



NORTH FIFTH STREET TRANSIT SUPPORTIVE CONCEPT PLAN

Transit Oriented Development Strategy

April 19, 2006

Prepared for: City of North Las Vegas

Prepared by: PB PlaceMaking
Parsons Brinckerhoff



ACKNOWLEDGEMENTS

City Council

Michael L. Montandon, Mayor
William E. Robinson, Mayor Pro Tempore, Councilman Ward 2
Stephanie S. Smith, Councilwoman Ward 3
Shari Buck, Councilman Ward 4
Robert Eliason, Councilman Ward 1

Planning Commission

Jay Aston, Chairman
Jo Cato, Vice Chairman
L. Dean Leavitt
Harry Shull
Steve Brown
Dilip Trivedi
Angelo Carvalho

City Manager's Office

Gregory E. Rose, City Manager
Maryann I. Ustick, Assistant City Manager – Development
Brenda Johnson, Director of Communications
Michelle Bailey-Hedgepeth, Assistant to the City Manager

Parks and Recreation

Mike Henley, Director
Tony Taylor

Planning and Zoning

Jory B. Stewart, Director
Misty Haehn
Marc Jordan
Robert Eastman
Vicki Adams
Jeremy Davis
Bob Hoyes
Johanna Murphy
Ned Thomas, Project Manager

Public Works

Jim Bell, Director
Qiong Liu
Kirk Bogan
Randy Cagel
Clete Kus
Duane McNelly
Thomas Brady, Engineering Services
Brian Martin

Economic Development

Mike Majewski, Director
Larry Bender
Peggy Proestos

Utilities Department

David Bereskin, Director
Louise Steeps

City Attorney's Office

Sean McGowan
Nicholas Vaskov

Police Department

Mark Paresi, Chief of Police
Tiffany Morey

Fire Department

Al Gillespie, Fire Chief
Terri Davis
James Frater

Regional Transportation Commission

Fred Ohene
Bruce Turner
Martyn James
Polly Carolin

Parsons-Brinckerhoff Las Vegas

Lee Gibson
Scott Rickert
Amy McAbee-Cummings

Workshop Participants

Carolyn Berger, Cornerstone Company
Louis Lombard, Nellis AFB
Adrienne Lombard, Idea Institute
Connie Suckling, SNHBA
Edgar Patino, Nevada Power
Molly O'Brien, Kimley Horn
TJ Fischer, PB & JC
Jim Dufault, Southwest Gas
Brian Lee, Tru West Realty
Jeremy Stamis, Jerry's Nugget
John Lee, Dymon Investments
Chad Dymon, Dymon Investments
Robert Combs, R.C. Farms
Scott Sauer
Sherri Evans
Maury Blanton
Bob Borgerson
Harvey Ferber
Andres Ramirez
Steven Lauber

PB PlaceMaking

GB Arrington
Patrick Sweeney
Keith Liden
Rajiv Batra
Emily Hull
Kimi Iboshi Sloop

TABLE OF CONTENTS

SECTION 1: A PLAN FOR THE FUTURE

Introduction.....	Error! Bookmark not defined.
Project Study Area.....	4
Project Background	4
2025 Strategic Plan	Error! Bookmark not defined.
Community Driven.....	Error! Bookmark not defined.
Project Objectives	6
Five Distinct Planning Districts.....	7
Elements of the North Fifth Street TSCP.....	8
Street Design.....	8
Transit-Oriented Development.....	8
A Form-Based Zoning Code.....	8
Implementation.....	9

SECTION 2: TRANSIT-ORIENTED DEVELOPMENT

What Is TOD?.....	11
TOD Creates Choice for a Diverse Demographic.....	12
Benefits of TOD.....	13
TOD Land Use and Design Principles.....	15
Greater Density Than the Community Average	16
A Mix of Uses	17
Quality Pedestrian Environment.....	18
A Defined Center	19
Core-Center-Edge Concept.....	20

SECTION 3: ENVISIONING THE CORRIDOR

A Vision for North Fifth Street	23
Vision Elements	24
Corridor Land Use Vision	25
TOD Land Use Categories	25
Corridor Land Use Strategy	36
Corridor Land Use Strategy by District	37
Corridor Circulation	40
Corridor Circulation Strategy	41

SECTION 4: PLANNING DISTRICT DESIGN CONCEPTS

District Design Concepts	55
University District	56
Deer Springs District	58
North Fifth Street District	60
Industrial District	62
Gateway Redevelopment District	64

SECTION 5: CODE RECOMMENDATIONS

Removing Barriers to TOD	67
Form-Based Codes Enable TOD	67
Code Recommendations	67
How Recommendations are Organized	68
TOD Code Elements	69

SECTION 6: IMPLEMENTATION

Next Steps.....	99
Innovative TOD Finance	102
Market Assessment	102

APPENDIX

I. Background Information.....	A-1
II. Planning District Existing Conditions Snapshot	A-5
III. The Visioning Process.....	A-11
IV. FTA New Starts	A-19
V. Innovative TOD Finance	A-23
VI. National Examples of Successful TOD.....	A-43

SECTION 1: A PLAN FOR THE FUTURE

INTRODUCTION

Rapid population and employment growth in the Las Vegas Valley is placing increased demand on the region's transportation system. To meet this challenge, the City of North Las Vegas and its regional agency partners are looking for opportunities to better integrate transportation improvements with land development in a way that enhances the quality of life for residents and maximizes the effectiveness of public investment in transportation.

The North Fifth Street Transit Supportive Concept Plan (TSCP) envisions a new direction for transportation and land use in North Las Vegas. By linking transportation investments with land use, the concept creates a long-term vision and strategy for North Fifth Street, Deer Springs Way, and Pecos Road and sets the course for compact, pedestrian-friendly, mixed use development.

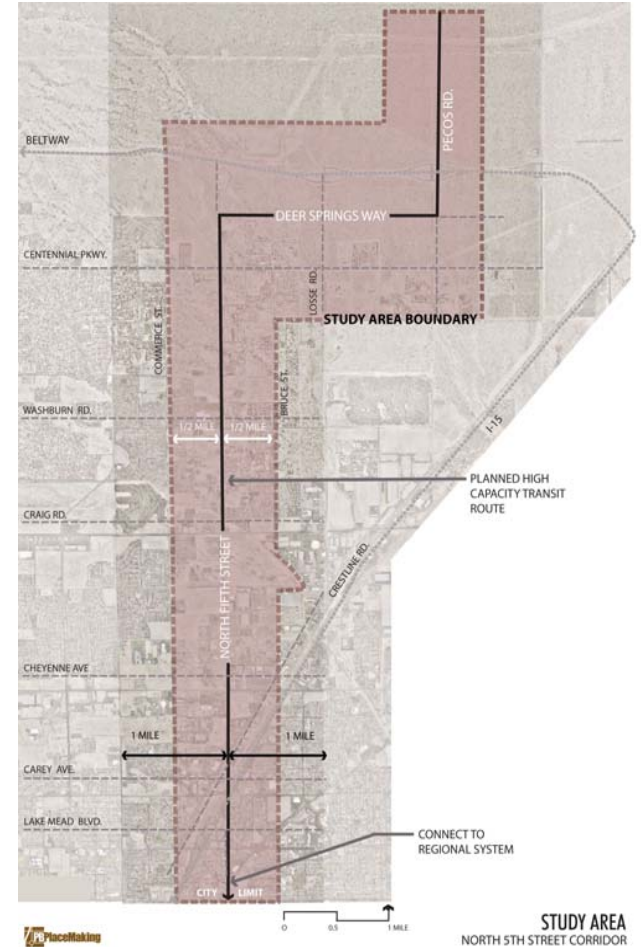
STUDY AREA

The North Fifth Street TSCP follows a seven mile corridor from the northern Beltway south to downtown and the southern city limits at Owens Avenue. The east-west limits of the corridor study area extend one-half mile on either side of North Fifth Street. From Deer Springs, the east-west segment extends a mile on either side.

BACKGROUND

The TSCP builds upon two previous transportation studies, the I-15 Northeast Corridor Study completed in 2002 and the North Fifth Street Corridor Study completed in 2004.

Recommendations within these reports provide the basis for an integrated circulation strategy along the corridor.



THE I-15 NORTHEAST CORRIDOR STUDY

The Nevada Department of Transportation prepared the I-15 Northeast Corridor Study in 2002, which recommended that North Fifth Street be extended across the I-15 Freeway Corridor to create a continuous north-south arterial street connecting the cities of Las Vegas and North Las Vegas to the Northern Beltway.

THE NORTH FIFTH STREET CORRIDOR STUDY

The City of North Las Vegas and the RTC completed the North Fifth Street Corridor Study in November 2004 to evaluate potential design alternatives that would accommodate significant traffic volumes and transit.

Recommendations from that report include

- A recommended right-of-way width of 150 feet.

- Six travel lanes (three northbound, three southbound).
- Dedicated space in the 150 foot right-of-way (ROW) for high capacity transit.
- Landscape buffers and multi-use pathways.

THE REGIONAL FIXED GUIDEWAY SYSTEM

The Regional Transportation Commission of Southern Nevada (RTC) is currently studying the feasibility of constructing a Regional Fixed Guideway (RFG) system within the Las Vegas Valley. This system would provide transit connections between North Las Vegas, downtown Las Vegas, the Resort Corridor, and the City of Henderson. Additional routes and connections are also contemplated.

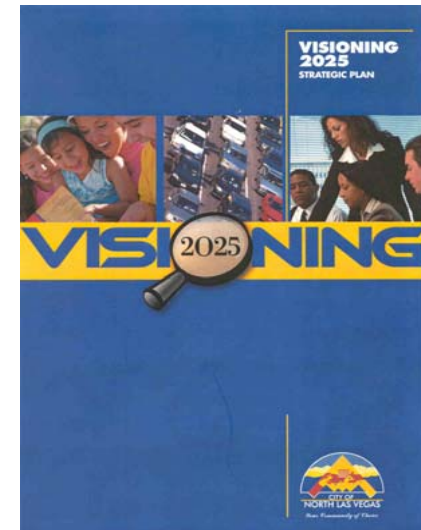
Operating primarily in dedicated right-of-ways, this high capacity service would use a form of bus rapid transit (BRT) or light rail (LRT). BRT service is currently available on Las Vegas Blvd. in the form of MAX bus service.

Regional Fixed Guideway service is anticipated to begin in 2013.

THE VISIONING 2025 STRATEGIC PLAN

The North Fifth Street TSCP is consistent with the goals and objectives of the City's *Visioning 2025 Strategic Plan*. The Strategic Plan promotes

- Housing choice for all income levels.
- Mixed use development.
- North Fifth Street as a mass transit corridor.



The TSCP is also consistent with the goals of sound fiscal management outlined within the *Visioning 2025 Strategic Plan* because a central element of the TSCP is the coordination of public investment in transportation with private investment in land development. The City of North Las Vegas is currently developing concepts for roadway improvements on North Fifth Street that would be compatible with transit, pedestrian use, and the desired land use vision.

PUBLIC WORKSHOPS

Creation of the North Fifth Street Corridor Vision began with several workshops involving city staff and stakeholders during the late spring and summer of 2005. These work sessions were used to

- Review existing conditions;
- Introduce TOD principles; and
- Identify how TOD could be used a variety of different ways in response to the range of development patterns in the corridor.

Workshop participants gathered in small groups with maps of the North Fifth Street Corridor study area. The participants were first asked to discuss where potential transit stations should be located. The groups were then asked to describe what types of neighborhoods would develop and grow around the station areas. To facilitate this discussion, participants were asked to discuss and select the most appropriate TOD typologies for each station area.

PROJECT OBJECTIVES

The primary objectives of the North Fifth Street TSCP are to

- Develop a community-based vision for the future development of the North Fifth Street Corridor.
- Develop concepts for land use and circulation patterns in support of this vision.
- Recommend strategies that can be used to implement the vision.



Community Workshops. The concept plan was developed through a series of highly interactive community and developer workshops.

FIVE DISTINCT PLANNING DISTRICTS

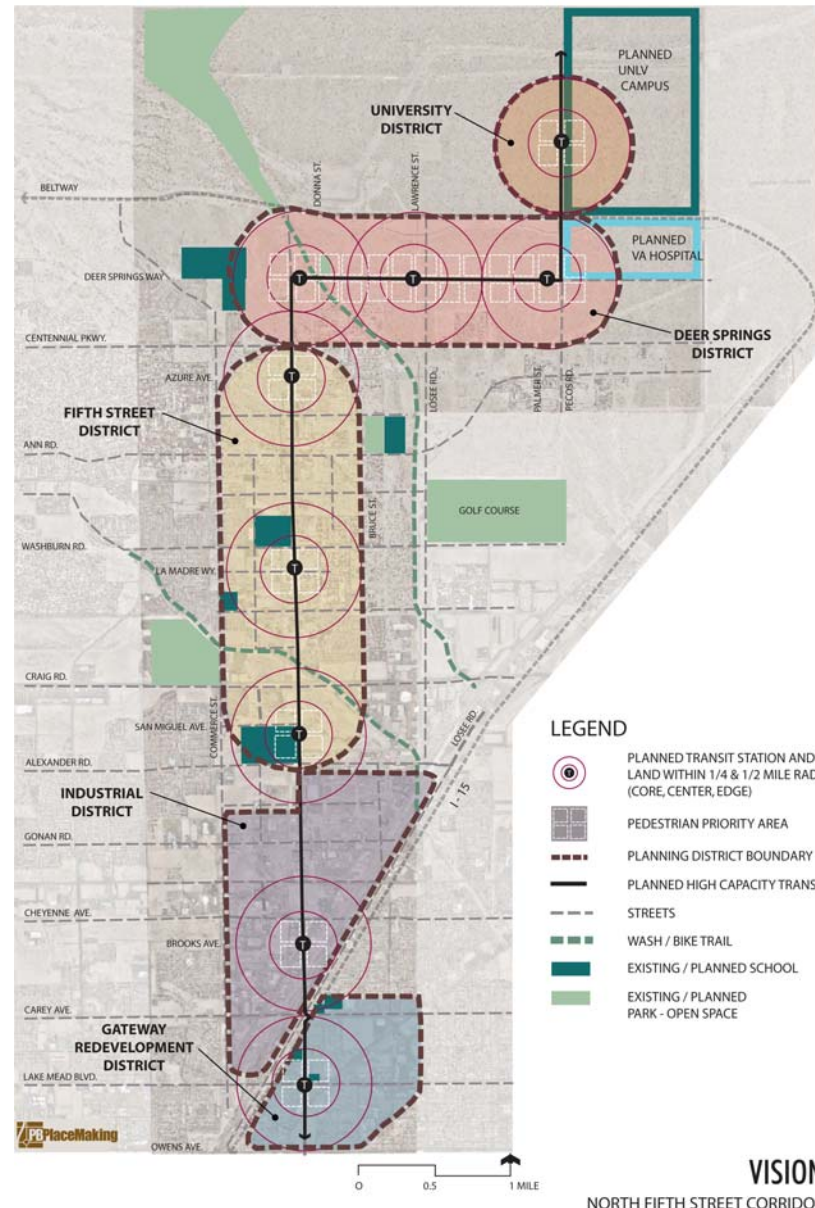
The North Fifth Street Corridor study area consists of a series of five distinct districts. The five planning districts are:

University District – A new campus for UNLV integrates transit and mixed use development that complements the corridor.

Deer Springs District – With the most intense mixed use development in the corridor, the Deer Springs District would become a distinctive and highly attractive regional destination.

North Fifth Street District – The North Fifth District would feature high-quality mixed use infill and other development designed to create “village” centers that complement existing residential neighborhoods.

Industrial District – The Industrial District preserves access for existing industrial land uses and creates opportunities for future development



VISION
NORTH FIFTH STREET CORRIDOR

of transit-compatible mixed use projects and facilities to serve the Cheyenne Technology Corridor.

Gateway Redevelopment District - Already designated a Redevelopment Area, the Gateway District is ripe with opportunities for urban redevelopment and infill that take advantage of future transit investments and provide residents with greater mobility.

ELEMENTS OF THE NORTH FIFTH TSCP

STREET DESIGN

North Fifth Street is planned to become a major transportation link between downtown North Las Vegas and I-15 to the south and the I-215 Beltway to the north. The TSCP aims to establish a unified and interrelated circulation system that tailors to the needs of each district and provides “through” access as well as development-oriented transit facilities, interconnected neighborhoods, and pedestrian-

oriented streets capable of facilitating mixed use development. North Fifth Street and all other streets within the corridor would be designed to complement the adjacent land uses through which they pass. Similarly, land uses along the corridor would be designed to create interesting and attractive streetscapes that gracefully provide mobility through the city.

TRANSIT-ORIENTED DEVELOPMENT

The TSCP conceives of future development along the North Fifth Street Corridor occurring in accordance with the principles of Transit-Oriented Development (TOD). For the purposes of this study, TOD has been distilled into four basic principles

- Greater density than community average
- A mix of uses
- Quality pedestrian environment
- A defined center

In a variety of markets, TOD has proven to be an effective strategy for aligning transit investments with development to create walkable, mixed use neighborhoods. Section 2, beginning on page 11, contains a detailed discussion of TOD principles in relation to the North Fifth Street Corridor.

A FORM-BASED ZONING CODE

Form-based zoning codes focus on the design, location, and arrangement of buildings within a neighborhood rather than looking at separate land uses. Section 5, beginning on page 61, provides a framework for a form-based zoning code which the City of North Las Vegas can use to guide and direct future growth in the North Fifth Street Corridor. Section 5, beginning on page 67, contains recommended code changes needed to implement TOD along the North Fifth Street Corridor.

IMPLEMENTATION

The North Fifth Street Corridor TSCP is feasible from a planning, market, and financial perspective. However, there are significant hurdles that must be addressed through a strong partnership between the city and the private sector in order for the concept plan to be successfully implemented, including

- Fragmented land ownership within the corridor.
- Designing roadway improvements to complement adjacent pedestrian-oriented development.
- Educating developers about mixed use since mixed use development has not occurred to any significant degree in the valley.
- Identifying public infrastructure funding.
- Identifying phasing of capital improvements and private development

Transportation improvements can serve as a catalyst to achieve the concept plan, yet unless they are sensitively designed to complement adjacent pedestrian-oriented development, they can become a serious barrier to the concept plan’s success.

Mixed use and pedestrian-oriented development need not wait for transit and should start today. It is critical for the city act now; otherwise the pace of development in the corridor will rapidly foreclose options to change the nature of development.

Successful implementation of the concept plan will emerge from a widely based and consistent commitment from all agency and private stakeholders to take the necessary steps to realize the concept plan.

Implementation Strategy

1. Adopt the Fifth Street Corridor TSCP.
2. Refine district transportation design concepts.
3. Redefine parking standards.
4. Adopt the TOD code recommendations.
5. Develop a master plan for each district.
6. Create a capital improvements and finance plan.
7. Forge public-private partnerships.
8. Develop a transit strategy.
9. Monitor the effects.
10. Follow a phasing plan.

SECTION 2: TRANSIT-ORIENTED DEVELOPMENT

WHAT IS TOD?

TOD is a strategy available to help manage growth and improve the quality of life in the North Fifth Street Corridor. TOD provides communities with an alternative to low-density suburban sprawl and automobile-dependent land use patterns.

In one recent study, TOD was defined as follows:

"Transit Oriented Development (TOD) is moderate to higher density development, located within an easy walk of a major transit stop, generally with a mix of residential, employment and shopping opportunities designed for pedestrians without excluding the auto. TOD can be new construction or redevelopment of one or more buildings whose design and orientation facilitate transit use."

TOD seeks to align transit investments with a community's vision for how it wants to grow, creating "livable" mixed use, denser, walkable "transit villages."¹

TOD is a transit supportive approach to development, which enables efficient use of available transit services. It is important to recognize that this style of development works successfully without transit and functions even better with transit. This is especially relevant for the North Fifth Street Corridor because land development will primarily come in advance of significant transit service along the corridor.

¹ Parsons Brinckerhoff. 2002. *Factors for Success in California's Transit-Oriented Development*. Sacramento: California Department of Transportation, Statewide Transit-Oriented Development Study.



PENTAGON ROW, ARLINGTON, VA

After three decades of TOD planning, residents of Arlington County, VA are heavy transit users. In the Rosslyn-Ballston Corridor 73% of residents arrive at stations by walking.

TOD CREATES CHOICE FOR A DIVERSE DEMOGRAPHIC

In general, people living and working in TODs walk more, use transit more, and own fewer cars. TOD households are twice as likely to not own a car and own roughly half as many cars as the “average” household. At an individual station, TOD can increase ridership by 20 to 40 percent and up to five percent overall at the regional level. People who live in a TOD are five times more likely to commute by transit than other residents. Locations next to transit can enjoy increases in land values over 50 percent in comparison to locations away from transit stops.²

TOD seeks to align transit investments with a community’s vision for how it wants to grow. A successful TOD will reinforce both the community and the transit system. TOD has broad potential in both large and small communities using bus and rail transit systems.



ORENCO STATION, HILLSBORO, OR

People living and working in TODs walk more, use transit more, and own fewer cars than the rest of the region.

² Ibid.

BENEFITS OF TOD

By implementing TOD and coordinating investment in transportation and land use projects, communities can make significant progress toward improving their quality of life. The extent to which this progress is made depends largely on the type and quality of transit service available as well as the primary characteristics of the TOD.

Ten major benefits from TOD are

1. Providing mobility choices. By creating “activity nodes” linked by transit, TOD provides much needed mobility options, including options for young people, the elderly and people who do not own cars or prefer not to drive.

2. Increasing public safety. By creating active places that are busy through the day and evening and providing “eyes on the street,” TOD helps increase safety for pedestrians, transit users, and many others.



EASTSIDE TRANSIT VILLAGE, PLANO, TX

TOD is an effective strategy to help manage the growth the City of North Las Vegas is experiencing while improving quality of life. When used as part of a broader strategy, TOD can help deliver significant community and transportation benefits.

3. Increasing transit ridership. TOD improves the efficiency and effectiveness of transit service investments by increasing the use of

transit near stations by 20 to 40 percent, and up to five percent overall at the regional level.

4. Reducing rates of vehicle miles traveled (VMT). Vehicle travel has been increasing faster than population growth. TOD can lower annual household rates of driving by 20 to 40 percent for those living, working, and/or shopping within transit station areas. Recent research shows that automobile ownership in TOD is approximately one half the national average.

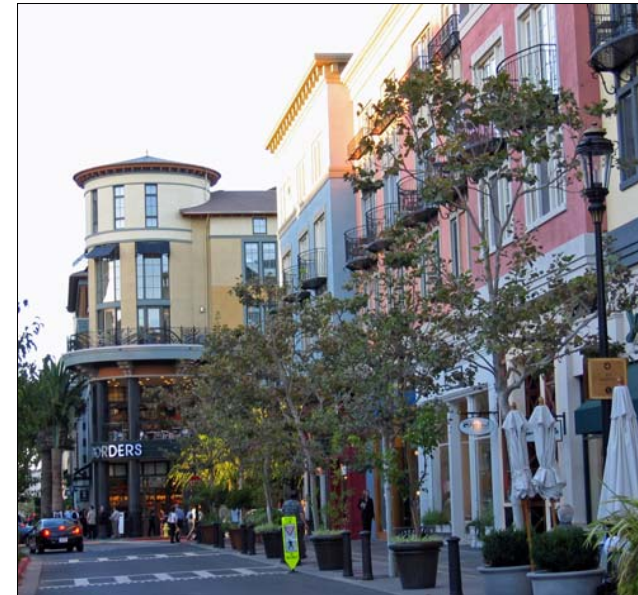
5. Increasing disposable household income. Housing and transportation are the first and second largest household expenses, respectively. TOD can effectively increase disposable income by reducing the need for more than one car and reducing driving costs, saving households \$3,000 to \$4,000 per year.

6. Reducing air pollution and energy consumption rates. By providing safe and easy pedestrian access to transit, TOD can lower rates of air pollution and energy consumption. TOD can also reduce rates of greenhouse gas emissions by 2.5 to 3.7 tons per year per household.

7. Helping protect existing single-family neighborhoods. TOD directs higher density development to appropriate areas near transit, thereby reducing pressure to build higher density development adjacent to existing single-family neighborhoods.

8. Playing a role in economic development. TOD is increasingly used as a tool to help revitalize aging downtowns and declining urban neighborhoods, and to enhance tax revenues for local jurisdictions.

9. Contributing to more affordable housing. TOD can add to the supply of affordable housing by providing lower-cost and accessible housing, and by reducing household transportation expenditures. It was recently estimated that housing costs for land and structures can be significantly reduced through more compact growth patterns.



Santana Row, San Jose, CA. This mixed used project illustrates all the basic elements of good TOD design: moderate to higher density, a mix of uses, development at a pedestrian scale, and the creation of a defined center.

10. Decreasing local infrastructure costs. Depending on local circumstances, TOD can help reduce infrastructure costs (such as for water, sewage, and roads) to local governments and property owners by up to 25 percent through more compact and infill development.

TOD LAND USE AND DESIGN PRINCIPLES

Transit-oriented development may be described by four basic principles, which define the essential characteristics of all successful TODs

- Greater density than community average.
- A mix of uses.
- Quality pedestrian environment.
- A defined center.

These four principles directly influence the land use, circulation, and design concepts of the North Fifth Street Corridor TSCP as well as the recommended code elements that support it.

TOD Principles	TOD Design	TOD Code
Greater Density than Community Average	Density by Design	Allows Greater Density
A Mix of Uses	Building & Mix of Uses	Height, Bulk, Allowed Uses
Quality Pedestrian Environment	Pedestrian Environment	Public Realm Stds / Connections
A Defined Center	Building Placement	Site Location & Setbacks
	Building Orientation & Frontage	Street Presence & Design
	Parking	Location & Quantity

TOD Principles: In comparison to other development in North Las Vegas, TODs will have greater density, a mix of uses, a walkable environment and a defined center.

Transit-Oriented Development

GREATER DENSITY THAN THE COMMUNITY AVERAGE

A key ingredient for walkable communities and support for transit is having sufficient residential densities to reduce walking distances between residences and other destinations, including commercial services, schools, parks, and transit.

The appropriate density levels depend largely upon community character and desires, but in general, a minimum of eight to nine units per acre is necessary to support any type of transit. Densities of seven units per acre and higher are currently found in the City of North Las Vegas. The following elements contribute to appropriate density for transit supportive land uses

- Densities that are higher than the community norm are located within $\frac{1}{4}$ to $\frac{1}{2}$ mile of transit.



Ballston, VA



Portland, OR



Dallas, TX



Melbourne, AUS

- Density Matters in TOD Performance.** Increasing the density in areas around a transit station can lead to a corresponding increase in transit ridership. Increasing density has also been found to reduce the use of cars.
- Structured parking is used rather than surface lots in higher density areas.
 - Site design for major projects allows for the intensification of densities over time.

A MIX OF USES

A transit supportive environment includes a mixture of residential, commercial, service, employment, and public uses making many trips between destinations shorter and more walkable

- First floor uses are “active” and oriented to serve pedestrians.
- Multiple compatible uses are permitted within buildings near transit.
- A mix of uses generating pedestrian traffic is concentrated within walking distance ($\frac{1}{4}$ to $\frac{1}{2}$ mile) of transit.
- Auto-oriented uses, such as service stations and drive through facilities, are limited or prohibited near transit.



Henderson, NV



Miami, FL



San Jose, CA



Beaverton, OR

Plan for a mix of uses. Promoting compact development and reducing automobile use can best be achieved through a mix of land uses. Mixed use can be horizontal, vertical or balanced between stations. TODs can offer places to shop, work, live and recreate.

QUALITY PEDESTRIAN ENVIRONMENT

Vibrant communities, with or without transit, are convenient and comfortable places for pedestrians. There are a number of components that contribute to a quality pedestrian environment

- Buildings and primary entrances are sited and oriented to be easily accessible from the street.
- Buildings incorporate architectural features that convey a sense of place and relate to the street and the pedestrian environment.
- Amenities, such as storefront windows, awnings, architectural features, lighting, and landscaping, are provided to help create a comfortable pedestrian environment along and between buildings.
- The site layout and building design allow direct pedestrian movements between transit, mixed land uses, and surrounding areas.



Henderson, NV

Design for the Pedestrian. Promoting compact development and reducing automobile use can best be achieved through a mix of land uses. Mixed use can be horizontal, vertical or balanced between stations. TODs can offer places to shop, work, live and recreate.



Summerlin, NV

- Most of the parking is located to the side or to the rear of the buildings.
- Sidewalks are present along site frontages, which connect to sidewalks and streets on adjacent and nearby properties.
- Street patterns form an interconnected grid that simplifies access for all modes.
- Pedestrian routes are buffered from fast-moving traffic and expanses of parking.
- Trees sheltering streets and sidewalks are provided along with pedestrian-scale lighting.
- Buildings and parks are used to provide a focal point or anchor for key areas or intersections.
- Secure and convenient bicycle parking is available.

A DEFINED CENTER

Transit is particularly successful in communities and neighborhoods that have defined centers, offering multiple attractions and reasons for pedestrians to frequent the area. These areas project a sense of place by including at least several of the following attributes

- The density and buildings are highest near the transit station, moderating somewhat in the core that is within ¼ mile of the transit station, and ultimately transitioning in the edge to match the character of surrounding development approximately ½ mile from the station.
- Parking is less predominant, being located to the rear and in parking structures.
- Buildings are oriented close to the street with window displays and main entrances.



Charlotte, NC

Defining a Center. Creating centers is an important principle of successful TOD implementation. The transit can be an important anchor for a center.

- Buildings are typically taller than the surrounding area.
- Parking requirements are reduced in close proximity to transit, compared to the norm.



