

EXHIBIT W
TO MASTER DEVELOPMENT AGREEMENT

Design Guidelines

[SEE ATTACHED PAGE(S)]



MUELLER DESIGN BOOK

AUSTIN TEXAS

NOVEMBER 2004

MUELLER DESIGN BOOK

CITY OF AUSTIN
CATELLUS DEVELOPMENT CORPORATION



CATELLUS

PREPARED BY ROMA DESIGN GROUP

NOVEMBER 2004

Design Book Disclaimer:

This design book is envisioned as a dynamic document that will continue to evolve in response to changing conditions and circumstances. As such, it is anticipated that over the life of the community, the guidelines herein will be refined, waived or amended to incorporate new conditions, special opportunities and/or circumstances.

The master developer and the City of Austin advise any party acquiring an interest in the property to obtain a current copy of this design book before making any decisions about acquiring any such interest.

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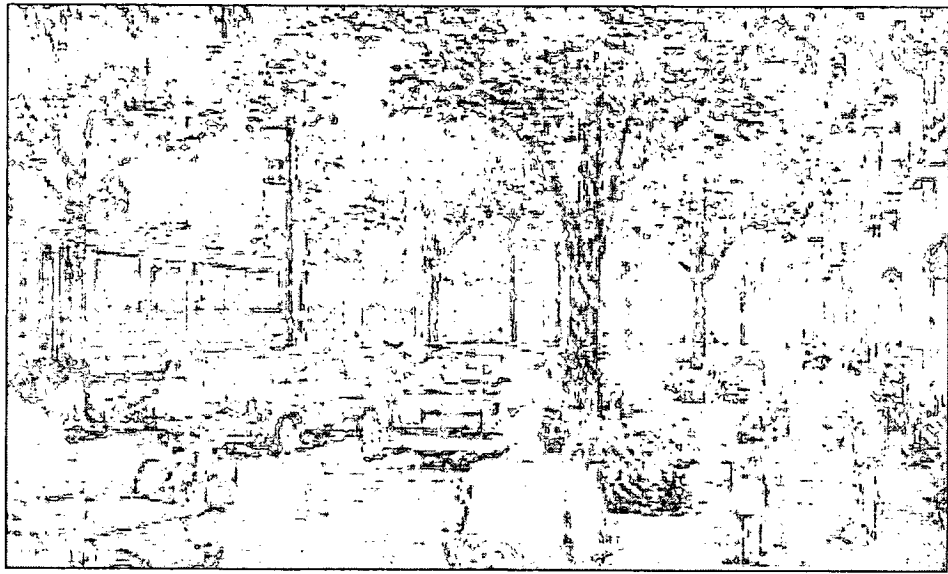
PREFACE

Over the past 20 years, a clear community vision has emerged for the Robert Mueller Municipal Airport site. As early as 1984, the CARE plan called for a new town in-town, promoting compact and higher density development, compatible with the surrounding single-family neighborhoods. In 1996, a 16-member Task Force representing a complete spectrum of Austin interests reiterated this vision, calling for the creation of a compact and pedestrian-oriented, mixed-use community. The Task Force challenged the City to create a district that would be a model for responsible urban development - an alternative to land-consumptive and automobile-dependent development patterns throughout the region that could influence the form and pattern of growth within Austin as it entered the new millennium. With this vision, the Task Force and the City Council articulated some clear goals, stating that the redevelopment of RMMA must marshal long-term market forces through an effective public-private partnership to promote:



RMMA is located three miles northeast of downtown Austin.

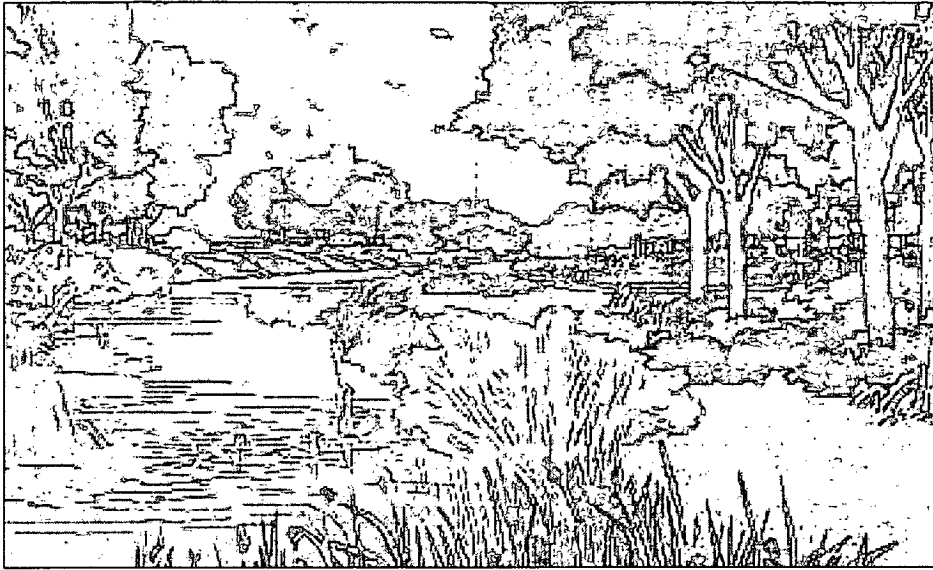
*Transit-Oriented
Development*



Pedestrian-Friendly Streets



- ***Fiscal Responsibility:*** Redevelopment must create a positive revenue stream that will fund on-site infrastructure and increase the City's tax base for the benefit of all citizens.
- ***Economic Development:*** The project should serve to reinforce Austin's role in an increasingly global marketplace and create a wide range of employment opportunities for a diversity of the community's citizens.
- ***East Austin Revitalization:*** The project must promote economic development opportunities within East Austin, giving local residents a direct stake in redevelopment.



Natural Greenways



Interactive Neighborhoods

- ***Compatibility with Surrounding Neighborhoods:*** Development must maintain and enhance the quality of life in adjacent neighborhoods, providing complementary linkages, land uses and transportation patterns.
- ***Diversity:*** Redevelopment must offer a wide range of housing choices in order to create a new community of socially and economically diverse residents.
- ***Sustainability:*** Development should be planned in a way that promotes energy and water efficiency, resource protection, reduced auto dependency, watershed protection and green space preservation.



The Mueller Plan is the product of many years of community involvement.

The Reuse and Redevelopment Plan was formulated on the basis of these goals and was adopted by the City Council in 2000. The product of many years of community involvement, the plan has become the springboard for more detailed development planning with Catellus Development Corporation, which was selected as the Master Developer for Mueller in 2002. Since that time Catellus (the Master Developer) and the City of Austin have been working to refine the plan and establish the specific terms for the disposition of the airport property within an overall Master Development Agreement. This Design Book represents an

updated Master Plan that encompasses and incorporates the 2000 Reuse and Redevelopment Plan, and is the result of that effort.

The Design Book sets forth guidelines for the design of buildings and public and private open spaces within the Mueller community and is incorporated as part of the Master Development Agreement between the Master Developer and the City of Austin. The guidelines are intended to supplement the zoning provisions of the Mueller Planned Unit Development (PUD), which was adopted by the City Council in August 2004, and the Mueller Master Community Covenants (Community Covenants) which have been formulated to establish the governance for the new community. As set forth in the Community Covenants, the design guidelines will be administered by a New Construction Council (NCC), comprised of design and real estate development professionals. The process for development and design approval is set forth in the final chapter of this Design Book.

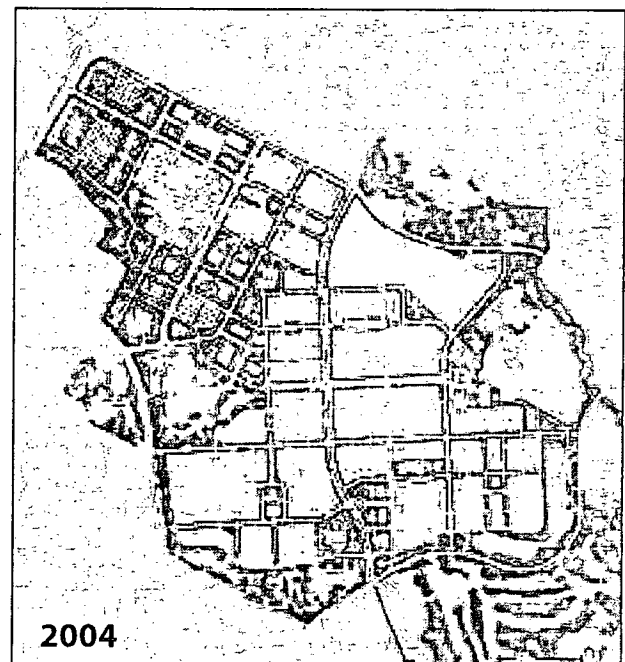
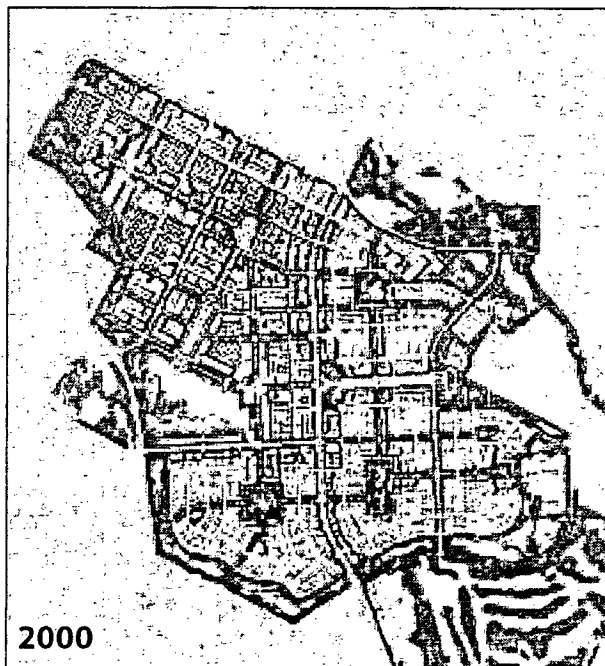
The design guidelines have been developed to promote a cohesive and high quality development that achieves the community's vision for Mueller. They are intended to guide new development in ways that promote connectivity, neighborliness, activity, authenticity, sustainability and livability. They are not intended to be highly prescriptive solutions that dictate a particular style, but rather as performance criteria that can encourage diversity, creativity and innovation in the spirit of the Austin community.

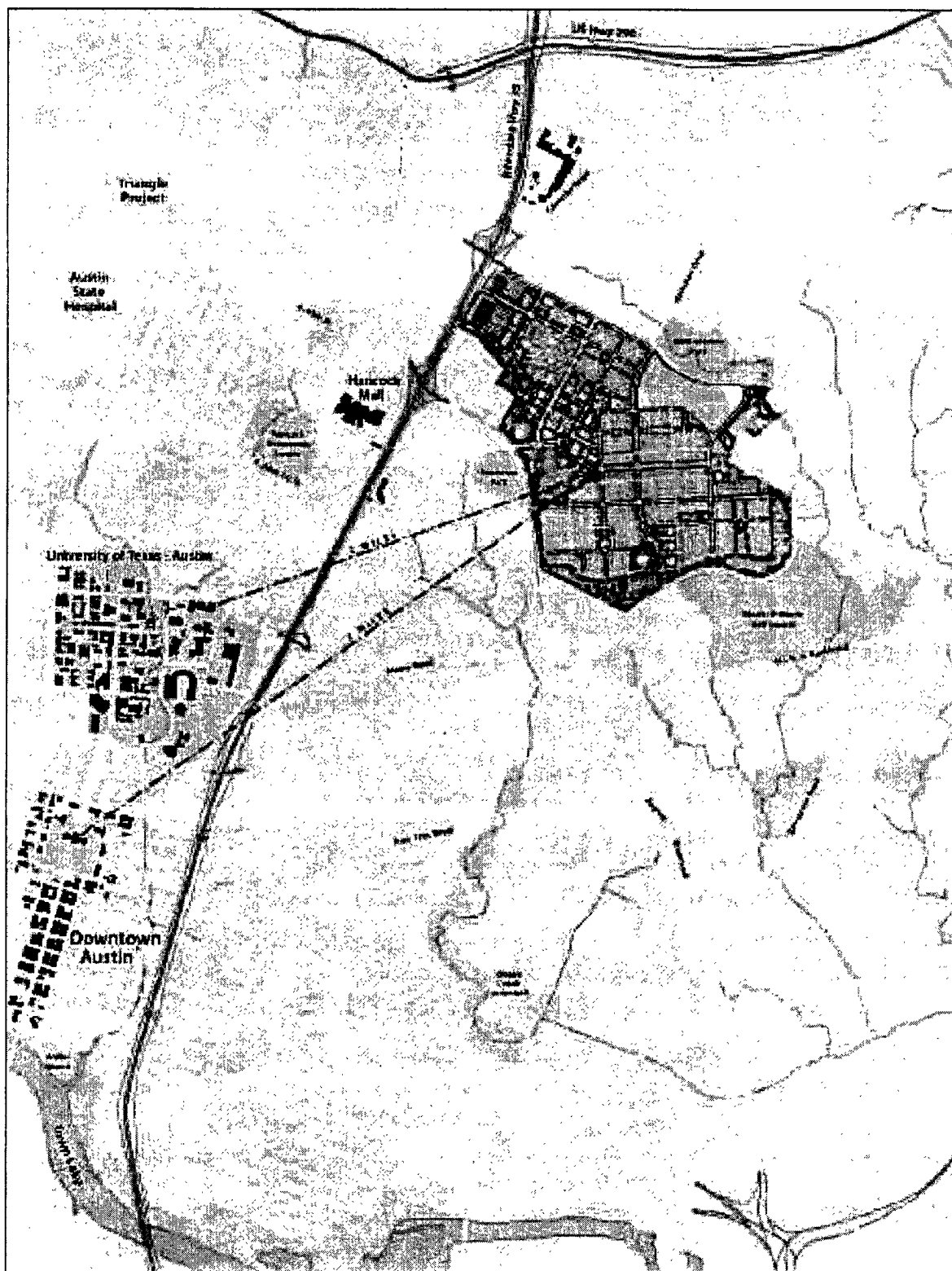
This Design Book is organized into eight chapters. Chapter One: The Plan for Mueller, describes the underlying goals and planning principles for the new community. Chapter Two: The Neighborhoods, outlines the design guidelines for Mueller's

four mixed-use residential neighborhoods. Chapter Three: The Town Center, provides the guidelines for the creation of a mixed-use commercial center within walking distance of these neighborhoods. Chapter Four: The Employment Centers, describes guidelines for the Northwest and Northeast Quadrants which include the Austin Film Studio, the Dell Children's Medical Center of Central Texas (Children's Hospital), and a regional retail and mixed-use complex along the I-35 frontage blocks. Chapter Five: Open Space and Recreation, describes the program and design treatments for parks and open spaces throughout Mueller. Chapter Six: Landscape and Streetscape, establishes the standards for planting and landscaping of streets and open spaces throughout the community. Chapter Seven: Sustainability and Green Urbanism, sets forth the design strategies for achieving a green urbanism through community design, building design and an integrated infrastructure system. Finally, Chapter Eight: Administration of the Design Book, describes the process and submission requirements for the review and approval of individual development projects.

In addition to these eight chapters, the Design Book includes two appendices that provide more detailed standards and technical information. Appendix A: Plant List, enumerates the range of trees, shrubs, vines, perennials, grasses and ground covers intended to create a sustainable, healthy, vibrant and diverse landscape palette. Appendix B: Mueller Street Cross Sections, describes the hierarchy of streets throughout the community, their critical dimensions and the location and placement of landscape elements.

Since 2002, Catellus and the City of Austin have been working to refine the plan. In so doing, the fundamental structure and organization of the community has been maintained.





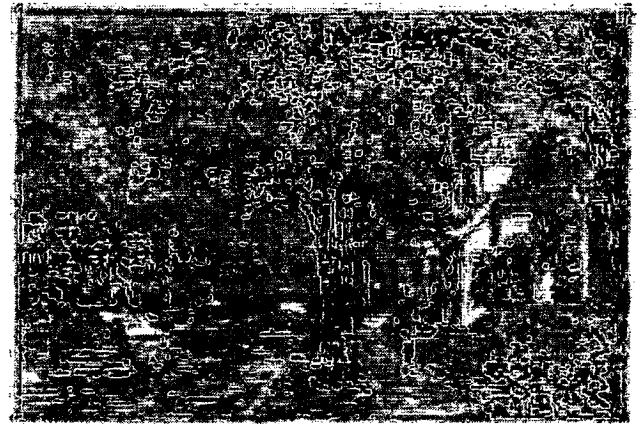
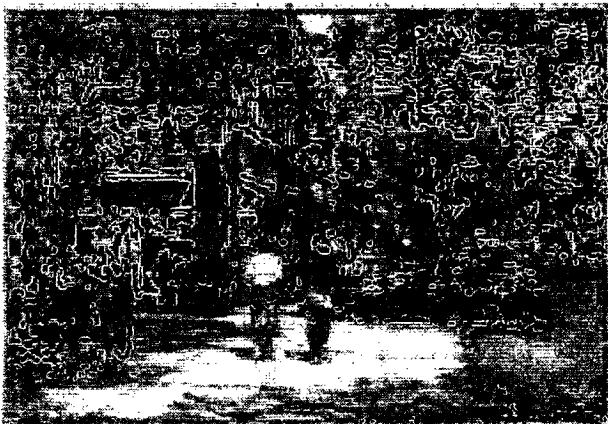
City Context

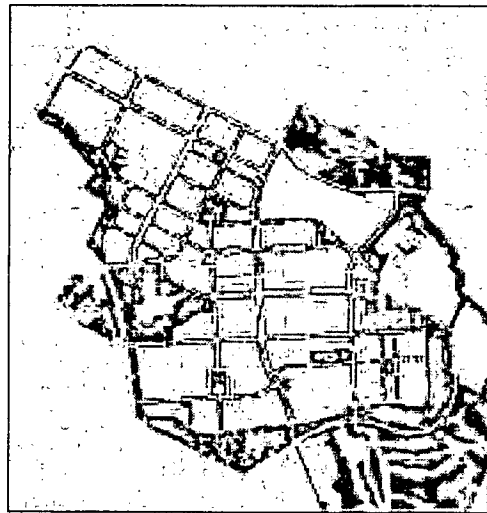
1 THE PLAN FOR MUELLER

For more than 70, years Mueller has been a void in the fabric of the East Austin community. The impacts of the airport have led to disinvestment and deterioration in surrounding neighborhoods. Redevelopment affords the opportunity to knit this approximately 700-acre property back into the community in a manner that will complement and enhance the quality of life and environment of adjacent areas while creating a new mixed-use community that is reflective of the City's goals for a more sustainable and livable approach to growth in the region.

Redevelopment of the airport is also intended to achieve broader public objectives for economic development and revitalization; it will help to overcome the perceptual barrier of the I-35 freeway; and it will provide alternatives to the outward expansion of the City. In order to achieve the underlying goals of sustainability, compact development and neighborhood compatibility set forth by the community, specific planning principles have emerged for development of Mueller. These principles are the structuring elements of the master plan, and support a vision of a new community within a community—one that complements and extends the surrounding neighborhoods and becomes an integral part of the urban and social fabric of Austin.

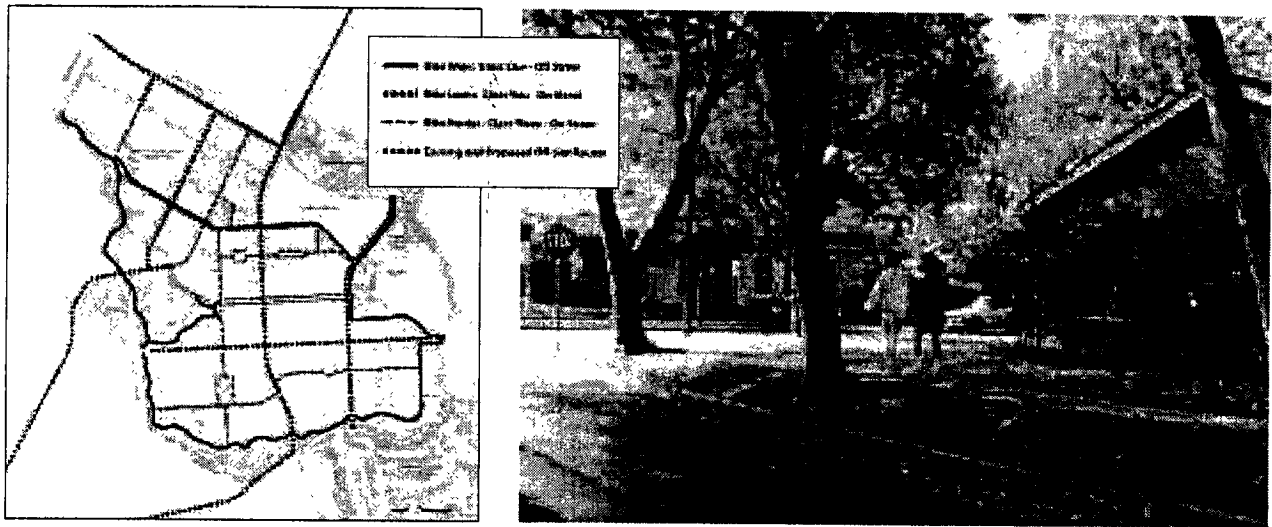
Redevelopment affords the opportunity to knit the airport property back into the community.





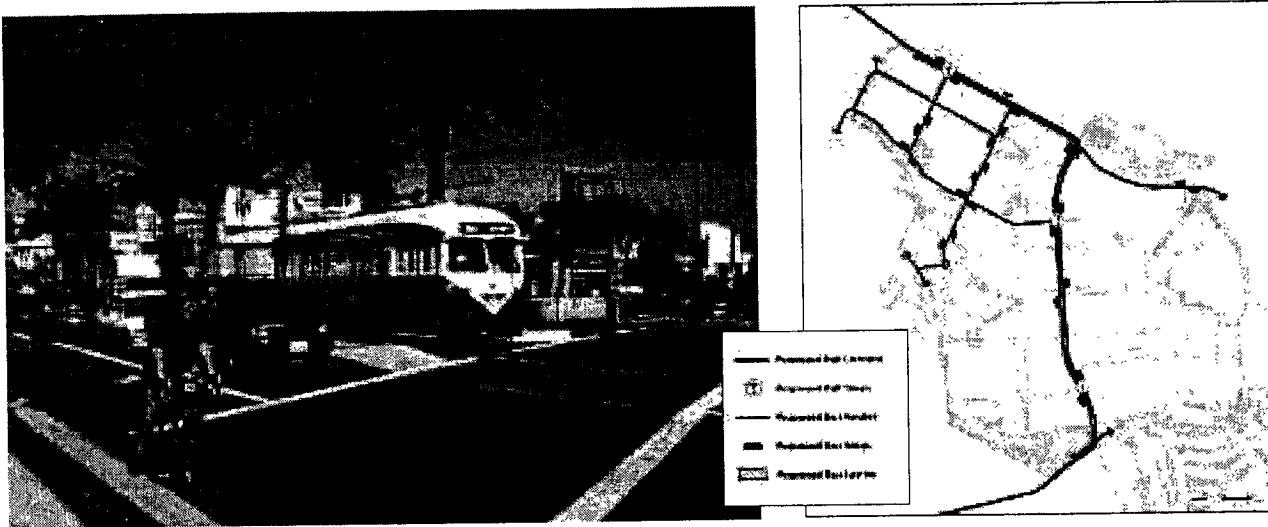
Open Space: An interconnected system of open spaces and pedestrian ways promote the walkability and amenity of the new community while forging strong links with surrounding neighborhoods.

Development of the Mueller site will result in significant new open space and recreational opportunities for residents, employees and visitors. The open space system, which comprises more than 20 percent of the property or approximately 140 acres, is designed to contribute to the overall structure and identity of the new community, providing a diversity of spatial experiences, including large parks and playfields offering recreational opportunities; smaller parks that contribute to a sense of community and neighborliness; urban plazas and open spaces that provide for social gatherings, celebrations and informal interaction; and an neighborhood school and community recreation center. A continuous system of landscaped greenways along the perimeter of the site will connect surrounding neighborhoods and open spaces, including Patterson and Bartholomew Parks and Morris Williams Golf Course, with the activities and open spaces within the new community. Lake Park, an approximately 30-acre park adjacent to the Town Center, provides a central open space amenity for informal gatherings as well as major civic events. As such, the open spaces of Mueller are intended to provide a seamless extension of existing open space resources and ultimately contribute to a larger "necklace" of greenways and creekside open spaces within the area. Chapter Five of this Design Book provides a more detailed description of each of the open space elements of the new community.



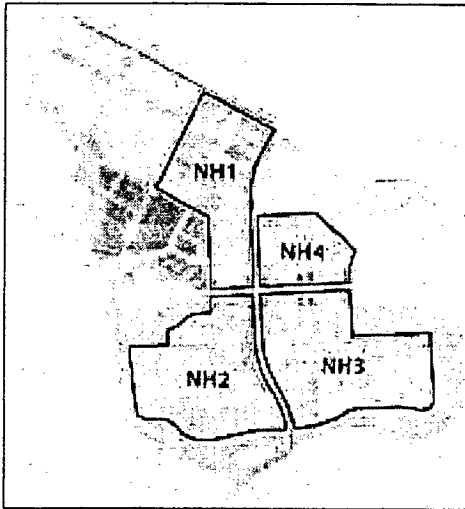
***Streets:** Roadways and streets are designed to distribute traffic in a way that minimizes impacts on adjacent communities. They serve as an extension of the open space, pedestrian and bicycle network, contributing to the community's sense of place and identity.*

Streets are the “connective tissue” of our modern communities. At Mueller, they have been conceived and designed not only as movement corridors, but also as important public spaces that provide a strong sense of place and orientation and contribute to the social life of a community. The streets are designed to extend and enrich the open space system and the network of pedestrian and bicycle ways throughout the new community. The hierarchy of roadways gives structure to the community and to the districts and neighborhoods within it. The street pattern is designed to provide efficient vehicular circulation between I-35 and the regional roadway arterials in the vicinity of Mueller, including Airport Boulevard, East 51st Street and Manor Road. A network of roadways within the property distributes traffic to the various activities of the new community without overburdening the existing perimeter streets. Multiple connections to the perimeter streets are established to promote an even distribution of traffic and are carefully configured and operated to discourage cut-through traffic within the existing and future neighborhoods. Roadway connections to the adjacent neighborhoods have been developed in a way that provides for convenient access to the amenities of the new community while minimizing traffic intrusion. A comprehensive network of on and off street bicycle lanes and paths (see diagram above) is created throughout Mueller to extend the existing systems surrounding the site. Cross-sections for each of Mueller’s streets are provided in Appendix B.



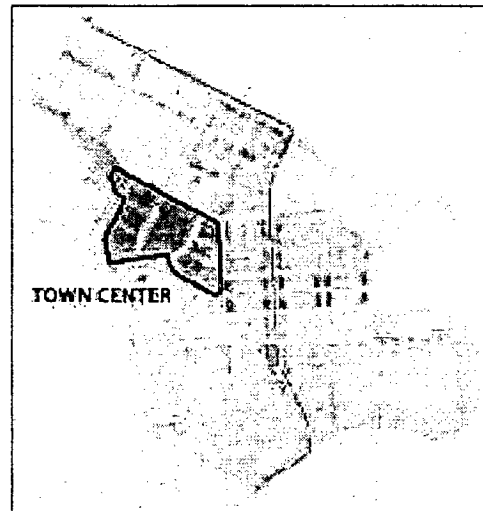
Transit: The pattern and intensity of development is planned in conjunction with a comprehensive program of transit improvements aimed at reducing automobile dependence.

Transit is essential to the goal of achieving a compact pedestrian-oriented community that fulfills the development potential of this property. Austin is currently planning for a program of commuter rail and rapid bus transit lines that will radiate out of the downtown core to the university, the new airport, and the outlying neighborhoods. Mueller offers one of the few opportunities in the region for the development of a transit-based community with sufficient densities and a pattern of land uses that can reinforce and justify the considerable public investment that will be necessary to support transit. As such, the Master Plan calls for alignment of the future rail through the heart of Mueller in a manner that will put the majority of residents and employees—more than 20,000 people—within a ten-minute walk of transit. A central transit boulevard offers a corridor for future commuter or light rail through the community. Mueller Boulevard will provide a key route for bus rapid transit, linking the Town Center and the Dell Children's Medical Center of Central Texas with Airport Boulevard and 51st Street. It is estimated that such transit service combined with transportation demand management measures (e.g., employer programs to encourage carpooling, vanpooling and transit use) will divert up to 30 percent of single-occupancy vehicle trips generated by this new community.



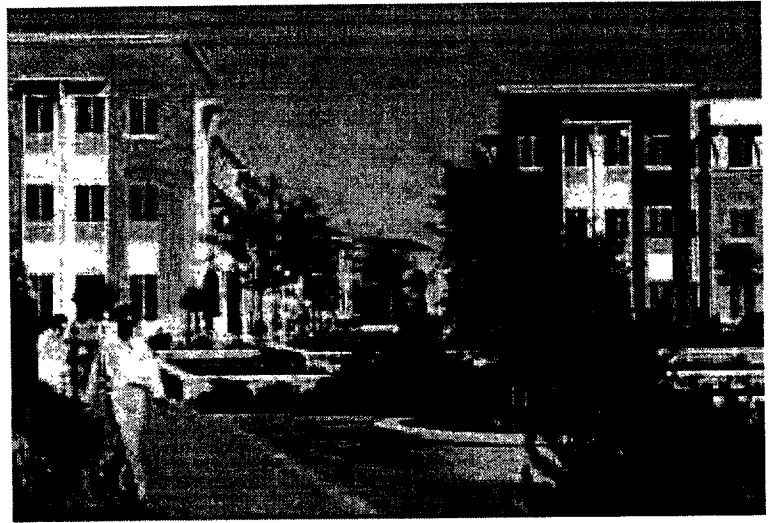
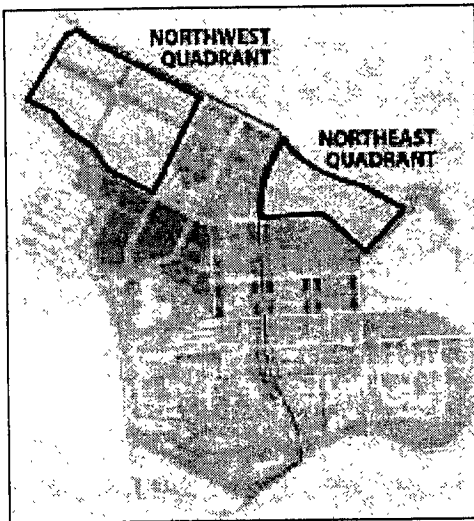
Neighborhoods: New neighborhoods extend the qualities of existing Austin neighborhoods while promoting a compact and walkable environment with a diversity of housing opportunities.

Surrounding the Town Center, the plan calls for the creation of four mixed-use residential neighborhoods. The character of these neighborhoods will reflect many of the qualities of Austin's distinctive neighborhoods. Tree-lined streets creating a continuous vegetated canopy are envisioned, with homes oriented to the streets in a way that creates a socially interactive community. Parking garages for residential units will be accommodated primarily along rear alleys and in auto courts in order to reduce their visual dominance. Homes and units will face the street, mediated by porches or stoops that promote neighborliness. Each neighborhood will be oriented to a central park, and will include smaller pocket parks with tot lots and play areas for children. The configuration of the streets and open spaces will provide walkable and bikeable connections to the Town Center, to the perimeter greenways, and to planned transit stations. The density of these neighborhoods will be greater than the existing ones that surround them. A mixture of small-lot single-family homes ("yard houses"), row houses, mixed-use "shop houses", multi-unit "Mueller Houses", and mixed-use apartment houses are carefully configured to promote a diverse and inter-generational population. Chapter Two of the Design Book provides design guidelines for development within the neighborhoods.



Town Center: A walkable and transit-oriented Town Center provides the social, cultural and commercial focus for both the new community and the surrounding neighborhoods.

At the heart of the Mueller community, a vibrant mixed-use district is envisioned. This district will be composed of higher density residential buildings, commercial office buildings and a ground-level environment of street-oriented activities, including retail shops, restaurants, cafés, entertainment and public-serving uses. This urban district, composed of mid-rise buildings up to eight floors in height, will be situated within easy walking distance of the existing and planned neighborhoods that surround it. At the core of the Town Center, a pedestrian and bicycle-friendly retail street (i.e., Aldrich Street) lined with shops and restaurants and anchored by a major grocery store will provide a convenient destination for residents and an attractive gathering place for people throughout Central and East Austin. Chapter Three provides design guidelines and a more detailed description of the Town Center.



The Employment Centers: Mueller provides opportunities for economic development and job creation in a way that complements and extends the compact and pedestrian-friendly pattern of the community.

In addition to the mixed-use Town Center, the Mueller plan designates approximately 18 percent of the airport site or approximately 120 acres for employment uses, intended to promote the creation of a balanced community where people both live and work, and where the City's broader economic development goals can be achieved. Austin homegrown businesses and those that manifest the values of sustainability are particularly encouraged. The Northwest Quadrant, adjacent to I-35, is targeted for major employment and regional uses that can benefit from this highly accessible and visible location. Approximately 32 acres of this area has already been purchased by the Seton Healthcare Network for the development of the Dell Children's Medical Center of Central Texas; approximately 50 acres adjacent to I-35 and East 51st Street have been identified for compatible regional-serving retail and office or residential uses, and an additional 42 acres of land along East 51st Street accommodates the film production campus of the Austin Film Studio and adjacent lands for office, retail and other employment uses. The employment centers are seen as an integral part of Mueller, with the same levels of pedestrian orientation, connectivity and amenity as the surrounding community. Chapter Four provides design guidelines for these mixed-use employment centers.



The creation of a compact, walkable and transit-oriented community with a mixture of residential, commercial and civic uses provides a clear alternative to automobile-dominant patterns of development.

Sustainability: *The Mueller community embraces the fundamental tenets of sustainable development and design and is intended to develop a new model of "green urbanism".*

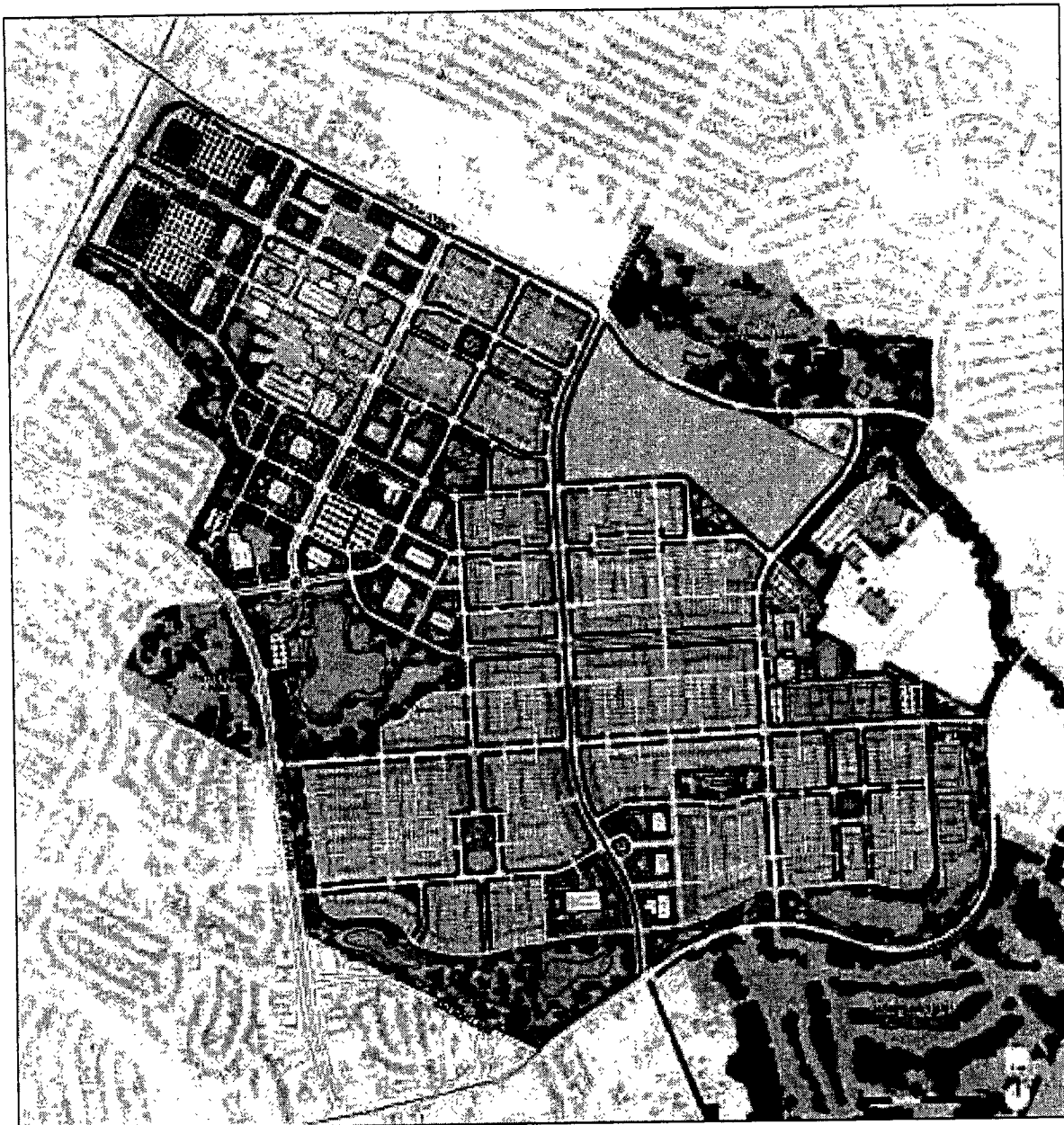
The design of the Mueller community combines the principles of Traditional Neighborhood Development and New Urbanism with state-of-the-art practices for green building and sustainable design. A new model of "green urbanism" has emerged with Mueller, promoting sustainability at three distinct levels:

- **Green Community Design:** The creation of a compact, walkable and transit-oriented community with a mixture of residential, commercial and civic uses provides a clear alternative to the automobile-dominant patterns of development that have prevailed for much of the 20th century.
- **Green Buildings:** Mueller combines national principles for green building developed by the U.S. Green Building Council's LEED® (Leadership in Energy and Environmental Design) with the City's own Green Building Program to encourage: resource efficient design; the selection of regional materials that are non-toxic, recycled and sustainably harvested; and site designs that provide heat island mitigation, light pollution reduction and stormwater management.



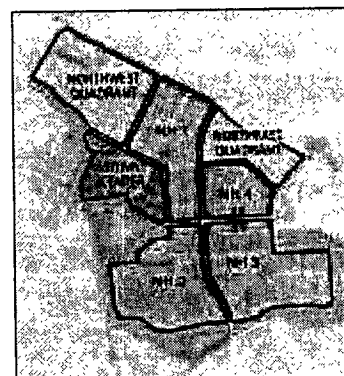
- *Green Infrastructure:* Mueller's infrastructure system including its parks, roadways, and utilities is designed to promote fundamental sustainability principles. The park system is designed to reduce off-site flooding and to naturally filter pollutants from stormwater before it is released into the natural stream systems. The street system is designed to support pedestrian and bicycle circulation. Over 15,000 trees selected from an approved list of sustainable and indigenous plant materials will be planted to create a diverse and comfortable environment that mitigates the heat island effect, reduces stormwater runoff and filters the air. The utility system is also designed to reduce resource consumption through the extension of reclaimed water for irrigation into much of the community. An innovative on-site cooling, heating and power plant by Austin Energy is also planned to meet the electrical and thermal needs of the Children's Hospital complex and nearby commercial and residential development within the Northwest Quadrant Town Center and northern neighborhoods of the community. Chapter Seven of this Design Book provides specific performance criteria aimed at achieving all three levels of sustainability.

Over 15,000 trees will be planted at Mueller to create a comfortable environment that mitigates the heat island effect, reduces stormwater runoff and filters the air.



Illustrative Plan

- Civic/Institutional**
Neighborhood center, or major office
or other large-scale building for district
- Yard Houses**
Large, single detached
- Row Houses/Shop Houses**
Townhouse, single-family attached, live-work lot
- Medium Houses**
Duplex, triplex, or four-unit per lot
- Mixed-Use Sites**
Medium-high density residential, retail
- Mixed-Use Commercial**
Retail, office, medium-scale commercial development
- Mixed-Use Residential**
Office, high-density residential, retail
- Publicly Accessible Open Space**



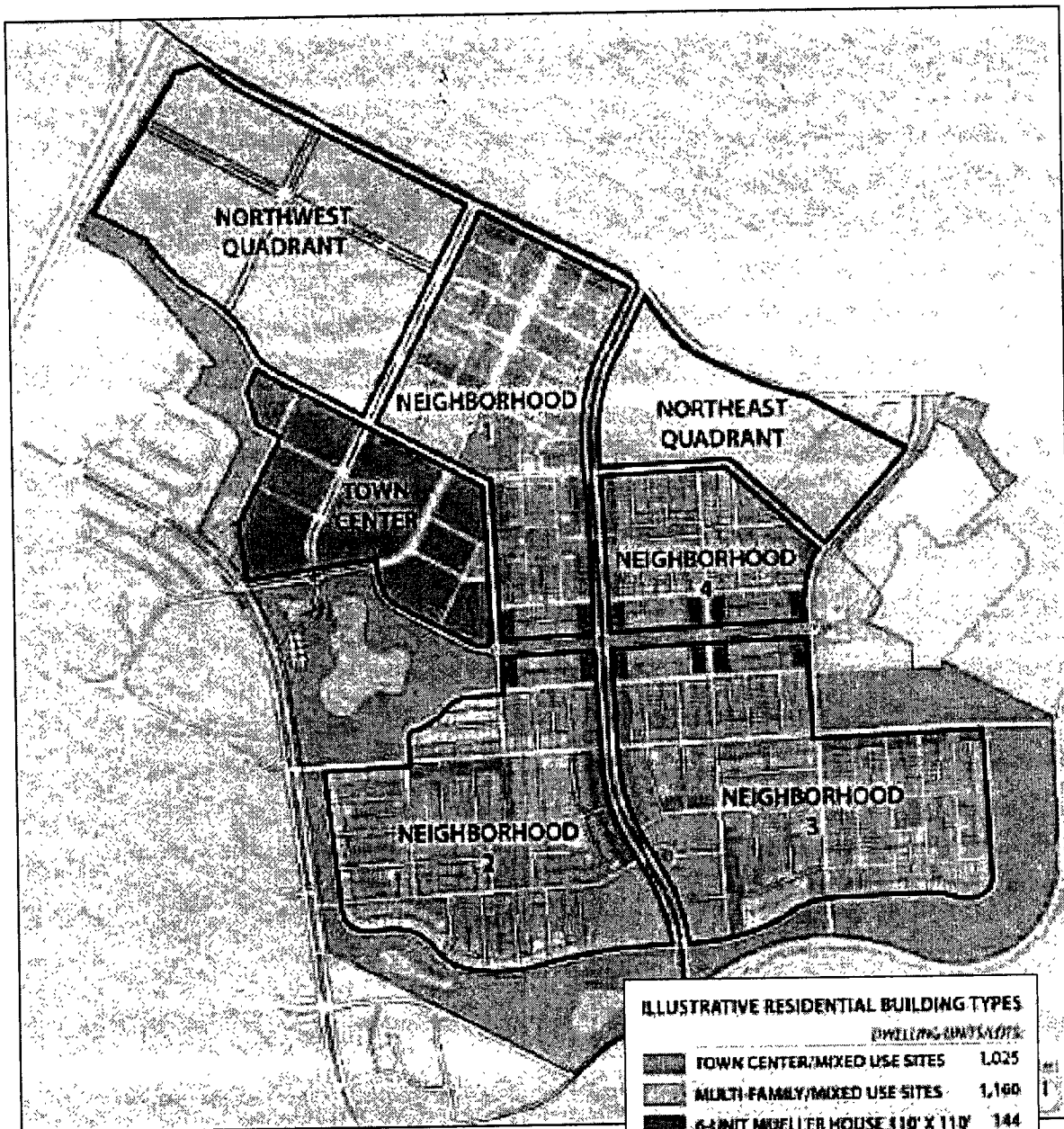
Illustrative Plan and Development Program

The illustrative plan and development program indicates how the Mueller community could potentially build out in conformance with the Master Plan and this Design Book over the next 10 to 15 years. As shown, it is anticipated that the community could be developed with approximately 4,600 units of housing, and four million square feet of commercial or employment uses. The PUD zoning allows for up to 6,450 units of residential development and up to 5.3 million square feet of commercial development subject to the limitations of the Traffic Impact Analysis. This Master Plan establishes a minimum residential program of 2,880 residential units, with at least 50% of these required to be developed for ownership housing in detached or attached units. At least 25 percent of all housing units at RMMA will be affordable to families or individuals whose incomes are less than or equal to 80 percent of the median family income (MFI) for the Austin Metropolitan Area. All affordable rental housing units will have rents not greater than Fair Market Rents (FMR) for existing housing, adjusted for tenant paid utilities.

It is expected that the precise program and configuration of development will vary somewhat from the illustrative plan and program as opportunities and new conditions present themselves. However, the underlying planning principles and design objectives set forth in this chapter will form the basis for implementing the vision of the Mueller community. The following chapters of this book provide the design guidelines that will be used by individual builders, developers, architects and landscape architects in bringing this vision to reality.

