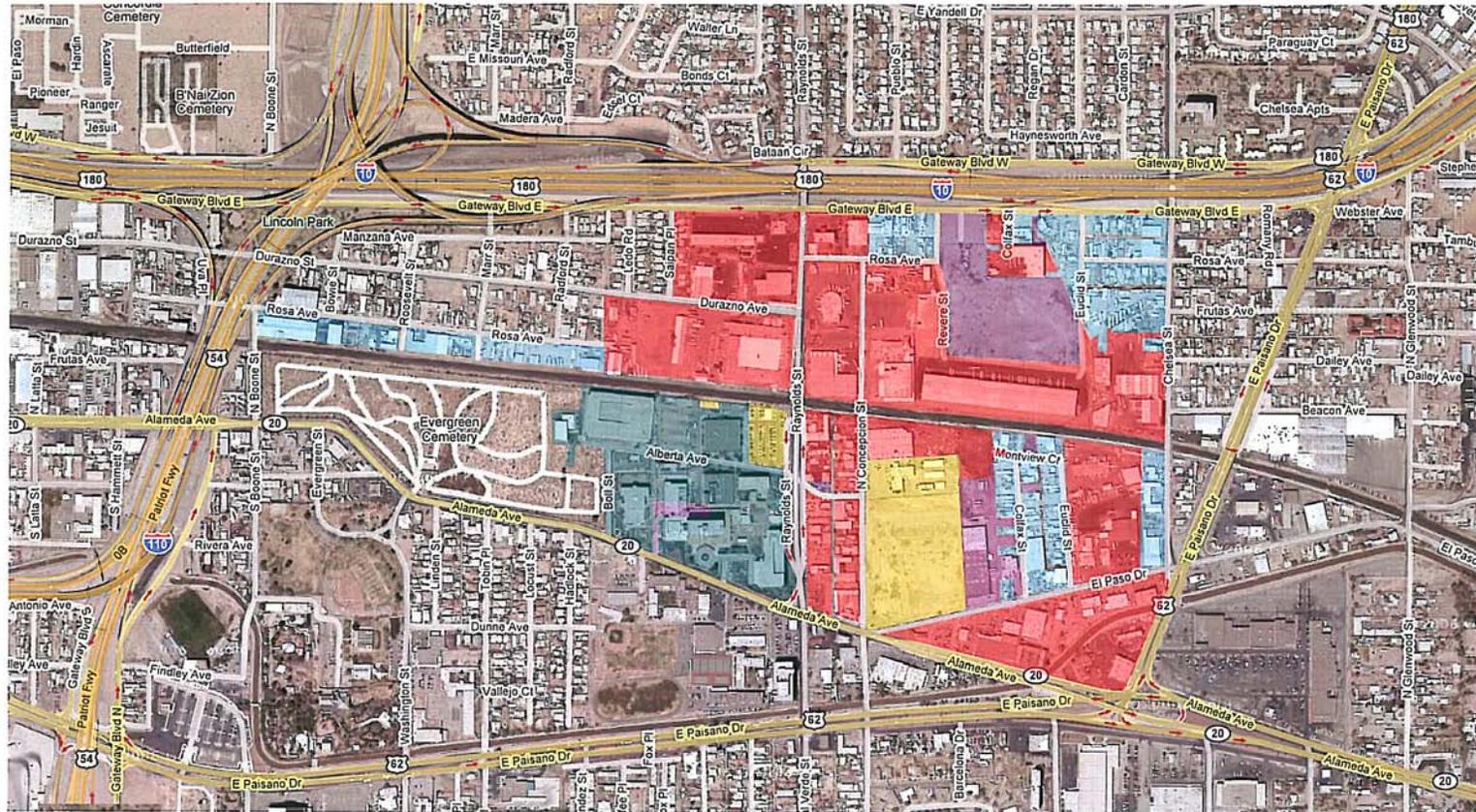
**Medical Center of the Americas  
Master Plan - Phase I**

El Paso, Texas

## Executive Summary

### Introduction

On August 10, 2006, the Medical Center of the Americas (MCA) Foundation Board issued a request for proposal to develop an efficient land and facility use plan for the MCA. The MCA is proposed to be located in El Paso, Texas and is dedicated to health research, health delivery and health education for the community, the Paso del Norte Region and the Americas. The scope of services includes a master plan, initially defined as 25 acres, in the area bound by Alameda Avenue (to the south), I-10 (to the north), Chelsea Street (to the east) and Interstate 54 (to the west). The objective of the MCA is to position the greater Paso del Norte Region as the premier center of health delivery, education and research for the Region's diverse and international population.



### Master Planning Process

The team of LBL Architects / Camden Group (LBL/ Camden) was selected as the master planning team for the project, given the healthcare and planning backgrounds of both firms. To supplement the team, LBL/Camden retained the services of Kimley-Horn (Civil Engineering) and the Vantage Group (Technology) to assist with specific elements listed in the MCA's request for proposal.

To assist LBL/Camden with input and oversight, the MCA Foundation Board created a Multidisciplinary Team which includes members of the MCA Board, Partner Organizations, the City of El Paso and Community Representatives to assist LBL/Camden with the master planning effort. A full list can be found in the Acknowledgements Section of this report.

Phase I	Phase II
<p><b>Project Kick-off</b></p> <ul style="list-style-type: none"> <li>1.1 Establish Project Protocol</li> <li>1.3 Data Collection</li> <li>1.5 Develop Existing Site Information</li> </ul> <p><b>Master Plan Development</b></p> <ul style="list-style-type: none"> <li>2.2 - Track 1: Demographic Projections/Campus Program</li> <li>2.3A - Track 2: Economic Development Strategy and Operational Planning</li> <li>2.4A - Track 3: Site / Facilities Master Plan Studies</li> <li>2.5 - Phasing and Implementation Plans</li> </ul>	<p><b>Master Plan Development</b></p> <ul style="list-style-type: none"> <li>2.3B - Track 2: Technology Use Plan</li> <li>2.4B - Zoning Plan (Included in Item 2.4A)</li> <li>2.4C - Land Acquisition Plan</li> <li>2.4D - Storm Water Utility Design</li> <li>2.4E - Parking, Traffic &amp; Pedestrian Plan</li> <li>2.6 - Cost Estimates (Use Local Estimator)</li> <li>2.7 - Financial Feasibility Model</li> </ul>

By design, the master plan developed for the MCA was divided into two distinct phases. Phase I, involving the programming and initial master planning effort, was developed over an eleven-month period. This portion of work included interviews of key community members, demographic research and validation of the volumes currently experienced, as well as projections looking forward to what the MCA service area may look like. This information was used as the basis for programming assumptions which have been converted into a square footage program. With such programming assumptions in place, Phase I included the master plan charrette process, which involved a wide range of community based organizations and individuals, for the purpose of identifying viable development options that would meet the needs of the community, the MCA and its partners. The goal was to identify a preferred scheme that could be used in Phase II as the basis for more detailed development.

*Phase I major tasks included:*

- Community and partner organization interviews
- Data gathering & evaluation
- Assessment of existing conditions
- Analysis and determination of vision for the future & campus components
- Establishment of planning parameters, key issues, concepts and relationships
- Development of comprehensive site programming elements
- Master plan site development

Phase II, which has not begun at the time this portion of the report was written, will look at the details of the preferred master plan option specific to major development issues. These include storm water management, future utility infrastructure, technology integration, architectural imagery and cost estimating, based on a phased implementation approach. All of these items will be reviewed and the final report will be modified with these findings.

*Phase II major tasks will include:*

- Architectural Theme Development
- Land Acquisition Planning
- Traffic and Pedestrian Control
- Technology Requirements
- Zoning and Utilities
- Environmentally Friendly Campus Design
- Timelines, Cost, Funding

# EXHIBIT A

Revised August 2008

Medical Center of the Americas Master Plan - Phase I

Lee, Burkhardt, Liu Architects / Camden Group

## Project Guiding Principles

To ensure a productive and focused master planning effort, LBL / Camden defined the following master plan guiding principles as a goal of the process and eventual product. These guiding principles should be viewed as general and not specific to any one partner or organization. These general guiding principles are:

### Planning Process

- Employs "Team-Centric," inclusive planning
- Responds to the cultural diversity of El Paso

### Aesthetics

- Provides a solution that develops a "campus feel"
- Begins to define the MCA
- Promotes green/sustainable facility responses

### Services

- Serves as a community resource
- Optimizes patient, physician and staff processes

### Resources

- Creates flexibility for built space, technology and future growth



# EXHIBIT A

## Existing Conditions / Site Analysis

The site, provided to the Master Planning Consultant Team by the MCA Foundation Board, is proposed to be an approximately 25 square acre congruous or non-congruous campus of facilities located in El Paso, Texas. The current area identified as available for planning purposes is shown below, bound by Alameda Avenue (to the south), I-10 (to the north), Chelsea Street (to the east) and Interstate 54 (to the west). The site is a combination of privately held residential and commercial land, institutional land and City of El Paso owned land.

### Access

Access to the site occurs in a few locations. To the south is Alameda, the main access point to Thomason and Texas Tech. El Paso Drive also extends along the southern edge and is being modified by the City to tie into Alameda at a 90 degree angle to improve traffic. Access from Paisano is currently limited unless used as a means to reach El Paso or Alameda. The purple arrows indicate access across Reynolds Avenue 4 Lane overpass. Access onto the MCA site occurs at both ends of Reynolds prior to the elevation rise over the railroad tracks.



Circulation Diagram

### Site Bisectors

The existing site is bisected by the railroad (east/west) and Reynolds Avenue (north / south). Many of the existing internal site roads running north / south do not cross the railroad as shown with the red "x". Additionally, since Reynolds is a 4-lane overpass connecting Alameda and I-10, east / west access is limited to just a few locations.



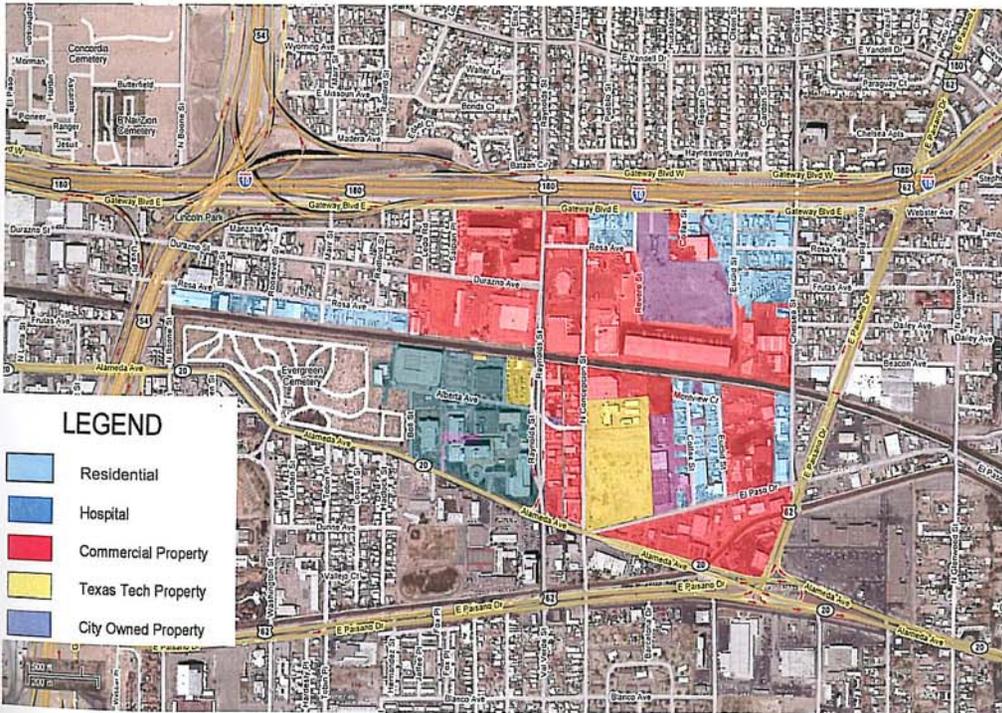
Access / Site Bisectors

### Visibility

Currently, the best visibility to the site occurs from I-10 or Alameda onto the MCA. Visibility from Paisano is limited, due to the lower scale of the buildings along the eastern edge of the MCA site.



Visibility Diagram



## Demographic Projections / Campus Program

### Demographic Projections Process

The Camden Group was asked to participate in a comprehensive evaluation of the infrastructure priorities, as well as engage in a review of the demographic and volume projections to support the healthcare enterprises of the Medical Centers of the Americas ("MCA"). Together, in conjunction with LBL Architects, the Master Plan Team undertook a wide-ranging interview process to speak with key stakeholders in the greater El Paso area as to their vision of services for, and integration with, the MCA site. Additionally, The Camden Group reviewed previously compiled information on population, demographics, healthcare professional needs, healthcare utilization rates, and bed needs of the City of El Paso, and to the extent possible, Ciudad Juarez.

To inform the evaluation process, LBL / Camden interviewed representatives of the MCA stakeholders during April and May, 2007. After the interviews were completed, our team determined potential funding sources and assigned priorities, taking into account the information from the interviews, the perceived momentum and support of the initiatives, and the likelihood of funding. In general, the expansion initiatives presented by Thomason Hospital, Texas Tech University School of Medicine program development, UTEP nurse training, and EPCC allied health program growth, were assigned the highest priority infrastructure attention.

### Service Area Definition

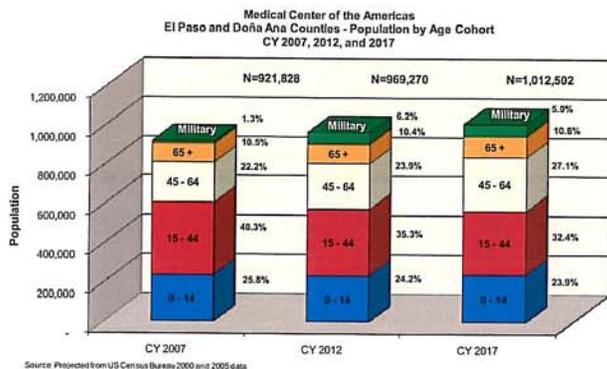
The map below shows the service area of the Medical Center of the Americas. It includes Doña Ana County in the State of New Mexico, El Paso County in the state of Texas, and Ciudad Juarez in Mexico.



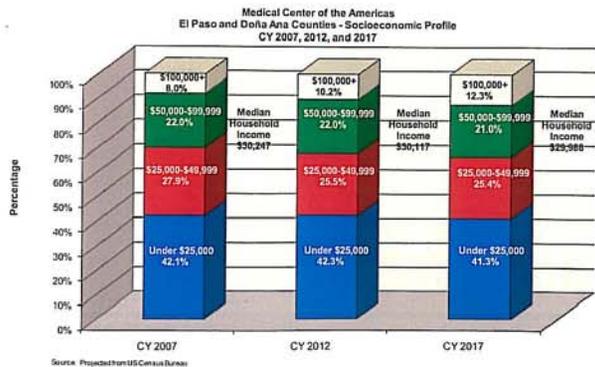
# EXHIBIT A

## Population and Demographics

The population by age cohort was projected from the U.S. Census Bureau 2000 and 2005 data for Doña Ana and El Paso Counties. The total population is projected to grow at a compound annual rate of 1.0 percent per year between 2007 and 2012, from 922,000 to 969,000. The population projections include the expected military increase of 60,000 individuals at Fort Bliss Base between 2007 and 2011. It is likely that there will be high demand for primary care, emergency, obstetrics, and pediatrics services.



The socioeconomic profile was projected from the U.S. Census Bureau 2000 and 2005 data for Doña Ana and El Paso Counties. The service area's median household income of \$30,247 in 2007 is more than \$10,000 less than the median household income of both the State of New Mexico (\$40,878) and the State of Texas (\$42,982). This implies that the payer mix of the service area is more unfavorable than either the State of New Mexico or the State of Texas. The adverse payer mix situation will create a challenge for recruiting and retaining physicians and a workforce to the service area.



## Medically Underserved Area/Health Professional Shortage Area

Significant portions of the MCA service area have been designated as a Medically Underserved Area, a Health Professional Shortage area, or both as shown on the maps below.



# EXHIBIT A

## Physician Supply Analysis

An analysis of physician by specialty per 100,000 population for the City of El Paso and the State of Texas is shown in the attached table. For primary care as well as for medical and surgical specialties, the City of El Paso has fewer physicians per 100,000 population. This information, coupled with the adverse payer mix situation, indicate that the MCA will be challenged by the shortage of primary care physicians and other healthcare providers in its service area and will need to make plans to successfully recruit and retain physicians and other healthcare professionals to the service area in order to support the MCA vision. This implies that a well organized clinic system is needed to care for the population.

Medical Center of the Americas  
Ratio of Physicians by Specialty per 100,000 Population - El Paso City and State of Texas  
CY 2006

Specialty	City of El Paso		State of Texas		Difference in Ratios	Compared to State
	Num. Providers	Providers per 100,000	Num. Providers	Providers per 100,000		
<b>Primary Care</b>						
Family Practice or General Practice	131	21.9	8,990	40.4	18.5	Worse
Family Practice	112	18.7	7,675	34.5	15.8	Worse
General Practice	22	3.7	1,413	6.3	2.7	Worse
General Preventative	1	0.2	145	0.7	0.5	Worse
Internal Medicine	198	33.1	9,843	44.2	11.1	Worse
Pediatrics	110	18.4	5,284	23.7	5.4	Worse
Obstetrics & Gynecology	69	11.5	3,045	13.7	2.1	Worse
<b>Medical</b>						
Allergy & Immunology	9	1.5	485	2.2	0.7	Worse
Dermatology	9	1.5	788	3.5	2.0	Worse
Endocrinology, Diabetes and ME	11	1.8	437	2.0	0.1	Worse
Gynecology	8	1.3	493	2.2	0.9	Worse
Neonatal/Perinatal Medicine	12	2.0	532	2.4	0.4	Worse
Nephrology	17	2.8	720	3.2	0.4	Worse
Neurology	15	2.5	985	4.4	1.9	Worse
Pediatric Endocrinology	1	0.2	67	0.3	0.1	Worse
Child Neurology	3	0.5	102	0.5	(0.0)	Similar
<b>Surgical</b>						
Neurological Surgery	9	1.5	440	2.0	0.5	Worse
Ophthalmology	25	4.2	1513	6.8	2.6	Worse
Orthopedic Surgery	50	8.4	1989	8.9	0.6	Worse
Pediatric Surgery	3	0.5	106	0.5	(0.0)	Similar
Vascular Surgery	3	0.5	347	1.6	1.1	Worse

Source: Texas Medical Association database of practitioners purchased in 2006.

\\persus1\cgl\clients\Lee Burkhardt Liu\Med Ctr of the Americas\Physician Needs.xls\Physician Supply (2)

Medical Center of the Americas  
El Paso County General Acute Care Hospital Utilization  
CY 2005

Facility	Ownership	Staffed Beds	Admissions	Average Daily Census	Average Length of Stay	Staffed Occupancy Rate
<b>El Paso County</b>						
R.E. Thomason General Hospital	Public	282	16,181	195	4.4	69.2%
Del Sol Medical Center	For-Profit	293	14,867	225	5.5	76.7%
Las Palmas Medical Center	For-Profit	261	10,593	153	5.3	58.7%
Physicians Hospital	For-Profit	40	2,309	25	3.9	62.1%
Providence Memorial Hospital	For-Profit	359	19,649	254	4.7	70.8%
Sierra Medical Center	For-Profit	334	13,592	180	4.8	53.9%
Southwestern General Hospital	For-Profit	23	1,117	13	4.2	55.8%
<b>TOTAL</b>		<b>1,592</b>	<b>78,308</b>	<b>1,045</b>	<b>4.7</b>	<b>63.9%</b>
<b>El Paso County Use Rate</b>			<b>108.9</b>			
<b>State of Texas</b>		<b>61,097</b>	<b>2,587,530</b>	<b>37,879</b>	<b>5.3</b>	<b>62.0%</b>
<b>State of Texas Use Rate</b>			<b>113.2</b>			

Source: Texas Department of Health, Utilization Data for Texas Acute Care Hospitals By County, 2005

Note: Use rate is defined as admissions per 1,000 population

\\persus1\cgl\clients\Lee Burkhardt Liu\Med Ctr of the Americas\Hospital Utilization.xls\Utilization Table

## Use Rates

Hospital utilization rates of El Paso County general acute care facilities indicate that the average staffed occupancy rate of El Paso County hospitals is 64 percent. This suggests that there is excess capacity in the County's hospitals as of 2005. Also, use rates (measured as admissions per 1,000 population) in El Paso County tend to be lower than the State of Texas as a whole. This is due to the large population of people under 45 who tend to use fewer healthcare services. The table above shows the utilization rates of the hospitals in El Paso County and the State of Texas as a whole.

# EXHIBIT A

## MCA Infrastructure Priorities

After validation of the market conditions, both current and projected, the Camden Group evaluated and reviewed service lines and ranked them by priority (using rankings of High\*, High, Medium and Low). These infrastructure priorities were presented to the MCA Board on June 7, 2007. The categories included:

- General Acute Care
- Clinics
- Outpatient Services
- Medical Office Building
- Medical School
- Nursing School
- Allied Professional Education/Training
- Research
- Faculty and Student Housing
- Senior Services
- Support Services

The full list of findings are summarized in Section 2 – Demographics and Programming.

## Creation of an MCA Space Program

Upon completion of service line ranking and a more detailed look at certain existing and potential future anchor tenants, LBL/Camden began a high-level programming effort to try to identify space requirements for the MCA site over time. Through a number of meetings with the Master Planning Committee, its partner organizations and community representatives, the detailed use rate projections were presented and validated after careful evaluation of historical trend lines and future growth projections. These projections were then converted into square footage allocations and included in an overall site program for use in the master planning process using industry benchmarking.

## Extrapolating Growth to Future Milestones

LBL/Camden researched the growth pattern of other Medical School Campus Plans where square footage information is available since their inception. The examples cited, based on our ability to find information, were Duke, the University of Virginia, UCLA and Stanford. Using UCLA as an example, you will notice that an initial growth rate in square footage of 30% after inception of the school. After that, an average 8% growth rate in square footage (compounded every five years) became the norm. Interestingly, the averages when you compare multiple campuses together did not change substantially. Included is a comparative chart showing average growth in square footage over time for Stanford, the University of Virginia and UCLA and a projection of a future MCA program size extrapolating using these estimated percentages.