Clarendon, VA



Bethesda, MD

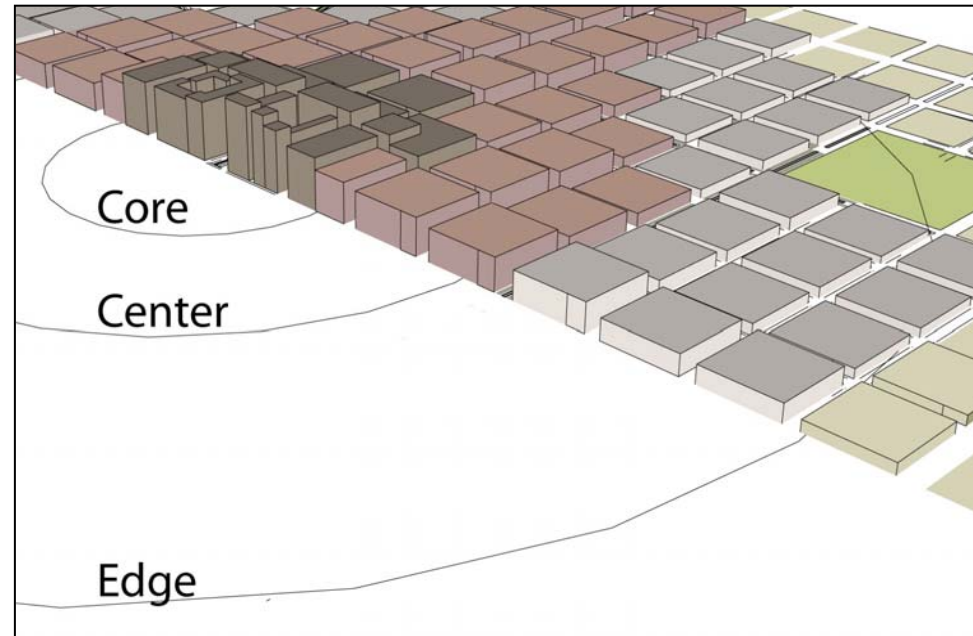
- Sidewalks are wider than in lower density areas, and offer pedestrian amenities, such as street trees, benches, kiosks, and plazas.

CORE-CENTER-EDGE CONCEPT

The specific application of the four TOD principles varies depends on the location of development in relation to the transit facility. Transit stations are surrounded by a core, a center, and an edge, which influence the proper location of higher densities, mixed uses, and the design of the circulation system.

The **core** is the area within approximately 600 feet of a transit station. It should have the highest density and degree of mixed use compared to the surrounding area. In addition, it should be the most walkable with wide sidewalks, smaller block sizes, building frontages located along the sidewalk, and pedestrian amenities.

The **center** extends from approximately 600 feet to 1,500 feet ($\frac{1}{4}$ mile). The density and mix of uses continues to remain higher than the surrounding area, but generally



less so compared to the core. High priority continues to be given to pedestrian convenience, comfort, and safety. The $\frac{1}{4}$ mile distance is approximately a five minute walk. It corresponds with the walking distance and time to get to transit that makes people more instinctively likely to choose transit.

The **edge** represents the outer limit of a transit station area, covering a distance between $\frac{1}{4}$ mile and $\frac{1}{2}$ mile (3,000 feet) from the transit station. This area is a transition zone between the higher density and mixed use pattern in the core and center and the lower density residential uses beyond. The $\frac{1}{2}$ mile distance, or a 10 minute walk, is based upon the maximum distance and time people typically are willing to walk to transit.

CORE - CENTER - EDGE CONCEPT

This concept influences the proper location of higher densities, mixed uses, and the design of the circulation system with respect to the distance from the transit station. The ½ mile distance is based upon the maximum distance that people usually are willing to walk to transit.

Core Area

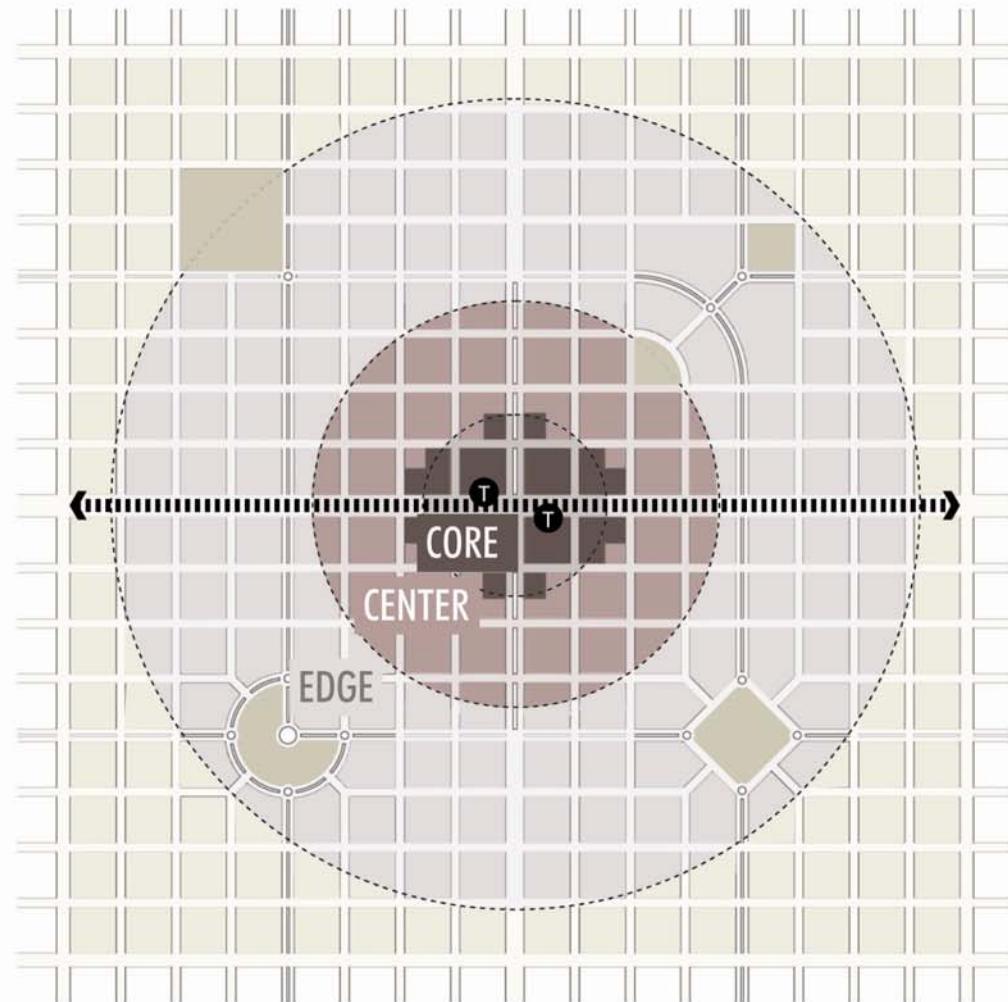
- Within 600 feet of transit station (2-3 minute walk)
- Highest density
- Most walkable
- Greatest mix of uses

Center Area

- 600 to 1,500 feet from transit station (up to 5 minute walk)
- High density
- Pedestrian-oriented
- Mixed-use

Edge Area

- ¼ to ½ mile from transit station (5 to 10 minute walk)
- Transitions between the higher density in the core and center to the lower density residential uses beyond the ½ mile radius from the transit station.
- Pedestrian friendly
- Less mixed uses, more residential



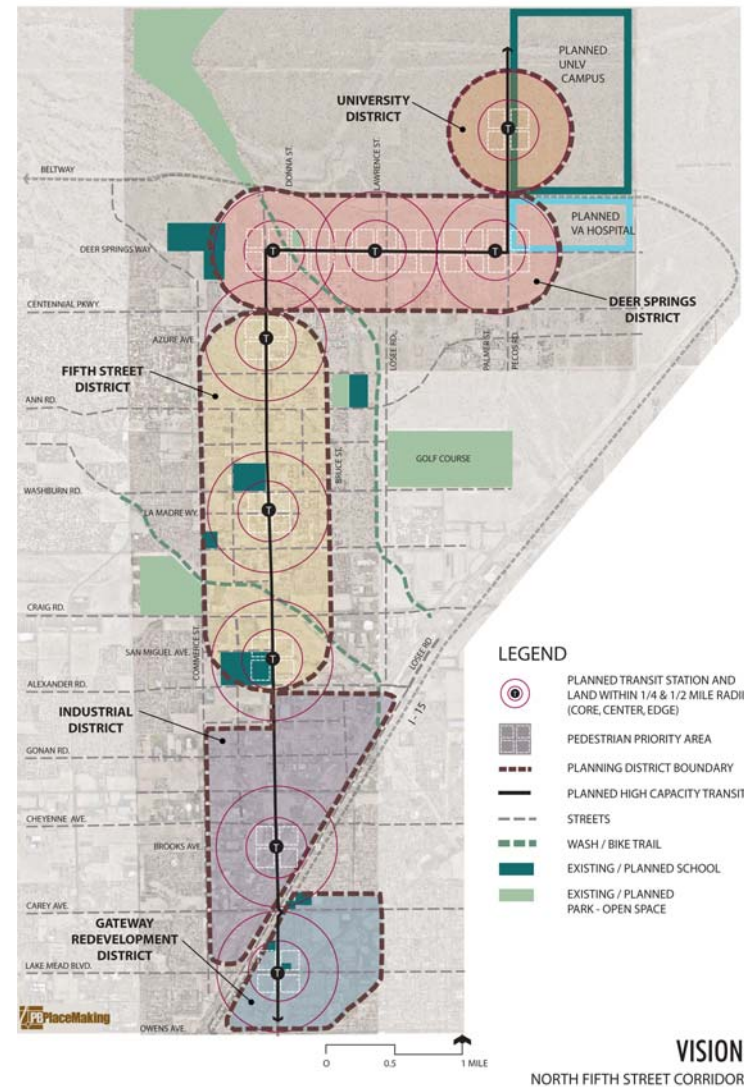
T TRANSIT FACILITY

SECTION 3: ENVISIONING THE CORRIDOR

A VISION FOR NORTH FIFTH STREET

The quality and character of land uses along the North Fifth Street Corridor vary widely from established industrial and employment uses, to low density residential, to undeveloped land with multiple development options. Under these circumstances, there can be no “one size fits all” approach to TOD. Rather, the TOD principles must be applied in a variety of ways that are sensitive to these differences.

The need to tailor implementation of the TOD principles to fit the wide-ranging character of the different sections of the corridor led to the creation of five distinct planning districts, described in Section 1. These districts are used to frame the discussion in the following sections regarding key land use, circulation, and design concepts.



VISION ELEMENTS

Based upon the TOD principles introduced in Section 2, the primary land use and transportation vision elements are

- Higher density development in appropriate locations within ½ mile of North Fifth Street, Deer Springs Way, and Pecos Road.
- Mixed use development near the corridor featuring a blend of retail, service commercial, civic, and residential activities.
- A circulation system featuring pedestrian priority streets with wide sidewalks, amenities, and design treatments to create quality connections between key destinations, such as future transit stops, parks, schools, trails, and commercial areas.

TOD Principles	TOD Design	TOD Code
Greater Density than Community Average	Density by Design	Allows Greater Density
A Mix of Uses	Building & Mix of Uses	Height, Bulk, Allowed Uses
Quality Pedestrian Environment	Pedestrian Environment	Public Realm Stds / Connections
A Defined Center	Building Placement	Site Location & Setbacks
	Building Orientation & Frontage	Street Presence & Design
	Parking	Location & Quantity

TOD Design: The design of TODs places an emphasis on pedestrians through design, mix of uses, building orientation and parking.

- Defined centers focused within ½ mile of possible future transit stops that have a combination of density, mixed uses, pedestrian orientation, and design elements to treat each as a unique community center with its own identity.

CORRIDOR LAND USE VISION

The corridor land use vision reflects the concept of having a core, center, and edge around transit station areas. The four TOD principles are used to guide the application of TOD design features into an integrated strategy for land use, circulation, and design for the corridor.

TOD LAND USE CATEGORIES

The land use component of the TSCP is comprised of five TOD land use categories that represent a range of densities, uses, and design characteristics.

The land use categories include

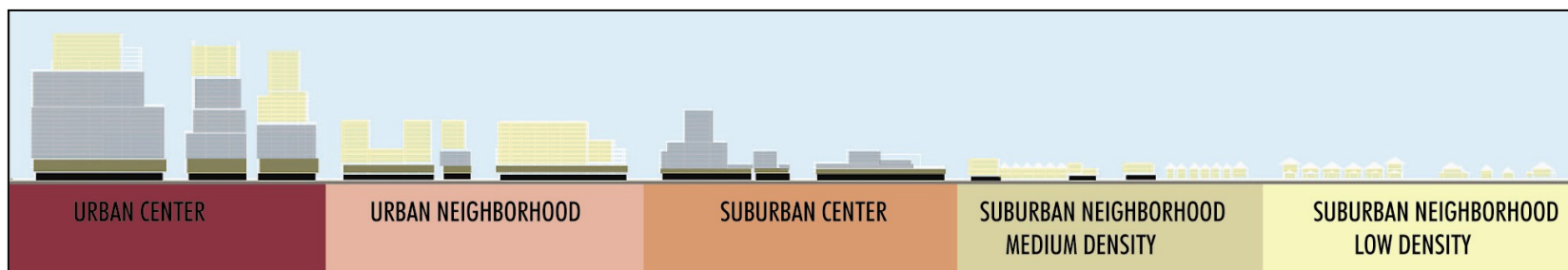
- Urban Center
- Urban Neighborhood
- Suburban Center
- Suburban – Medium Density
- Suburban – Low Density

These five land use categories are consistent with the TOD principles and illustrate the general intent of the vision for development in the North Fifth Street Corridor.

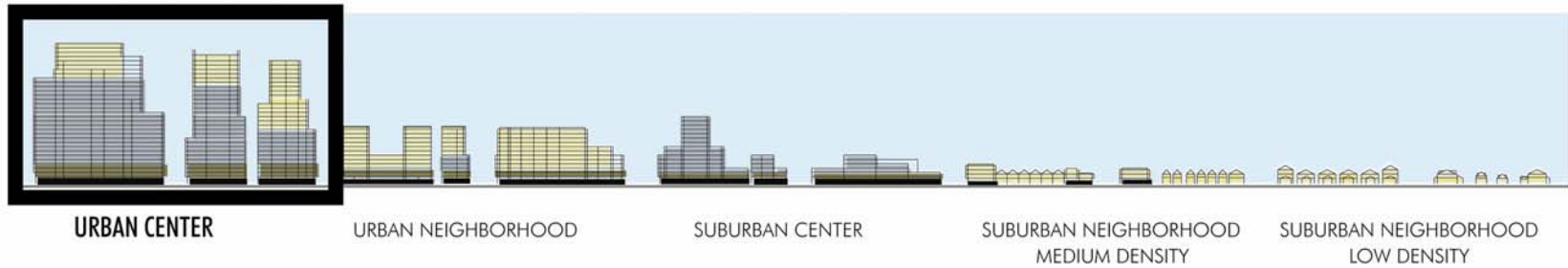
The land uses range from high densities and significant mix of uses, not typically seen in North Las Vegas, to low density, predominantly residential uses, which are similar to most existing developments in the corridor today.

A detailed description of each land use category is provided on the following pages. Additional information is also provided in *Appendix C: The Visioning Process*.

It is important to recognize that these generic descriptions do not account for the public open spaces and park land that should be incorporated into specific development plans within the corridor districts.



Envisioning the Corridor



NORTH FIFTH STREET CORRIDOR TOD LAND USE CHARACTERISTICS

Density: 40+ units per acre enabled by

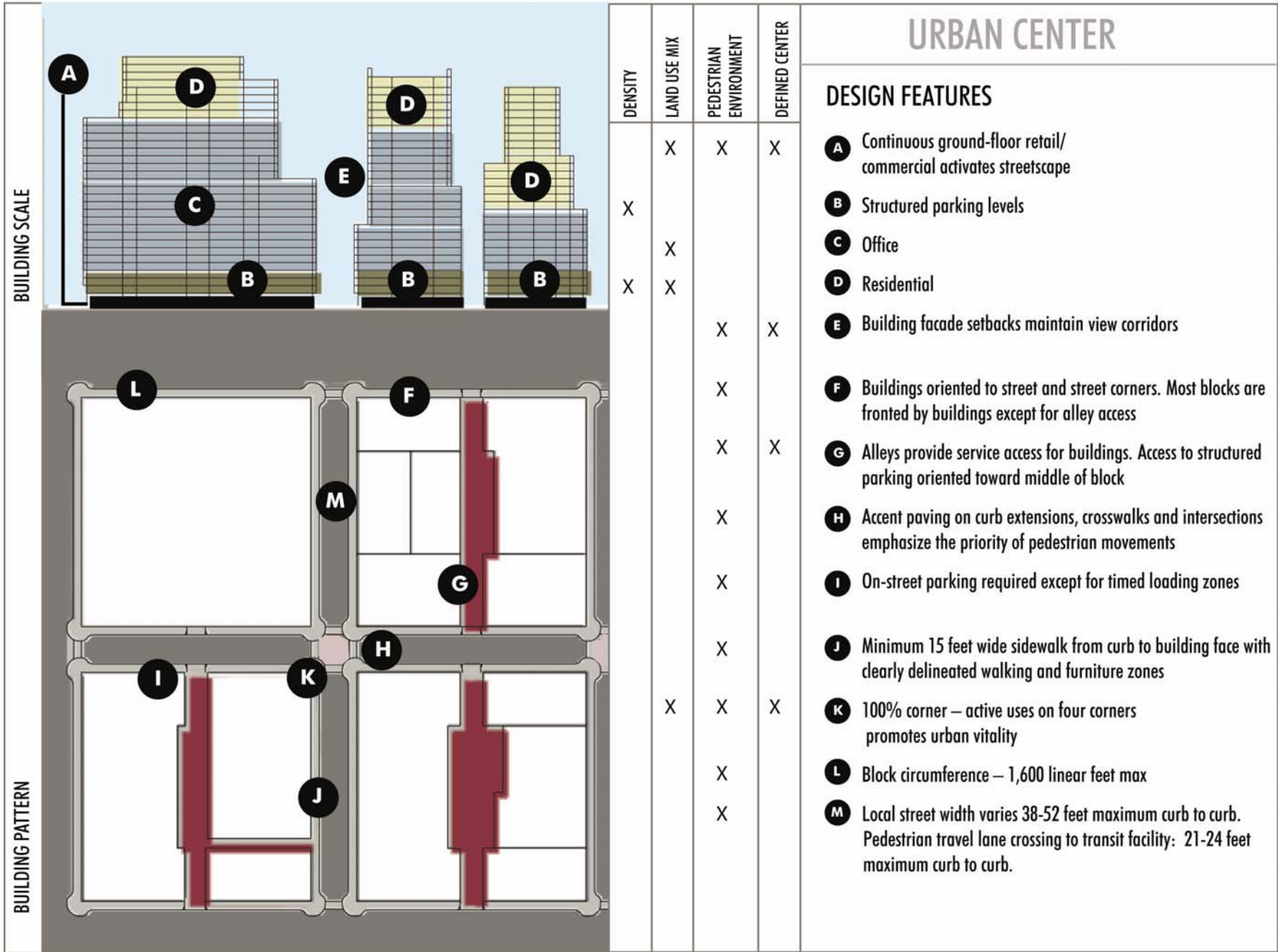
- 4 - 30 story buildings; and
- 90 - 100% site coverage.

Land Use Mix: Office center, retail, commercial, urban entertainment, and multi-family housing, with ground floor retail or office use required. Minimum ground floor height is 16 feet.

Pedestrian Environment: Wide sidewalks, convenient connections, and other amenities.

Defined Center: A community center in higher density areas of the corridor.





Envisioning the Corridor



NORTH FIFTH STREET CORRIDOR TOD LAND USE CHARACTERISTICS

Density: 15 - 30 units per acre enabled by

- 3-20 story buildings; and
- 80-90% site coverage.

Land Use Mix: Office center, retail, commercial, urban entertainment, and multi-family housing with ground floor retail or office use required. Minimum ground floor height is 16 feet.

Pedestrian Environment: Wide sidewalks, convenient connections, and other amenities.

Defined Center: A community center in higher density areas of the corridor or a transition between an Urban Center and lower density uses.



Page 28



City of North Las Vegas

		URBAN NEIGHBORHOOD			
		DENSITY	LAND USE MIX	PEDESTRIAN ENVIRONMENT	DEFINED CENTER
BUILDING SCALE		X	X	X	X
		X	X	X	X
BUILDING PATTERN				X	X
		X	X	X	X
				X	X
				X	X
				X	X

DESIGN FEATURES	
A	Continuous ground-floor retail / office activates streetscape
B	Structured parking level(s)
C	Residential and office
D	Building facade setbacks transition building heights
E	Buildings oriented to street and street corners
F	Alleys provide service access for buildings. Access to structured parking oriented toward middle of block
G	Accent paving on curb extensions and crosswalks
H	On-street parking required except for timed loading zones
I	Mixed-use parking garage with ground floor retail and residential
J	Urban plazas provide space for pedestrian amenities such as benches, fountains, and public art displays
K	Minimum 12 feet continuous sidewalk pavement from curb to building face with clearly delineated walking and furniture zones
L	Block circumference – 1,600 linear feet maximum
M	Local street width varies 38-52 feet maximum curb to curb Pedestrian travel lane crossing to transit facility: 21-24 feet maximum curb to curb

Envisioning the Corridor



NORTH FIFTH STREET CORRIDOR TOD LAND USE CHARACTERISTICS

Density: 30+ units per acre enabled by

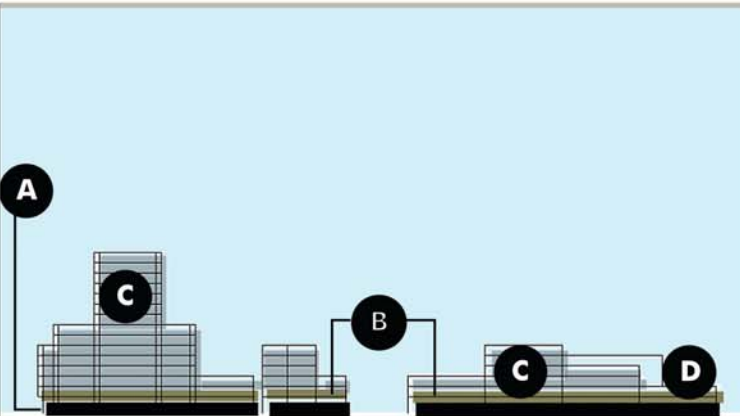
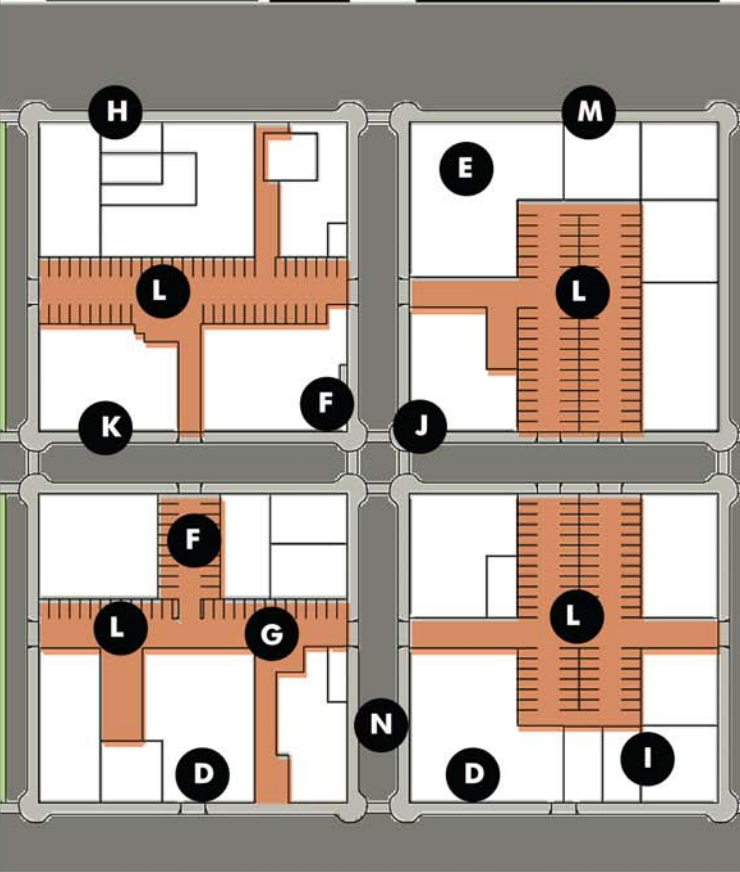
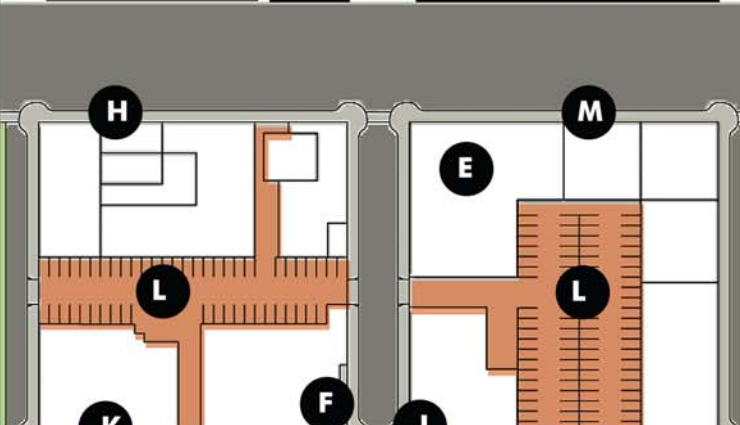
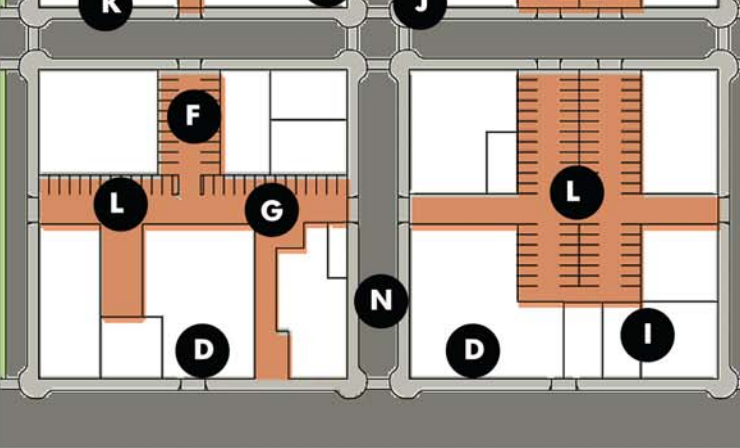
- 2-30 story buildings; and
- 75 - 85% site coverage.

Land Use Mix: Residential, retail, commercial, and multi-family housing with ground floor retail or office use required. Minimum ground floor height is 16 feet.

Pedestrian Environment: Wide sidewalks, convenient connections, and other amenities.

Defined Center: A community center in lower density areas of the corridor as a transition between an Urban Neighborhood and lower density uses.



		DENSITY	LAND USE MIX	PEDESTRIAN ENVIRONMENT	DEFINED CENTER	SUBURBAN CENTER	
BUILDING SCALE		X	X	X	X	DESIGN FEATURES	
		X	X	X	X		
BUILDING PATTERN		X	X	X	X	<ul style="list-style-type: none"> A Continuous ground-floor retail and office uses activate streetscape B Structural parking allows for more intense development of properties in corridor C Office and/or residential above the ground floor D Building facade setbacks transition building heights E Buildings oriented toward street and sidewalk with limited building setback. Setbacks used for outdoor dining, merchandise display, public plazas, and displays of public art F Mixed use buildings oriented to corners G Alleys provide access for utilities, services, and surface parking H Required on-street parking beneficial to ground floor retail visibility and access I A variety of building footprints allow for a greater mix of retail and commercial tenants J Curb extensions and crosswalks with accent paving K 10 feet wide minimum continuous sidewalk pavement from curb to building face L Surface parking oriented to sides and rear of buildings M Block circumference - 1,600 linear feet maximum N Local street width varies 38-52 feet maximum curb to curb. Pedestrian travel lane crossing to transit facility: 21-24 feet maximum curb to curb. 	
		X	X	X	X		

Envisioning the Corridor



NORTH FIFTH STREET CORRIDOR TOD LAND USE CHARACTERISTICS

Density: Maximum 15 units per acre enabled by

- 2 - 5 story buildings; and
- 70 - 80% site coverage.

Land Use Mix: Residential, neighborhood retail, and local office, with ground floor retail or office use required. Minimum ground floor height is 16 feet for mixed use or 9-12 feet for residential.

Pedestrian Environment: Wide sidewalks, convenient connections, and other amenities.

Defined Center: A transition between Suburban Center and lower density uses.



		DENSITY	LAND USE MIX	PEDESTRIAN ENVIRONMENT	DEFINED CENTER	SUBURBAN NEIGHBORHOOD MEDIUM DENSITY DESIGN FEATURES
BUILDING SCALE		X	X	X	X	
	BUILDING PATTERN		X	X	X	X
X		X	X	X	X	
X		X	X	X	X	
X		X	X	X	X	

Envisioning the Corridor



NORTH FIFTH STREET CORRIDOR TOD LAND USE CHARACTERISTICS

Density: 7 - 12 units per acre enabled by

- 1 - 3 story buildings; and
- 60 - 75% site coverage.

Land Use Mix: Residential, and neighborhood retail. Minimum ground floor height is 16 feet retail / office.

Pedestrian Environment: Sidewalks, convenient connections, and other amenities.

Defined Center: A transition to similar or lower density uses outside of the corridor.