ILLUSTRATIVE DEVELOPMENT PROGRAM

Area	Total Land Area (Acres)	Non-Residential (sq ft)					Residential (Number of Units)				
		Office	Retail	Industrial	Other	Total (sq ft)	Apartment Condo	Market Housing	Affordable Housing	Detached/Attached	Total (Units)
Northwest Quadrant	12.5	1,500,000	400,000	100,000		2,000,000					
Northwest Quadrant	4.5	1,000,000	100,000			1,100,000					
Central Corridor	41.5	300,000	1,000,000			1,300,000	1,200		20		1,220
North/Southwest 1	15.5		1,200			1,200	400	20	200	100	700
North/Southwest 2	11.5						100	20	100	100	300
North/Southwest 3	15.5		1,200			1,200	400	20	200	100	700
North/Southwest 4	15.5							20	200	100	300
104th Drive Station	1.25										
Community School	10.7										
Public Library	0.5										
Total	100.0	2,500,000	1,500,000	100,000	0	4,100,000	2,000	100	500	3,000	3,600



The Mueller Neighborhoods

ILLUSTRATIVE RESIDENTIAL BUILDING TYPES

DWELLING UNIT/SITE	
TOWN CENTER/MIXED USE SITES	1,025
MULTI-FAMILY/MIXED USE SITES	1,160
6-UNIT MUELLER HOUSE 110' X 110'	144
4-UNIT MUELLER HOUSE 90' X 110'	120
ROW HOUSE 22.5' X 90'	337
ROW HOUSE 22.5' X 70'	240
SHOP HOUSE 25' X 55'	28
YARD HOUSE 55' X 90'	101*
YARD HOUSE 45' X 90'	407*
YARD HOUSE 37' X 90'	993
GARDEN COURT HOUSE	24
PUBLIC OPEN SPACE	
TOTAL	4,570*

* Up to 125 Carriage House units would also be permitted in this illustrative program.

THE NEIGHBORHOODS

Introduction

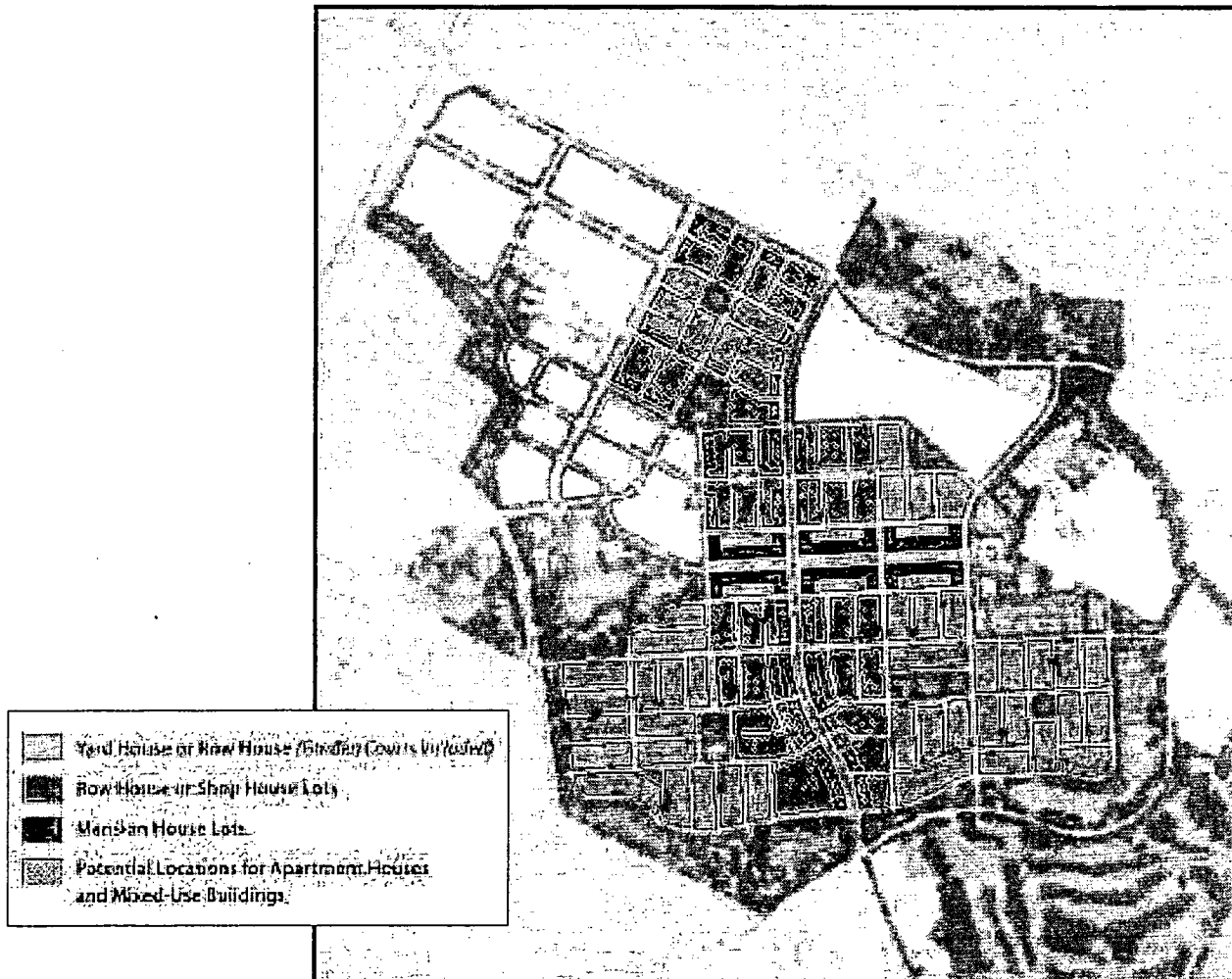
The Mueller community includes four mixed-use residential neighborhoods organized around and within convenient walking distance of the Town Center. Each of the neighborhoods is programmed with a wide range of building types to foster a population with diverse demographic and economic characteristics. Families, seniors, single workers, young couples and students will live within close proximity of one another, promoting neighborhoods that reflect the diversity and richness of the larger Austin community. Each neighborhood contains a park as a focal point with resident-serving amenities and with direct visual and pedestrian linkages to the Town Center. While one particular architectural style is not mandated, all buildings within the neighborhoods will be designed to be:

- *Neighborly*, with a strong street-orientation, and with porches and entries that promote interaction and socialization among residents and that reinforce the pedestrian scale and character of the community.
- *Sustainable*, employing strategies to conserve energy and water resources, use healthy long-lasting and low-maintenance building materials, integrate building siting and landscaping, and mitigate light pollution and heat island effect.
- *Compatible*, in scale and character with adjacent structures in the same vicinity.
- *Indigenous*, utilizing to the extent practicable, local materials and regional Central Texas architectural approaches.

A series of six building types including: Yard Houses, Garden Court Houses, Row Houses, Live-Work Shop Houses, Mueller Houses (i.e., multi-unit four and six-plex buildings) and Apartment Houses are envisioned within the neighborhoods. Building types are located to help structure the community. For instance, Mueller Houses, designed to resemble larger traditional homes, are located along the community's main east-west boulevard to create a stately parkway linking the neighborhood school with the Lake Park and the Town Center. Residential row houses as

well as live-work shop houses are located along the north-south transit boulevard to provide spatial definition to this wide street and to promote a diversity of activity. Apartments and mixed-use buildings are located in clusters around planned transit stops and adjacent to the Town Center to provide a concentration of activity and neighborhood services. Yard houses on a range of lot sizes and garden courts are distributed throughout the neighborhoods and along the perimeter greenways. The distribution of residential and mixed-use building types is illustrated on the diagram below. Additional building types may be introduced, if the NCC finds that such building types reinforce the following neighborhood building design characteristics.

The remainder of this chapter describes: site planning standards to guide the layout and organization of the neighborhoods; design guidelines for each of the six neighborhood building types; and guidelines that pertain to the design character, treatments and materials of all neighborhood buildings.



Distribution of Neighborhood Building Types

NEIGHBORHOOD SITE PLANNING STANDARDS

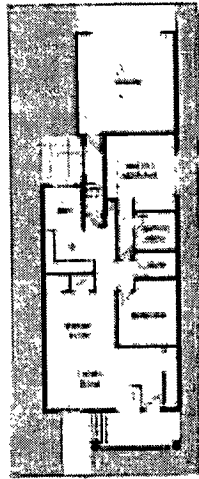
A Preliminary Plan (Case # C8-04-0043) has been filed by the Master Developer with the City of Austin, describing the layout of the neighborhoods and the Town Center. Any revisions to the layout of the neighborhoods shown in the Preliminary Plan must adhere to the following site planning standards:

- a. With the exception of multi-family residential or mixed-use sites, all properties will be served by alleys. Some exceptions to this standard may be provided as described in the guidelines for yard houses.
- b. Block lengths will typically be 600 feet or less in length, and will not exceed a maximum length of 750 feet. Cul-de-sacs are not permitted, except as an interim condition.
- c. To the extent practicable, blocks should be oriented in a north-south direction, so that the majority of detached (yard house) and attached (row house) lots present their narrower frontage to the west.
- d. At least 90 percent of all residential units will be within 600 feet of an open space (measured from the front entry of the unit to the open space along public streets), including a neighborhood park, pocket park, greenway, or Lake Park, and no unit will be greater than 850 feet from such an open space.
- e. At least 90 percent of all detached "yard-house" lots will be no greater than 5,000 square feet in area.
- f. A minimum of 1,440 detached "yard-house" units and/or attached "row house" or "shop house" units will be provided within the neighborhoods.
- g. A minimum of approximately 15 acres of land will be designated for multi-family housing or mixed-use residential/commercial development within the neighborhoods. Multi-family parcels will be distributed throughout the neighborhoods, with any one parcel not exceeding an area of approximately seven acres.
- h. Each neighborhood will include a neighborhood park with a minimum area of approximately two acres.
- i. Neighborhood and pocket parks, Lake Park, and the perimeter greenways will be lined with public streets, and residential units along those streets will front such open spaces. Rear yards will not be permitted to abut public open space.
- j. The design and treatment of streets within the neighborhoods will be consistent with the Mueller street cross sections set forth in Appendix B of this Design Book.

Note: The term "neighborhoods" as used in this Design Book may not correspond to neighborhoods created by the Master Development under the Community Covenants. Neighborhoods created under the Community Covenants are created for the purpose of facilitating a representative system of voting. There may be multiple voting neighborhoods within each of the four mixed-use residential neighborhoods referred to in this Chapter.

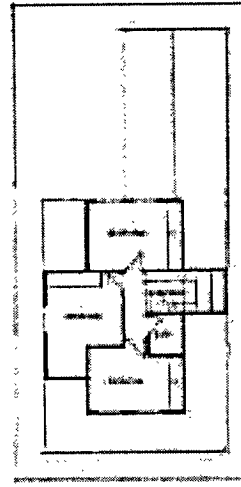
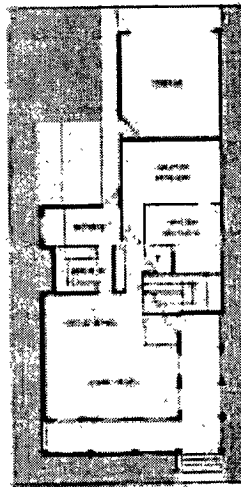
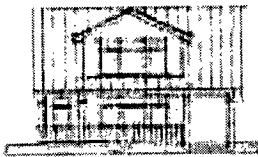
BUNGALOW

65% Impervious Cover
1330 SF Floor Area



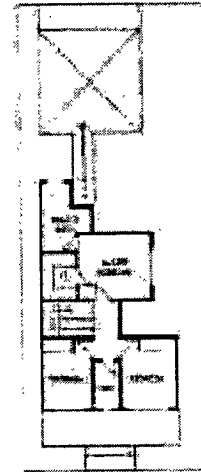
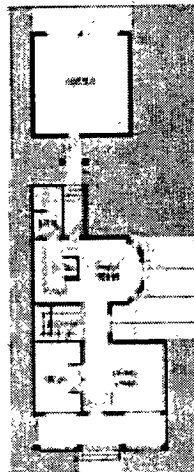
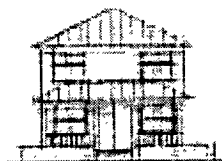
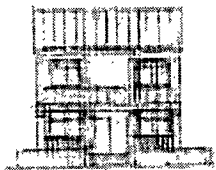
1-1/2 STORY COTTAGE

44% Impervious Cover
2330 SF Floor Area



2-STORY

45% Impervious Cover
1592 SF Floor Area



Yard House Concepts

2.1 YARD HOUSES

The single-family detached “yard house” is the predominant building type in each of the mixed residential neighborhoods. Single-family detached lots generally range in size from approximately 3,300 square feet (37' x 90') to 5,000 square feet (55' x 90'), promoting a diversity of housing opportunities. The following guidelines must be applied to the design of all yard houses within the community:

Auto Access: Yard houses will be served by rear alleys. Fronting garages will be permitted only in exceptional cases, where the garage is at least 50 feet back from the front property line, where a side yard driveway from the street is a maximum of 10 feet in width, and where the site and architectural design is skillfully employed to reduce or eliminate the visual effect of the garage.

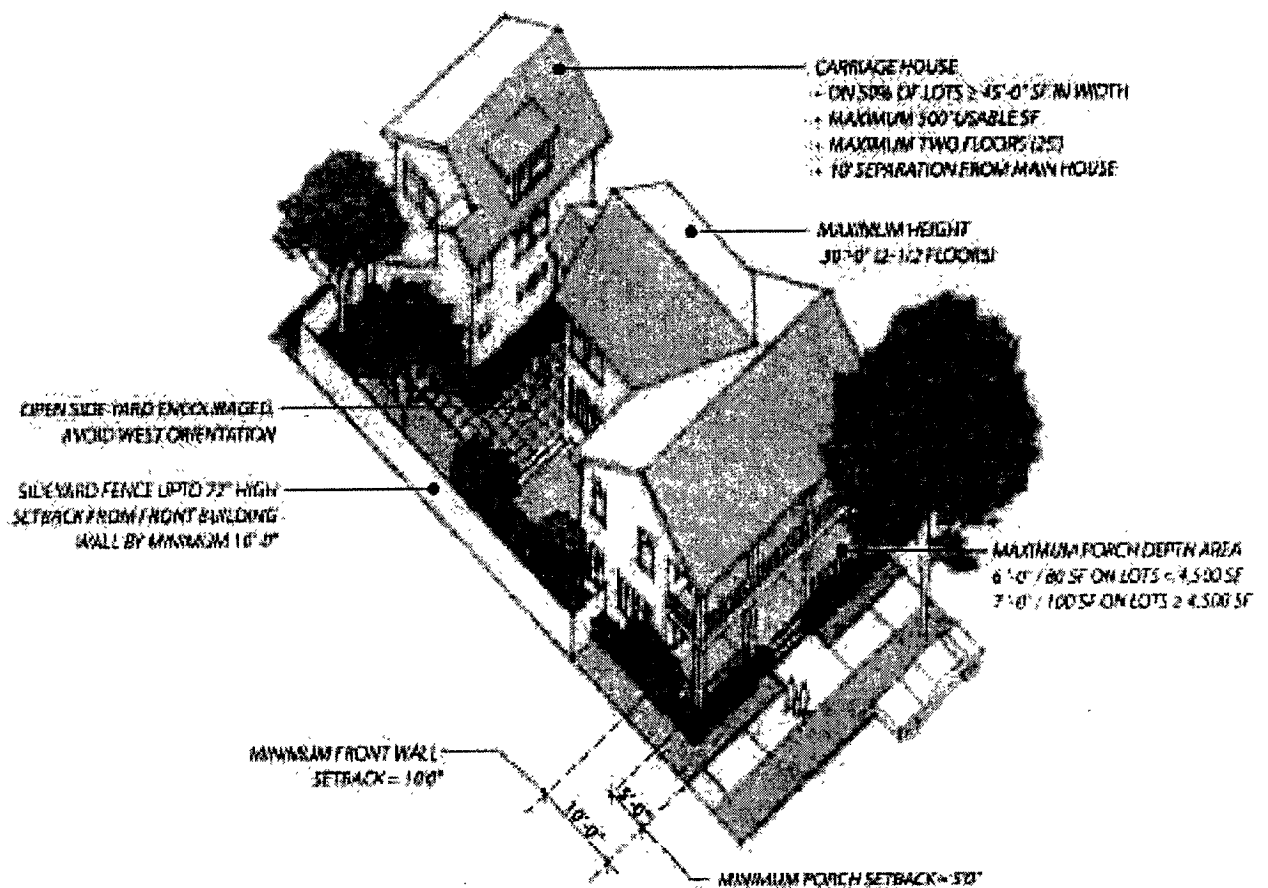
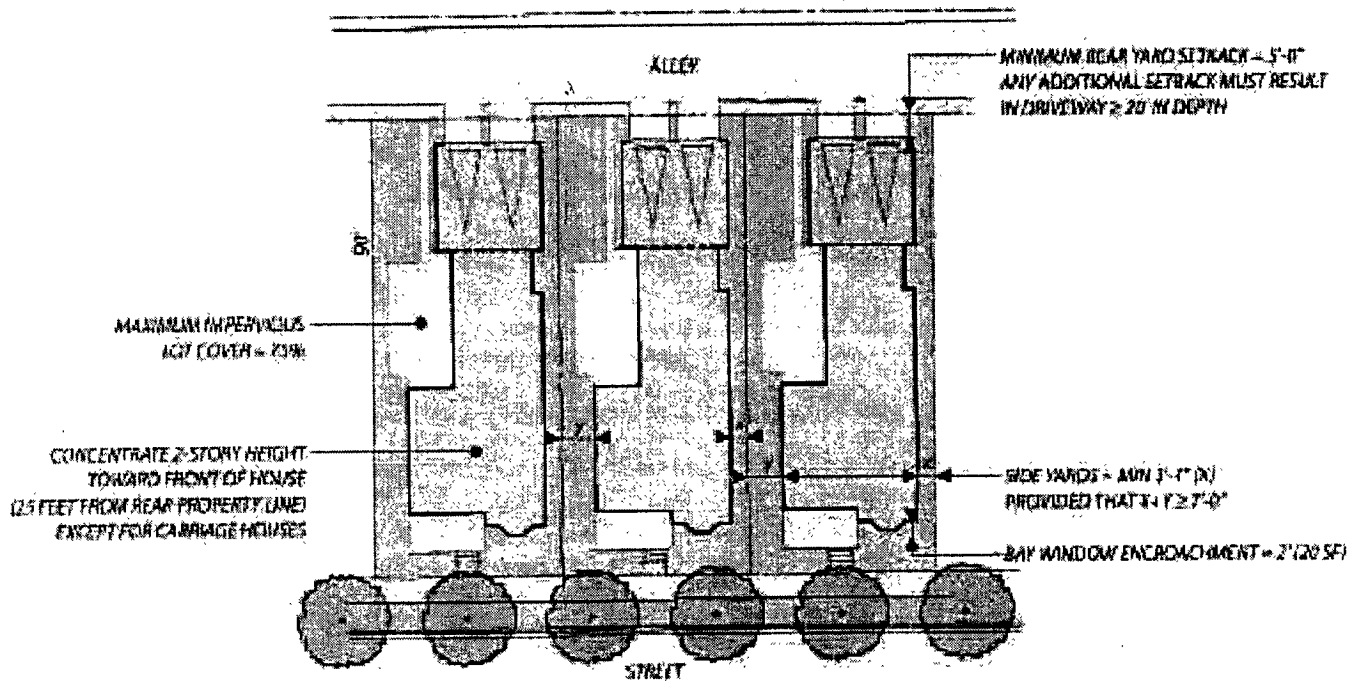
Variation and Diversity: To promote diversity and interest within the neighborhoods, the following guidelines are applied:

- Each block face should contain at least four different floor plan models with no more than two of the same building elevation. A separation of at least four lots should be maintained for any model with similar elevations, colors or materials.
- To the extent practicable, a mix of single, one-and one-half, and two-story homes should be introduced along a block face.
- A mix of materials, colors and treatments should be employed.

Porches: All yard houses will have ground level front or corner porches with a minimum area of 80 square feet and a minimum depth of six feet. Yard houses on lots of 4,500 square feet or greater will have ground level porches with a minimum area of 100 square feet and a minimum depth of seven feet. Reduction of the porch area requirements will be considered by the NCC, if such reductions are deemed to improve the visual diversity of the street frontage. Unless there

In the spirit of traditional Austin neighborhoods, Yard Houses will include a mixture of bungalows, one-and one-half and two-story buildings, all with a strong orientation to the street.





Yard House Development Standards

is no other reasonable way to meet City of Austin visitability requirements (e.g., elevating the garage to the same level as the unit), the porch will be no less than 18 inches or more than 36 inches above the elevation of the fronting sidewalk to provide privacy and clear separation from the street. The porch will be clearly delineated from the front yard with at least a 12-inch grade change; the use of columns and open railings is strongly encouraged. Two story porches and second floor cantilevered porches in the tradition of Central Texas residential buildings are also encouraged to provide additional outdoor space, and to mediate the harsh summer sun.

Roof Forms: Yard houses should have sloping roofs, employing gables, hips and dormers. To the extent practicable, south-facing slopes should be introduced to allow for the architectural integration of photovoltaics, solar water heating and induced ventilation, subject to NCC approval. The roof pitch of the principal building should generally utilize slopes of 6:12 or greater and generally no more than 9:12; however, greater slopes up to 12:12 may be appropriate where living space is incorporated into the roof. Slopes of less than 6:12 will be permitted subject to NCC approval, where eaves project from the face of the building, or for porch roof pitches and ancillary buildings and wings. Flat roofs are also permitted on ancillary structures, when they are used for outdoor terraces and decks. Mansard and false roofs are not permitted on yard house structures. Rooftop equipment (e.g., HVAC units, satellite dishes, vent stacks, etc.) will be architecturally integrated within the volume of the building, and not visible from streets, alleys or other public areas. Photovoltaic and solar water heating systems are permitted subject to NCC approval, but should be architecturally integrated into the roof and/or building form and not visible from public streets.

Building Height and Massing: Yard houses will not exceed a height of 30 feet or two-and one-half stories. Massing of two-story yard houses should:

- Concentrate height toward the front of the lot, with the two-story portion set back by at least 25 feet from the rear property line. (Exceptions will be made for Carriage Houses as described below.)
- Employ changes in volume and plane, sloping roofs, and porches to reduce the perceived scale of the structure.
- Introduce moldings, belt courses, decorative eaves and other architectural elements that provide interest and scale.



Buildings on corner lots should be sited and designed so that they present attractive elevations to both streets.

Front Yard Setbacks: The front wall of yard houses will be set back by a minimum of 10 feet from the front property line, but no more than 15 feet. (Lots on corners will be assumed to have two “fronts”.) Porches, awnings, chimneys and roof overhangs may encroach within this front yard setback area up to five feet from the front property line. Up to two bay windows will also be permitted to encroach into the front yard setback area by up to 24 inches, provided that the total floor area of the bay windows does not exceed 20 square feet.

Side Yards: Within the side yard setbacks prescribed by the Mueller zoning, buildings should be sited and designed to maximize usability of outdoor open space, to reduce summer heat gain within the home, and to optimize privacy between units. To this end, each unit should be designed with an open and closed side; the orientation of open sides should to the maximum extent possible, avoid western exposures.

Site Coverage: Yard house lots must be designed to have an impervious cover that does not exceed 75 percent.

Rear Yard: Garages will be set back from the rear property line and alley by a minimum of five feet. Any additional setback beyond five feet should be configured to ensure that no driveway is less than 20 feet in depth.

Corner Lots: Buildings on corner lots should be sited and specially designed so that they present attractive elevations to both streets. Building and landscape elements, house massing, wrap-around porches, façade composition, and other design strategies should be employed. Where a garage presents its side elevation to the street, it should be specially designed as an extension of the primary building elevation.

Terminus Lots: Houses on lots that terminate thoroughfares and/or views should be sited and designed so they respond to, and take advantage of, the specific site conditions. Care should be taken to ensure that these façades are particularly well composed and detailed.

Garages: Semi-detached and detached garages are encouraged on lots greater than 4,000 square feet to promote more usable rear yards and a more interesting and varied alleyscape. Detached and semi-detached garages should be separated from the principal mass of the building by at least 10 feet; semi-detached garages may be connected to the principal building by a one-story “breezeway” or connector with a width not exceeding 12 feet. Three-car garages are allowed only on detached garages or in semi-detached garages with tandem configurations. A maximum of one additional exterior or covered parking space is permitted on lots with a width of 45 feet or greater. The maximum size of an individual covered or uncovered off-street parking space is 12 feet by 24 feet.



Carriage house units are encouraged to promote housing diversity, live-work opportunities, and to enliven the alleys.

Carriage House Units: Carriage house units, located above detached and semi-detached garages, and on lots equal to or greater than 45 feet in width, are encouraged to promote housing diversity, live-work opportunities, and to enliven the alleys. They will be subject to the following conditions:

- The usable floor area of a carriage unit will not exceed 500 square feet.
- The general massing of the carriage house should be one-and one-half to two-stories in height; the structure will not exceed 25 feet in height, and should use sloping roofs and dormers to reduce the scale.
- The carriage house will be separated from the principal building mass by at least 10 feet.
- The design and materials of the carriage house should be complementary with the main building and surrounding structures.
- No more than 50 percent of the units along a block face will include carriage houses.

2.2 GARDEN COURTS

Garden courts are groupings of four or more yard houses or cottages around a common green. They are located within the neighborhoods to provide variation in pattern, to introduce pockets of open space, and to provide additional housing diversity. Because of their shared open space, the lot sizes may be smaller than the yard house, ranging from approximately 2,500 to 3,000 square feet. The design of the garden courts will be governed by the guidelines for yard houses, with the following additional provisions:

Relationship to Street: The front and side wall of any garden court building complex along a street will be set back 10 feet from the front property line. Porches may encroach up to five feet into this setback area. The design of the court should be open and welcoming to the street, with any fencing and landscaping no higher than 36 inches. The side elevation of a garden court home (including its attached garage) along a public street should be specially designed with the same level of architectural detail as a front elevation. (See Corner Lots above).

Garden Court Green: The width of a green, independent of the individual lots, will be no less than 30 feet. It should include a walkway of at least four feet in width providing a direct path of travel to each residential lot along the court.

Front Yard Facing Green: Garden court buildings will be set back from the green by 10 feet; porches may encroach up to five feet into this setback area.

Garden Courts are groupings of four or more cottages or yard houses around a common green.

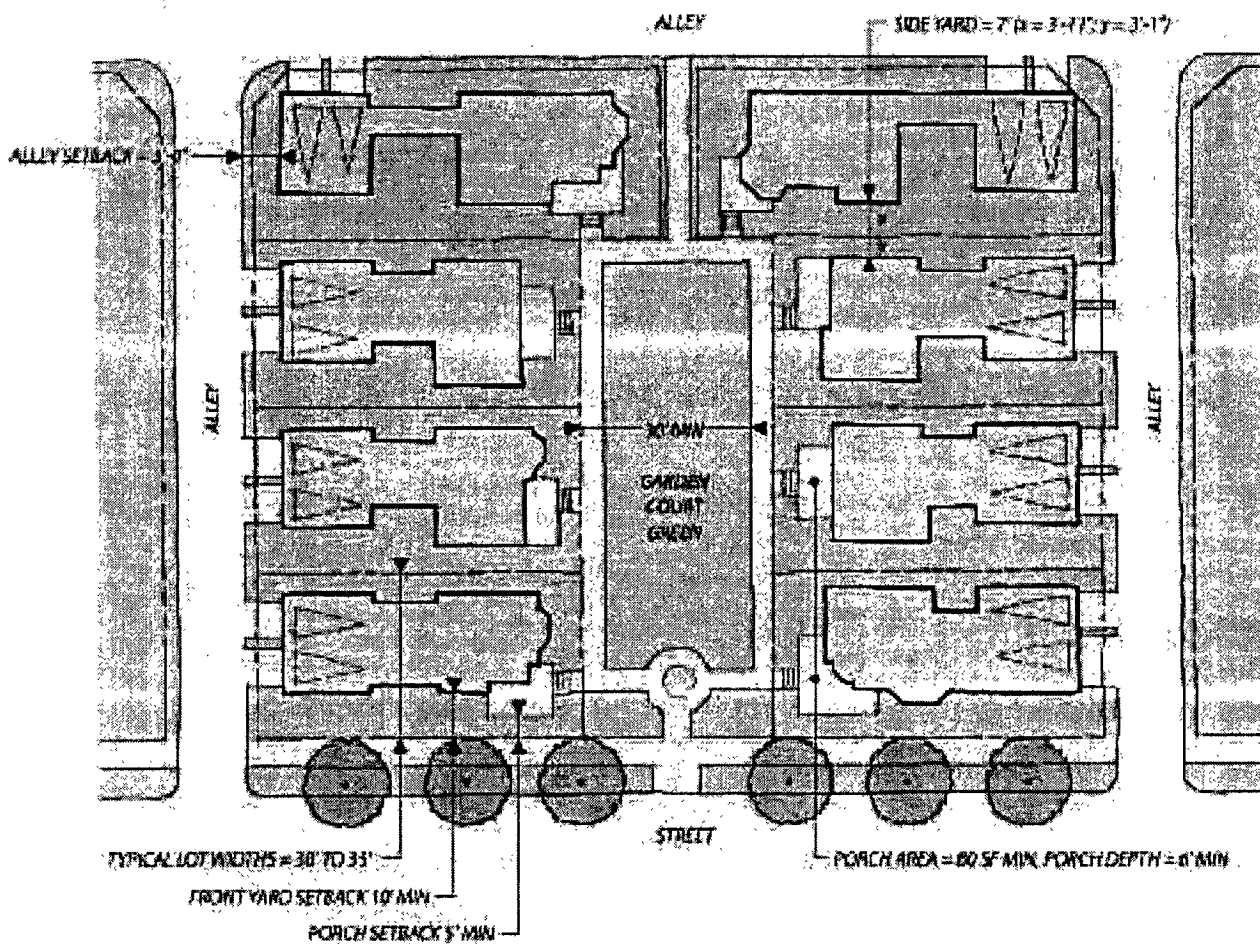


Auto Access: All garden court houses must be served by rear or side alleys. The alley should be substantially screened from the garden court green through the placement of buildings and landscaping.

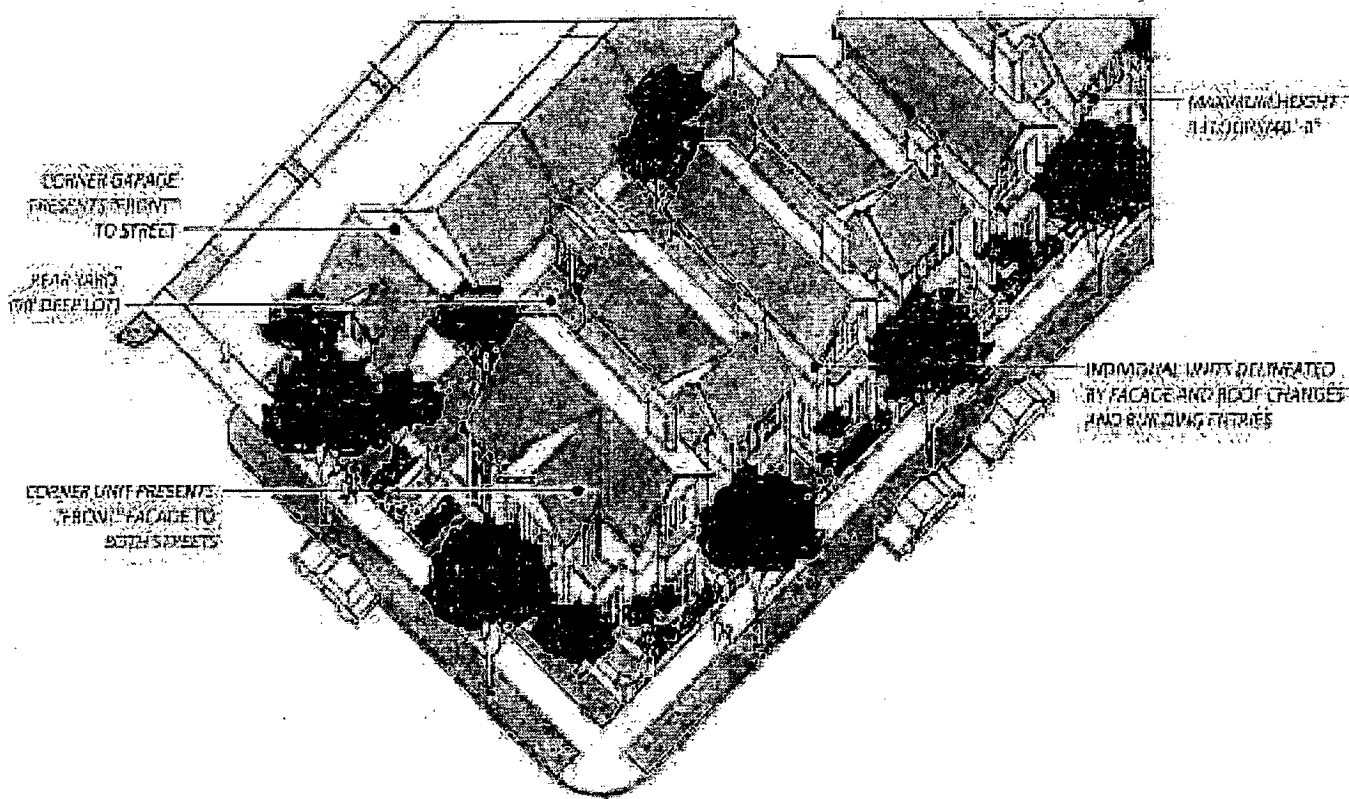
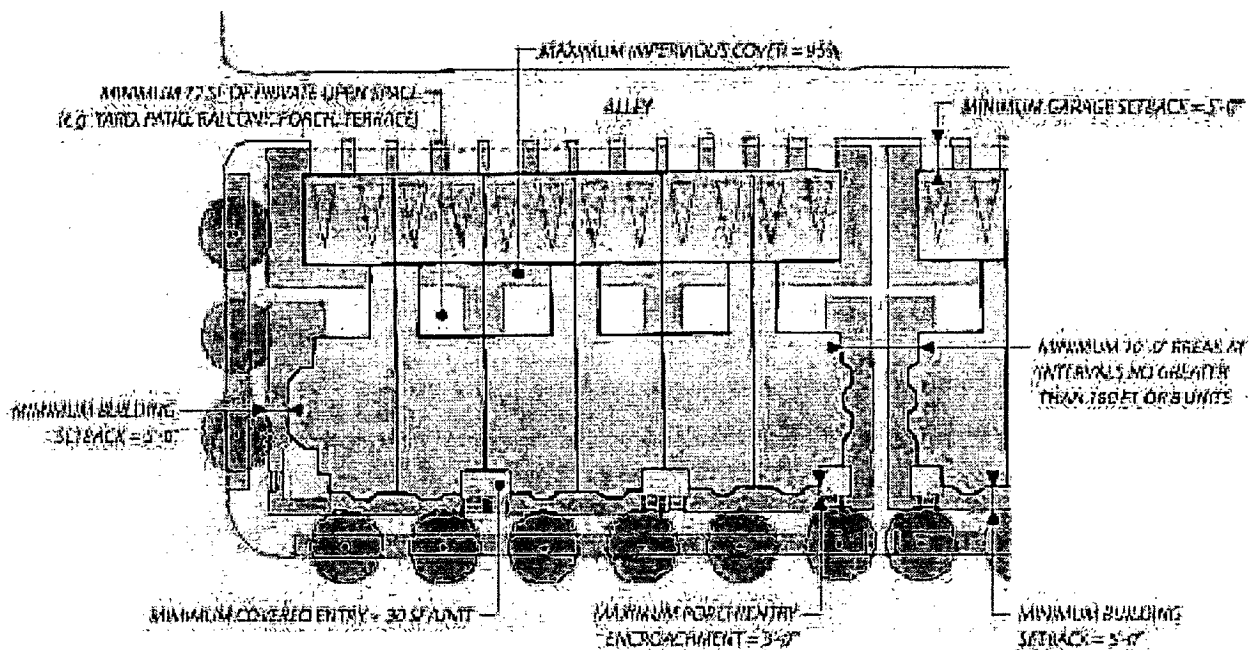
Parking: No more than two parking spaces are permitted on each garden court lot; no individual parking space may exceed an area of 12 x 24 feet.

Variation and Diversity: Within a garden court complex, there should be no more than two units with the same building elevation. The massing of individual buildings should be varied to create visual interest, and to reinforce the spatial composition of the complex and of the green.

Height and Massing: The height of garden court units will not exceed 30 feet or two-and-one-half stories. Height should be concentrated toward the green and should step down toward the alley, such that the height does not exceed 20 feet within 15 feet of the rear property line.



Garden Court House Development Standards



Row House Development Standards

2.3 ROW HOUSES AND SHOP HOUSES

Within the Mueller neighborhoods, there is a variety of attached housing that will provide lifestyle diversity and additional opportunities for home ownership. A number of different lot sizes are provided in the community, including:

- 90 x 22.5 foot lots with backyards located between the garage and the primary unit.
- 70 x 22.5 foot lots with attached garages and with the main living space located on the second floor with decks providing outdoor space; and
- 55 x 25 foot lots that provide opportunities for live-work “shop houses”.

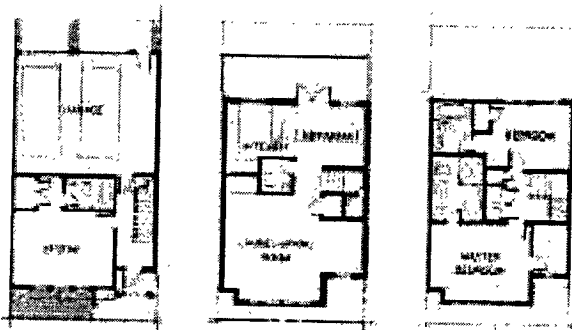
Live-work shop houses can also be located on row house lots that are located along main connecting streets and the central transit boulevard. While shop houses are similarly configured to residential row houses, they are distinguished by a ground level workspace or studio that is typically flush with the street. They are intended to provide opportunities for local economic activity and home occupations that can further reduce the need for automobile trips, and that can promote diversity of activity and character within the neighborhoods. Row houses and shop houses are governed by the following guidelines:

Residential Row Houses (left) and Live-Work Shop Houses (right) will contribute to the lifestyle diversity of Mueller's neighborhoods.



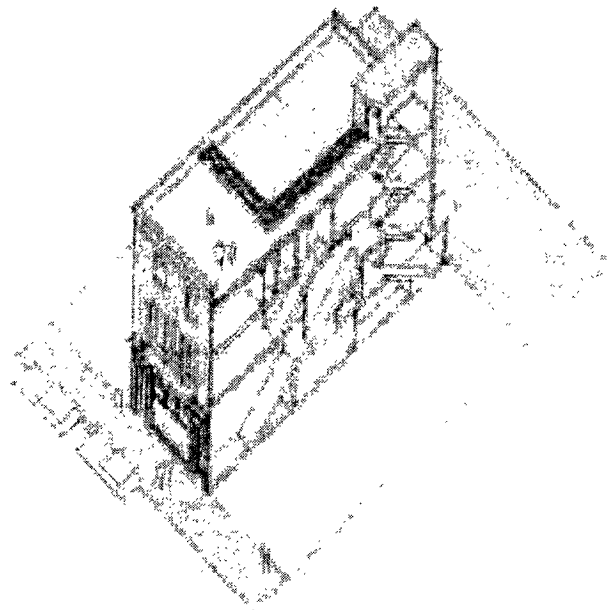
Auto Access: Row houses and shop houses are served by rear alleys; fronting garages are not permitted.

Covered Entries: Shop house units will have ground level entries relatively level with the fronting sidewalk. The porch or entry of a residential row house will be no less than 18 inches or more than 60 inches above the elevation of the fronting sidewalk. The entry will be clearly delineated from the front yard with at least 12-inch grade change from the front setback line. If there is no other reasonable way to meet City of Austin visitability requirements (e.g., elevating the garage to the same level as the unit), the NCC may allow for residential row house units to be less than 18 inches above the fronting sidewalk.



50' Deep Shop House, 95% Impervious Cover, 1,954 SF Floor Area

Shop House Concept (TRANSIT BOULEVARD AND TOWN CENTER)



Roof Forms: Except for those located along the transit boulevard (and within the Town Center), row houses and shop houses within the neighborhoods should have sloping roofs, employing gables, hips and dormers. To the extent practicable, south-facing slopes should be introduced to allow for the architectural integration of photovoltaics, solar water heating and induced ventilation subject to NCC approval. The roof pitch of the principal building should generally utilize slopes of 6:12 or greater and generally no more than 9:12; however, steeper and shallower slopes will be permitted subject to NCC approval. Flat roofs are also permitted on ancillary structures when they are used for outdoor terraces and decks. Mansard roofs are permitted on row house structures, provided that they appear from all public streets as full sloping roofs. Row houses and shop houses along the transit boulevard should employ flat roofs with a projecting cornice that provides a visual terminus to the building. Pediments are also permitted within the 40-foot height restriction. Rooftop equipment should be architecturally integrated within the volume of the building, and not be visible from streets, alleys or other public areas. Photovoltaic and solar water heating systems are permitted, subject to NCC approval, but should be architecturally integrated into the roof and building form and not visible from public streets.



As this row house example illustrates, changes in building volume and plane can contribute to a varied streetscape with individual unit identity.

Building Massing: Row house and shop house buildings may be built to a height of three floors or 40 feet, but should:

- Employ changes in volume and plane, sloping roofs, and porches to reduce the perceived scale of the structure, and to help delineate individual row house units;
- Introduce moldings, belt courses, decorative eaves and other architectural elements that provide interest and scale; and
- Not have blank side walls greater than one-story or 10 feet in height.

Front Yard Setbacks: The front wall of row houses and shop houses will be set back by a minimum of five feet from the front property line, but no more than 15 feet. On streets where row houses or shop houses are located opposite to, or on the same block as yard houses, the 10-foot minimum setback of the yard house will apply. Porches, entries, chimneys and roof overhangs may encroach into the setback area by up to two feet. Corner lots will be required to employ yard set backs on both

street frontages. One bay window will be permitted to encroach into the front yard setback area by up to 24 inches, provided that the area of the bay window projection does not exceed 20 square feet.

Site Coverage: Row house and shop house lots must be designed to have an impervious cover that does not exceed 95 percent.

Rear Yard: Garages will be set back from the alley by a minimum of five feet. Any additional setback should be at least 20 feet from the rear property line, so that no driveway is less than 20 feet in depth.

Grouping of Row Houses and Shop Houses: To break up row houses and shop houses, a minimum separation of 10 feet will be provided at least every 180 feet or every eight units, whichever is less. This separation should be utilized for pedestrian access to the alleys wherever feasible.

Corner Lots: Row house and shop house buildings on corner lots should be sited and specially designed so that they present front elevations to both streets. Special corner elements, façade composition and other design strategies should be employed to create attractive façades along both frontages.

Terminus Lots: Row houses and shop houses that terminate thoroughfares and/or views should be specially designed to take advantage of the specific site conditions.

Garages: Garages exposed to streets will be designed as an integral part of the primary building mass at the same level as a front elevation. Tandem parking is permitted and encouraged where practicable. The maximum size of an individual garage or off-street parking space is 12 x 24 feet.

Exterior Space: Each row house and shop house unit will have a minimum of 72 square feet of private exterior open space (e.g., balconies, patios, terraces, etc.) adjacent to the principal living space of the unit. The minimum depth of the space will be six feet.

2.4 MUELLER HOUSES

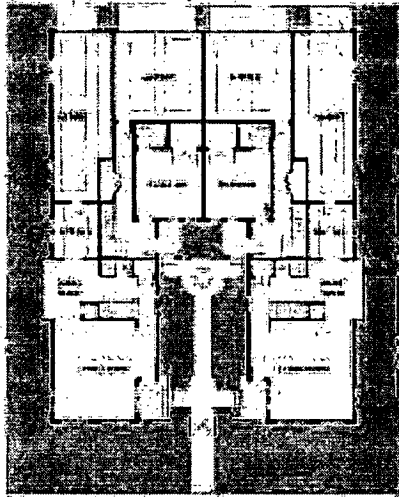
Mueller houses combine four to six living units in both single and multi-floor configurations, and are designed to appear as large single-family homes. In the spirit of traditional towns, Mueller houses are situated along both sides of a wide tree-lined parkway street that traverses the community from Lake Park and the Town Center to the neighborhood school. Mueller houses are intended to provide a distinctive identity, and a counterpoint to the surrounding detached and attached houses. The lot sizes for Mueller homes generally vary from 9,000 square feet (four-units) to 12,000 square feet (six-units). They have the following design characteristics:

- The buildings are set back from the street by 18 feet to create a generous front yard that extends the open space of the parkway.
- The buildings are also well spaced from each other, with at least 10 foot side yards on each lot, to allow for clear separation and to provide for side entries to individual units.
- Each building is designed as a large “custom” home; individual units are indistinguishable within the larger building form.
- The building employs a variety of forms and roof profiles to create an interesting and varied silhouette, and uses porches and courtyards to provide outdoor space and a transition to the street.
- While the building is designed to appear as a large home with a singular principal entrance on the front, each unit has a building entry that is accessible from the street, on the front or side elevation of the building.
- Each unit also has direct covered access to its own one or two-car garage.
- Up to eight units may be permitted within a Mueller House, if it is demonstrated that the addi-

In the spirit of traditional towns, Mueller Houses combine four to six units and are designed to appear as large custom homes.