## All Campuses: Average Growth Rate over time

Time Period	Stanford Univ.	Univ. of Virginia	UCLA	Average
1st 5 years	35%	29%	27%	30%
2nd 5 years	6.4%	9.7%	5.2%	7%
3rd 5 years	8.1%	6.4%	6.5%	7%
4th 5 years	5.3%	13.5%	4.1%	8%
5th 5 years	4.6%	1.7%	9.2%	5%
6th 5 years	3.4%	5.3%	9.1%	2%
7th 5 years	8.1%	9.9%	8.2%	9%
8th 5 years	2.6%	4.5%	9.5%	6%
9th 5 years	9.0%	9.8%	9.0%	9%
10th 5 years	26.2%	8.3%	13.5%	16%
	8%	8%	8%	8%

Average (1961-2007)

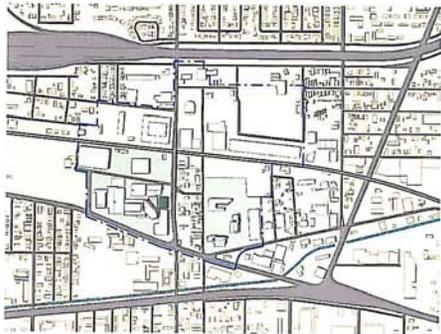
## MCA Future Building Area Estimate - 2007-2107

Time Period	Estimated Percentage	Building Area Added GSF	Cummulative Building Area
2007 Existing	-	1,200,000	1,200,000
2007-2015	30%	360,000	1,560,000
2016-2025	16%	249,600	1,809,600
2026-2030	16%	289,536	2,099,136
2031-2040	16%	335,862	2,434,998
2041-2050	16%	389,600	2,824,597
<b>2051-2060</b>	<b>50 Year</b>	<b>16%</b>	<b>451,936</b>
2061-2050	16%	524,245	3,800,778
2051-2060	16%	608,125	4,408,903
2061-2070	16%	705,424	5,114,327
2071-2080	16%	818,292	5,932,620
2081-2090	16%	949,219	6,881,839
2091-2100	16%	1,101,094	7,982,933
2101-2110	<b>100 Year</b>	<b>16%</b>	<b>1,277,269</b>
			9,260,202

# EXHIBIT A

## Estimating Land Use Over Time

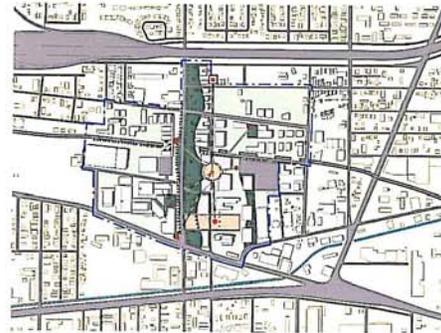
To try to quantify a land use number (in acres), LBL/Camden assumed an "average density" of two stories (an average between the majority of the site at one story compared to Thomason & Texas Tech with multi-story buildings). Using this assumption, 40,000 s.f. of development was allocated per acre. Based on the estimated projected MCA square footage, the MCA will expand to 82 acres in 50 years and 230 acres in 100 years. Again, acreage will be a function of built density but the images below indicate what the site may look like over the next 100 years.



Existing Condition



Phase 1 (10 - 15 Years)



Phase 2 (25 - 50 Years)



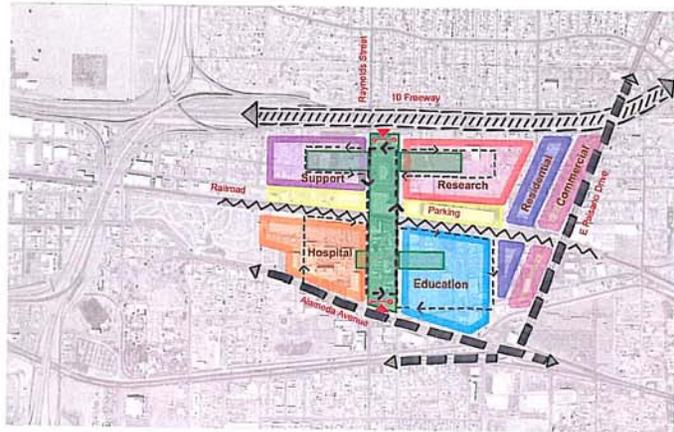
Final Phase (100 Years)

# EXHIBIT A

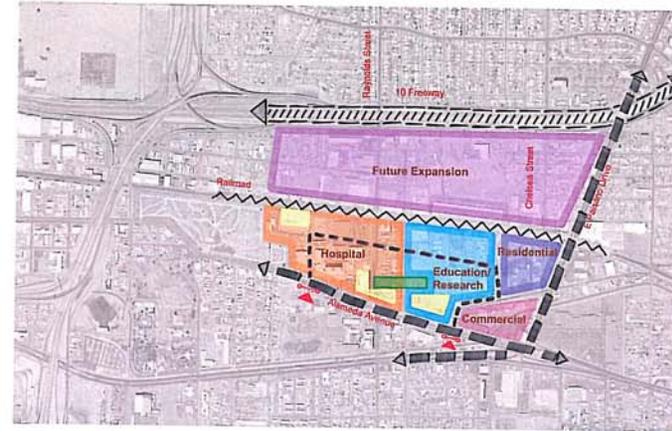
## Master Plan Development

Several master plan schemes were developed that respond to a multitude of planning issues and to the program developed. Development ranged from conservative to aggressive in its planning approach, each utilizing different strategies for addressing existing site conditions; an example being the bisection of the site by both Reynolds Avenue and the railroad. Each option concluded with advantages and disadvantages which were reviewed by the Multidisciplinary Team, kept as a viable option, discarded or combined into new schemes. Examples of the options included:

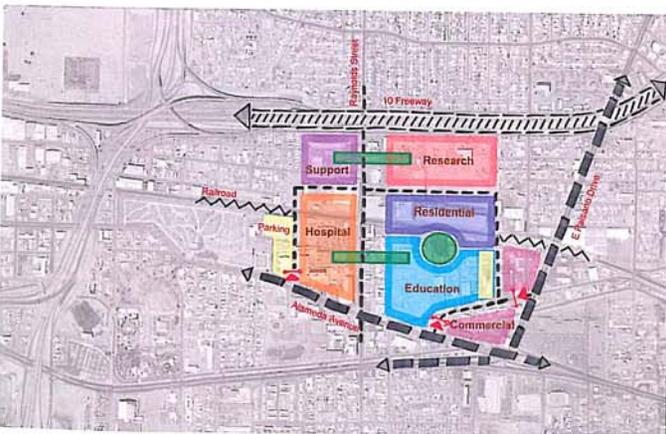
**Option #1**  
Raynolds Spine (Utilizes a strong, unifying, central zone)



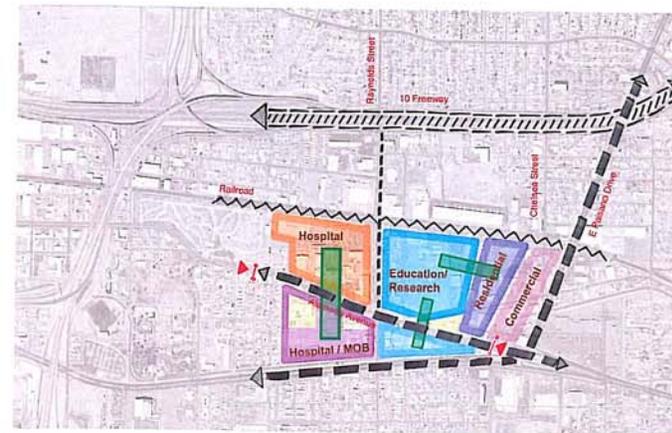
**Option #3**  
Southern Horseshoe (Promotes a strategy of development south of the railroad tracks with future development occurring to the north)



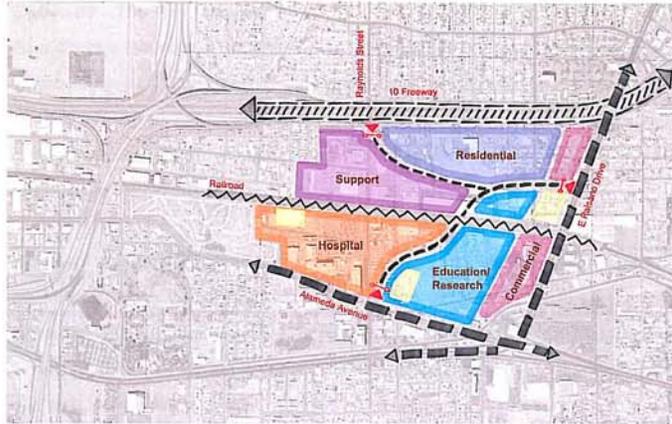
**Option #2**  
East / West (Development of circulation spines between Thomason and Texas Tech as well as connectors in the northern quadrant)



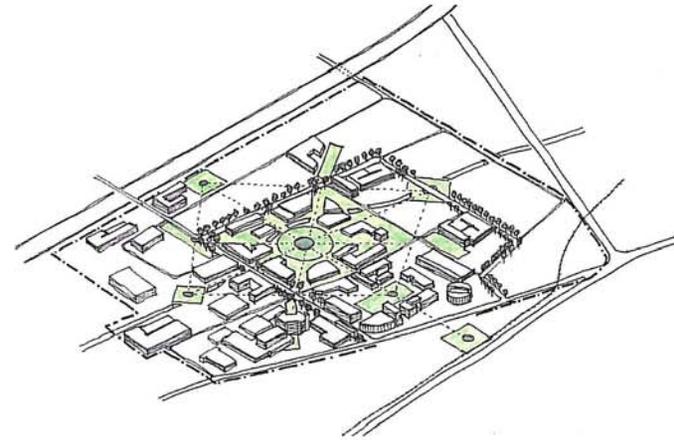
**Option #4**  
Alameda Span (Promotes a strategy of development south of the railroad tracks with a focus on Alameda as the main circulation spine)



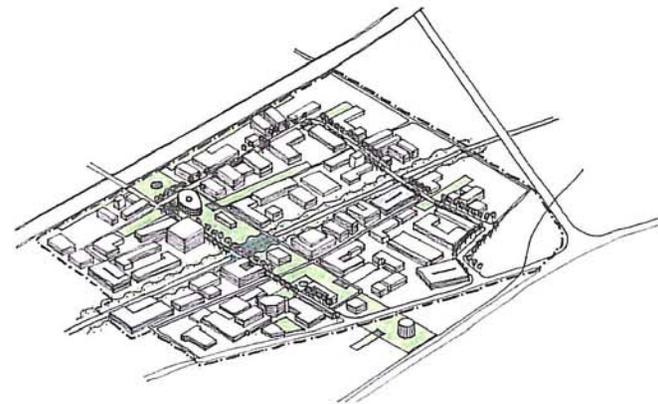
# EXHIBIT A



**Option #5**  
Promenade (Utilizes a connection spine between Reynolds (at I-10), Paisano Drive and Alameda)



**Option #7**  
Campus Quad (Combines Options 1, 2 and 3 and based on a unifying, central plaza organization concept)



**Option #6**  
Central Park (Combines Options 1, 2 and 3 and based on the strong, unifying, linear organization concept)



**Option #8**  
Plaza Scheme (Combines the best attributes of Options 6 and 7 integrating a central plaza concept with a strong linear based scheme)

## Preferred Master Plan

### Option #9 – The Plaza Revised

As outlined in the Master Plan Development Section of the report, The Plaza Option #9 is a further development of the prior Option #8 based on comments by the MCA and partner organizations. The idea of a central, multi-use public zone resonated strongly with the entire Multidisciplinary Team, with the caveat that the plaza needed to be located more westerly to allow direct access from Thomason and Texas Tech. For other incoming services, like EPCC's School of Nursing, the same need / desire for access to the other key services is important.

Option #9 still recognizes the importance of gateways from Alameda and I-10 and supports the notion of a MCA spine running north / south along Reynolds Avenue. In this option, the plaza opens to the Reynolds spine, allowing for clear organization of elements north and south off of the access drive or radially around the Plaza once a final location is selected. As identified in Option #7, the Plaza can be comprised of buildings and open space, allowing for direct pedestrian flow from quadrants of the site back to this interactive zone. The "Plaza" could be the site for such services as a Conference Center, a Medical Mall (pharmacy, optical services, etc.), Commercial (coffee houses, restaurants, day care, and gym) and other employee, patient and visitor services. Secondary open space hubs would also be created for other areas of the site which could support development as it occurs on the MCA campus.

As with the prior options, this scheme utilizes an internal campus ring road that could be utilized for vehicular circulation around the site without having to utilize the perimeter arterials such as Alameda. Similar access to clear parking zones and a clear MCA arrival experience are consistent in this option.

#### Key master planning concepts for this option include:

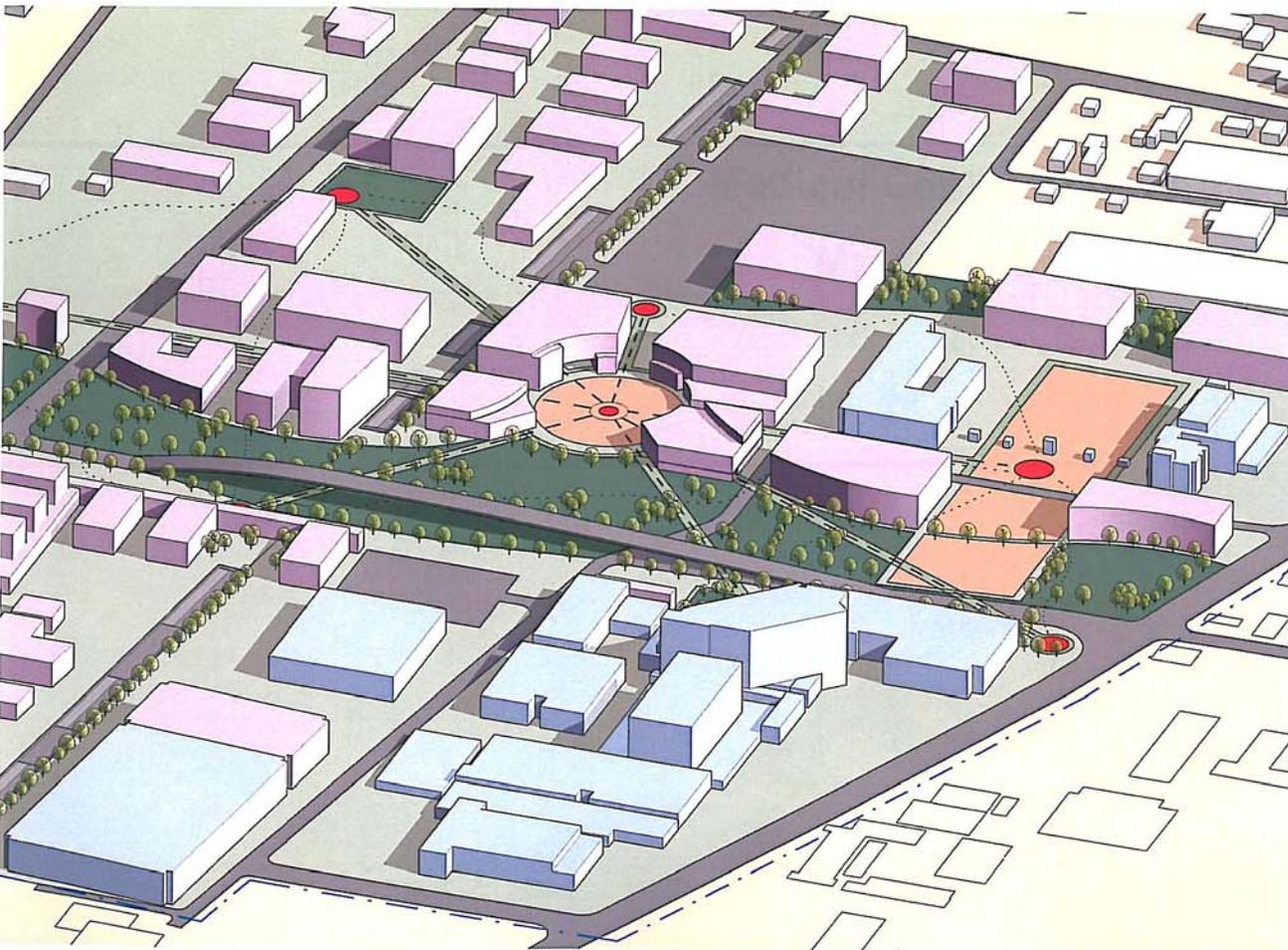
- Provide the flexibility to change over time.
- Plan for a balance of functionality and aesthetic quality within a cost-effective solution.
- Develop clear site organization with strong relationships between components.
- Identify arrival to the MCA.
- Provide good accessibility and way finding.
- Establish functional relationships that provide opportunity and efficiency.
- Design and implement an effective infrastructure.
- Promote an environment that is responsive and sensitive to the population it serves.



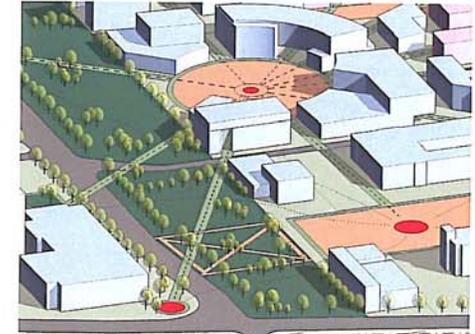
# EXHIBIT A

## Conclusion

By thoughtful planning, it is the intent of this MCA Master Plan Committee to develop a plan for creating a premier center for health delivery that responds directly to required services for the region and is accomplished by development that can deliver the highest standard of care.



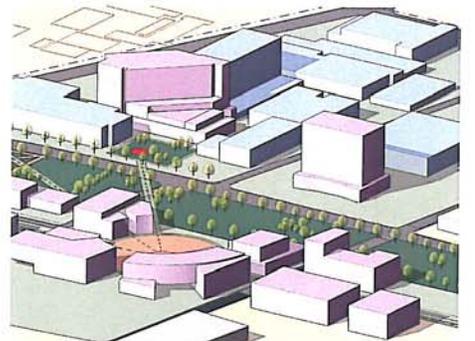
Option #9 Plaza Scheme Axonometric



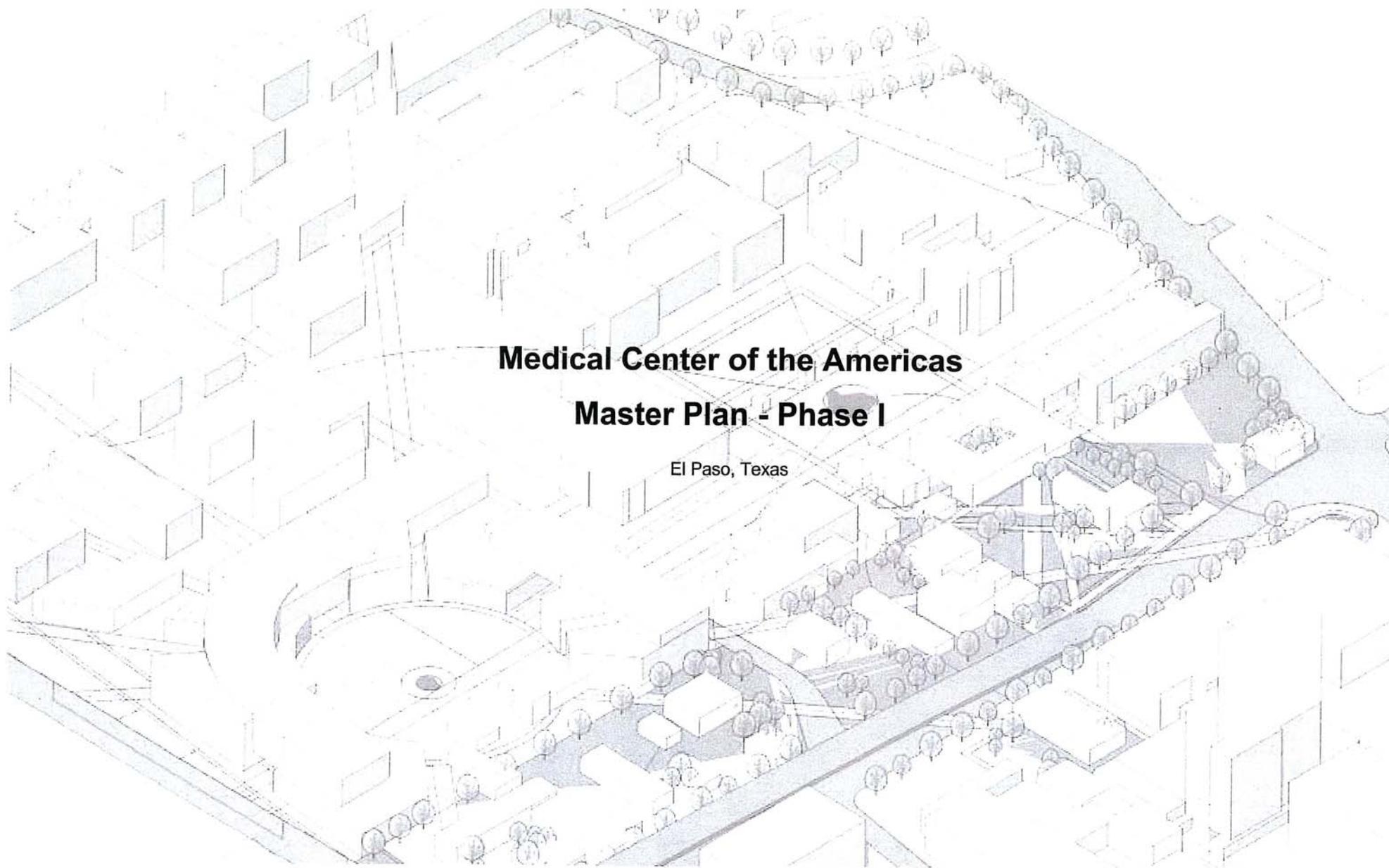
Plaza View from Southwest



Texas Tech View from Southeast



Plaza View from Northeast



**Medical Center of the Americas  
Master Plan - Phase I**

El Paso, Texas

**EXISTING CONDITIONS**

## Existing Conditions / Site Analysis

The site, provided to the Master Planning Consultant Team by the MCA Foundation Board, is proposed to be an approximately 25 square acre congruous or non-congruous campus of facilities located in El Paso, Texas. The current area identified as available for planning purposes is shown below, bound by Alameda Avenue (to the south), I-10 (to the north), Chelsea Street (to the east) and Interstate 54 (to the west). The site is a combination of privately held residential and commercial land, institutional land and City of El Paso owned land.