Page 34

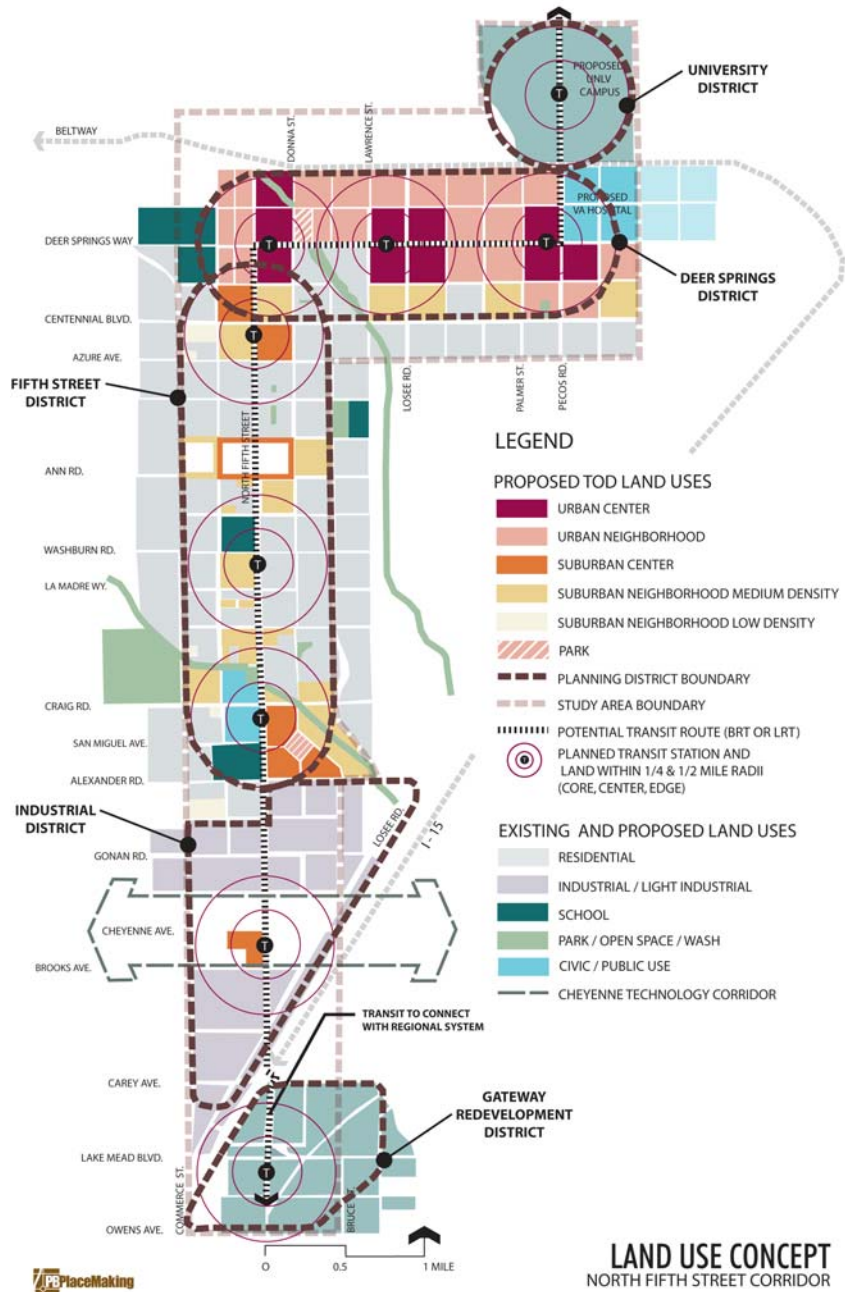


City of North Las Vegas

CORRIDOR LAND USE STRATEGY

The corridor land use strategy derives from the five TOD land use categories detailed on pages 26-35. The Land Use Concept map shown here illustrates how the five TOD land use categories might be arranged around nine hypothetical station locations within the corridor. Actual station locations have yet to be determined, so this map is intended for illustration purposes only. In keeping with the core-center-edge concept, the intensity of development varies according to the location of each station within the corridor as well as proximity to the station and compatibility with adjacent neighborhoods.

The creation of specific Land Use Maps for each planning district within the corridor is a primary recommendation of the TSCP. Ideally, these maps will be based on detailed citizen input and ultimately adopted as part of a future update to the City's Comprehensive Plan.



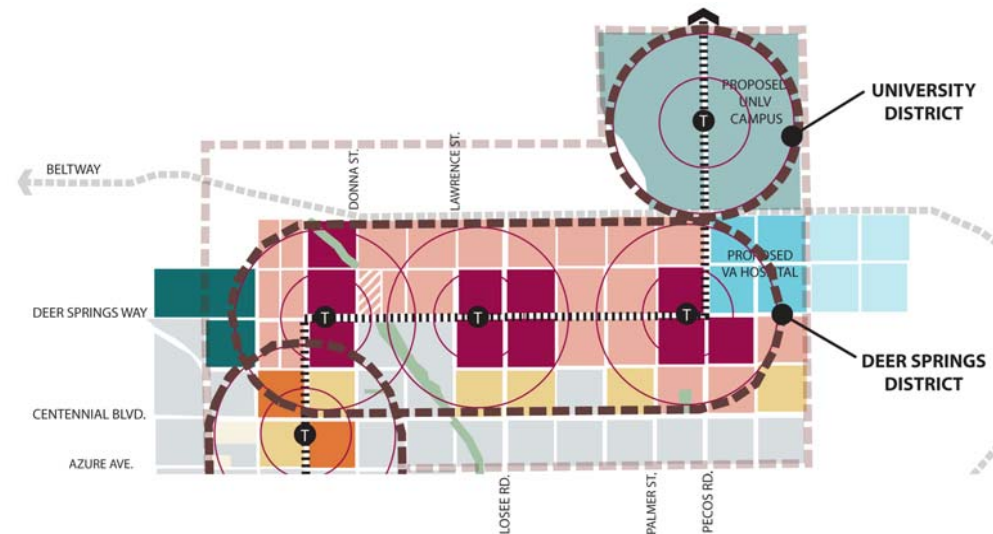
CORRIDOR LAND USE STRATEGY BY DISTRICT

UNIVERSITY DISTRICT

The University District land uses would be primarily defined by the UNLV Northern Campus Master Plan. Future uses and development within a 10 to 15 minute walk of the campus should be designed to be compatible with the overall North Fifth Street corridor concept and TOD principles. More information about the UNLV Northern Campus Master Plan can be obtained at <http://www.ci.north-las-vegas.nv.us/Departments/EconomicDevelopment/SpecialProjects.cfm>

DEER SPRINGS DISTRICT

The Deer Springs District organizes the highest intensity land uses around three potential transit station areas located adjacent to North Fifth Street, Losee Road, and Pecos Road. These station areas will be predominately characterized by the Urban Core TOD land use designation, with the most intense mixed use development and pedestrian activity is proposed in the



core and center areas surrounding these stations. Each station area would be the focal point for the surrounding neighborhoods and would feature a distinctive urban environment.

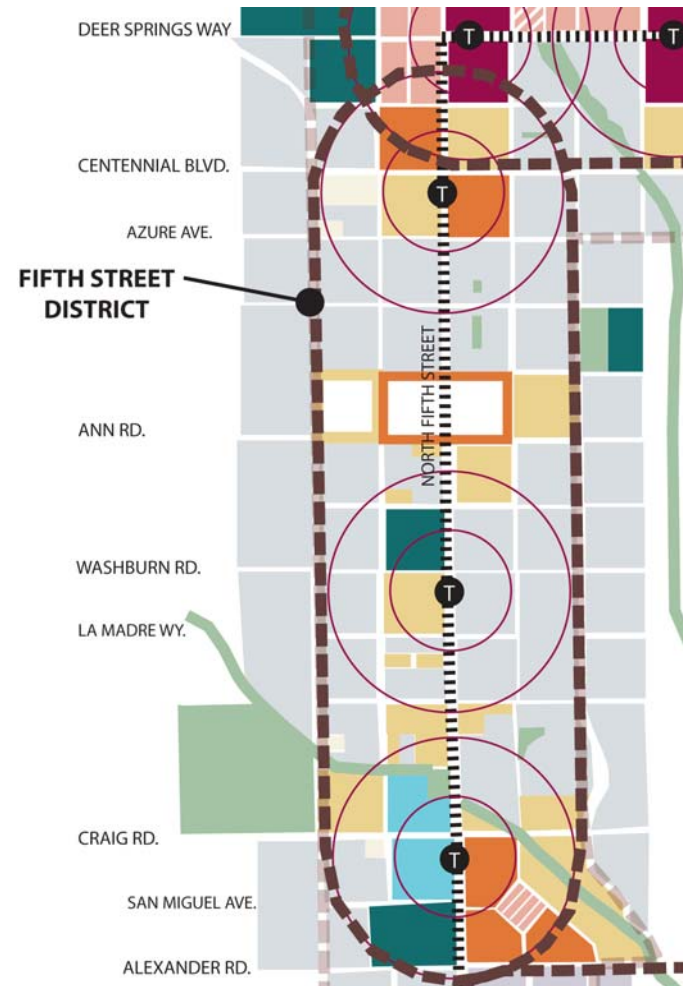
The station edge areas are proposed to be developed as Urban Neighborhood and Suburban Neighborhood Medium Density uses. Development would be oriented toward the station areas and provide a transition to the lower density development outside of the corridor.

Public and civic uses anchor each end of the Deer Springs District with a future public school campus at the western end and the proposed Veterans Administration Hospital at the eastern end on Pecos Road. Other public uses include the planned greenway trail at the west end of the district that connects to a proposed public park along Deer Springs Way. In addition, a major regional mall is planned at the intersection of Losee Road and Deer Springs Way.

NORTH FIFTH STREET DISTRICT

The North Fifth Street District concentrates higher density mixed use infill around the proposed station areas at Azure Avenue, Washburn Road, and Craig Road. The Azure Avenue area holds opportunities for moderately intense development as characterized by the Suburban Center TOD land use. The Washburn Road area in the center of the district is surrounded by existing and stable residential neighborhoods. Limited opportunities for mixed use infill exist here. At Craig Road, a major mixed use development is proposed on the east side of North Fifth Street. Canyon Springs High School and existing residential development are also nearby within walking distance.

Compared to the University and Deer Springs Districts, the density of development near transit in the North Fifth Street District is lower in response to the character of the existing low density residential neighborhoods that currently form the identity of this portion of the corridor.



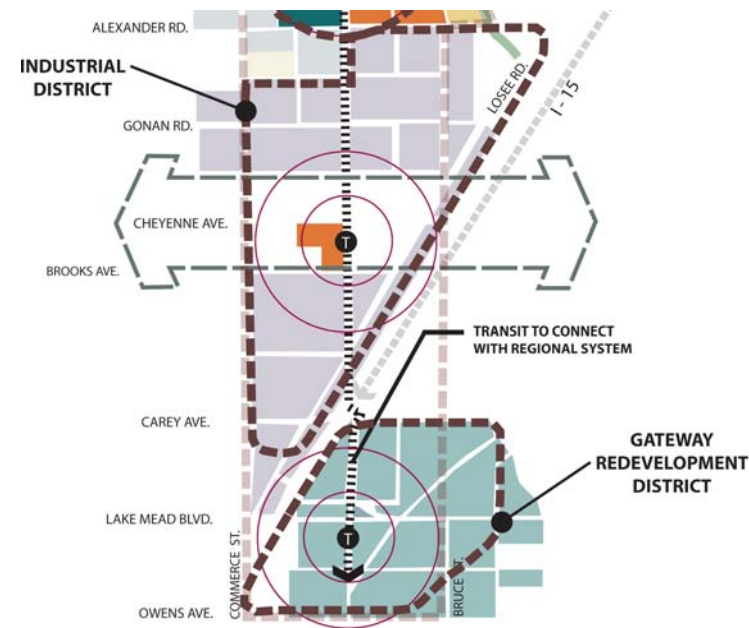
INDUSTRIAL DISTRICT

The land use concept for the Industrial District focuses on employment-based uses around the proposed transit station. In the immediate station area, opportunities for more intensive development as described in the Suburban Center TOD land use would provide a concentration of activity in the district. Mixed use commercial and office represent the primary land uses.

A multi-modal transportation facility could be located at Brooks Avenue to serve the Cheyenne Technology Corridor. The multi-modal facility would provide direct connections to employment centers along Cheyenne Avenue to the west and to the Cheyenne campus of the Community College of Southern Nevada to the east.

GATEWAY REDEVELOPMENT DISTRICT

The land use concept for the Gateway District focuses the strategic location of a future Lake Mead transit station and the district's existing designation as a Redevelopment Area.



The focal point of the district is the mixed use station area inside the Lake Mead couplet where the most intense pedestrian-oriented development would be located. Nearby freeway access, good visibility, and a defined development area could support opportunities for mixed use development similar to the Urban Center TOD land use. Characterized by multi-family and single-family housing with nearby public schools,

the neighborhoods surrounding the potential station area offer excellent infill redevelopment opportunities, as described in the Urban Neighborhood and Medium Density Residential land uses. Commercial and office land uses concentrated along Lake Mead Boulevard and Las Vegas Boulevard could be redeveloped with Suburban Center land use type.

CORRIDOR CIRCULATION

The TSCP builds upon two previous transportation studies, the I-15 Northeast Corridor Study completed in 2002 and the North Fifth Street Corridor Study completed in 2004. Recommendations within these reports provide the basis for an integrated circulation strategy along the corridor.

THE I-15 NORTHEAST CORRIDOR STUDY

The Nevada Department of Transportation prepared the I-15 Northeast Corridor Study in 2002, which recommended that North Fifth Street be extended across the I-15 Freeway Corridor to create a continuous north-south arterial street connecting the cities of Las Vegas and North Las Vegas to the Northern Beltway.

THE NORTH FIFTH STREET CORRIDOR STUDY

The City of North Las Vegas and the RTC completed the North Fifth Street Corridor Study in November 2004 to evaluate potential design alternatives that would accommodate significant traffic volumes and transit.

Recommendations from that report include

- A recommended right-of-way width of 150 feet.
- Six travel lanes (three northbound, three southbound).
- Dedicated space in the 150 foot right-of-way (ROW) for high capacity transit.
- Landscape buffers and multi-use pathways.

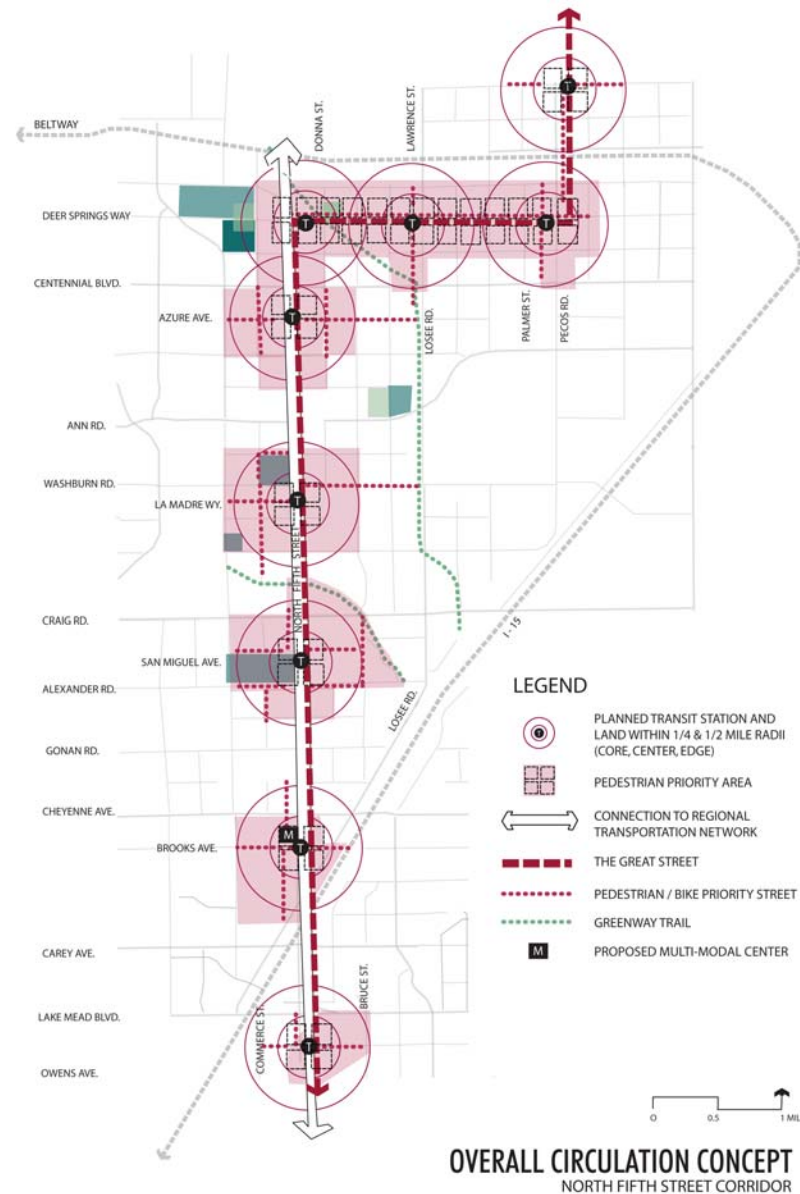
CORRIDOR CIRCULATION STRATEGY

The TSCP aims to establish a unified and interrelated transportation system that provides efficient circulation for “through” traffic, development-oriented transit and related facilities, interconnected neighborhoods, and pedestrian-oriented streets capable of facilitating mixed use development.

The components of the TSCP circulation strategy work together as a unified circulation system. The components include

- Transit corridor streets.
- Pedestrian priority areas.
- Pedestrian/bike priority streets.
- Great streets.

These components work together as a unified whole. **The success of this concept is dependent upon preservation of the city’s existing grid pattern of streets.**

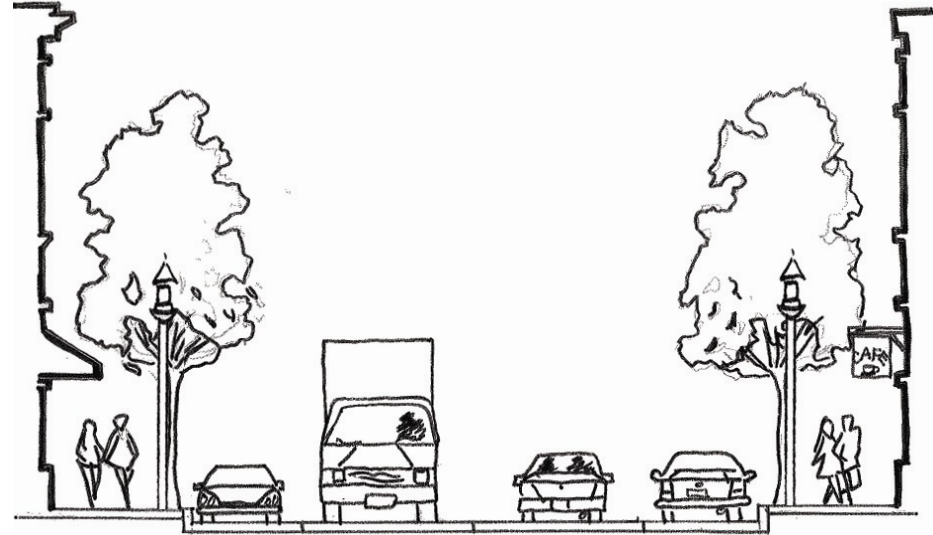


PEDESTRIAN PRIORITY AREAS

The pedestrian priority area is defined as the area within ¼-mile radius of a proposed transit station. The objective is to create an environment for pedestrians to feel like it is “easy to get around” and where residents feel comfortable enough to leave the car at home and walk 5 to 10 minutes to obtain daily necessities.

Standard features include safe and convenient street crossings, pedestrian-friendly intersection designs, tree-lined sidewalks on both sides of each street, designated pedestrian routes to transit facilities, and clear and direct pedestrian routes to and between neighborhoods, retail, commercial and employment centers, and schools.

Focusing on pedestrian-to-transit connectivity helps build transit ridership by removing the obstacles and barriers that could otherwise create an environment where transit is an afterthought rather than the preferred choice.



Core-Center-Edge street dimensions vary as per location within TOD

STATION AREA CIRCULATION

The *highest* priority pedestrian areas occur within 600 linear feet of a transit facility. In these areas, the objective also includes making access to and from transit more convenient. Reaching destinations in pedestrian priority areas with transit should be as easy as or easier than using a car for the same trip.

At each station area, TOD land uses recommend mixed use and pedestrian-oriented development up to the curb line. The core-center-edge design

concept provides curb-to-curb street performance criteria for each station area, determined by the proposed TOD land uses and their distances from the station.

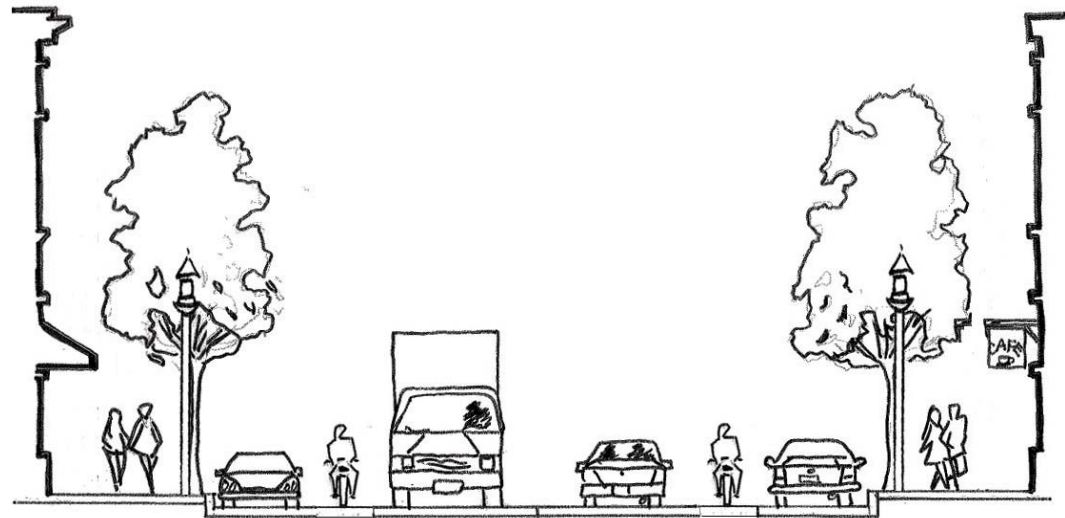
The street design requirements assign lane widths according to the type of street desired in the design of a TOD development. For example, the schematic cross section shown here represents a typical two-way TOD street. The parking lane and travel way widths would change to

accommodate the intensity of development with respect to its proximity of the transit facility, i.e., whether the street occurs in the core, center, or edge areas of the station area.

A matrix of street core-center-edge requirements can be found in the code recommendations found in Section 5, beginning on page 61.

*PEDESTRIAN/BIKE
PRIORITY STREET*

Pedestrian and Bike Priority Streets provide clear and direct pedestrian and bicycle connections from residential neighborhood areas to transit facilities, schools, and park and recreation facilities. These streets would feature wider sidewalks, designated bike lanes and traffic calming devices.



Wider sidewalks and designated bike lanes are typical for Pedestrian/Bike Priority Streets

THE GREAT STREET

The “Great Street” concept describes a linear multi-modal transportation corridor that gracefully addresses the need for mobility through the city. According to the “Great Street” concept, the design of the roadway complements and adapts to the function and character of adjacent land uses along the corridor. Although conceived as one continuous concept, the “Great Street” has three different segments – the North Fifth Great Street, the Deer Springs Great Street, and the Pecos Road Great Street.

- The North Fifth Great Street combines local and regional auto access with transit. It extends from Owens Avenue to the Northern Beltway and passes, through the Gateway Redevelopment District, the Industrial District, and the North Fifth Street District. The design of the road will change in response to the adjacent land uses and pedestrian circulation patterns within each of these districts (see diagram beginning on page 45).
- The Deer Springs Great Street integrates local access, transit, and mixed use development in a compact, pedestrian-oriented right-of-way. It connects North Fifth Street to Pecos Road (see diagram on page 46).
- The Pecos Road segment of the Great Street starts at the intersection of Deer Springs Way and continues through the UNLV Campus. Its character would be complementary to the UNLV Campus Master Plan and similar to the Deer Springs Great Street concept (see diagram on page 46).

NORTH FIFTH GREAT STREET CONCEPT

AS ADJACENT LAND USES CHANGE ALONG THE CORRIDOR, SO DOES THE DESIGN OF THE STREET.

Between Owens Road and the Northern Beltway, North Fifth Street passes through the Gateway District, over I-15, through the Industrial District, and then through more neighborhoods before it intersects with the Beltway. The North Fifth Great Street has three components: through-lanes, mass transit, and local access lanes. The through-lanes provide limited access mobility through the corridor so regional traffic can move efficiently through the corridor between the City of Las Vegas and the Beltway. The local access lanes will provide local access to adjacent land uses and provide the dedicated lanes for mass transit. In some locations, the local access streets will be pedestrian-oriented, convenient, and accessible for a variety of community services. In other locations the local access street will be configured to provide access to industrial uses for the efficient movement of goods and services.

Local and Through Traffic with Transit Connectivity:

Those two diagrams below conceptually illustrate the North Fifth Great Street.

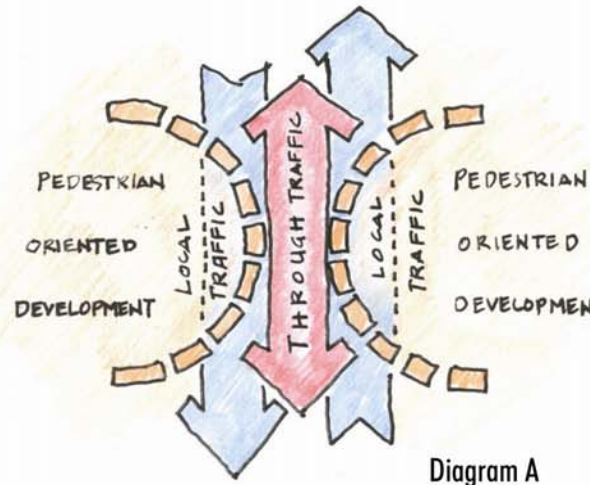


Diagram 'A' shows interior traffic (red arrow) passing through pedestrian-oriented development (orange dashed lines) maintaining regional mobility. Local traffic and transit (blue arrows) interface with adjacent pedestrian-oriented development and provide access to properties and local land uses.

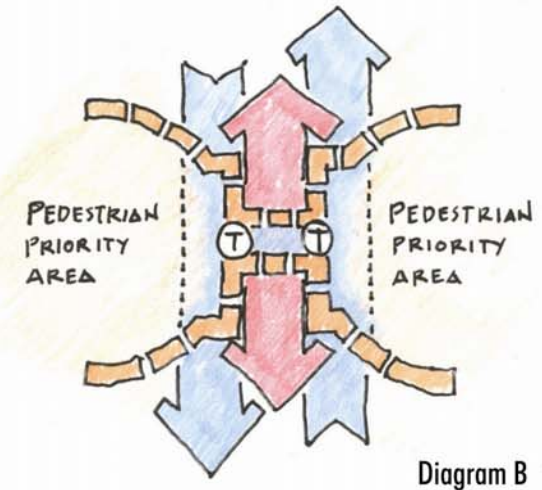


Diagram 'B' shows a connection across the through lanes where transit stations (circled T) occur. Both sides of the station area are connected, linking both sides of the pedestrian priority area together.

DEER SPRINGS WAY AND PECOS ROAD GREAT STREET CONCEPT

A CONSISTENT HIGH QUALITY URBAN DEVELOPMENT PATTERN IN THE DEER SPRINGS AND UNIVERSITY DISTRICTS WILL PROVIDE A CONTINUOUS PEDESTRIAN-ORIENTED URBAN DESIGN SCHEME ON DEER SPRINGS WAY AND PECOS ROAD.

The Deer Springs Way and Pecos Road Great Streets are more compact and fit into a narrower right-of-way than the North Fifth Great Street. Adjacent land uses, planned as high-density, pedestrian-oriented development, provide a framework and backdrop for the urban vitality on the street. Similar to a traditional 'main street', streetscape amenities such as benches, street trees, pedestrian scaled lighting and sidewalk cafes will help create a vibrant sense of place.

Continuous Pedestrian-Oriented Local Access:

Those two diagrams below conceptually illustrate the Deer Springs Way and Pecos Road Great Street concept.

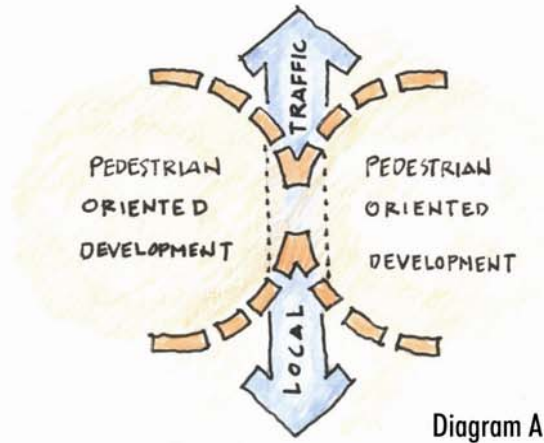


Diagram 'A' shows local traffic, including transit, (blue arrow) that interacts with local uses. Pedestrian-oriented development is a part of the street and the street is part of the pedestrian-oriented development.

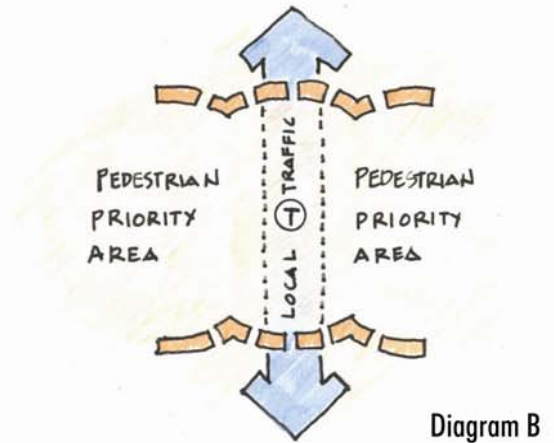
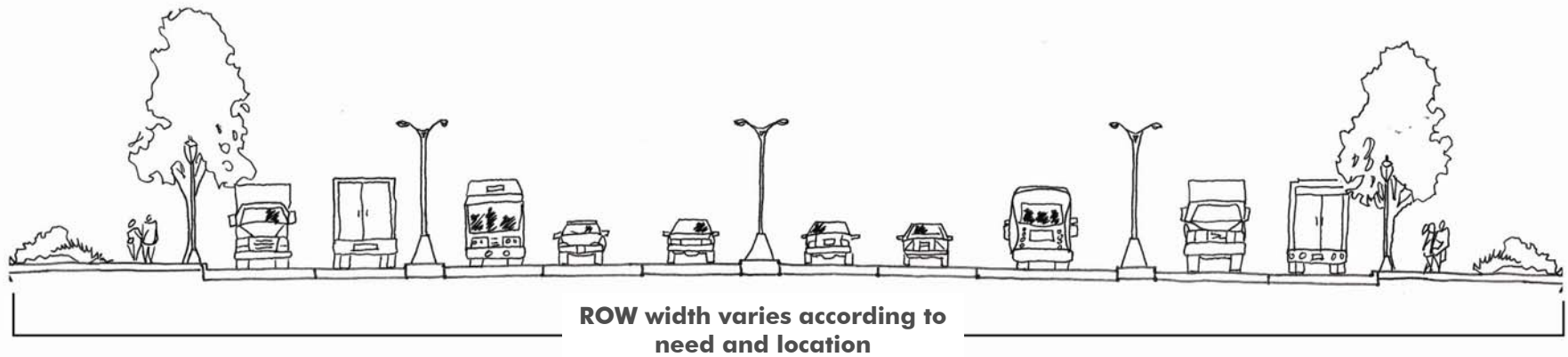


Diagram 'B' shows the local traffic and transit (blue arrow) with an integrated transit station (circled T). At station areas, the pedestrian priority area elevates the importance of pedestrian connectivity to both development and traffic. With the highest concentration of pedestrian-oriented mixed uses located around the station, these areas require the traffic, transit, and land uses to be compatible with walking.