Plan A

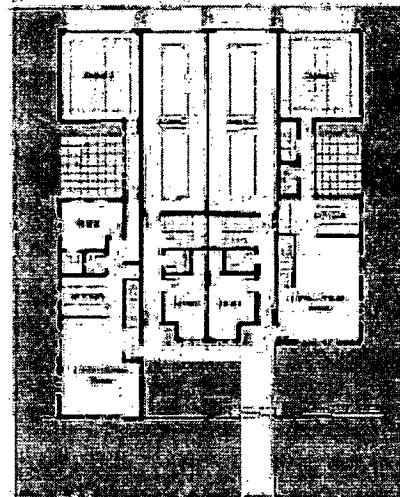


First Floor Plan



Front Elevation

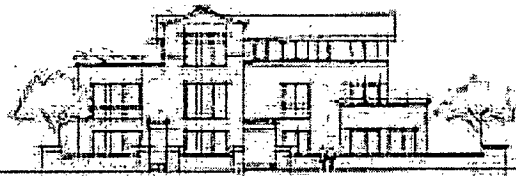
Plan B



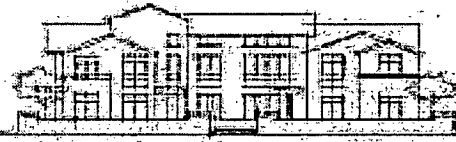
First Floor Plan



Front Elevation

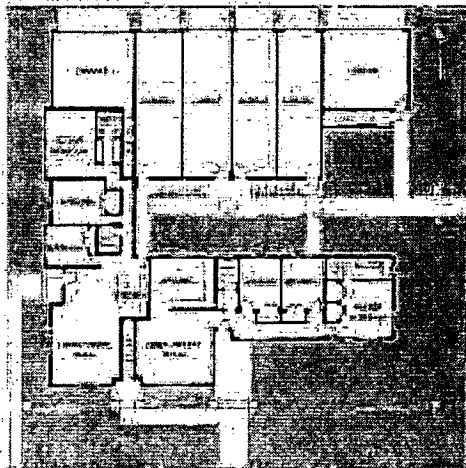


Front Elevation



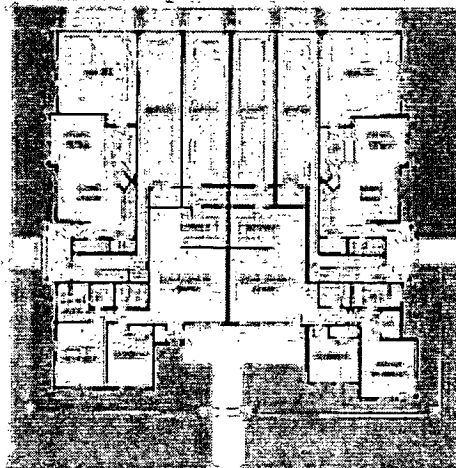
Front Elevation

Plan C



First Floor Plan

Plan D



First Floor Plan

Mueller House Illustrative Design Concepts

tional units achieve the above design characteristics without detracting from the overall appearance of the building as a large single-family dwelling.

Auto Access: Mueller Houses are served by rear alleys; fronting garages are not permitted.

Variation and Diversity: To promote diversity and interest along the parkway boulevard, the following guidelines are applied:

- Each block face should contain models with significant variation in building elevation, materials, floor plan configuration and massing.
- No more than two of the same building elevation should be employed on a block face, and these units should employ different materials and treatments to establish a unique identity. A separation of at least two lots should be maintained for any similar model.
- To the extent practicable, a mix of two-and three-story homes should be introduced along a block face.
- A mix of materials and colors should be employed.

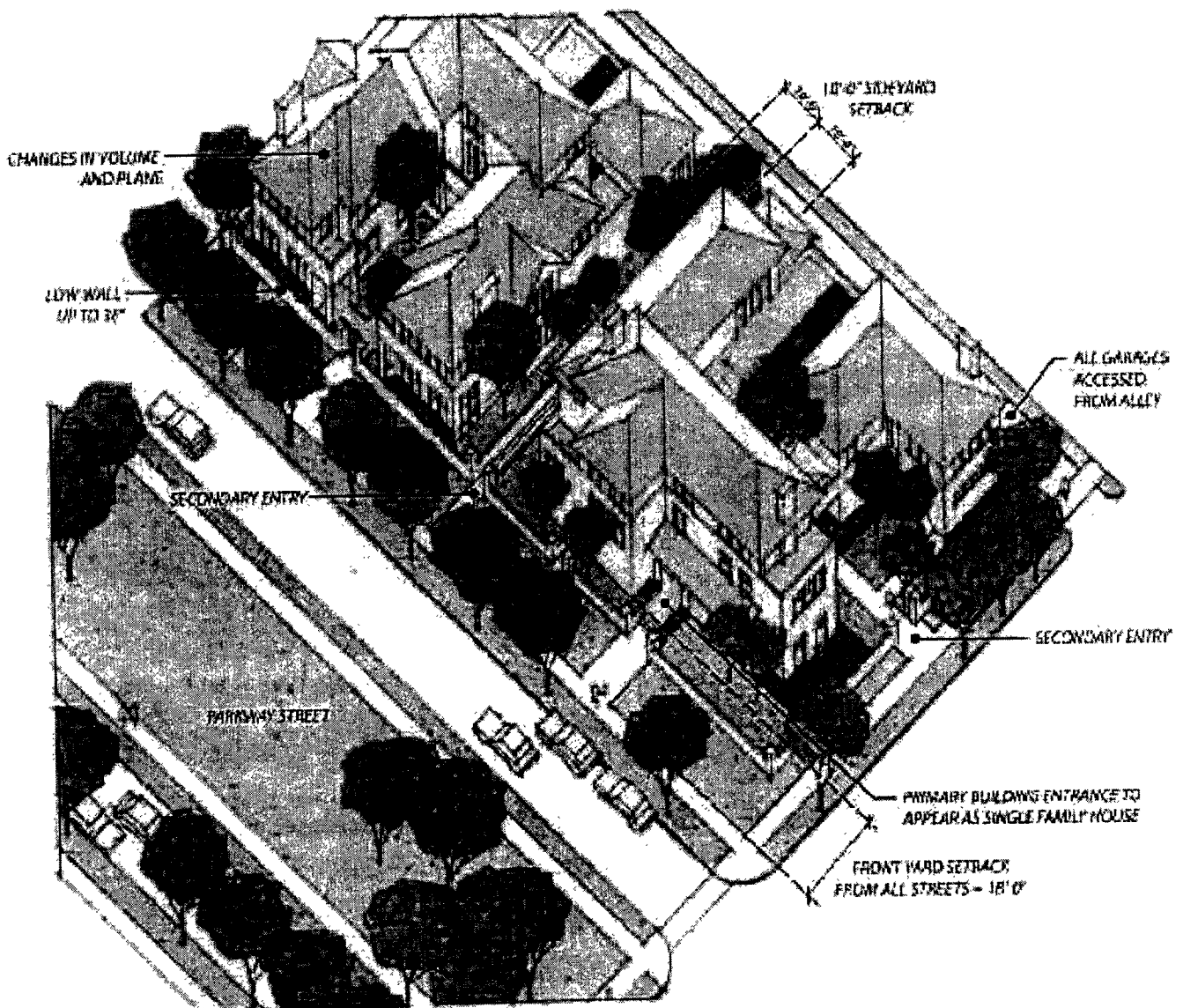
Relationship to Street/Entries: All Mueller Houses will be designed to have a primary building entrance that is in scale with the overall mass of the building, and that promotes the impression of a large single-family home. Porches and/or front courtyards defined by low walls that do not exceed 36 inches in height may be designed in conjunction with the front entry. Additional unit entries should be designed to be subservient to the primary entry, located on the side elevations, or, if on the front, downplayed architecturally (e.g., 90 degrees to the street). The porch or courtyard will be no less than 12 inches or no more than 36 inches above the elevation of the fronting sidewalk.

Roof Forms: All Mueller Houses will have sloping roofs, employing gables, hips and dormers. To the extent practicable, south-facing slopes should be introduced to allow for the architectural integration of photovoltaics, solar water heating and induced ventilation, subject to NCC approval. The roof pitch of the principal building should generally utilize slopes of 6:12 to 9:12; however, steeper or shallower slopes will be permitted subject to NCC approval. Porch roof pitches and ancillary buildings and wings may vary between 2:12 and 4:12. Flat roofs are also permitted on ancillary structures, when they are used for outdoor terraces and decks. False or mansard roofs will be permitted on Mueller Houses, provided they are designed as an

integral part of the overall building mass and composition and appear as full sloping roofs. All rooftop equipment must be concealed from streets, alleys and other public spaces. Photovoltaic and solar water heating systems are permitted subject to NCC approval, but should be architecturally integrated into the roof and/or building form and not visible from public streets.

Building Massing: Within a three-story 40-foot height limit, Mueller Houses should:

- Concentrate height toward the front of the lot; to this end, the principal building mass should be set back by at least 20 feet from the rear property



Mueller House Development Standards

line. The height of any secondary portion of the building mass or ancillary structure should not exceed one-and one-half stories or 25 feet;

- Employ changes in volume and plane, sloping roofs, and porches to reduce the perceived scale of the structure;
- Introduce moldings, belt courses, decorative eaves and other architectural elements that provide interest and scale; and
- Be designed to optimize solar access to adjacent buildings.



The significant front yard setback on Mueller Houses will contribute to the creation of a green parkway spine from Lake Park to the neighborhood school.

Front Yard Setbacks: The front wall of all Mueller Houses will be set back a minimum of 18 feet from the front property line, but no more than 25 feet. Porches, chimneys, roof overhangs and special architectural elements (e.g., towers) may encroach within this front yard setback area up to thirteen feet from the front property line. Up to four bay windows will also be permitted to encroach into the front yard setback area by up to 24 inches, provided that the area of any one bay window does not exceed 15 square feet. Corner lots are assumed to have two “fronts”.

Side Yards: To create clear building separation between Mueller Houses, and to allow for side entries, a side yard setback of 10 feet is required. Porches, entries, chimneys and roof overhangs will be permitted to encroach into the side yard setback by up to five feet. Up to two bay windows will also be permitted to encroach into the side yard setback area by up to 24 inches, provided that the total area of the bay windows does not exceed 30 square feet.

Site Coverage: Mueller House lots must be designed to have an impervious cover that does not exceed 60 percent.

Rear Yard: Garages will be set back from the alley by a minimum of five feet. Any additional setback should be at least 20 feet from the rear property line, so that no driveway is less than 20 feet in depth.

Corner Lots: Buildings on corner lots will be sited and designed so that they present front elevations to both streets. Building and landscape elements, house massing, wrap-around porches, façade composition and other design strategies should be employed to create attractive elevations on both streets.

Garages: Garages exposed to public streets will be designed as an integral part of the building mass, with fenestration and treatments equivalent to other parts of the building. Tandem parking is permitted and encouraged.

Exterior Space: Each unit within a Mueller House will have a minimum of 72 square feet of private exterior open space (e.g., balconies, patios, terraces, etc.) adjacent to its principal living space. The minimum depth of the space will be six feet.

2.5 APARTMENT HOUSES AND MIXED-USE BUILDINGS

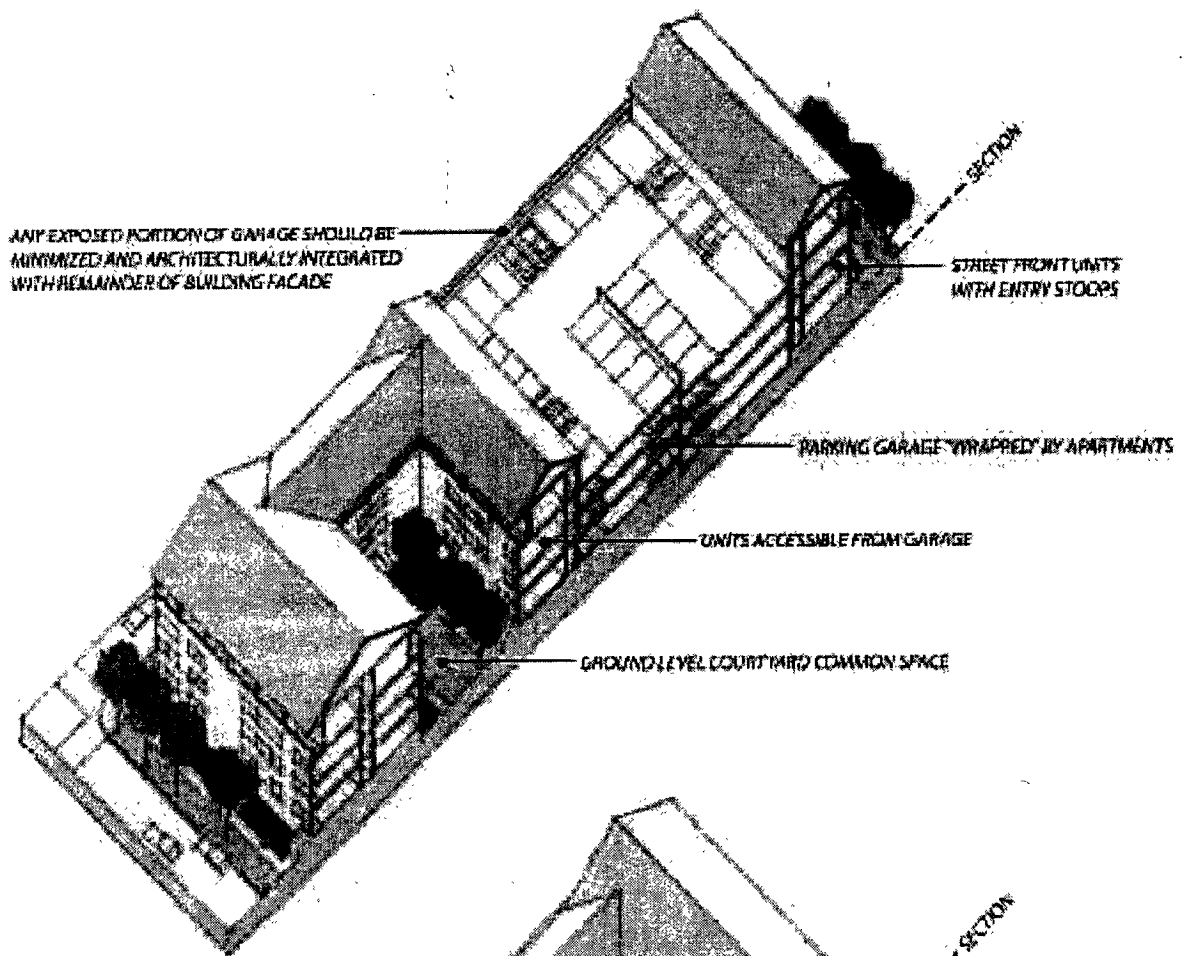
Medium-density residential and commercial mixed-use buildings are encouraged at designated locations within the Mueller neighborhoods, along the transit boulevard, adjacent to the Town Center, and at the main entry points to the community along East 51st Street and Manor Road. Rather than stand-alone projects, these buildings are envisioned as an integral part of the surrounding neighborhoods, extending the fabric of friendly streets, creating activity nodes with ground level, community-oriented uses, and providing an appropriate scale transition to nearby yard, row and Mueller Houses. Clustering of apartment houses or neighborhood-scaled office buildings at these locations offers the opportunity to create activity centers with local-serving retail and restaurant uses, as well as neighborhood-serving amenities and services at the street level. A range of residential building types are envisioned in the Mueller neighborhoods, including:

- Podium buildings, ranging in density from 40 to 75 units per acre, where housing is constructed above and/or against one or two levels of structured parking, and where the roof of the parking garage may provide an interior courtyard and common space for residents;
- Wrap buildings (40 to 75 units per acre) where housing is constructed around and against one or more levels of structured parking; and
- Walk-up and tuck-under buildings (20 to 35 units per acre), where apartments and flats are constructed around parking courts and above individual garages. (Note: This lower density building type will be allowed only subject to approval of the Master Developer and the NCC. It is not permitted in the Town Center.)

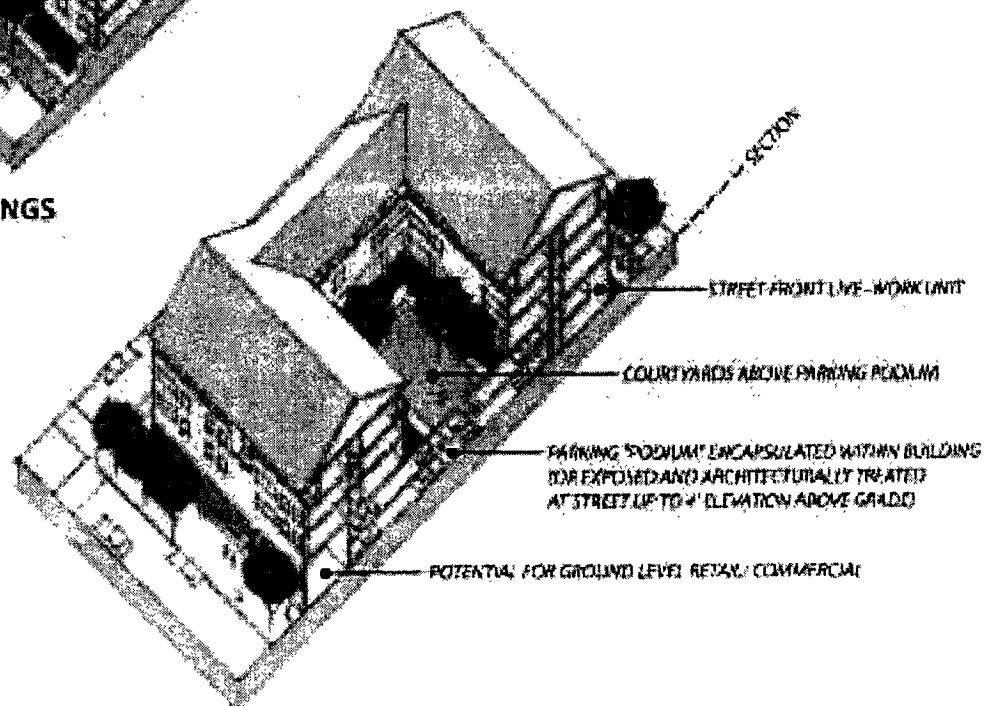
Apartment houses and mixed-use buildings should be designed to extend and enliven the fabric of neighborhood streets.

Although apartment houses are envisioned as a predominant building type in portions of the neighborhoods, commercial mixed-use office or civic buildings are also permitted. All these structures are subject to the same guidelines and have common characteristics:





"WRAP" BUILDINGS



"PODIUM" BUILDINGS

Multi-Family Building Types

- Parking is largely invisible from public view; garages are architecturally integrated and/or encapsulated within the body of the building.
- All street fronts include ground level residential units or ground level commercial storefronts with their primary entries oriented to the street and to the sidewalk.
- The buildings provide an appropriate transition in scale and character to adjacent single-family and attached housing.



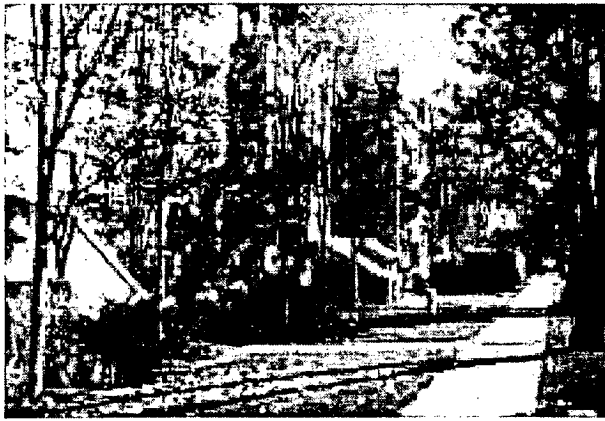
Mixed-use buildings like this example above, are encouraged at transit stops and other activity centers throughout the neighborhoods.

In order to ensure neighborhood compatibility, apartment houses and mixed-use buildings will be located on blocks separate from single-family yard houses, such that in no case will apartment houses or mixed-use buildings have abutting side yards, rear yards or shared alleys with yard houses. Similarly, apartment houses and mixed-use buildings will not have abutting side yards with row houses or shop houses, but may have common rear alleys.

The following guidelines govern the design of multi-family apartment house and mixed-use buildings within the neighborhoods:

Auto Access and Parking: Parking facilities, including surface parking lots, individual garages and parking structures will not be visible from public streets and open spaces. Garages will be architecturally integrated and/or encapsulated within the overall building mass. Limited exposure of garage façades will be considered by the NCC, if they are designed as an integral part of the overall composition. Partially-submerged garages up to four feet above sidewalk elevation will also be considered, if they are architecturally integrated into the streetfront façade. Driveways leading to parking facilities should not exceed 24 feet in width. Unless otherwise approved by the NCC, driveway curb cuts are not allowed along Berkman Drive (the transit boulevard) or Mueller Boulevard. Drop-off areas and auto courts along streets are discouraged, unless they can be achieved within the Building Relationship to Street provisions below.

Building Relationship to Street: All apartment houses and mixed-use buildings will be constructed within 15 feet of the front property line for at least 75 percent of any street front property line. At least 75 percent of such frontage should include ground level residential units or ground level commercial, retail or community-oriented space. Blank walls and service areas should be minimized. Ground



This is a good example of an apartment house with residential streetfront entries.

level residential units will have their primary entries oriented to the street, with front entries, porches or stoops; secondary or additional primary access may be provided from interior corridors or courtyards to promote convenience and to achieve accessibility and visitability standards. The floor elevation of ground level residential units will be no less than 18 inches and no more than 36 inches above the elevation of the sidewalk. Private open spaces that are visually screened from the street (e.g., enclosed balconies, terraces or patios) are not permitted on ground level units. Ground level commercial, retail or community-

oriented space should generally be flush with the sidewalk, and include storefront windows that provide a high degree of transparency. Blank walls in excess of 25 feet in length should be avoided, and architecturally-treated to create interest and detail along the street front.

Building Height and Massing: Within a four-story or 60-foot height limit, multi-family and mixed-use commercial buildings within the Mueller neighborhoods will:

- Employ changes in volume and plane, sloping roofs, loggias and porches to reduce the perceived scale of the structure, and to help provide a transition to adjacent single-family or attached homes;
- Introduce moldings, belt courses, decorative eaves and other architectural elements that provide interest and scale; and
- Be designed to optimize solar access to adjacent buildings.

On apartment house and mixed-use building lots adjacent to or across a public street from a yard house, row house, Mueller House or shop house, the height of the building will not exceed three floors or 40 feet with stepbacks that render any additional floors largely invisible from public view.

Front Yard Setbacks: Apartment houses and mixed-use buildings will be set back a minimum of five feet from the front property line, but no more than 15 feet. On streets where apartment houses or mixed-use buildings are located across a street from yard houses, a 10-foot setback should be applied to the apartment house or mixed-use building. Ground level building entries and porches may encroach into the setback area by up to 36 inches. Bay windows and "Juliet balconies" will be permitted to encroach into the front yard setback area by up to 24 inches provided

that the area of each bay window or balcony does not exceed 20 square feet, and that the placement of bay windows and balconies is composed to create visual interest and to avoid monotony.

Site Coverage: Apartment house and mixed-use building lots must be designed to have an impervious cover that does not exceed 95 percent.

Corner Lots: Apartment house and mixed-use buildings on corner lots will be sited and designed so that they present front elevations to both streets. Special corner elements, façade composition and other design strategies should be employed to ensure that attractive elevations are created along all public streets.

Terminus Lots: The portions of apartment houses or mixed-use buildings that terminate thoroughfares and/or views should be designed to take advantage of the specific site conditions, with special architectural elements and building articulation.

Exterior Private Open Space: Each residential unit within an apartment house or mixed-use building will have a minimum of 60 square feet of private exterior open space (e.g., balconies, porches, patios, terraces, etc.) adjacent to the principal living space of the unit. The minimum depth of the space will be six feet. Up to 50 percent of units within a complex may be exempt from this provision, provided that the equivalent area of private open space is added to the common open space requirement.

Exterior Common Open Space: Each apartment house or mixed-use building will have exterior common open space, with an area that is no less than 40 square feet for each residential unit within the complex. Common open space is defined as any exterior open space that is available for the use and enjoyment of all residents and their visitors including pools and pool decks, terraces, gardens, courtyards, etc. Provision for shade and relief from the harsh summer climate should be a key factor in the design of common open spaces.

Trash and Recycling Rooms and Service Areas: All trash and recycling collection facilities and service areas will be visually and acoustically screened, architecturally integrated within the body of the building or enclosed within a structure located at the rear of the property.

As illustrated by this mixed-use building, special corner treatments help to define and enliven the streetscape.



NEIGHBORHOOD BUILDINGS: CHARACTER, MATERIALS AND TREATMENTS

Character: Neighborhood buildings should be designed in the spirit of regional and Central Texas architecture, in a traditional or contemporary idiom. Common elements of Central Texas architecture that are encouraged include: shade on wall surfaces through projecting eaves to minimize direct summer solar gain; simple volumetric building forms with gabled, hipped and pyramidal roof shapes; and the use of porches, loggias, arcades, courtyards and patios to mediate the seasonal climatic extremes and to provide outdoor space.

Sustainability: Preference should be given to materials and products that enhance building energy performance and that are manufactured with raw materials that are non-toxic, low-emitting, renewable, recycled, recyclable, and/or regionally sourced and manufactured.

Visitability: All dwelling units will be required to meet City of Austin S.M.A.R.T. Housing™ Standards for visitability.

Roof Materials: Builders are encouraged to use interlocking standing seam metal roofs in a natural galvanized finish for the principal roof and/or for ancillary roof areas (e.g., porches). Other acceptable roofing materials include: composition shingles, concrete tile, slate or ceramic tile, consistent with the project goals of energy efficiency and heat island mitigation. Preference should be given to products that comply with the US EPA energy star requirements.

Building Materials: A simple and harmonious application of materials is encouraged, in keeping with the form and style of the building. An excessive number of materials is discouraged; material changes should occur when there is a change in volume and/or plane. Materials should wrap around to the sides of the building to promote three-dimensional design. Acceptable cladding materials include: Texas limestone or sandstone in light and warm tones; smooth horizontal bevel or lap fiber-cement siding four to eight inches wide, with miter cut corners, or with 5/4 by 6-inch corner boards; smooth finish clay brick in Common, English or Flemish bond patterns; painted brick; smooth finished stucco; or other similar or innovative materials deemed by the NCC to be appropriate and complementary with the neighborhood and community.

Windows: Windows are key determinants of building character, and require careful design and detailing. In keeping with the spirit of traditional regional architecture, the following characteristics should be followed:

- a. Windows should be vertically proportioned with a minimum vertical to horizontal ratio of 1.6:1.0. (Small accent windows and transoms are excepted from this guideline). Vertically proportioned windows may be grouped together horizontally up to a maximum width of nine feet.
- b. Double-hung, single-hung, casement and awning windows are permitted. Horizontal sliding windows are not permitted, unless otherwise permitted by the NCC.

- c. Wood, vinyl (solid or clad) or painted aluminum windows with traditional profiles and double-glazed are permitted. Mill finished aluminum windows are not permitted.
- d. Divided lights are encouraged, but muntins should be properly proportioned in relation to the window with a minimum 1/2-inch width, and constructed to be an integral part of the window. "Snap-in" decorative muntins are prohibited, except on exit doors at the rear of the house.
- e. Shutters should be proportioned and sized so that they could enclose the window, if operable.
- f. All windows should include surrounding trim appropriate to the materials, style and proportion of the home. Windows should be set back from the main face of the wall by at least one-and one-half inches to create a shadow line and an appearance of solidity.

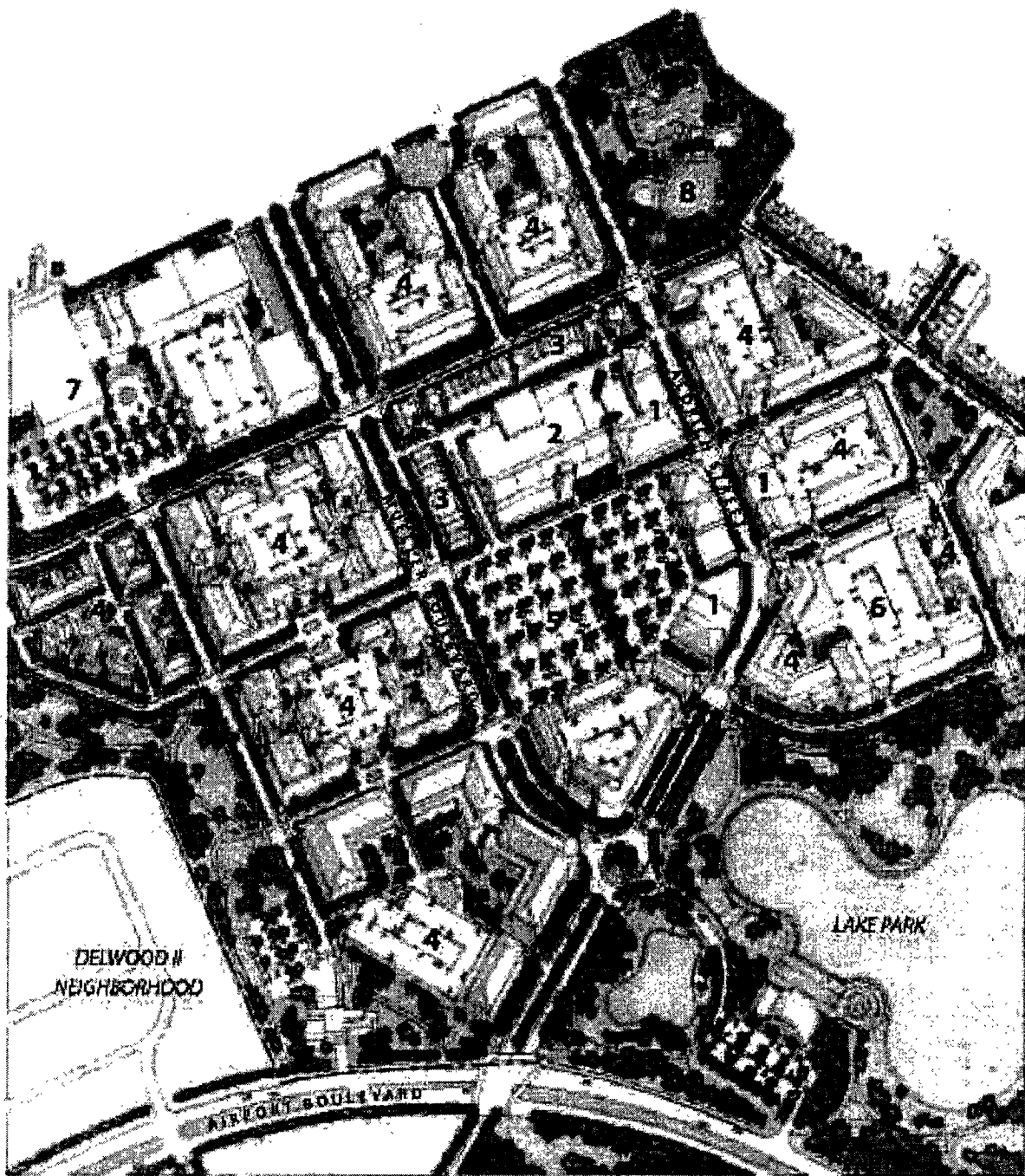
Doors: Doors should be carefully designed to be in scale and character with the building. More specifically:

- a. With the exception of garage doors, doors should generally be hinged.
- b. Sliding glass doors should be located only on rear or interior side yard elevations.
- c. Permitted door materials include painted or stained wood, hardboard, fiberglass or metal. Door color selection should be coordinated with the house composition and design.

Exposed Foundations: Exposed building foundations should not exceed 24 inches above grade. When more than 12 inches of foundation is visible, cover walls should be provided with masonry, painted or finished with stucco or cement wash.

Fencing and Walls: Hedges or low fences of wood or metal up to 36 inches in height are permitted along a fronting property line, subject to NCC approval. Privacy fences up to a height of 72 inches are permitted on side yards and rear yards, provided that the side yard privacy fence is set back at least 10 feet from the front building façade. Fences should be coordinated with the design of the building in terms of color, scale and detailing. Along alleys, fences are encouraged to permit some views into the rear yard and to have gates that provide pedestrian access as applicable. Low retaining walls constructed of stone, brick, architectural concrete or similar material approved by the NCC, up to 18 inches in height are also permitted along the front property line.

Technology: Builders will be required to adhere to wiring, networking and technology guidelines established for Mueller.



Town Center Illustrative Plan

1. ALDRICH STREET SHOPS
2. GROCERY STORE ANCHOR
3. ROW HOUSES/SHOP HOUSES
4. MIXED-USE RESIDENTIAL/COMMERCIAL
5. ORCHARD PARKING
6. PUBLIC PARKING GARAGE
7. DELL CHILDREN'S MEDICAL CENTER OF CENTRAL TEXAS
8. NEIGHBORHOOD PARK

THE TOWN CENTER

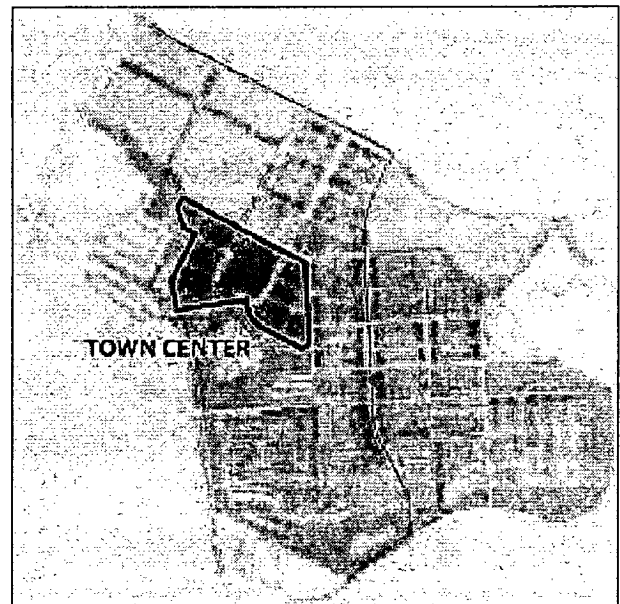
Introduction

The Mueller Town Center is envisioned as a vibrant mixed-use district at the heart of the new community... a place where residents, workers and visitors are naturally drawn ... a place to shop for everyday needs, to meet friends for lunch or dinner, to enjoy a concert or movie in Lake Park, or just to take a leisurely stroll down Aldrich Street with its unique shops and restaurants. It is envisioned that the combination of local businesses and the friendly pedestrian orientation of the district will make it an attractive destination, not only for the Mueller community, but also for surrounding neighborhoods throughout the City. The configuration and design of the Town Center is predicated on several key criteria:

Identity: The Town Center is located at the gateway to Mueller along Airport Boulevard, and overlooking Lake Park, the principal open space of the new community. Aldrich Street, Mueller's Main Street, has a direct connection to Airport Boulevard, giving it regional and citywide identity and visibility that will be critical to its ongoing success and viability.

Connectivity: The Town Center is an integral part of the Mueller community and a seamless extension of the surrounding neighborhoods. The pattern of blocks and streets and the perimeter greenway provide direct pedestrian, and bike connections, making it a five-to ten-minute destination from planned transit facilities and most homes within the community.

Walkability: The Town Center is a place for pedestrians of all ages. Aldrich Street is designed with shady tree-lined sidewalks with arcades and awnings for promenading and outdoor dining. The network of streets leading to it is enlivened by shops, galleries, lofts, small businesses and row houses.





The Mueller Town Center is envisioned as a convenient and friendly mixed-use district at the heart of the new community – a place where residents, workers and visitors are drawn to shop as well as live, work and play.

Convenience: The Town Center is programmed and configured to be convenient for residents and employees alike. A major grocery store will anchor the district; the grid of streets is designed to promote easy access and mobility for motorists as well as pedestrians; and a centralized supply of shared “orchard” parking is provided within close walking distance of all businesses.

Diversity: The Town Center is more than a place to shop. With its mix of apartments, lofts, live-work lofts, shop houses and offices, it is also a great place to live and do business.

Authenticity: The Town Center represents the best of Austin. Local retailers, restaurateurs, and other homegrown businesses are encouraged within the district, giving it a distinctive Austin character.

The vision for the Town Center has evolved through the extensive community planning process, and through the more detailed development planning that has taken place with the Master Developer. The development strategy calls for the creation of a diverse mixed-use district with the following key components:

- A grocery store anchor and local-serving retail uses strengthen the role of the Town Center as a daily destination within the community. The grocery anchor is situated at the northern edge of the Town Center linked to Aldrich Street, the main pedestrian spine of the district, by smaller local-serving retail uses.
- Food, entertainment and specialty retail uses anchor the southern terminus of Aldrich Street. Overlooking Lake Park, this part of the Town Center will evolve as a place for social interchange and recreation, featuring special events and celebrations that bring the surrounding community together.
- In between these anchors, and surrounding the Town Center, vertical mixed-use development including residential and office above ground level commercial and retail uses will promote vitality and diversity of activity within the area.
- Parking for ground level retail uses will be centralized within the Town Center to promote the creation of a cohesive and convenient district, and to allow the district to develop incrementally with a finer-grained pattern of uses. An orchard parking lot as well as a public garage are positioned on either side of Aldrich Street.

The ultimate design and implementation of the Town Center will involve the further participation of developers, users and tenants, architects and designers. Prior to the review and approval of individual building projects, an overall architectural master

plan for the Town Center must be submitted to the NCC to provide the basis for subsequent building projects. The architectural master plan must comply with the design guidelines included in this chapter.

There are five basic building types that make up the Town Center, including: retail/mixed-use buildings along Aldrich Street; commercial and residential mixed-use buildings located on the blocks east of Aldrich Street and west of Mueller Boulevard; the grocery store anchor; the public parking garage building; and row houses and shop houses against the back and side of the grocery store.

In addition to these basic building types, civic, religious and other types of institutional buildings may also be located in the Town Center, provided that the location and design of these buildings are described in the Town Center architectural master plan, and are determined by the NCC to be in keeping with the intended identity and character of the Town Center, consistent and complementary with the vision of a mixed-use and pedestrian-oriented district. Civic or institutional buildings may not be located along the Aldrich Street frontage. Parking for civic and institutional buildings will be provided in the shared public facilities, and/or on-site in architecturally integrated and encapsulated garages or parking courts that are not visible from public streets.

TOWN CENTER SITE PLANNING STANDARDS

A Preliminary Plan (Case # C8-04-0043) has been filed by the Master Developer with the City of Austin, describing the layout of the neighborhoods and the Town Center. Any revisions to the layout of the Town Center as shown in the Preliminary Plan must adhere to the above-stated principles, and to the following site planning standards:

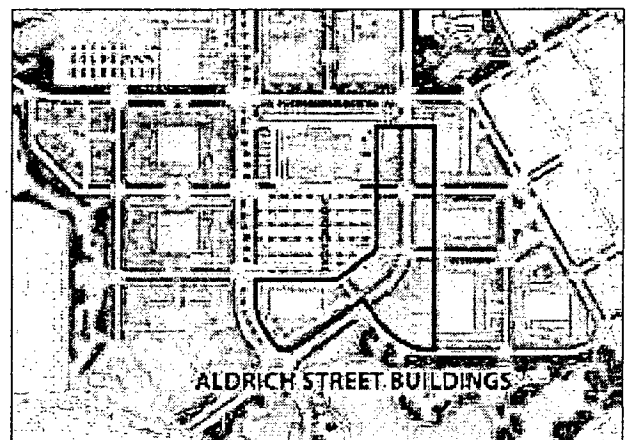
- a. The Town Center will include a principal street that is designed to be a major gathering space of the Mueller community, and to which retail uses will be oriented. The street will connect to the surrounding Mueller neighborhoods, Lake Park, and Airport Boulevard.
- b. The Town Center will include a pattern of blocks that provide street-front activity and connections to adjacent neighborhoods and districts.
- c. Surface parking lots, parking structures and service areas will not be located along the principal gathering street.
- d. The design and treatment of streets within the Town Center will be consistent with the Mueller street cross sections set forth in Appendix B of this Design Book.

3.1 ALDRICH STREET BUILDINGS

Aldrich Street is the principal commercial and retailing street within Mueller and an important pedestrian promenade linking Lake Park on the south with the neighborhoods to the north. The 80-foot-wide right-of-way with its 20-foot-wide tree-lined sidewalks, convenient curbside parking and continuous line of shop fronts is seen as one of Mueller's key gathering places, and as a place that will provide a strong image and identity for the community. As such, the design of buildings along its edges will be key to the success of the Town Center as an attractive destination. In the spirit of Main Streets throughout Central Texas, buildings along the street will have the following characteristics:

- A continuous frontage of high bay retail, restaurant or pedestrian-oriented uses built to or near the property line of the street.
- Projecting canopies, pergolas and awnings and/or arcades and colonnades that, in addition to the street trees, provide cover and shade along the length of the street.
- A pedestrian-friendly scale with the predominant building height along the street of two-to three-stories, with any additional height stepping back from the street front.
- Multiple building parcels with a change in architectural expression at intervals of approximately 50 feet to promote diversity, interest and a fine-grained character.
- Upper level uses, including residences and offices, that overlook the street and provide additional intensity of activity.
- Parking that is either architecturally encapsulated within the building and/or is located in one of the Town Center's shared facilities.

All buildings along Aldrich Street must comply with the following design guidelines:





With its tree-lined sidewalks and neighborhood shops, Aldrich Street will be one of Mueller's principal gathering places.

Building Height and Massing: Buildings along Aldrich Street will be no more than three floors or 45 feet in height to maintain a cohesive town scale along the frontage; any additional height up to five floors or 65 feet will be stepped back by at least 10 feet from the face of the building. Any portion of the building above 65 feet and up to 100 feet must be stepped back from Aldrich Street by at least 30 feet, and oriented to one of the side streets within the Town Center.

Minimum Height: While the predominant height of buildings along Aldrich Street will be two to three floors, one-level buildings will be permitted if they are deemed by the NCC to add to the interest and vitality of the street; if they have a minimum height to the top of the parapet of 25 feet; and if they represent less than 50 percent of a block frontage.

Building Setbacks and Build-to Lines: Aldrich Street buildings will be built to within five feet of the property line of the street, to create a continuous street wall along the length of the street.

Encroachments: Projecting awnings, canopies, arcades, pergolas and upper level porches are permitted to encroach into the public right-of-way of Aldrich Street by five feet. In the tradition of Central Texas commercial buildings, canopies, arcades and projecting colonnades should be designed as delicate additions to the buildings in an accenting material (e.g., wood or metal) to maximize the visibility of individual storefronts.

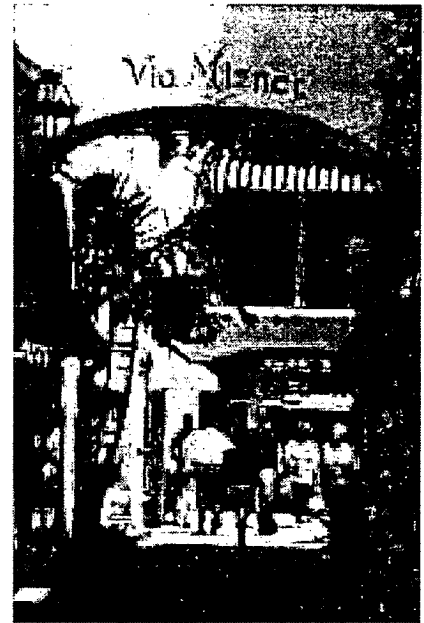
Exterior Open Space: Aldrich Street buildings are encouraged to provide paseos and courtyards that provide pedestrian linkages to public parking facilities, and/or to other Town Center activities. Such spaces should be designed to provide shade and cover for pedestrians, as well as opportunities for outdoor dining, informal seating, street vending and performances, as well as small gatherings.

Ground Level Activities: The ground level of Aldrich Street will include active pedestrian-oriented uses. First priority will be given to retail and restaurant uses that create the most intensive level of pedestrian activity. Uses that cater to the public and that promote walk-in business (e.g., galleries, personal and financial services, real estate offices, etc.) are also permitted, provided that such space is designed to allow for future occupation by retail or restaurant use. Ground level residential is not permitted along Aldrich Street, or along the shared orchard parking lot, unless it is designed as live-work loft space that could be converted to retail in the future.

Ground Level Treatment: The street frontage along Aldrich Street will be designed with high bay storefronts, with a building floor-to-floor height no less than 16 feet, and with a window to wall transparency ratio on the ground floor storefront of at least 60 percent. The primary entry to all ground level uses must be oriented to Aldrich Street at intervals no less than 50 feet. Secondary entries and storefronts should also be provided to the extent practicable along the orchard parking lot frontage. High quality accent materials should be employed along the ground level storefronts of both Aldrich Street and the orchard parking. Such materials could include stone, wood, and metals; other decorative features should be utilized to create interest and scale along all public frontages of the building. Reflective glass is prohibited.