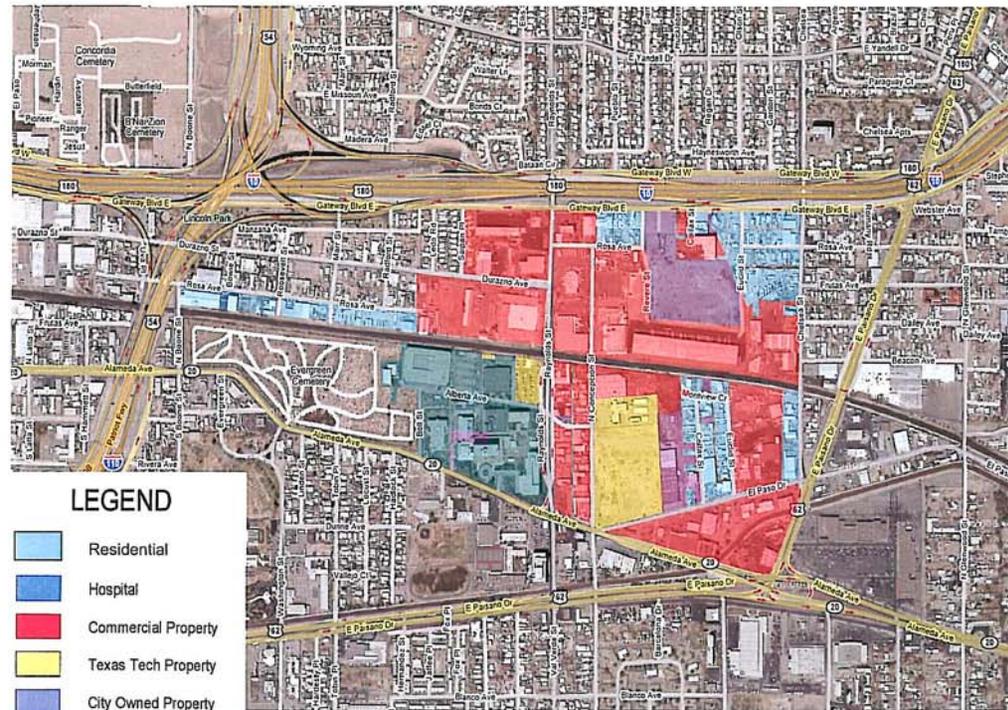
### Campus Facilities & Zoning

The site, shown opposite, has been divided into its major functional zones. The existing Thomason Hospital and its related components comprise the Hospital Zone. This zone includes all inpatient, outpatient and support related functions.

Immediately surrounding Thomason is the Commercial Zone, made up primarily of commercial businesses with some small residential pockets mixed between.

The yellow area east of Thomason and at the north of the Thomason Campus is the existing Texas Tech Medical School. Texas Tech recently completed the second building of the medical school, which was recently accredited as a 4-year medical school. The purple zones are City owned properties which include the majority of the area north of Durazno, south of I-10 and west of Saipan Place. This area was flooded in 2007 and the families were relocated by the City.

The light blue areas are primarily residential and make up the last category indicated on the existing zoning diagram.



# EXHIBIT A

## Thomason Hospital

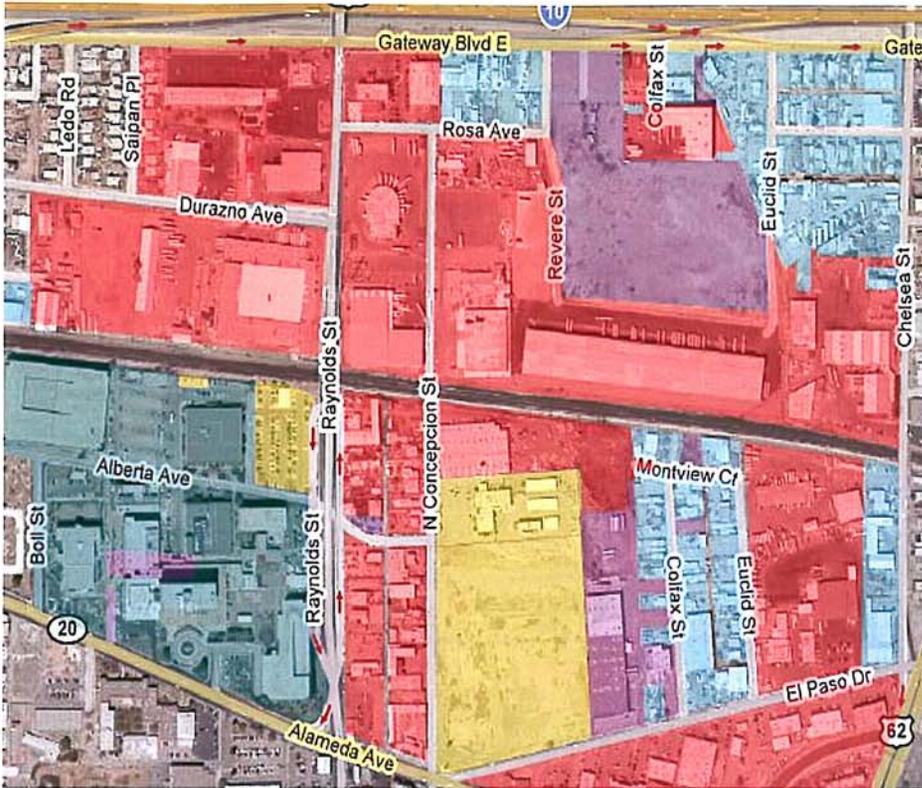


## Texas Tech Medical School & Clinics



# EXHIBIT A

## Commercial Zone



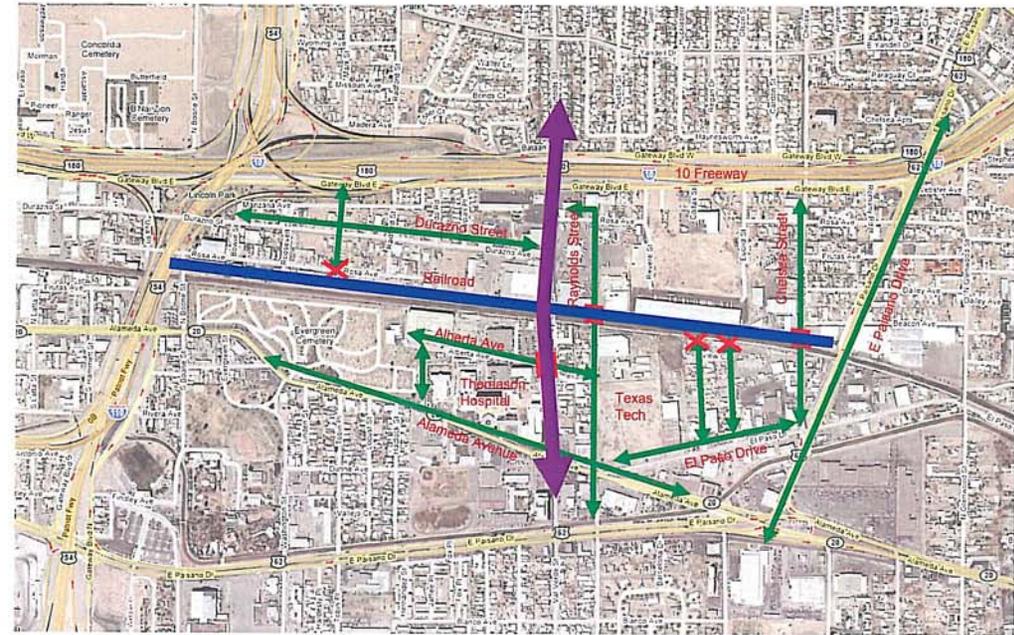
## Residential Zones



# EXHIBIT A

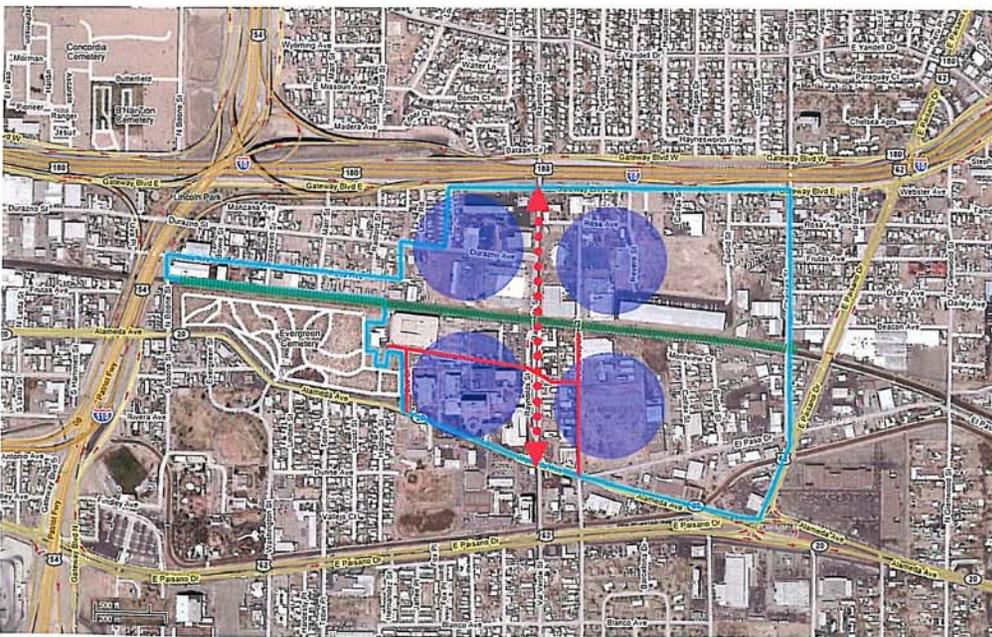
## The Site Bisectors

The site, provided to the Master Planning Consultant Team by the MCA Foundation Board, is proposed to be an approximately 25 square acre congruous or non-congruous campus of facilities located in El Paso, Texas. The current area identified as available for planning purposes is shown below, bound by Alameda Avenue (to the south), I-10 (to the north), Chelsea Street (to the east) and Interstate 54 (to the west). The site is a combination of privately held residential and commercial land, institutional land and City of El Paso owned land.



## Site Bisectors

The existing site is bisected by the railroad (east / west) and Reynolds Avenue (north / south). Many of the existing internal site roads running north / south do not cross the railroad as shown with the red "x". Additionally, since Reynolds is a 4-lane overpass connecting Alameda and I-10, east west access is limited to just a few locations.



Reynolds looking North



Railroad looking West

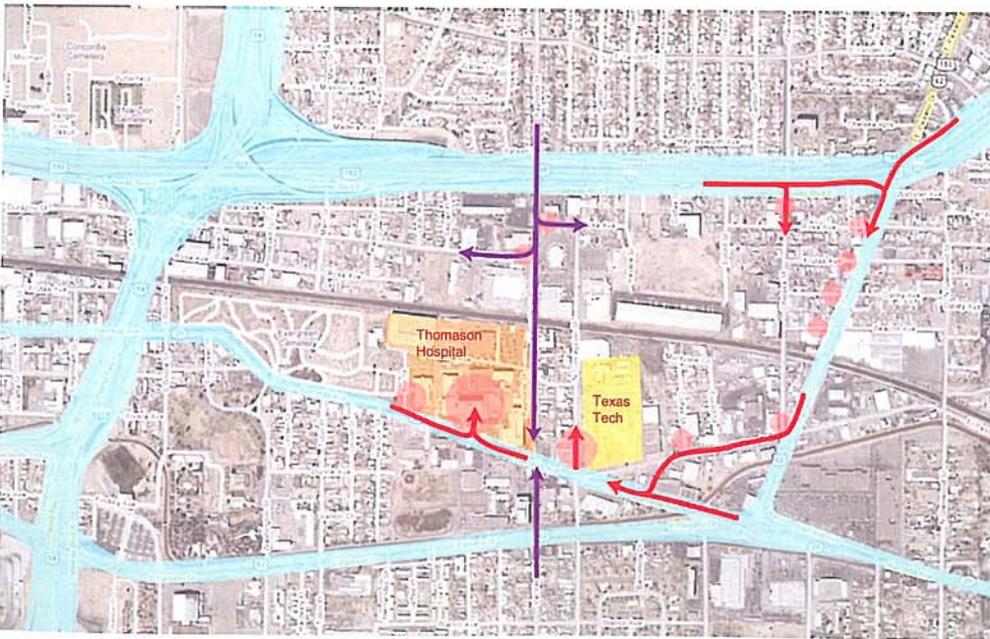
# EXHIBIT A

## Access & Circulation

Access to the site occurs in a few locations. To the south is Alameda, the main access point to Thomason and Texas Tech. El Paso Drive also extends along the southern edge and is being modified by the City to tie into Alameda at a 90 degree angle to improve traffic. Both of these southern access points are the main entry points to Thomason Hospital and Texas Tech as shown in the red dots on the image below.

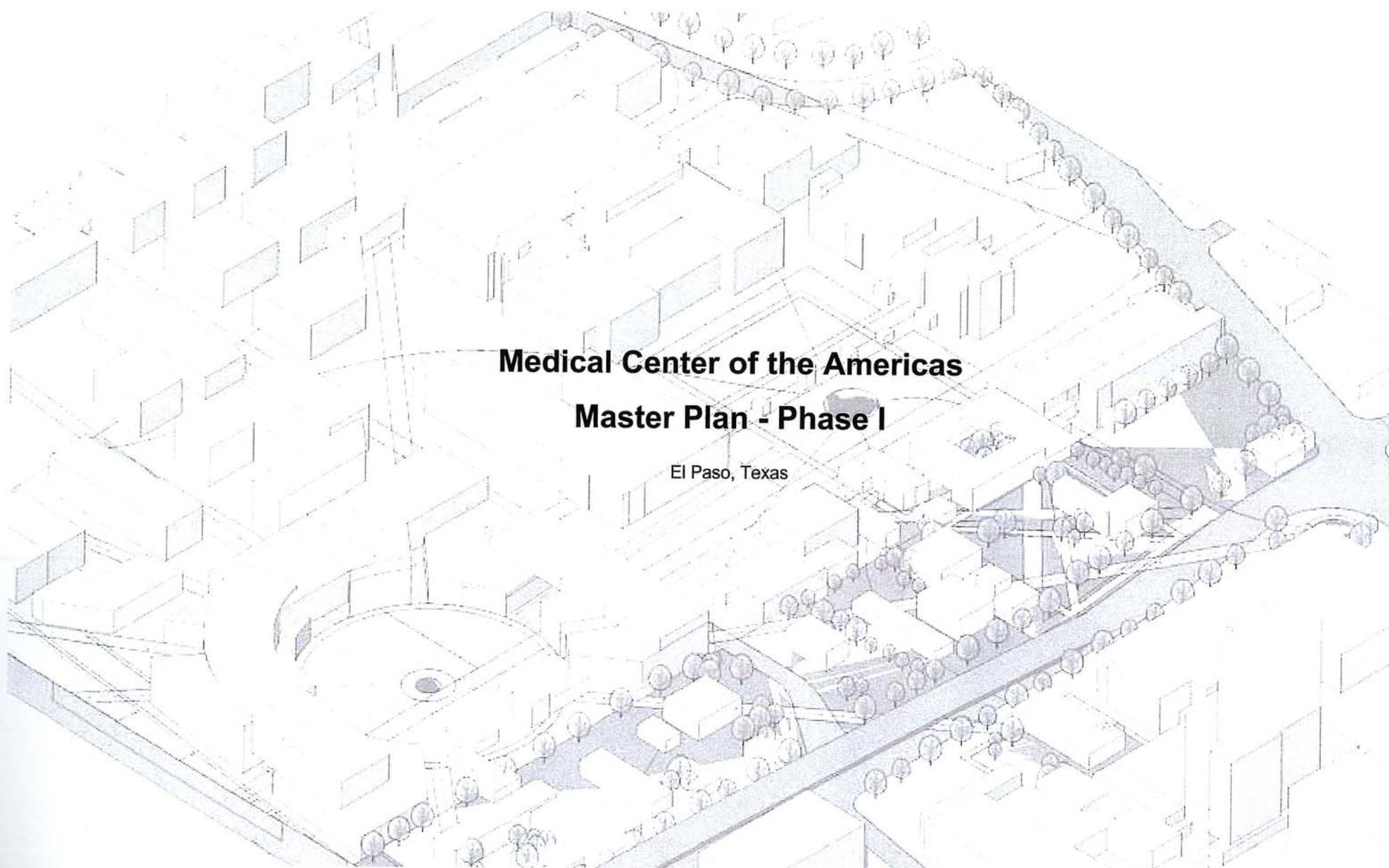
Access from Paisano is currently limited unless used as a means to reach El Paso or Alameda; however, Paisano is one of the main arterials from I-10 and is one of the direct exits from the Interstate.

The purple arrows indicate access across Reynolds Avenue 4 Lane overpass. Access onto the MCA site occurs at both ends of Reynolds prior to the elevation rise over the railroad tracks; however, unless you are familiar with the area, it can be a daunting task to find your way around or under the Reynolds overpass.



## Existing Development Challenges

Given the existing railroad and Reynolds overpass, future growth of the MCA will be challenging in both the east / west and north/south directions. It will be necessary to establish a strategy for either direction depending on the amount area required and the necessary access points across them.



**Medical Center of the Americas**

**Master Plan - Phase I**

El Paso, Texas

**DEMOGRAPHICS & PROGRAM**

## Demographic Projections / Campus Program

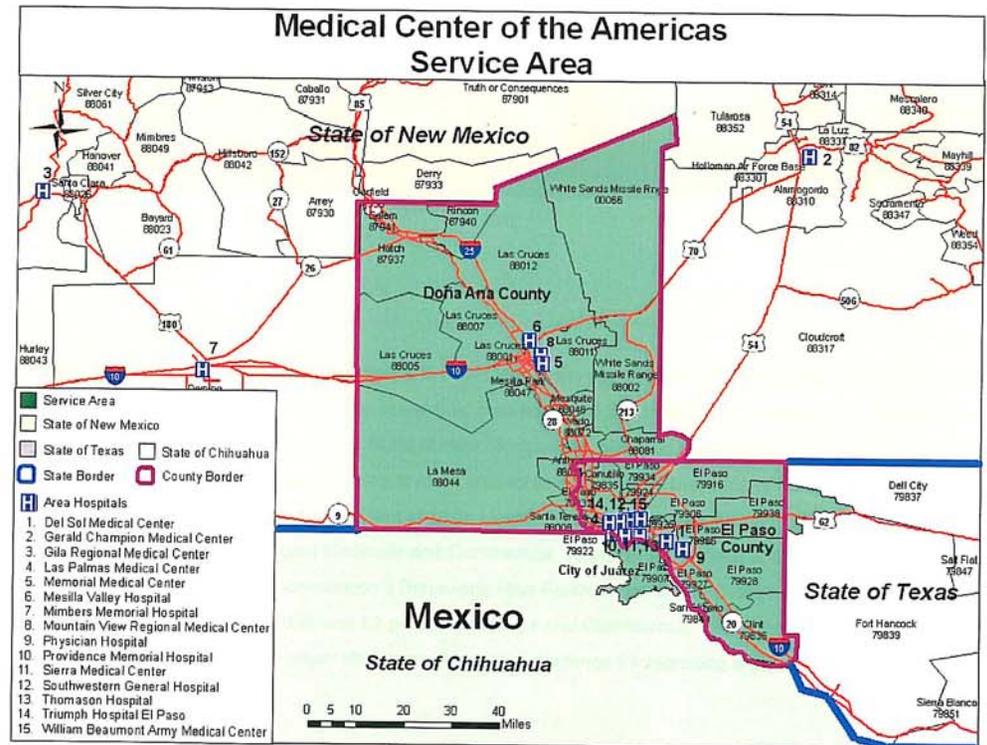
### Demographic Projections Process

The Camden Group was asked to participate in a comprehensive evaluation of the infrastructure priorities as well as engage in a review of the demographic and volume projections to support the healthcare enterprises of the Medical Centers of the Americas ("MCA"). Together, in conjunction with Lee, Burkhardt, Liu ("LBL"), the Master Plan Team undertook a wide-ranging interview process to speak with key stakeholders in the greater El Paso area as to their vision of services for and integration with the MCA site. Additionally, The Camden Group reviewed previously compiled information on population, demographics, healthcare professional needs, healthcare utilization rates, and bed needs of the City of El Paso, and to the extent possible, Ciudad Juarez. To inform the evaluation process, LBL and The Camden Group interviewed representatives of the MCA stakeholders during April and May, 2007.

After the interviews were completed, our team determined the potential funding sources and assigned priorities taking into account the information from the interviews, the perceived momentum and support of the initiatives, and the likelihood of funding. In general, the expansion initiatives presented by Thomason Hospital, Texas Tech University School of Medicine program development, UTEP nurse training, and EPCC allied health program growth, were assigned the highest priority infrastructure attention.

### Service Area Definition

The map below shows the service area of the Medical Center of the Americas. It includes Doña Ana County in the state of New Mexico, El Paso County in the state of Texas, and Ciudad Juarez in Mexico.