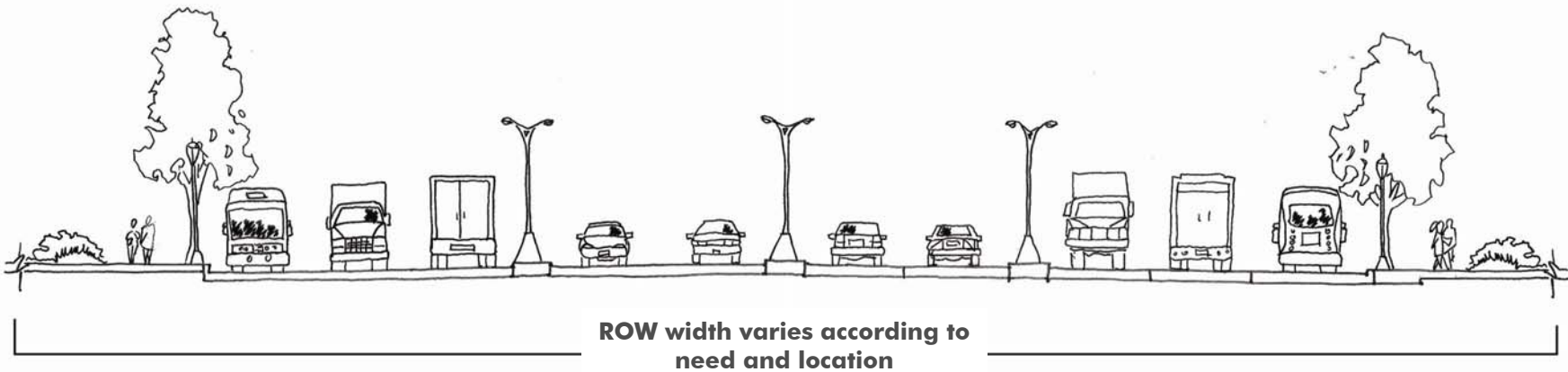
North Fifth Street
 Conceptual Street Design for Industrial Land Uses
 Cross - Section 'A'



Features:

- Street trees buffer pedestrians from moving traffic
- 10 feet wide sidewalk each side
- Two-way local access lane
- Transit located with through traffic
- Regional through traffic located in center of right-of-way
- **Additional 20' Building/Landscape Setback required on both sides of ROW**

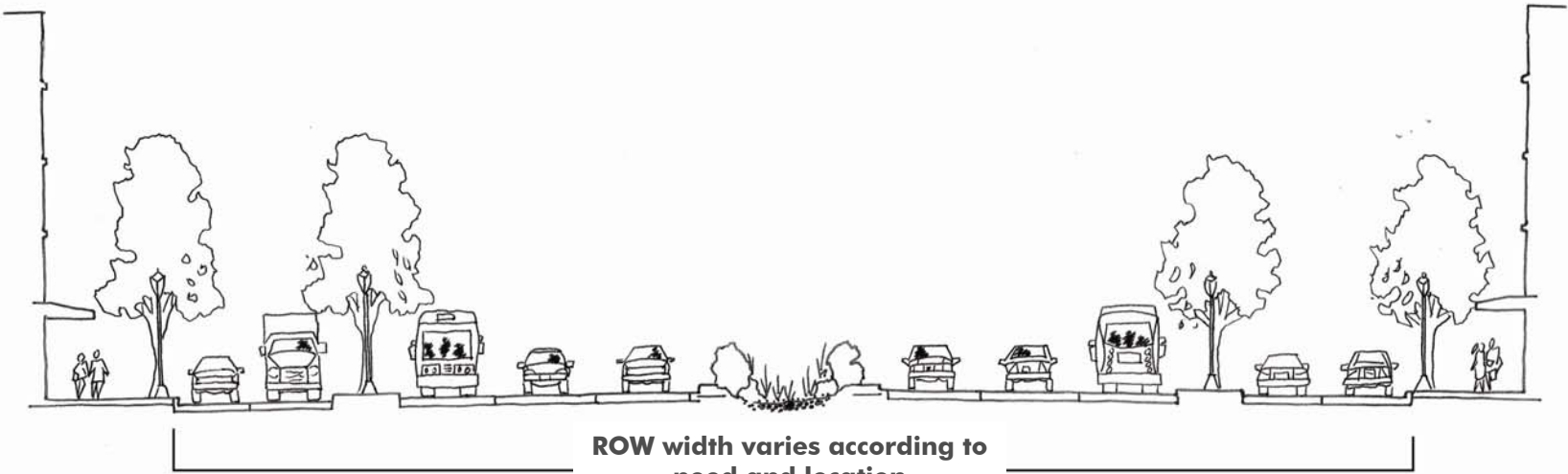
North Fifth Street Street
Conceptual Street Design for Industrial or Neighborhood Land Uses
Cross - Section 'B'



Features:

- Street trees buffer pedestrians from moving traffic
- 10 feet wide sidewalk each side
- Two-way local access lane
- Transit located curbside with local access traffic
- Regional through traffic located in center of right-of-way
- **Additional 20' Building/Landscape Setback required on both sides of ROW**

North Fifth Street
Conceptual Street Design For Neighborhood Land Uses
Cross - Section 'C'

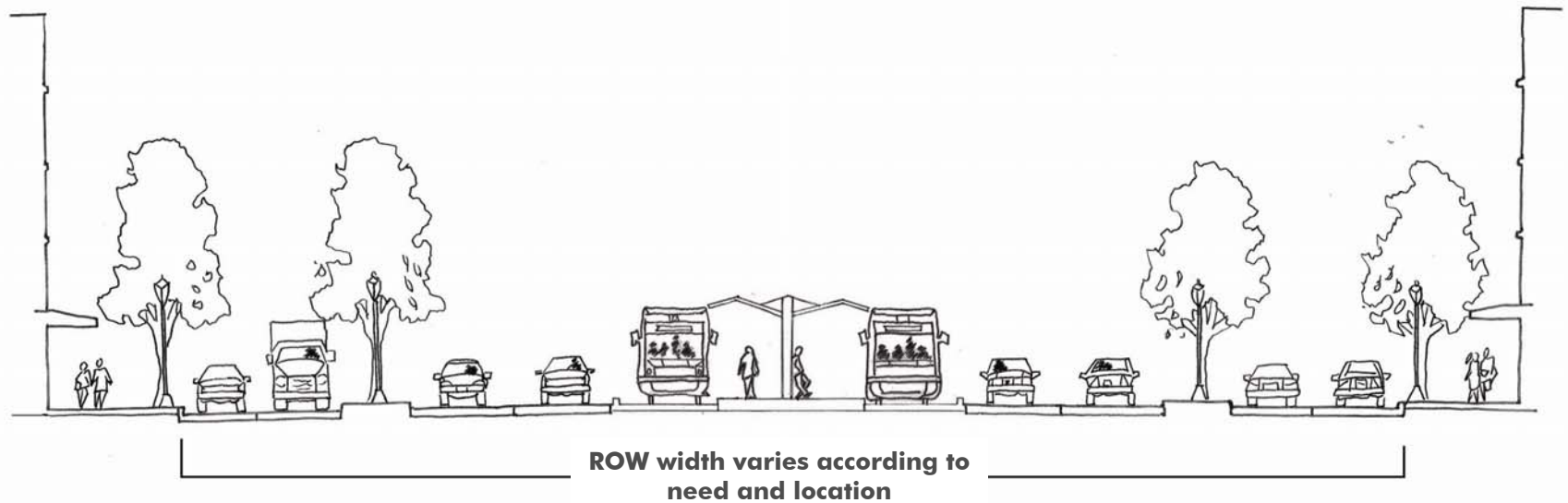


ROW width varies according to need and location

Features:

- Sidewalk buffered from moving traffic with landscaped medians
- One-way local access lane with on-street parking
- Transit located curbside adjacent to median
- Regional through traffic located in center of right-of-way with stormwater management swale
- **Additional 20' Building/Landscape Setback required on both sides of ROW**

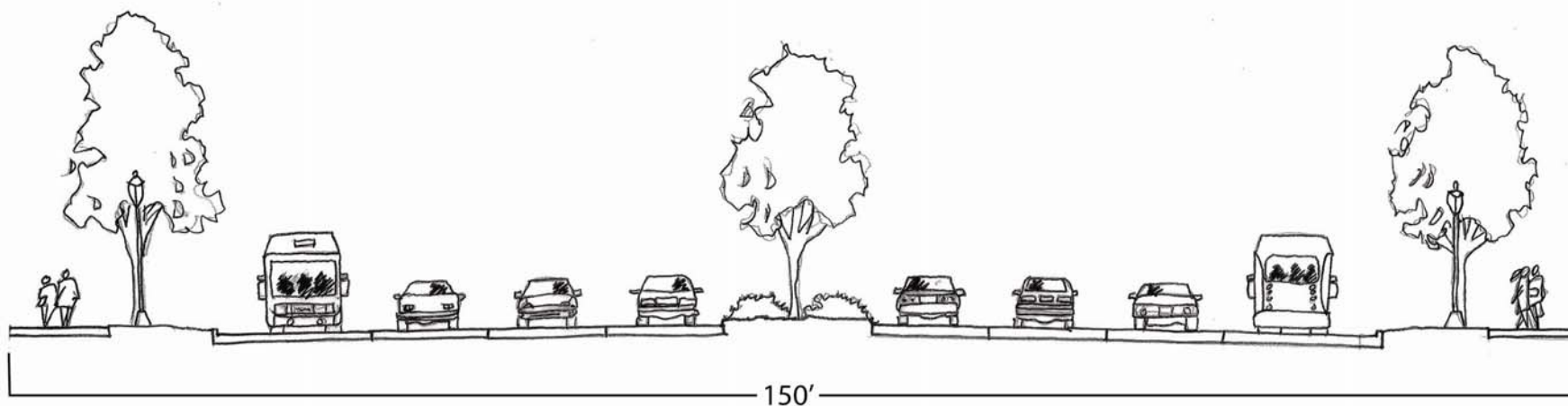
North Fifth Street
Conceptual Street Design For Neighborhood Land Uses
Cross - Section 'D'



Features:

- Sidewalk buffered from moving traffic with street trees, on-street parking and landscaped medians
- One-way local access lane with on-street parking
- Transit located in center of right-of-way
- Regional through traffic located on either side of transit
- **Additional 20' Building/Landscape Setback required on both sides of ROW**

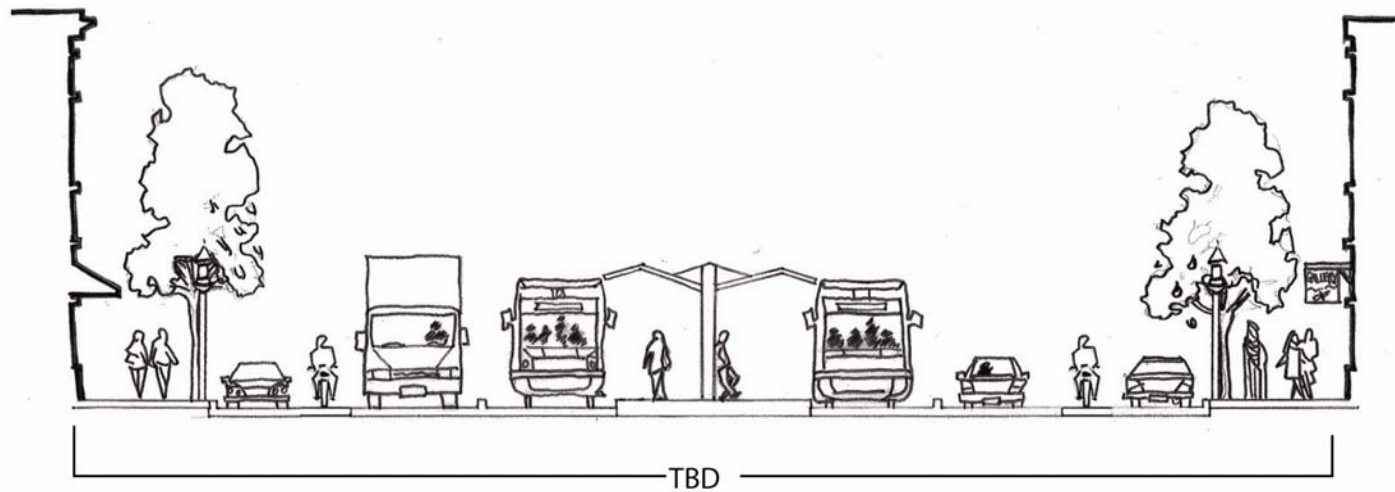
North Fifth Street
Current Approved Standard for Industrial or Neighborhood Land Uses (2006)
Cross - Section 'E'



Features:

- Sidewalk buffered from moving traffic with street trees
- Transit located curbside adjacent to sidewalk
- Regional through traffic located in center of right-of-way
- Improvements located within 150' right-of-way
- **Additional 20' Building/Landscape Setback required on both sides of ROW**

Deer Springs Way and Pecos Road
Conceptual Street Design For Neighborhood Land Uses
Cross - Section 'F'



Features:

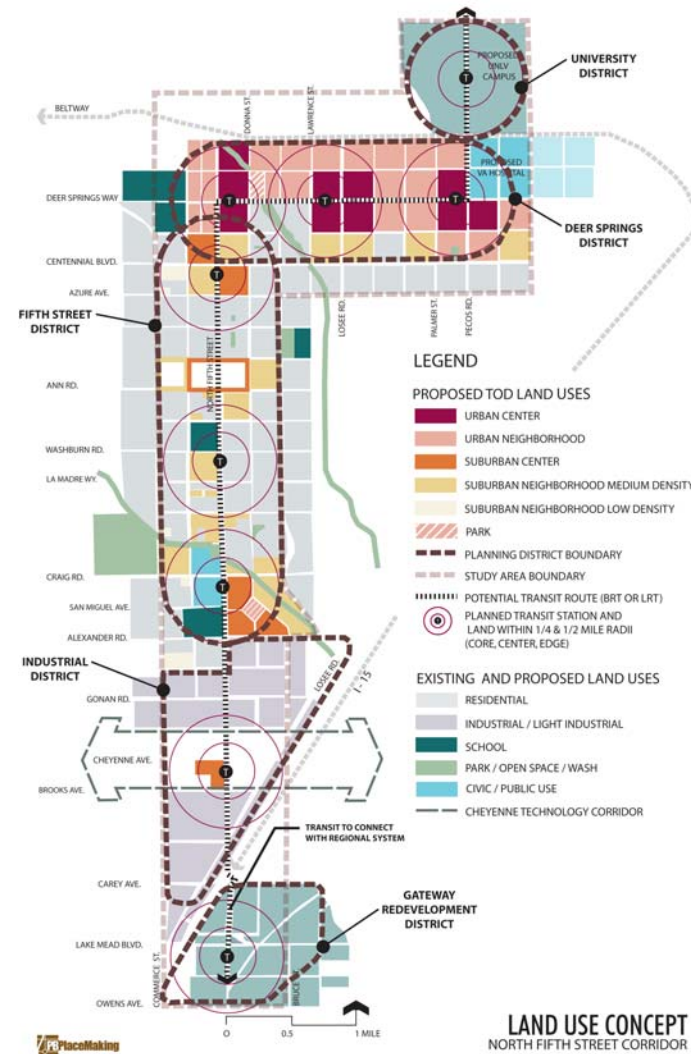
- Sidewalk buffered from moving traffic with street trees and on-street parking
- Transit located in center of right-of-way
- Vehicle and bike lanes for local traffic
- Right-of-way width to be determined

Summary: Components of the Circulation Strategy in each North Fifth Street Corridor Concept Plan District					
Component of the Circulation Concept	UNLV District	Deer Springs District	North Fifth District	Industrial District	Gateway Redevelopment District
Preferred Transit Route	Station located at the "front door" of the proposed UNLV campus	Stations located adjacent to Donna St., Losee Rd. and Pecos Rd.	Stations located adjacent to Azure Ave., Washburn Rd., and San Miguel Ave.	Station located adjacent to Brooks Ave.	Station located in Lake Mead couplet
Pedestrian Priority Area	Standard for station area	Standard for station areas	Standard for station areas	To be compatible with truck and freight circulation	Standard for station area
Pedestrian/Bike Priority Street	Connects neighborhoods east and west of Pecos Road to transit facility	Connects neighborhoods north and south of Deer Springs to transit facilities, links to greenway trail and future school	Connects neighborhoods east and west of N. Fifth St. to transit facilities, links with Mojave HS and Canyon Springs High School	Connects pedestrians to employment uses east and west of N. Fifth St. to transit facility	Connects neighborhoods east and west of N. Fifth St to transit facility, links with Reynaldo Martinez Elementary School and McCall Elementary School
North Fifth Great Street			Central through lanes parallel each side with pedestrian-oriented local access streets, transit, and on-street parking	Central through lanes with transit parallel each side with local access lanes to industrial uses	Central through lanes parallel each side with pedestrian-oriented local access streets, transit, and on-street parking
Deer Springs Great Street		Pedestrian-oriented ROW with center running transit and travel lane on either side, with bike lanes and on-street parking			
Pecos Road Great Street	Pedestrian-oriented ROW with center running transit and travel lane on either side, with bike lanes, and on-street parking				

SECTION 4: PLANNING DISTRICT DESIGN CONCEPTS

DISTRICT DESIGN CONCEPTS

The vision for North Fifth Street provides a framework for land use development in the five distinct planning districts. As planning for the North Fifth Street Corridor progresses toward implementation, more work will be necessary to translate these broad concepts into more specific and tangible master plan designs for each district and station area. The following design concepts begin this translation process from the broad concepts to more specific potential opportunities and urban design schemes for each district. *Note: The proposed station locations were determined during the North Fifth Street Corridor TOD Workshops held in June 2005 (see Appendix for more information). The City of North Las Vegas and the Regional Transportation Commission (RTC) may consider additional station locations as part of the Regional Fixed Guideway Plan.*

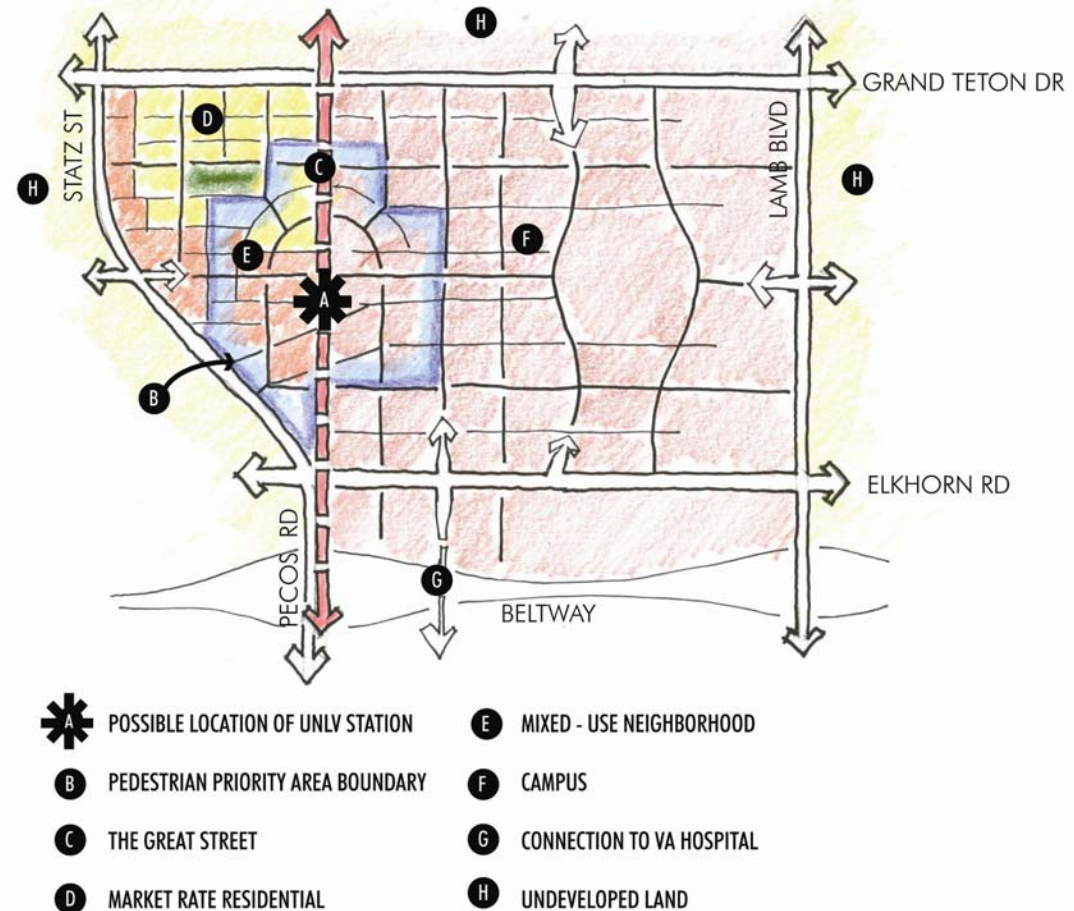


UNIVERSITY DISTRICT

The primary land use component of the University District is a future UNLV campus to be located north of the Beltway and east of Pecos Road. Planning for the new campus offers unparalleled opportunities to integrate transit and mixed use development. Although the campus master plan is still being developed, a few key details have emerged

- A mixed use neighborhood with market rate housing is planned at the west entrance to the University.
- A “civic wedge” will link the campus to the city with performing arts and library facilities.
- The transit line and an inter-modal transit hub are to be integrated into the campus master plan.
- Arterial traffic along Pecos Road may be diverted to Statz Road. The transit alignment would remain on Pecos Road and pass by the “front door” of the future campus and through the heart of a mixed use pedestrian priority area.

UNIVERSITY DISTRICT CONCEPT



- A potential connection over the Beltway would link the campus to the planned VA Hospital facility.

The preliminary plans for the UNLV campus appear to be compatible with the overall vision for the North Fifth Street Corridor. As the campus plans progress, the city should consider the following

- Future uses and development within a 10 to 15 minute walk of the campus should be designed with the smaller block sizes, pedestrian crosswalks, and designated bike facilities.
- Pedestrian/Bike Priority Streets should link land uses east and west of the transit facilities.

DEER SPRINGS DISTRICT

As a regional retail and employment destination with vibrant, high density urban neighborhoods, the Deer Springs District would feature the most intense mixed use development in the corridor. The district is organized around three transit station areas along a two-mile segment of Deer Springs Way. Each station area would be the focal point for the surrounding neighborhoods and would feature a distinct urban environment with the tallest buildings (potentially over 20-stories) oriented to the arterial streets. On-street parking would be provided as well as surface parking lots and structured parking.

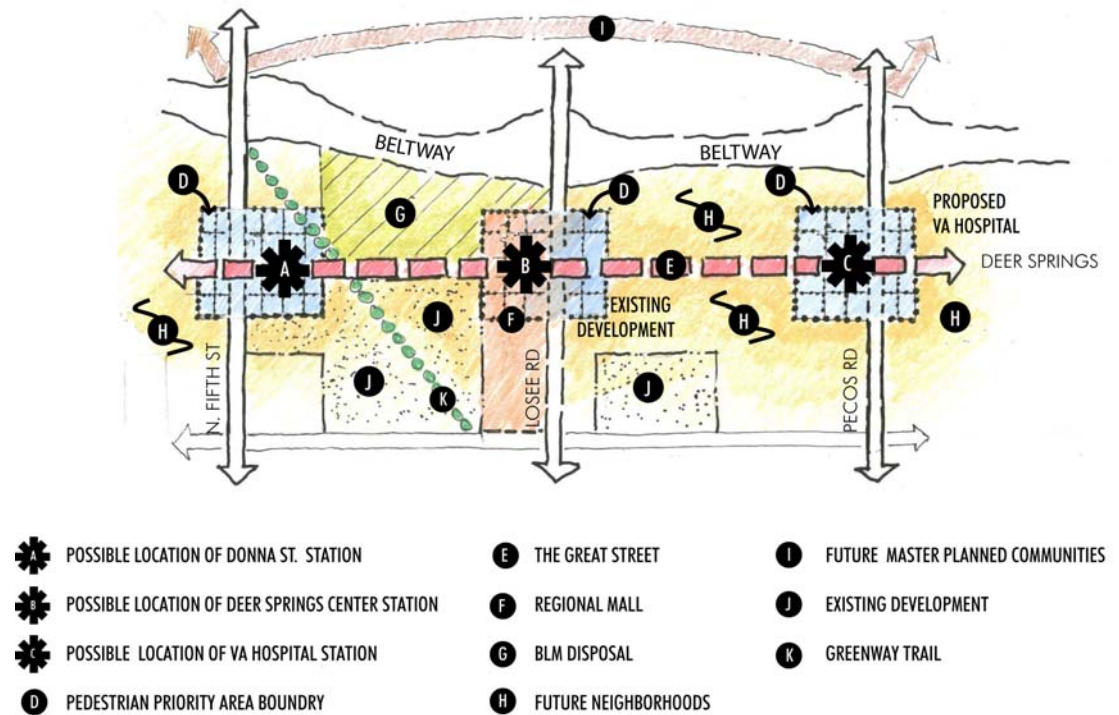
Surrounding the station areas are high-density residential neighborhoods within a 5 to 10 minute walk of transit. Public and civic uses anchor each end of the district with public school facilities at the western end and the proposed Veterans Administration Hospital at the eastern end adjacent to

Pecos Road. Other public land uses include a segment of the regional trail system at the west end of the district and a future city public park along Deer Springs Way. Employment-based uses in the district would include hospitals and schools, a proposed regional mall, and mixed

commercial/office uses concentrated around the transit stations.

With most of the land in the Deer Springs District currently undeveloped, there is a unique opportunity for the city to master plan the un-entitled land and create a network of interconnected transit

DEER SPRINGS DISTRICT CONCEPT



supportive and pedestrian-oriented neighborhoods. Existing development in the district needs to be considered as the planning process moves forward, including the BLM land south of the Beltway that was sold in November 2005 to private development companies. On the north side of the Beltway, existing BLM land may be sold and developed as master-planned communities. Existing land owners should be included in the design and planning of the district.

The Deer Springs District circulation strategy is focused on the Deer Springs Way Great Street. At the intersection of North Fifth Street and Deer Springs Way, the arterial traffic of North Fifth Street continues north to an interchange with the Beltway as the transit route turns east on Deer Springs Way. With the transit “uncoupled” from the arterial, the transit and local traffic can now become the primary transportation component of the corridor. The Deer Springs Way Great Street is envisioned to be a narrower right-of-way containing center-running transit, two travel lanes, parallel (or

diagonal) parking, and wide sidewalks that connect intensive land uses with a vibrant, urban and pedestrian-oriented streetscape. The Deer Springs District includes a Pedestrian Priority Area featuring smaller block sizes, traffic calming, crosswalks and designated bike lanes. The Pedestrian/Bike Priority Streets provide direct connections to transit facilities from adjacent neighborhoods. A proposed grid of streets interconnects with existing streets and link disconnected neighborhoods.

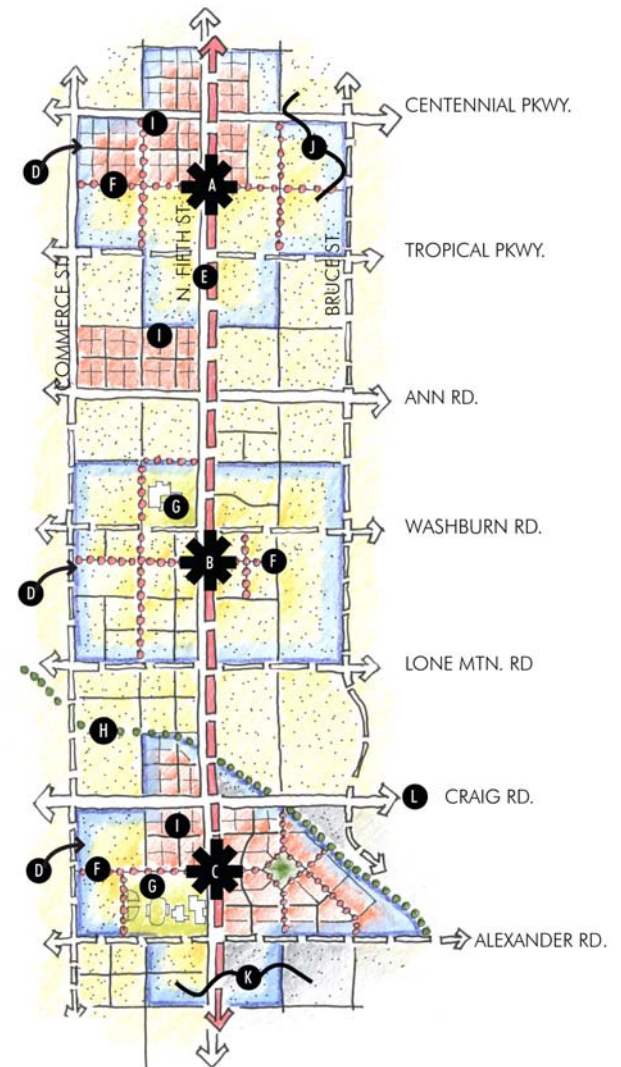
NORTH FIFTH STREET DISTRICT

The North Fifth Street District provides opportunities for high-quality, mixed use infill and other development integrated with new and existing single-family neighborhoods. North Fifth Street is the spine of the district and links the residential neighborhoods together. The district land uses concentrate higher density mixed use infill around the three proposed stations.