Façade Treatment: A key objective for Aldrich Street is to create a diverse and fine-grained pattern of buildings, reflecting the personality of individual businesses, and providing a varied and interesting townscape. Larger buildings should employ changes in volume and plane to create diversity rather than applied or contrived façade expression. Changes in floor-to-floor dimension are also an effective way in modulating streetfront expression. In general, Aldrich Street buildings should be designed with window openings that “puncture” the building wall in a vertical rather than horizontal proportion; curtain walls and horizontal strip windows are discouraged. Balconies, loggias, bay windows, roof eaves, and other architectural devices that promote scale and interest are encouraged.

Roof Treatment: Buildings along Aldrich Street can employ flat or sloping roofs. Decorative building parapets that provide a distinctive silhouette should be considered for flat-roofed buildings; while projecting eaves, exposed beams and decorative brackets should be integrated into sloping roof designs. Sloping roofs should utilize concrete or clay tile in warm colors or standing seam metal roofs in a natural galvanized finish, compliant with energy performance guidelines. Composition shingles are prohibited in the Town Center, except as permitted by the NCC for row houses and shop houses.

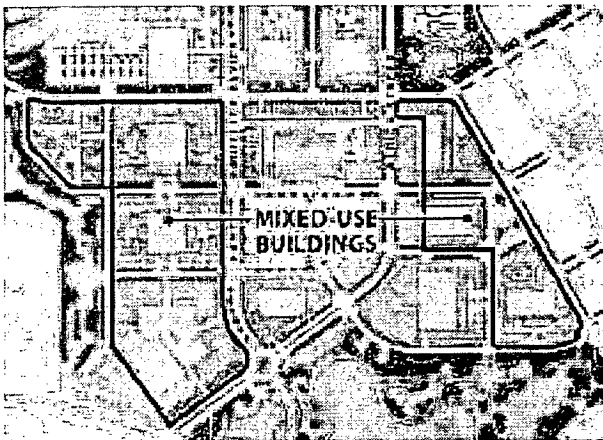


Aldrich Street buildings are encouraged to provide paseos and courtyards, like this example in Palm Beach, to provide pedestrian linkages to public parking facilities, and/or to other Town Center activities.

3.2 MIXED-USE BUILDINGS

Mixed-use residential and commercial buildings on the blocks east of Aldrich Street and west of Mueller Boulevard will further intensify the level of pedestrian activity in the Town Center. Office buildings and apartment houses, in conjunction with shop houses and row houses (see below) will establish the Town Center as a pedestrian-intensive district with a rich diversity of activity. Mixed-use buildings within the Town Center will share the following characteristics:

- Buildings will be built to or near the front property line to provide strong spatial definition to the streets.
- Ground level uses will include retail shops, offices, live-work studios, and residential row houses to reinforce the pedestrian character of the street.
- At least one floor of upper-level residential or office use will be provided to create a critical mass of people living and working in the Town Center, and to contribute to the vibrancy of its day and nighttime environment.
- West of Mueller Boulevard, a mix of uses is desired such that no more than 75% of the total building floor area within this area will be in either multi-family residential or commercial office space.
- Parking will be architecturally integrated and encapsulated within the building complex.



- Outdoor space, including courtyards, paseos, balconies, terraces and gardens will be provided to extend the pattern of pedestrian-friendly streets and to provide additional gathering places for employees and residents.

While the architectural master plan will provide additional detail and delineation of specific architectural approaches within the Town Center, mixed-use buildings must comply with the following guidelines:

Building Height and Massing: Mixed-use commercial and residential buildings within the Town Center must comply with the following height and massing guidelines:

- West of Mueller Boulevard, buildings will not exceed 65 feet or five floors, and must step down to comply with the Mueller PUD zoning and City of Austin compatibility standards in relation to the Delwood II neighborhood.
- East of Mueller Boulevard, buildings will be permitted to a height of 100 feet or eight floors, provided that:
 - The buildings comply with the height and setback provisions described for Aldrich Street buildings above.
 - Any portion of the building above 65 feet or five floors is sited and configured in a manner to: create landmark elements that contribute to the creation of a legible and attractive townscape in the Town Center, and to avoid excessive winter time shading of public spaces, streetscapes and parkland (e.g., between 11:00 am and 2:00 pm). Higher buildings should also be configured to minimize winter shading of adjacent private structures.
 - Appropriate transitions are made to the adjacent residential neighborhoods, such that there is no more than three stories or 36 feet of height difference between mixed-use buildings and neighborhood residential buildings (i.e., yard houses, row houses, Mueller Houses, apartment houses) within 300 feet of such buildings, or two stories or 24 feet of height difference within 200 feet; or one story or 12 feet of height difference within 100 feet.



Mixed-use buildings in the Town Center will have active ground level retail and commercial uses.

Minimum Height: The minimum height of all mixed-use buildings is two floors or 30 feet.

Building Setbacks and Build-to Lines: Mixed-use buildings will be set back from the property line by at least five feet, but no more than 10 feet, and maintain a continuous street wall for at least 75 percent of the street frontage.

Encroachments: Projecting canvas awnings, pergolas, canopies, arcades and upper-level porches are permitted to encroach into the setback area. In the tradition of

Courtyards and paseos that enrich the pedestrian experience are encouraged within Town Center mixed-use buildings.



Central Texas commercial and mixed-use buildings, such encroachments should be designed as delicate additions to the buildings in an accenting material (e.g., wood or metal).

Exterior Open Space: Mixed-use buildings are encouraged to provide courtyards and other exterior open space for the use of residents, employees and visitors. Each mixed-use residential building will have exterior common open space, with an area that is no less than 40 square feet for each residential unit within the complex. Common open space is defined as any exterior open space that is available for the use and enjoyment of all residents and their visitors including pool decks, terraces, gardens, courtyards, etc. Provision for shade and relief from the harsh summer climate should be a key factor in the design of common open spaces.

Ground Level Activities: Mixed-use buildings will introduce ground level uses as follows:

- Ground level commercial or loft space that can be converted to retail in the future will be provided along the frontage of the orchard parking lot and along east-west streets within 100 feet of the Aldrich Street frontage.
- For all remaining Town Center street frontages, east and west of Aldrich Street and Mueller Boulevard, the ground level street front will be designed with either commercial space as described above, or with ground level residential uses.

Ground Level Commercial Treatment: Ground level commercial space will be designed with high-bay storefronts, with a floor-to-floor height no less than 16 feet, and with a window to wall transparency ratio of at least 50 percent. The primary entry to all ground level uses will be oriented to the adjacent street at intervals no less than 75 feet. High quality accent materials should be employed along ground level commercial space, including stone, wood, and metals; other decorative features should be utilized to create interest and scale along the street. Reflective glass is not permitted. Front yard landscaping and hardscape with planting and seating areas is encouraged within the setback zone.

Ground Level Residential Treatment: Ground level residential space will be elevated at least 18 inches but no more than 60 inches from the elevation of the sidewalk to provide privacy and separation. Residential building lobbies and unit entries, porches and stoops should be located along the street front. Private open space (e.g., enclosed patios, terraces, etc.) is not permitted along street fronts.

Façade Treatment: Mixed-use buildings will be designed to create a pedestrian-scaled and varied streetscape, with the following characteristics:

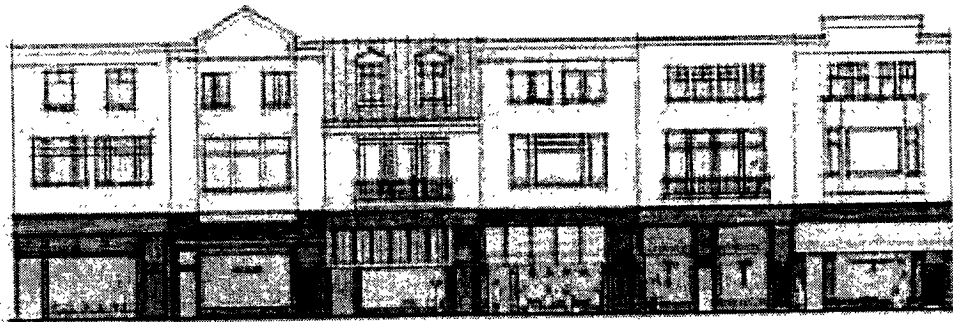
- Window openings composed and varied, with windows generally in a vertical proportion. Strip windows and curtain walls are not permitted.
- Variation in building volume and plane to reduce the perceived scale of the building, and to create visual interest along the street.
- Architectural elements including projecting bay windows, balconies (in a non-repetitive pattern), loggia, canopies, pediments, moldings, etc., that further break up the mass of the building.
- Four-sided and volumetric architecture, with materials that wrap around to the sides of the structure and that contribute to the three-dimensionality of the building.
- Architectural delineation between the building's base, its upper levels and the roof silhouette.

3.3 SHOP HOUSES AND ROW HOUSES

Shop houses and row houses, as described in Chapter Two, are also permitted in the Town Center to increase the diversity of street front activity and building form within the area. Town Center shop houses will comply with the guidelines set forth in Chapter Two, and their siting within the Town Center will be guided by the following criteria:

- Residential row houses should not be located along or within 100 feet of Aldrich Street or portions of Mueller Boulevard within the Town Center.
- Live-work shop houses may be located throughout the Town Center, provided that ground level space can be converted to retail space in the future. They should be sited to extend the pattern of ground level commercial uses on the streets east and west from Aldrich Street, and, if possible, to provide a screen to the service areas of the grocery anchor along Mueller Boulevard and Philomena Street.

Shop houses are encouraged throughout the Town Center to promote small businesses and a 24-hour live-work environment.



3.4 THE GROCERY ANCHOR

A major grocery store anchor is an important element of the Town Center to ensure its role as a convenient neighborhood retail destination for Mueller and area residents. A facility of up to 90,000 gross square feet is permitted within the Town Center, provided that it meets the following conditions:

- The design of the anchor and its exterior building materials is described in the architectural master plan, and is determined by the NCC to be in keeping with the intended identity and character of the Town Center.
- The design and siting of the grocery store does not devalue or denigrate adjacent properties or Aldrich Street.
- Truck docks, service areas and the blank side and rear walls of the grocery store are visually and acoustically screened with “liner uses” (e.g. retail, shop house lofts), architectural noise walls of up to 12 feet in height, and/or landscaping.
- The siting and orientation of the grocery store contributes to the activation of Aldrich Street, with entries on the street and/or convenient pedestrian linkages from the front of the store to the street.
- The parking supply for the grocery store is provided in the shared orchard parking lot, or in acceptably designed structured parking beneath or adjacent to the store. The design of the orchard parking must comply with the landscaping guidelines set forth in Chapter Six.

A major grocery store will ensure the role of the Town Center as a convenient neighborhood retail destination.

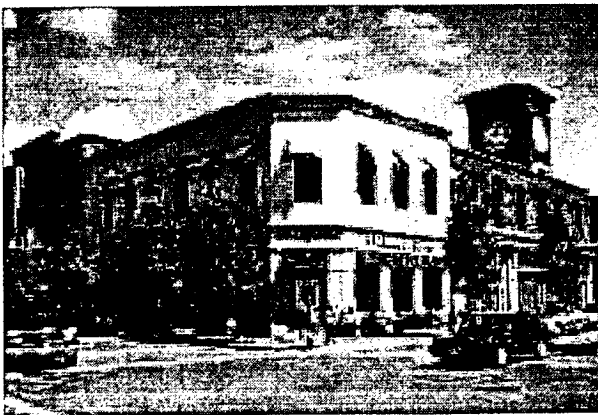


3.5 THE PUBLIC PARKING GARAGE

A component of structured parking may be required within the Town Center for it to fully evolve as an intensive mixed-use and pedestrian-oriented district, and to offset the need for on-site parking within individual parcels. A public garage of approximately 500 spaces is planned east of Aldrich Street, just north of Lake Park. This garage is located to provide an additional supply of retail parking to the orchard parking area west of Aldrich Street and to the curbside parking throughout the Town Center. It will also offer shared parking for major events that are staged in Lake Park. While the precise design and configuration of the public parking garage will be described in the architectural master plan for the Town Center, it will comply with the following guidelines:

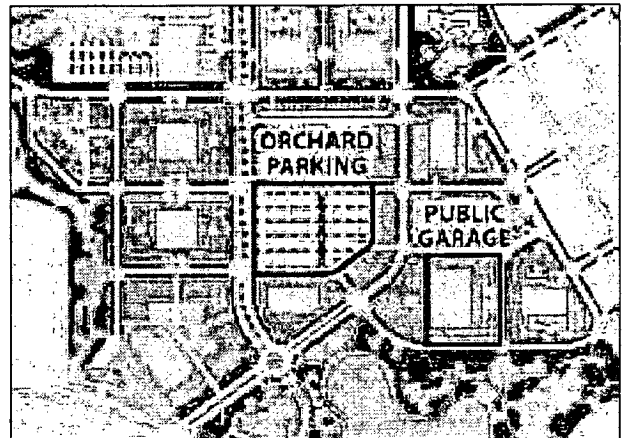
- The garage will be designed as a mixed-use facility, with “liner” uses along the frontage of Lake Park and all adjacent street frontages. Such liner uses could include retail, residential and/or office uses, consistent with the design guidelines for mixed-use Town Center buildings or shop houses and row houses described in this chapter.
- Any exposed portion of the parking garage will be designed to appear as an integral extension of the adjacent buildings, with the same building materials and the same level of architectural detailing.
- A direct pedestrian linkage will be provided between Aldrich Street and the parking facility, through a mid-block pedestrian passage and courtyard that is designed with landscaping and shading devices; this space will be well-lit and include active ground level uses that make the passage safe and interesting throughout the day and evening.

Like this example, the public parking garage will be designed as a mixed-use facility with active ground level uses along the streetfront.



- Pedestrian entries to the garage should also be provided on both the Lake Park frontage and along the northern perimeter of the garage to maximize public access and use of the facility.
- Vehicular access to the garage should be from the side streets perpendicular to Aldrich Street. The NCC may allow a vehicular entry from Aldrich Street, if such an entry is determined to be advantageous to the viability of the Town Center, and is designed in a manner to minimize pedestrian conflicts.
- Trellises, greenroofs, and/or other shading devices should be provided on the roof of the parking garage to reduce heat island effects.
- The public parking facility may include a component of private parking for the liner uses, and/or other Town Center uses, provided that the demand for Town Center retail parking is given the first priority.
- Parking for bicycles and “car share” programs, should be provided in the garage, as applicable. Consideration should also be given to recharging stations for electrical vehicles, as feasible.

The Town Center will be served by an orchard parking lot and a public parking garage.



TOWN CENTER BUILDINGS: CHARACTER, MATERIALS AND TREATMENTS

Character: Town Center buildings should be designed with a high degree of care and craftsmanship. Standardized building solutions are strongly discouraged in favor of a diversity of architectural expressions within a cohesive urban framework. Buildings that employ regional design characteristics of Central Texas architecture in either traditional or modern forms are particularly encouraged. Some of these characteristics include: shade on wall surfaces through projecting eaves or other architectural elements to minimize direct summer solar gain; simple forms with flat, gabled, hipped and pyramidal roof shapes; use of loggias, arcades, pergolas, courtyards and paseos to mediate the seasonal climatic extremes and to provide outdoor space; and regionally extracted and manufactured materials.

Orientation and Parking: All buildings within the Town Center will be oriented to the streets on which they front.

Parking: On-site parking (beyond the shared orchard parking or the public parking garage) will be encapsulated and architecturally-integrated within the individual building parcels. Surface parking lots will not be permitted along street frontages within the Town Center.

Corner and Terminus Elements: Buildings that occupy corner lots, or that terminate key views along streets should introduce special architectural elements (e.g., towers, cupolas, gables, dormers, balconies, etc.) to reinforce the legibility of the Town Center, and to promote a varied and interesting streetscape.

Sustainability: Preference should be given to materials and products with high levels of energy performance, and with recycled content that is renewable, non-toxic, low-emitting and regionally sourced and manufactured.

Roof Treatment: Buildings within the Town Center can employ flat or sloping roofs. Decorative building parapets that provide a distinctive silhouette should be considered for flat-roofed buildings, while projecting eaves, exposed beams and decorative brackets should be integrated into sloping roof designs. Sloping roofs should utilize standing seam metal roofs in a natural galvanized finish, or concrete or clay tile in warm colors; composition shingles are not permitted in the Town Center, except as approved by the NCC for shop houses and row houses consistent with the project goals of energy efficiency and heat island mitigation, preference should be given to products that comply with the US EPA energy star requirements. Rooftop equipment including photovoltaic and solar water heating systems should not be visible from public streets.

Primary Building Materials: A range of primary building materials may be used for Town Center buildings including: Texas limestone or sandstone in light or warm tones, smooth finish brick in common, English or Flemish bond patterns, painted brick, smooth finished stucco (provided that Texas lime-

stone or other stone is used as an accent material), light colored pre-cast concrete, or other similar or innovative materials deemed by the NCC to be compatible and complementary.

Accent Materials: A range of accent materials including stone, tile, terra cotta, metals, and wood should be introduced along storefronts and ground level frontages along pedestrian-intensive streets.

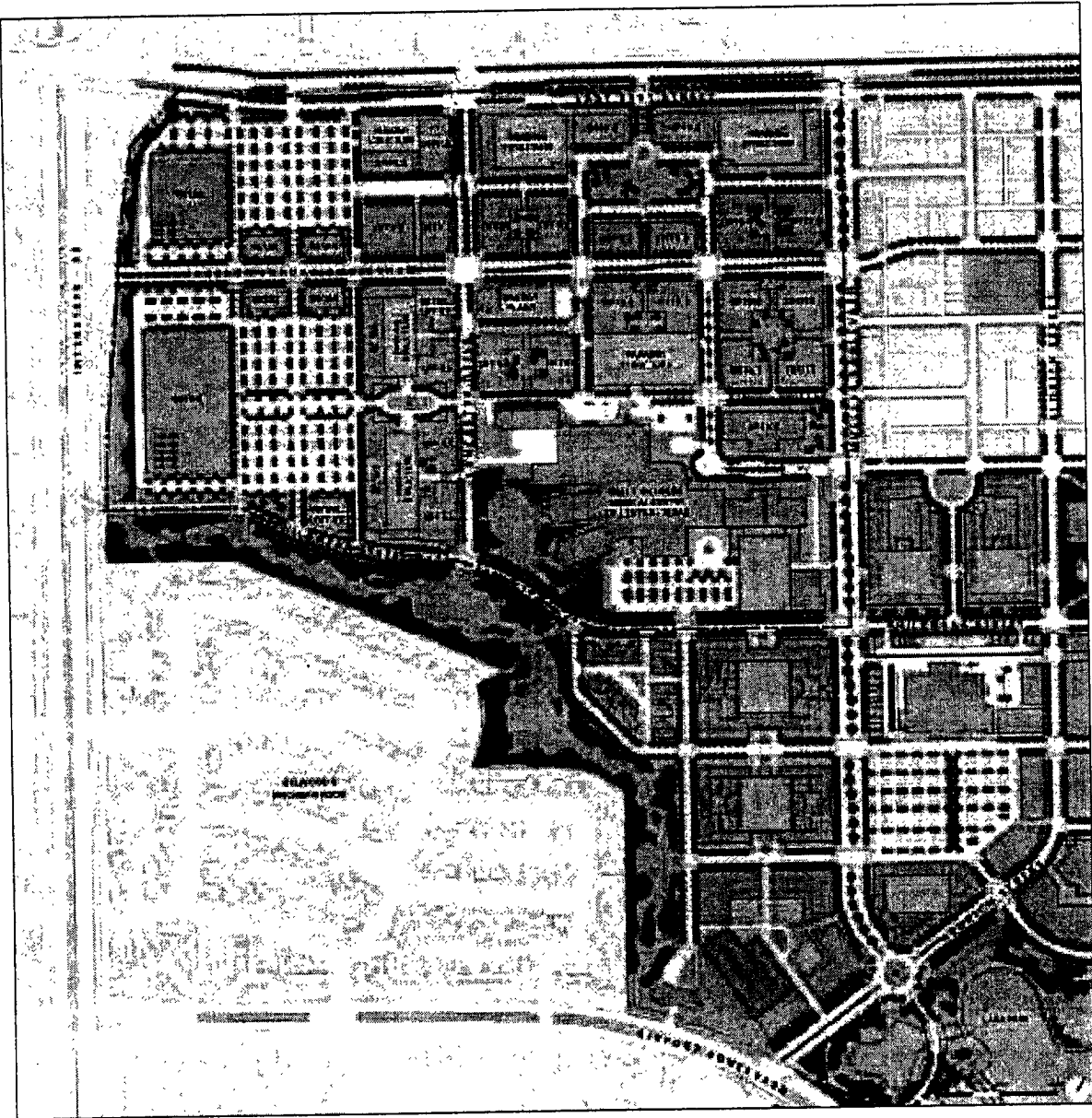
Façade Treatments: All portions of the building, visible from public streets or the orchard parking area must be treated in a similar manner. Materials should wrap around corners and define volumes rather than planes. Within the Town Center, fiber-cement siding will be permitted only for the exterior cladding of portions of the building not visible from public streets, and not accessible by the public (e.g., rear or side façades, soffits, etc.).

Service Areas: All service areas (e.g., garbage and recycling rooms, mechanical areas, storage, utility and meter rooms, etc.) must be architecturally integrated within the body of the building, or architecturally screened from all public areas, and located to the maximum extent practicable on frontages other than Aldrich Street.

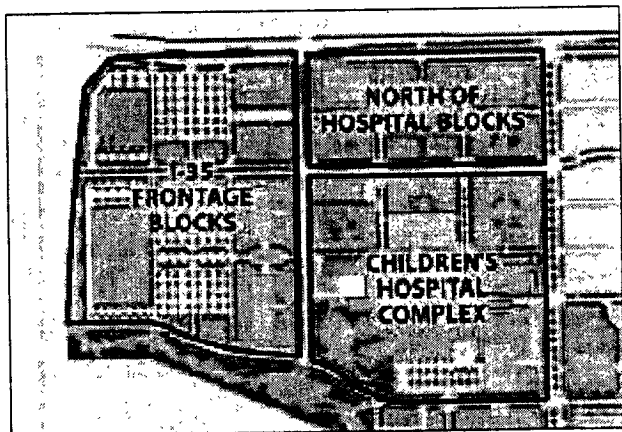
Signage: A coordinated signage program must be prepared and submitted to the NCC for their review and approval. Signage should be pedestrian-scaled and mounted on buildings within 20 feet of the ground plane. Roof top signs are strongly discouraged. Blade signs, awning signs, under-canopy signs, heraldic signs, and letter-mounted signs are encouraged. Up to two Town Center monument signs will be permitted along the Mueller Boulevard frontage, and one on Airport Boulevard, subject to the review and approval of the NCC.

Town Center buildings should be designed with a high degree of care and craftsmanship. Standardized building solutions are strongly discouraged in favor of a diversity of architectural expressions with a strong pedestrian orientation.





Northwest Quadrant
Illustrative Plan



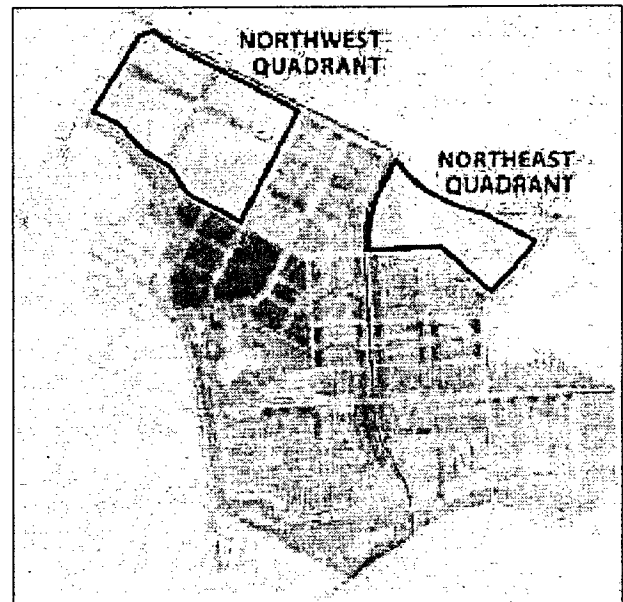
THE EMPLOYMENT CENTERS

Introduction

Two employment centers are established within Mueller to encourage economic development and job creation. These include the Northwest Quadrant at I-35 and East 51st Street, and the Northeast Quadrant to the east of the Transit Boulevard along East 51st Street. The Northwest Quadrant, west of Mueller Boulevard and north of Philomena Street, is planned as a mixed-use commercial and employment district that includes the 32-acre campus of the Dell Children's Medical Center of Central Texas (the Children's Hospital) and approximately 50 acres of additional properties adjacent to I-35 and East 51st Street. The Northeast Quadrant includes the 20-acre Austin Film Studio production complex and approximately 22 acres of adjacent properties to the east and west of the Film Studios, that are envisioned for a range of commercial and employment uses.

Because of its strategic location, the Northwest Quadrant has long been targeted for regionally-oriented uses that can benefit from freeway proximity and access, and create a diversity of employment opportunities within the community. In addition to the Children's Hospital, which establishes a strong employment anchor in the district, the Northwest Quadrant may include a mix of retail, office and residential uses, configured to create a cohesive district with strong pedestrian and bicycle linkages to the surrounding neighborhoods. Within the Northwest Quadrant, three distinct subareas have emerged: the I-35 Frontage Blocks, the Children's Hospital complex, and the North of Hospital Campus along East 51st Street.

The Northeast Quadrant has evolved into an important film production campus that has recycled several general aviation hangars into sound stages and production facilities. The facility has helped to establish Austin as a competitive film production venue, contributing to both the economic base and the unique identity of the

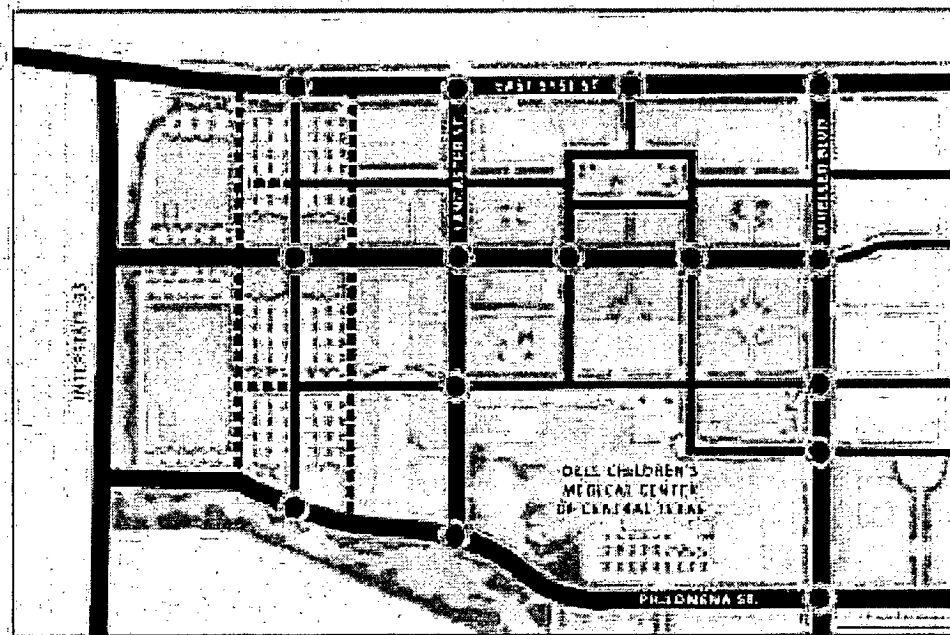


City. Within the Northeast Quadrant, two subareas are delineated, the Austin Film Studio campus, and the adjacent blocks to the east and west.

Rather than “stand-alone” projects, all of the subareas of the Northwest and Northeast Quadrants are envisioned as an integral part of the Mueller community, utilizing the same principles of compact development and pedestrian and transit orientation. Prior to the review and approval of individual building projects within each of the five subareas, an architectural master plan for each area must be submitted to the NCC. These master plans, once approved by the NCC will provide the basis for subsequent building projects within each of the subareas. The architectural master plans must comply with the design guidelines set forth in this chapter.

Although each of the subareas within the Northwest and Northeast Quadrants will be programmed with a diversity of uses (e.g., a major hospital complex, a regional retail center, a film production campus, and office and multi-family residential developments), the site and building design of each will promote the following common design characteristics:

Within the Northwest Quadrant, each subarea should be planned with an existing and future network of streets that can allow a finer-grained pattern of development to emerge over time.



Illustrative Pattern of Existing and Future Streets

- BACKBONE STREETS
- ON-SITE STREETS
- ADDITIONAL POTENTIAL FUTURE STREETS
- FULL MOVEMENT INTERSECTIONS

Connectivity: A pattern of streets and pedestrian and bicycle ways will extend the movement system of the overall community, break down the large “superblocks”, and provide strong pedestrian, bicycle and vehicular linkages between each of the subareas of the Northwest and Northeast Quadrants.

Amenity: On-site publicly-accessible open space in the form of parks, squares, gardens, courtyards, etc., will be provided within each of the subareas for the year-round enjoyment and comfort of workers, visitors and residents.

These open spaces, designed to provide shade during summer months, will be linked by trail, sidewalks, etc., to the overall open space and street system of the Mueller community. Within larger sites, as outlined in these guidelines, such amenities will be the responsibility of individual developers.

Intensity: Each of the subareas will be designed to allow for intensification over time, providing for the replacement of surface parking with structures, and for activities to be clustered in a way that promotes a compact human scale and pedestrian-oriented environment.

Compatibility: New development in the Northwest and Northeast Quadrants will be designed to be compatible with adjacent existing and future neighborhoods, providing appropriate scale relationships and buffering.

Identity: Because of the gateway location of the Northwest Quadrant and its visibility from I-35, each of the subareas within this quadrant will be designed to contribute to a cohesive and coordinated visual identity of the overall Mueller community.

Sustainability: Development within the Northwest and Northeast Quadrants will exemplify the City’s sustainability goals, creating an urban environment that has lasting value, that addresses objectives for resource efficiency, and that utilizes green building and integrated sustainable development practices.

The remainder of this chapter provides guidelines for the preparation of the architectural master plans for each of the five subareas of the Northwest and Northeast Quadrants. At the end of the chapter, common design guidelines for the treatment of all employment center sites and buildings are described.



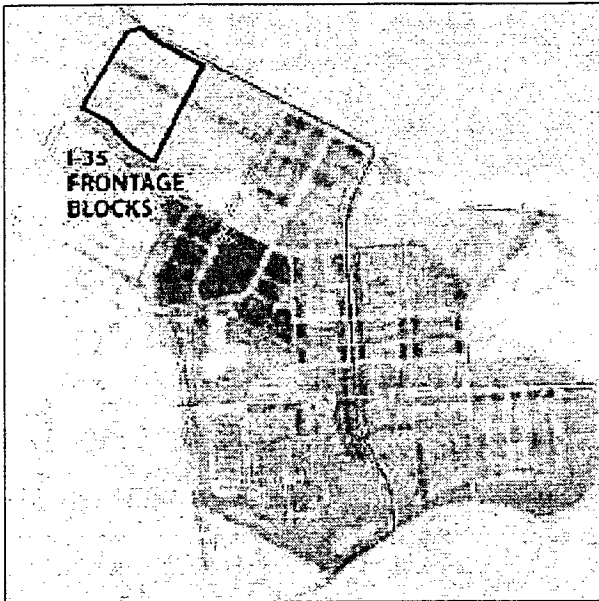
On-site publicly-accessible open space in the form of parks, squares, gardens, courtyards, etc. will be provided within each of the employment subareas.

4.1 I-35 FRONTAGE BLOCKS

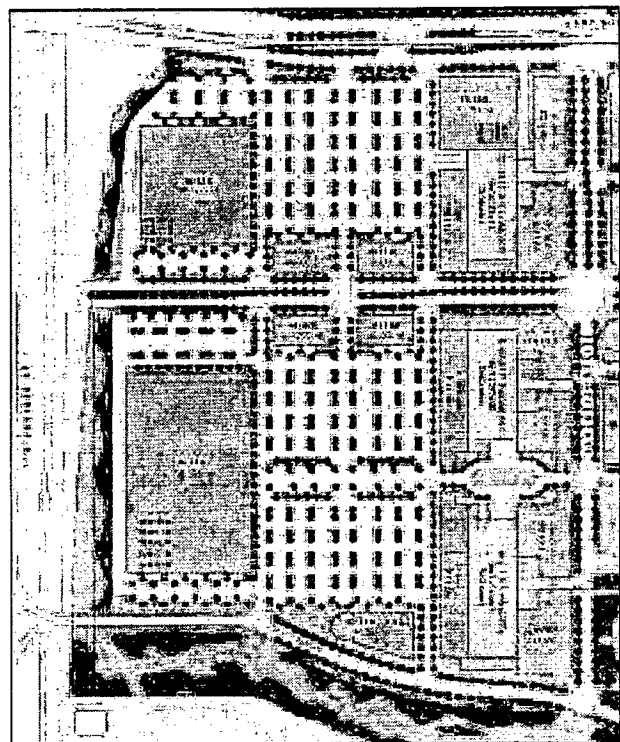
Along the I-35 frontage, two “superblock” sites totaling approximately 34 acres have been created on either side of Barbara Jordan Boulevard. These properties have the highest levels of visibility and access within the Mueller community, and as such have been targeted for regional retail and employment uses that can contribute to the City of Austin’s economic development objectives. Rather than a “stand-alone” project, however, the development of this subarea is envisioned as a mixed-use regional destination that exemplifies the highest levels of design quality consistent with the fundamental principles of the Mueller community.

The Site Plan: The site plan for the two I-35 frontage blocks should be a spatial composition of buildings, open spaces and parking fields. Conventional “strip” development, characterized by individual building pads surrounded by parking lots and oriented to arterial streets, is prohibited. The site plan should create a distinctive sense of place, and adhere to the following principles:

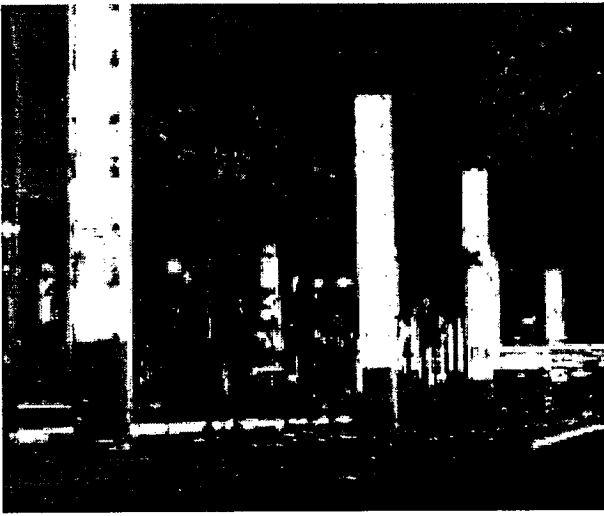
- A clear pattern of streets will be established within the subarea to break down the scale of the “superblock” and to provide pedestrian, bicycle and vehicular linkages to adjacent activity centers including the Children’s Hospital. This pattern of streets may evolve over time as uses within the area intensify. To the extent possible, future rights-of-way will be identified within the I-35 frontage blocks to allow a finer-grained pattern of development to emerge over time. These “rights-of-way” will be laid out and designed so as not to preclude their future development and dedication as public streets.
- Surface parking lots should be planned as outdoor “rooms”, spatially defined by buildings, and with a significant tree canopy (i.e., one tree for every four cars) and surface level vegetation to mediate the harsh summer sun, mitigate against heat island effect and reduce stormwater runoff.



- The pattern of streets and surface parking should be designed to allow for future intensification and infill of the parking lots over time. In this regard, utilities should be aligned along streets in such a way as to avoid the need for utility relocations in the future.
- The eastern portion of the I-35 blocks adjacent to Lancaster Drive will be programmed and designed with a mixture of higher intensity “liner” uses (e.g., office and/or residential) that create activity and provide a transition between the regional retail center, the Children’s Hospital and the remainder of the community. Retail uses that adhere to the guidelines in this section may also be considered for liner uses, subject to NCC approval.
- Regional retail uses will not be oriented to the I-35 frontage, but rather to interior parking areas. The I-35 frontage should comply with the setback and street frontage guidelines described below.
- Continuous pedestrian ways will be provided to connect all development components within the subarea with one another, and with the sidewalks along the perimeter streets and the greenway. Particular emphasis will be given to linking existing and future transit stops with planned development. All pedestrian ways must be well-lit and designed with continuous tree canopy and/or architectural cover to provide shade and weather protection throughout the year. Active ground level uses will be oriented to the pedestrian ways and sidewalks to the maximum extent practicable.
- Plazas, courtyards, pocket parks and other open spaces will be designed as an integral part of the development, to promote the attractiveness of the subarea as a people-oriented and pedestrian-friendly destination within the community.
- Bike parking must be provided in compliance with City of Austin standards throughout the district to maximize convenience for cyclists.
- Service and loading areas must be oriented away from public and pedestrian intensive areas, and screened from predominant public view.



I-35 Frontage Blocks Illustrative Plan



Like this example near Los Angeles Airport, a major identity program of landscaping and public art is envisioned along the I-35 edge.

Building Height and Massing: Buildings will generally step down in height along Philomena Street adjacent to the Delwood II neighborhood, in conformance with the City of Austin Compatibility Standards.

Along East 51st Street, buildings will be no higher than four stories or 60 feet to create an appropriate transition to the Windsor Park neighborhood to the north.

Building Setbacks and Street Frontage Relationships: Buildings will be designed to reinforce the spatial definition of streets and parkland frontages in a way that enhances the visual legibility and cohesiveness of the community. More specifically:

- **The I-35 Edge:** Buildings will be set back from the I-35 property line by a minimum of 40 feet. At least 30 feet of this setback will be set aside for landscaping and screening that is designed to create a strong visual identity for the Mueller community along the freeway frontage. While limited signage for the regional retail center is permitted, subject to approval of the NCC (see Signage p.89) at the Barbara Jordan/I-35 intersection, the predominant visual identity along I-35 should be established with landscaping, walls and public art elements designed to create a distinctive and appropriately-scaled front door to Mueller. All rooftop equipment and service and loading areas must be visually screened. No driveway access will be permitted from the I-35 frontage road.
- **The Barbara Jordan and East 51st Street Edge:** Buildings fronting Barbara Jordan Boulevard or East 51st Street will be built to within 10 feet of the property line along these two gateway streets to reinforce their spatial definition, and to promote ground level street-oriented activity. At least 35% of the frontage along these streets should be lined with buildings, with their primary or secondary public entries oriented to the fronting sidewalks. Up to three driveway access points at intervals of at least 250 feet will be permitted along Barbara Jordan Boulevard and East 51st Street between the I-35 frontage road and Lancaster Drive.
- **The Lancaster Edge:** Buildings fronting Lancaster Drive will be built to within 10 feet of the property line to create a complementary urban edge between the mixed-use regional retail district, the Children's Hospital complex, and mixed-use development on the North of the Hospital blocks. At least 75% of the frontage along Lancaster Drive should be lined with buildings with their primary public entries oriented to the street. Multi-family development that is constructed along this frontage will have ground level units along the street with

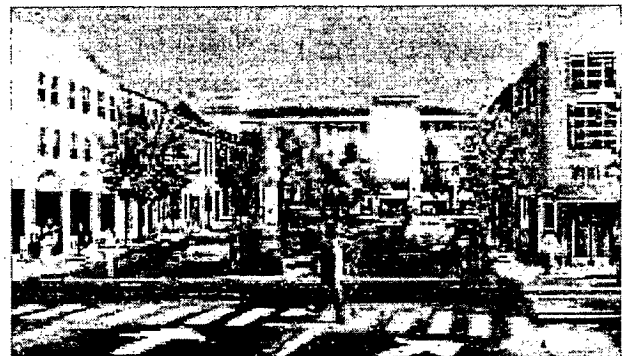
porches or entries designed subject to the same guidelines for multi-family development within the neighborhoods (see Chapter 2). Commercial office or retail development will have its primary frontage oriented to the street. Service and loading areas will not be visible from Lancaster Drive. One driveway access will be permitted along Lancaster between East 51st Street and Barbara Jordan Boulevard. Three additional driveways will be permitted between Barbara Jordan and Philomena Street; one of these must be located to extend the main east-west driveway of the Children's Hospital into the regional retail district

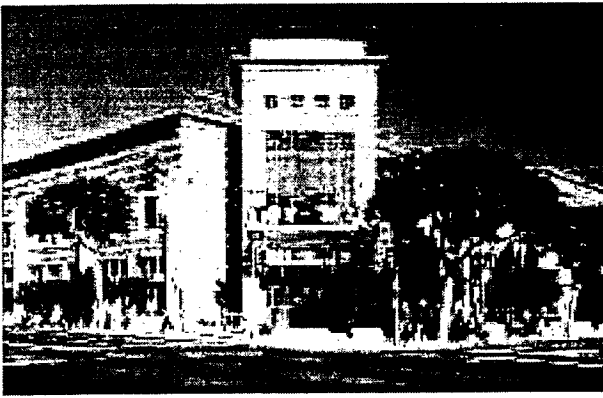
- *The Philomena Edge:* Philomena Street creates an important edge between the mixed-use regional center and the recreational greenway. It has been designed as a lushly landscaped parkway connecting the Northwest and Northeast Quadrants of the community. The westernmost segment of Philomena Street is designed as a high-occupancy vehicle ramp that will ultimately connect to HOV lanes above the retrofitted I-35 freeway. At least 50% of the frontage along Philomena Street east of the HOV ramp should be lined with buildings. Development will be set back from the street by 25 feet with a landscaped treatment that extends the parkway character of the corridor. Service and loading areas will not be visible from Philomena Street or the greenway. Up to three driveway curb cuts at intervals of approximately 250 feet or greater will be permitted along the frontage.

Architectural Approach and Treatment of Buildings: A coordinated architectural design concept should be developed for all of the buildings within the mixed-use regional retail center, subject to the following principles:

- Buildings should be designed to contribute to the larger spatial composition and identity of the district.
- Brand buildings or formulaic "stand-alone" solutions that have no regard to their context are strongly discouraged.
- Similarly, architectural building concepts that promote an overly themed approach are also discouraged.
- Buildings should have a clear architectural relationship with one another, employing common building materials or architectonic elements, while creating visual diversity and interest. (See end of chapter for building materials and treatment standards.)

As illustrated in this photo simulation, mixed-use "liner" buildings along Lancaster Drive should provide a transition between the regional retail center and the remainder of the community.





Like this example, regional retail uses should be designed with transparent storefronts that contribute to the pedestrian experience.

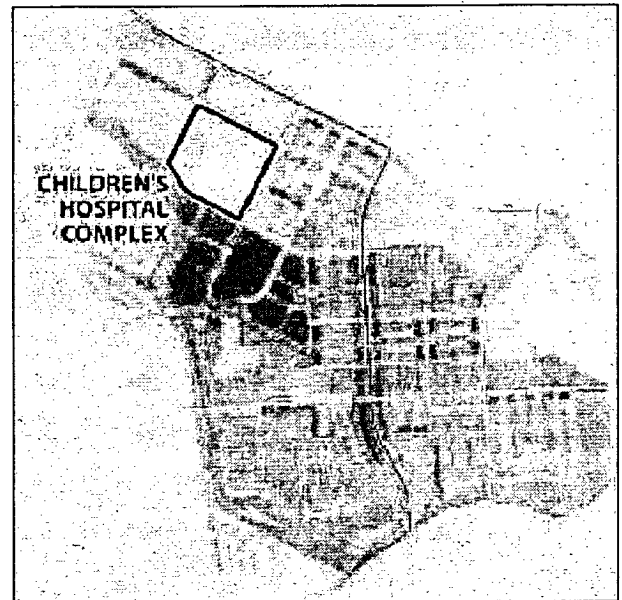
- Buildings should be designed with “four-sided” architecture that emphasizes the volumetric features of the structure. Exceptions will be made for portions of the building that are not publicly visible.
- Buildings should be designed to be flexible to accommodate resource efficient change over time and permit reuse by other tenants. Highly specialized buildings suitable for only one user are discouraged.
- Buildings should be appropriately scaled in response to the public spaces that they are defining. For example, the creation of a fine-grained village scale may not be appropriate in the context of large buildings and parking areas, while such a scale is appropriate for smaller buildings organized around a public space or along a pedestrian-scaled street.
- Building entries should be carefully placed in conjunction with an overall pedestrian and bicycle circulation plan. Buildings should employ awnings, canopies and/or arcades to provide pedestrians with shelter from the sun and the elements.
- Retail buildings should be designed with transparent storefronts and display windows to create visual interest; blank internalized “boxes” are discouraged.
- Smaller scaled “liner” retail is particularly encouraged as feasible along the face or side of larger retail structures to promote diversity and a finer-grained pedestrian scale.
- Multi-level buildings with upper-level office or residential uses are also encouraged, particularly in the eastern portions of the subarea along Lancaster Drive.
- Truck docks and loading areas must be located within buildings, away from pedestrian areas, or architecturally screened from predominant public view with walls and landscaping for visual screening and noise reduction.