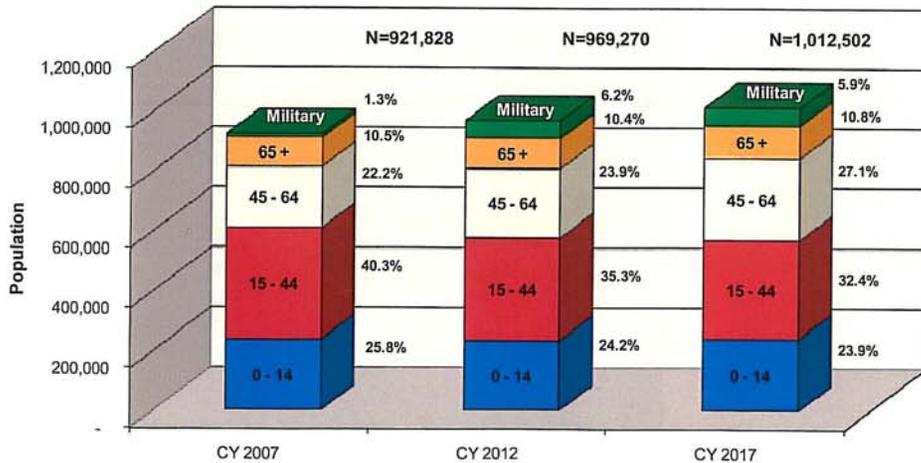


# EXHIBIT A

## Population and Demographics

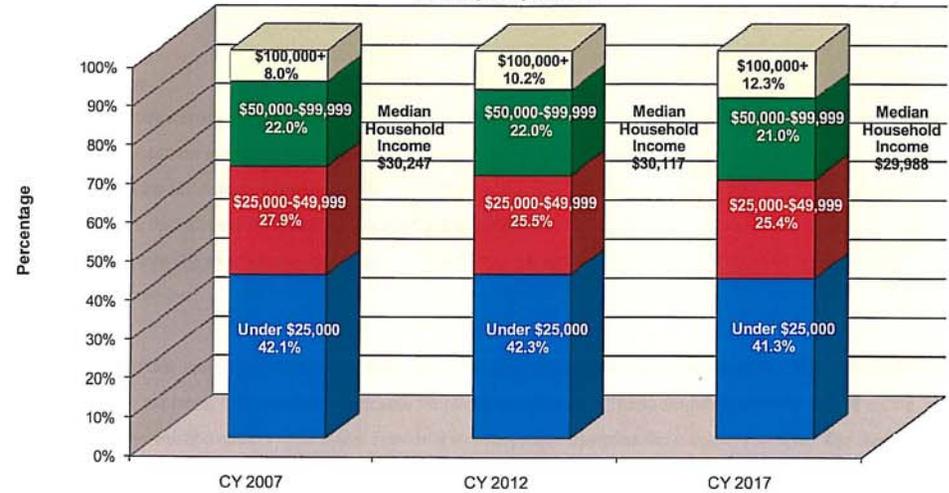
The population by age cohort was projected from the U.S. Census Bureau 2000 and 2005 data for Doña Ana and El Paso Counties. The total population is projected to grow at a compound annual rate of 1.0 percent per year between 2007 and 2012, from 922,000 to 969,000. The population projections include the expected military increase of 60,000 individuals at Fort Bliss Base between 2007 and 2011. It is estimated that 60 to 65 percent of the population will be younger than 44 during the period 2007 to 2012, which implies that the service area population will utilize fewer acute healthcare services than the State of Texas or State of New Mexico. However, it is likely that there will be high demand for primary care, emergency, obstetrics, and pediatrics services. A chart detailing the population projections is shown below:

Medical Center of the Americas  
El Paso and Doña Ana Counties - Population by Age Cohort  
CY 2007, 2012, and 2017



Source: Projected from US Census Bureau 2000 and 2005 data

Medical Center of the Americas  
El Paso and Doña Ana Counties - Socioeconomic Profile  
CY 2007, 2012, and 2017



Source: Projected from US Census Bureau

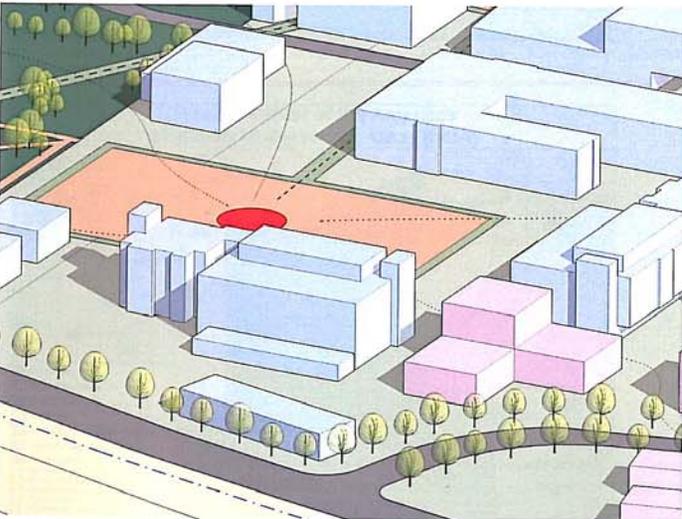
The socioeconomic profile was projected from the U.S. Census Bureau 2000 and 2005 data for Doña Ana and El Paso Counties. The service area's median household income of \$30,247 in 2007 is more than \$10,000 less than the median household income of both the State of New Mexico (\$40,878) and the State of Texas (\$42,982). This implies that the payer mix of the service area is more unfavorable than either the State of New Mexico or the state of Texas. According to the Texas Department of State Health Services, the payer mix in El Paso County in CY 2005 was projected to be 40 percent Medicare and Commercial, 19 percent Medicaid, and 41 percent uninsured. The New Mexico Health Policy Commission's Behavioral Risk Factor Surveillance System projected that the payer mix of Doña Ana County in CY 2005 was 52 percent Medicare and Commercial, 18 percent Medicaid, and 30 percent uninsured. The adverse payer situation will create a challenge for recruiting and retaining physicians and a workforce to the service area.

## Master Plan Process

Upon completion of the demographic evaluation and programming effort outlined in "Demographic Projections & Programming" Section, the Master Planning Design Team began the architectural evaluation and option development components of the Master Plan. This involved the translation of program elements to a physical plan that responds to a multitude of issues and requirements for different organizations and implemented over time in multiple phases.

Since the future development of the MCA will evolve and change over time, it was important for assumptions relative to potential development be tested by the Multidisciplinary Team established by the MCA. In bringing the ideas of all the potential partners and community representatives together, many potential hurdles could be avoided later in the process. To implement such a strategy, LBL/Camden initiated a process of four design charrettes (workshops) for review, input and discussion of issues related to each option development.

The Master Plan should be viewed as a living document that will be modified, expanded and redirected as future requirements become realized. The goal of Phase I was to move toward a Preferred Master Plan that could be further evaluated and developed based on more detailed criteria established in Phase II. By building consensus of the participants, the option selected as the Preferred Master Plan attempts to address the issues identified by those involved in the process.



View of Texas Tech from the Southeast

## Master Plan Development

At the beginning of the charrette process, LBL and the MCA Multidisciplinary Team identified key areas of focus that appeared to be most important for successful implementation of a Medical Center of the Americas Medical Center Campus. These were:

- MCA Image
- Campus Environment / Open Space
- Clear Organization of the MCA Components
- Visibility of the MCA from Alameda & I-10
- Vehicular & Pedestrian Accessibility / Clear MCA Entry Points
- MCA Bisectors (Raynolds & the Railroad)
- Future Expansion

Development of one preferred master plan began with a wide range of ideas that were summarized into five preliminary schemes; each exploring different global concepts for planning of the site. These schemes are each based on the evaluation of the existing site conditions and individual structures that comprise the current MCA site. The design team evaluated the strengths and weaknesses of each component as it relates to the full MCA development concept.

There is a unifying existing condition, in all schemes, worthy of discussion prior to describing the unique features of each option. This existing condition is the bisection of the site, both in the north/south and east/west directions due to the railroad and the related Raynolds Street overpass.

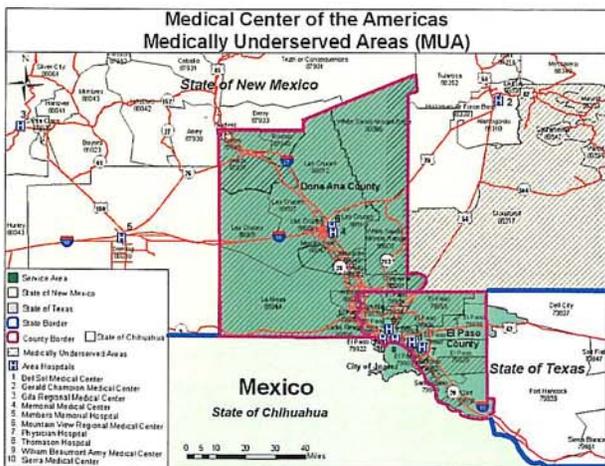
This condition is described in the "Existing Site Conditions" Section in detail and is a major contributing factor to the initial thinking around development of the MCA in this section of El Paso. Given that the railroad runs east/west through the center of the site, particular attention focused on future adjacencies on both sides of the tracks. There was substantial discussion, described later, around possibly depressing the railroad track over time; however each of the schemes listed below was designed to work either with or without a depressed railroad. Similarly, the north/west Raynolds Street 4-lane overpass was constructed to provide access over the railroad which could be maintained for the long term or eliminated if the railroad was depressed. For the purposes of the master plan, we have assumed the railroad and Raynolds may remain in their current configuration for the foreseeable future.

*On the following pages are summaries of the five preliminary schemes and the major concepts behind each.*

# EXHIBIT A

## Medically Underserved Area/Health Professional Shortage Area

Significant portions of the MCA service area have been designated as a Medically Underserved Area, a Health Professional Shortage area, or both as shown on the maps below.



Medical Center of the Americas  
Ratio of Physicians by Specialty per 100,000 Population - El Paso City and State of Texas  
CY 2006

Specialty	City of El Paso		State of Texas		Difference in Ratios	Compared to State
	Num. Providers	Providers per 100,000	Num. Providers	Providers per 100,000		
<b>Primary Care</b>						
Family Practice or General Practice	131	21.9	8,990	40.4	18.5	Worse
Family Practice	112	18.7	7,675	34.5	15.8	Worse
General Practice	22	3.7	1,413	6.3	2.7	Worse
General Preventative	1	0.2	145	0.7	0.5	Worse
Internal Medicine	198	33.1	9,843	44.2	11.1	Worse
Pediatrics	110	18.4	5,284	23.7	5.4	Worse
Obstetrics & Gynecology	69	11.5	3,045	13.7	2.1	Worse
<b>Medical</b>						
Allergy & Immunology	9	1.5	485	2.2	0.7	Worse
Dermatology	9	1.5	788	3.5	2.0	Worse
Endocrinology, Diabetes and ME	11	1.8	437	2.0	0.1	Worse
Gynecology	6	1.3	493	2.2	0.9	Worse
Neonatal/Perinatal Medicine	12	2.0	532	2.4	0.4	Worse
Nephrology	17	2.8	720	3.2	0.4	Worse
Neurology	15	2.5	985	4.4	1.9	Worse
Pediatric Endocrinology	1	0.2	67	0.3	0.1	Worse
Child Neurology	3	0.5	102	0.5	(0.0)	Similar
<b>Surgical</b>						
Neurological Surgery	9	1.5	440	2.0	0.5	Worse
Ophthalmology	25	4.2	1513	6.8	2.6	Worse
Orthopedic Surgery	50	8.4	1989	8.9	0.6	Worse
Pediatric Surgery	3	0.5	106	0.5	(0.0)	Similar
Vascular Surgery	3	0.5	347	1.6	1.1	Worse

Source: Texas Medical Association database of practitioners purchased in 2006.  
\\pseu01\top\clients\Lee Burkhardt Liu\Med Ctr of the Americas\Physician Needs.xls\Physician Supply(2)

## Physician Supply Analysis

An analysis of physician by specialty per 100,000 population for the City of El Paso and the State of Texas is shown in the table to the left. In primary care as well as for medical and surgical specialties, the City of El Paso has fewer physicians per 100,000 population.

This information coupled, with the adverse payer mix situation, indicates that the MCA will be challenged by the shortage of primary care physicians and other healthcare providers in its service area and will need to make plans to successfully recruit and retain physicians and other healthcare professionals to the service area in order to support the MCA vision.

This implies that a well organized clinic system is needed to care for the population.

## Use Rates

Hospital utilization rates of El Paso County general acute care facilities indicate that the average staffed occupancy rate of El Paso County hospitals is 64 percent. This suggests that there is excess capacity in the County's hospitals as of 2005. Also, use rates (measured as admissions per 1,000 population) in El Paso County tend to be lower than the state of Texas as a whole. This is due to the large population of people under 45 who tend to use fewer healthcare services. The table to the right shows the utilization rates of the hospitals in El Paso County and the State of Texas as a whole.

Medical Center of the Americas  
El Paso County General Acute Care Hospital Utilization  
CY 2005

Facility	Ownership	Staffed Beds	Admissions	Average Daily Census	Average Length of Stay	Staffed Occupancy Rate
<b>El Paso County</b>						
R.E. Thomason General Hospital	Public	282	16,181	195	4.4	69.2%
Del Sol Medical Center	For-Profit	293	14,867	225	5.5	76.7%
Las Palmas Medical Center	For-Profit	261	10,593	153	5.3	58.7%
Physicians Hospital	For-Profit	40	2,309	25	3.9	62.1%
Providence Memorial Hospital	For-Profit	359	19,649	254	4.7	70.8%
Sierra Medical Center	For-Profit	334	13,592	180	4.8	53.9%
Southwestern General Hospital	For-Profit	23	1,117	13	4.2	55.8%
<b>TOTAL</b>		<b>1,592</b>	<b>78,308</b>	<b>1,045</b>	<b>4.7</b>	<b>63.9%</b>
<b>El Paso County Use Rate</b>			<b>108.9</b>			
<b>State of Texas</b>						
		<b>61,097</b>	<b>2,587,530</b>	<b>37,879</b>	<b>5.3</b>	<b>62.0%</b>
<b>State of Texas Use Rate</b>			<b>113.2</b>			

Source: Texas Department of Health, Utilization Data for Texas Acute Care Hospitals By County, 2005  
Note: Use rate is defined as admissions per 1,000 population  
\\pseu01\top\clients\Lee Burkhardt Liu\Med Ctr of the Americas\Hospital Utilization.xls\Utilization Table

# EXHIBIT A

## Demographics & Programming

### Creation of an MCA Space Program

Upon completion of service line ranking and a more detailed look at certain existing and potential future anchor tenants (Thomason, TTUHSC, EPCC), LBL/Camden began a high-level programming effort to try and identify space requirements for the MCA site over time. Through a number of meetings with the Master Planning Committee, its partner organizations and community representatives, the detailed use rate projections were presented and validated after careful evaluation of historical trend lines and future growth projections.

These projections were then converted into square footage allocations and included in an overall site program for use in the master planning process using industry benchmarking. To the right is the spreadsheet prepared by LBL converting current square footage into projected square footage for key future milestones.

	Existing	Projected Year		Notes/Questions/Comments
		2,015	2,025	
<b>Thomason Hospital</b>				
Inpatient Beds	294	423	450	
Square Footage (In & Outpatient/Clinics/Spt.)	600,000	865,000	920,000	
Added Physicians Requiring MOB Space	?	57	75	
Square Footage		114,000	150,000	
<b>Texas Tech University Health Science Center (TTUHSC)</b>				
Faculty Office Space	?	50,000	144,000	
Additional Teaching Space / Research Labs / Clinics		100,000	200,000	
<b>Community College Nursing Program</b>				
Facility Square Footage for Relocating Svcs	?	75,000	100,000	
<b>Research (Private)</b>				
Lab & Office Space		100,000	200,000	
<b>Residential</b>				
Staff/ Faculty/ Students/ Other		75,000	150,000	Assumes (480 Faculty + 320 Students + 300 Other) at 5% (2015)
<b>Commercial</b>				
Hotel/ Retail/ Restaurant		300,000	500,000	
Med. Mall/ Pharmacy/ Optometry/ etc.		25,000	40,000	
<b>Support</b>				
Loading/ Warehouse/ Storage/ Facility Services		250,000	400,000	
Irrigation/ Trash/ Recycling/ Flood Control/ Shipping/				
<b>Parking</b>				
<b>Others</b>				
Outside Clinics		20,000	30,000	
Emergency Services/ Police/ Fire Dept.		20,000	30,000	
Employee Services/ Day Care/ Gym		20,000	40,000	
<b>Total</b>		<b>2,014,000</b>	<b>2,904,000</b>	Driven by Development (Hospital: 2/Bed, Outpatient: 6/1000 s.f., Retail: 1/200 s.f., etc.)

Source: LBL and The Camden Group

C:\Documents and Settings\jasonh\Desktop\Program Matrix.xls\Matrix

# EXHIBIT A

## Extrapolating Growth to Future Milestones

LBL / Camden researched the growth pattern of other Medical School Campus Plans where square footage information is available since their inception. The examples cited, based on our ability to find information, were Duke, the University of Virginia, UCLA and Stanford. Using UCLA as an example, you will notice that an initial growth rate in square footage of 30% after inception of the school. After that, an average 8% growth rate in square footage (compounded every five years) became the norm. Interestingly, the averages when you compare multiple campuses together did not change substantially. Included is a comparative chart showing average growth in square footage over time for Stanford, the University of Virginia and UCLA.

## All Campuses: Average Growth Rate over time

Time Period	Stanford Univ.	Univ. of Virginia	UCLA	Average
1st 5 years	35%	29%	27%	30%
2nd 5 years	6.4%	9.7%	5.2%	7%
3rd 5 years	8.1%	6.4%	6.5%	7%
4th 5 years	5.3%	13.5%	4.1%	8%
5th 5 years	4.6%	1.7%	9.2%	5%
6th 5 years	3.4%	5.3%	9.1%	2%
7th 5 years	8.1%	9.9%	8.2%	9%
8th 5 years	2.6%	4.5%	9.5%	6%
9th 5 years	9.0%	9.8%	9.0%	9%
10th 5 years	26.2%	8.3%	13.5%	16%
	8%	8%	8%	8%

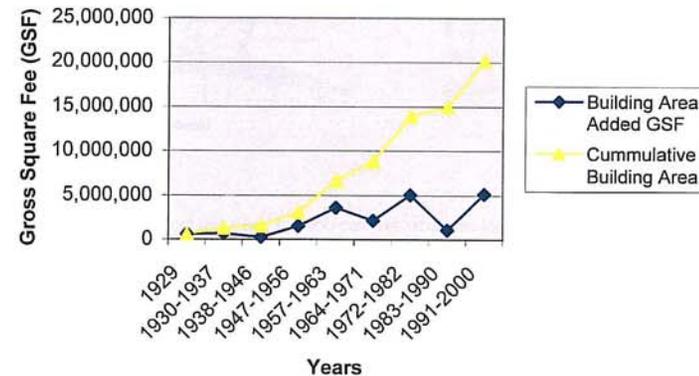
Average (1961-2007)

## Building Area of UCLA, 1929-2007

Time period	Building Area Added (GSF)	Cummulative Building Area	
1929-1960	6,000,000	6,000,000	26%
1961-1965	1,200,000	7,200,000	5.2%
1966-1970	1,500,000	8,700,000	6.5%
1971-1975	950,000	9,650,000	4.1%
1976-1980	2,150,000	11,800,000	9.2%
1981-1985	2,125,000	13,925,000	9.1%
1986-1990	1,900,000	15,825,000	8.2%
1991-1995	2,216,622	18,041,622	9.5%
1996-2000	2,083,625	20,125,247	9.0%
2001-2007	3,130,255	23,255,502	13.5%
	<b>23,255,502</b>		<b>8%</b>

Average (1961-2007)

## Incremental and Total Building Area, 1929-2002



# EXHIBIT A

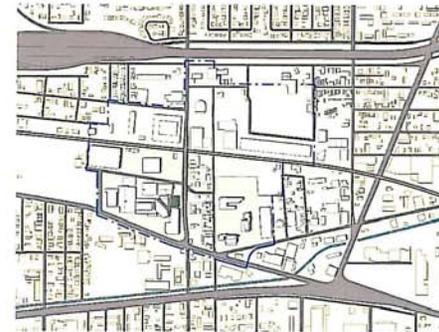
LBL/Camden then applied similar percentages to the MCA, the only difference being that 10 year intervals were used instead of 5 year since the development horizon we are looking at is much longer. You will notice in the chart below that a current 2007 estimated square footage of 1.2 million square feet (including all MCA functions) was used as the baseline for extrapolating forward with milestone square footages of 50 years and 100 years being highlighted.

## MCA Future Building Area Estimate - 2007-2107

Time Period	Estimated Percentage	Building Area Added GSF	Cummulative Building Area
2007 Existing	-	1,200,000	1,200,000
2007-2015	30%	360,000	1,560,000
2016-2025	16%	249,600	1,809,600
2026-2030	16%	289,536	2,099,136
2031-2040	16%	335,862	2,434,998
2041-2050	16%	389,600	2,824,597
<b>2051-2060</b>	<b>16%</b>	<b>451,936</b>	<b>3,276,533</b>
2061-2050	16%	524,245	3,800,778
2051-2060	16%	608,125	4,408,903
2061-2070	16%	705,424	5,114,327
2071-2080	16%	818,292	5,932,620
2081-2090	16%	949,219	6,881,839
2091-2100	16%	1,101,094	7,982,933
2101-2110	16%	1,277,269	9,260,202
		9,260,202	

### Estimating Land Use Over Time

To try and quantify a land use number (in acres), LBL/Camden assumed an "average density" of two stories (an average between the majority of the site at one story compared to Thomason & Texas Tech with multi-story buildings). Using this assumption, 40,000 s.f. of development was allocated per acre. Based on the estimated projected MCA square footage, the MCA will 82 acres in 50 years and 230 acres in 100 years. Again, acreage will be a function of built density but the images below indicate what the site may look like over the next 100 years.