The potential Azure Road Station Area provides the opportunities for moderately intense development as characterized by the Suburban Center TOD land use. The potential Washburn Road Station Area in the center of the district is surrounded by existing and stable residential neighborhoods. At the Craig Road Station, mixed use development could be used to create a gateway to various neighborhoods and uses surrounding the site, including the Craig Ranch Regional Park.

-  POSSIBLE LOCATION OF AZURE ROAD STATION
-  POSSIBLE LOCATION OF WASHBURN ROAD STATION
-  POSSIBLE LOCATION OF CRAIG ROAD STATION
-  PEDESTRIAN PRIORITY AREA BOUNDARY
-  THE GREAT STREET
-  PEDESTRIAN/BIKE PRIORITY STREET
-  SCHOOL
-  GREENWAY TRAIL
-  TOD OPPORTUNITY AREA
-  EXISTING RESIDENTIAL / COMMERCIAL DEVELOPMENT (TYPICAL)
-  EXISTING INDUSTRIAL DEVELOPMENT
-  I-15 ACCESS

NORTH FIFTH STREET DISTRICT CONCEPT



At the time of this study, a major mixed use development was proposed at the southeast corner of North Fifth Street and Craig Road. The design of the proposed development was focused inward toward the center of the property and did not address North Fifth Street. The developer of this property has the unique opportunity to re-orient development on this site to encourage interaction with the proposed transit facility on North Fifth Street. If oriented in this manner, the development could be more compatible with transit and the overall pedestrian-oriented and mixed use concept for the corridor.

Circulation in the district is defined by the North Fifth Great Street concept. The character of North Fifth Street above Craig Road is different from the Industrial District. North Fifth Street above Craig Road is more pedestrian-oriented with tighter local access right-of-ways, on-street parking, and bike lanes. Near station areas, buildings are located at the edge of the sidewalk.

Each of the three station areas is surrounded by a Pedestrian Priority Area. In the surrounding residential neighborhoods, direct and convenient access to transit and mixed use infill development is necessary so that existing residents can have convenient opportunities to leave the car at home and walk to transit. Pedestrian/Bike Priority Streets are designed to provide connections to transit facilities and other neighborhood civic destinations such as schools, libraries, and parks.

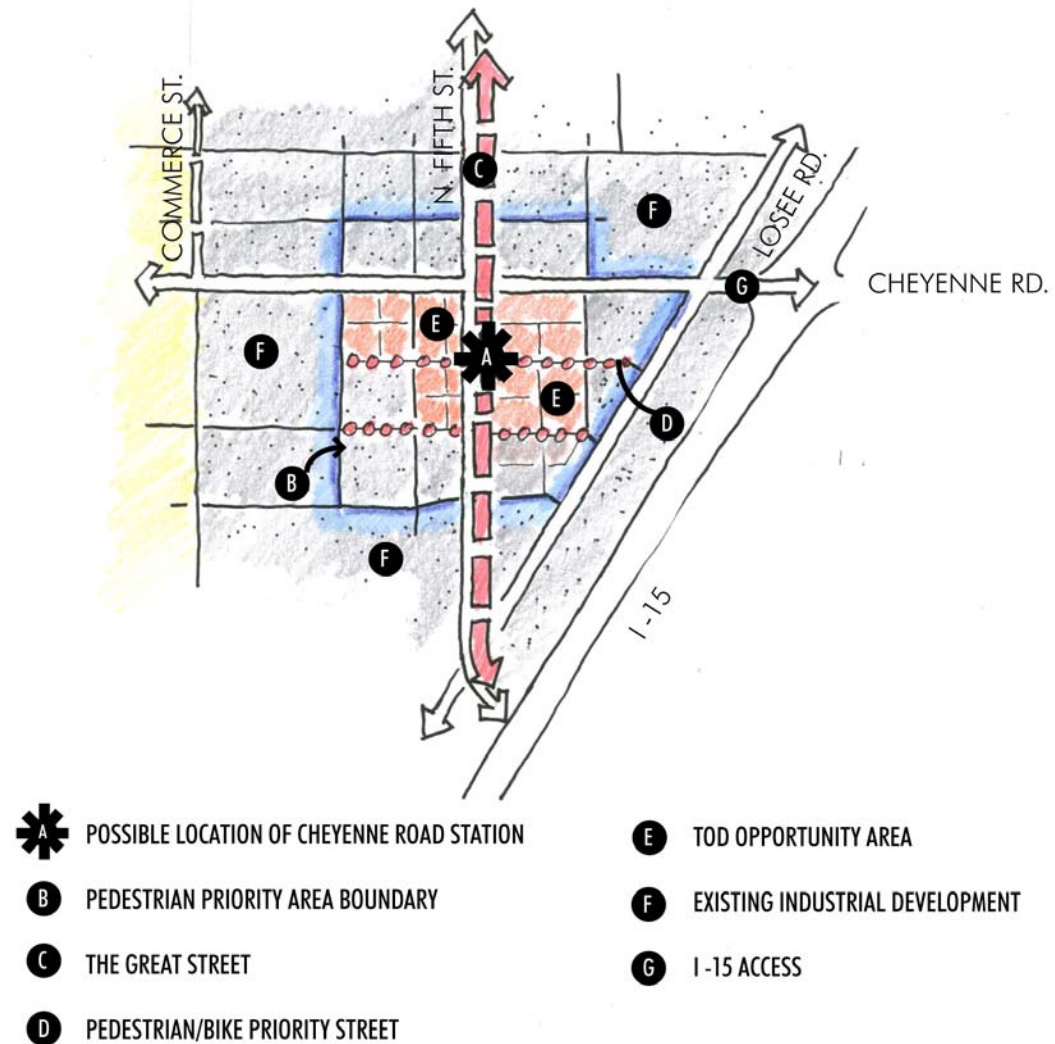
Existing residential and commercial development patterns have often been accommodated by vacating the City's established grid pattern of streets in favor of limited access and internal streets and cul-de-sacs. New development in the corridor should create or maintain the grid pattern so that existing streets and new streets are interconnected in a smaller, more pedestrian-oriented development pattern.

INDUSTRIAL DISTRICT

Adjacent to employment-based land uses in the Cheyenne Technology Corridor, the Industrial District would provide property owners with access as well as opportunities for future employment, industrial, and mixed use development that is transit-supportive. The Industrial District needs to support existing land uses while providing the opportunity for high visibility, underutilized properties to redevelop into more intensive transit supportive uses around the proposed station facility. Adjacent to the station area, TOD opportunities for more intensive mixed use commercial and office development would provide a concentration of activity in the district.

The heart of the district would be a redesigned North Fifth Street with high-speed limited access lanes for through traffic and local access lanes and transit to serve adjacent properties. The North Fifth Great Street concept would be designed to provide local access lanes with ingress/egress to adjacent land uses and to facilitate

INDUSTRIAL DISTRICT CONCEPT



truck and freight circulation. A proposed multi-modal transit facility south of the Cheyenne at Brooks Avenue would provide convenient street connections to employment centers along the Cheyenne Technology Corridor and the Cheyenne campus of the Community College of Southern Nevada. The Pedestrian Priority Area around the station would extend from Losee Road on the east side of North Fifth to Commerce Street to the west. A Pedestrian/Bike Priority Street provides direct connections within these areas to the transit facility.

Where existing roads follow the framework of the existing grid pattern of interconnected streets, proposed development would unite the grid where possible.

GATEWAY REDEVELOPMENT DISTRICT

Already designated as a redevelopment area by the City of North Las Vegas, the Gateway Redevelopment District is ripe with urban redevelopment and infill opportunities. Future transit investment in this area will provide the city with unequalled opportunities to improve the quality of housing and neighborhoods in this area. The focal point of the district is the mixed use station area inside the Lake Mead couplet where the most intense pedestrian-oriented development should be located. Nearby freeway access, good visibility, and a defined development area could support opportunities for more intensive mixed use development.

Characterized by multi-family and single-family housing with nearby public schools, the neighborhoods that surround the potential station area offer infill redevelopment opportunities. Underutilized

GATEWAY REDEVELOPMENT DISTRICT CONCEPT



- | | | |
|-----------------------------------------------|-------------------------------------------|------------------------------------------|
| A POSSIBLE LOCATION OF GATEWAY STATION | F TOD OPPORTUNITY AREA | J I-15 ACCESS |
| B PEDESTRIAN PRIORITY AREA BOUNDARY | G LAKE MEAD ROAD COUPLET | K LINK TO REGIONAL TRANSIT SYSTEM |
| C THE GREAT STREET | H EXISTING RESIDENTIAL DEVELOPMENT | L CITY LIMITS |
| D PEDESTRIAN/BIKE PRIORITY STREET | I EXISTING INDUSTRIAL DEVELOPMENT | M PROPOSED OVERPASS |
| E SCHOOL | | |

commercial and office land uses concentrated along Lake Mead Boulevard and Las Vegas Boulevard have the potential for accessible, high-visibility, mixed use TOD redevelopment.

Circulation through the district is defined by the Great Street concept and a Pedestrian Priority Area. On North Fifth Street, local access lanes and transit would be grade separated from through traffic lanes near the Lake Mead Boulevard couplet. At the Lake Mead Boulevard couplet, the North Fifth Street through lanes are proposed to continue below grade as the transit (and transit station facilities) and local access stay at-grade. The east-west travel lanes of the Lake Mead couplet would bridge over the North Fifth Street north-south through lanes that are below grade. This concept prioritizes and maintains local connectivity while allowing North Fifth Street through traffic to move more efficiently through the Gateway area. The Pedestrian Priority Area around the proposed transit village includes nearby school properties and

links them to the transit facilities with Pedestrian/Bike Priority Streets. These streets cater to those who prefer to walk or bike between destinations. Future street connections efficiently link existing land uses and proposed redevelopment areas to the core of the station area.

SECTION 5: CODE RECOMMENDATIONS

REMOVING BARRIERS TO TOD

A significant barrier to implementing TOD is the continued application of a development code that inhibits TOD from being fully implemented.

Traditional zoning separates land uses (e.g., residential uses and building types separated from commercial, retail and employment centers).

Implicit with TOD is a mixed use development pattern that combines complementary land uses with good design to create pedestrian friendly neighborhoods.

In a successful TOD it is not unusual to find several stories of residential units above a grocery store within a five-minute walk of the transit station. Those who walk to catch the train could also walk to the grocery store. This is a different kind of lifestyle from places where getting into the car and driving for groceries is the norm.

FORM-BASED CODES ENABLE TOD

TOD works best where complementary neighborhood land uses fit into the traditional form of a neighborhood. A form-based zoning code can help facilitate the implementation of the TOD principles in the design of a pedestrian-oriented neighborhood.

Form-based codes seek to

- Focus on the form and function of entire urban neighborhoods instead of looking at land uses separately.
- Focus on the design, location, intensity and arrangement of buildings.
- Focus on the relationships between building and the public realm.
- Provide flexibility with uses in the buildings so that property owners can adapt to changing market trends.

Form-based codes are not appropriate for all zoning areas but work best where

- Market demand supports compact, higher density, mixed use, and walkable neighborhoods;
- Transit is located within close proximity; and
- Community values are aligned with the vision of creating pedestrian-oriented places.

CODE RECOMMENDATIONS

A form-based code is recommended for the North Fifth Street Corridor because the TSCP represents a new direction in planning for the City of North Las Vegas and a different approach to regulating development. Implementing the North Fifth Street TSCP will require a flexible zoning code that allows a mix of compatible

Code Recommendations

land uses within compact neighborhoods and centers.

Development within the North Fifth Street Corridor needs to be guided by a code that emphasizes

- The form of the building and its relationship to the streetscape.
- Local values and priorities.
- Pedestrian-oriented uses.
- A desired visual character for the corridor as defined by collaboration between the City and project stakeholders.

HOW THE RECOMMENDATIONS ARE ORGANIZED

The form-based code recommendations discussed on the following pages are organized according to the TOD principles described throughout this report. These code recommendations are intended as a starting point for the City to use when creating more specific

TOD Principles	TOD Design	TOD Code
Greater Density than Community Average	Density by Design	Allows Greater Density
A Mix of Uses	Building & Mix of Uses	Height, Bulk, Allowed Uses
Quality Pedestrian Environment	Pedestrian Environment	Public Realm Stds / Connections
A Defined Center	Building Placement	Site Location & Setbacks
	Building Orientation & Frontage	Street Presence & Design
	Parking	Location & Quantity

TOD Code: The code to guide TOD will allow greater density while addressing height, uses, the spaces between buildings and parking.

plans and design guidelines for each planning district.

The code is divided into five categories, including the TOD principles and core-center-edge concept

- Greater Density than Community Average.
- A Mix of Uses.
- Quality Pedestrian Environment.

- A Defined Center.
- Core-Center-Edge.

Under each category is a general rationale explaining why the code recommendations are important for the development of the TOD land uses. Following the rationale are the related TOD code elements with recommendations applied to each of the five TOD land uses.

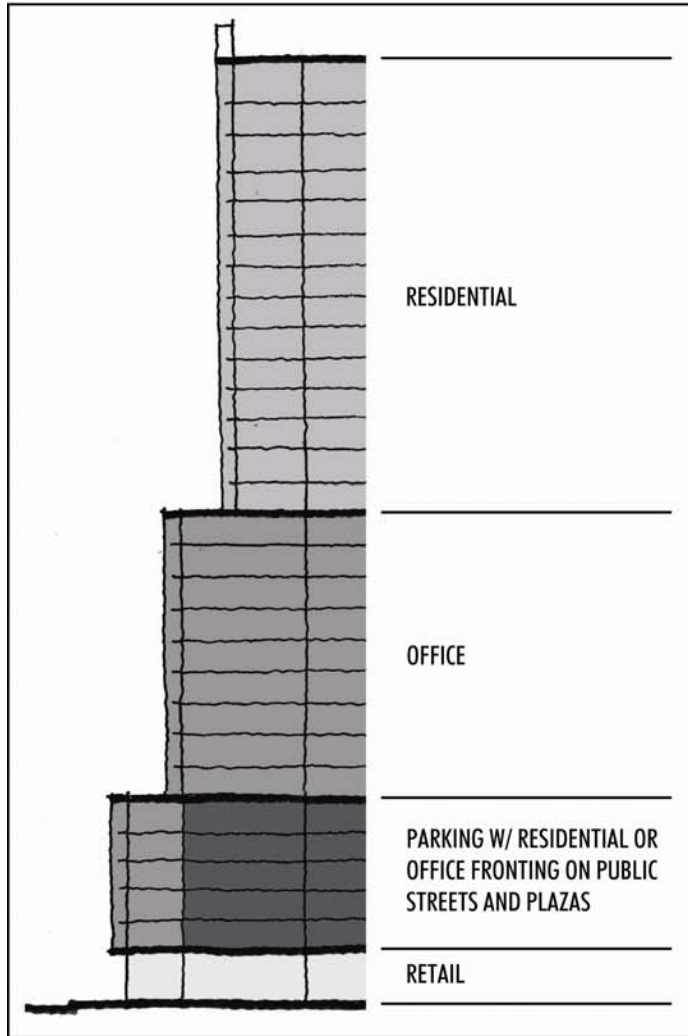
TOD Principle 1– Greater Density than Community Average					
TOD Code Element - Density					
<p>Rationale. Sufficient residential and commercial densities are a critical prerequisite for TOD in order to have an adequate number of people within walking distance of transit stations and stops. Without sufficient densities, transit tends to be underutilized because it is not convenient for a sufficient number of people. The appropriate density may range considerably but will generally be based upon the nature of the community and the type of transit service (i.e., bus, bus rapid transit, light rail). The vision and land use strategy for the corridor call for higher densities than the community average. These densities may be compatible with existing neighborhoods.</p> <ul style="list-style-type: none"> • Transit use rates begin to increase at an average overall density of six to seven households per residential acre. In general, six to seven dwelling units per acre will support good bus service, and nine to twenty-five dwelling units per acre will supports rail service. • At around 50 households per acre, the number of trips taken daily by vehicles, transit, and walking become about the same. • Residents of a TOD are 5 times more likely to use transit than the regional average. • Density needs to be transit supportive yet designed to be attractive and readily absorbed by the market. 					
TOD Land Uses					
TOD Code Element	Urban Center	Urban Neighborhood	Suburban Center	Suburban Neighborhood Medium Density	Suburban Neighborhood Low Density
Density	See 17.20.165 D.				
Residential density (min/max)	40 units/acre min. No maximum density	15-30 units/acre	30-units/acre min. No maximum density	12-20 units/acre	7-12 units/acre
Mixed use or non-residential floor-area-ratio (FAR) (min/max)	1.0 to 10.0 Multi-story buildings higher than five stories allowed	0.5 to 5.0 Multi-story buildings higher than five stories allowed	0.5 to 1.0	0.25 to 0.5	0.25 to 0.35

TOD Principle 2 – A Mix of Uses					
TOD Code Elements – Height, Bulk, and Allowed Uses					
<p>Rationale. Mixing uses has beneficial impacts by increasing walking, reducing automobile use, and increasing transit use. Pedestrian-oriented communities are more successful when a full range of local services are provided within walking distance of each other. A successful neighborhood is the product of the distances people have to walk to access daily necessities and activities. Concentrated retail, commercial, office, employment, entertainment, civic, and residential uses assembled and in a walkable and mixed use development pattern directly supports the goal of vibrant pedestrian-oriented station areas and neighborhoods.</p> <ul style="list-style-type: none"> • Mixed uses, both vertical and horizontal, create interesting, vital, and balanced neighborhoods with places to live and work. • Centers with a mix of land uses (residential, retail, employment, civic, cultural, and recreational) and a connectedness between them encourage more walking and transit use as opposed to driving. • Mixed uses within buildings (i.e., vertical mixed use) increases building density while integrating mutually supportive uses. For example, residential above commercial can help create 18 hours of activity, concentrated pedestrian activities, and increased transit ridership. Similar results can be achieved by mixed use in separate buildings (i.e., horizontal mixed use) if residential and non-residential uses are within close proximity and well connected by sidewalks. • A use mix that emphasizes pedestrians and de-emphasizes motorists will also support transit. Drive-through facilities and uses with large surface parking lots should not be allowed in the central area near station locations. 					
TOD Land Uses					
TOD Code Elements	Urban Center	Urban Neighborhood	Suburban Center	Suburban Neighborhood Medium Density	Suburban Neighborhood Low Density
Building Height, Bulk & Uses	See 17.20.165 E.				
Building stories (min/max)	4-30	3-10	2-20	2-5	1-3
Site coverage (max.)	100%	85%	90%	80%	75%

TOD Code Elements – Height, Bulk and Allowed Uses (continued)					
TOD Land Uses					
TOD Code Elements	Urban Center	Urban Neighborhood	Suburban Center	Suburban Neighborhood Medium Density	Suburban Neighborhood Low Density
Building Height, Bulk & Uses	See 17.20.165 E.				
Transitions for compatibility with surrounding development	Tallest buildings are within 600 feet of Deer Springs Way. Building heights step down toward the Beltway and Centennial.	Tallest buildings are adjacent to the Urban Center land use. Building heights step down toward the northerly mountains and the established single family neighborhoods.	Tallest buildings are within 600 feet of North Fifth Street. Building heights step down to maintain solar access for existing residential neighborhoods.	Tallest buildings are within 600 feet of North Fifth Street. Building heights step down to maintain solar access for existing residential neighborhoods.	In areas adjacent to existing single-family residential, building heights step down to be consistent with allowed heights in the existing zoning district.
Uses – required & prohibited	Ground floor retail/office required	Ground floor retail/office required	Ground floor retail/office required	Ground floor retail/office optional	Ground floor retail/office optional
	Auto-oriented uses (e.g., service stations/repair), outdoor storage, drive through, and surface parking in front are prohibited.	Auto-oriented uses (e.g., service stations/repair), outdoor storage, drive through, and surface parking in front are prohibited.	Auto-oriented uses (e.g., service stations/repair), outdoor storage, drive through, and surface parking in front are prohibited.	Auto-oriented uses (e.g., service stations/repair), outdoor storage, drive through, and surface parking in front are prohibited.	Auto-oriented uses (e.g., service stations/repair), outdoor storage, drive through, and surface parking in front are prohibited.
Parking Structures	See Diagram	See Diagram	See Diagram	See Diagram	See Diagram
Mixed uses: vertical and horizontal	See Diagram	See Diagram	See Diagram	See Diagram	See Diagram

MIXED USE - VERTICAL & HORIZONTAL

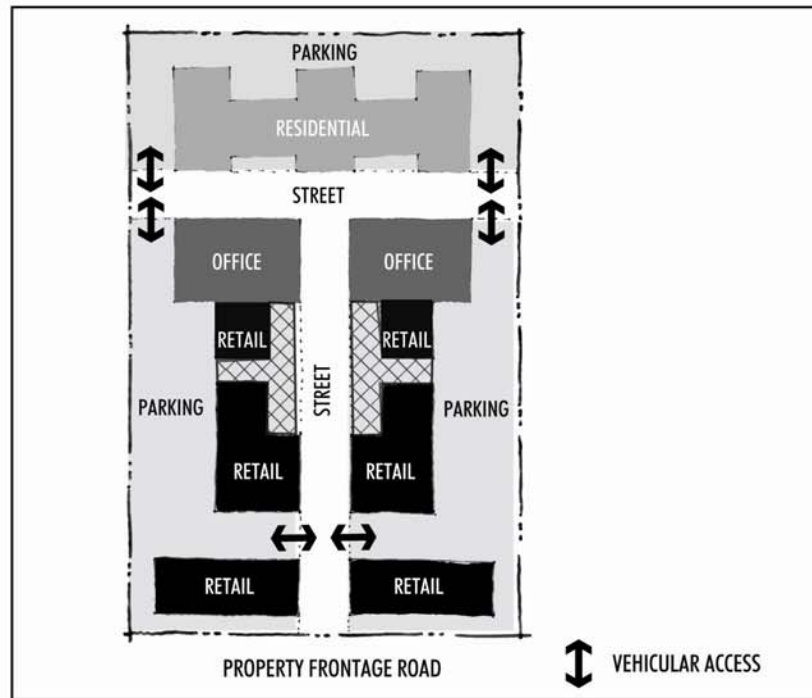
TOD CODE ELEMENTS - HEIGHT, BULK AND ALLOWED USES



VERTICAL MIXED USE

Recommended Requirements: See Table - TOD Principal 2 / A Mix of Uses

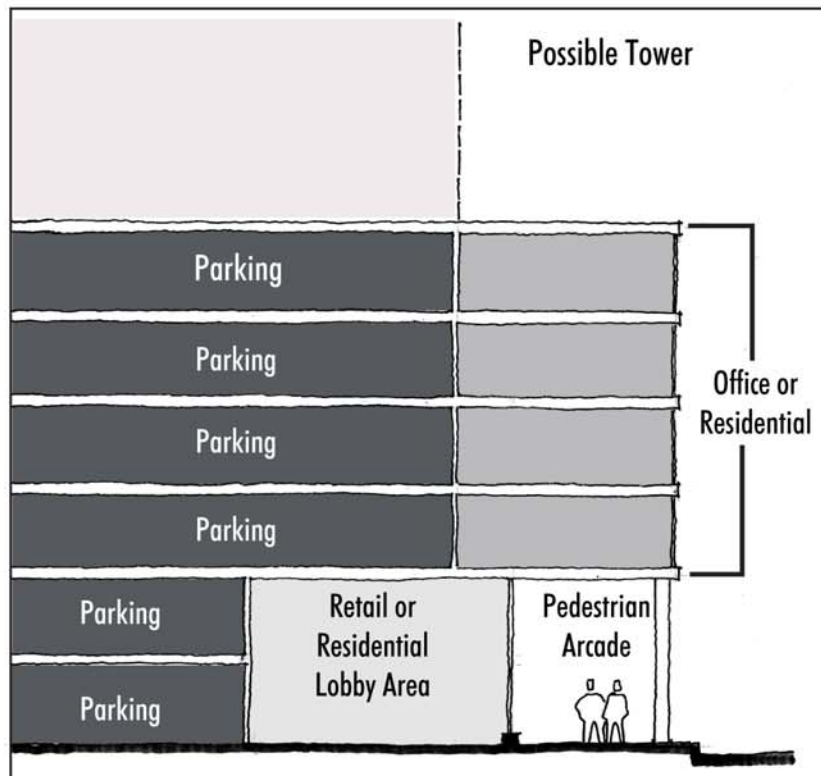
- Mixed use buildings include commercial, residential and office uses. Ground floor uses in mixed-use buildings with residential planned for the 2nd story and higher shall be retail, commercial or office uses compatible with residential.
- Horizontal mixed use buildings shall include minimum of two individual retail frontages per block face.
- Development parcels of 1 acre or more within a 1/2 mile radius of a transit facility shall include a minimum of two horizontal mixed uses. Uses include residential, office, and commercial. Development parcels of 1 acre or more within a 1/2 mile radius of a transit facility zoned for industrial or institutional uses may be exempt from this requirement subject to the Planning Department design review.



HORIZONTAL MIXED USE

PARKING STRUCTURES

TOD CODE ELEMENTS - HEIGHT , BULK AND ALLOWED USES



Recommended Requirements:

- Design Review is required for liner buildings on parking structures.
- Ground Floor Treatment: Parking garages need to be designed to fit the small block sizes and pedestrian -oriented urban building pattern. The corners of parking garage buildings should look similar to retail uses typical of urban areas and include activated storefront windows along sidewalks, inviting pedestrian entrances oriented to public sidewalks and streets, and canopies over entrances and windows. Mid-block parking garage facades are encouraged, to have active uses along the sidewalk edge. If active uses are not feasible, building fenestration, awnings and decorative grille-work designs shall be integrated into the building design. Blank walls are not permitted.
- Above Ground Floor Treatment: All buildings in pedestrian TOD areas need to be visually interesting and add long-term value to the urban environment. Parking garages can be more valuable if mixed uses are incorporated into the design of the structure. Office, residential and commercial single or mixed uses are permitted to line the outer perimeter of parking garage structures and extend over the sidewalk creating an arcade (see diagram). If active uses are not feasible, avoid long stretches of blank facades and incorporate fenestration details into 70% of the total building façade square footage. Fenestration details include but are not limited to decorative grille-work in façade openings, sills, lintels, and pilasters. Open sections of façade shall be divided and incorporated into the fenestration detailing.

TOD Principle 3– Quality Pedestrian Environment					
TOD Code Elements – Public Realm and Circulation					
<p>Rationale. Successful and functional community centers and transit service both rely on pedestrian environments that are safe, convenient with short walking distances, and have comfortable and stimulating surroundings. Much of this environment is influenced by the design of the public realm, including public streets, sidewalks, and gathering places.</p> <ul style="list-style-type: none"> • Comfortable sidewalks are key to reinforcing a pedestrian-oriented environment. The comfort and convenience of a pedestrian trip will support transit ridership by creating destinations attainable without an automobile. The degree of walking is dependent upon sidewalks that connect transit and adjacent pedestrian destinations, such as building entrances, street crossings, and other walkways and nearby intersections. • A walkable community needs a finer scale of development. Average block lengths should not exceed 400 feet, with the total block perimeter no more than 1,600 feet. This allows for a five minute walk around the block. • Within a center there will be a hierarchy of streets based on function, volume, and land use. All streets should accommodate automobile demand yet minimize pavement widths for vehicles, provide sidewalks, and include safe and convenient street crossings for pedestrians. • Gathering places are an integral part of site and building design. They provide places for people to meet, entertain, rest, contemplate, or simply people watch. • Pleasant pedestrian areas feature wide sidewalks, planter strips, street trees, awnings, street lighting, bicycle lanes, and/or on-street parking. These and similar elements help to reduce noise, provide shelter, and enhance the overall comfort and safety of an area. 					
	TOD Land Uses				
TOD Code Elements	Urban Center	Urban Neighborhood	Suburban Center	Suburban Neighborhood Medium Density	Suburban Neighborhood Low Density
Public Realm & Circulation	See 17.20.165 F.				
Master circulation plan	Street grid is required.	Street grid is required.	Street grid is required.	Street grid is required	Street grid is required
Block size	Maximum block perimeter: 1,600'	Maximum block perimeter: 1,600'	Maximum block perimeter: 1,600'	Maximum block perimeter: 1,600'	Maximum block perimeter: 1,600'

TOD Code Elements – Public Realm and Circulation (continued)					
TOD Land Uses					
TOD Code Elements	Urban Center	Urban Neighborhood	Suburban Center	Suburban Neighborhood Medium Density	Suburban Neighborhood Low Density
Public Realm & Circulation	See 17.20.165 F.				
Sidewalk width	15' minimum See Diagram	12' minimum See Diagram	12' minimum See Diagram	10' minimum See Diagram	10' minimum See Diagram
Landscaping / Streetscape amenities	Required	Required	Required	Required	Required
Street tree planting	30'-40' on center See Diagram	30'-40' on center See Diagram	30'-40' on center See Diagram	30'-40' on center See Diagram	30'-40' on center See Diagram
Pedestrian scale street lighting	20' maximum See Diagram	16' maximum See Diagram	20' maximum See Diagram	16' maximum See Diagram	16' maximum See Diagram
On-street parking	Required	Required	Required	Required	Required
Pedestrian-oriented intersections	See Diagram	See Diagram	See Diagram	See Diagram	See Diagram

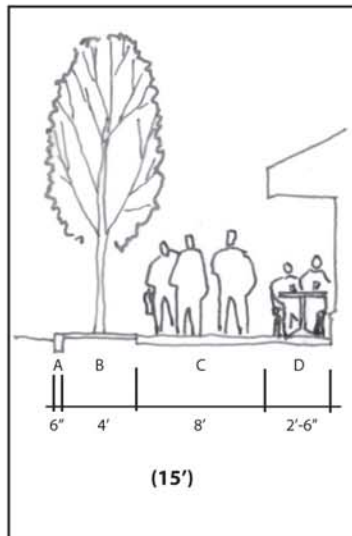
SIDEWALK WIDTHS

TOD CODE ELEMENTS - PUBLIC REALM AND CIRCULATION

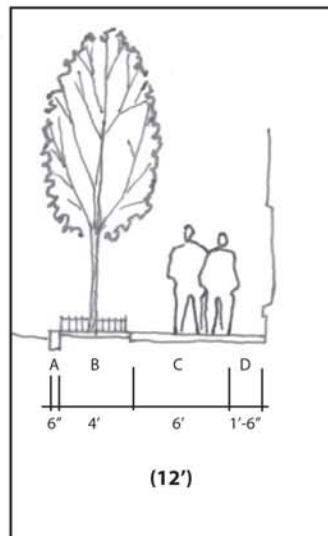
Recommended Requirements:

- A. Curb Zone: helps to define the pedestrian environment within the streetscape.
- B. Furnishings Zone: buffers pedestrians from the adjacent roadway and is also the area where elements such as street trees, signal poles, utility poles, street lights, controller boxes, hydrants, signs, parking meters, driveway aprons, grates, hatch covers, and street furniture are properly located. This is the area where people alight from parked cars.
- C. Walking Zone: the area intended for pedestrian travel. This zone should be entirely free of permanent and temporary objects.
- D. Frontage Zone: the area between the walking zone and the property line. This zone allows pedestrians a comfortable "shy" distance from the building fronts, in areas where buildings are at the lot line, or from elements such as fences and hedges on private property.