4.2 CHILDREN'S HOSPITAL COMPLEX

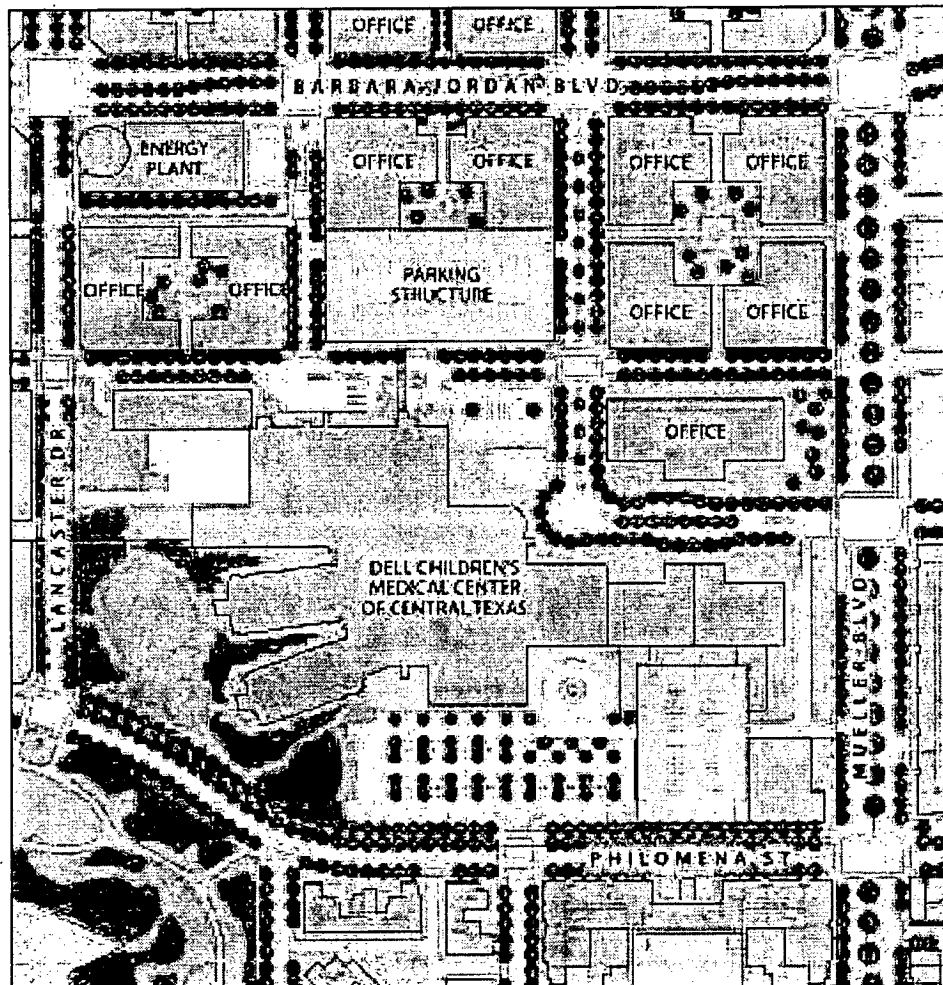
The 32-acre campus of the Dell Children's Medical Center of Central Texas is defined by Mueller Boulevard on the east, Barbara Jordan Boulevard on the north, Lancaster Drive on the west and Philomena Street on the south. The complex, part of the Seton Healthcare Network, will serve the surrounding 46 county region, bringing together a full spectrum of pediatric medical specialties essential to caring for the needs of critically ill or injured children. The facility is an important anchor in the Mueller community, providing a prestigious destination of regional significance, a broad range of employment opportunities, and a population of potential residents who will be able to walk or bike to work. The hospital complex will help to energize the Town Center as well as the mixed-use regional retail center, both of which are positioned on adjacent sites.

The build-out of the Children's Hospital complex is expected to occur over many years. The first phase will include the principal hospital facility and the district power heating and cooling plant, both of which are currently under construction. Subsequent phases of development will replace parking lots with garages and include additional office, educational and research facilities. Prior to the approval of subsequent building projects, Seton will submit an overall architectural master plan to the NCC describing the site plan and landscape approach, as well as the location, massing and architectural character of individual buildings. The first phase of the architectural master plan, has been approved by the City and Master Developer. The build-out of the architectural master plan is still subject to review and approval. The architectural master plan and any future amendments must comply with the following design guidelines:

The Site Plan: While meeting operational requirements for access and parking, the site plan for the Children's Hospital campus should also complement and extend the surrounding town fabric of the Mueller community. More specifically:



- Streets or driveways must be extended into the campus to promote connectivity with adjacent residential and commercial districts. Along each perimeter street of the complex (i.e.; Mueller Boulevard, Philomena Street, Lancaster Drive, Barbara Jordan Boulevard), there must be at least one street extension into the Children's Hospital campus.
- Street extensions and driveways should include sidewalks to provide convenient pedestrian access to all public entries. Particular emphasis should be placed on pedestrian linkages between public entries and transit stops, the Town Center, residential neighborhoods, and the adjacent regional mixed-use retail center.
- Walkways should be well-lit while not contributing to light pollution and include generous tree cover and/or shading devices (e.g., trellises, awnings, arcades, etc.) that provide relief from the hot summer sun.



Children's Hospital Campus Illustrative Plan

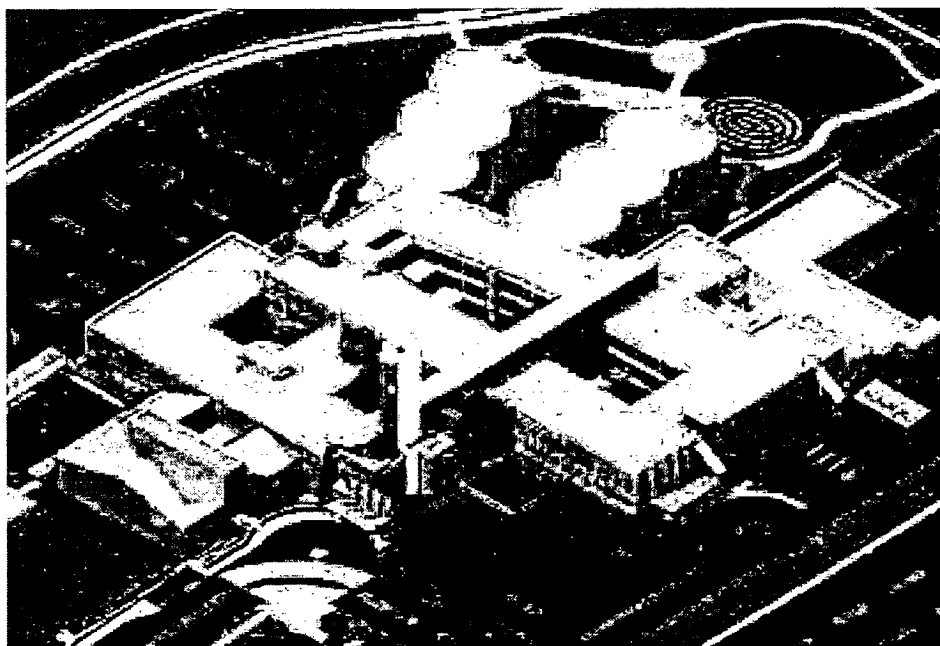
- With the exception of street lighting and irrigation, which will be the responsibility of the Master Developer, the improvement of perimeter street frontages will be the responsibility of the Children's Hospital (i.e., Seton).
- A continuous hike and bike path of 10 feet in width will be provided along the northern edge of Philomena Street (see Appendix B: Street Sections) to extend the community system of recreational trails.
- A contiguous open space of at least two acres will be provided on the southwest corner of the campus at the intersection of Lancaster Drive and Philomena Street. This space (known as the "Healing Garden") will be for the use of hospital patrons but visible to the public, accessible on special occasions, and designed to visually extend the adjacent greenway system.
- Buildings should be oriented toward the perimeter backbone streets to provide activity along the streets and a complementary and positive edge to the adjacent community (see Building Setbacks and Street Frontage Relationships below). As the campus expands, surface parking lots along the perimeter streets should be replaced with buildings that have a strong orientation to the streets with public entries and fenestration.
- Parking garages should be located in the interior of the site to the maximum extent practicable.
- Bike parking will be provided in compliance with City of Austin standards throughout the district to maximize convenience for cyclists.
- Service and loading areas will be screened from predominant public view through architectural and landscaping treatments, which will also be designed to attenuate sound.



The Children's Hospital will include a 120' tower at the main building entry to create a strong community landmark (Karlsberger Architects).

Building Height and Massing: The predominant height of non-hospital buildings within the Children's Hospital campus will be three to six stories or up to 85 feet in height. A tower element of up to 120 feet in height is encouraged at the main hospital building entry to promote a sense of place within the hospital campus and the larger community. The NCC may consider additional height for this tower element,

*Schematic Design Concept
for the Children's Hospital
building (Karlsberger
Architects).*



subject to zoning and demonstration by the applicant that additional height is consistent with urban design objectives of the Employment Center district.

Building Setbacks and Street Frontage Relationships: Buildings within the Children's Hospital campus will be designed to reinforce the spatial definition of streets and parkland frontages in a way that enhances the visual legibility and cohesiveness of the Mueller community. More specifically:

- ***The Barbara Jordan and Mueller Boulevard Edges:*** Buildings along these key interfacing streets will be built to within 10 feet of the property line to reinforce their spatial definition, and to promote ground level, street-oriented activity. Front yard landscaping in conjunction with sidewalk extensions and building entries will be combined to create an interesting and varied streetscape. In the final phase of implementation, at least 50% of the frontage along these streets should be lined with buildings, with their primary or secondary public entries oriented to the fronting sidewalks. Within 400 feet of the Philomena Street/Mueller Boulevard intersection, building frontages along Mueller Boulevard should, to the maximum extent practicable, include active ground level uses (e.g., retail, financial, personal or customer-oriented services, etc.) to activate this key corner adjacent to the Town Center. Three driveway access points at intervals of no less than 200 feet (centerline to centerline) will be permitted along Barbara Jordan Boulevard between Mueller Boulevard and Lancaster Drive. Five driveway access points at intervals of no less than 175 feet will be permitted along Mueller Boulevard between Barbara Jordan Boulevard and Philomena Street.

- *The Lancaster Edge:* Campus buildings along Lancaster Drive will either be built to within 10 feet of the property line with entries oriented to the street to create a complementary urban edge with the mixed-use regional retail district, or be set back by at least 25 feet to create a landscaped edge that extends the park-like character of the proposed Healing Garden. Three driveway access points will be permitted along Lancaster Drive at intervals of no less than 175 feet.
- *The Philomena Edge:* With the exception of buildings within 400 feet of Mueller Boulevard, development along Philomena Street will be designed to step back from the street by a minimum of 25 feet with a landscaped treatment that extends the parkway character of the corridor. Within 400 feet of Mueller Boulevard, buildings will be built to within 10 feet of the property line to help to activate this important intersection near the Town Center. Building entries and active ground level uses (e.g., retail, financial, personal or customer-oriented services, etc.) will be concentrated at this key corner. Up to two driveway curb cuts at intervals of approximately 200 feet or greater will be permitted along the Philomena frontage.

Architectural Approach and Treatment of Buildings: A coordinated architectural design concept should be developed for all of the buildings within the Children's Hospital campus. More specifically:

- Buildings within the campus should have a clear architectural relationship with one another, employing common building materials or architectonic elements, while creating visual diversity and interest. (See end of chapter for building materials and treatment standards.)
- Building entries should have strong architectural expression to promote a sense of orientation for visitors to the complex. Entries should be situated along key streets and pedestrian ways where there is clear visibility and accessibility for pedestrians as well as motorists.
- Building activities throughout the hospital campus (e.g., entry lobbies and reception areas, supporting retail uses, public-oriented offices, etc.) should be oriented to perimeter streets and to interior pedestrian ways to the maximum extent practicable.
- Structured parking garages must be designed as an integral part of the architectural vocabulary of the campus, and, to the extent practicable, be encapsulated within a building complex. Parking access should be organized in a way that minimizes conflicts or disruption of the pedestrian environment.

- The district heating/cooling/power plant to be located at the intersection of Barbara Jordan Boulevard and Lancaster Drive will be designed as a distinctive visual landmark appropriate to this gateway location. It should artfully express the function of the plant by revealing the cooling tower and chiller equipment.
- Building materials should be durable, sustainable and of a high quality, with sufficient variation to create visual interest and diversity, and to reduce the scale of large building masses. A coordinated palette of stone, pre-cast concrete, stucco and metal is recommended. (See requirements for all employment center buildings below).
- Where buildings are adjacent to pedestrian ways, awnings, canopies and/or arcades should be employed to provide shelter from the sun and the elements.
- Truck docks and loading areas must be located within buildings, away from pedestrian areas, and architecturally treated with walls and landscaping to reduce sound and to screen views.

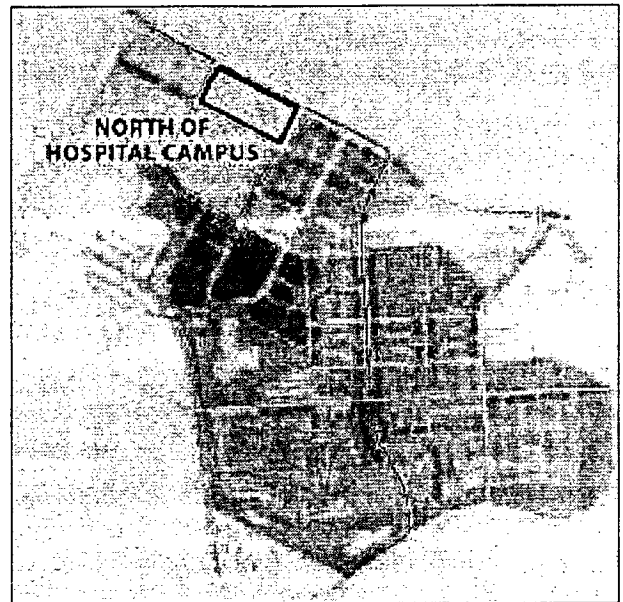
4.3 NORTH OF HOSPITAL CAMPUS

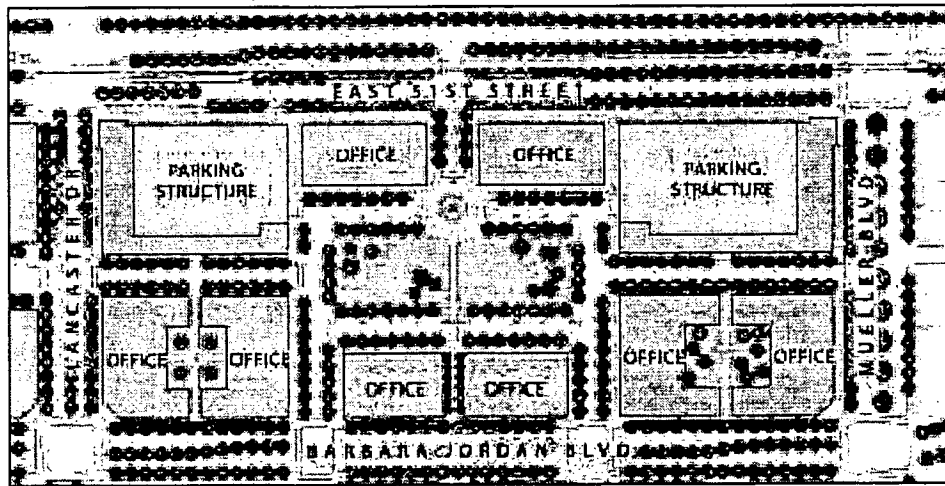
The approximately 14-acre block immediately north of the Children's Hospital complex is targeted for a major employment use, designed in an urban campus configuration. The block could be programmed as a mixed-use office campus and/or as an academic and research campus that may offer a synergistic relationship to the hospital across the street. In either case, the entire block should be planned as a cohesive grouping of buildings and open spaces that is coordinated with and connected to the surrounding community.

An architectural master plan must be submitted to the NCC, prior to the approval of individual building projects, describing the overall site plan and landscape approach on this block, as well as the location, massing and architectural character of individual buildings. The master plan, once approved by the NCC, will provide the basis for subsequent building projects within the campus. Amendments to the architectural master plan will also be reviewed and approved by the NCC. The architectural master plan must comply with the following design guidelines:

The Site Plan: The site plan for the North of Hospital Campus will complement and extend the surrounding town fabric of the Mueller community. More specifically:

- Streets will be extended into the campus to promote connectivity with the adjacent hospital complex, and with the East 51st Street frontage. Two street extensions will be provided across Barbara Jordan Boulevard to the Children's Hospital campus, and at least one street access should be provided along East 51st Street. One street extension is permitted along Lancaster Drive, and one from Mueller Boulevard between East 51st Street and Barbara Jordan Boulevard.





North of Hospital Campus Illustrative Concept

- Street extensions and driveways will include sidewalks to provide convenient pedestrian access to all public entries. Particular emphasis will be placed on pedestrian linkages between public entries and existing and planned transit stops.
- To the extent practicable, driveway curb cuts leading to garages or service areas should be from the internal streets rather than the perimeter streets.
- Walkways will be well-lit and include generous tree cover and/or shading devices (e.g., trellises, awnings, arcades, etc.) that provide relief from the hot summer sun.
- The improvement of perimeter street frontages will be the responsibility of the block's developer, as per Streetscape standards set forth in Chapter Six.
- A contiguous open space or quadrangle of at least one acre in area will be provided by the block's developer as a focal point and gathering place within the building complex. This space must be publicly accessible, with sidewalk connections to the perimeter streets (i.e., East 51st Street, Barbara Jordan Boulevard, Lancaster Drive, Mueller Boulevard), and should include generous tree cover. Buildings will be oriented to the open space to reinforce its role as an activity center.
- Buildings will also be oriented toward the perimeter backbone streets to provide activity along the streets and a complementary and positive edge to the adjacent community (see Building Setbacks and Street Frontage Relationships below). As the North of Hospital Campus expands, surface parking lots along the perimeter streets will be replaced with buildings that have a strong orientation to the streets with public entries and fenestration.

Building Height and Massing: Buildings and parking structures within the North of Hospital Campus will be three to four stories or up to 65 feet in height. Additional height up to six floors is permitted subject to NCC findings that the additional height will not adversely impact adjacent residential or commercial districts or public spaces, and that it is complementary with the image and identity of the Mueller community. Tower elements and gateway buildings that promote a sense of place within the campus and the larger community are encouraged.

Building Setbacks and Street Frontage Relationships: Buildings within the North of Hospital Campus will be designed to reinforce the spatial definition of the perimeter streets and the central campus quadrangle. As such, buildings along all perimeter streets (i.e., East 51st Street, Barbara Jordan Boulevard, Lancaster Drive, Mueller Boulevard) will be built to within 10 feet of the property line to reinforce their spatial definition, and to promote ground level street-oriented activity. Front yard landscaping in conjunction with sidewalk extensions and building entries should be combined to create an interesting and varied streetscape. At build-out of the campus, at least 75% of the frontage along each of the perimeter block faces should be lined with buildings, with their primary or secondary public entries oriented to the fronting sidewalks.

Architectural Approach and Treatment of Buildings: A coordinated architectural design concept should be developed for all of the buildings within the North of Hospital Campus. More specifically:

- Buildings within the campus should have a clear architectural relationship with one another, employing common building materials or architectonic elements, while creating visual diversity and interest. (See end of chapter for building materials and treatment standards.)
- Building entries should have strong architectural expression to promote a sense of orientation for visitors to the complex. Entries should be situated along key pedestrian routes and adjacent to the central quadrangle or other public open spaces.
- Building activities throughout the campus (e.g., entry lobbies and reception areas, supporting retail uses, public-oriented offices, etc.) should be oriented to perimeter streets and to interior pedestrian ways and open spaces to the maximum extent practicable.

A central open space or quadrangle of at least one acre will provide a central gathering place for the North of Hospital campus.

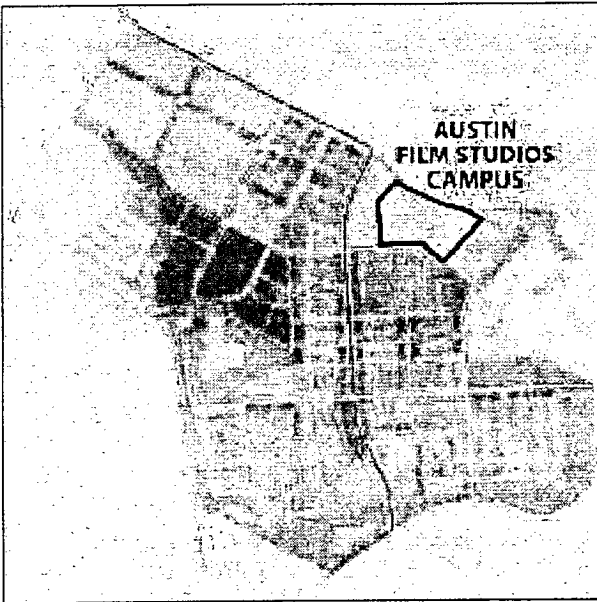


4.4 AUSTIN FILM STUDIO CAMPUS

Since 2001, the Austin Film Studio (AFS) has been operating a film production facility in several former general aviation buildings on the airport site along East 51st Street. This non-profit operation has been responsible for the production of several major motion pictures and television features, that have helped to reinforce Austin as one of the most important film making centers in North America. The AFS has also been effective in promoting local and East Austin employment on film projects.

The plan for Mueller calls for the AFS and its production facility to remain and expand within a 20-acre campus in the Northeast Quadrant of the new community. It is important, however, that the development of the AFS campus be implemented in a way that assures compatibility with adjacent commercial and residential neighborhoods, while meeting its own operational and functional requirements. To this end, an architectural master plan must be prepared for the 20-acre campus, and reviewed and approved by the NCC. The architectural master plan must comply with the following guidelines:

- Land uses within the campus will be limited to film production and support uses.
- The campus will be developed with a maximum of 220,000 gross square feet of development. Any additional development will be consistent with the Traffic Impact Analysis (TIA) for Mueller.
- The maximum height of buildings within the AFS campus will not exceed 50 feet, unless the NCC makes a finding that additional height is compatible with adjacent neighborhoods and the overall character of the community.
- All truck and vehicular access to the AFS campus will be from driveways connecting to East 51st Street.



- Development along the East 51st Street frontage will be set back from the property line by at least 50 feet to provide for landscaping that extends the open space character of Bartholomew Park, and offers visual screening and drainage opportunities.
- Service and parking areas will not be visible from East 51st Street, nor any of the adjacent streets within the Mueller community.
- The maximum impervious coverage of the campus will not exceed 75 percent. Open space, swales planting beds, etc., should be distributed throughout the campus to intercept and reduce runoff.
- Perimeter security fencing and/or walls will be architecturally treated to present an attractive public appearance. The use of wrought iron and other decorative high quality materials and treatments is particularly encouraged along fronting streets.
- Along the northern edge of Philomena Street, the AFS will be responsible for constructing an eight-foot wall to screen views into the production facility, and to provide sound attenuation between the facility and the adjacent residential neighborhood. The wall must be architecturally treated in a way that presents an attractive face to the neighborhood, utilizing high quality materials (e.g., pre-cast concrete, brick or masonry); it must be set back from the property line by at least three feet to provide for ground cover and landscaping against the wall. Integral murals or other artistic elements that convey the creative film-making activities of the complex are encouraged.
- Pedestrian and bicycle access between the AFS campus and the hike and bike trail along Philomena Street should be provided at one or more points as practicable.
- To the extent practicable, community and public-oriented uses within the AFS campus are encouraged along the Neighborhood Park and Philomena Street, with entries and windows oriented to the neighborhood. Such uses could include screening rooms or event spaces, public information or interpretive centers, gift or bookshops, etc. Parking for such uses should be confined to the street and to interior parking lots within the campus.



The plan for Mueller calls for the AFS and its production facility to remain and expand within approximately a 20-acre campus in the Northeast Quadrant.

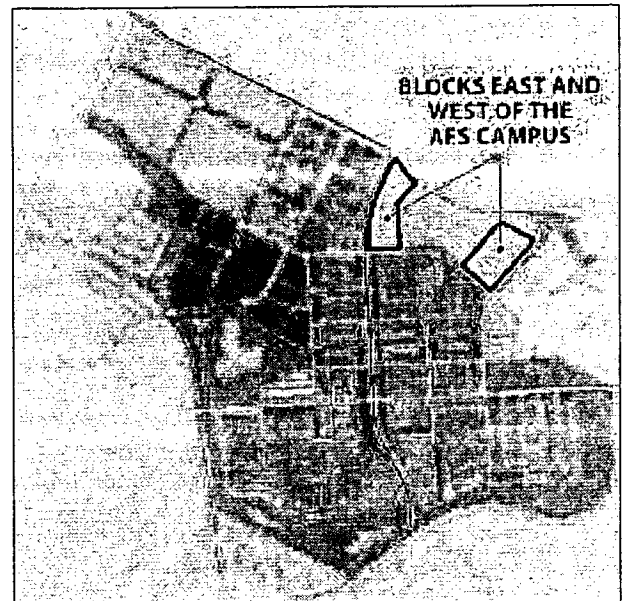
4.5 BLOCKS EAST AND WEST OF THE AFS CAMPUS

Sites have been reserved to the east and west of the AFS campus for commercial and/or residential uses that will be compatible with the film production facility, and provide an appropriate transition to adjacent planned neighborhoods. Prior to development on these properties, an architectural master plan must be submitted to the NCC for review and approval. The eastern and western portion of these plans may be developed separately from one another or as an integral part of the AFS architectural master plan. In any case, the architectural master plan(s) must comply with the following design guidelines:

- Buildings within this area should not exceed 50 feet or three floors in height unless the NCC determines that additional height (up to 75 feet) is compatible with adjacent neighborhood scale and character.
- Development of the western blocks must be designed to create a positive edge along Berkman Drive and East 51st Street, compatible and complementary with the adjacent planned residential neighborhood to the west. As such:
 - Active ground level uses and treatments that promote “eyes on the street” and reinforce the role of Berkman Drive as a transit boulevard are encouraged. Such uses include small retail shops and restaurants, live-work shop houses, public-oriented offices or service uses, and/or residential row houses with front entries oriented to the street. (The design treatment of these fronting uses should be consistent with the building types described in Chapter Two: Neighborhoods.)
 - Buildings along Berkman Drive (i.e., the Central Transit Boulevard) will be built to within 10 feet of the front property line, with entries oriented to the street. Parking lots or structures are prohibited from fronting on Berkman Drive; all parking must be provided at the rear of the property in lots and/or in parking structures.
 - Driveways from Berkman Drive should, to the maximum extent practicable, be located at “T” intersections along the street to allow for controlled pedes-

trian crosswalks and vehicular left turns. Driveways will not be provided at intervals of less than 250 feet.

- Development will step down in height to 40 feet, within 20 feet of the property line along Berkman Drive to create an appropriate transition to the neighborhood, and provide spatial consistency on both sides of the street.
- The pattern of streets and surface parking will be designed to allow for future intensification and infill of the parking lots over time. In this regard, utilities will be aligned along internal streets in such a way as to avoid the need for utility relocations in the future.
- Similarly, buildings facing Philomena Street on either side of the AFS campus must present a complementary edge to the residential neighborhood to the south. More specifically:
 - Active ground level uses and treatments that reinforce the role of Philomena Street as a pedestrian and bicycle corridor and complement the neighborhood are encouraged. Such uses could include live-work shop houses, public-oriented offices or service uses, and/or residential row houses with front entries oriented to the street. (The design treatment and materials for these fronting uses must be consistent with building types described in Chapter Two: Neighborhoods.)
 - The NCC, at its discretion, may allow the decorative wall required for the AFS campus to be extended along the Philomena Street frontage, if it is deemed that this treatment would be beneficial to the adjacent neighborhood. If the NCC approves a wall along this edge, it must comply with the guidelines described for the AFS campus above.
 - Buildings along Philomena Street will be built to within 10 feet of the front property line, with entries oriented to the hike and bike trail and the street. Parking lots or structures are prohibited from fronting on Philomena Street; all parking must be provided at the rear of the property in lots and/or in parking structures.



- All buildings along Philomena Street will step down to 40 feet within 20 feet of the front property line to create an appropriate transition to the residential neighborhood to the south.
- Development of the eastern block (on the current National Guard site) will be oriented to the main north-south street connecting East 51st Street with Manor Road. More specifically:
 - Building entries and activities will be oriented to the street to the maximum extent practicable; parking lots and service areas will be located at the rear of the property, screened from public view.
 - Buildings will be constructed within 25 feet of the fronting property line, with the setback area landscaped in a manner that complements the greenway treatment on the east side of the street.
- Building materials and treatments for all structures must be consistent with those described in Chapter Two: Neighborhoods, and Chapter Four: Employment Centers, depending upon the building type.

EMPLOYMENT CENTER: SITE AND BUILDING MATERIALS AND TREATMENTS

The following guidelines are intended to promote a cohesive environment with complementary high quality buildings throughout all of the Employment Center subareas:

Treatment of Surface Parking: Rather than residual or leftovers spaces, surface parking lots should be designed as spatially defined outdoor "rooms" that give structure and legibility to the district. Depending upon the program of uses, these could be arranged in a series of smaller spaces and/or several larger ones. The layout and design of surface parking areas must adhere to the following guidelines:

- a. At least one tree must be planted for every four parking spaces, such that after 10 years a canopy of tree cover is created over at least 30 percent of the parking area. Temporary parking and staging areas (e.g., within the AFS campus) are exempt from this requirement.
- b. Vegetated islands, swales, ribbon curbs and pervious paving should be considered to the maximum extent practicable to reduce stormwater runoff impacts.

- c. Parking lots should provide designated pedestrian walkways of at least eight feet in width, at intervals of approximately 600 feet or less. These walkways should have tree and/or architectural cover to mitigate the harsh summer sun.
- d. Buildings should, to the extent practicable, provide perimeter activity and spatial definition to parking areas on at least three sides.
- e. Lighting must conform to City of Austin standards and be designed to reinforce the spatial qualities of the area. Lighting must be fully shielded to avoid light pollution.
- f. Light-colored concrete is the preferred paving material to reduce heat island effect.

Treatment of Structured Parking Facilities: Structured parking garages, if necessary, should be designed as an integral part of the architectural vocabulary, and to the extent practicable, be encapsulated within a building complex. Parking access should be organized in a way that minimizes conflicts or disruption of the pedestrian environment.

Building Materials: The architectural master plans for each subarea must provide samples and specifications of the materials to be used for all buildings within the mixed-use regional retail center. The palette of materials should be of a high quality, low maintenance, durable and complementary with one another. Materials should also meet the guidelines outlined in Chapter Seven: Sustainability.

Signage Program: A coordinated signage program for each subarea within the employment centers must be prepared and submitted to the NCC for their review and approval. The signage program must conform to City of Austin standards, as well as the following guidelines:

- a. A clear hierarchy of signage should be established within each of the employment center subareas, ranging from larger monument or "tower" signage oriented to the freeway edge, to smaller monuments along Barbara Jordan Boulevard and East 51st Street, to signs that are in scale and proportion with the buildings on which they are mounted.
- b. The signage program for the mixed-use regional retail center should be visually subservient to the landscape, public art and other identity treatments that are established for Mueller along the I-35 frontage.
- c. The one exception to Item b. may be a major architectural signage element (e.g., tower, wall, etc.) in conjunction with the I-35 identity treatment for Mueller, if, subject to NCC findings, it is designed as a high quality landmark feature. Smaller elements in a similar configuration may be appropriate along Barbara Jordan Boulevard and East 51st Street. Signage along Philomena Street should be carefully scaled and located in consideration of the parkway edge and the adjacent Delwood II neighborhood.
- d. Advertising, electronic or flashing signs are prohibited, unless approved by the NCC.



Recreational Open Space

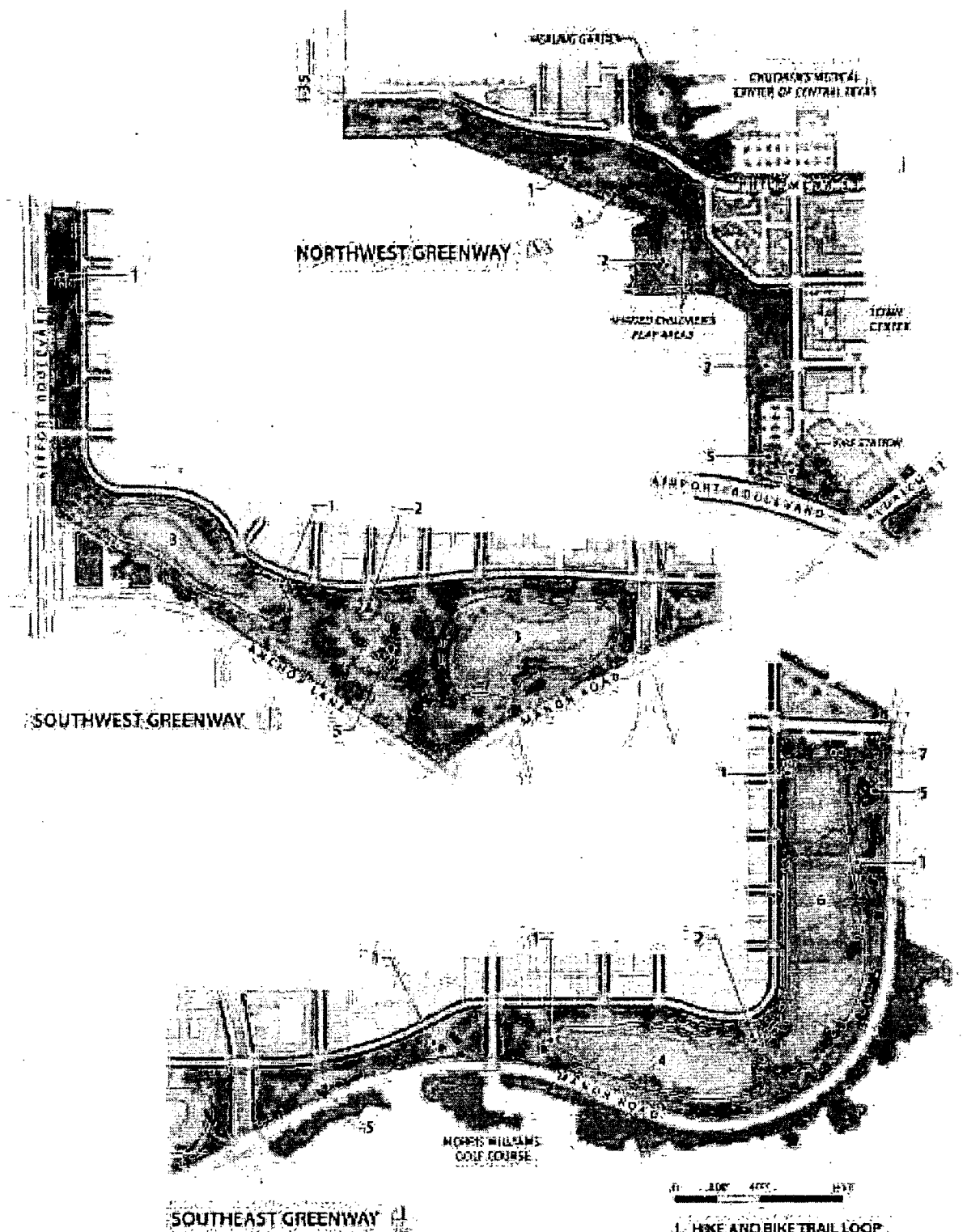
1. PERIMETER GREENWAY
2. LAKE PARK
3. PLAYFIELDS
4. ELEMENTARY SCHOOL AND RECREATION CENTER
5. NEIGHBORHOOD PARKS
6. POCKET PARKS
7. TOWER PARK

5 OPEN SPACE AND RECREATION

Approximately 140 acres of land is set aside for new parks and open spaces within the Mueller community. These parks and open spaces have been located to link to Bartholomew and Patterson Parks and the Morris Williams Golf Course adjacent to the old airport, and in so doing, to create an expanded network of recreational open space that will significantly enhance the quality of life for the surrounding area. At the same time, the open spaces are designed to reinforce neighborhood structure and community identity. They will offer a wide variety of recreational experiences, in facilities that range in size and type, but which together create an integrated system that enhances livability, natural appearance and ecological values. The primary elements of the system are the perimeter greenways that traverse the southern, eastern and western edges of the community; Lake Park that serves as a major focus within the Town Center and that extends eastward via a linear greenway to new recreational facilities at the neighborhood school site; and the neighborhood parks and pocket parks that will serve future residents. The following guidelines focus on the programmatic potentials and desired character and treatment of these parks and open spaces.

The interconnected system of open spaces includes Lake Park (left), a central focus of activity linked to the surrounding community by greenways with hike and bike trails (right).





Perimeter Greenway Illustrative Plans

5.1 PERIMETER GREENWAYS

The perimeter greenways total approximately 75 acres of land and have been developed as broad greenswards that provide a strong visual edge and linear progression of recreational activities. They are predominantly green open spaces composed of a series of clearings or "outdoor rooms" defined by large trees. The perimeter greenways also play an important environmental and ecological role, detaining and filtering stormwater before it re-enters the natural creek systems of the area. The greenways include three major assemblages, each with its own role and character. The greenway to the northwest adjoins the Children's Hospital campus as well as the existing Delwood II neighborhood. Within this perimeter greenway are a number of mature trees to be preserved and an existing stormwater detention area. In addition to serving larger greenway purposes related to linear recreation and storm drainage, this greenway is also envisioned as an amenity for the hospital and adjacent residents. It provides for children's play areas and family picnic grounds, provides a landscape screen to the fire station parking lot and links directly across Aldrich Street to Lake Park. The greenway to the southwest also connects to Lake Park and is notable for its stands of existing trees which will remain. Wet ponds are located within this widened greenway which is the terminus of a number of streets from the new neighborhood to the north. The southeastern greenway, adjacent to Morris Williams Golf Course, features a detention irrigation pond and playfields in the detention meadows.

Linkages. A relatively unbroken continuity of open space will be created within the perimeter greenway with strong linkages to existing parks (i.e., Patterson Park, Morris Williams Golf Course and Bartholomew Park) as well as planned neighborhood parks. The pattern of roadways within the Mueller community will be designed to enhance accessibility to the perimeter greenway and to make it more visible to surrounding areas.

Potential Recreational Uses. Potential recreational uses will include walking, jogging, bicycling, exercise courses, field sports, sports classes, children's play areas, informal play areas, picnicking, group events and parties, nature and ecological discovery. In the southeastern greenway, playfields should be developed in an area

A portion of the greenway will be devoted to playfields for youth soccer.





Like Central Park in Austin, the perimeter greenways form an essential part of the drainage, detention and water quality system at Mueller.

of approximately 20 acres for multi-use playfields (primarily soccer) as well as playgrounds and group picnic facilities. The playfields are intended for youth league practice fields. Small, well-landscaped and screened parking lots of less than 50 cars each should be provided to serve the users of the fields. The recommended parking ratio for playfields is 25 spaces per field. The fields will not be lighted.

Trail System: A continuous hike/bike trail of a width of no less than 10 feet will be developed with an accessible gradient along its length. The hike/bike trail will

become the backbone for recreational experiences within the perimeter greenway, tying together the entire greenway system and recreational experiences within it. The hike/bike trail should connect to secondary paths (of a minimum six-foot width) and where possible, a looping route should be incorporated into each of the three greenway segments, creating smaller systems that can be used independently from the larger overall system. Consideration should be given to the provision of safe connections for cyclists and pedestrians between adjacent parks and neighborhoods and the greenway system. Trail access points should be clearly marked, providing information, seating, "parcourse" exercise equipment, shade and drinking water. These trailheads should also be large enough for groups to gather.

Ecological Function. The perimeter greenways play an important role in filtering pollutants from storm water and in detaining run-off as a mitigation to flooding in adjacent areas. Land should be contoured in a way that appears natural in character, while incorporating sound hydrologic engineering procedures. Slopes around the wet ponds and detention areas should not exceed 3:1, transitioning to more gradual slopes in surrounding areas. Native, riparian trees should be used, along with wetland grasses and marsh plantings as prescribed by the City of Austin Environmental Criteria Manual. Consideration should be given to the incorporation of interpretive signage at special environmental features and key points, such as the wet ponds expanding upon their role in stormwater management. Seating areas and overlooks at the wet ponds should also be included, where not in conflict with wildlife values.

Management. Portions of the greenways will be dedicated to the City of Austin as public parks to satisfy the parkland dedication requirements for the Mueller community. These greenways will be required to meet the City of Austin Parks and Recreation Department's standards for construction, with special consideration for long-term maintenance and operations. Lawn areas requiring mowing should not exceed a 3:1 slope.

5.2 LAKE PARK

Lake Park, approximately 30 acres in size, is designed as an integral extension of the greenway system and as a central focus and amenity for the entire community. It is envisioned as a major destination for recreational users jogging, hiking and bicycling through the greenway. Located along Airport Boulevard, Lake Park will provide an important “front door” to the Mueller community, establishing a new identity for the site and an attractive visual setting for the Town Center. Lake Park offers views from the center of the new community to the downtown Austin skyline, the Capitol dome and the UT tower.

Landscape Character: Lake Park should have a predominantly naturalistic character, with open meadows defined by canopy trees surrounding the lake. The edges around the lake should provide opportunities for people to promenade along and overlook the water. A promenade edge with a low bulkhead wall should be provided along the more urbanized edge of the lake adjacent to the Town Center.

Potential Recreational Uses: Lake Park will be designed for a variety of uses, such as community celebrations, concerts, outdoor theater and performances, special events, weddings, parties, outdoor dining, art fairs, festivals, farmers’ markets, jogging, walking, boat/bicycle rental concessions, paddleboats, model boat sailing and canoeing. A natural amphitheater should be designed with a sloping grade into and along the banks of the lake; performances could be staged at the edge of the lake and/or from a floating stage within the water body. A boathouse (potentially located within the bow-trussed hangar) should be incorporated within the park to provide a boat and bicycle rental concession.

Bow-Trussed Hangar: The bow-trussed hangar structure should be studied to determine the feasibility of retaining it as a landmark within the park for community use, a publicly oriented commercial-recreational use and/or as a sales and information center for Mueller.

Hike/Bike Trail: The hike/bike trail will extend through Lake Park, linking the northwest and southwest portions of the perimeter greenway as well as providing a looping route within the park itself. The trail should be lit with full-cut off and fully-shielded path lights.

New Structures: New structures, including public restrooms, recreational facilities or concessions within Lake Park, should not exceed a height of 25 feet or a total combined area of 15,000 square feet. They should be sited and designed to complement and blend into the open space setting of the park and concentrated on the portion of the site adjacent to Airport Boulevard.

Parking: A parking lot of up to 80 cars is permitted within Lake Park. This parking facility should be located between the bow-trussed hangar and Airport Boulevard, and be well-landscaped (a minimum of one tree for every four cars) to extend the open space character of the park. Additional curbside parking should be provided along adjacent streets.



Lake Park Illustrative Plan

- | | | |
|----------------------------------|-----------------------------------|--|
| 1. HISTORIC HANGAR | 5. LAKE OVERLOOK/PARK FEATURE | 9. PARKING |
| 2. LAKE / WATER QUALITY WET POND | 6. PICNIC GROVE AND PARK PAVILION | 10. PRESERVE EXISTING MATURE TREES |
| 3. POND FOREBAY | 7. OPEN LAWN / DETENTION MEADOW | THICK LINE: 100 YR. FLOOD DETENTION AREA |
| 4. LAWN STEPS & AMPHITHEATER | 8. HIKE AND BIKE TRAIL LOOP | |

5.3 SCHOOL AND RECREATIONAL AREA

At the eastern end of the Mueller community, a new neighborhood school and joint use recreational center is to be built on a site of approximately 20 acres to accommodate recreational fields that are open and accessible to the public.

Landscape Character: At the neighborhood school site, the school grounds and adjacent recreation center will be designed as a single, well-landscaped campus with open lawns and playfields that provide a visual and open space amenity to the adjacent neighborhoods. Clusters of trees in combination with the perimeter street trees will be provided to maximize shade within the campus.

Potential Recreational Uses: The recreation center should include such recreational facilities as a gymnasium, unlighted multipurpose sports fields, game courts (e.g. basketball, tennis), field house and support parking.