Existing Condition



Phase 1 (10 - 15 Years)

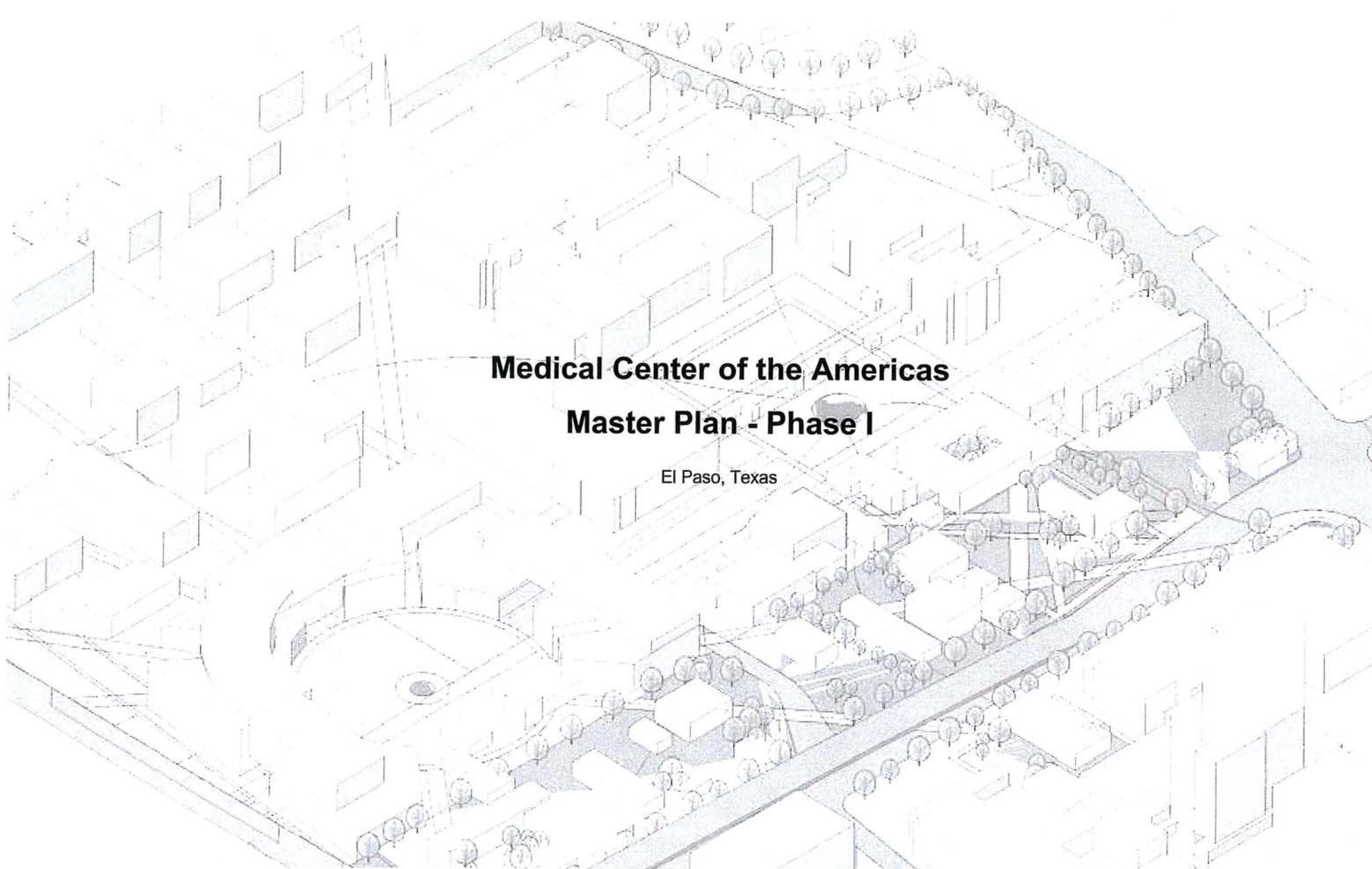


Phase 2 (25 - 50 Years)



Final Phase (100 Years)

Again, density of the site would affect this need but you can see what this looks like in the phasing portion in the "Preferred Master Plan Section" of the report.



**Medical Center of the Americas**

**Master Plan - Phase I**

El Paso, Texas

**MASTER PLAN DEVELOPMENT**

# EXHIBIT A

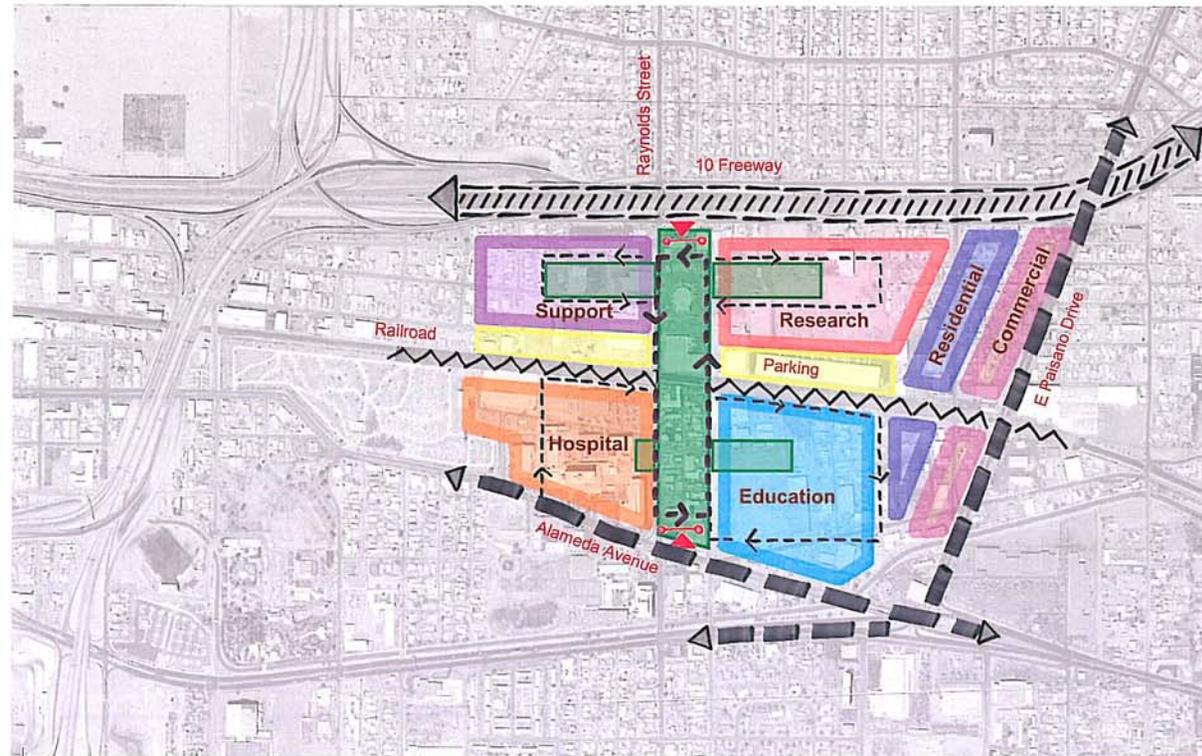
## Option #1 – Reynolds Spine

The concept of the first option expanded the current and future MCA development elements along a main, central organizing spine of the site congruent with Reynolds Street. Although diagrammatic, the option shows open/green space extending from I-10 to Alameda. This is intended to suggest a visual and access connection under the Reynolds overpass between the building elements. Within the central spine is clear vehicular and pedestrian access with additional access loops extending off of the main spine in each of the four quadrants created by the bisection of the site by the railroad and Reynolds.

Zoning was then created for each of the anticipated future elements of the MCA based on proven relationships for a medical center campus. A hospital zone remained where Thomason currently resides. East of that zone opposite the spine, a complete education zone was created for the expansion functions of Texas Tech and other education and public health functions.

Research and support were established to the north in support of the other health related functions with clear access and visibility from I-10. Commercial and possible future residential zones were included adjacent to Paisano to provide commercial opportunities in support of housing and to buffer existing residential areas from more public health center development.

The following Reynolds Spine diagrams show the existing elements, the proposed circulation diagram and proposed zoning.



### Multidisciplinary Comments:

The Reynolds Spine Scheme was well received; however, the multidisciplinary team reviewing the schemes questioned what functions would be located within the open/green space. It was discussed that perhaps this area should be minimized, still allowing for the spine but limiting the width of this area. Additionally, the group felt that extension of the master plan to Paisano was too aggressive and not needed. In future schemes, the master plan extends only to Chelsea as originally shown in the RFP issued by the MCA Foundation Board.

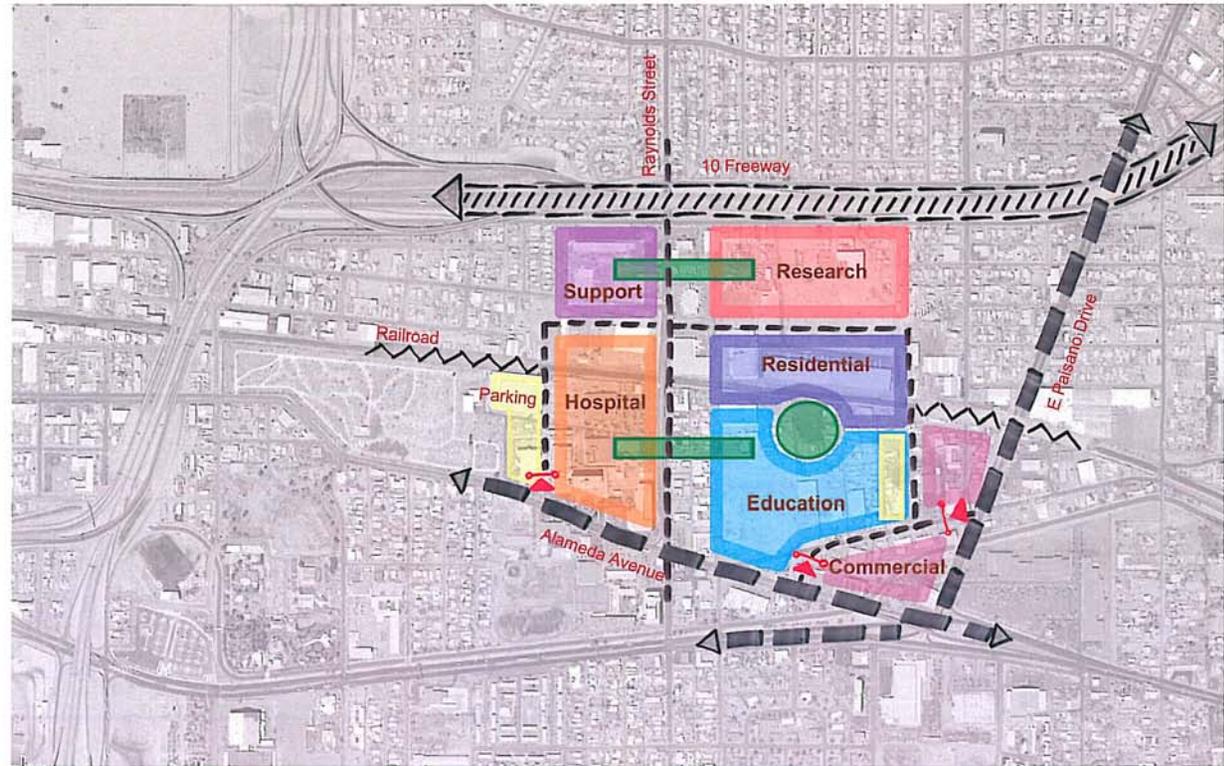
# EXHIBIT A

## Option #2 – East / West

This option developed the concept of an east/west connection across the zone currently dividing Thomason and related hospital functions from Texas Tech, other education, public health and research functions. In addition to the development of connection parkways from east to west, this option developed the concept of an internal campus ring road that could be utilized for internal vehicular circulation. The development of the ring road can occur with or without depression of the railroad or removal of the Reynolds overpass. However, it was this scheme that began to identify the advantages associated with a long-term strategy to address the railroad and overpass.

The zoning diagram of this option relied on northern expansion in the future with a relationship between the east and west zones and their interconnection at particular access points. Another organizing idea of creating a plaza between the residential and education zones served as the impetus of future schemes. The expansion of residential and commercial zones to Paisano was also pulled back to Chelsea in this scheme.

The following East / West diagrams show the existing elements, the proposed circulation diagram and proposed zoning.



### Multidisciplinary Comments:

Certain elements of East / West Scheme were well received; specifically, the idea of an internal ring road, stronger connections between Thomason, Texas Tech and other future services. Extensive discussion about the benefits and challenges, primarily cost, of addressing the railroad were also key elements of this scheme. The plaza idea or central public zone within the site began an important discussion that carried forward into future options.

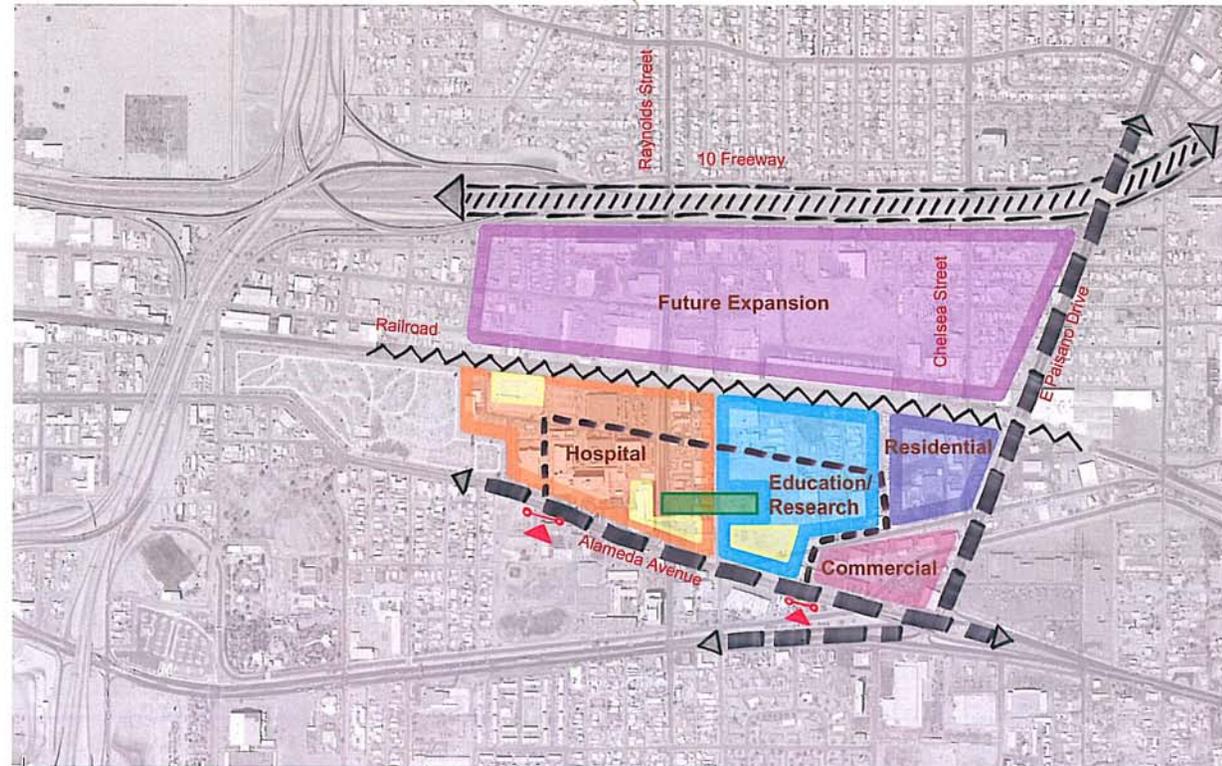
# EXHIBIT A

## Option #3 – Southern Horseshoe

Given the issues associated with the bisection of the site by the railroad, the concept of this scheme was to limit development south of the railroad. To do this, expanding the width of Alberta and creating an internal ring, similar to the East/West Scheme, was designed to allow access between elements. It was assumed that eventually, development would need to move north; however limiting expansion to a smaller area in the immediate future could limit the size of the MCA to a more manageable size for initial development.

The zoning diagram was simplified in this scheme and research was assumed to be integral with education. The connection between Thomason and Texas Tech was also emphasized, given their current locations and that all components will need to link across this east/west corridor.

The following Southern Horseshoe diagrams show the proposed circulation diagram and proposed zoning.



### Multidisciplinary Comments:

The Multidisciplinary Team understood and appreciated the development of the southern quadrants relative to the current plans for expansion of Thomason and Texas Tech but was concerned about the available area and future expansion, especially of other functions that currently do not exist on the site of the MCA. This scheme would initially require expansion of this zone all the way to Paisano, which would affect a large existing residential area. This was also a source of concern and an issue that adjacency must be addressed.

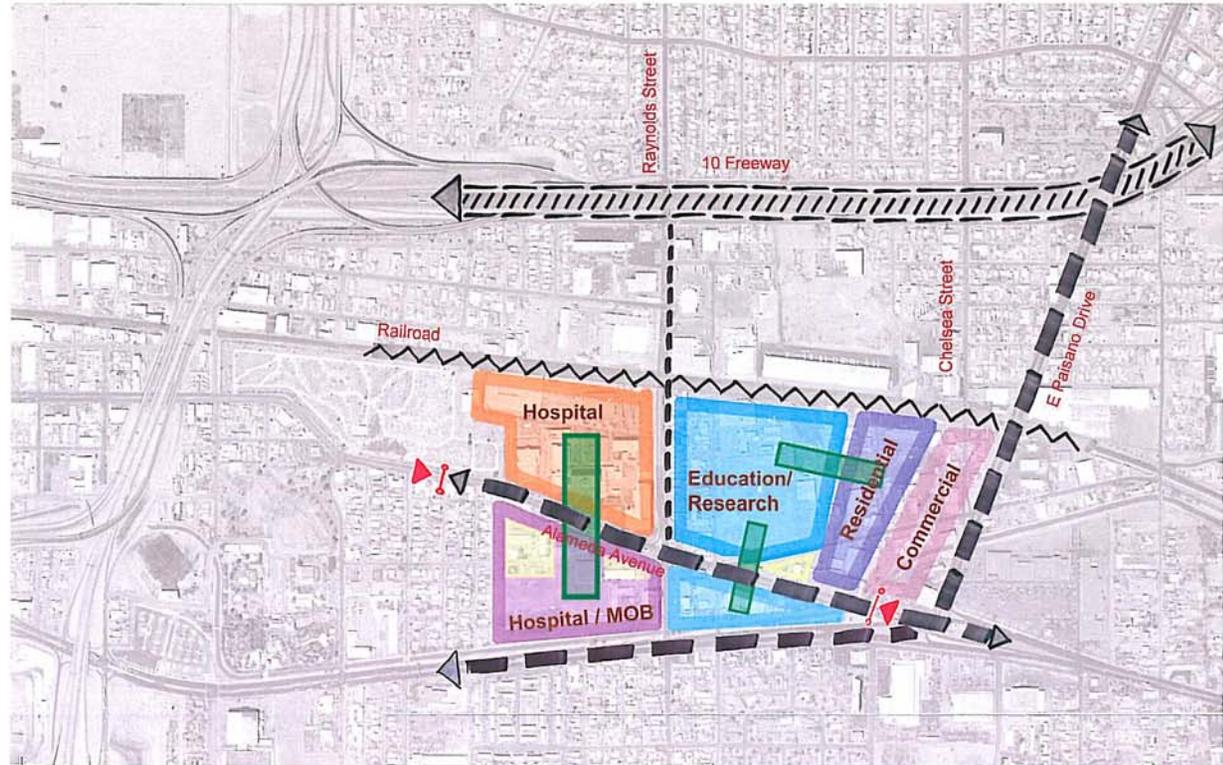
# EXHIBIT A

## Option #4 – Alameda Span

The concept of the Alameda Span was similar to the Southern Horseshoe with respect to the idea of keeping development south of the railroad. The Alameda Span concept focused the main spine and entry points to each of the key anchor tenants off of Alameda. This idea is partially realized given the fact that Thomason and Texas Tech are currently accessed directly from Alameda. The other major idea explored in this option was to include the Jefferson High School site as part of the master plan, while leaving the magnet school portion intact. This would allow access to substantial areas that requires one acquisition instead of the need to acquire smaller, individually owned parcels.

In this option, outpatient functions could be located across Alameda with direct adjacency to the hospital. Different strategies could be employed for the connection of these services across Alameda and could be designed into the proposed expansion of Alameda currently being developed by the City of El Paso. Additionally, the education and research zone could also expand to the south, integrating the magnet school into future development that works with the education functions. Commercial and residential zones could still occur to the east and buffer Paisano.

The following Alameda Span diagrams show the proposed circulation diagram and proposed zoning.



### Multidisciplinary Comments:

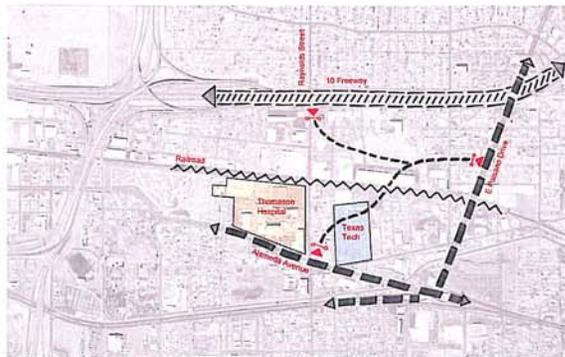
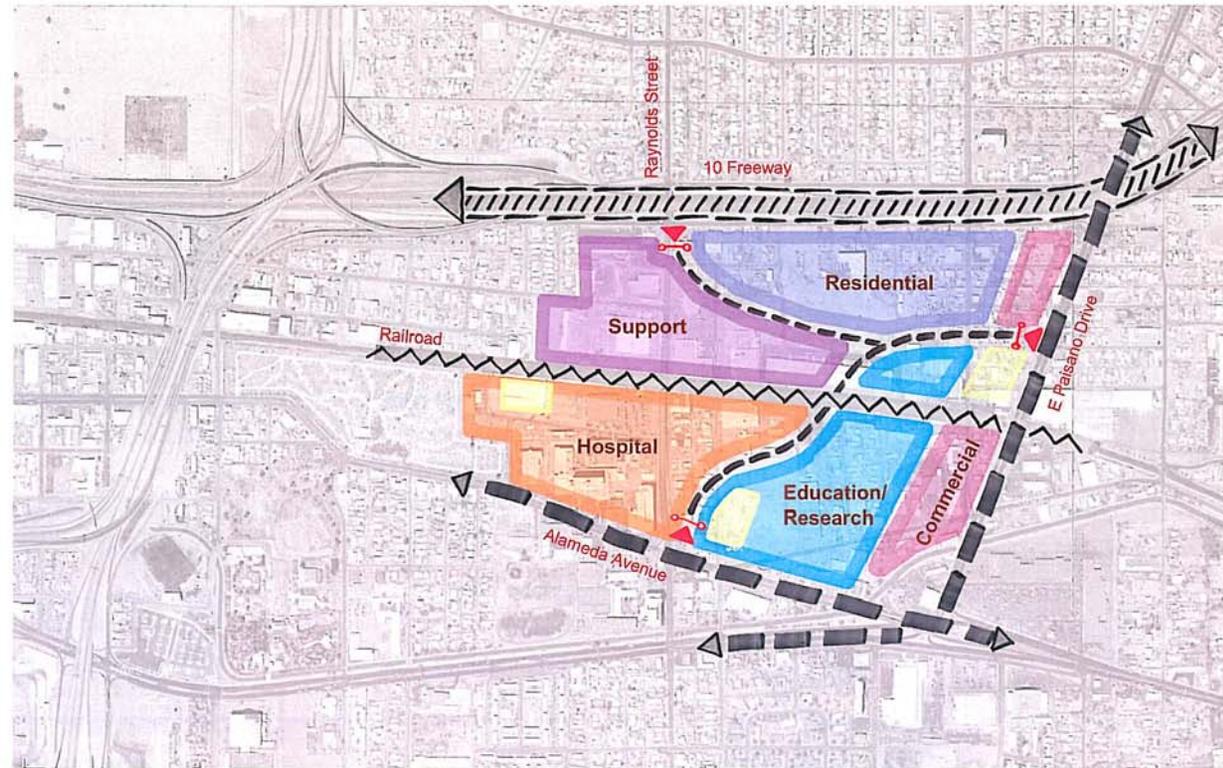
The Multidisciplinary Team was divided on this scheme. The pro's included access to Alameda and the property gain from one client, assuming Jefferson was eventually closed or relocated. The opposite argument is the idea that community functions (schools and churches) are the right community services that support a hospital and medical center such as the MCA. Access across Alameda was also of concern, especially to the Thomason representatives who see the current danger of crossing.