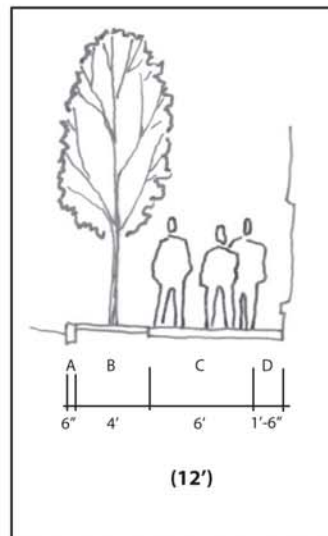
URBAN CENTER



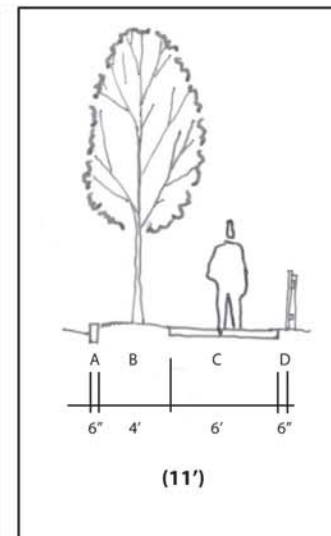
URBAN NEIGHBORHOOD



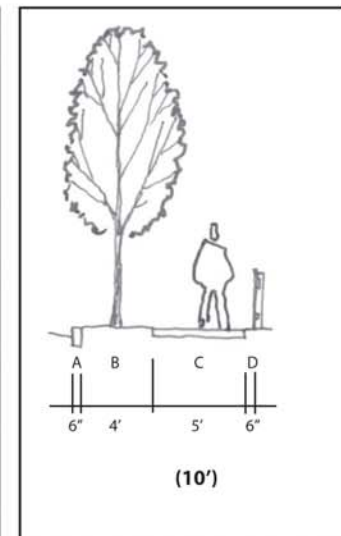
SUBURBAN CENTER



SUBURBAN MEDIUM DENSITY



SUBURBAN LOW DENSITY

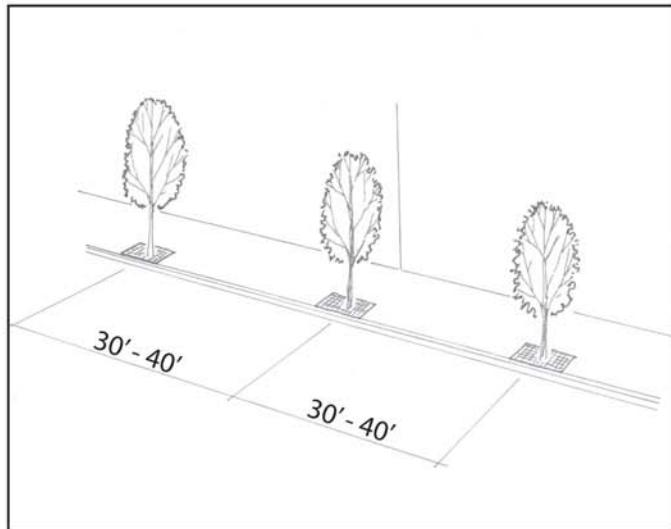


STREET TREE PLANTING

TOD CODE ELEMENT - PUBLIC REALM AND CIRCULATION

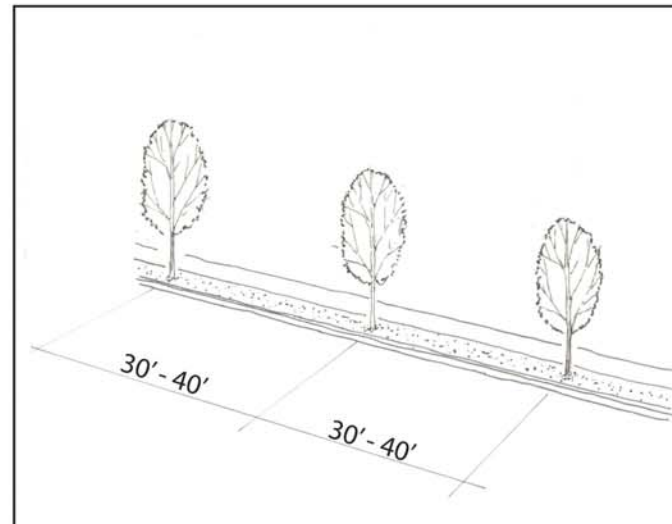
Recommended Requirements:

URBAN CENTER URBAN NEIGHBORHOOD SUBURBAN CENTER



- Provide 25 square foot minimum tree well with grate.
- Branching 7 feet minimum above sidewalk.

SUBURBAN NEIGHBORHOOD
MEDIUM DENSITY SUBURBAN NEIGHBORHOOD
LOW DENSITY

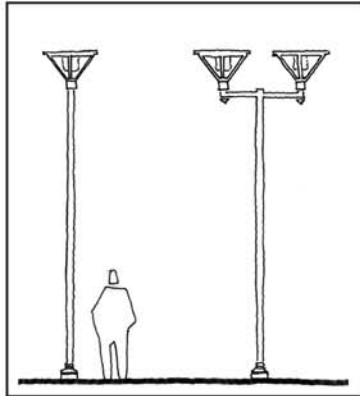


- Provide planting strip with minimum width of four feet between sidewalk and curb.
- Branching 7 feet minimum above sidewalk.

STREET LIGHTING

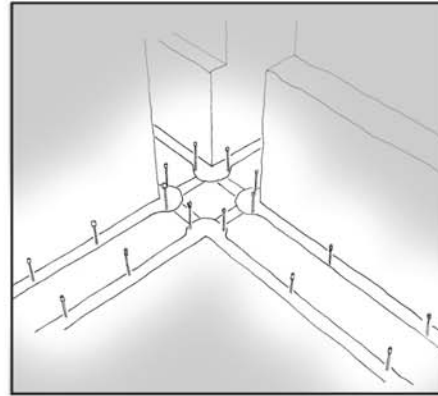
TOD CODE ELEMENTS - PUBLIC REALM AND CIRCULATION

Recommended Requirements: See Table - TOD Principal 3 / Quality Pedestrian Environment



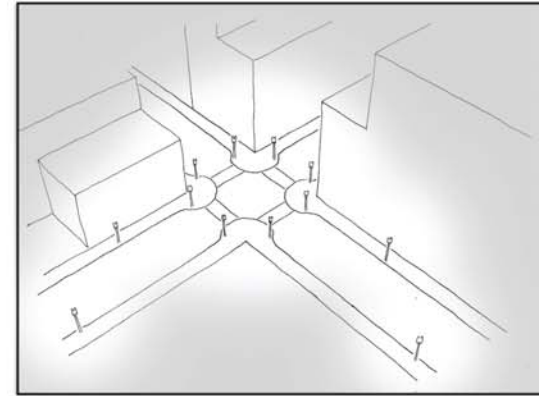
SINGLE LAMP

DOUBLE LAMP



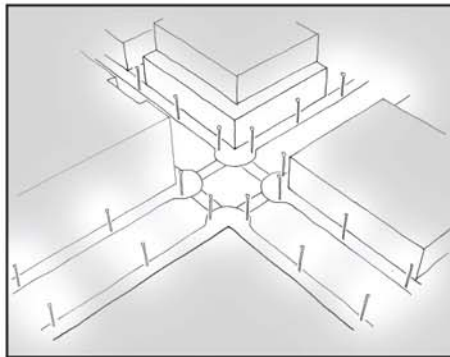
URBAN CENTER LIGHTING

- Double lamp
- Parallel fixtures



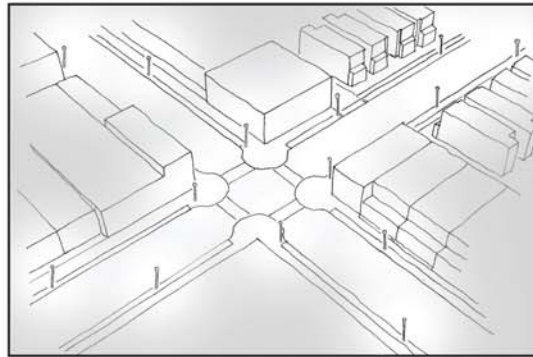
URBAN NEIGHBORHOOD LIGHTING

- Single lamp
- Alternate fixtures



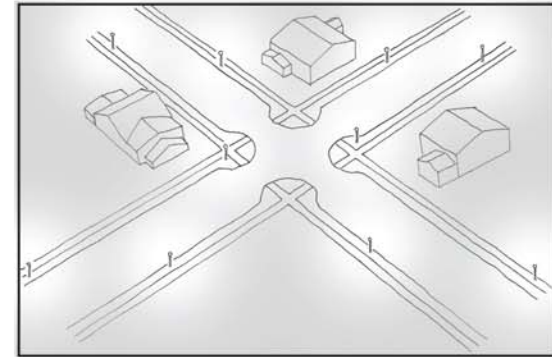
SUBURBAN CENTER LIGHTING

- Double lamp
- Parallel fixtures



MEDIUM DENSITY LIGHTING

- Single lamp
- Alternate fixtures

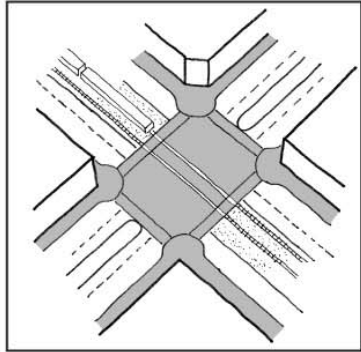


LOW DENSITY LIGHTING

- Single lamp
- Alternate fixtures

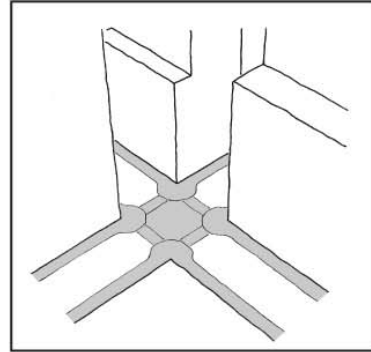
PEDESTRIAN - ORIENTED INTERSECTIONS

TOD CODE ELEMENTS - PUBLIC REALM AND CIRCULATION



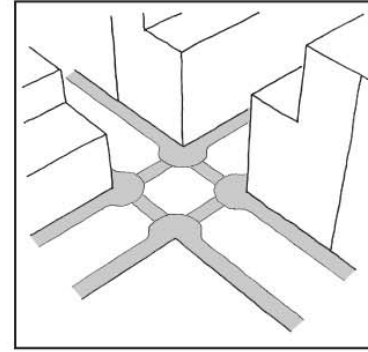
TRANSIT INTERSECTION

- Curb extensions
- Sidewalk and corner decorative pavement
- Decorative pavement crosswalks
- Decorative intersection pavement



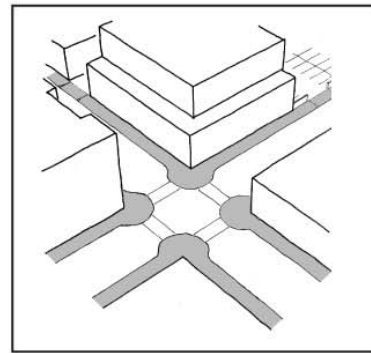
URBAN CENTER

- Curb extensions
- Sidewalk and corner decorative pavement
- Decorative pavement crosswalks
- Decorative intersection pavement



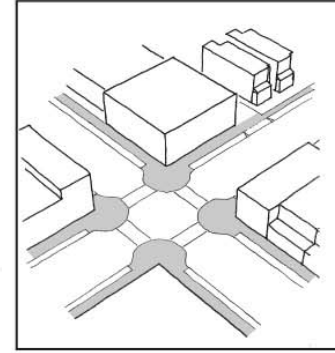
URBAN NEIGHBORHOOD

- Curb extensions
- Decorative pavement crosswalks
- Painted crosswalks



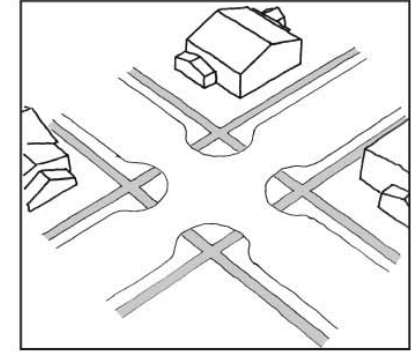
SUBURBAN CENTER

- Curb extensions
- Sidewalk and corner decorative pavement
- Painted crosswalks



SUBURBAN MEDIUM DENSITY

- Curb extensions
- Full corner pavement
- Painted crosswalks



SUBURBAN LOW DENSITY

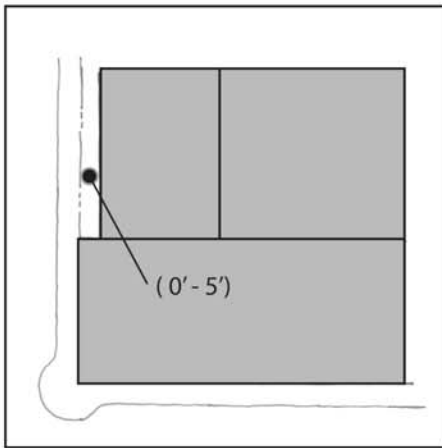
- Curb extensions

TOD Principle 4 – A Defined Center					
TOD Code Elements – Building Location and Setbacks					
<p>Rationale. Creating pedestrian-friendly and transit-supportive community centers is an important principle of successful TOD implementation. The location of buildings plays an important role in defining a center.</p> <ul style="list-style-type: none"> • Building location and setbacks that place buildings close to public streets and sidewalks help define activity centers that are pedestrian-friendly. • Buildings in a center should be oriented to the edge of the street to create an “active” street wall. • Extensive surface parking lots in front of building set back from the street are hostile for pedestrians, particularly in the summer in North Las Vegas. Pedestrian-friendly development has buildings located on or very near the street. Architectural design features incorporated into buildings located near the street encourage pedestrian activity. 					
TOD Land Uses					
TOD Code Elements	Urban Center	Urban Neighborhood	Suburban Center	Suburban Neighborhood Medium Density	Suburban Neighborhood Low Density
Building Location & Setbacks	See 17.20.165 G.				
Front (min/max)	0 to 5 feet for 80% of street frontage	0 to 10 feet for 80% of street frontage	0 to 10 feet for 70% of street frontage	0 to 10 feet for 70% of street frontage	0 to 15 feet for 70% of street frontage
Corner (min/max)	0 feet	0 to 10 feet	0 to 10 feet	0 to 10 feet	0 to 20 feet
Side (min)	0 feet	0 feet	0 feet	0 to 5 feet	0 to 5 feet
Rear (min/max)	0 to 10 feet	0 to 10 feet	0 to 10 feet	30 feet	40 feet
Façade setbacks	See Diagram	See Diagram	See Diagram	N/A	N/A

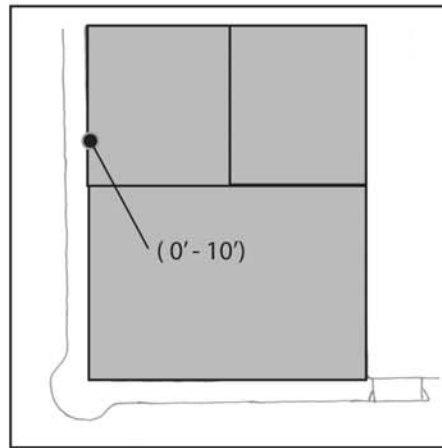
BUILDING SETBACKS

TOD CODE ELEMENTS - BUILDING LOCATION AND SETBACKS

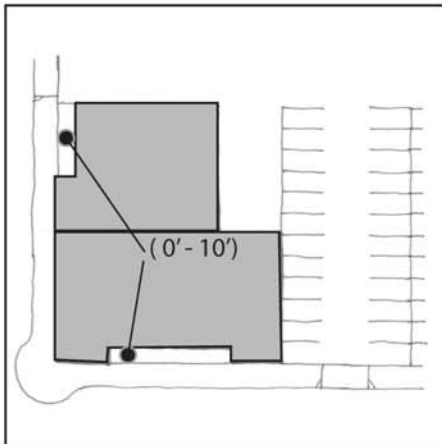
Recommended Requirements: See Table - TOD Principal 4 / A Defined Center



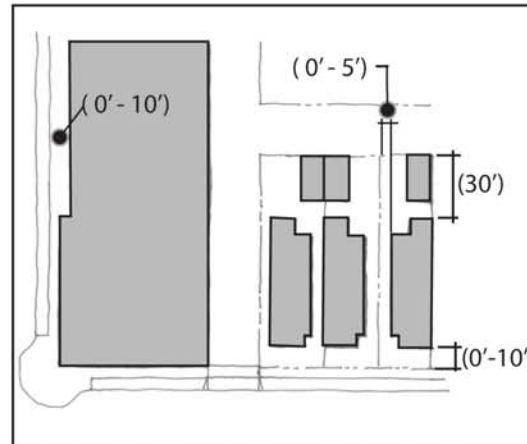
URBAN CENTER



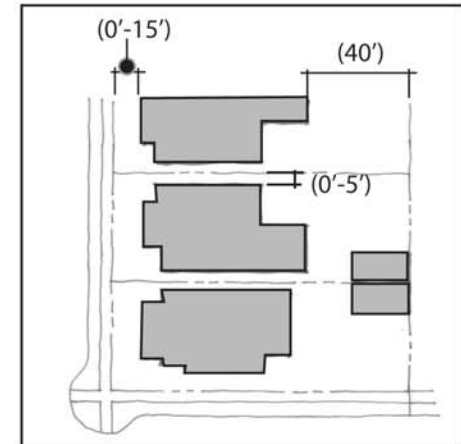
URBAN NEIGHBORHOOD



SUBURBAN CENTER



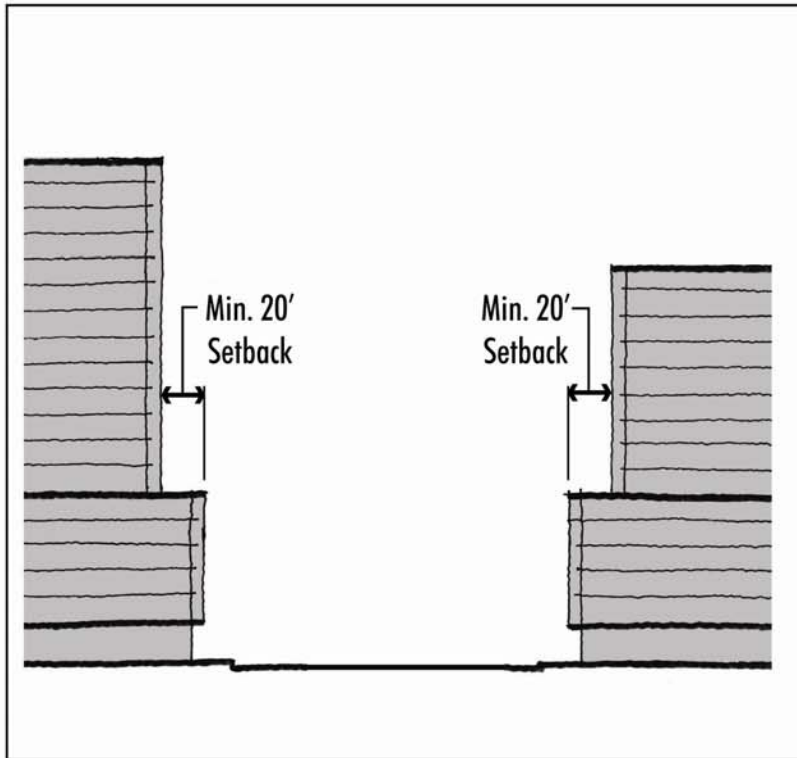
SUBURBAN MEDIUM DENSITY



SUBURBAN LOW DENSITY

FACADE SETBACKS

TOD CODE ELEMENTS - BUILDING STREET PRESENCE AND DESIGN



Recommended Requirements:

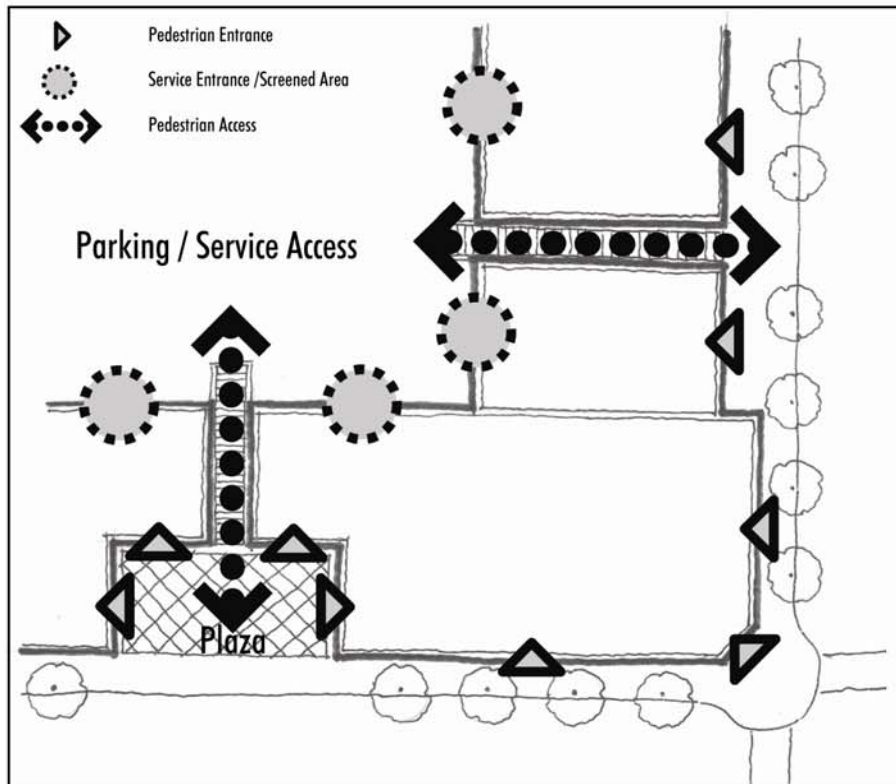
- Building facade setbacks shall be required for buildings over 6 stories in height. Building facade setback shall occur from the 4th to 6th story in the core, 3rd to 6th story in the center and 2nd to 6th story in the edge.

TOD Principle 4 – A Defined Center					
TOD Code Elements – Building Street Presence and Design					
<p>Rationale. In addition to location, the architectural design, street orientation, and pedestrian appeal of buildings are important elements in creating places that people want to visit.</p> <ul style="list-style-type: none"> • The main entrance of each primary structure should face the street frontage, except on corner lots where the main entrance may face either street or be oriented to the corner. • Varied architectural design, pedestrian-scale amenities, and carefully designed gathering places are the building blocks of active neighborhoods. • Strengthening the visual connections between buildings and streetscapes will help create a sense of enclosure and enchantment that encourages people to linger and return. • Development in station areas should relate to pedestrians. All new development in station areas should include buildings that are close to and oriented to the street, landscaping or screening for parking and storage areas, and public spaces that are easily accessible. 					
TOD Land Uses					
TOD PUD Code Elements	Urban Center	Urban Neighborhood	Suburban Center	Suburban Neighborhood Medium Density	Suburban Neighborhood Low Density
Building Street Presence & Design	See 17.20.165 H.				
Entrance location and orientation	<p>Main building entrances to be oriented to the front sidewalk or to a pedestrian plaza or courtyard accessible from a property line sidewalk.</p> <p>See Diagram</p>	<p>Main building entrances to be oriented to the front sidewalk or to a pedestrian plaza or courtyard accessible from a property line sidewalk.</p> <p>See Diagram</p>	<p>Main building entrances to be oriented to the front sidewalk or to a pedestrian plaza or courtyard accessible from a property line sidewalk.</p> <p>See Diagram</p>	<p>Main building entrances to be oriented to the front sidewalk or to a pedestrian plaza or courtyard accessible from a property line sidewalk.</p> <p>See Diagram</p>	<p>Main building entrances to be oriented to the front sidewalk or to a pedestrian plaza or courtyard accessible from a property line sidewalk.</p> <p>See Diagram</p>

TOD Code Elements – Building Street Presence and Design (continued)					
TOD Land Uses					
TOD Code Elements	Urban Center	Urban Neighborhood	Suburban Center	Suburban Neighborhood Medium Density	Suburban Neighborhood Low Density
Building Street Presence & Design	See 17.20.165 H.				
Fenestration	See Diagram	See Diagram	See Diagram	See Diagram	See Diagram
Large format retail	See Diagram	See Diagram	See Diagram	See Diagram	See Diagram
Building shading	See Diagram	See Diagram	See Diagram	See Diagram	See Diagram
Arcades	See Diagram	See Diagram	See Diagram	See Diagram	See Diagram
Awnings and Canopies	See Diagram	See Diagram	See Diagram	See Diagram	See Diagram
Screen Mechanical Equipment	See Diagram	See Diagram	See Diagram	See Diagram	See Diagram
Signage	See Diagram	See Diagram	See Diagram	See Diagram	See Diagram
Compatibility with Surroundings and Community Identity	As per guidelines developed during district master plan process.	As per guidelines developed during district master plan process.	As per guidelines developed during district master plan process.	As per guidelines developed during district master plan process.	As per guidelines developed during district master plan process.
Pedestrian Circulation (to/from the site and internal)	Direct, convenient, and safe connections between destination points (e.g., transit station or stop, building entrances, surrounding uses).	Direct, convenient, and safe connections between destination points (e.g., transit station or stop, building entrances, surrounding uses).	Direct, convenient, and safe connections between destination points (e.g., transit station or stop, building entrances, surrounding uses).	Direct, convenient, and safe connections between destination points (e.g., transit station or stop, building entrances, surrounding uses).	Direct, convenient, and safe connections between destination points (e.g., transit station or stop, building entrances, surrounding uses).

ENTRANCE LOCATION AND ORIENTATION

TOD CODE ELEMENTS - BUILDING STREET PRESENCE AND DESIGN



Recommended Requirements:

- The main entrance of each primary structure should face the street frontage, except on corner lots where the main entrance may face either of the streets or be oriented to the corner.
- Pedestrian access from rear parking lots to the main entrance of primary structures should be facilitated by a pedestrian access way or a combination pedestrian access way and plaza where feasible. Plazas shall be orientated to the same street as the primary structure(s) entrance so the greatest dimension of the plaza parallels the public sidewalk.

FENESTRATION

TOD CODE ELEMENTS - BUILDING STREET PRESENCE AND DESIGN

Recommended Requirements:

- Street level building fenestration should incorporate single and double height windows or general access entrances to encourage browsing and window shopping.
- Doors at storefronts with windows should match the materials, design, and character of the display window framing. Doors may be flanked by columns, distinctive lighting fixtures or other details.
- All windows on a building should be related in design. Windows in upper floors should be smaller in size than storefront windows on the ground floor and should encompass a smaller proportion of façade surface area. Upper floor windows should be detailed with architectural elements such as projecting sills, molded surrounds, and/or lintels. Window reveals should be a minimum of 4 inches. Storefront, transom, display windows, or doors should encompass 50% minimum of the front of a building wall area. False fronts or windows are discouraged.