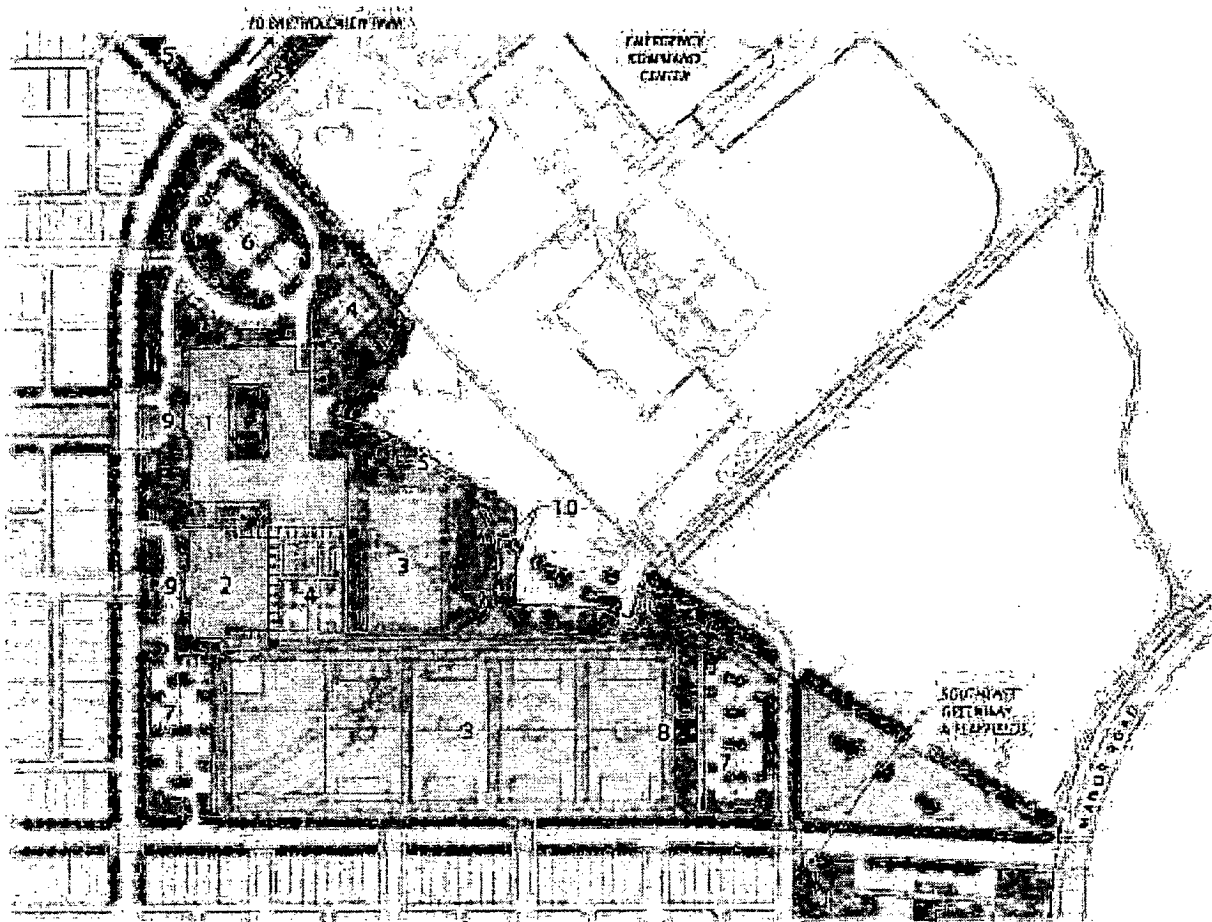
Hike/Bike Trail: The hike/bike trail will extend through the neighborhood school and recreational center campus as an uninterrupted path linking the Philomena Street hike and bike trail with the southeast perimeter greenway.

New Structures: The neighborhood school and recreation center should not exceed a height of 50 feet and should be designed in a manner that is compatible and complementary with the adjacent neighborhood. The neighborhood school should be designed as a two-story community landmark, providing a distinctive visual terminus to the east-west parkway street that connects to Lake Park and the Town Center. The buildings should have a street orientation with building entries and publicly-oriented activities presenting a welcoming front to the neighborhood, and ground level uses (e.g., assembly spaces) that create interest along the street.

The school and recreation center grounds should be designed with open lawns and playfields.



Parking: Parking lots should be distributed to avoid large expanses of asphalt on the campus and to promote a sense of convenience. Separate lots for the neighborhood school, recreation center and the playfields are suggested. Curbside parking will also provide additional parking for the facilities. Surface parking shall comply with the landscape guidelines set forth in Chapter Six.



Neighborhood School and Recreation Center Illustrative Plan



- | | |
|------------------------|------------------------------------|
| 1. NEIGHBORHOOD SCHOOL | 6. SCHOOL PARKING |
| 2. RECREATION CENTER | 7. REC CENTER PARKING |
| 3. YOUTH SPORTS FIELDS | 8. FIELD HOUSE |
| 4. SPORTS COURTS | 9. MAIN ENTRY & DROP-OFF |
| 5. HIKE AND BIKE TRAIL | 10. PRESERVE EXISTING MATURE TREES |

5.4 NEIGHBORHOOD PARKS AND POCKET PARKS

Neighborhood parks of approximately two to three acres in size are planned as the principal focus and gathering space for each of Mueller's four neighborhoods. These parks will typically include a variety of active and passive recreational facilities, and will require careful site planning to maintain a predominantly green, verdant character with no more than fifty percent impervious cover.

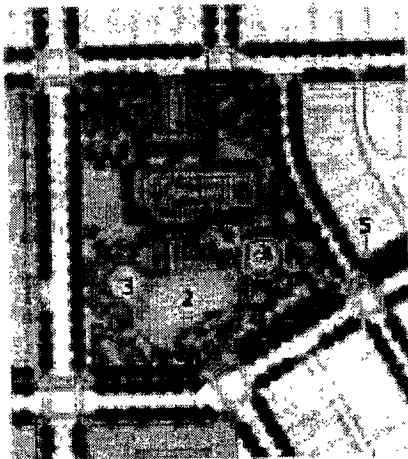
A series of smaller pocket parks of approximately one-quarter to one acre in size are also planned within each neighborhood. These pocket parks are located so as to ensure that all residents are within 600 feet of a park and configured to create a focus for neighborhood subareas. These parks, like the neighborhood parks, should be designed to serve the special recreational interests of the community and reflect the demographic characteristics of each neighborhood. It is important that these small parks be designed as simple and flexible open spaces suitable for a wide range of informal use.

Potential Recreational Uses: Neighborhood parks will be designed to provide for a variety of activities, such as: swimming, multi-use play lawns, picnicking, children's play, neighborhood gatherings, etc. Pocket parks will be designed to provide for a variety of activities, such as children's play areas, formal and informal seating areas, neighborhood festivals and gatherings.

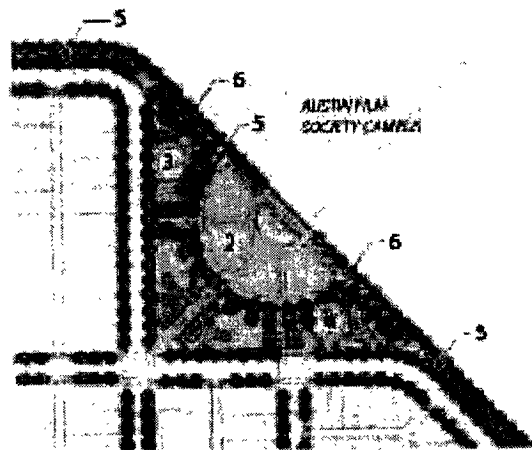
Landscape Character: Street tree plantings will continue at the park edges as a structuring element. Within the parks, more informal massing of shade and ornamental trees will be incorporated and additional shade, if necessary, should be provided within pool deck areas and over playscapes by using shade structures. An open lawn area will be maintained within each park to encourage spontaneous play and allow for neighborhood gatherings.

Parking: Since the neighborhood and pocket parks are easily accessible by foot, parking will be limited to on-street, curbside parking along the edges of the open space.

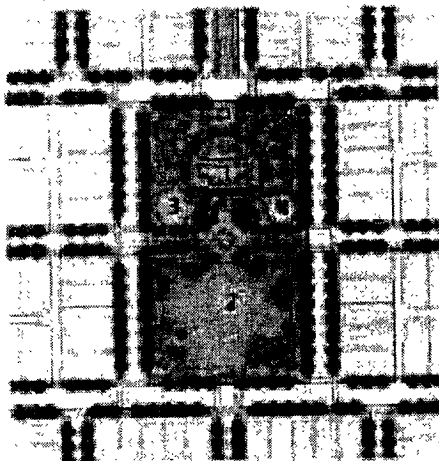
Lighting: Night lighting should be provided both within the parks and at their perimeters for safety and surveillance. Sport courts should be lighted to extend the time that they can be used. Sharp cutoff fixtures are required to minimize glare to neighboring residents and to avoid light pollution.



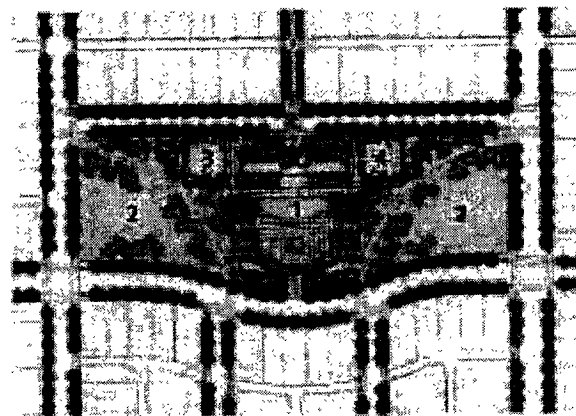
NEIGHBORHOOD 1 (NORTHWEST)



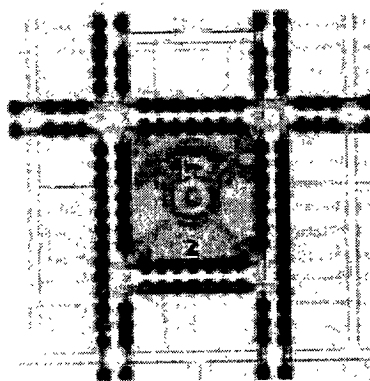
NEIGHBORHOOD 4 (NORTHEAST)



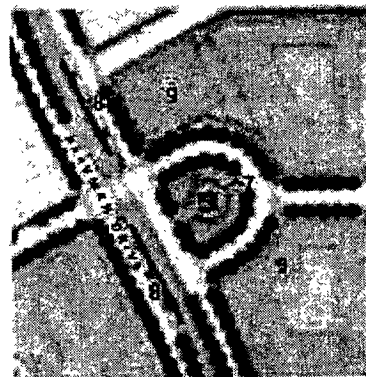
NEIGHBORHOOD 2 (SOUTHWEST)



NEIGHBORHOOD 3 (SOUTHEAST)



TYPICAL POCKET PARK



CONTROL TOWER POCKET PARK

Neighborhood Park and Pocket Park Illustrative Plans

1" = 100' 1" = 100' 1" = 100'

- | | | |
|------------------------------|---|--------------------------|
| 1. SWIM CENTER & BATH HOUSE* | 4. SHADED CHILDREN'S PLAY AREA | 7. CONTROL TOWER & PLAZA |
| 2. OPEN LAWN | 5. PHILOMENA STREET HIKE AND BIKE TRAIL | 8. TRANSIT STATION |
| 3. SPORTS COURT | 6. WALL ALONG AFS CAMPUS | 9. MIXED USE DEVELOPMENT |

*SPLASH POOLS OR OTHER WATER PLAY FEATURES MAY SUBSTITUTE FOR SWIMMING POOLS TO PROVIDE DIVERSITY BETWEEN NEIGHBORHOODS.

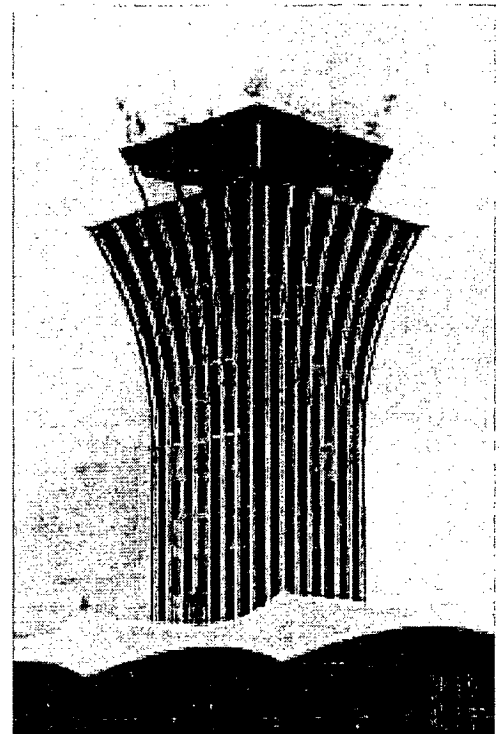
5.5 TOWER PARK

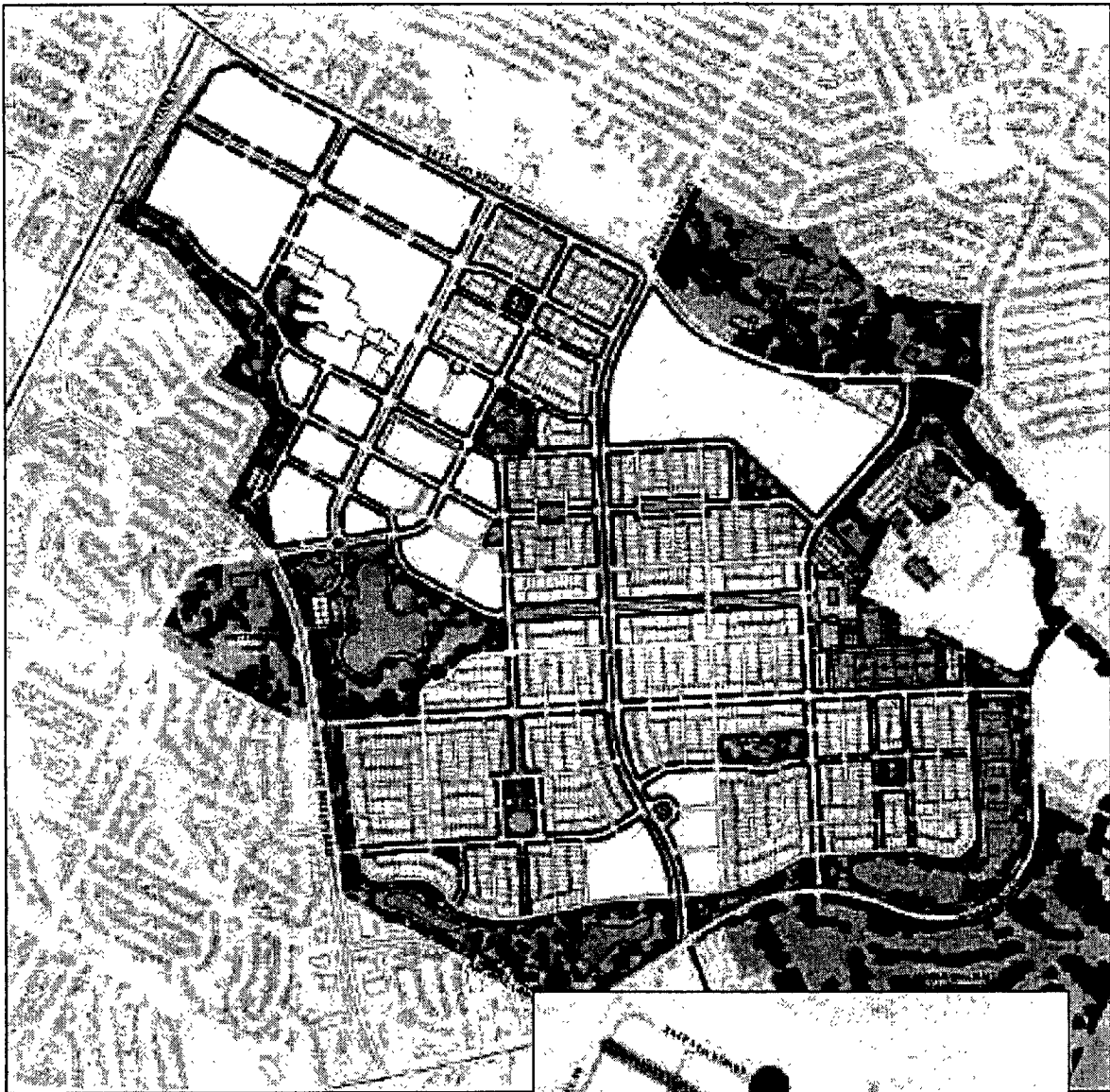
The utilization of the original aircraft control tower as a prominent visual landmark and activity center within the Mueller community is an important project goal. At approximately 100 feet in height, the tower will provide a provocative focal point for the community and help to celebrate the aviation history of the site. The plan has been carefully configured to give the tower a significant gateway role along the central transit boulevard, and within the community. It is also envisioned as the focal point of the southern neighborhoods, surrounded by mixed-use residential buildings with ground level commercial and community-serving activities and a future rail transit stop.

The tower is set in a small semi-circular urban green (see plan on left), which should be designed as a simple and elegant setting for the tower, and as an intimately-scaled neighborhood gathering place. Additions or modifications that detract from the tower's original form are discouraged. While adaptive reuse of the tower for other activities is desirable, modern-day life-safety and exiting requirements may prevent it from being used as a public assembly building or viewing tower. Opportunities should be explored for retrofitting the ground floor of the building as a small interpretive center; the first two floors of the tower were originally within the terminal building, and as a result will need to be enclosed and clad in a complementary manner. Interpretive elements and displays that recall the history of aviation at Mueller and in Austin are encouraged at the base of the tower.

The park will be designed as a simple horizontal plaza and green, that highlight the verticality of the tower. In addition to interpretive exhibits, provision should be made for seating, small gatherings and events, as well as informal and passive recreational use. Landscaping and canopy trees will be provided along the perimeter of the park to provide shade and greenery, while preserving sight lines to the tower from the adjacent neighborhoods and from the transit boulevard.

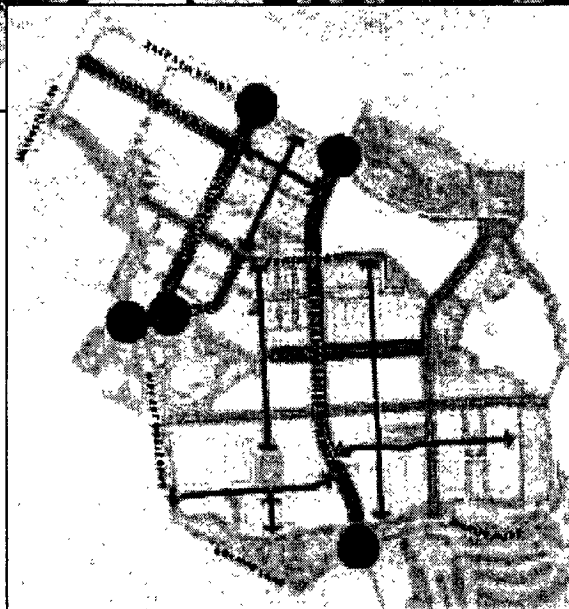
At approximately 100 feet, the tower will provide a focal point for the community and help to celebrate the aviation history of the site.





Streetscape Concept

-  COMMUNITY CONNECTOR
-  LINEAR PARK CONNECTOR
-  GREENWAY STREET
-  NEIGHBORHOOD BOULEVARD
-  NEIGHBORHOOD CONNECTOR
-  TOWN CENTER MAIN STREET
-  NEIGHBORHOOD LOCAL STREET
-  COMMUNITY GATEWAY



LANDSCAPE AND STREETSCAPE

The successful transformation of the airport into a mixed-use, pedestrian-oriented community will rely to a great extent on landscaping within parks and open spaces, along streets and within private properties. The focus of this chapter is on planting, preserving and relocating plant materials – primarily trees – that will significantly influence the identity and character of the Mueller community and its environmental and social characteristics. Guidelines and standards are set forth to help guide the transformation of this urban infill site into a green and sustainable urban landscape that emulates qualities of Austin's best neighborhoods. Lighting standards and guidelines are also provided to promote nighttime safety and livability as well as to establish an attractive nighttime environment that addresses issues of light pollution. Guidelines for street and park furnishings intended to enhance comfort and add to the amenity of the public environment are also described.

More than 15,000 trees are planned for the Mueller community, comprising an urban forest that will help to achieve community objectives for increased environmental quality, greater energy conservation and mitigation of the heat island effect. The goal is to achieve a thirty percent canopy coverage within streets and other public spaces at maturity. Guidelines for the selection of plant materials, desired character, planting methods and practices, preservation, relocation, removal and maintenance are set forth as follows.

Plant Selection and Landscape Character

Approved Plant List: At least 80 percent of the plant materials proposed for use in the Mueller community must be selected from the list of "Approved Plant Materials" (refer to Appendix A), which emphasize non-invasive, drought-tolerant and native species.

Diversity: At least 20 to 30 different types of trees will be used throughout the Mueller community, with no more than forty percent of a single species.

Mueller's 15,000 trees will create an urban forest, enhancing environmental quality, promoting energy conservation and ameliorating heat island effect.



Potential Street Tree Selection: Preference for street tree plantings is given to tall, high-canopied trees that grow to at least a height of 40 feet at maturity, provide shade, and reduce the heat island effect. Potential choices for street tree selections are as follows:

- *Major Community Gateways:* Live Oak (*Quercus virginiana*) and Crape Myrtle (*Lagerstroemia indica*)
- *Community Connectors (Mueller Boulevard, Barbara Jordan Boulevard, and Berkman Drive):* Live Oak (*Quercus virginiana*)
- *Linear Park Connector:* Cedar Elm (*Ulmus crassifolia*)
- *Greenway Streets (Philomena Street) and Neighborhood Boulevards:* Lacebark Elm (*Ulmus parvifolia*) and Chinquapin Oak (*Quercus muehlenbergii*)
- *Town Center Main Street (Aldrich Street):* Sweetgum (*Liquidambar styraciflua*), Texas Red Oak (*Quercus texana*) or Mexican White Oak (*Quercus polymorpha*)
- *Neighborhood Connectors:* Combination of distinctive oak trees, including Shumard Oak (*Quercus shumardii*), Chinquapin Oak (*Quercus muehlenbergii*), Texas Red Oak (*Quercus texana*), and Mexican White Oak (*Quercus polymorpha*)
- *Neighborhood Local Streets:* Mexican Sycamore (*Platanus texana*), Shumard Oak (*Quercus shumardii*), Cedar Elm (*Ulmus crassifolia*), and Lacebark Elm (*Ulmus parvifolia*)
- *Alleys:* Occasional plantings of smaller narrow and high-branching trees where sufficient space allows and where not in conflict with trash pick-up and other service needs.

Landscaped paseos, courtyards and outdoor cafe areas that extend the public space of the street are encouraged.



Paired Street Trees: Tree species will be mirrored on both sides of the street for spatial continuity and uniform canopy coverage. The spacing of street trees should generally range from 20 to 30 feet.

Tree Size at Planting: Street trees will be planted at a minimum 65-gallon container size (or three-inch caliper). Opportunities for additional landscaping to shade west and south facing building walls should be optimized, through the use of ornamental trees and

pergolas. If portions of the street are planted at different times, then subsequent plantings should match the current size of the existing plantings in caliper, height and canopy spread.

Aldrich Street Landscaping: Along the commercial streetfronts of the Town Center (e.g., Aldrich Street), street tree planting should be augmented with ornamental plantings along the building face. These could include hedges, low planters, ornamental pots, hanging pots, etc. Such planting will be permitted to encroach within the right-of-way by up to 24 inches, but must be designed and located in a way that does not impede pedestrian access or safety.

Medians: Medians should be planted with street trees with a rich mixture of colorful shrubbery and ground cover to contribute to the desired garden-like setting of the Mueller community and to break down the scale and expanse of pavement of large boulevards. Plant material selections should be carefully made to avoid obstructing sight lines.

Park Landscaping: Landscaping in parks and perimeter greenways should include plantings of younger trees to create mixed-age stands of trees that provide a sustainable tree canopy for the future.

Private Landscaping: A diversity of plant materials is encouraged on private property. Property owners should landscape with a variety of plants providing seasonal color, fragrance, texture, foliage interest and screening capabilities. Fruit and ornamental trees should be encouraged for use in individual yards and should be used for accent, wildlife food and habitat and seasonal color.

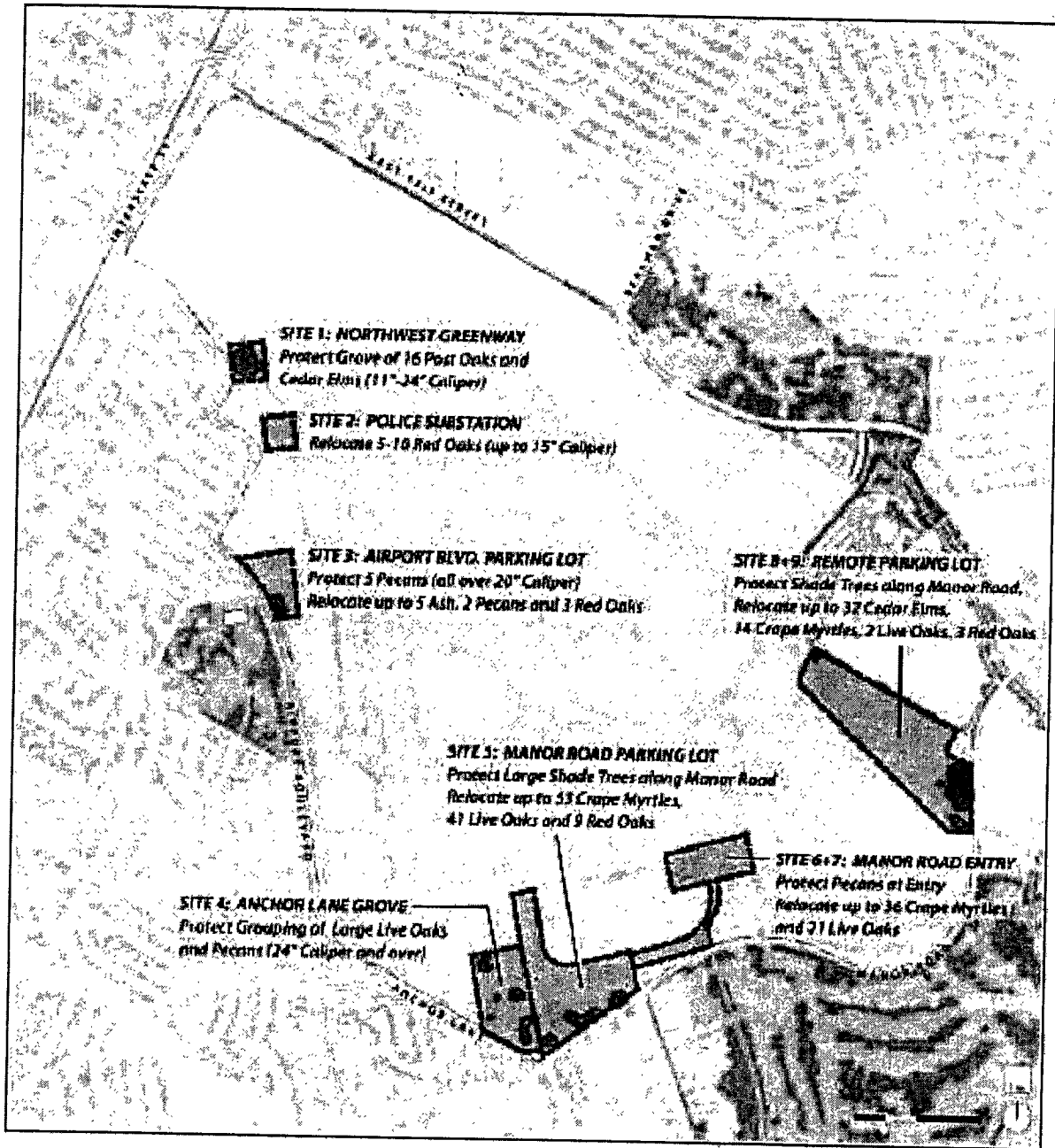
Town Center Courtyards and Paseos: Landscaped paseos, courtyards, and outdoor café areas that extend the public space of the street are encouraged, particularly in pedestrian-intensive areas (e.g., between Aldrich Street in the Town Center and the public parking areas (i.e., the orchard parking lot and public parking garage). These spaces should provide a canopy through tree planting, pergolas, awnings, etc.

Private Courtyards and Gardens: Interior courtyards and garden areas should be provided within mixed-use commercial or residential developments for the use and enjoyment of residents and employees. These spaces should include generous landscaping, providing shade through the use of trees or pergolas for at least 30 percent of their area.

Yard House Landscaping: At least 40 percent of front and back yard areas will be landscaped with turf and planting beds. In the front yard of detached yardhouses, at



Storefront landscaping, including hedges, planters, ornamental and hanging pots are encouraged along Aldrich Street.



Tree Preservation and Relocation Plan

PROTECT IN PLACE*

RECOMMENDED FOR RELOCATION*

*SUBJECT TO MORE DETAILED INVESTIGATION BY CERTIFIED ARBORIST

least one shade or ornamental tree should be located to maximize canopy coverage of the yard area. In backyards, trees, shrubs and ground cover should be planted to contribute to the visual interest and appearance of the alleys.

Shading of Southern and Western Walls: On private parcels, trees should be placed to maximize shading of buildings, structures and outdoor use areas with southern and western exposures. Shade trees selected for such use should grow to appropriate heights at maturity to assist in the reduction of the heat island effect.

Alley Planting: Planting pockets will be provided at each lot to provide for vines that can grow up the walls and fences along the alleys.

Ground Cover: All exposed and unpaved natural soil, except pathways, should be planted with ground cover and/or turf.

Parking Lot Landscaping: A minimum of one tree for every four cars must be provided within surface parking lots. The trees should be sized and distributed so as to achieve a 30 percent canopy coverage over the parking area within 10 years of planting. Shade trees selected should be medium-to fast-growing trees to maximize available shade as quickly as possible. Low hedge planting, shrubs and/or walls up to 36 inches should be provided to screen parking along all public streets.

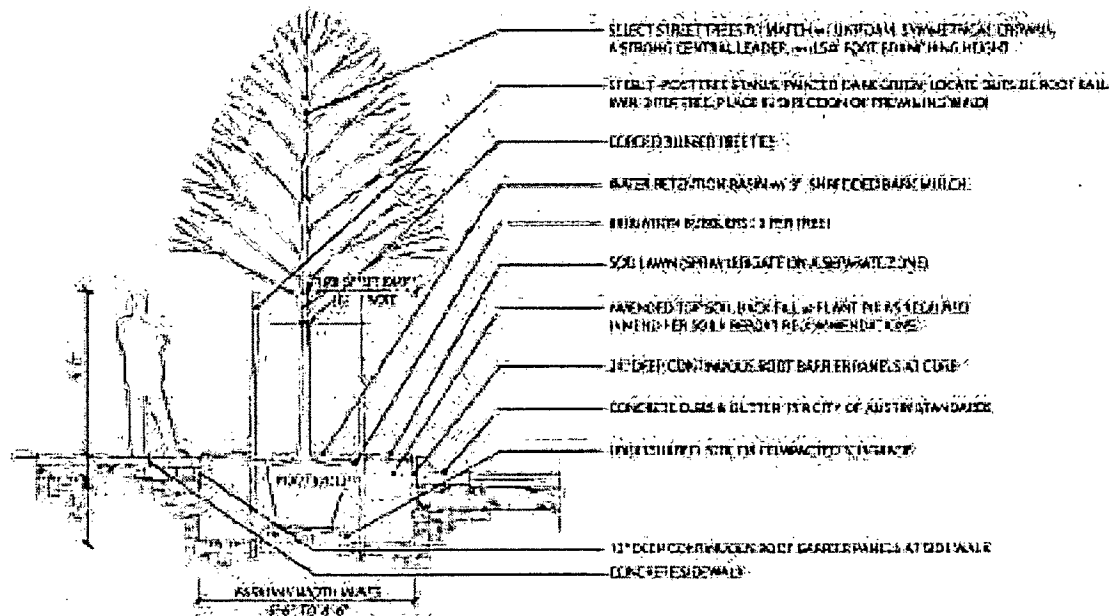
Tree Preservation, Relocation and Replacement

Preservation: Existing groupings of trees within the perimeter greenway will be protected and incorporated with future improvement plans. Grading or any disruption of the soil, should not be permitted within the dripline of these trees nor should drainage patterns be altered in such a way as to threaten their future viability.

Relocation: Approximately 250 individual specimen trees will be considered for relocation within the Mueller community and utilized as anchors in “signature” plantings. Final determination of trees to be protected and relocated will be made by a certified arborist with a minimum of ten years’ experience in Austin.

Replacement: To the extent practicable, protected trees that die or are severely damaged and cannot be restored to original condition should be replaced by trees of equal size or total caliper inches.

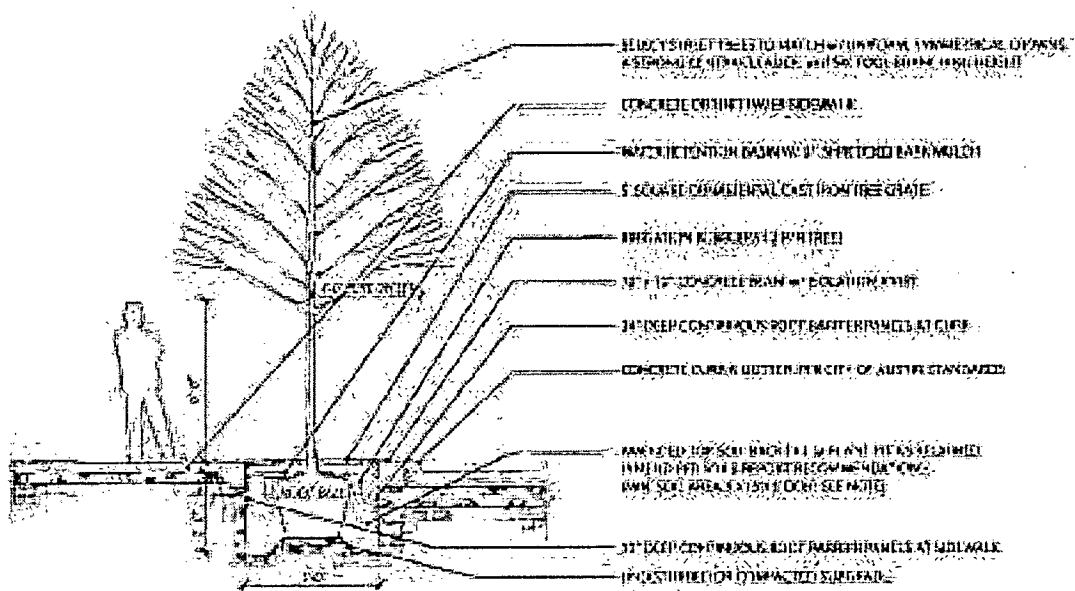
Invasive Species: Existing invasive species should be eradicated, and trees identified as “invasive” should not be planted.



NOTE:

1. LINED OFF TO CENTER OF TRUNK & PLANT TO TOP OF PARKWAY STRIPS 3' TO 4' FROM TRUNK STRIPS
2. PLANTING IN PARKWAY STRIPS WITH A 10' WIDE STRIP AT THE END OF THE PARKWAY STRIP. PLANTING IN PARKWAY STRIPS WITH A 10' WIDE STRIP AT THE END OF THE PARKWAY STRIP. PLANTING IN PARKWAY STRIPS WITH A 10' WIDE STRIP AT THE END OF THE PARKWAY STRIP.

Typical Street Tree Planting at Parkway Strips



NOTE:

1. ON ONE OF THE MAIN STREETS, THE TREE IS PLANTED TO STREET TREES CROWNED WITH WELL-EXTENDED LEAVES OF 10' TO 12' IN LENGTH. THE TREE IS PLANTED TO STREET TREES CROWNED WITH WELL-EXTENDED LEAVES OF 10' TO 12' IN LENGTH. THE TREE IS PLANTED TO STREET TREES CROWNED WITH WELL-EXTENDED LEAVES OF 10' TO 12' IN LENGTH.
2. ONCE THE TREE IS PLANTED, THE TREE IS PLANTED TO STREET TREES CROWNED WITH WELL-EXTENDED LEAVES OF 10' TO 12' IN LENGTH. THE TREE IS PLANTED TO STREET TREES CROWNED WITH WELL-EXTENDED LEAVES OF 10' TO 12' IN LENGTH. THE TREE IS PLANTED TO STREET TREES CROWNED WITH WELL-EXTENDED LEAVES OF 10' TO 12' IN LENGTH.

Typical Street Tree Planting at Town Center / Aldrich Street

Planting Practices and Methods

Plant Quality: Plant materials will be of premium quality and planted according to best practices and methods, utilizing automated irrigation systems, root barriers where adjacent to pavement (except in the Town Center area where structural soils or other techniques are used to support root growth), staking and well-aerated, fertile, well-drained soils.

Soil Testing and Amendment: Prior to planting, agricultural suitability testing must be undertaken to determine the need for soil amendments, import, special drainage requirements and fertilization. If soils are not suitable for planting, recommendations of a soil scientist should be followed to support the long-term health and viability of the plantings. The use of water absorbent polymers should be considered, along with locally engineered soils where appropriate, as a means of increasing soil water-holding capabilities.

Parkway Strips: Care should be taken to minimize soil compaction around the critical root zone of all plants. With exception of the Town Center, parkway strips for the planting of all street trees will be incorporated adjacent to the curbs in widths ranging from six to eight and one-half feet continuously along both sides of the street (see Appendix B). Parkway strips should be planted with low-maintenance turfgrass, capable of withstanding foot traffic and should serve to catch and filter run-off from the sidewalks before it reaches the storm sewer system.

Aldrich Street Tree Wells: On Aldrich Street within the Town Center, trees will be planted in tree wells and consideration should be given to the use of structural soil mix or other methods that mitigate the effect of soil compaction under pavement on root growth and tree development. Uniform decorative tree grates should be used around each tree.

Irrigation: Water-conserving irrigation systems, including automated rain sensors and programmable irrigation controllers, should be used to provide 100% coverage to all irrigated areas, with appropriate zone separation of landscape areas with differing water needs.

Reclaimed Water: Reclaimed water will be utilized for landscape areas in the public rights-of-way to the maximum extent practicable, and irrigation systems should be designed for adaptation to reclaimed water, if not available at the time of installation.

Spray Irrigation: Spray heads and rotors will be utilized where necessary in large landscaped areas. Spray irrigation systems will be designed so that water is confined

to landscaped areas, avoiding overspray. Spray heads will be of the pop-up type. Timers should limit use of irrigation to the early morning or evening hours.

Bubblers/Drip Irrigation: Bubblers and drip irrigation systems will be used for street trees and elsewhere to encourage deep-rooted plantings. Drip emitters will be used to deliver water directly to plant materials.

Landscape Maintenance

Standards of Maintenance: Landscape maintenance of all parks within the Mueller community will be funded privately and maintained at a high level in consideration of the longevity, appearance and continuity of the plantings and the continued functioning of support systems.

Pruning: Trees will be pruned, as required, after planting to promote good structure and to reduce wind load. Street trees will be pruned within two years so that the branching begins at six feet above grade and continue to be limbed up (only in conditions where the structure of the tree is not disfigured) until the lowest branch is at a maintained height of 10 feet above grade. Any branching over vehicular lanes will be pruned to 14 feet above grade.

Replacement Planting: Successional plantings will be undertaken to replace trees and other plant materials as they age and decline over time.

Integrated Pest Management: All pest and weed management will use least-toxic chemical controls, consistent with recommendations of the City of Austin Department of Watershed Protection.

Special Precautions Related to Oak Wilt: Special care will be taken to minimize the spreading of Oak wilt within the site's oak population.

- The pruning of oak trees will be avoided from February 1 to June 15.
- All wounds will be painted immediately, regardless of size, with a thin coat of commercial tree wound paint to prevent transfer of fungal spores to the wound.
- Pruning tools will be disinfected between cuts, particularly when pruning multiple oaks, with Clorox, Lysol spray or 70% rubbing alcohol solution.

- Pruning will comply with the requirements of the City of Austin ECM and ANSI A300 (Part 1) “Tree, Shrub, and Other Woody Plant Maintenance-Standard Practices (Pruning)”.

Dumping Staging and Storage

- Open Space areas will not be used as temporary or permanent dumps, storage or staging areas.
- Such areas on the site shall be permitted on an interim basis during construction if the NCC finds that they are adequately screened and located in an area that will not impact adjacent residents or employment uses.

Streetscape Furniture

Benches, trash receptacles, transit shelters and paving materials are all significant elements that contribute to the character and amenity of the public environment, including the streets and parks within the Mueller community.

Benches, Trash and Recycling Receptacles

- Benches, trash and recycling receptacles will be incorporated along sidewalks in the Town Center and at transit stops for greater pedestrian comfort and convenience.
- Benches, trash and recycling receptacle selections should be identical in style and color, sized appropriately to the specific site, similar to those in place at Capital Metro transit stops.

Sidewalks and Pavement

- Sidewalks should be a minimum of four feet in width and should provide for continuous pedestrian movement along the street and facilitate crossings at each vehicular intersection. (See Appendix B for dimensions).
- Along Aldrich Street, sidewalks should be widened to 20 feet to allow for café extension zones and awnings that extend the activity within Town Center shops and restaurants. The use of higher quality paving accents should also be considered.

Capitol Metro's typical transit shelter will be used throughout Mueller.



- The use of light-colored concrete or other paving materials is encouraged to help mitigate heat island effect.
- In plaza areas and other areas of pedestrian focus, the use of higher quality pavement materials, such as brick, stone or unit pavers is encouraged.
- Along trails and other pedestrian pathways, where feasible, permeable pavers and porous pavements should be considered as an alternative to standard concrete to increase stormwater infiltration and groundwater recharge.

Transit Shelters

- Transit shelters should be of the same style, materials, and "Capital Metro Green" color as the typical Capital Metro transit shelter used throughout Austin (see photo above).
- Shelters should be scaled appropriately for the level of ridership anticipated at a particular stop.

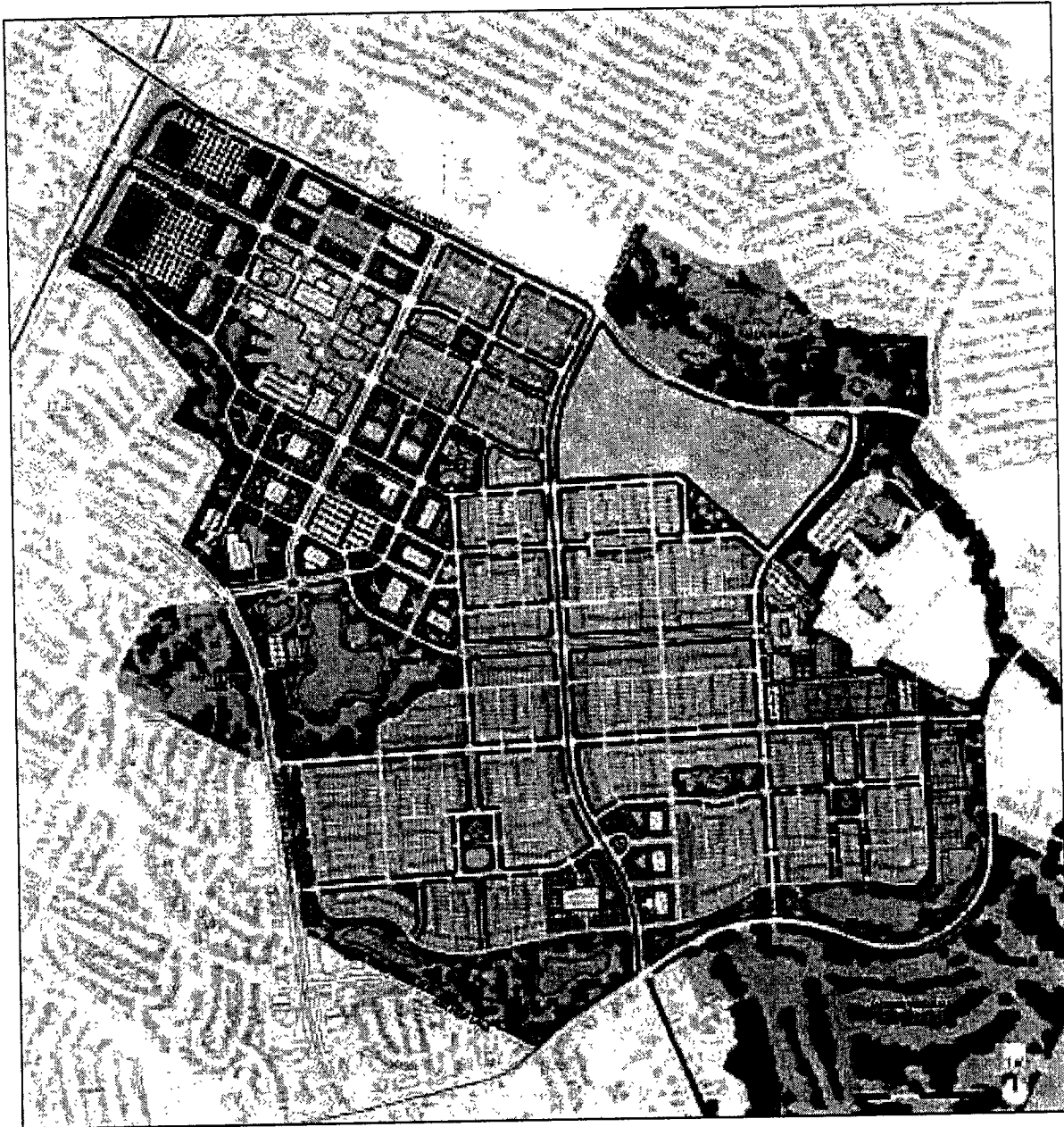
Site Lighting

Lighting is important in adding to the attractiveness of the Mueller community, creating a sense of safety and security. Light equipment selections and lighting design should be made with a goal of eliminating glare, light trespass and light pollution.