# EXHIBIT A

## Option #5 – Promenade

The Promenade Option is based on the creation of intersecting access arterials connecting Alameda to the south, Raynolds to the north and Paisano from the East. The plan is such that only one major crossing would be required at the railroad tracks. The zones created between arterials would be zoned appropriately for functional adjacencies similar to the prior four schemes. The major challenge with this type of development scheme is that the infrastructure associated with the arterials would need to be established all together with significant up-front costs. The Multidisciplinary Team felt this type of development was not feasible, given the overall strategy for development, and the scheme was subsequently eliminated.

The following Promenade diagrams show the proposed circulation diagram and proposed zoning.



### Multidisciplinary Comments:

The Multidisciplinary Team eliminated the Promenade Scheme as a potential option.

# EXHIBIT A

## Development of Option #6 & #7

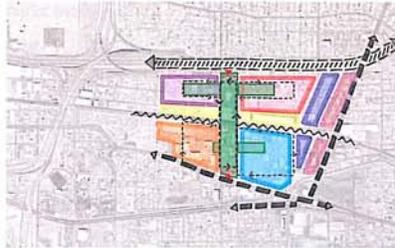
Upon review and comments by the MCA Board, the partner organizations and community representatives, there was consensus that LBL Architects should explore additional options taking the best ideas and concepts from Options #1, #2 and #3.

Option #4 (Alameda Span), although not uniformly supported, was still deemed a viable option and one that should remain as a potential option.

Option #5 (Promenade) was eliminated as a potential option.

Given that direction from the MCA Board and Steering Committee, LBL explored additional options and returned with Options #6 and #7 described on the following pages.

### #1 Reynolds Spine



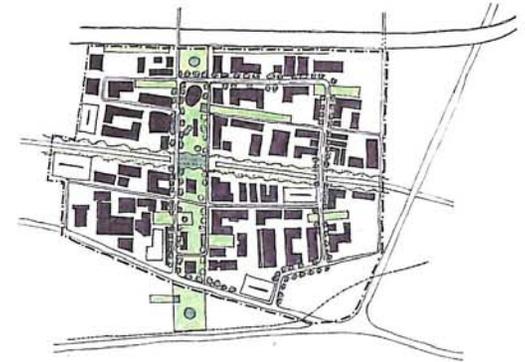
### #2 East/West



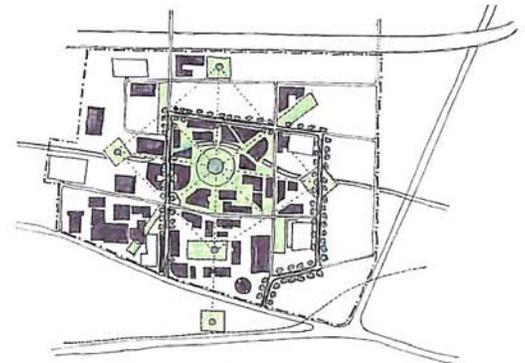
### #3 Southern Horseshoe



Combine Schemes 1, 2 & 3 into two new schemes incorporating the best ideas of all three



#6 Central Park



#7 Campus Quad

# EXHIBIT A

## Option #6 – Central Park

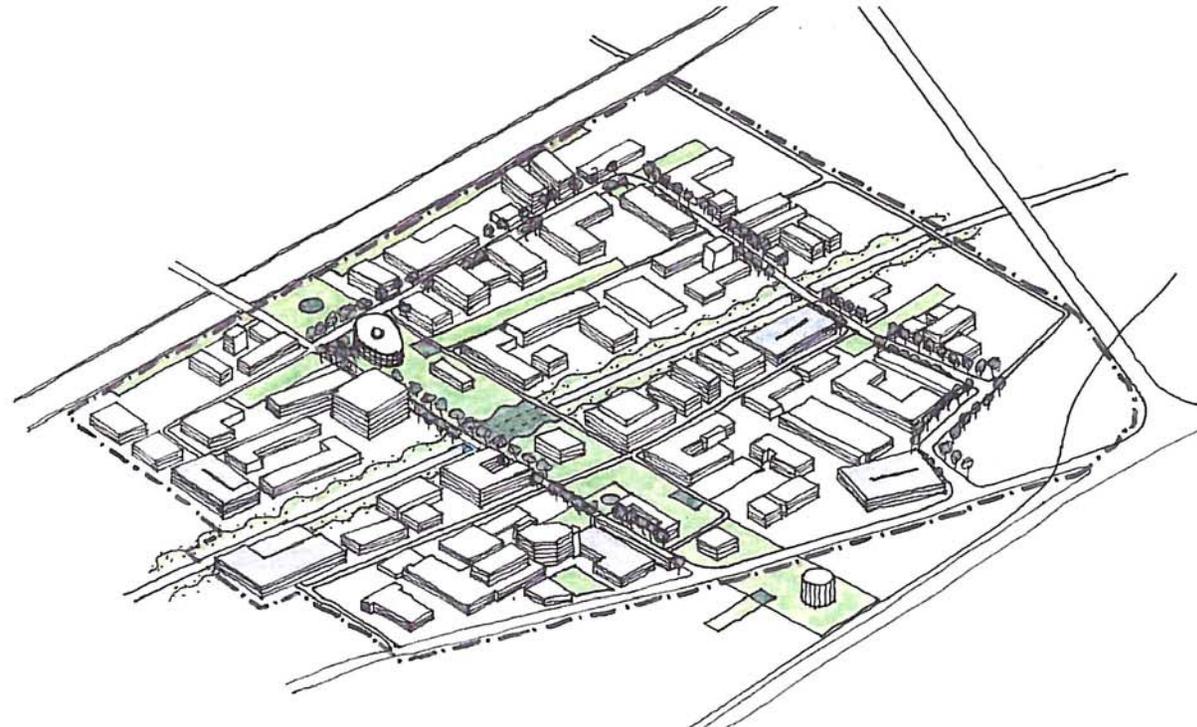
Option #6 further developed the original Option #1 – Reynolds Scheme with a few additions.

The main linear greenbelt still remains as the main organizing concept. In addition to the main spine, open space between building clusters has been provided which doubles as a secondary link back to other portions of the site. As with the prior schemes, depression of the railroad would be a tremendous advantage to the openness and north south flow of this scheme; however it is not essential to its implementation. Some connections, new or existing, would be required to connect the two portions of site currently bisected by the railroad.

A further modification to Option #6 was the addition of a campus ring road, allowing access to a larger area of the site. This idea was well supported in some of the other early master plan schemes. This circulation would connect to key "gateways" to the site that would serve as points of arrival to the MCA. Parking has been located off of the main circulation roads to provide easy access for patients, visitors and staff and improve overall access to MCA elements.

Given the existing relationship between Thomason Hospital and Texas Tech, this scheme is a logical extension of existing conditions at the MCA site. The zoning diagram of this option is similar to Options 1, 2 and 3 but the boundary of the site was adjusted back from Piasano to Chelsea with the goal to minimally impact the residential areas.

The following Central Park diagrams show the existing elements, the proposed circulation diagram and proposed zoning of this scheme.



In addition to development currently planned for both Thomason and Texas Tech, other related functions can be developed in close proximity to implement the concepts embodied in this scheme. The Multidisciplinary Team agreed with this methodology. Option #7, shown on the next page, also was popular and offered additional benefits. The comments listed below are actual statements by the Multidisciplinary Team for Option #6:

- I like option 6.5. Option 6 is more "organic" but Option 7 gives great magnetism and organization.
- Option 6 is a better short term plan. Option 6 uses more of the current infrastructure (roads, etc.) and will be less costly.
- The green belt seems to be a better connector (especially from the Texas Tech / Thomason perspective).
- Look at the nursing program location again. EPCC wants to be closer to Texas Tech and Thomason
- Quick implementation is very important. If the plan goes stale it will die. Make the central park more of a quad.
- As a native El Pasonan, I like the green space idea, but we aren't planning a park. We are planning a medical campus.
- One of these days, Thomason may have a rehab hospital or the VA may require a hospital. We need to think in those longer term ideas.
- Move the quad to the middle of the Central Park



Zoning Diagram



Phase I Plan

# EXHIBIT A

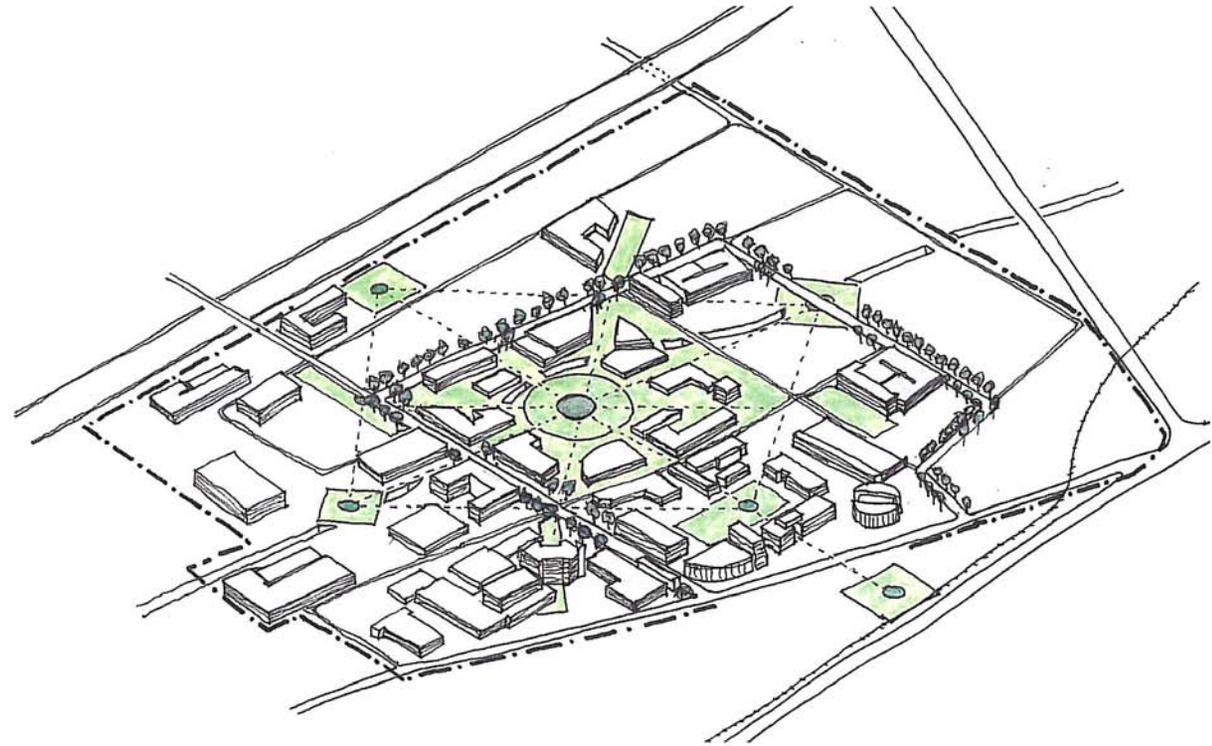
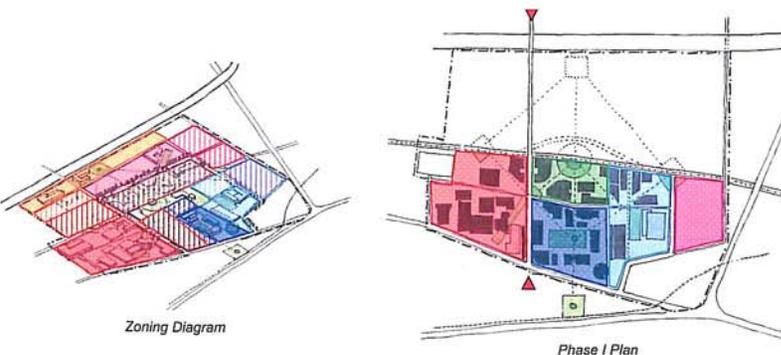
## Option #7 – Campus Quad

Option #7 was developed around the concept of a new, central, multi-use public zone – the Campus Quad – created to act as the organizing element of the site located further east to provide an anchor to services located elsewhere on the MCA site. Circulation links radiate from the central quad, comprised of buildings and open space, allowing for direct pedestrian flow from quadrants of the site back to the more public zone. The "Plaza" could be the site for such services as a Conference Center, a Medical Mall (pharmacy, optical services, etc.), Commercial (coffee houses, restaurants, day care, and gym) and other employee, patient and visitor services. Secondary open space hubs would also be created for other areas of the site which could support development as it occurs on the MCA campus.

As with Option #6, this option utilizes an internal campus ring road that could be utilized for vehicular circulation around the site without having to utilize the perimeter arterials such as Alameda. Similar access to clear parking zones and a clear MCA arrival experience are consistent in this option.

The zoning diagram relies heavily on future development to the north to support the concept of a "central" organizing element. This is also the basic challenge of this option, since realization of the final product is somewhat dependent on substantial development surrounding the central plaza area. You will notice that in the Phase I development, shown below, the central plaza concept is not fully realized should Phase I development stay primarily to the south of the railroad.

The following Central Park diagrams show the proposed zoning and Phase I development of this scheme.



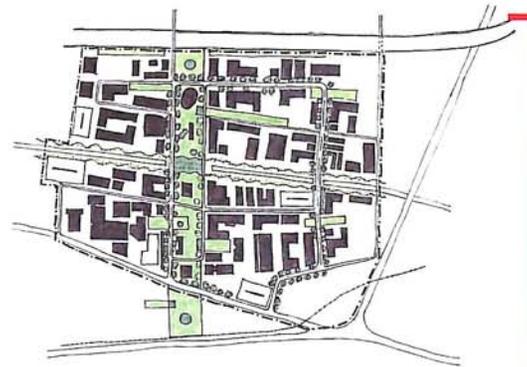
There was a tremendous amount of support for this scheme for development of the site. Similar to Option #6, the multidisciplinary Team had the following comments articulating the benefits of Option #7 to Option #6:

- As a planner, I like Option 7 better. Call it the "commons or plaza."
- Option 6 may be more feasible but Option 7 is my choice, especially looking at the long term.
- Option 7 makes Thomason somewhat inconsequential, but I really like the Quad idea. Perhaps the quad can be moved, even on a smaller scale, to be inclusive of Thomason.
- I like the concept of the Quad, but think that Option 6 has the Quad in it, just not highlighted. I worry about implementation. We can get both concepts if the Quad is moved into Option 6.
- Option 7 allows for more growth on the overall MCA campus over time.
- Option 7 is more romantic but less realistic.
- Move the quad to the middle of the Central Park

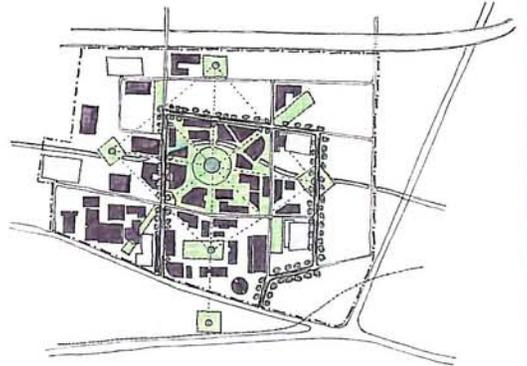
# EXHIBIT A

## Development of Option #8

It became clear after reviewing Option #6 and #7 that there was strong support for both master plans. The Multidisciplinary Team felt it was appropriate to look at an option that attempted to combine the best ideas of both schemes into one; essentially moving the quad to the west and integrating it with the linear organizing element extending north/south.

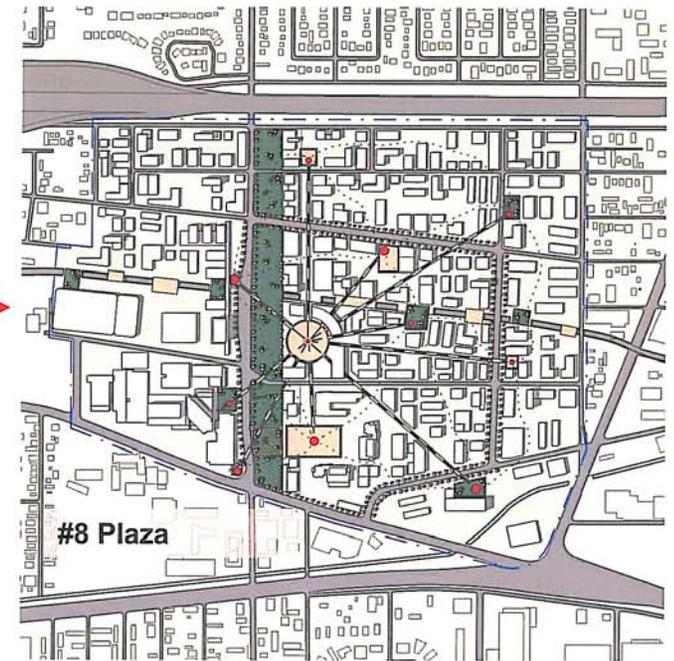


#6 Central Park

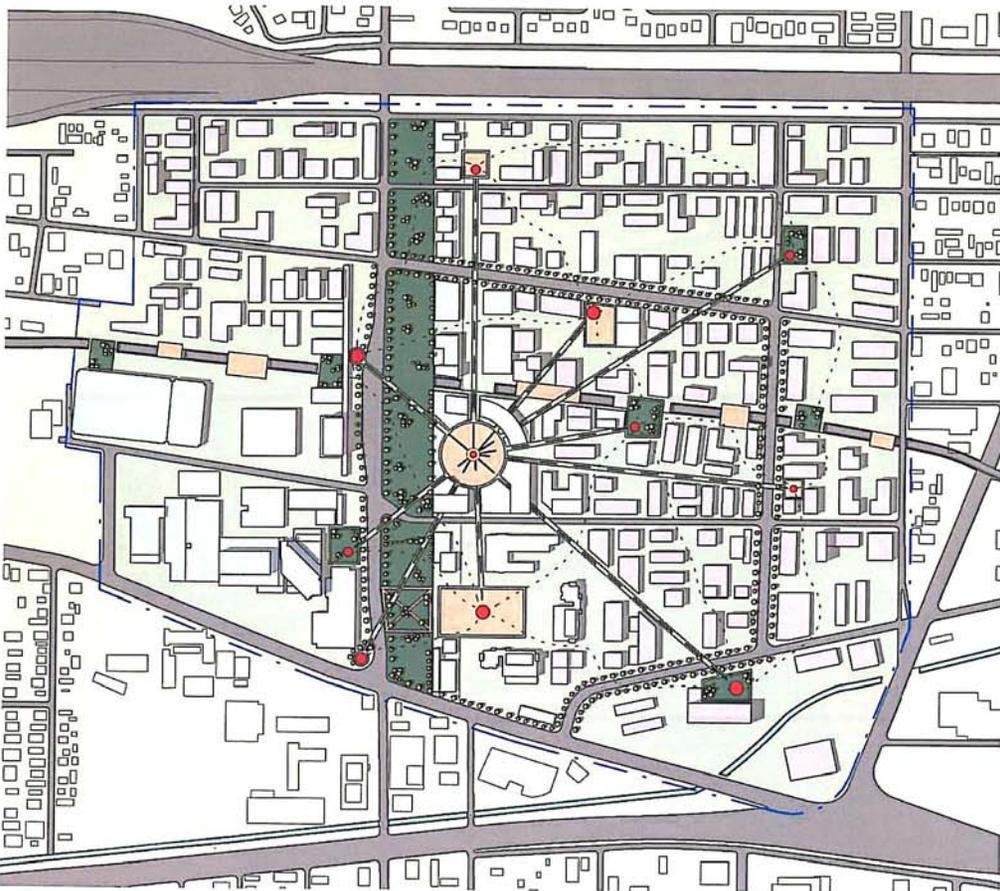


#7 Campus Quad

Combines  
Schemes  
#6 and #7  
into one  
new  
scheme



#8 Plaza



## Option #8 – The Plaza Scheme

As outlined in the Master Plan Development Section of the report, The Plaza Option was developed as a combination of the Central Park (Option 6) and Campus Quad (Option 7) concepts. The idea of a central, multi-use public zone resonated strongly with the entire Multidisciplinary Team, with the caveat that it needed to be located more westerly to allow direct access from Thomason and Texas Tech, whose programs are already established. For other incoming services, like EPCC's School of Nursing, the same is true.

### Key master planning concepts for this option include:

- Provide the flexibility to change over time.
- Plan for a balance of functionality and aesthetic quality within a cost-effective solution.
- Develop clear site organization with strong relationships between components.
- Identify arrival to the MCA.
- Provide good accessibility and way finding.
- Establish functional relationships that provide opportunity and efficiency.
- Design and implement an effective infrastructure.
- Promote an environment that is responsive and sensitive to the population it serves.

# EXHIBIT A



Option #8 - Plaza 100 Year Axonometric

# EXHIBIT A

## Education Zone

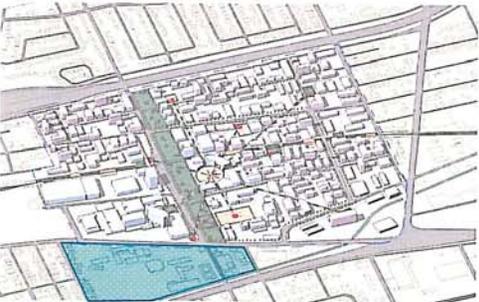
There are currently three education identities located within or immediately adjacent to the MCA. Currently, the Texas Tech University School of Medicine, Jefferson High School and the Magnet High School reside adjacent to Thomason Hospital. In addition, El Paso Community College (EPCC) is interested in moving their Nursing School adjacent to Thomason Hospital. The image to the right shows Texas Tech University School of Medicine as the possible expansion zones westward toward Thomason and to the north.



El Paso Community College (EPCC) is interested in relocating their nursing program services adjacent to Thomason and have the funds to construct buildings. EPCC is looking for assistance from the MCA for land with which to construct a home for this program. With input from Dr. Rhodes (EPCC President) and others on the EPCC team, a zone was identified that is adjacent to Thomason, the Plaza and Texas Tech and can be acquired or donated by one individual. This is a key issue since other portions of the site, populated by multiple properties with different owners, may not be possible to obtain in one land purchase.