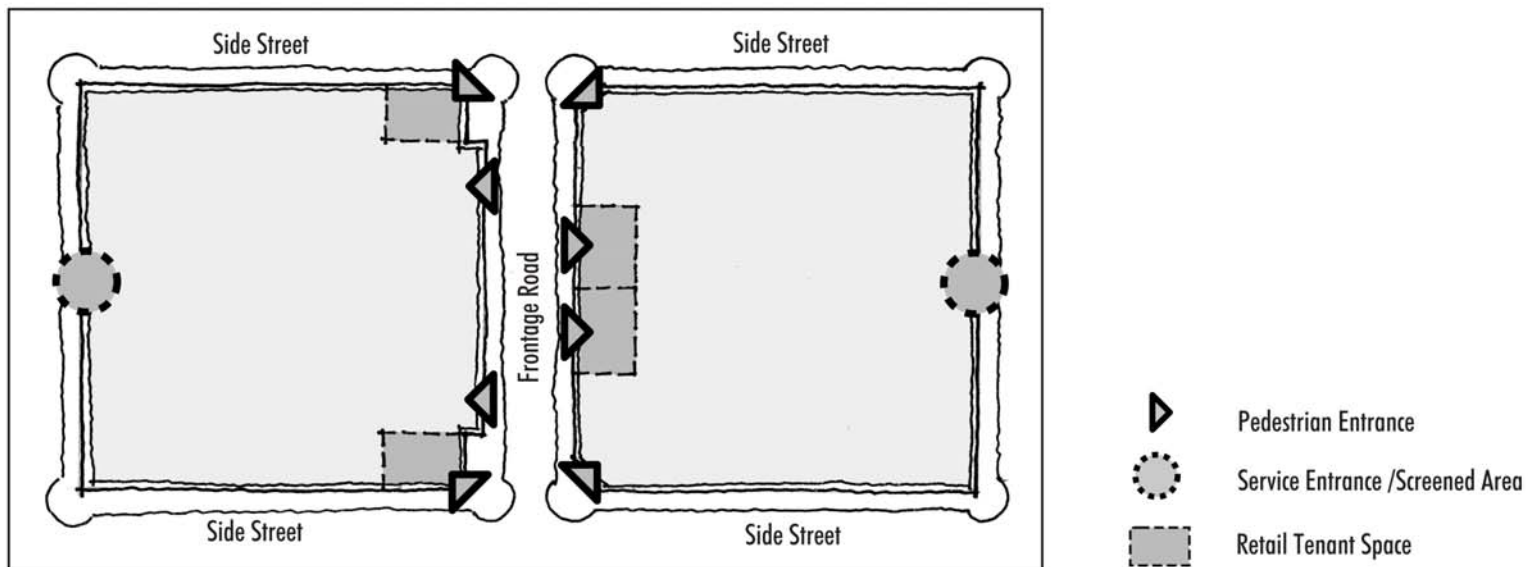


LARGE FORMAT RETAIL

TOD CODE ELEMENTS - BUILDING STREET PRESENCE AND DESIGN

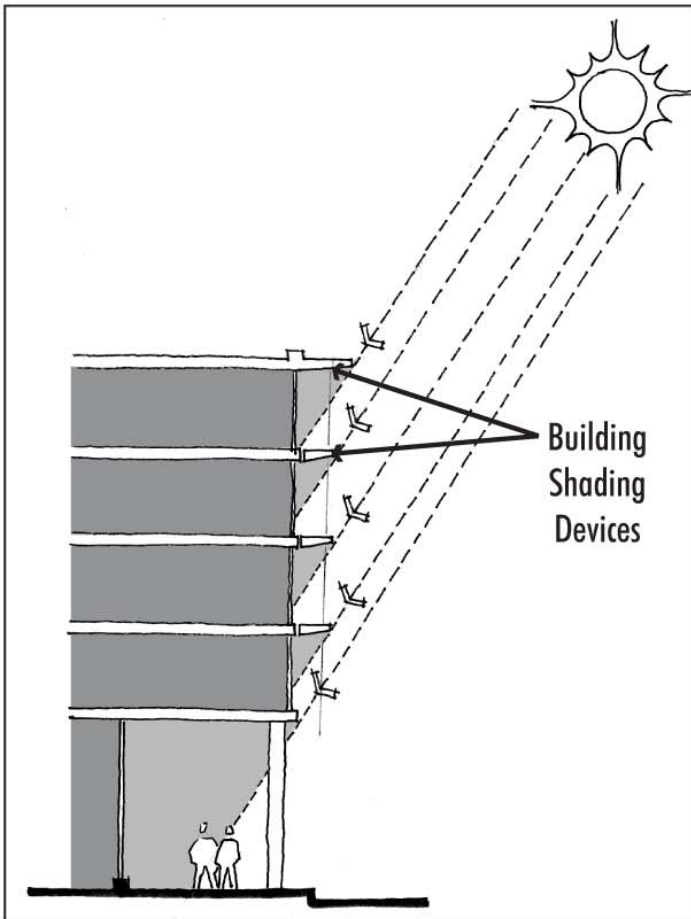
Recommended Requirements:

- Large format retail buildings need to be designed to fit the small block sizes and pedestrian-oriented urban building pattern. Large format retail building should look similar to smaller retailers typical of urban areas and include: activated storefront windows along sidewalks, inviting pedestrian entrances oriented to public sidewalks and streets, and canopies over entrances and windows.
- Design Review is required for large format buildings (exceeding 30,000 square foot footprint).



SHADING

TOD CODE ELEMENTS - BUILDING STREET PRESENCE AND DESIGN

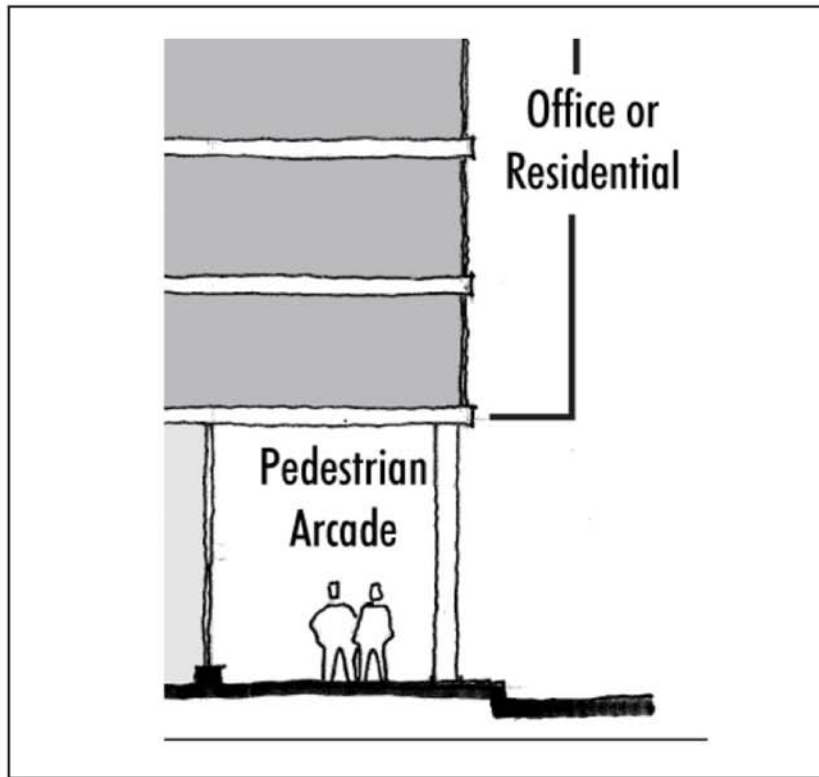


Recommended Requirements:

- Given the climate in North Las Vegas, buildings should address the cooling requirements of an extended hot season. This increases the importance of protecting windows, walls and doors from solar heat gain. Protection can be obtained through incorporating light colored and high albedo materials, insulated glass and shading devices. Shading devices include roof overhangs, arcades, awnings, porches screens, shutters trellises and landscaping. Shading devices can play a major role in providing architectural character in each district but should be employed in a thoughtful and calculated manner and not simply to achieve a desired "look" for a building. Designers should account for the different exposures of a building so that shading measures can produce a cooling benefit and energy conservation.
- Buildings shall be designed to incorporate shading devices to reduce solar heat gain and conserve energy.

ARCADES

TOD CODE ELEMENTS - BUILDING STREET PRESENCE AND DESIGN



Recommended Requirements:

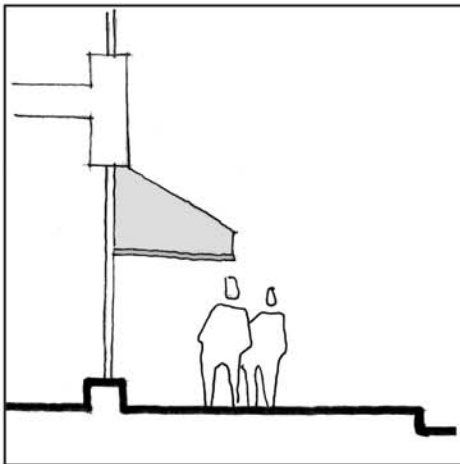
- Arcades may be used to enhance building facades and storefronts and provide additional building space over the sidewalk up to the 6th story. The arcade should be integral to the building design and consistent in form and material with the building characteristics.
- Arcades may be located across the façade of the building on a public street frontage.
- Arcades may be utilized on all core and center building frontages and shall provide consistent and continuous pedestrian protection from the elements, to the extent feasible.
- Arcades shall have a consistent depth as those of neighboring buildings with a minimum depth of 8 feet.

AWNINGS AND CANOPIES

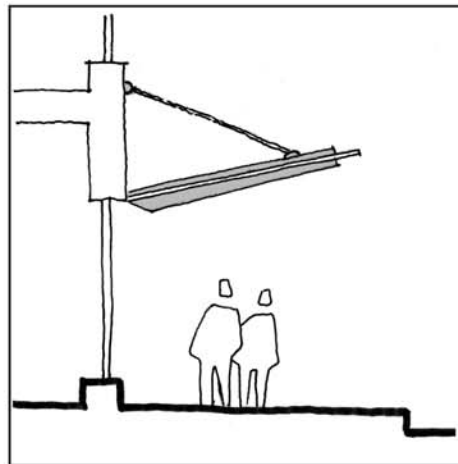
TOD CODE ELEMENTS - BUILDING STREET PRESENCE AND DESIGN

Recommended Requirements:

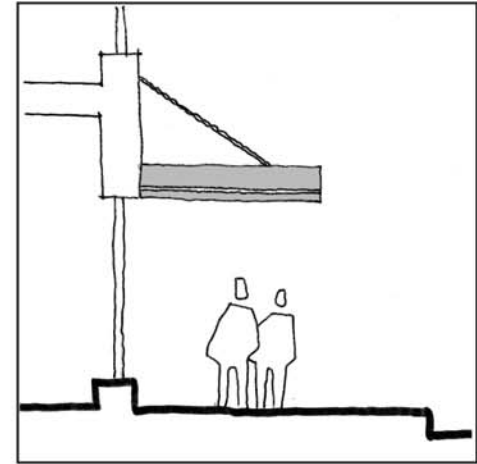
- Awnings or canopies should be utilized on all core-center-edge commercial and mixed use building frontages on sidewalks and shall provide consistent and continuous pedestrian protection from the elements, to the greatest extent feasible.
- Awnings or canopies shall have a consistent depth of those of neighboring buildings with a minimum depth of 6 feet.
- Awnings and canopies may encroach the right-of-way by a distance of 8 feet and shall provide a vertical clearance of 8 feet.



TEXTILE



GLASS



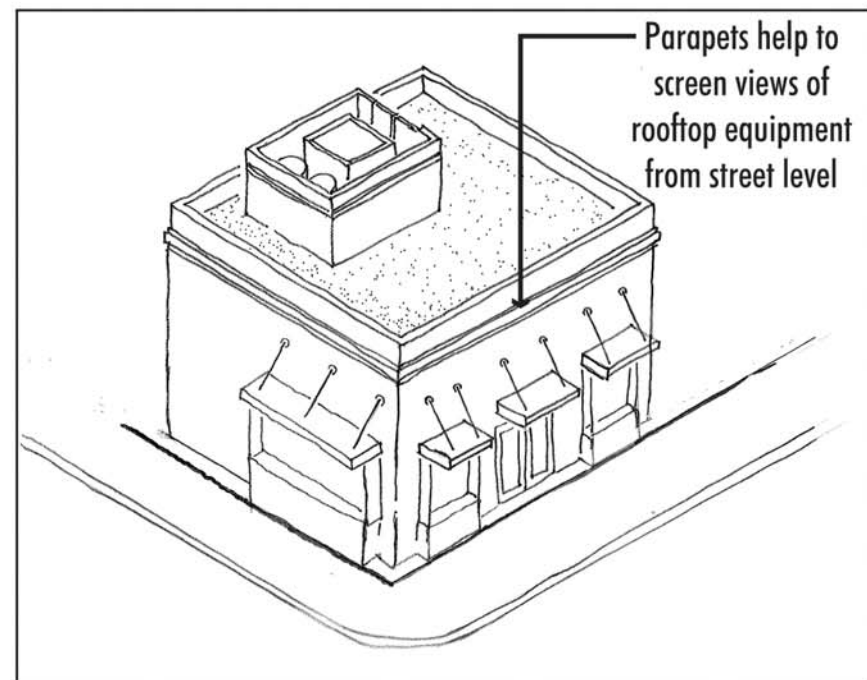
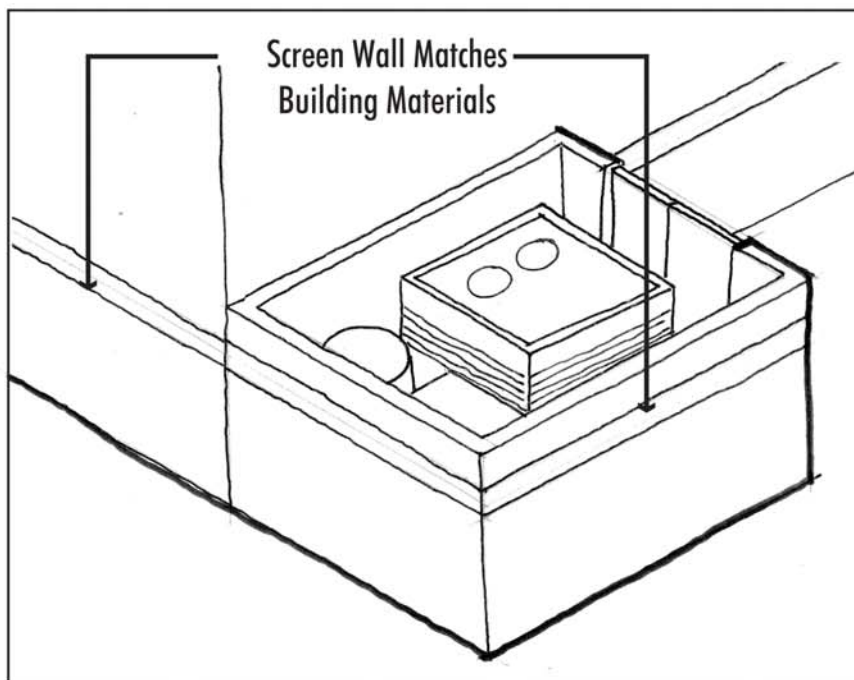
METAL

SCREEN MECHANICAL EQUIPMENT

TOD CODE ELEMENTS - BUILDING STREET PRESENCE AND DESIGN

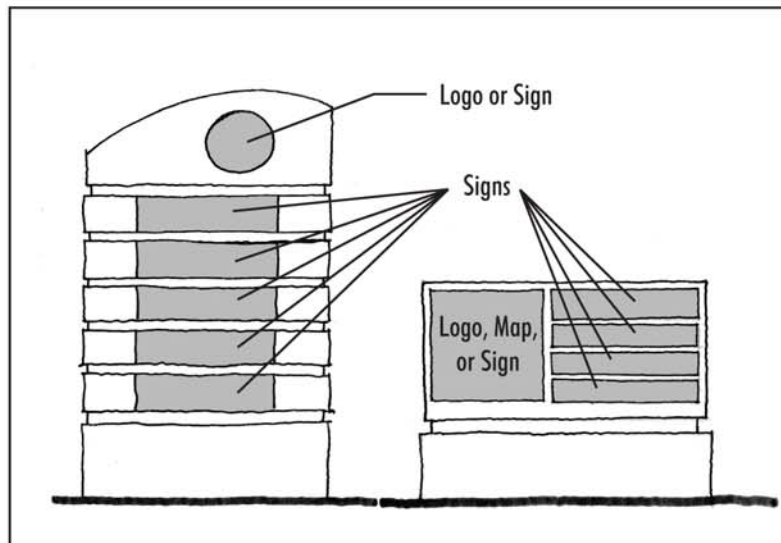
Recommended Requirements:

- Rooftops should be designed in a way that that they acknowledge their visibility from other buildings and from the street. Service equipment should be architecturally screened from both the street and neighboring buildings.
- Screen rooftop equipment from view using parapets or similar architectural features.

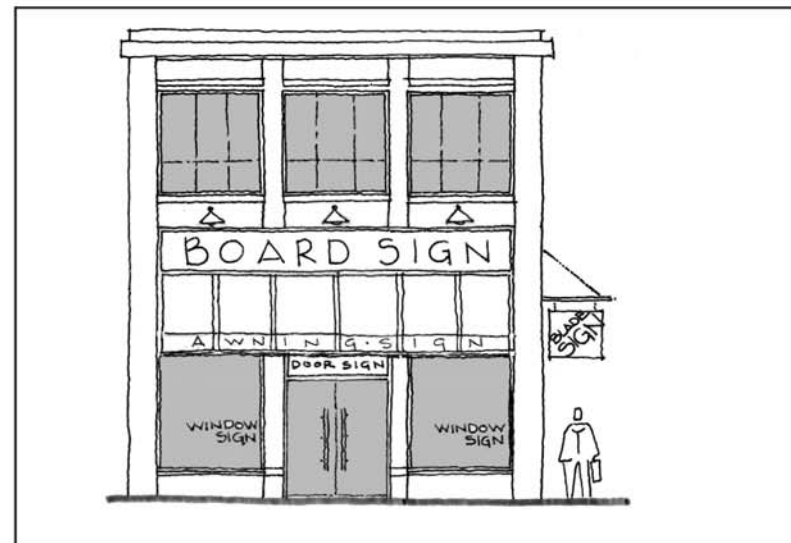


Recommended Requirements:

- Signs should make a positive contribution to the overall visual character of the streetscape. Signs should be appropriately scaled and designed for their building and neighborhood. Signs should be proportionately sized with the scale of the building and integrated into the design of the building façade. Signs should be carefully located so they have little or no impact on nearby residential uses. Free standing signs prohibited adjacent to any residential area.
- In general, signs should be compatible with the building and the surrounding environment, should be of high quality materials, oriented toward the pedestrian, should be legible and down lighted from an external light fixture. The majority of signage should be wall, board, awning, window and blade signs.
- Monument signs need to be carefully designed and integrated into the design scheme of the site and should be located at major intersections and at neighborhood entry points. Maximum monument sign height is 8 feet.



MONUMENT SIGNAGE



BUILDING SIGNAGE

TOD Principle 4 – A Defined Center**TOD Code Elements – Off-Street Parking Location and Quality**

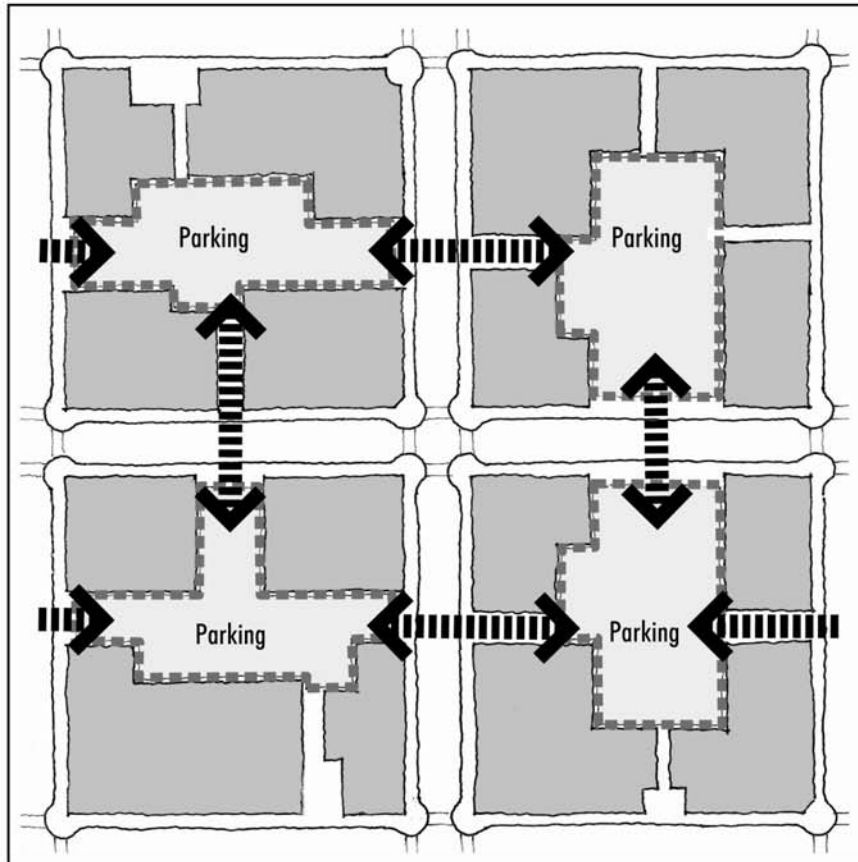
Rationale. In addition to buildings, the manner in which parking is accommodated has a significant effect upon the character of the community center and its degree of pedestrian-friendliness. Parking in a center requires attention to three fundamental components: size, location and design.

- Parking requirements should be adjusted to reflect density, mix of uses, shared use parking, on-street parking, and a park-once strategy.
- Parking facilities need to be located so that buildings – not parked cars – are the dominant visual feature. As an integral part of each development, parking areas should be designed in relation to the streetscape, circulation patterns, and pedestrian safety.
- When parking is allowed adjacent the pedestrian realm, landscaping and/or visual buffers are needed to enhance the pedestrian environment.
- In order to achieve the densities and level of desired activity in the station areas, structured parking is generally necessary as an alternative to large surface parking lots between buildings and the street.
- Because of the higher rate of walking and transit use, minimum parking standards, maximum parking ceilings, shared parking between complementary uses, and/or structured parking should be employed to reduce the land area consumed by surface parking.
- On-street parking should be allowed to contribute toward satisfying off-street parking requirements for adjoining uses.
- Bicycles are an alternative mode of transportation and an integral element of successful TOD. Bicycle usage is encouraged by the provision of safe and convenient on-street and off-street routes as well as safe and secure bicycle parking facilities near transit stops.

TOD Code Elements – Off-Street Parking Location and Quality (continued)					
TOD Land Uses					
TOD Code Elements	Urban Center	Urban Neighborhood	Suburban Center	Suburban Neighborhood Medium Density	Suburban Neighborhood Low Density
Off-Street Parking Location & Quantity	See 17.20.165 I.				
Supplemental parking standards (reduction of required minimums in Section 17.24.140 and maybe even suggest a maximum standard and shared parking ideas)	When transit service is available, reduce parking minimums by 30% and have a cap of 120% of code minimum.	When transit service is available, reduce parking minimums by 20% and have a cap of 120% of code minimum.	When transit service is available, reduce parking minimums by 30% and have a cap of 120% of code minimum.	When transit service is available, reduce parking minimums by 20% and have a cap of 120% of code minimum.	When transit service is available, reduce parking minimums by 20% and have a cap of 120% of code minimum.
Parking location and setbacks	Parking only in rear or above ground floor in a structure. See Diagram	Parking only in rear or along a maximum of 20% of one street frontage. See Diagram	Parking only in rear or along a maximum of 20% of one street frontage. See Diagram	Parking only in rear or along a maximum of 50% of one street frontage. See Diagram	Parking only in rear or along a maximum of 70% of one street frontage. See Diagram
Landscaping	N/A	Internal landscaping for surface lots.	Internal landscaping for surface lots.	Internal landscaping for surface lots.	Internal landscaping for surface lots.
Bike Parking	Short and long-term parking facilities required	Short and long-term parking facilities required	Short and long-term parking facilities required	Short and long-term parking facilities required	Short and long-term parking facilities required
Parking Lot Screen	See Diagram	See Diagram	See Diagram	See Diagram	See Diagram

SURFACE PARKING LOCATION

TOD CODE ELEMENTS - OFF STREET PARKING LOCATION AND QUALITY



Recommended Requirements:

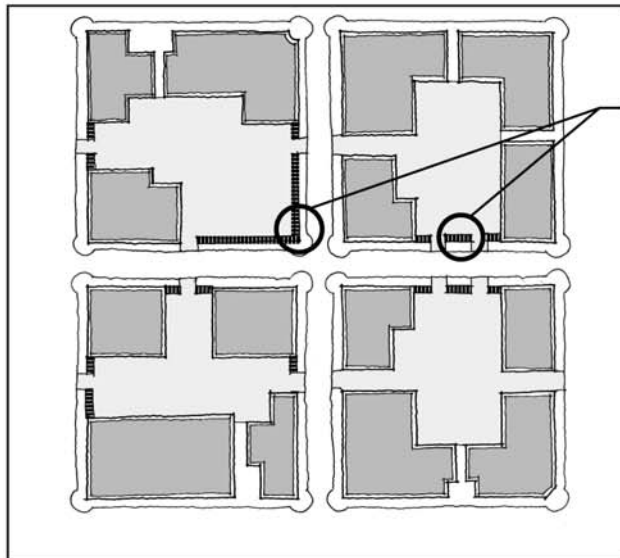
- Surface parking lot location and access shall be oriented to the middle of a block where feasible.
- Surface parking located at the corners of blocks is discouraged.

PARKING LOT SCREEN

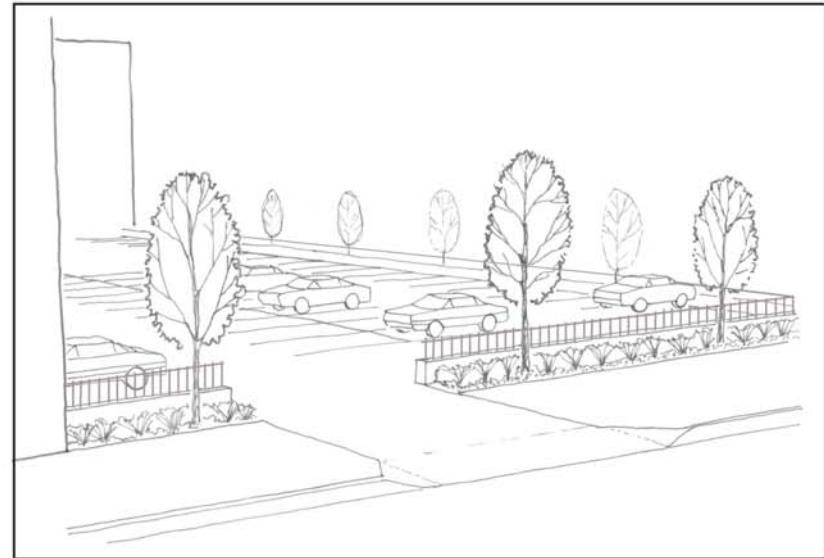
TOD CODE ELEMENTS - OFF STREET PARKING LOCATION AND QUALITY

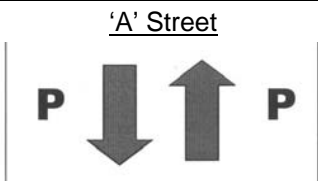
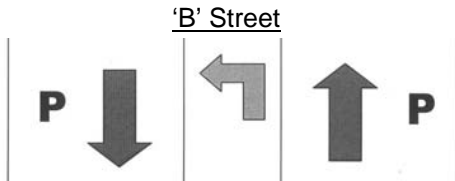
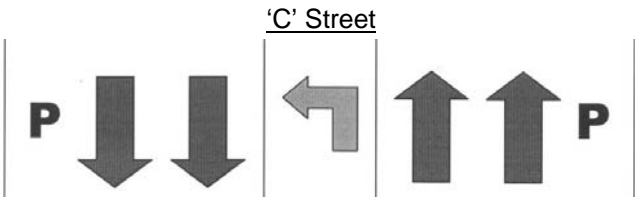
Recommended Requirements:

- Parking lot setback 5 feet from the edge of sidewalk shall contain a combination 5 feet tall maximum fence or low wall with fence and landscaping.
- Masonry wall up to 18 inches maximum height shall be combined with decorative fence for a combined maximum height of 5 feet.
- Landscaping shall include shade trees spaced at 25 feet on center and drought resistant vegetative materials to provide a minimum 60% ground coverage within two years of planting.



TYPICAL
PARKING LOT
SCREEN
LOCATIONS



Core-Center-Edge Concept				
TOD Code Elements – Local Street Widths				
<p>Rationale. TOD street design requires balancing the needs of land uses, pedestrians, bicyclists, and vehicles. Street design must be considered in terms of how movement of every kind can be accommodated safely (i.e., comprehensive capacity); and the role of the street in the station area and its proximity to transit facilities (i.e., character of the street).</p> <ul style="list-style-type: none"> Street network design and classifications to be designated per district planning process 				
TOD Code Elements		Core	Center	Edge
Street Classifications				
 <p>'A' Street</p>	Parking Lane Width	8.5'	8'	8'
	Travel Lane Width (optional bike lanes, minimum width: 5 feet)	10.5'	10'	9'
 <p>'B' Street</p>	Parking Lane Width	8.5'	8'	8'
	Travel Lane Width (optional bike lanes, minimum width: 5 feet)	12'	11'	10'
	Median/Center Turn Lane Width	14'	14'	12'
 <p>'C' Street</p>	Parking Lane Width	8.5'	8'	8'
	Outside Travel Lane Width (optional bike lanes, minimum width: 5 feet)	12.5'	12'	12'
	Inside Travel Lane Width	11'	10.5'	10'
	Median/Center Turn Lane Width	14'	14'	12'
Pedestrian/Bike Priority Street	Bike Lane Width	5'	5'	5'
	Walking Zone Width on sidewalk	10' min.	8' min.	6' min.

SECTION 6: IMPLEMENTATION

The North Fifth Street Corridor TSCP builds on the *Visioning 2025 Strategic Plan* by adding another level of detail to the future of the corridor. By necessity, the brush strokes in the concept plan are broad; they provide a clear, but general, direction for the corridor's future. Subsequent steps must be taken to make the concept plan a reality.

NEXT STEPS

The North Fifth Street Corridor TSCP is feasible from a planning, market, and financial perspective. However, there are significant hurdles that must be addressed through a strong partnership between the city and the private sector in order for the concept plan to be successfully implemented. These hurdles include

- Multiple land owners in the corridor.
- Designing transportation improvements to complement

adjacent pedestrian-oriented development. Transportation improvements can serve as a catalyst to achieve the concept plan, yet unless they are sensitively designed to complement adjacent pedestrian-oriented development, they can become a serious barrier to the concept plan's success.

- Educating developers about mixed use since mixed use development has not occurred to any significant degree in the valley.
- Identifying public infrastructure funding.
- Identifying phasing of capital improvements and private development.

Mixed use and pedestrian-oriented development does not have to wait for transit and should start today. It is critical for the city act now; otherwise the pace of development in the corridor will rapidly foreclose options to change the nature of development.

Successful implementation of the concept plan will emerge from a widely based and consistent commitment from all agency and private stakeholders to take the following steps necessary to realize the concept plan. The recommended implementation strategy for the corridor includes the following 10 actions

1. Adopt the Fifth Street Corridor TSCP

Adoption of the concept plan will send a clear signal that the city is committed to the concept plan and its implementation. For the concept plan to succeed, it needs to have a project champion within the City of North Las Vegas with the time and authority to facilitate implementation.