- Lighting layout will be coordinated with proposed landscaping and existing trees to maximize light distribution and avoid conflicts.
- Light fixtures will be designed and lamped for both pedestrian and vehicular purposes. Lamping will be metal halide on major streets, in the Town Center, and as accent lighting for highlighting trees and site features or downlighting from tree canopies. High-pressure sodium will be used for street lighting within residential areas, consistent with surrounding residential areas.
- The 14-foot “Town Lake” decorative steel fixture (available from Austin Energy) will be used for pedestrian and street lighting within the parkway strip of most public streets.
- Only along Mueller and Barbara Jordan Boulevards will the taller, 30-foot “Cobrahead” fixture (also available from Austin Energy) be used. Where it is used, ornamental pole bases, poles and mast arms are encouraged.
- Fixtures will be adapted to comply with light trespass considerations as required.
- All fixtures will be painted a dark green color to match existing Capital Metro site furnishings.
- Decorative seasonal lighting (e.g. “Tivoli” lights) is encouraged on public streets within the Town Center.
- Lasers, searchlights and flashing lights are not permitted, unless otherwise reviewed and approved by the City of Austin.
- In the perimeter greenway, no lighting of the sports fields will be allowed in order to avoid the impact of glare on neighboring residents.
- Parking lot lighting must meet applicable City of Austin standards, and be designed to avoid light pollution by employing cut-offs that prevent light from being emitted above the horizontal plane.



The Town Lake fixture will be the predominant street light standard at Mueller.



Illustrative Plan

-  **Civic/Institutional**
Neighborhood library, community center
hospital, public office building, fire station
-  **Yard House**
Single-family detached
-  **New Medium-Density House**
Rowhouse, single-family detached, townhouse
-  **Medium House**
A rowhouse with a 40-ft. courtyard house
-  **Mixed-Use Sites**
Office, high-density residential, retail
-  **Mixed-Use Commercial**
Retail, office, medium-density residential
-  **Mixed-Use Residential**
Office, high-density residential, retail
-  **Publicly Accessible Open Space**

SUSTAINABILITY AND GREEN URBANISM

Introduction

Nationally and internationally, a groundswell is underway to establish planning, architecture, engineering, construction and maintenance practices that value ecological sustainability and environmental health as hallmarks of performance. Referred to as Green or Sustainable Building, this emerging discipline strives to create a built environment that is economically, socially and ecologically responsible. As an early adopter of green building principles and practices, the City of Austin achieved international recognition at the 1992 United Nations Earth Summit for its Green Builder Program – the first in the world – and has maintained its preeminence in the field throughout the last decade.

The Mueller community is planned as a demonstration of Austin Energy's Green Building Program for sustainable development. By embracing and implementing fundamental tenets of sustainable development and green building, Mueller will become an example of low-impact development. More than an optimization of any single component, sustainable design and construction represents the integration of materials and methods that, together, define how a community's values are reflected and how its physical environment is manifested.

The Mueller community offers a spectrum of unique opportunities to successfully apply Green Building and New Urbanism strategies simultaneously. This combination of strategies can be described as "Green Urbanism" – the coordinated merging of environmental protection, economic prosperity, community cohesion and aesthetic beauty – sustainable over many generations, and valued as a focal point of the larger city. Among Mueller's signature green urbanism objectives are:

Mueller is planned as a demonstration of sustainable development, combining principles of new urbanism with green building design.



Protecting Air Quality: Air quality is a priority indicator of environmental quality. Exposure to high levels of ground level ozone can result in impaired lung function, and can exacerbate asthma, chronic bronchitis, and emphysema. Strategies to reduce ground level ozone begin with reducing reliance on the automobile and gas-powered landscape and maintenance equipment – both significant nitrogen oxide (NO_x) sources – and curbing volatile organic compound (VOC) emissions by specifying and using low-emitting materials, such as interior and exterior paints, finishes, adhesives and sealants. Mueller's extensive vegetation, tree planting, and open space preservation interlaced throughout the community will augment these source reduction strategies by functioning as the community's lungs to filter the air and lower ambient temperatures.

Mitigating Urban Heat Island: Caused by large expanses of unshaded, heat absorbing impervious surfaces, the urban heat island effect takes its toll on urban environments, especially in regions like Austin, characterized by long, hot summers. By increasing ground level temperatures, sometimes by as much as 10°F, the urban heat island effect also increases a building's cooling load, contributes to conditions favorable for ground level ozone formation, and lessens comfort associated with outside activity. Through sensible hydrologic, landscape, and building approaches, urban heat island effect can be substantially reduced.

Protecting the Night Sky: Minimizing light pollution from urban areas is an important goal of green urbanism. Light pollution can be defined as over-illumination or poorly controlled artificial illumination that directs light and glare to areas where it is not needed, such as upward into the night sky. This problem, common in all urban areas, is an inefficient use of energy and has been shown to adversely impact the daily cycles and behaviors of plants and animals such as the migrating patterns of birds and the reproductive behavior of many species. In addition, light pollution minimizes urban dwellers' ability to see and appreciate the beauty of the night sky. Light pollution will be minimized at Mueller through the use of shielded light standards that direct light downward, and through vegetative cover that reduces reflective paved surfaces.

Creating Green Buildings: Green buildings are designed to be environmentally and socially responsible, economically profitable, and healthy and productive places for people to live and work. Given that an estimated 90 percent of our time is spent indoors, attention to the indoor environment is a fundamental precept of green building. Similarly, attention to building-related decisions that affect the outdoor or ambient environment and the public health, through the building's life cycle, while recognizing consequences on the local, regional and global scales, also merits significant weight. As basic tenets, green buildings take advantage of:

- Climatic design principles for heating, cooling and daylight to offset reliance on fossil fuels;
- Long-lasting, low-maintenance materials and products with attention to recycled-content, renewable, non-toxic, low-emitting, and regionally-sourced and manufactured materials and products when performance meets or exceeds basic requirements
- Resource efficient practices such as right-sizing mechanical equipment, choosing low-flow water fixtures and drought resistant landscaping, minimizing finish materials, installing renewable energy and rainwater harvesting systems; and
- Low-impact construction and operations by recycling construction site debris; restricting use of toxic pesticides, herbicides and other persistent chemical treatments associated with landscape maintenance, pest control and/or materials manufacture; and installing site features which can help to treat stormwater run-off and increase the community's water retention capacity (e.g., green roofs, permeable paving, water absorptive soils).

By adopting locally-and nationally-recognized green building standards to guide and certify performance, the Mueller community will further Austin's role as a leader in green building initiatives. Green Urbanism will be implemented at three distinct levels within Mueller: Green Community Design, Green Buildings and Green Infrastructure.

Achieving Sustainability Standards at Mueller

Green Community Design

The opportunity to transform an industrialized brownfield site like Mueller into a thriving urban community brings together new urbanist practices and sustainable development strategies. Brownfield remediation and restoration has emerged as a highly effective way of restoring undervalued properties, often located within

Green Buildings

Green Building addresses the environmental, social and economic issues of constructing and maintaining buildings over many generations. Numerous sustainable or green building programs have emerged in recent years to guide projects towards their sustainable design goals. Locally, the City of Austin, through Austin Energy, has developed the internationally award winning Green Building Program applicable to both residential and commercial buildings. Nationally, the U.S. Green Building Council has developed the Leadership in Energy and Environmental Design (LEED®) guidelines for commercial buildings and more recently, for sector- and functionally-specific sectors, such as existing buildings and retail. Both these guidelines consist of specific building strategies that can be employed to reduce environmental burdens and life-cycle costs of buildings, and enhance human health and productivity.

For the Mueller community, buildings will follow Austin Energy Green Building Program guidelines or the U.S. Green Building Council's LEED® program. Single-family and any duplex residential development will be required to achieve a Three-Star minimum entry level under the Green Building Program, while multi-family (three or more family units), and institutional, office and single tenant retail structures greater than 25,000 gross square feet, will be required to achieve either a minimum Two-Star rating under Austin Energy's Green Building Program, or Certified rating under the U.S. Green Building Council's LEED® program. All buildings will be encouraged to surpass these minimums, incorporating as many LEED® and Austin Energy Green Building strategies as are practicable, particularly those that reinforce the signature Green Urbanism themes.

GREEN BUILDING GUIDELINES

Office, Single Tenant Retail, Institutional Buildings greater than 25,000 gross square feet: will achieve LEED® Certified certification and/or achieve a minimum Two-Star rating under Austin Energy Green Building Program.

Multi-Family Residential Buildings with three or more units: will also achieve LEED® Certified certification and/or achieve a minimum Two-Star rating under Austin Energy Green Building Program.

Single-Family and Duplex Residential Buildings: will follow the Austin Energy Green Building Program guidelines and attain a minimum rating of Three Stars. Builders are encouraged to exceed this standard to achieve Four and Five Star ratings.

Builders and developers are encouraged to exceed these standards.

Green Infrastructure

Mueller infrastructure embodies principles of resource efficiency, attention to context and scale, and environmental, social and economic responsibility. Because of its context, Mueller immediately benefits from three significant green infrastructure elements:

- *City of Austin Reclaimed Water:* In an effort to lessen dependence on treated potable water for non-potable uses at the municipal scale, the City of Austin's Water and Wastewater Department has designed and constructed a "purple pipe" reclaimed water system, with networks distributed throughout the City. Planned for installation along Mueller's northern boundary on 51st Street, the reclaimed water system will serve as the primary source of irrigation water for many of Mueller's public open spaces and streetscapes, and potentially for commercial uses within the employment centers and the Town Center.
- *Austin Energy Combined Heat & Power Station:* Austin Energy has been an innovator in bringing to the marketplace highly efficient modular combined heat and power systems. One of these systems, including chilled water distribution, is planned to be installed on the campus of the Dell Children's Medical Center of Central Texas, and will be available to serve adjacent commercial and multi-family developments in the Northwest Quadrant and the Town Center. By operating at more than 60 percent efficiency, the Combined Heat and Power system represents a substantial reduction of greenhouse gas (carbon dioxide) and other chemical and particulate emissions associated with fossil fuel combustion and soften the economic challenges associated with projected price increases for fossil fuels.
- *Community Stormwater Treatment:* Similarly, Mueller's stormwater treatment system has been designed to manage 100 percent of the stormwater on-site through a series of drainage and landscape features, including water catchment and water quality wet ponds, which also serve as public amenities. Complementary strategies employed by builders and developers within the community, including rainwater catchment systems, greenroofs, pervious and porous paving systems, generous open space, vegetative filter strips, landscaping and tree plantings, will contribute to the reduction of stormwater rate and quantity, while also providing media for filtering stormwater contaminants. These will serve as hydrological absorptive systems at all scales.

EXAMPLES OF DEVELOPMENT STRATEGIES AT DIFFERENT PROJECT SCALES

	ENERGY	LANDSCAPE	HYDROLOGY	MATERIALS
Building/Plot Scale	Thermally-protected foundation/soil heat/cool storage	Roof/patio/wall vegetative systems for climatic and hydrologic control	Roof water harvesting, rain gardens and multi-sized containerized plants/systems & increase soil water retention capacity	Specify durable variants, e.g. low maintenance pre-manufactured building elements
Neighborhood Scale	Modularized neighborhood heating/cooling storage systems	Streetscapes and neighborhood park systems linked as continuous neighborhood shade and light attenuating strategies	Disconnected impervious surfaces	Specify non-toxic surface treatments (pavement, roofs, walls) with high reflectance and high emissivity
Development Scale		Interspersed vegetation to reduce heat island and take advantage of cooling southeasterly breezes over water features	Networked water collecting systems around entire development	Balance heat-absorbing massive materials with non-heat retaining materials

ADMINISTRATION OF THE DESIGN BOOK

Background

Mueller is subject to the terms and provisions of the Mueller Master Community Covenant, Mixed-Use Community Covenant, EC/TC Community Covenant and certain Supplemental Covenants, each recorded or to be recorded in the Official Public Records of Travis County, Texas.

Review Authority

Section 5.1 of the Master Covenant provides that all site work, landscaping, structures, improvements, and other items within the community and any alterations to such improvements must be approved in advance by the New Construction Council (NCC).

Section 5.3 of the Master Covenant provides that all modifications of existing improvements (as opposed to the expansion of existing Improvements) must be approved in advance by the Modification Committee (MC).

Section 5.4 of the Master Covenant specifically provides for the promulgation and enforcement of certain "Design Guidelines." This Design Book constitutes the Design Guidelines as contemplated pursuant to the Master Covenant. The NCC has the specific authority to ensure each applicant's compliance with the terms of this Design Book.

Governmental Requirements

To the extent that any applicable government ordinance, building code or regulation imposes a more restrictive standard than the standards set forth in any Mueller Covenant described in this Design Book, the applicable government standard will control. To the extent that any applicable government standard is less restrictive, the Mueller Covenants and this Design Book (in that order) will control. Plans submitted to the NCC and the MC must comply with all applicable laws, codes, regulations and governmental requirements.

Interpretation: Limitation of Liability

Approval of plans and specifications is not a representation, warranty or guarantee that the structure is in compliance with governmental requirements or restrictions or requirements other than the terms of the Design Book. Please be advised that this Design Book may change from time to time. A copy of the current Design Book may be obtained from the NCC. A fee may be charged to cover reproduction costs.

Philosophy of the Mueller Design Book

This Design Book has been developed to promote a cohesive and high quality development that achieves the vision for Mueller as a compact and pedestrian-friendly mixed-use community. It is intended to guide new development, and any modification of such new development, in ways that promote connectivity, neighborliness, activity, authenticity, sustainability and livability. Except where specifically noted, this Design Book is not intended to be a highly prescriptive solution that dictates a particular style, but rather as performance criteria that can encourage diversity, creativity and innovation in the spirit of the Austin community.

Amendments to the Design Book and Waivers of Design Book Provisions

This Design Book is envisioned as a dynamic document that will continue to evolve in response to changing conditions and to the Mueller character. As such, it is anticipated that over the life of the community, this Design Book will need to be refined or amended to incorporate new conditions and waivers of certain requirements may need to be made from time to time to take advantage of special opportunities and/or circumstances. The NCC may grant reasonable variances or adjustments from any conditions and restrictions imposed by the Community Covenants and/or this Design Book in order to overcome practical difficulties and unnecessary hardships arising by reason of the application of the conditions and restrictions contained in such instruments; provided however, no variance may be materially detrimental or injurious to other property within the Mueller community or deviate substantially from the general intent and purpose of the Community Covenants or the Design Book.

In the event this Design Book is refined or amended in a manner which makes previously approved and completed improvements no longer compliant, compliance with the refined or amended Design Book will be grandfathered for such improvements. Improvements which are noncompliant may not be expanded. In the event more than 50% of the value of the noncompliant improvements are

destroyed or damaged, the repair or reconstruction must cause such improvements to comply with the refined or amended Design Book in their entirety.

During the “Development and Sale Period” defined under the Master Covenant, any revision or exception to the guidelines within this Design Book must also be administratively approved by the City of Austin and by the Master Developer.

Submittal Requirements for Improvements within the Mueller Neighborhoods

Each applicant will be required to submit each application to the Master Developer for review and approval (to ensure that each proposed project will comply with the Design Book and the submittal requirements set forth below) prior to submission of such plans to the NCC.

An applicant is responsible for ensuring that all of the applicant’s representatives, including the applicant’s architect, engineer, contractors, subcontractors, and their agents and employees, are aware of this Design Book and the submittal requirements set forth below. The NCC reserves the right from time to time to modify the submittal requirements hereunder.

Designs for any improvements within the Mueller Neighborhoods, as outlined in Chapter Two, including yard houses, garden court houses, row houses, shop houses, Mueller houses, apartment houses and mixed-use buildings will be submitted to the NCC in three stages:

A Preliminary Design Submission to the New Construction Council must include:

- *Dimensioned Block Plan(s)* showing the extent of the “take-down” area with: lot lines and rights-of-way; the location of trees, lawns, sidewalks and curbs.
- *Individual Lot Layouts* showing buildable area, setbacks, building height (in feet and floors), ground floor plan (with porch as applicable), garage plan and driveway apron, and a coding of building model and elevation to demonstrate architectural streetscape diversity.
- *Conceptual Floor Plans* at 1/8”=1’-0” or larger of ground floor and upper floors for each proposed model.

- *Program Chart* indicating anticipated total number of model types, total living area square footage, number of bedrooms and bathrooms, and number of parking spaces proposed for each building model.
- *Conceptual Elevations* at 1/8"=1'-0" or larger, of all elevations of each model with descriptions of key architectural elements and proposed building materials.
- *Conceptual Sections* at 1/8"=1'-0" to describe the typical relationship of the building to the street, alley (as applicable), and to adjacent structures.
- *Conceptual Street Elevations* at 1/8"=1'-0" or larger, describing the appearance of a prototypical block face elevation of a street and alley.
- *Conceptual Landscape Plan* at 1"=20' for each block face indicating the location of street trees and parkways, fences, low walls, arbors, paving and other landscape/hardscape areas.
- *Conceptual Grading and Drainage Plan* at 1"=20' of each block or block face to include existing contours from the mass grading plan, proposed changes to lot grades, and individual lot drainage.

A Final Design Submission will respond to comments provided by the New Construction Council and include:

- *Final Neighborhood Plans* fully-dimensioned at 1"=20' indicating sidewalks, front yard setbacks, lot lines and rights-of-way, individual lot layouts with ground level plans indicated, and calculations of lot coverage, impervious cover, number and type of units, height of buildings (in feet and floors), density and open space.
- *Final Floor Plans* at 1/8"=1'-0" of all floors of all livable space and garages, and exterior spaces, with calculations indicating total number of model types to be constructed, total living area square footage, number of bedrooms and bathrooms and number of off-street parking spaces (covered and uncovered).
- *Final Building Elevations and Sections* at 1/8"=1'-0" or larger, in color, of each elevation, describing key architectural elements, proposed building materials, colors and finishes.
- *Final Blockface Elevations* showing a typical street and alley elevation to demonstrate architectural streetscape diversity and treatment.

- *Material Sample Board* indicating exterior colors and materials to be used for each building model, and a roofing material sample.
- *Final Landscape Plan* at 1"=20' of each block or block face, describing the location of fences, low walls, arbors, paving and other hardscaped areas, as well as plant species and sizes.
- *Final Grading and Drainage Plan* at 1"=20', indicating existing contours from the mass grading plan, proposed changes to the lot grades, individual lot drainage including downfall spout locations and size and location of drainage swales in relation to adjacent lots and top of slab elevations.

New Construction Document Package: Prior to commencing construction of any improvement, each applicant is required to submit for approval one complete set of construction documents and specifications to the NCC which must include a list of any changes from the "final" approved documents listed above. A single set of construction documents may be submitted for each model, with a list of deviations outlining ways in which the model will be adapted for each lot. An applicant may not commence construction of any improvement until it obtains written approval from the NCC. The NCC will notify the applicant in writing of the final determination on any application within sixty (60) days after its receipt of a completed application and all required submissions. Changes during the construction process of previously approved improvements must be approved in a similar manner, as applicable, to each individual change.

Construction Modification Document Package: After completion of improvements as approved by the NCC, prior to modifying such improvements in any manner governed by the Mueller Covenants or this Design Book, the owner is required to submit a completed application for modification promulgated by the MC and such other documentation as the MC requires. Such owner may not commence modifications until it obtains written approval from the MC.

Submittal Requirements for Improvements in the Town Center and Employment Center Subareas

Within the Town Center and each of the employment center subareas, as described in Chapters Three and Four of this Design Book respectively, the applicant will be required to make the following three-staged submission.

Architectural Master Plan: An architectural master plan is required prior to the approval of any improvement within the Town Center or the subareas of the North-

west and Northeast Quadrants. Individual architectural master plans for these areas must include the following components:

- *Site Plan* at 1"=20', indicating rights-of-way, lot lines, streets, driveways, alleys, parking layouts, publicly accessible open spaces and building footprints.
- *Development Program and Key Information* including, but not limited to, building floor area, the anticipated mix and number of dwelling units, covered and uncovered parking spaces, open space area, impervious cover for each lot, building heights, residential and commercial density, and other key information that is warranted by the particular project.
- *Conceptual Floor Plans* at 1/16"=1'-0" or greater, describing the configuration of ground floor and upper floors for each building, with clear indication of parking, service areas and mechanical rooms, dwelling units, common open space, porches, etc.
- *Conceptual Building Elevations and Sections* at 1/8"=1'-0" or larger.
- *Illustrative Renderings* describing the overall character and specific features of the public environment and the proposed buildings.
- *Conceptual Landscape Plan* at 1"=20' or larger, showing the location and type of plant materials, softscape, hardscape, fences, walls, etc.
- *Conceptual Grading Plan* indicating existing contours from the mass grading plan, proposed changes to lot grades and overall site drainage.
- *Conceptual Phasing and Construction Plan* indicating the proposed sequence of site preparation, open space and building construction.

Final Design: Following approval of the architectural master plan, final design for portions of the architectural master plan must be submitted to the NCC for approval. Any changes to the architectural master plan proposed as a result of the individual development project will also be presented to the NCC for their approval as a proposed amendment to the approved architectural master plan. The final design package must include:

- *Final Site Plan* fully-dimensioned at 1"=20' indicating sidewalks, setbacks, lot lines and rights-of-way, driveways, parking areas, open spaces, and individual lot layouts with ground level plans indicated, and calculations of lot coverage, impervious cover, building height (in feet and floors), number and type of units, density and open space.
- *Final Floor Plans* at 1/8"=1'-0" or greater, describing all habitable and non-habitable spaces including service and mechanical areas, parking, commercial space and residential dwelling units.
- *Final Building Elevations and Sections* at 1/8"=1'-0" or greater, in color, of all building faces, indicating proposed materials, finishes, colors and architectural features.
- *Material Sample Board* indicating exterior colors and materials to be used for each building and a roofing material sample.
- *Final Landscape Plan* at 1"=20', describing the location and treatment of all softscape and hardscape areas, surface parking areas, streetscapes and driveways, lighting, furnishings, and the location and treatment of fences, low walls, arbors and other landscape features.
- *Final Grading Plan* at 1"=20', indicating existing contours from the mass grading plan, proposed changes to the grades, site drainage including downfall spout locations, and size and location of drainage swales in relation to adjacent lots, and top of slab elevations.
- *Final Phasing and Construction Plan* describing the location of each building model, and a construction phasing schedule showing the timetable for grading and phased building construction.

New Construction Document Package: Prior to commencing construction of any improvement, each applicant is required to submit for approval one complete set of construction documents and specifications to the NCC which must include a list of any changes from the "final" approved documents listed above. An applicant may not commence construction of any improvement until it obtains written approval from the NCC. The NCC will notify the applicant in writing of the final determination on any application within sixty (60) days after its receipt of a completed application and all required submissions. Changes during the construction process of previously approved improvements must be approved in a similar manner, as applicable, to each individual change.

Construction Modification Document Package: After completion of improvements as approved by the NCC, prior to modifying such improvements in any manner governed by the Mueller Covenants or this Design Book, the owner is required to submit a completed application for modification promulgated by the MC and such other documentation as the MC requires. Such owner may not commence modifications until it obtains written approval from the MC.

Number of Copies: Each submittal shall include six sets of full-size sheets (30" x 42") and one reduced set (11" x 17"). All but one set will be returned to the applicant following approval.

Certificate of Compliance

As more specifically provided in Section 5.9 of the Master Covenant, any owner may request in writing that the NCC issue a certificate of compliance for a completed improvement, certifying that there are no known violations of this Design Book. Such certification shall be issued within 60 days.

Fees

As provided in Section 5.7 of the Master Covenant, the NCC and MC may establish and charge reasonable fees for their review as required by the Mueller Covenants and this Design Book and may require that such fees be paid in advance.

APPENDIX A: PLANT LIST

This Plant Material List is intended to provide a broad range of choices to create a healthy, vibrant and diverse landscape palette. This list is not meant to be exclusive; 80 percent of the plantings in the Mueller community should be selected from this list. However, the list should also be periodically reviewed and updated, not to limit, but rather expand, the potential range of suitable choices.

This plant list incorporates all plant materials recommended in the City of Austin "Preferred Plant List" and the Grow Green Native and Adapted Landscape Plants Guide (August 2003), with the exception of certain invasive species. Plants noted with an asterisk (*) are included in the Grow Green Native and Adapted Landscape Plants. Grow Green is a partnership between the City of Austin Watershed Protection and Development Review Department and the Texas Cooperative Extension, in cooperation with local nurseries. Their guide to native and adapted landscape plants was created to help one choose plants that will thrive in the Austin environment and aid in preserving water and water quality. The guide includes information such as physical characteristics, water and light requirements, and more, for each plant. It is available free of charge at many area nurseries (see www.growgreen.org for additional information).



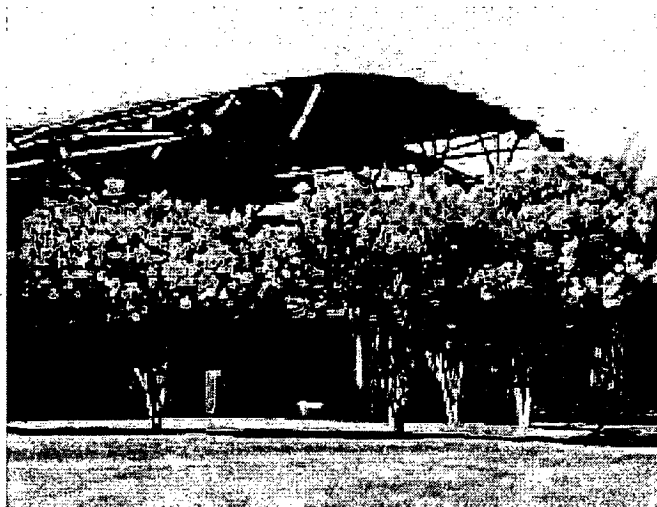
Southern Live Oak (Quercus virginiana)



Lacebark Elm (Ulmus parvifolia)



Shumard Oak (Quercus shumardii)



Crape Myrtle (Lagerstroma var.)



Cedar Elm (Ulmus crassifolia)



American Sweetgum (Liquidambar styraciflua)

Major Street Trees



Pecan (Carya illinoensis)



Chinguapin Oak (Quercus muhlenbergii)



Bur Oak (Quercus macrocarpa)



Texas Red Oak (Quercus texana)



Mexican Sycamore (Platanus texana)



Texas Redbud (Cercis canadensis var. texensis)

Other Potential Street Trees

Botanical Name	Common Name	Ht. x Spd.	Min. Size	Drought Tolerant	Native	Comments
Deciduous Trees						
Acacia farnesiana	Huisache	20' x 20'	8' ht.	yes	yes	
Acer grandidentatum*	Bigtooth Maple	30' x 20'	2" cal.	yes	yes	
Acer palmatum	Japanese Maple	15' x 10'	6' ht.	no	no	Specimen or container use only
Aesculus pavia*	Red Buckeye	10' x 20'	8' ht.	yes	yes	
Bauhinia congesta*	Anacacho Orchid Tree	6' x 12'	8' ht.	yes	no	
Carya illinoensis*	Pecan	50' x 50'	2" cal.	yes	yes	
Cercis canadensis var. mexicana*	Mexican Redbud	20' x 15'	8' ht.	yes	yes	
Cercis canadensis var. texensis*	Texas Redbud	20' x 15'	8' ht.	yes	yes	
Chilopsis linearis*	Desert Willow	20' x 15'	8' ht.	yes	yes	
Cornus drummondii*	Roughleaf Dogwood	20' x 15'	8' ht.	yes	yes	
Cotinus obovatus*	Smoke Tree	12' x 8'	8' ht.	yes	yes	
Diospyros texana*	Texas Persimmon	15' x 10'	8' ht.	yes	yes	
Fraxinus cuspidata	Fragrant Ash	10' x 15'	8' ht.	yes	yes	
Fraxinus texensis*	Texas Ash	50' x 40'	2" cal.	yes	yes	
Ilex decidua*	Possumhaw Holly	20' x 12'	8' ht.	yes	yes	
Juglans major	Arizona Walnut	40' x 50'	8' ht.	yes	yes	
Juglans microcarpa	Little Walnut	20' x 30'	8' ht.	yes	yes	
Juglans nigra	Eastern Walnut	70' x 80'	8' ht.	yes	yes	
Lagerstroemia indica*	Crape Myrtle	25' x 15'	8' ht.	yes	no	
Leucaena retusa*	Goldenball Leadtree	20' x 15'	8' ht.	yes	yes	
Liquidambar styraciflua	Sweet Gum	40' x 25'	2" cal.	yes	yes	

*Green Grow Native and Adapted Landscape Plants

Botanical Name	Common Name	Ht. x Spd.	Min. Size	Drought Tolerant	Native	Comments
Magnolia soulangiana	Saucer Magnolia	30' x 25'	8' ht.	no	no	Ornamental accent use only
Parkinsonia aculeata*	Retama	25' x 20'	8' ht.	yes	yes	
Pistacia texana*	Texas Pistache	20' x 15'	12' ht.	yes	yes	
Platanus occidentalis var. glabrata	Texas Sycamore	70' x 40'	2" cal.	yes	yes	
Platanus texana	Mexican Sycamore	60' x 40'	2" cal.	yes	yes	
Prosopis glandulosa*	Honey Mesquite	25' x 30'	8' ht.	yes	yes	
Prunus mexicana*	Mexican Plum	20' x 15'	8' ht.	yes	yes	
Prunus persica	Flowering Peach	15' x 10'	8' ht.	yes	no	Ornamental accent use only
Prunus serotina var. eximia*	Escarpment Black Cherry	20' x 30'	8' ht.	yes	yes	
Quercus glaucooides / laceyi*	Lacey Oak	20' x 40'	2" cal.	yes	yes	
Quercus macrocarpa*	Bur Oak	75' x 50'	2" cal.	yes	yes	
Quercus marilandica	Blackjack Oak	50' x 60'	2" cal.	yes	yes	
Quercus muhlenbergii*	Chinquapin Oak	60' x 30'	2" cal.	yes	yes	
Quercus polymorpha*	Mexican White Oak	40' x 30'	2" cal.	yes	yes	
Quercus shumardii*	Shumard Oak	60' x 40'	3" cal.	yes	yes	
Quercus sinuata	Durand Oak	50' x 70'	2" cal.	yes	yes	
Quercus sinuata brevifolia	Shin Oak	30' x 35'	2" cal.	yes	yes	
Quercus stellata	Post Oak	50' x 75'	2" cal.	yes	yes	
Quercus texana*	Texas Red Oak	25' x 15'	3" cal.	yes	yes	
Rhamnus caroliniana*	Carolina Buckthorn	20' x 15'	8' ht.	yes	yes	
Rhus copallina / lanceolata*	Flameleaf Sumac	15' x 20'	8' ht.	yes	yes	
Salix babylonica	Weeping Willow	30' x 25'	2" cal.	no	no	Park wetland and pond use only

*Green Grow Native and Adapted Landscape Plants

Botanical Name	Common Name	Ht. x Spd.	Min. Size	Drought Tolerant	Native	Comments
<i>Salix nigra</i>	Black Willow	50' x 40'	2" cal.	no	yes	Park wetland and pond use only
<i>Sapindus drummondii</i> *	Soapberry	30' x 25'	8' ht.	yes	yes	
<i>Sophora affinis</i> *	Eve's Necklace	20' x 30'	8' ht.	yes	yes	
<i>Taxodium distichum</i> *	Bald Cypress	75' x 50'	2" cal.	yes	yes	Dutch Elm Disease resistant cultivars only
<i>Taxodium mucronatum</i> *	Montezuma Cypress	75' x 50'	2" cal.	yes	yes	
<i>Ulmus americana</i>	American Elm	60' x 40'	2" cal.	no	yes	
<i>Ulmus crassifolia</i> *	Cedar Elm	50' x 35'	2" cal.	yes	yes	
<i>Ulmus parvifolia</i> *	Chinese / Lacebark Elm	30' x 20'	2" cal.	yes	no	
<i>Ulmus parvifolia</i> 'Drake'	Drake Elm	30' x 20'	2" cal.	yes	no	
<i>Ungradiad speciosa</i> *	Mexican Buckeye	20' x 15'	8' ht.	yes	yes	

Evergreen Trees

<i>Arbutus texana</i>	Texas Madrone	25' x 30'	6' ht.	yes	yes
<i>Cedrus deodara</i>	Deodar Cedar	30' x 15'	12' ht.	yes	no
<i>Cupressus arizonica</i> *	Arizona Cypress	30' x 20'	8' ht.	yes	yes
<i>Cupressus sempervirens</i>	Italian Cypress	25' x 10'	8' ht.	yes	no
<i>Eriobotrya japonica</i>	Loquat	15' x 10'	6' ht.	no	no
<i>Ilex vomitoria</i> *	Yaupon Holly	20' x 12'	8' ht.	yes	yes
<i>Juniperus chinensis</i> 'Blue Point'	Blue Point Juniper	15' x 5'	4' ht.	yes	no
<i>Myrica cerifera</i> *	Southern Wax Myrtle	10' x 8'	6' ht.	yes	yes
<i>Pinus eldarica</i>	Afghan Pine	50' x 25'	8' ht.	yes	no
<i>Pinus pinea</i>	Italian Stone Pine	80' x 40'	8' ht.	yes	no

*Green Grow Native and Adapted Landscape Plants

Botanical Name	Common Name	Ht. x Spd.	Min. Size	Drought Tolerant	Native	Comments
<i>Pinus thunbergii</i>	Japanese Black Pine	50' x 25'	8' ht.	yes	no	
<i>Prunus caroliniana</i> *	Cherry Laurel	25' x 15'	6' ht.	yes	yes	
<i>Quercus fusiformis</i> *	Escarpment Live Oak	50' x 50'	2" cal.	yes	yes	
<i>Quercus virginiana</i> *	Southern Live Oak	50' x 50'	3" cal.	yes	yes	
<i>Sophora secundiflora</i> *	Texas Mountain Laurel	20' x 10'	6' ht.	yes	yes	
Evergreen Shrubs						
<i>Abelia grandiflora</i> *	Glossy Abelia	6' x 6'	4' o.c.	yes	no	
<i>Abelia grandiflora</i> , dwarf varieties	Dwarf Abelia	3' x 3'	3' o.c.	yes	no	'Edward Goucher', 'Sherwoodii'
<i>Agave</i> spp.*	Agave	4' x 6'	5' o.c.	yes	yes	
<i>Artemesia</i> x 'Powis Castle'*	Powis Castle Artemesia	1' x 4'	3' o.c.	yes	no	
<i>Berberis trifoliata</i> *	Agarita	4' x 4'	3' o.c.	yes	yes	
<i>Cotoneaster glaucophylla</i> *	Grayleaf Cotoneaster	3' x 5'	3' o.c.	yes	no	
<i>Cotoneaster</i> spp.*	Cotoneaster	3' x 5'	3' o.c.	yes	no	
<i>Cycas revoluta</i>	King Sago	6' x 4'	5' o.c.	no	no	Specimen or container use only
<i>Dasylinion texana</i> *	Texas Sotol	4' x 4'	4' o.c.	yes	yes	
<i>Dietes bicolor</i> *	Yellow Fortnight Iris	3' x 3'	3' o.c.	yes	no	
<i>Elaeagnus pungens</i> *	Elaeagnus	15' x 8'	5' o.c.	yes	no	
<i>Fatsia japonica</i>	Fatsia	4' x 4'	3' o.c.	no	no	Specimen or container use only
<i>Feijoa sellowiana</i>	Pineapple Guava	6' x 6'	5' o.c.	yes	no	
<i>Hesperaloe parviflora</i> *	Red Yucca	4' x 4'	3' o.c.	yes	yes	
<i>Ilex cornuta</i> 'Burfordii'	Burford Holly	8' x 5'	5' o.c.	yes	no	

*Green Grow Native and Adapted Landscape Plants

Botanical Name	Common Name	Ht. x Spd.	Min. Size	Drought Tolerant	Native	Comments
Ilex cornuta 'Burfordii Nana'	Dwarf Burford Holly	6' x 4'	3' o.c.	yes	no	
Ilex cornuta 'Rotunda Nana'*	Dwarf Chinese Holly	4' x 3'	3' o.c.	yes	no	
Ilex vomitoria 'Nana'*	Dwarf Yaupon	2' x 2'	2' o.c.	yes	no	
Jasminum floridum	Florida Jasmine	3' x 4'	4' o.c.	yes	no	
Jasminum mesnyi*	Primrose Jasmine	8' x 8'	5' o.c.	yes	no	
Juniperus chinensis 'Parsonii'	Parsons Juniper	2' x 3'	3' o.c.	yes	no	
Juniperus chinensis 'Sea Green'	Sea Green Juniper	5' x 6'	4' o.c.	yes	no	
Juniperus conferta	Shore Juniper	1.5' x 8'	6' o.c.	yes	no	
Juniperus horizontalis cultivars	Andorra Juniper	2' x 4'	3' o.c.	yes	no	
Leucophyllum frutescens*	Texas Sage	5' x 4'	4' o.c.	yes	yes	
Loropetalum spp.	Loropetalum	8' x 5'	4' o.c.	yes	no	
Mahonia bealei	Leatherleaf Mahonia	4' x 3'	3' o.c.	no	no	
Myrica pusilla	Dwarf Wax Myrtle	4' x 4'	3' o.c.	yes	yes	
Nandina domestica, dwarf varieties*	Nandina, dwarf varieties only	3' x 2'	3' o.c.	yes	no	'Compacta Nana', 'Gulf Stream', 'Harbour Dwarf', 'Moonbay'
Nerium oleander*	Oleander	15' x 10'	6' o.c.	yes	no	
Nolina texana*	Sacahuista, Bear Grass	2' x 3'	3' o.c.	yes	yes	
Opuntia engelmannii var. lindheimeri*	Prickly Pear Cactus	3' x 3'	3' o.c.	yes	yes	
Raphiolepis indica	Indian Hawthorn	4' x 4'	3' o.c.	no	no	
Rhus virens*	Evergreen Sumac	12' x 8'	8' o.c.	yes	yes	
Rosa spp.*	Rose	varies	NA	yes	varies	
Rosmarinus officinalis*	Upright Rosemary	4' x 5'	3' o.c.	yes	no	
Rosmarinus officinalis 'prostratus'	Prostrate Rosemary	2' x 5'	3' o.c.	yes	no	

*Green Grow Native and Adapted Landscape Plants

Botanical Name	Common Name	Ht. x Spd.	Min. Size	Drought Tolerant	Native	Comments
<i>Sabal minor</i> *	Dwarf Palmetto	5' x 5'	4' o.c.	no	yes	Park wetland and pond use only
<i>Viburnum suspensum</i> *	Sandankwa Viburnum	6' x 6'	4' o.c.	no	no	
<i>Yucca pallida</i> *	Paleleaf Yucca	1' x 2'	2' o.c.	yes	yes	
<i>Yucca pendula / recurvifolia</i> *	Softleaf Yucca	5' x 3'	3' o.c.	yes	yes	
<i>Yucca rupicola</i> *	Twisted Leaf Yucca	2' x 2'	2' o.c.	yes	yes	

Semi-evergreen Shrubs

<i>Dalea bicolor</i>	Dalea	3' x 3'	3' o.c.	yes	yes	
<i>Malpighia glabra</i> *	Barbados Cherry	3' x 2'	2' o.c.	yes	yes	
<i>Salvia greggii</i> *	Cherry Sage	3' x 3'	3' o.c.	yes	yes	
<i>Salvia melissodora</i>	Grape-Scented Sage	3' x 3'	3' o.c.	yes	yes	
<i>Salvia x superba</i>	Blue Queen Sage	3' x 3'	3' o.c.	yes	yes	

Deciduous Shrubs

<i>Ageratina havanense</i> *	White Mistflower / Boneset	5' x 3'	3' o.c.	yes	yes	
<i>Anisacanthus quadrifidus</i> var. <i>wrightii</i> *	Flame Acanthus	3' x 3'	3' o.c.	yes	yes	
<i>Berberis thunbergii</i>	Japanese Barberry	4' x 4'	3' o.c.	yes	no	
<i>Berberis thunbergii</i> 'Atropurpurea'*	Red Leaf Japanese Barberry	5' x 5'	4' o.c.	yes	no	
<i>Berberis thunbergii</i> , dwarf varieties	Japanese Barberry, dwarf varieties	2' x 2'	2' o.c.	yes	no	'Crimson Pygmy', 'Aurea'
<i>Buddleja davidii</i> *	Butterfly Bush	5' x 5'	4' o.c.	yes	no	
<i>Buddleja marrubiiifolia</i> *	Wooly Butterfly Bush	6' x 6'	5' o.c.	yes	yes	
<i>Callicarpa americana</i> *	American Beautyberry	6' x 6'	5' o.c.	yes	yes	

*Green Grow Native and Adapted Landscape Plants

Botanical Name	Common Name	Ht. x Spd.	Min. Size	Drought Tolerant	Native	Comments
<i>Capsicum annuum</i> *	Chile Pequin	3' x 3'	2' o.c.	yes	yes	
<i>Cassia corymbosa</i> *	Flowering Senna	8' x 6'	5' o.c.	yes	no	
<i>Cassia lindheimeriana</i>	Lindheimer's Cassia	2' x 3'	2' o.c.	yes	yes	
<i>Cephalanthus occidentalis</i>	Button Bush	8' x 10'	6' o.c.	yes	yes	Park wetland and pond use only
<i>Chaenomeles speciosa</i>	Flowering Quince	6' x 6'	5' o.c.	no	no	
<i>Dalea frutescens</i> *	Black Dalea	2' x 4'	3' o.c.	yes	yes	
<i>Eupatorium coelestinum</i> *	Blue Mistflower	3' x 3'	3' o.c.	yes	yes	
<i>Eysenhardtia texana</i> *	Kidneywood	10' x 6'	6' o.c.	yes	yes	
<i>Hamamelis virginiana</i>	Witch Hazel	10' x 8'	6' o.c.	yes	yes	
<i>Hibiscus syriacus</i>	Althea	10' x 6'	5' o.c.	no	no	
<i>Lantana horrida</i> *	Native Lantana	4' x 4'	3' o.c.	yes	yes	
<i>Malvaviscus arboreus</i> <i>'Drummondii'</i> *	Turks Cap	3' x 4'	3' o.c.	yes	yes	
<i>Mimosa borealis</i> *	Fragrant Mimosa	4' x 4'	3' o.c.	yes	yes	
<i>Pavonia lasiopetala</i> *	Rock Rose Pavonia	2' x 3'	2' o.c.	yes	yes	
<i>Philadelphus coronarius</i> *	Mock Orange	10' x 8'	6' o.c.	yes	no	
<i>Punica granatum</i> *	Pomegranate	10' x 6'	4' o.c.	yes	no	
<i>Rhus aromatica</i> *	Aromatic Sumac	6' x 4'	5' o.c.	yes	yes	
<i>Salvia regia</i> *	Mountain Sage	5' x 4'	3' o.c.	yes	no	
<i>Senna lindheimeriana</i> *	Lindheimer Senna	4' x 4'	3' o.c.	yes	yes	
<i>Symphoricarpos orbiculatus</i> *	Coralberry	2' x 3'	3' o.c.	yes	yes	
<i>Tecoma stans</i> var. <i>angustata</i> *	Yellow Bells	4' x 4'	4' o.c.	yes	yes	
<i>Teucrium fruticans</i> *	Bush Germander	5' x 5'	5' o.c.	yes	no	

*Green Grow Native and Adapted Landscape Plants

Botanical Name	Common Name	Ht. x Spd.	Min. Size	Drought Tolerant	Native	Comments
<i>Viburnum dentatum</i>	Arrowwood	15' x 10'	8' o.c.	yes	yes	
<i>Viburnum rufidulum</i> *	Blackhaw Viburnum	15' x 10'	8' o.c.	yes	yes	
Evergreen Ground Covers						
<i>Aspidistra elatior</i> *	Cast Iron Plant	36" x 24"	24" o.c.	no	no	
<i>Calypocarpus vialis</i> *	Horseherb	8" ht.	12" o.c.	yes	yes	
<i>Carex perdentata</i> *	Meadow Sedge	18" x 18"	12" o.c.	yes	yes	
<i>Carex texensis</i> *	Texas Sedge	8" x 18"	12" o.c.	yes	yes	
<i>Carex tumulicola</i> *	Berkeley Sedge	12" x 12"	12" o.c.	yes	no	
<i>Chrysactinia mexicana</i> *	Damianita	24" x 18"	18" o.c.	yes	yes	
<i>Hypericum calycinum</i>	St. John's Wort	24" x 24"	24" o.c.	yes	no	
<i>Liriope gigantea</i>	Giant Liriope	24" ht.	24" o.c.	no	no	
<i>Liriope muscari</i> *	Liriope and varieties	18" ht.	18" o.c.	no	no	
<i>Ophiopogon japonicus</i> *	Monkey Grass	12" ht.	12" o.c.	no	no	
<i>Oreganum vulgare</i> *	Oregano	36" x 36"	36" o.c.	yes	no	
<i>Phyla incisa</i> *	Frogfruit	4" x 12"	12" o.c.	yes	yes	
<i>Rivina humilis</i> *	Pigeonberry	12" x 24"	24" o.c.	yes	yes	
<i>Ruellia brittoniana</i> 'Katie'*	Katie Dwarf Ruellia	12" x 12"	12" o.c.	yes	no	
<i>Santolina chamaecyparissus</i> *	Santolina	12" x 24"	24" o.c.	yes	no	
<i>Sedum nuttallianum</i> *	Sedum	6" ht.	12" o.c.	yes	no	
<i>Setcreasea pallida</i> *	Purple Heart	12" ht.	12" o.c.	yes	no	Specimen or container use only
<i>Trachelospermum asiaticum</i> *	Asian Jasmine	18" ht.	24" o.c.	yes	no	