Jefferson and the Magnet High School are existing schools that occupy the land directly south of Thomason Hospital across Alameda. The schools, especially the Magnet, are viewed as direct leaders to many of the programs that will be located on the MCA over time. With the hope that local recruiting could keep future health care professionals practicing in El Paso, it was deemed important to keep these schools and functioning and supported by the MCA for the future of El Paso.



## Hospital Zone

The hospital zone identified considers the full land bank controlled by Thomason plus a similar size area to the north. This future area could provide expansion or eventual replacement of certain older buildings of Thomason over time. There was also discussion that the VA may be interested in establishing a hospital in El Paso, given Fort Bragg's growth, which would also require a substantial amount of land.



The option also still exists for Hospital functions to move east toward Texas Tech's land. This is a logical expansion zone and will be tested as each program grows.

The second image outlines an inpatient / outpatient strategy for Thomason given the existing location of the Texas Tech Clinic and future need for expansion of outpatient services. In this model, a zone for outpatient development could be saved to allow for easy access for patients from anywhere on the site as well as a planned support zone around it with other critical services.



# EXHIBIT A

## Public Multi-Use Zone – “The Plaza”

The Public Zone is envisioned to be the main “interaction space” includes patient, visitor and staff functions. The central location for this group of services acts as a main organizing element of the site and will allow for direct access to/from many of the larger anchor tenants. Public conference, day care, medical mall functions (pharmacy, vision services, etc.), restaurants, coffee houses and a potential future tie to rail or other public transportation hubs could all occur in this zone.



## Hotel / Retail / Support Zone

As with any development, as the service lines grow, the necessary support functions will need to be in place to support the additional growth. Hotels, motels, retail and support functions (both public and private) will need to be provided.



## Public Health Zone

The City of El Paso already has some public health functions located within the MCA. This zone could include both patient care and support functions for a variety of services and clinics in support of the community.



## Residential / Mixed-Use Zone

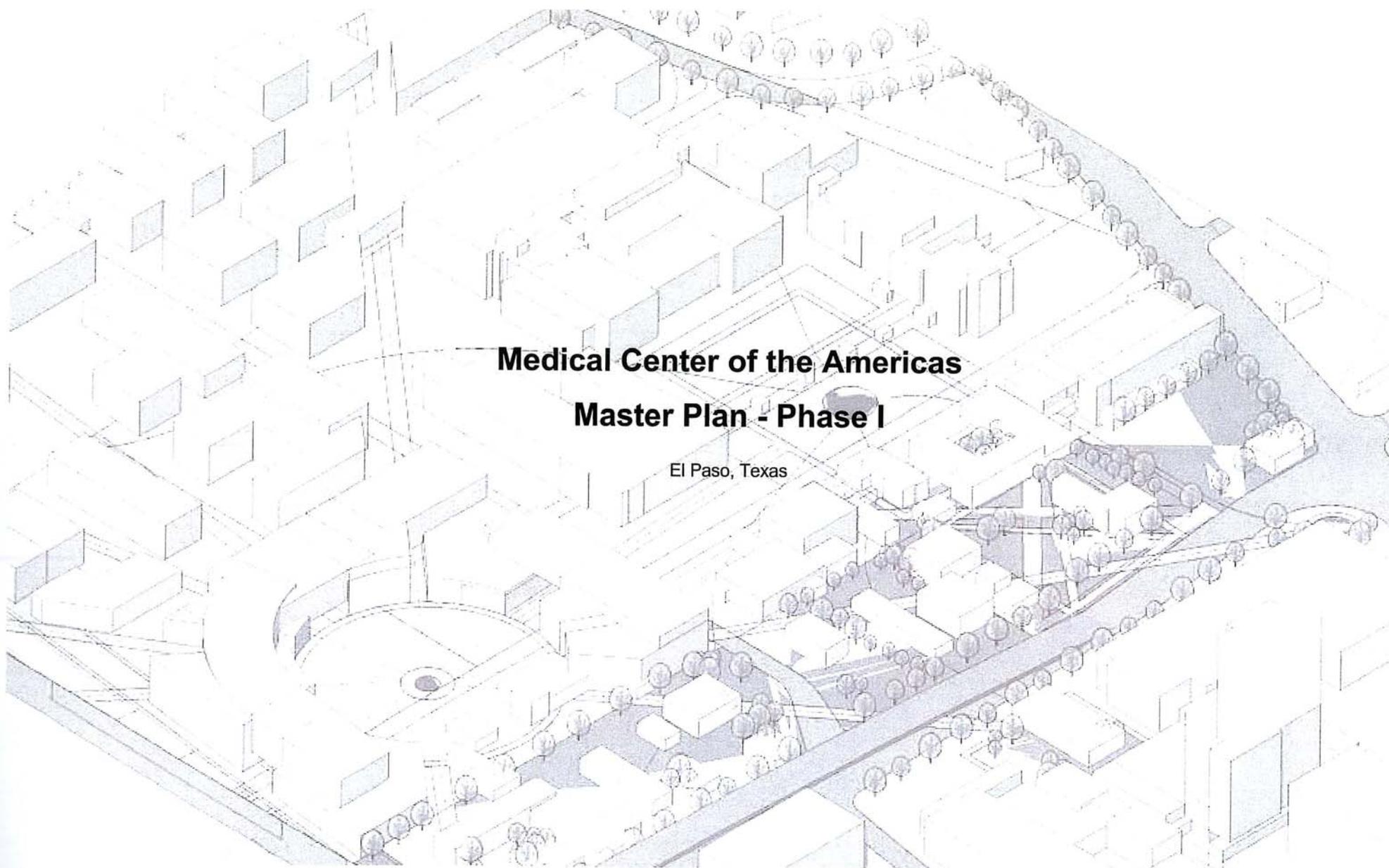
Although not expected to be a critical need in the immediate future, the MCA can become an attractive location for housing assuming a revitalization of the area.



## Research Zone

A Research Zone has been provided as part of the Master Plan for discussion purposes. El Paso's population makes it an ideal location for medical research related to conditions affecting the Hispanic population.





**Medical Center of the Americas**

**Master Plan - Phase I**

El Paso, Texas

**PREFERRED MASTER PLAN**

## Preferred Master Plan – Plaza Option #9

The Recommended Master Plan is intended to be the start of a roadmap to the future for the Medical Center of the Americas (MCA). Although controlled by external factors such as available land, cost and multiple approvals by various entities, the design team worked with the Master Plan Steering Committee, partner organizations and community representatives to develop a plan that could support future medical center functions expanding in this location, or, allow the integration of other partners not located on the site.

## Option #9 – The Plaza Scheme Revised

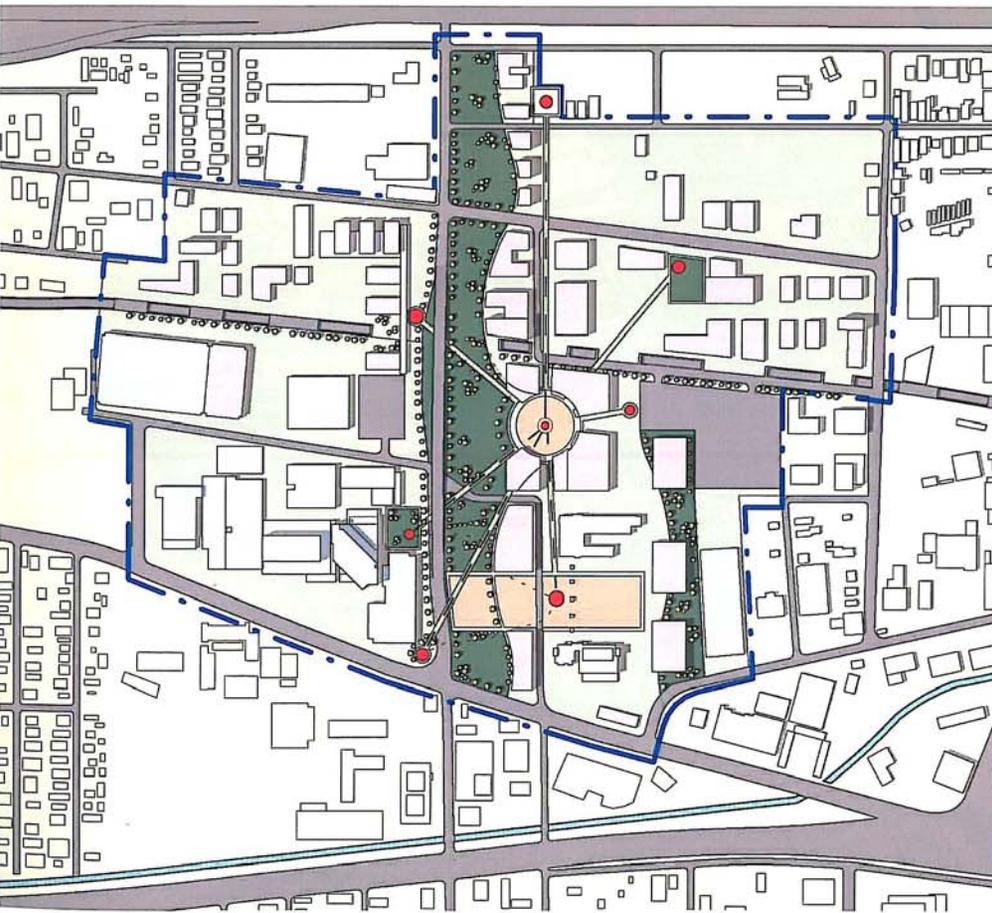
As outlined in the Master Plan Development Section of the report, Option #9 is the further development of Option #8 based on input from the MCA and other partner organizations and community members. The idea of a central, multi-use public zone resonated strongly with the entire Multidisciplinary Team, with the caveat that it needed to be located more westerly to allow direct access from Thomason and Texas Tech, whose programs are already established. For other incoming services, like EPCC's School of Nursing, the same is true. Integration of this multi-use public zone has been further developed in this scheme.

Option #9 still recognizes the importance of gateways from Alameda and I-10 and supports the notion of a MCA spine running north south along Reynolds Avenue. In this option, the plaza opens to the Reynolds spine, allowing for clear organization of elements north and south off of the access drive or radially around the Plaza once a final location is selected. As identified in Option #7, the Plaza can be comprised of buildings and open space, allowing for direct pedestrian flow from quadrants of the site back to this interactive zone. The "Plaza" could be the site for such services as a Conference Center, a Medical Mall (pharmacy, optical services, etc.), Commercial (coffee houses, restaurants, day care, and gym) and other employee, patient and visitor services. Secondary open space hubs would also be created for other areas of the site which could support development as it occurs on the MCA campus.

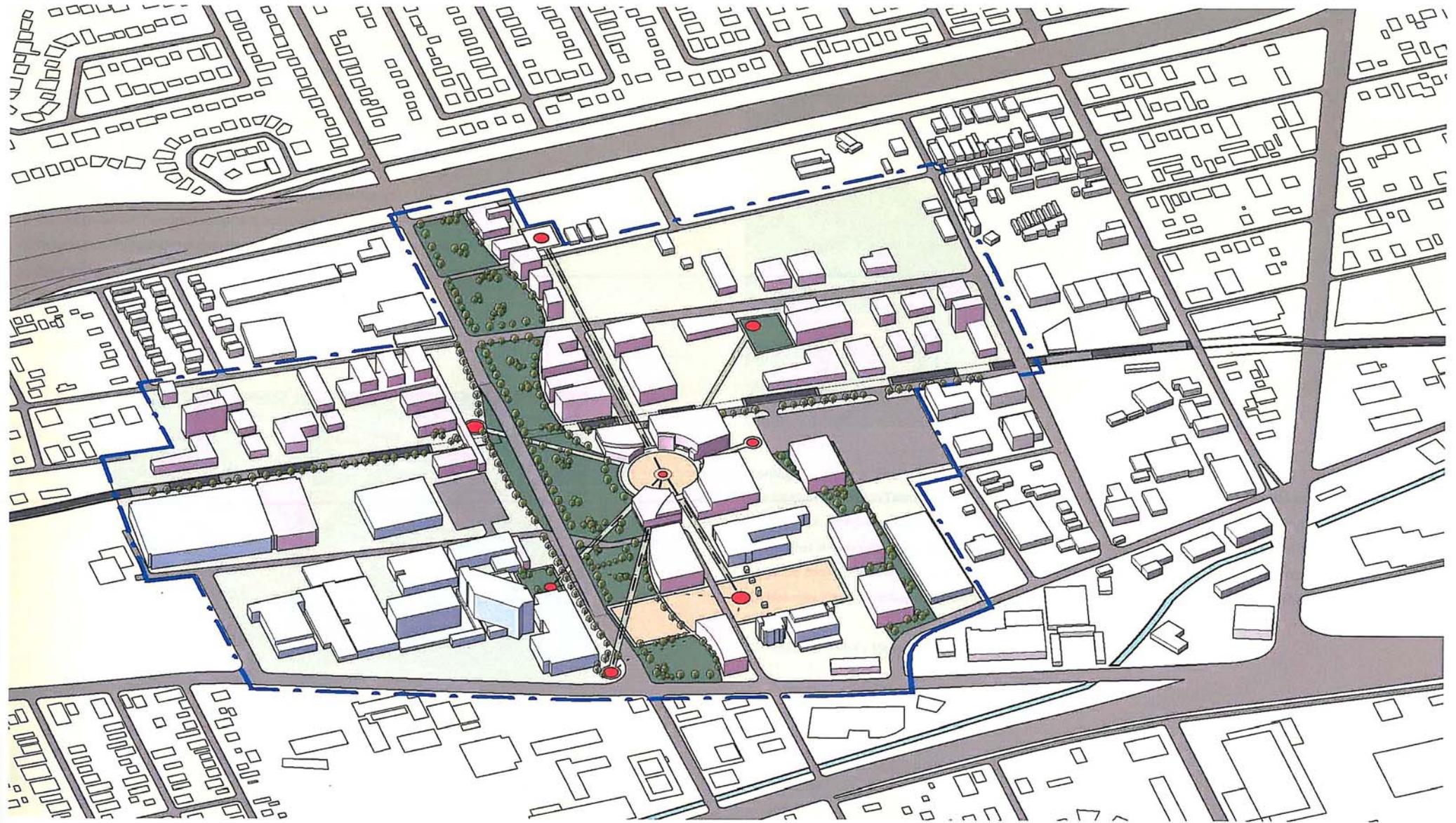
As with the prior options, this scheme utilizes an internal campus ring road that could be utilized for vehicular circulation around the site without having to utilize the perimeter arterials such as Alameda. Similar access to clear parking zones and a clear MCA arrival experience are consistent in this option.

### Key master planning concepts for this option include:

- Provide the flexibility to change over time.
- Plan for a balance of functionality and aesthetic quality within a cost-effective solution.
- Develop clear site organization with strong relationships between components.
- Identify arrival to the MCA.
- Provide good accessibility and way finding.
- Establish functional relationships that provide opportunity and efficiency.
- Design and implement an effective infrastructure.
- Promote an environment that is responsive and sensitive to the population it serves.



# EXHIBIT A



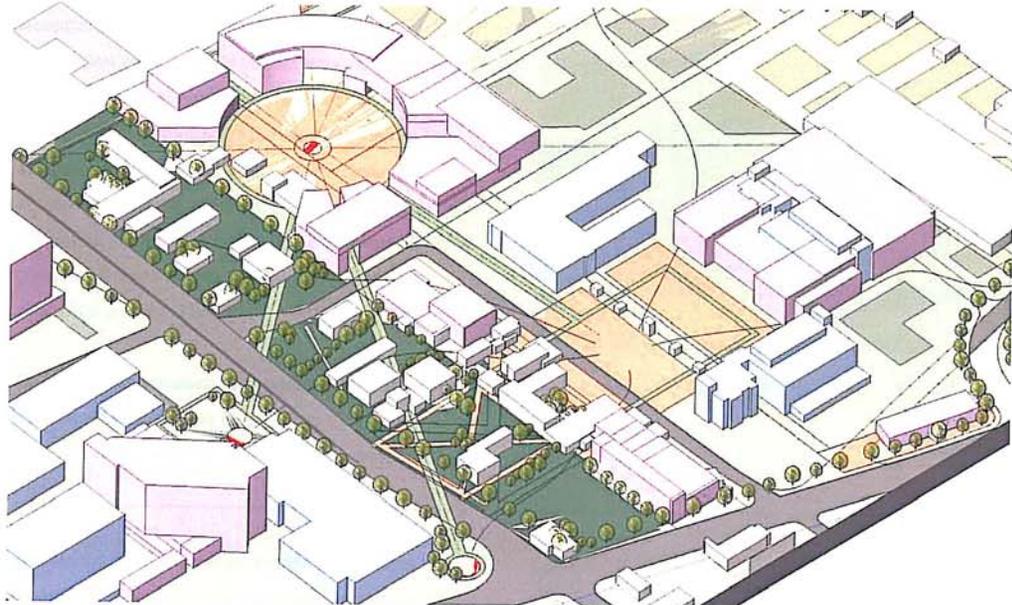
Plaza Scheme 50 Year Axonometric

# EXHIBIT A

## Master Plan Elements

The recommended master plan is intended to be a glimpse into the future for the Medical Center of the Americas. Although controlled by external factors such as available land, cost and multiple approvals by various entities, the design team worked with the Master Plan Committee to develop a plan that solved many of the existing challenges for organization of the site as identified by the MCA Board, its Partner Organizations and the community representatives. Some of the items identified included are but are not limited to the following:

- The Creation of Texas Tech, El Paso as a 4-year Medical School
- Current Growth of Thomason Hospital & Approved Bond Measure Construction
- Relocation of El Paso Community College (EPCC) School of Nursing to the site
- Potential VA Hospital Establishment in El Paso
- Public Health Function Growth
- Commercial Growth
- Potential Private Research Development



Plaza Scheme looking from Southwest

## Zoning

The Master Plan Design Team began the master planning exercise by identifying the new campus zoning by function. The existing MCA zoning is contained in the Existing Conditions section of this document. In addition to the two main anchor tenants that already exist within the MCA area, Thomason Hospital and Texas Tech University Medical School, the following additional zone types have been identified for discussion purposes. In some cases, the final zoning approved by the City of El Paso may allow for multi-use allowing some flexibility for services not yet known or identified within the MCA area.

Currently, the Phase I Master Plan is divided into the following functional zones:

- Public Multi-Use Zone
- Hospital Zone
- Education
- Public Health
- Research
- Hotel / Retail / Support
- Residential / Mixed Use



Plaza Scheme looking from West

# EXHIBIT A

## Education Zone

There are currently three education identities located within or immediately adjacent to the MCA. Currently, the Texas Tech University School of Medicine, Jefferson High School and the Magnet High School reside adjacent to Thomason Hospital. In addition, El Paso Community College (EPCC) is interested in moving their Nursing School adjacent to Thomason Hospital. The image to the right shows Texas Tech University School of Medicine and the possible expansion zones westward toward Thomason and to the north.

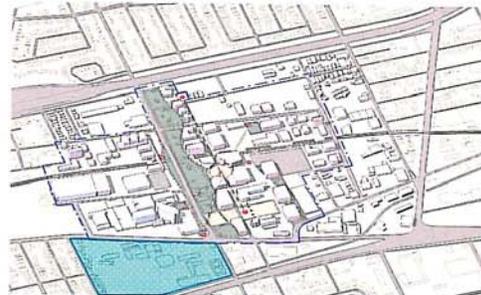


## Non-Profit / Public Health / Future MOB Zone

The MCA has identified support services for public health functions, physician offices, general support offices and miscellaneous services that need to be provided in support of a larger medical center concept. These services have been identified where currently residing as well as a future zone to the north.



Jefferson and the Magnet High School are existing schools that occupy the land directly south of Thomason Hospital across Alameda. The schools, especially the Magnet, are viewed as direct leaders to many of the programs that will be located on the MCA over time. With the hope that local recruiting could keep future health care professionals practicing in El Paso, it was deemed important to keep these schools and functioning and supported by the MCA for the future of El Paso.



## Hospital Zone

The hospital zone identified considers the full land bank controlled by Thomason plus a similar size area to the north. This future area could provide expansion or eventual replacement of certain older buildings of Thomason over time. There was also discussion that the VA may be interested in establishing a hospital in El Paso, given Fort Bragg's growth, which would also require a substantial amount of land.

The option also still exists for Hospital functions to move east toward Texas Tech's land. This is a logical expansion zone and will be tested as each program grows.

The second image outlines an inpatient / outpatient strategy for Thomason given the existing location of the Texas Tech Clinic and future need for expansion of outpatient services. In this model, a zone for outpatient development could be saved to allow for easy access for patients from anywhere on the site as well as a planned support zone around it with other critical services.



# EXHIBIT A

## Public Multi-Use Zone – “The Plaza”

The Public Zone is envisioned to be the main “interaction space” includes patient, visitor and staff functions. The central location for this group of services acts as a main organizing element of the site and will allow for direct access to/from many of the larger anchor tenants. Public conference, day care, medical mall functions (pharmacy, vision services, etc.), restaurants, coffee houses and a potential future tie to rail or other public transportation hubs could all occur in this zone.



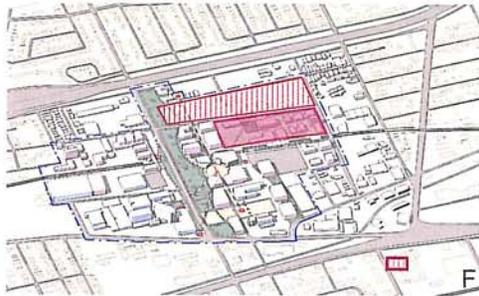
## Hotel / Retail / Support Zone

As with any development, as the service lines grow, the necessary support functions will need to be in place to support the additional growth. Hotels, motels, retail and support functions (both public and private) will need to be provided.



## Research Zone

A Research Zone has been provided as part of the Master Plan for discussion purposes. El Paso's population makes it an ideal location for medical research related to conditions affecting the Hispanic population.



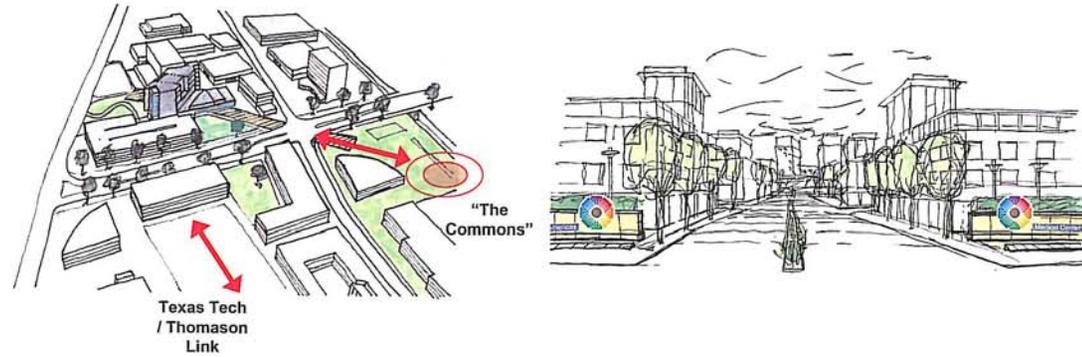
# EXHIBIT A

## Site Gateways / Circulation and Parking

Some of the key goals to the master plan were establishing a sense of arrival (image) to the MCA as well as clear wayfinding and circulation on the site. To do this, the design team provided clear entry points to the site off of Alameda, I-10 at Reynolds and at El Paso Street. The architectural language and design elements of these gateways will be studied in detail as part of the Phase II Master Plan development.

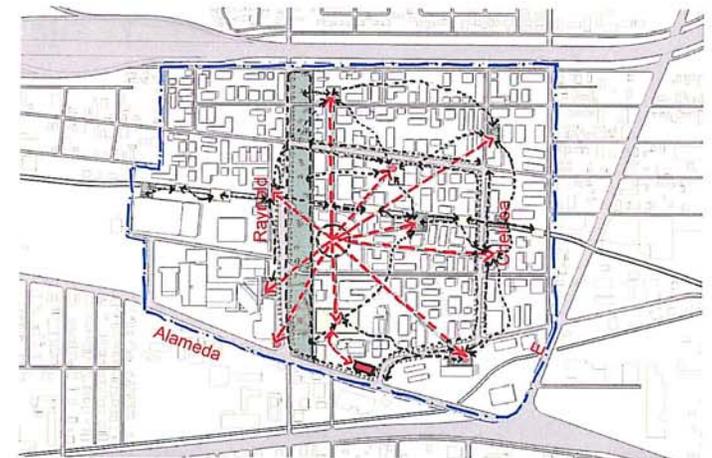
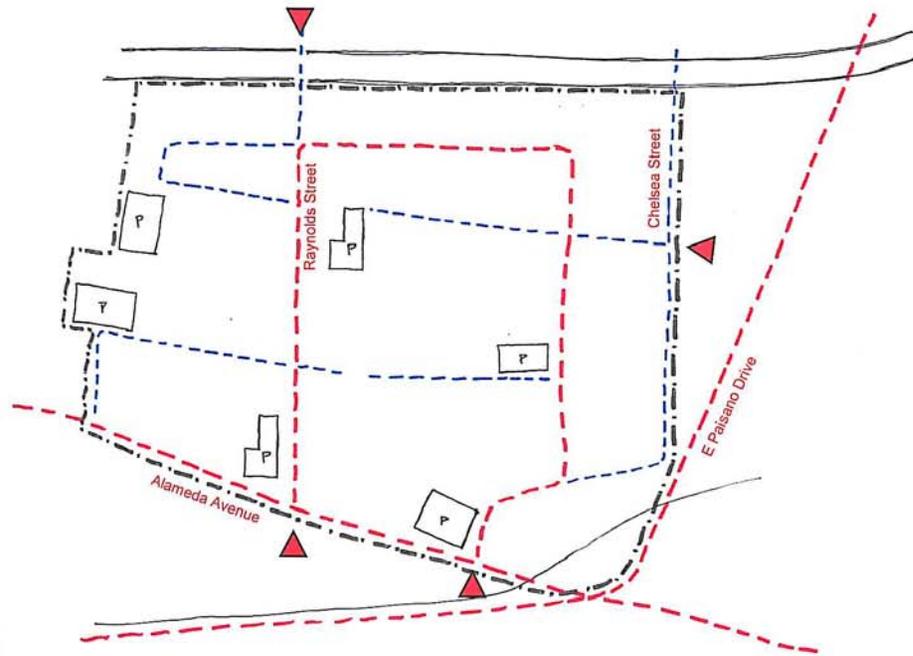
Once on the campus, an internal ring-road has been identified which could be implemented over time. Parking structures would be constructed in close proximity to the main circulation spines, allowing for easy access from the main entry points of the site and could be adjacent to the functions or quadrants they serve. It should be noted that the master plan document shows revisions to El Paso Street which will be modified by the City in the coming months as part of the Alameda Corridor Improvements.

Below are circulation drawings showing major vehicular circulation within the MCA area.



Another consideration of this scheme is the pedestrian circulation that will occur between components as the campus grows. The dashed red lines below indicate major links between the central public plaza and secondary open spaces, similar to what you would find at a major medical or university setting. The dashed black lines indicate the need to provide direct pedestrian paths between buildings to allow patients, visitors and staff to move between structures. Although it is nearly impossible to plan without knowing what type of buildings will be created, the location and order of development, it is the intent of this document to underscore its importance so that development that occurs is responsive to this issue.

The second image below is an example of how Thomason, with its current development of future phases, can provide linkages back to a main plaza development now in support of future development.



# EXHIBIT A

## Option #9 - Plaza Scheme Revised

### Phasing

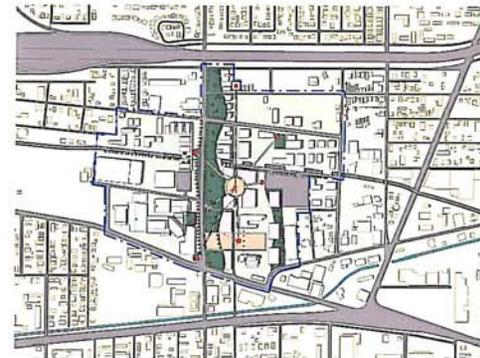
Based on the assumptions outlined in the Demographics and Program Section of this document, it is important that the Preferred Master Plan respond to growth of the MCA over time. It was important to the MCA Board and the Design Team that the final master plan be organized and address the goals of the MCA but that the concept also be achievable in the immediate future. To do this it was necessary to think through the phasing of the project based on the known and estimated growth within specific periods of time.



Phase 1 Diagram

### Existing Site

The existing MCA site is primarily comprised of Thomason Hospital and the Texas Tech School of Medicine. These structures exist now and clearly identify the start of development of the MCA. These areas are highlighted in green left.

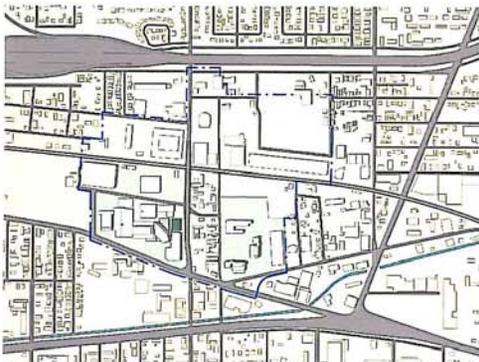


### Phase II Development

Phase II Development was identified by the MCA board as the 50-year plan extending 25 - 50 years out. During this period there is planned expansion of both Thomason Hospital and Texas Tech.

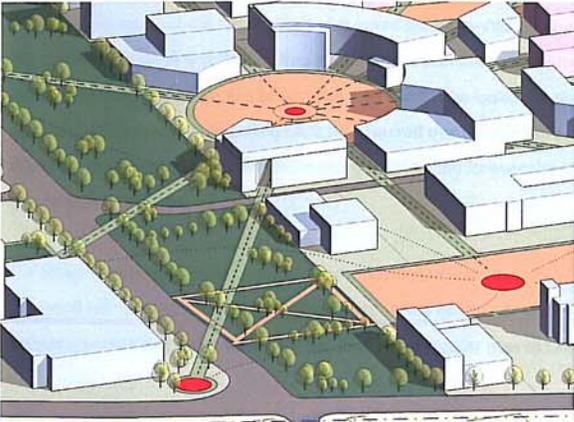
### Phase I Development

Phase I development was identified by the MCA board as the more immediate future (10 - 15 Years). During this period there is planned expansion of both Thomason Hospital and Texas but may include the addition of other new components on the campus such as a new building for the El Paso Community College School of Nursing (EPCC) and the start of development of the public plaza area. It would be a goal of the MCA to begin development of the gateways at Alameda and I-10 to begin to identify the MCA.



# EXHIBIT A

## Site 3D Perspectives



Plaza from South



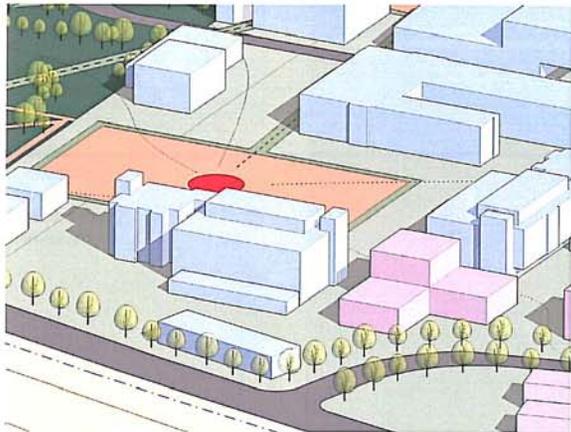
Plaza from North



Reynolds Spine from South



Plaza from Northwest



Texas Tech from South



Option 8 from West

## Conclusion

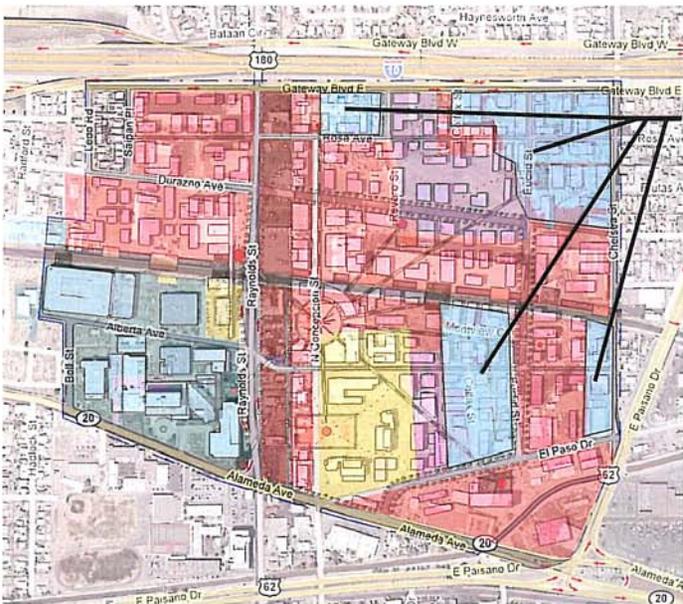
By thoughtful planning, it is the intent of this master plan to develop a facility that emphasizes patient focused care but utilizes sound operational efficiencies for key services and staff. This is accomplished by the creation of new operational models that provide the ability to deliver the highest standard of care.

# EXHIBIT A

## Preferred Master Plan Challenges

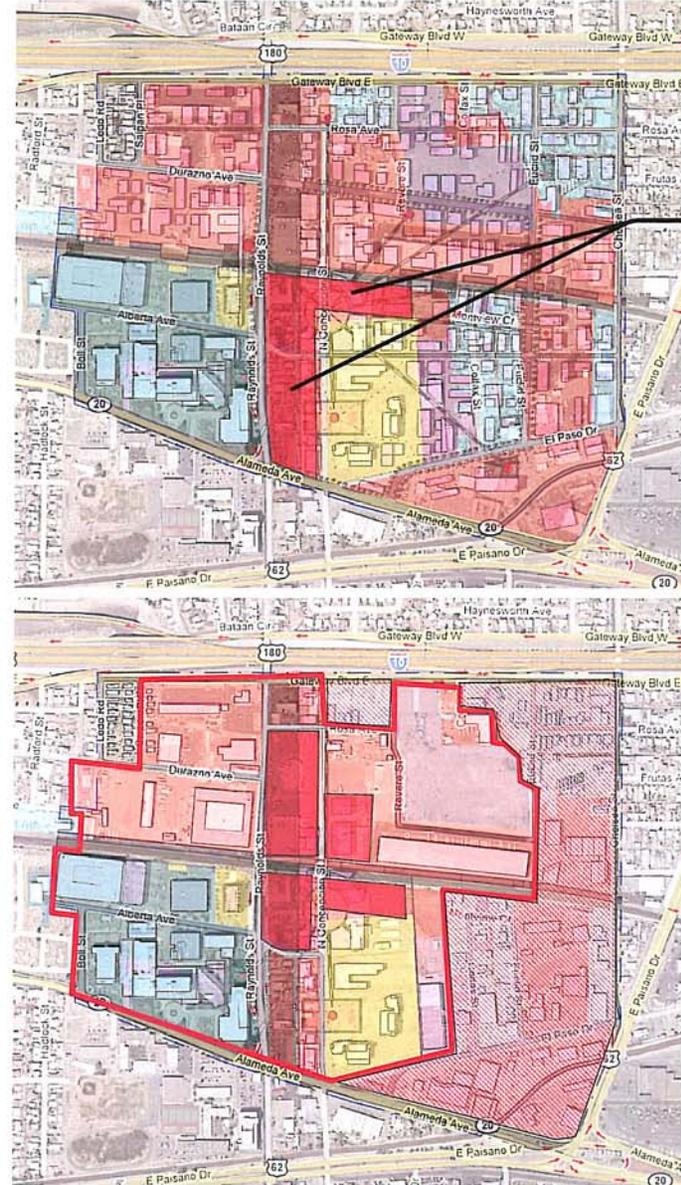
The following images indicate some of the challenges associated with the implementation of the Preferred Master Plan. In the image below, some of the larger residential areas are highlighted in blue. These areas will be more difficult to develop given the number of homes and the fact that individuals are emotionally connected to their homes. The reality of relocation and challenges associated with this activity will also need to be looked at closely. To avoid a tremendous amount of required relocations, LBL suggested pulling back the required master plan area as shown in the image in the lower right corner. In doing so, the requirements of the MCA can be met for the foreseeable future and the majority of dedicated residential streets can remain untouched.

For those commercial areas, already clearly located between the newer components of Texas Tech and Thomason, the stage has been set for speculative buying of property. It will be the responsibility of the MCA Foundation Board to acquire the necessary parcels up front for implementation of the master plan or to obtain this land later using other means.



### Master Plan Implementation Challenges

- Residential
- Multiple Owners
- Emotionally Invested



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### Possible Solutions

- Limit Development area to exclude residential areas
- Concentrate land acquisition to key areas or larger parcels
- Present different options that require different land options

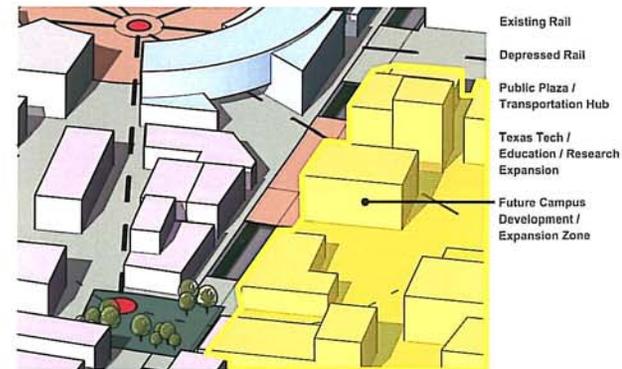
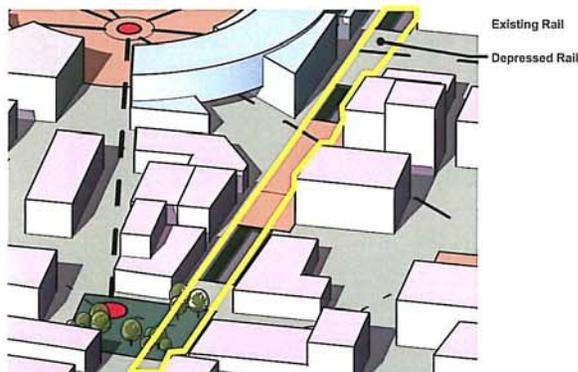
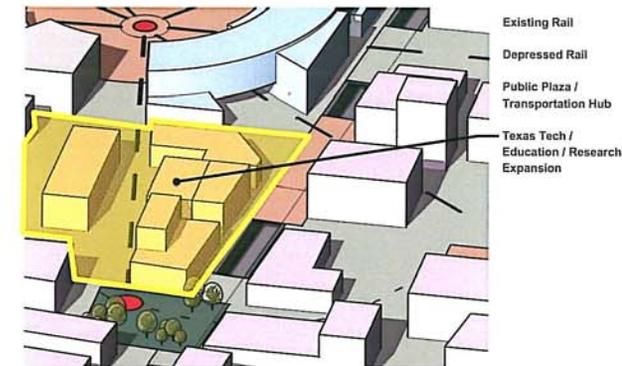
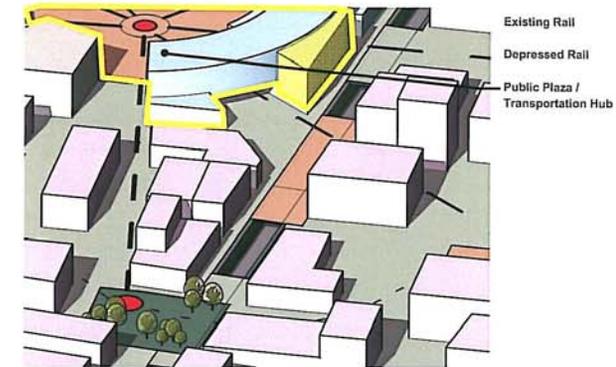
# EXHIBIT A

## The Railroad

There was a tremendous amount of discussion regarding addressing the railroad in the future. Similar to other areas El Paso, the generally supported idea is to depress the railroad over time, allowing the MCA to grow north without a barrier. The attached diagrams help illustrate the flexibility gained should the railroad be able to depress below grade.

In doing this, there was also discussion about what happens to the Reynolds Avenue overpass. There are now two options available to the Master Planning Committee; one is to eliminate it over time and the other is to allow it to remain. If the overpass were to remain with the railroad depressed, the entire MCA site, at grade, would be open for vehicular and pedestrian circulation. The faster traffic trying to get from Alameda to 1-10 would still use the overpass, keeping the site roads serving the MCA only.

If the overpass is removed, that same traffic may need to be relocated around the site on Alameda or Paisano to make the same connection north.



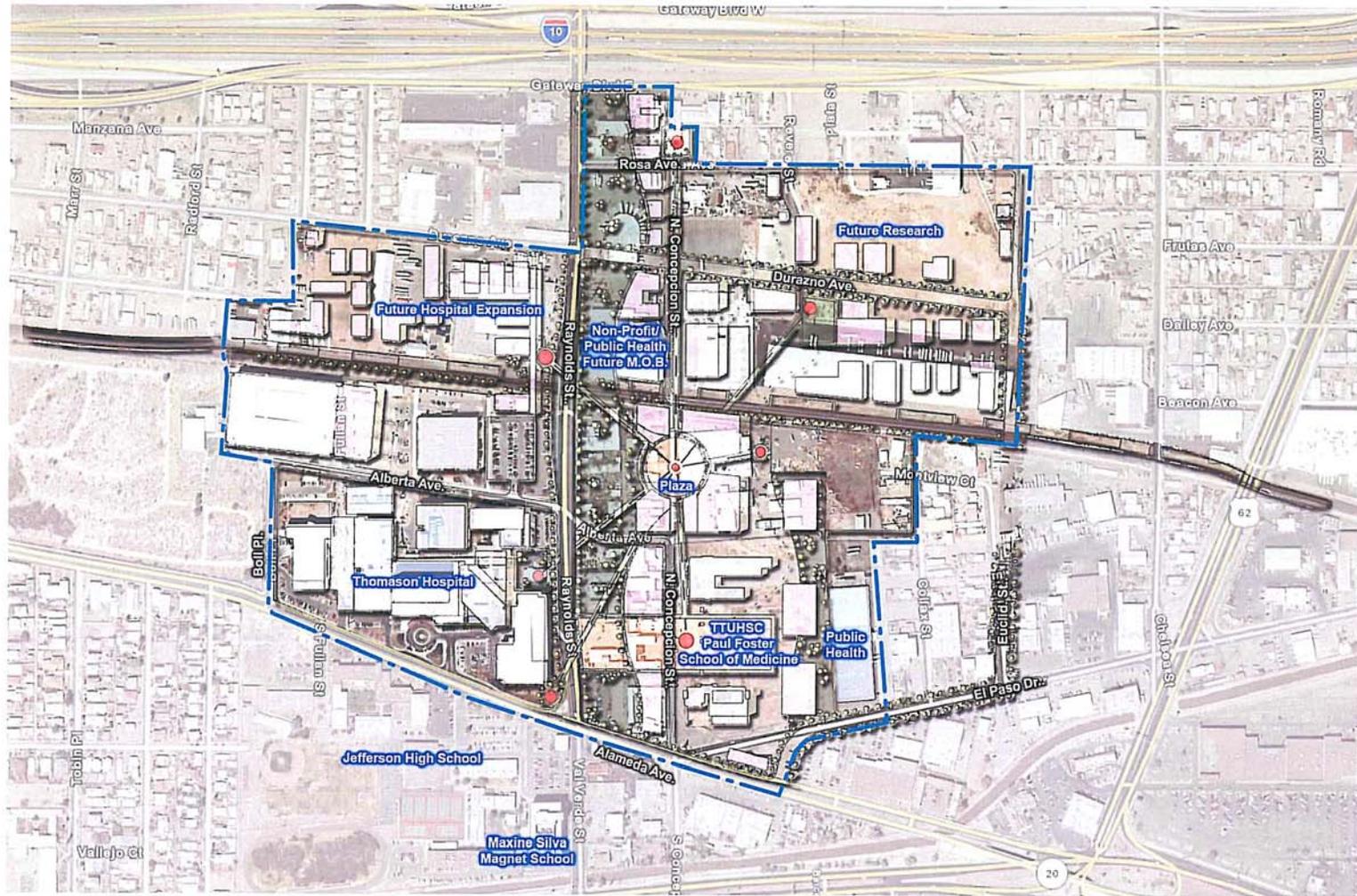
# EXHIBIT A

## Conclusion

Upon completion of Option #9 The revised Plaza Scheme, it was determined that a 100 Year Plan was so far in the future that it would not be necessary to indicate any potential zoning beyond 50 years.

The following master plan image indicates the 50 year development area currently being presented to the City for adoption into the general plan. Further work is still required in the subsequent master plan phase to address specific issues related to traffic, utilities and flood mitigation.

The Phase II work associated with the master plan will follow approval by the City of El Paso to proceed.



**EXHIBIT "B"**

**Medical Center of the Americas Map and District Boundaries**