*Green Grow Native and Adapted Landscape Plants

Botanical Name	Common Name	Ht. x Spd.	Min. Size	Drought Tolerant	Native	Comments
Vinca minor*	Littleleaf Periwinkle	12" ht.	24" o.c.	yes	no	Do not plant in greenbelts
Deciduous Ground Covers						
Ceratostigma plumbaginoides*	Leadwort Plumbago	12" ht.	18" o.c.	yes	no	
Dichondra argentea*	Silver Ponyfoot	4" ht.	24" o.c.	yes	no	
Lantana montevidensis*	Trailing Lantana	12" x 48"	36" o.c.	yes	no	
Plumbago auriculata*	Blue Plumbago	36" x 60"	36" o.c.	yes	no	
Stemodia tomentosa*	Wooly Stemodia	6" x 36"	24" o.c.	yes	yes	
Evergreen Vines						
Bignonia capreolata*	Crossvine	50'	NA	yes	yes	
Ficus pumila*	Fig Vine	20'	NA	yes	no	
Gelsemium sempervirens*	Yellow Jessamine	20'	NA	yes	yes	
Lonicera sempervirens*	Coral Honeysuckle	12'	NA	yes	yes	
Rosa banksiae*	Lady Banksia Rose	20' ht.	NA	yes	no	
Trachelospermum jasminoides	Confederate Jasmine	10'-15'	NA	yes	no	
Deciduous Vines						
Antigonon leptopus*	Coral Vine / Rose of Montana	NA	NA	yes	no	
Bougainvillea spp.	Bougainvillea	NA	NA	yes	no	Specimen or container use only
Campsis radicans*	Trumpet Vine	NA	NA	yes	yes	
Clematis spp.	Clematis	NA	NA	yes	yes	

*Green Grow Native and Adapted Landscape Plants

Botanical Name	Common Name	Ht. x Spd.	Min. Size	Drought Tolerant	Native	Comments
<i>Ipomoea quamodit</i>	Cypress Vine		NA	yes	no	
<i>Parthenocissus quinquefolia</i> *	Virginia Creeper	20'	NA	yes	yes	
<i>Parthenocissus tricuspidata</i> 'Veitchii'	Boston Ivy		NA	yes	no	
<i>Passiflora incarnata</i> *	Passionflower	12'	NA	yes	yes	Specimen or container use only
<i>Vitis mustangensis</i>	Mustang Grape	10'	NA	yes	yes	
<i>Wisteria macrostachya</i>	Texas Wisteria	30'	NA	yes	yes	
Perennials						
<i>Achillea millefolium</i> *	Yarrow	1.5' x 3'	2' o.c.	yes	no	
<i>Agapanthus africanus</i>	Agapanthus	2' ht.	2' o.c.	no	no	Specimen or container use only
<i>Aquilegia canadensis</i> *	Red Columbine	3' x 2'	1' o.c.	yes	yes	
<i>Aquilegia chrysantha</i> 'Texas Gold'	Yellow Columbine	3' x 2'	1' o.c.	yes	yes	
<i>Aquilegia chrysantha</i> x 'Hinkleyana'	Hinkley's Columbine	3' x 2'	1' o.c.	yes	yes	
<i>Asclepias curassivica</i> *	Mexican Butterfly Weed	3' x 1'	1' o.c.	yes	yes	
<i>Asclepias tuberosa</i> *	Butterfly Weed	3' x 1'	1' o.c.	yes	yes	
<i>Aster oblongifolius</i> *	Fall Aster	3' x 2.5'	2' o.c.	yes	yes	
<i>Bulbine frutescens</i> / <i>caulescens</i> *	Bulbine	2' x 2.5'	2' o.c.	yes	yes	
<i>Caesalpinia pulcherrima</i> *	Poinciana	6' x 6'	5' o.c.	ye	yes	Specimen or container use only
<i>Canna</i> spp.	Canna Lily	4' x 4'	4' o.c.	no	no	Specimen use only
<i>Chrysanthemum leucanthemum</i>	Oxeye Daisy	3' x 3'	3' o.c.	yes	yes	
<i>Coreopsis lanceolata</i> *	Coreopsis	2' x 2'	2' o.c.	yes	yes	
<i>Cuphea hyssopifolia</i>	Mexican Heather	2' x 2'	2' o.c.	yes	no	

*Green Grow Native and Adapted Landscape Plants

Botanical Name	Common Name	Ht. x Spd.	Min. Size	Drought Tolerant	Native	Comments
Cuphea micropetala*	Cigar Plant	4' x 3'	3' o.c.	yes	no	
Dalea greggii*	Gregg Dalea	1' x 3'	3' o.c.	no	yes	
Diets spp.*	Butterfly Iris	4' x 3'	3' o.c.	yes	no	
Echinacea purpurea*	Purple Coneflower	2' x 1.5'	2' o.c.	yes	yes	
Eupatorium wrightii	White Mistflower	2' x 2'	2' o.c.	yes	yes	
Gaura lindheimeri*	Whirling Butterflies	3' x 3'	3' o.c.	yes	yes	
Hamelia patens*	Firebush	2.5' x 3'	3' o.c.	no	no	
Helianthus maximiliana	Maximilian Sunflower	6' ht.	3' o.c.	yes	yes	
Hemerocallis spp.	Daylilies	3' ht.	2' o.c.	yes	no	
Hibiscus cardiophyllus	Heartleaf Hibiscus	1' x 1'	1' o.c.	yes	yes	
Hibiscus coccineus / moscheutos *	Perennial Hibiscus	4' x 4'	4' o.c.	yes	no	
Hymenoxys / Tetraneuris scaposa*	Hymenoxys	1' x 1'	1' o.c.	yes	yes	
Ipomoea fistulosa / leptophylla*	Bush Morning Glory	7' x 7'	6' o.c.	yes	yes	
Iris albicans*	Bearded Iris	1' x 3'	3' o.c.	yes	no	
Iris spp.	Iris	2'-5' ht.	2' o.c.	yes	varies	
Justicia brandegeana*	Shrimp Plant	3' x 4'	2' o.c.	yes	no	
Justicia spicigera*	Mexican Honeysuckle	2' x 4'	3' o.c.	yes	no	
Lantana x hybrida*	Lantana	2' x 4'	3' o.c.	yes	no	
Liatris mucronata*	Gayfeather	2' x 2'	2' o.c.	yes	yes	
Linum pratense	Meadow Flax	1.5' x 1'	1.5' o.c.	yes	yes	
Lisianthus russelianus	Texas Bluebells	1' x 1'	1' o.c.	yes	yes	
Lobelia cardinalis	Cardinal Flower	3' x 2'	2' o.c.	yes	yes	

*Green Grow Native and Adapted Landscape Plants

Botanical Name	Common Name	Ht. x Spd.	Min. Size	Drought Tolerant	Native	Comments
Melampodium leucanthum*	Blackfoot Daisy	1' x 2'	2' o.c.	yes	yes	
Monarda fistulosa	Bee Balm	3' x 4'	3' o.c.	yes	yes	
Nepeta x faassenii 'Six Hills Giant'	Catmint	4' x 3'	3' o.c.	yes	yes	
Oenothera missouriensis*	Missouri Primrose	1.5' x 3'	2' o.c.	yes	yes	
Oenothera speciosa	Evening Primrose	1.5' x 3'	2' o.c.	yes	yes	
Penstemon baccharifolius	Rock Penstemon	1.5' x 1'	1' o.c.	yes	yes	
Penstemon tenuis	Gulf Coast Penstemon	1.5' x 1'	1' o.c.	yes	yes	
Penstemon triflorus*	Scarlet Penstemon	2' x 1.5'	1' o.c.	yes	yes	
Perovskia atriplicifolia*	Russian Sage	3' x 3'	3' o.c.	yes	no	
Phlomis fruticosa*	Jerusalem Sage	3' x 3'	3' o.c.	yes	no	
Phlox paniculata*	Garden Phlox	3' x 2'	3' o.c.	yes	no	
Physostegia virginiana*	Fall Obedient Plant	3' x 2'	3' o.c.	yes	yes	
Poliomintha longiflora*	Mexican Oregano	3' x 3'	3' o.c.	yes	no	
Rudbeckia hirta*	Black-eyed Susan	2' x 2'	2' o.c.	yes	yes	
Salvia coccinea*	Tropical Sage	3' x 2'	2' o.c.	yes	yes	
Salvia farinacea*	Mealy Blue Sage	2' x 1.5'	1.5' o.c.	yes	yes	
Salvia guaranitica*	Majestic Sage	4' x 5'	4' o.c.	yes	no	
Salvia leucantha*	Mexican Bush Sage	4' x 4'	4' o.c.	yes	yes	
Salvia penstemonoides*	Big Red Sage	4' x 2'	2' o.c.	yes	yes	
Salvia roemeriana*	Cedar Sage	2' x 3'	3' o.c.	yes	yes	
Salvia x 'Indigo Spires'*	Indigo Spires Salvia	3' x 5'	4' o.c.	yes	no	
Scutellaria suffrutescens*	Pink Skullcap	1' x 2'	2' o.c.	yes	no	

*Green Grow Native and Adapted Landscape Plants

Botanical Name	Common Name	Ht. x Spd.	Min. Size	Drought Tolerant	Native	Comments
<i>Stachys byzantina</i> *	Lamb's Ear	2' x 4'	3' o.c.	yes	no	
<i>Stachys coccinea</i> *	Texas Betony	1' x 3'	3' o.c.	yes	no	
<i>Tagetes lemmonii</i> *	Copper Canyon Daisy	3' x 4'	3' o.c.	yes	no	
<i>Tagetes lucida</i> *	Mexican Mint Marigold	2' x 3'	3' o.c.	yes	no	
<i>Thelypteris kunthii</i> *	River Fern	3' x 3'	3' o.c.	no	yes	
<i>Tradescantia x Andersoniana</i>	Spiderwort	2' x 2'	2' o.c.	yes	no	
<i>Verbena bipinnatifida</i> *	Prairie Verbena	1' x 2'	1.5' o.c.	yes	yes	
<i>Verbena peruviana</i>	Peruvian Verbena	1' x 2'	1.5' o.c.	yes	no	
<i>Verbena tenuisectum</i>	Moss Verbena	1' x 2'	1.5' o.c.	yes	yes	
<i>Wedelia texana / hispida</i> *	Zexmenia	2' x 3'	2' o.c.	yes	yes	

Ornamental Grasses

<i>Andropogon gerardii</i> *	Big Bluestem	5' x 3'	3' o.c.	yes	yes	
<i>Andropogon glomeratus</i> *	Bushy Bluestem	4' x 2'	3' o.c.	yes	yes	
<i>Bambusa</i> spp.	Bamboo			no	no	Clumping varieties only
<i>Bouteloua curtipendula</i> *	Side Oats Grama	3' x 2'	3' o.c.	yes	yes	
<i>Bouteloua gracilis</i>	Blue Grama	1' x 1'	Seed	yes	yes	
<i>Chasmanthium latifolium</i> *	Inland Sea Oats	4' x 8'	5' o.c.	yes	yes	
<i>Cortaderia selloana</i> 'Pumila'	Dwarf Pampas Grass	6' x 6'	4' o.c.	yes	no	
<i>Elymus canadensis</i> *	Wild Rye	4' x 4'	4' o.c.	yes	yes	
<i>Muhlenbergia capillaris</i> *	Gulf Muhly	2.5' x 2'	2' o.c.	yes	yes	
<i>Muhlenbergia dumosa</i> *	Bamboo Muhly	5' x 4'	4' o.c.	yes	yes	

*Green Grow Native and Adapted Landscape Plants

Botanical Name	Common Name	Ht. x Spd.	Min. Size	Drought Tolerant	Native	Comments
Muhlenbergia lindheimeri*	Big Muhly	5' x 3'	5' o.c.	yes	yes	
Muhlenbergia reverchonii*	Seep Muhly	3' x 2'	2' o.c.	yes	yes	
Muhlenbergia rigens*	Deer Muhly	1' x 1'	1' o.c.	yes	yes	
Pennisetum alopecuroides*	Fountain Grass	3' x 3'	3' o.c.	yes	no	
Schizachyrium scoparium*	Little Bluestem	3' x 1.5'	1.5' o.c.	yes	yes	
Sorghastrum nutans*	Indian Grass	4' x 5'	4' o.c.	yes	yes	
Stipa tenuissima*	Mexican Feather Grass	2' x 1.5'	2' o.c.	yes	no	
Turf Grasses						
Buchloe dactyloides*	Buffalograss	Seed or Sod		yes	yes	
Cynodon dactylon*	Common Bermuda	Seed or Sod		yes	no	
Cynodon spp.*	Bermuda varieties	Sod		yes	no	
Stenotaphrum secundatum*	St. Augustine	Sod		no	no	Shaded areas only
Zoysia japonica*	Zoysia	Seed or Sod		yes	no	

*Green Grow Native and Adapted Landscape Plants

Common Name	Recommended Varieties	Ht. x Spd.	Drought Tolerant	Native	Comments
Edible Plants					
Agarita*	no named varieties	4' x 4'	yes	yes	
Apple	Anna, Dorsette Golden, Ein Shemer, Stark Gala, Mollies Delicious	30' ht.	no	no	
Black Walnut	Thomas	50' ht.	yes	no	Arizona Walnut or Little Walnut are easy care native alternatives
Blackberry	Brazos, Brison, Navaho, Rosborough, Womack, Cheyenne	4' x 3'	no	no	
Escarpment Black Cherry*	no named varieties	20' x 30'	yes	yes	
Fig	Alma, Celeste, Texas Everbearing	15' ht.	no	no	
Grape	Champanel, Black Spanish, Siebel 9110, Fredonia, Mars, Reliance, Suffolk Red	8' x 8'	no	no	Mustang Grape is easy care native alternative
Jujube	Lang, Li	30' ht.	no	no	
Kumquat	Meiwa	15' ht.	no	no	
Loquat	Early Red, Oliver, Advance, Champagne	20' ht.	no	no	

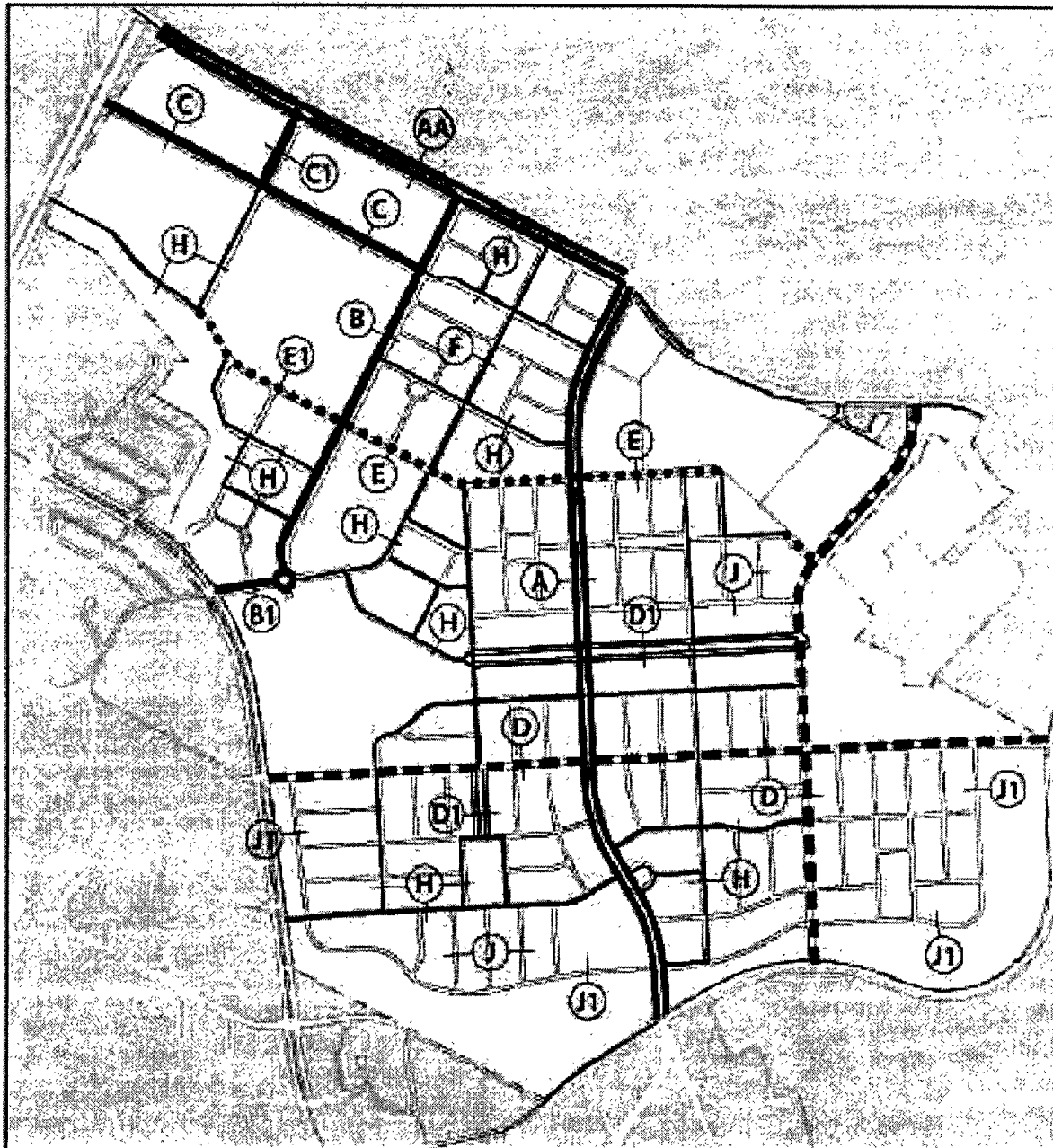
*Green Grow Native and Adapted Landscape Plants

Common Name	Recommended Varieties	Ht. x Spd.	Drought Tolerant	Native	Comments
Mexican Plum*	no named varieties	20' x 15'	yes	yes	
Mulberry	Paradise, Shangri La, Texas Mulberry, White Mulberry, Red Mulberry	45' ht.	yes	varies	Paper Mulberry is non-native and invasive - do not plant
Paw Paw	Mitchell, Overleese, Prolific, Taytoo	20' ht.	no	no	
Peach	Sentinel, Harvester, Redglobe, Redskin, Dixiland, Springold, Bicentennial, June Gold	10' ht.	no	no	
Pear	Moonglow, Magness, Seckel, Orient, Keiffer, Garber, Leconte, Warran	20' ht.	no	no	
Pecan*	Cheyenne, Choctaw, Sioux, Caddo, Desirable, Kiowa, Podsednik, Shawnee, Western, Wichita	50' x 50'	yes	yes	
Persimmon	Eureka, Fuyu, Hachiya, Tamopan, Tane-nashi	25' ht.	yes	no	
Plum	Allred, Bruce, Methley, Morris, Ozark Premier, Santa Rosa	15' ht.	no	no	
Pomegranate*	Wonderful	15' x 10'	yes	no	
Prickly Pear Cactus*	spineless varieties are easier to handle	3' x 3'	yes	yes	
Strawberry	Sequoia, Tioga, Cardinal	12" x 12"	no	no	best grown as annual in Texas heat

*Green Grow Native and Adapted Landscape Plants

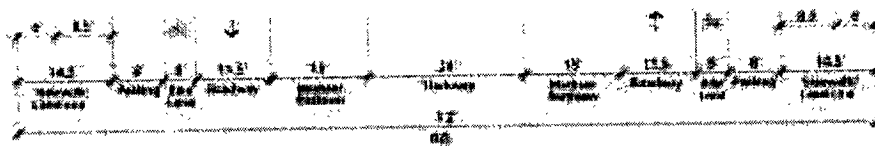
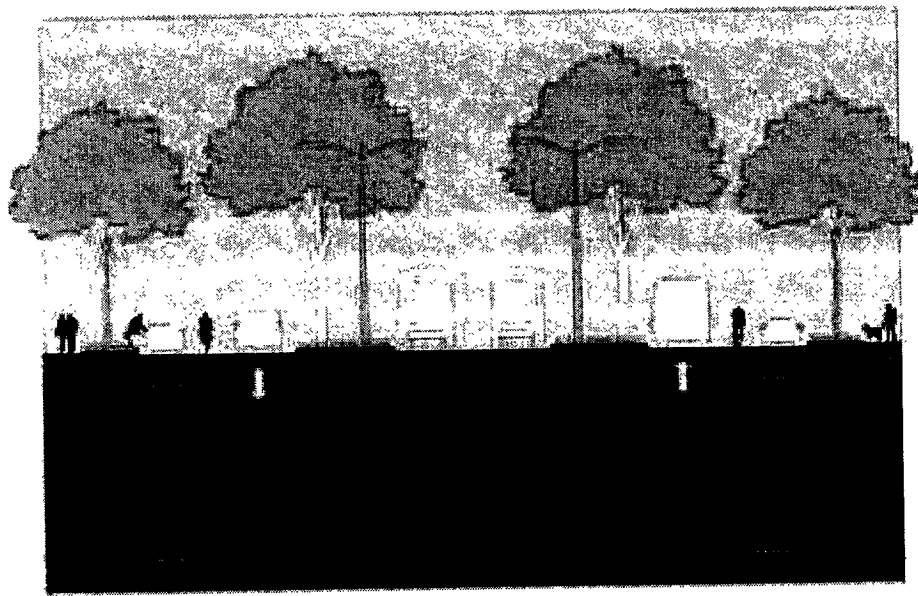


APPENDIX B: **MUELLER STREET CROSS SECTIONS**

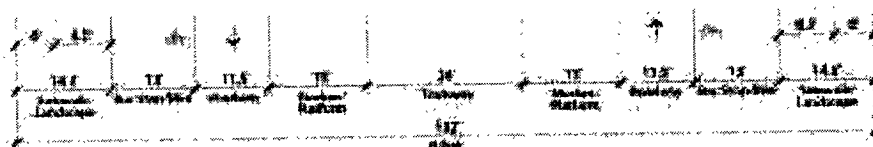
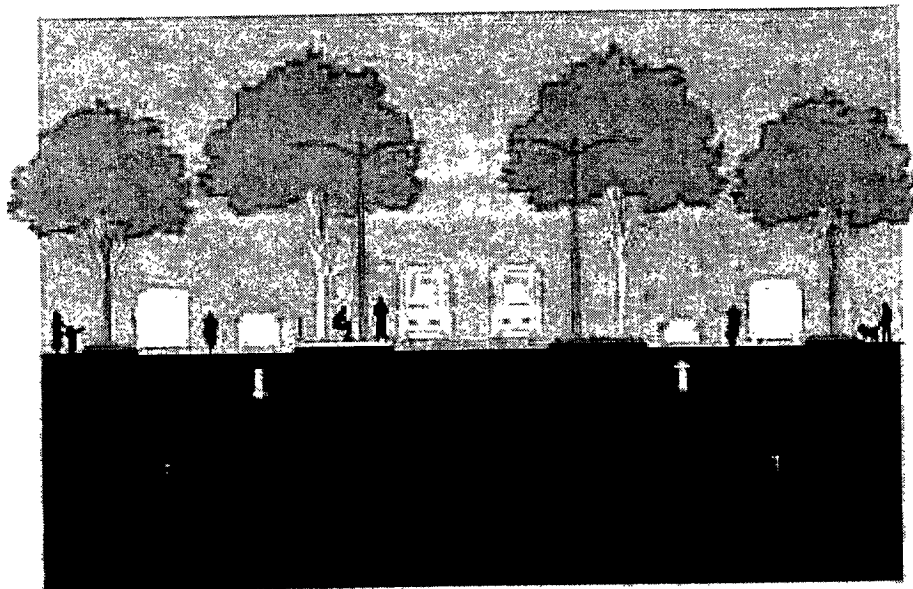


Street Hierarchy

	TRANSIT BOULEVARD (A)		LINEAR PARK BOULEVARD (D1)
	51ST STREET (AA)		GREENWAY STREET (E)
	MUELLER BOULEVARD (B)		TOWN CENTER MAIN STREET (F)
	ALDRICH STREET - ENTRY BOULEVARD (B1)		NEIGHBORHOOD CONNECTOR STREET (H)
	BARBARA JORDAN BOULEVARD (C)		NEIGHBORHOOD LOCAL STREET (J)
	LANCASTER DRIVE EXTENSION (C1)		GREENWAY PERIMETER STREET (J1)
	NEIGHBORHOOD BOULEVARD (D)		NEIGHBORHOOD ALLEY (K) (NOT SHOWN)

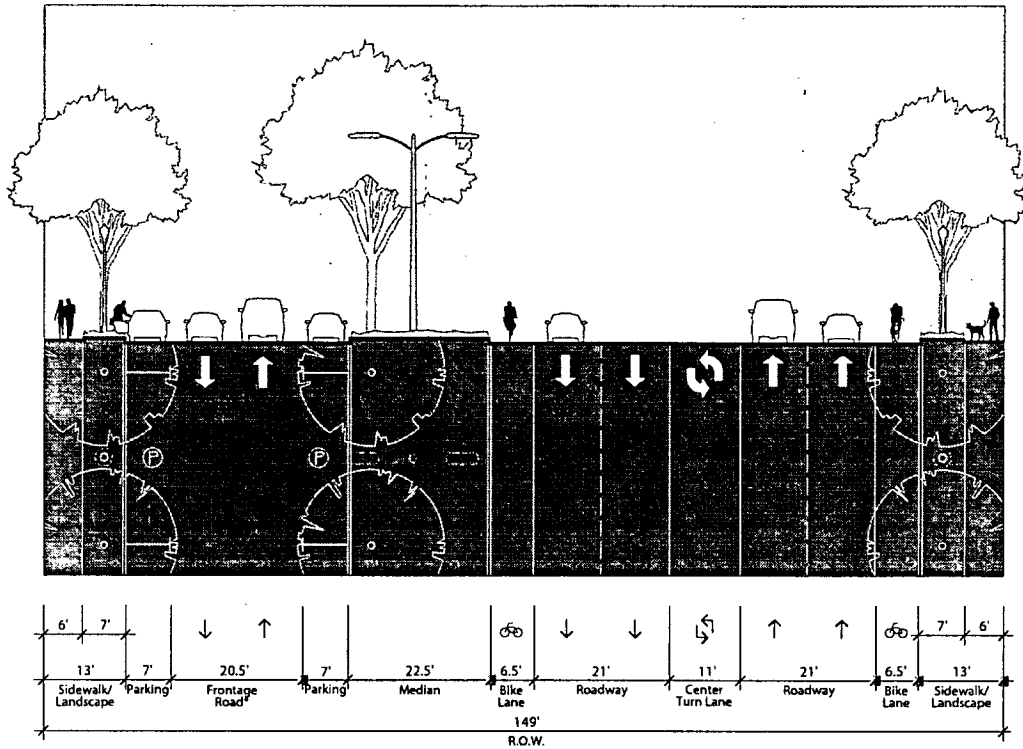


TRANSIT BOULEVARD (A)

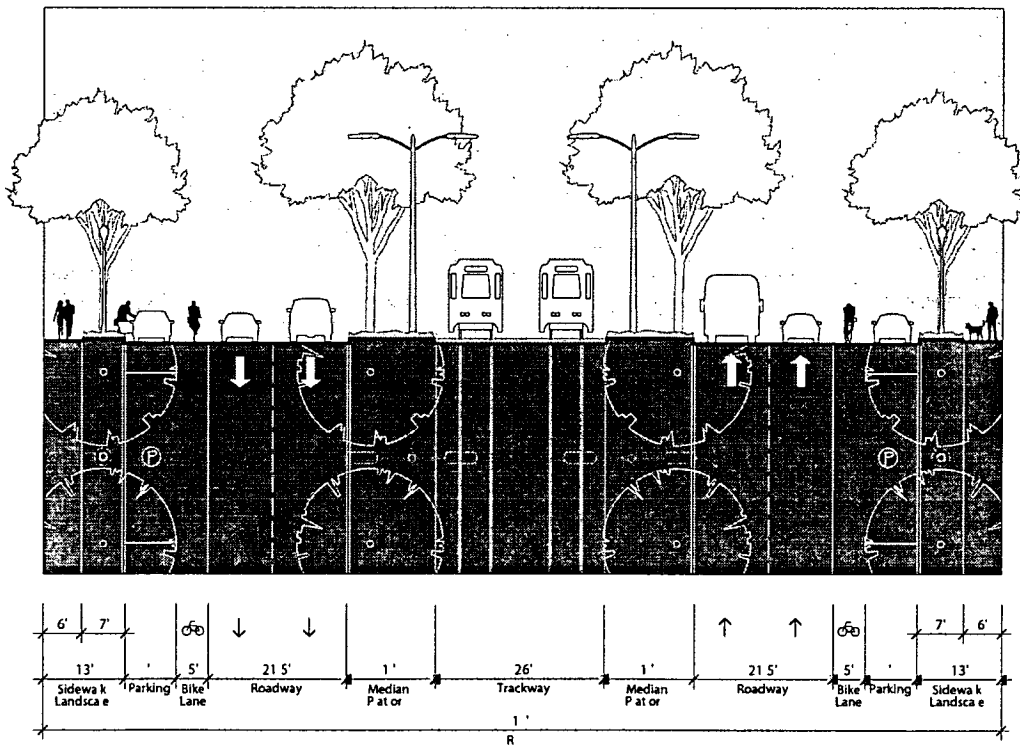


TRANSIT BOULEVARD at PLATFORM (A1)

*Prior to rail, median will be landscaped as parkway open space.

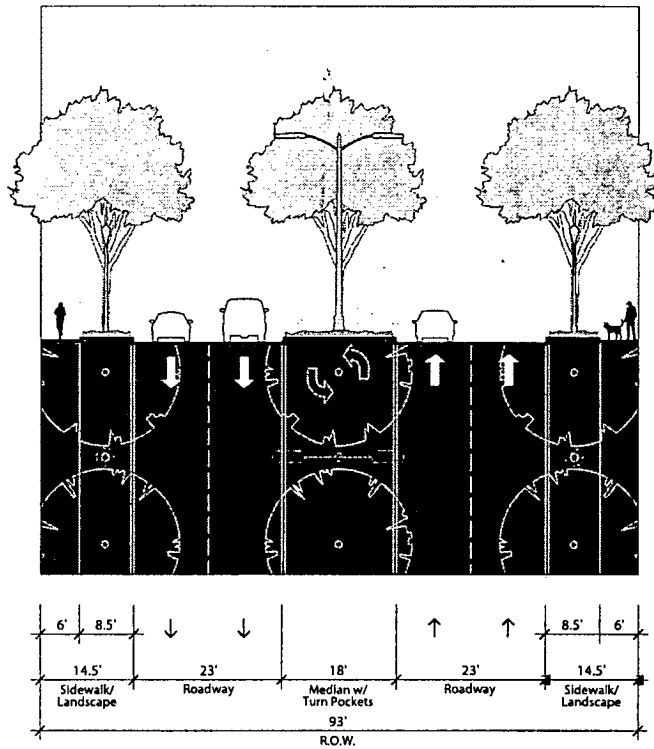


51st STREET INTERIM (AA)

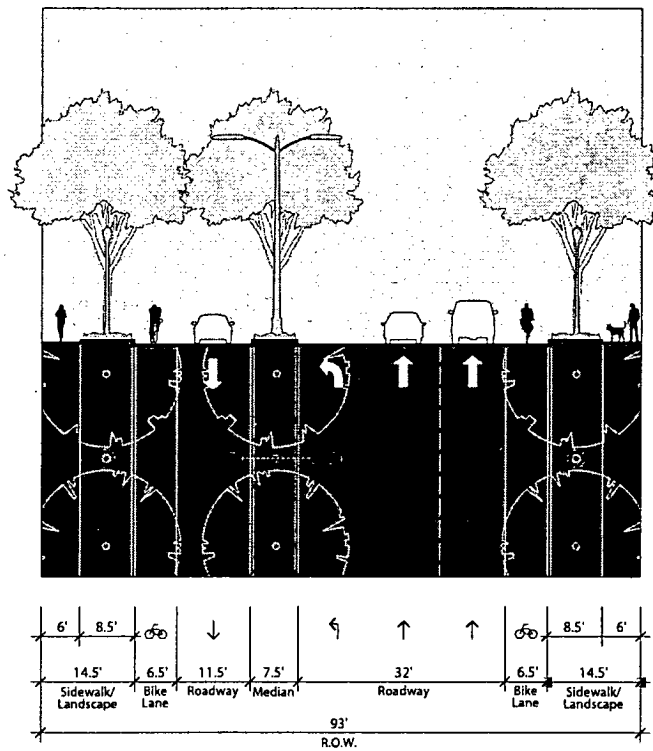


51st STREET ULTIMATE (AA1)

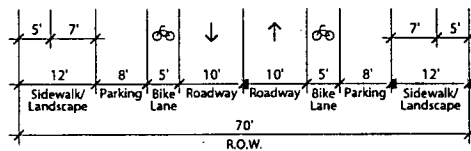
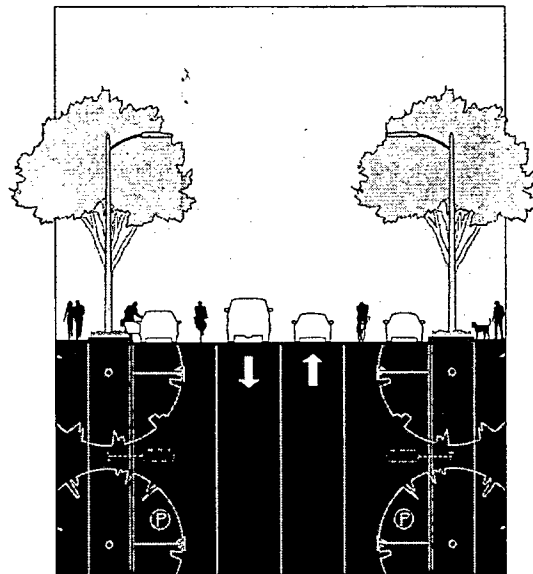
*Frontage Road could be replaced with open space, if roadway not required.



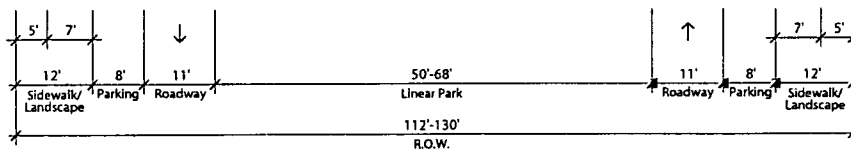
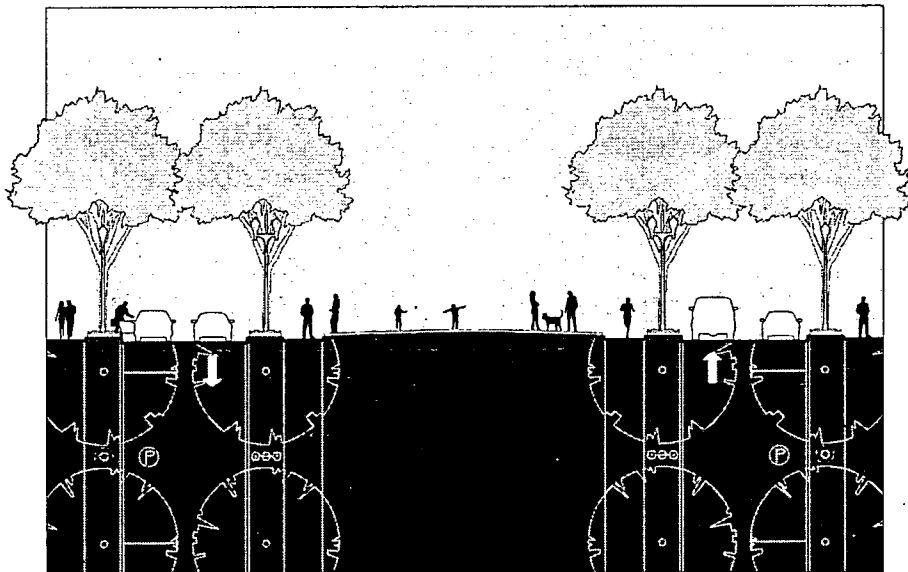
EAST-WEST COMMUNITY BOULEVARD (C)



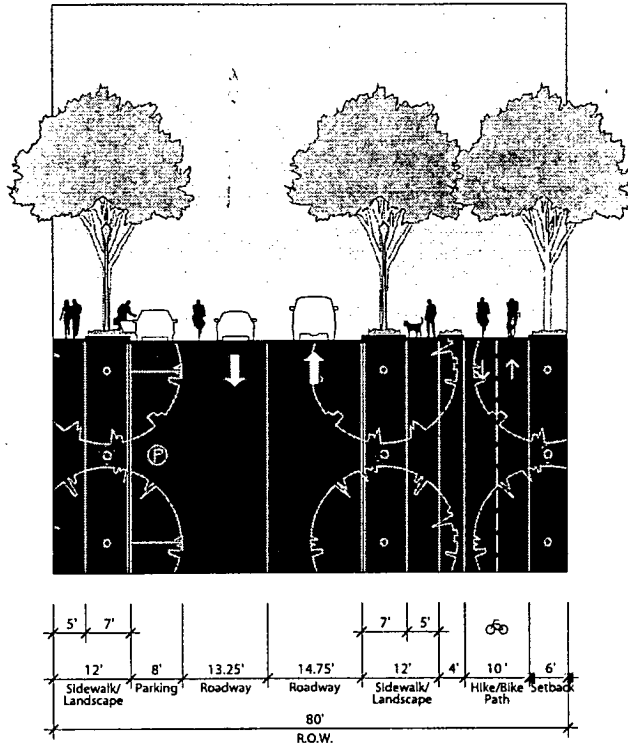
LANCASTER DRIVE EXTENSION (C1)



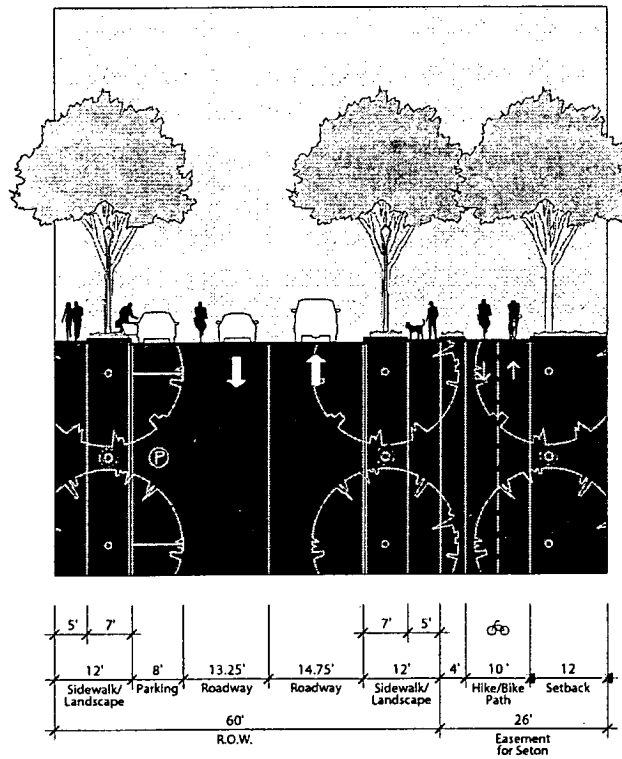
NEIGHBORHOOD BOULEVARD (D)



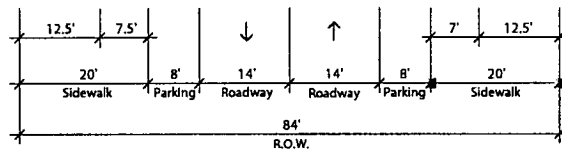
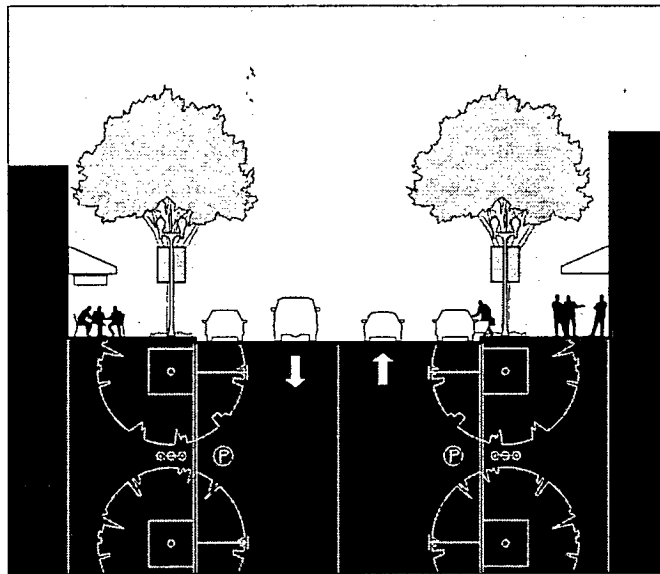
LINEAR PARK BOULEVARD (D1)



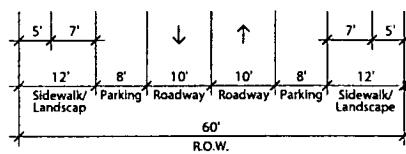
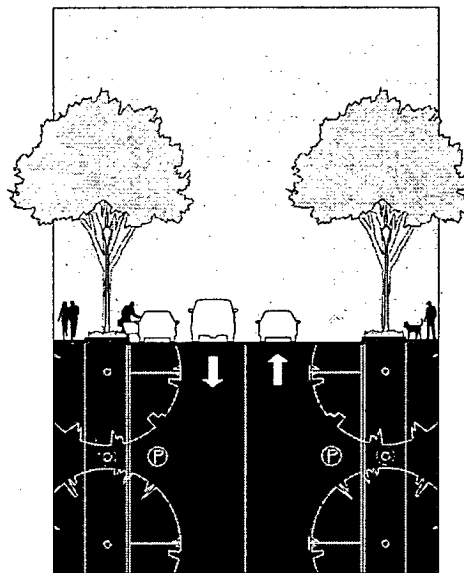
GREENWAY STREET IN NEIGHBORHOOD (E)



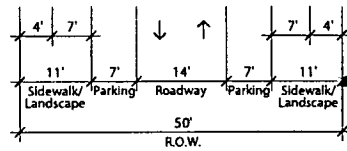
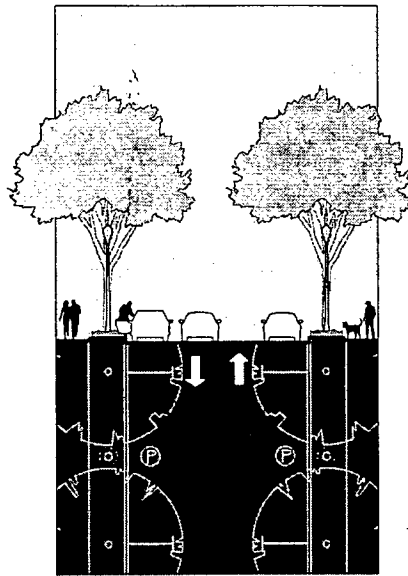
GREENWAY STREET AT CHILDREN'S HOSPITAL (E1)



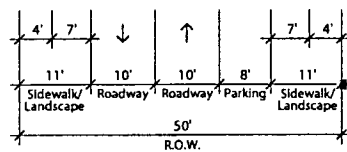
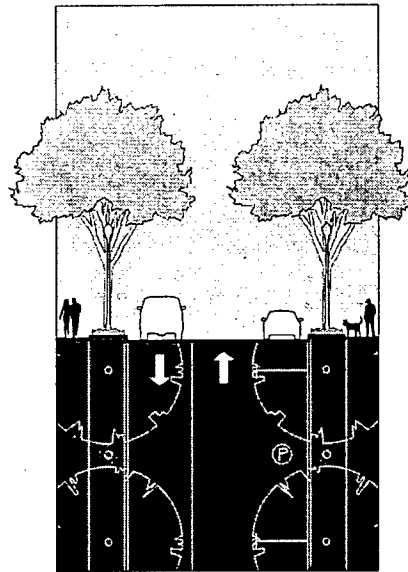
TOWN CENTER MAIN STREET (F)



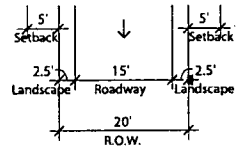
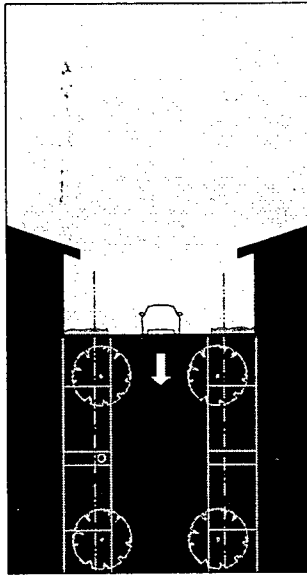
NEIGHBORHOOD CONNECTOR STREET (H)



NEIGHBORHOOD LOCAL STREET (J)



GREENWAY PERIMETER STREET (J1)



NEIGHBORHOOD ALLEY (K)