2. Refine District Transportation Design Concepts

Experience has shown that transportation investments can be a powerful catalyst to leverage new patterns of land use such as those envisioned in the corridor concept plan. Realizing the vision will require simultaneously advancing and refining the land use and transportation elements of the concept plan to

- Make pedestrians the priority for initial circulation improvements in the corridor.
- Recognize development opportunities at different station locations.
- Refine the design of North Fifth Street to be responsive to adjacent land uses and context sensitive design issues.
- Refine the arterial street designs to be more pedestrian-oriented in the transit corridor. This is an essential component for the ultimate success of transit.

- Preserve the remaining street grid system to enhance mobility for all modes.
- Require interconnected streets and smaller block sizes within all new development in the corridor.

3. Redefine Parking Standards

The city's parking standards need some refinement to facilitate compact, pedestrian-oriented mixed use development. One of the most important land use decisions the City of North Las Vegas will make in the corridor will be to create a realistic strategy and approach for parking that not only will work today, but in the future when transit is available. Experience has shown that waiting to change parking requirements until after transit arrives is an ineffective strategy. The auto-oriented land use pattern in the corridor will then be set and be difficult to reverse.

The following parking strategy attributes are recommended to reduce reliance on parking

- Remove parking minimums, and establish maximums.
- Allow on-street parking and have it apply toward meeting development parking requirements.
- Design and locate parking to be less dominant visually and to encourage parking once to accomplish several errands.
- Manage the parking supply and allow for a transition of parking standards over time.
- Plan new development to allow conversion of parking to other uses in the future.
- Consider having the city become a financial and management partner in parking structure development.
- Reduce parking ratios by incorporating mixed use in determining parking needs.

4. Adopt the TOD Code Recommendations

Section 5 of this report and the design refinement process described above will identify the zoning code amendments to adopt to support the concept plan including

- A master planning procedure modeled after the city's PUD process.
- Code standards and guidelines, which have the flexibility necessary to allow mixed land use and circulation that is consistent with the vision.

5. Develop a Master Plan for Each District

The city, in concert with public partners such as UNLV, the Veterans Administration, property owners and developers, must create more detailed master plans for each district that build on the concept plan. The district master plans should be based upon the outcome of the prior four steps, and they should address issues related to

land use, circulation, open space, and urban design, along with infrastructure improvements and funding. The district master plans should feature

- A process organized around district charrettes with private and agency stakeholders.
- Multiple place-based and market-oriented development concepts refined into a comprehensive and stakeholder supported development scheme
- Developer roundtables to test development schemes against market realities.
- Continuous agency and department collaboration.

6. Create a Capital Improvements and Finance Plan

A significant amount of public and private funding will be necessary for the corridor vision to become a reality. As noted later in this section and the appendix, there is a wide range of available funding mechanisms that may be utilized to construct the

necessary transit, street, and other infrastructure improvements.

7. Forge Public-Private Partnerships

The city should enter in to cooperative agreements with the development community to finance the necessary infrastructure to support development in the corridor

- Streamline TOD development approvals in the transit corridor.
- Participate in land assembly.
- Jump start private sector interest in the corridor with public works demonstration projects. Prioritize districts with the greatest development opportunities.

8. Develop a Transit Strategy

The city and RTC should develop a strategy and implementation plan to introduce transit along the corridor. This strategy will need to be updated and refined over time. It should include

- Implementation of “development-oriented” transit that attracts private sector investment and minimizes financial risk to developers.
- Design and operation of the transit system and station locations in the corridor.
- A focus on the pedestrian as the primary user of the transit system and committing to the development of high quality and convenient pedestrian access to all facilities and station area development.
- How to best work with FTA to position the transit element of the corridor for future FTA funding.

9. Monitor the Effects

The North Fifth Street corridor has the potential to become a dynamic planning area. Over time, as mixed use development and transit are implemented, the synchronized coordination of transportation infrastructure and land use

designations will require routine maintenance. The effect of mixed land uses, pedestrian-oriented design, and transit should be monitored to determine the affect these practices have on walking trips, traffic generation, transit ridership, and parking demands.

10. Follow a Phasing Plan

A strategic phasing plan should be developed at the outset to identify the appropriate sequence of actions that need to be taken to implement the concept plan. The actions above are not all sequential, and at times, several should be advancing simultaneously.

INNOVATIVE TOD FINANCE

A funding strategy will be essential to develop the transit, street, and infrastructure that will support the Vision for the North Fifth Street Corridor. Funding is possible through local and federal sources. (For more information on TOD financing options,

see Appendix V: Innovative TOD Finance).

Local opportunities include revenue and general obligation bonds, special improvement districts, and other bond programs. Several federal sources are available with the most promising prospects being the Federal Transit Administration (FTA) and Federal Administration (FHA) funding programs. In particular, the FTA New Starts program is specifically designed to help finance the transit component of the North Fifth Street corridor. No single source will cover the entire cost, and it will be particularly important for the local agencies to work closely together to develop a funding strategy. This approach should utilize multiple sources in a way that will be mutually supportive and help leverage the maximum amount of funding available.

MARKET ASSESSMENT

In addition to developing a funding strategy, it will be important to have a land development element that can succeed in the market. A preliminary assessment of the proposed Vision and land use concept was conducted to begin answering this question.

The current and anticipated market conditions will offer a combination of opportunities and challenges as the City moves forward with implementation of the Vision. Opportunities include market demand shifting more toward higher density housing and an increasing interest in mixed used development. Barriers to overcome include a cloudy development future related to specific land uses and design requirements that will be expected in the corridor, as well as the potential risks associated with introducing a new mixed-used community form, which is essentially untested in the North Las Vegas area.

The potential barriers will need attention throughout the planning steps noted above. This market consideration will be especially critical as the district plans (Step 2) and parking standards (Step 3) are refined as well as the development of district master plans (Step 5).

Note: For more information on the market assessment, contact the City of North Las Vegas Planning Department (Phone: (702) 633-1515) for a copy of The North Fifth Street Corridor Transit Supportive Concept Plan Market Assessment, by Restrepo Associates (February 2006).

APPENDIX

- I. BACKGROUND INFORMATION
- II. PLANNING DISTRICT EXISTING CONDITIONS SNAPSHOT
- III. THE VISIONING PROCESS
- IV. FTA NEW STARTS
- V. INNOVATIVE TOD FINANCE
- VI. NATIONAL EXAMPLES OF SUCCESSFUL TOD

Note: A market analysis was completed for the North Fifth Street Corridor Transit Supportive Concept Plan and is available under separate cover. Contact the City of North Las Vegas Planning Department (Phone: (702) 633-1515) for a copy of The North Fifth Street Corridor Transit Supportive Concept Plan Market Assessment, by Restrepo Associates (February 2006).

I. BACKGROUND INFORMATION

DEMOGRAPHIC TRENDS

Strong population and employment growth in the Las Vegas Valley continues to drive rapid urbanization in the region. By 2035, the regional population is expected to grow from 1.5 million to almost 3 million, and regional employment is expected to grow from approximately 860,000 to 1.3 million jobs. North Las Vegas, which contains a substantial amount of vacant developable land, is expected to receive a large portion of this new growth. The North Las Vegas population is expected to grow from 147,877 in 2003 to 514,645 in 2020.

LAND USE

Industrial, residential, civic and commercial land uses currently exist in the North Fifth Street Corridor. There is also a fair amount of vacant land. In general, industrial uses such as paving,

equipment sales and leasing, trucking, warehousing, and distribution are concentrated in the southern portion of the project between Losee Road and Alexander Road.

Further north, along North Fifth Street between Craig Road and Deer Springs Way, is a combination of single-family residential, small scale commercial, educational, and industrial uses, as well as significant areas of vacant land.

The remainder of the study area along Deer Springs Way and Pecos Road is largely undeveloped; however, several properties are being prepared for development in the near future. In addition, a large portion of the corridor lying north of Deer Springs Way was recently sold at auction to a private development company by the Bureau of Land Management (BLM). Additional BLM land located between Pecos Road and Lamb Boulevard north

of the Beltway has been designated for a new UNLV campus.

Existing land uses in the corridor are not generally considered transit-supportive because of their low densities, auto orientation, and lack of accommodation for pedestrians and bicycles. However, the large amount of vacant land within the corridor offers significant potential for mixed use infill and other types of transit-friendly development.

RELEVANT PLANS AND STUDIES

This project builds upon a series of recent planning efforts by various entities that focused on different aspects of the North Fifth Street Corridor. A summary of these planning activities is included in the following pages as context for the concepts and strategies contained within this study.

VISIONING 2025 STRATEGIC PLAN

In order to address a wide range of planning needs, the North Las Vegas City Council adopted the *Visioning 2025 Strategic Plan* in early 2005. This document contains several policy directives that are pertinent to the North Fifth Street TSCP. Several key goals that provided guidance for this project include

LAND USE GOAL 7: ENCOURAGE NODAL DEVELOPMENT.

Rationale: The creation of nodal development that integrates commercial development with surrounding amenities and neighborhoods.

Strategies include:

- Incorporate appropriate nodal development within the various community master plans.
- Develop a walkable community with commercial nodes and amenities for residents.

LAND USE GOAL 8: ESTABLISH ENTRYWAYS, GATEWAYS, STREETSCAPES, AND OTHER FEATURES THAT DISTINCTIVELY DELINEATE VARIOUS AREAS OF THE CITY.

Rationale: Each part of the city should be identified distinctively through methods that also invoke the image people desire for that portion of the community.

Strategies include:

- Incorporate within the city's comprehensive and related community master plans appropriate locations and design standards for entryways, gateways, streetscapes and other features delineating various areas of the city.

LAND USE GOAL 9: CREATE APPROPRIATE MASTER PLANS FOR THE LAND USE ALONG MAJOR TRANSPORTATION CORRIDORS AND ARTERIALS THROUGHOUT THE CITY.

Rationale: Arterials, transportation corridors and surrounding areas need to be master planned to ensure that development occurs in a manner consistent with the city's long-term goals and plans.

Strategies include:

- Ensure that each development contributes to the long-term outcomes of the master plans.
- Use these master plans as a basis for economic development activities to recruit appropriate businesses and development along these corridors.
- Encourage neighborhood and citizen participation in the development of these master plans.
- Give particular attention to master planning requirements where major intersections occur.

TRANSPORTATION GOAL 1:
PROVIDE GREATER MOBILITY
THROUGH THE DEVELOPMENT
OF MASS TRANSIT
CORRIDORS.

Rationale: The city of North Las Vegas must encourage, identify and plan for transit corridors in order to provide all residents greater accessibility to businesses, employment centers, shopping, schools and community amenities.

Strategies include:

- Actively seek the development of North Fifth Street as a mass transit corridor.
- Require higher density land use and local development along the rail corridor.
- Create alternatives for north-south and east-west transportation routes.

AIR QUALITY GOAL 2:
PROMOTE AND ENCOURAGE
ALTERNATIVES TO SINGLE
PASSENGER TRAVEL.

Rationale: To promote cleaner air, there must be alternatives to those modes of transportation that disproportionately contribute to the city’s air quality problems.

Strategies include:

- Publicize and encourage mass transit and carpooling efforts.
- Encourage the use of bike trails and walking as an alternative to driving.

OTHER PIVOTAL CENTERS
GOAL 2: CREATE A NORTHERN
DEVELOPMENT AREA.

Rationale: In order to maximize/capitalize on the growth opportunities provided by development of key projects (e.g., UNLV and Veterans Administration Hospital), the city of North Las Vegas should promote the development of a northern core area.

Strategies include:

- Ensure that the transportation routes of the North Fifth Street mass transit corridor and 215 Beltway are integral parts of the northern development area.
- Maximize the location of hospital site and UNLV campus to create a university-based research park.
- Encourage and create shopping, restaurants, business and entertainment zones.

*1999 COMPREHENSIVE
PLAN – CITY OF NORTH
LAS VEGAS*

The City of North Las Vegas Comprehensive Plan is currently being updated and revised. The TOD land use principles and implementation strategies outlined in the North Fifth Street TSCP will be incorporated into the updated Comprehensive Plan.

*REGIONAL FIXED
GUIDEWAY PROJECT*

The Regional Transportation Commission of Southern Nevada (RTC) is currently managing transit service and facilities in North Las Vegas, including the MAX bus rapid transit (BRT) on North Las Vegas Boulevard. The RTC is also exploring options for the construction of a Regional Fixed Guideway system to provide improved transit connections between North Las Vegas, downtown Las Vegas, the Resort Corridor, and the City of Henderson. This high speed, high capacity service would be operated primarily within a dedicated right-of-way and would use either BRT, LRT (light rail transit), or DMU (diesel multiple unit train) technology.

Regional Fixed Guideway service is slated to begin as early as 2013. The proposed alignment for North Las Vegas includes North Fifth Street between Owens Avenue and Deer Springs Way, Deer Springs Way between North Fifth Street and Pecos

Road, and Pecos Road north of Deer Springs to the I-215 Beltway and the proposed UNLV campus.

*NORTH FIFTH STREET
CORRIDOR STUDY*

Nevada Department of Transportation prepared a Northeast Corridor Study for I-15 in 2002. This study recommended that North Fifth Street be extended north to south across the I-15 corridor to create a continuous north-south arterial street connecting the Northern Beltway with the cities of North Las Vegas and Las Vegas.

In 2004, the City of North Las Vegas and the RTC completed the North Fifth Street Corridor Study, which evaluated potential design alternatives for North Fifth Street that could accommodate significantly traffic volumes as well as transit. In particular, this study provides a basis for the North Fifth Street TSCP.

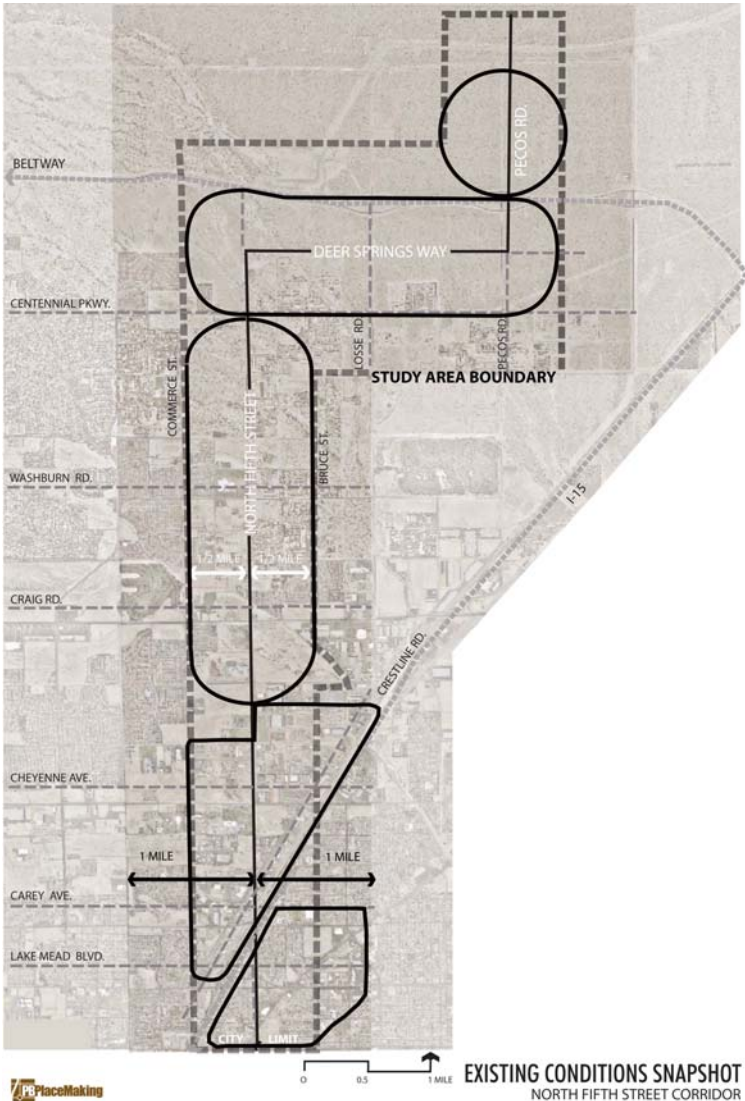
UNLV CAMPUS PLAN

A master plan is currently being developed for the proposed UNLV campus in North Las Vegas. It is anticipated that the campus would have a student population of 25,000 and cover approximately 640 acres.

II. PLANNING DISTRICT EXISTING CONDITIONS SNAPSHOT

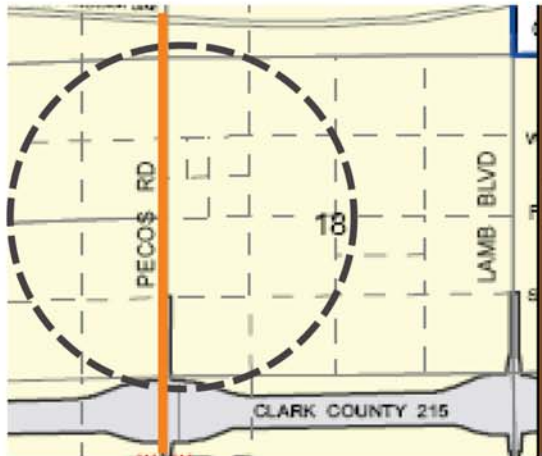
The following pages briefly summarize and illustrate the existing conditions in each of the proposed planning districts.

Each district “snapshot” illustrates the current planned land uses and planned street network. An aerial image of the each district is also included. Date of aerial photography is 2004.



UNIVERSITY DISTRICT EXISTING CONDITIONS

OPEN LAND / FUTURE UNIVERSITY DISTRICT



EXISTING ZONING

Planned Land Uses:

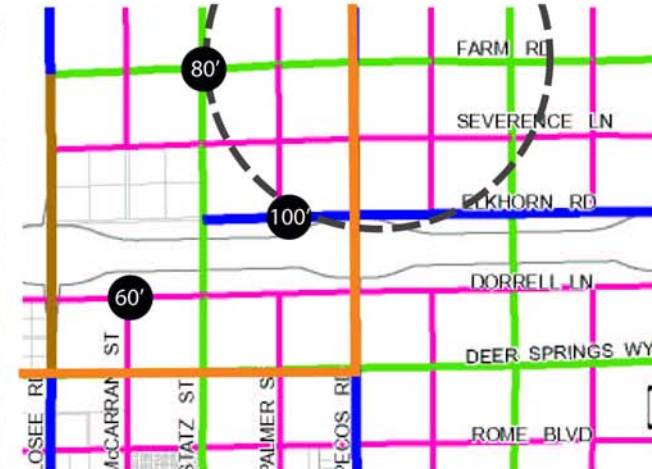
- UNLV Campus



EXISTING AERIAL

Aerial Context:

- Open land owned by UNLV



EXISTING RIGHT OF WAY WIDTHS

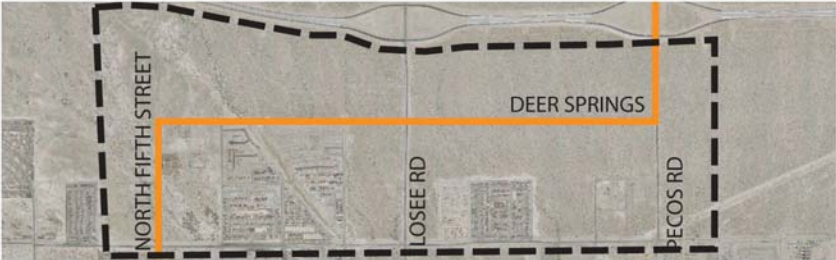
Planned Street Network:

- Pecos Road is planned to cross the Beltway and provide arterial access to lands north of the Beltway

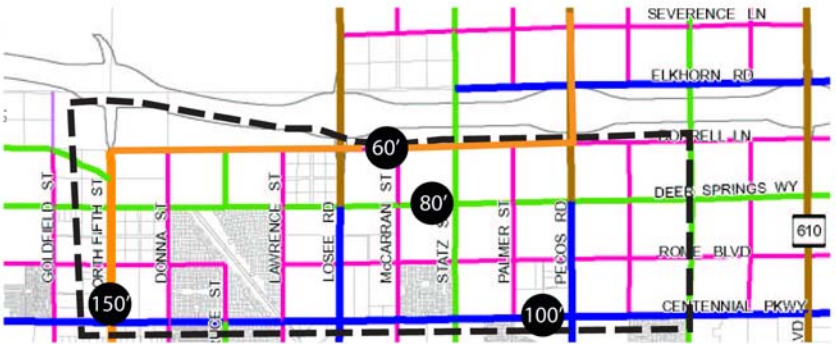
DEER SPRINGS DISTRICT EXISTING CONDITIONS



EXISTING ZONING



EXISTING AERIAL



EXISTING RIGHT OF WAY WIDTHS

Planned Land Uses:

- Residential and neighborhood land uses pushing north
- Land south of Beltway interchanges and west of Pecos Road pending BLM land sale

Aerial Context:

- Mostly open land
- Residential development pushing north towards Beltway

Planned Street Network:

- Street grid pattern with arterials 1/2 mile apart
- Local streets in grid pattern within arterial framework
- Existing subdivisions are not required to maintain local street grid network

APPENDIX II: PLANNING DISTRICT EXISTING CONDITIONS SNAPSHOT

-  COMMERCIAL NEIGHBORHOOD
-  PLANNED UNIT DEVELOPMENT
-  SINGLE FAMILY HOUSING
-  RANCH ESTATES
-  COMMERCIAL / RETAIL
-  INDUSTRY
-  CLARK COUNTY ISLAND



EXISTING ZONING

Planned Land Uses:

- Primarily Residential and commercial development
- Neighborhoods transition to industrial uses south of Craig Road

NORTH FIFTH STREET DISTRICT EXISTING CONDITIONS



EXISTING AERIAL

Aerial Context:

- Grid development pattern intersected by natural and managed stormwater management facilities

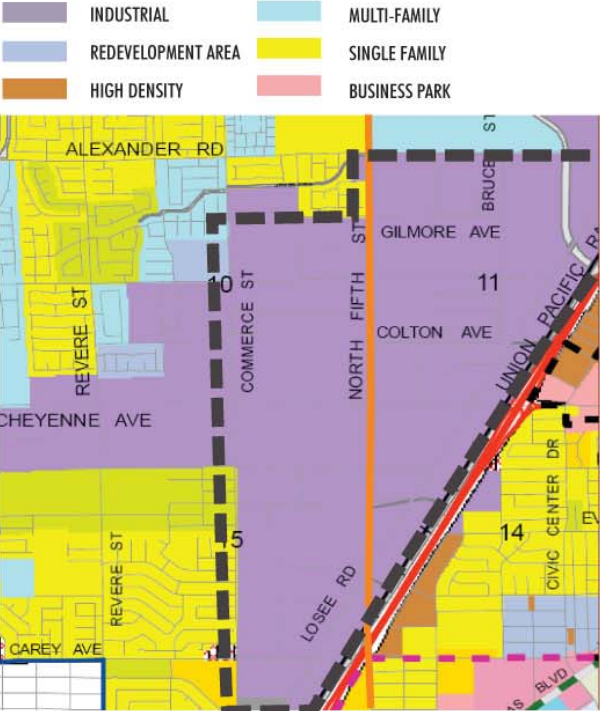


EXISTING RIGHT OF WAY WIDTHS

Planned Street Network:

- Gap in North Fifth Street north of Ann Road
- Local grid inconsistent within arterial framework

INDUSTRIAL DISTRICT EXISTING CONDITIONS



EXISTING ZONING

Planned Land Use:

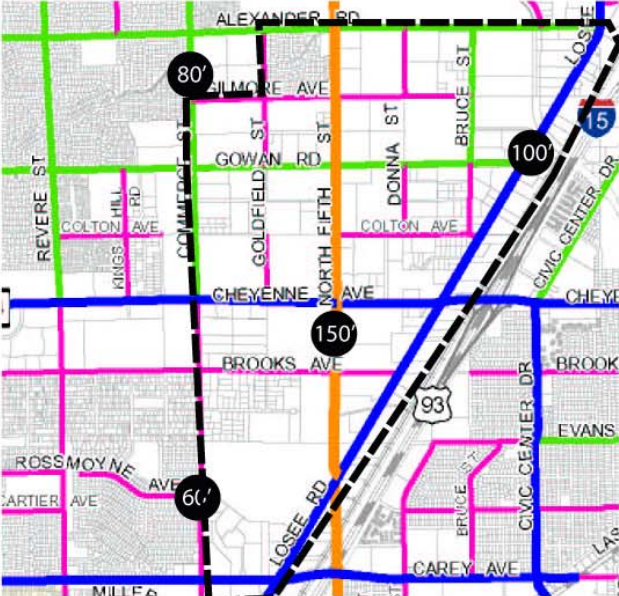
- North Fifth Street provides north/south circulation through center of industrial district
- Contiguous industrial area bordered by business parks and residential neighborhoods



EXISTING AERIAL

Aerial Context:

- I-15 divides industrial uses from residential development to the southwest
- Large area of vacant land north of Gowan Road

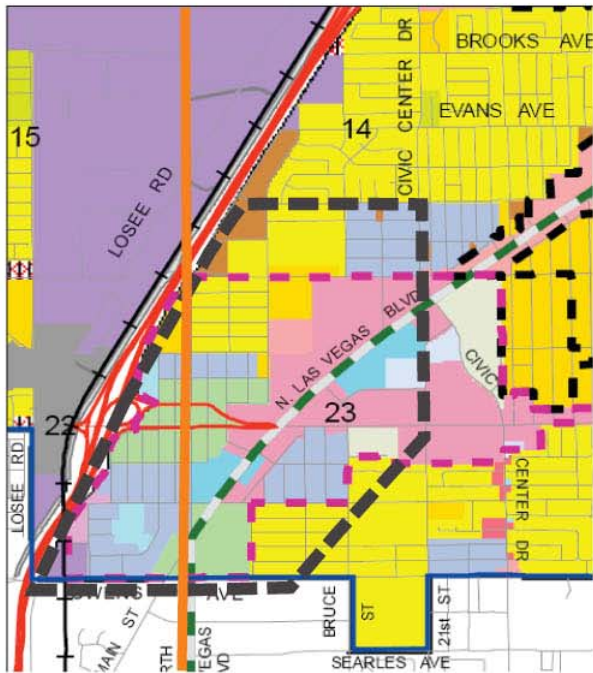


EXISTING RIGHT OF WAY WIDTHS

Planned Street Network:

- Losee Road and I-15 divide grid
- Cheyenne and Carey Ave. provide access to I-15 for industrial uses

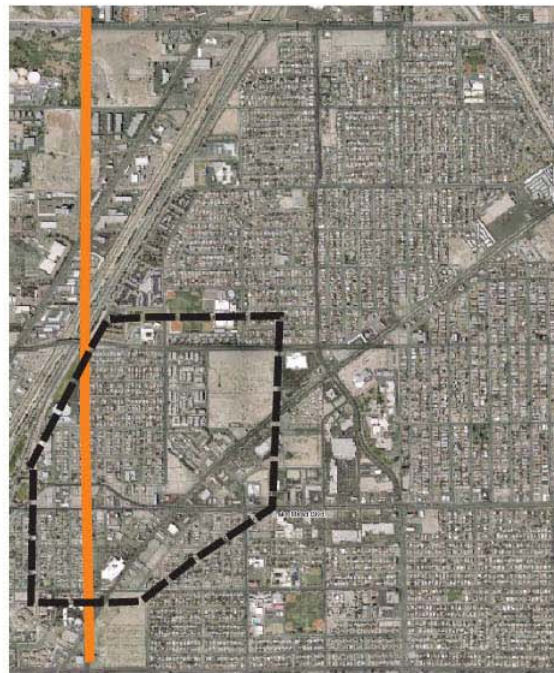
APPENDIX II: PLANNING DISTRICT EXISTING CONDITIONS SNAPSHOT



EXISTING ZONING

Planned Land Uses:

- Area designated for redevelopment
- Multi-family housing, office/business and redevelopment areas border North Fifth Street

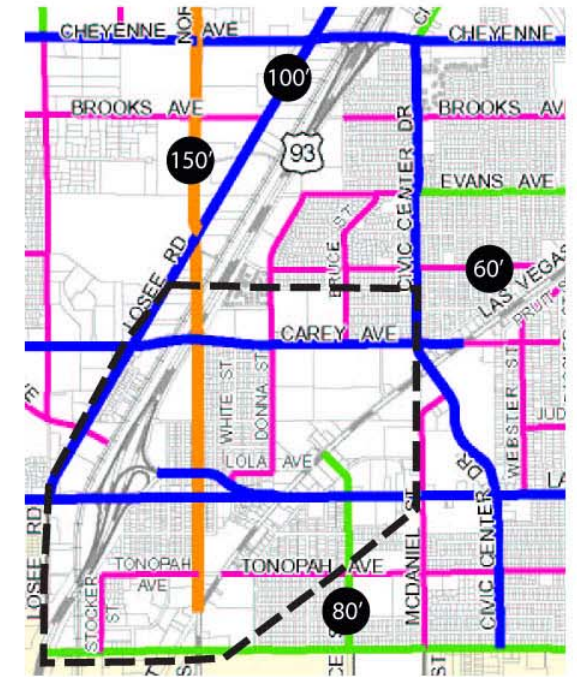


EXISTING AERIAL

Aerial Context:

- Residential neighborhoods are dominant development pattern with commercial uses along Las Vegas Blvd

GATEWAY DISTRICT EXISTING CONDITIONS



EXISTING RIGHT OF WAY WIDTHS

Planned Street Network:

- Major arterials frame redevelopment areas

III. THE VISIONING PROCESS

The North Fifth Street vision was developed using four steps and several key ingredients.

Step 1: Consider key city goals from the *Visioning 2025 Strategic Plan*.

- Nodal development
- Transit
- Non-automotive transportation
- A northern development area

Step 2: Apply the TOD Principles.

- Greater density than the community average
- A mix of uses
- A quality pedestrian environments
- Defined centers

Step 3: Involve stakeholders in applying the goals and principles to create alternative visions for the corridor.

Step 4: Create a Corridor Vision based upon the alternatives.

NORTH FIFTH STREET TOD WORKSHOPS

Creation of the North Fifth Street Corridor Vision began with several workshops involving city staff and stakeholders during the late spring and summer of 2005. These work sessions were used to

- Review existing conditions;
- Introduce TOD principles; and
- Identify how TOD could be used a variety of different ways in response to the range of development patterns in the corridor.



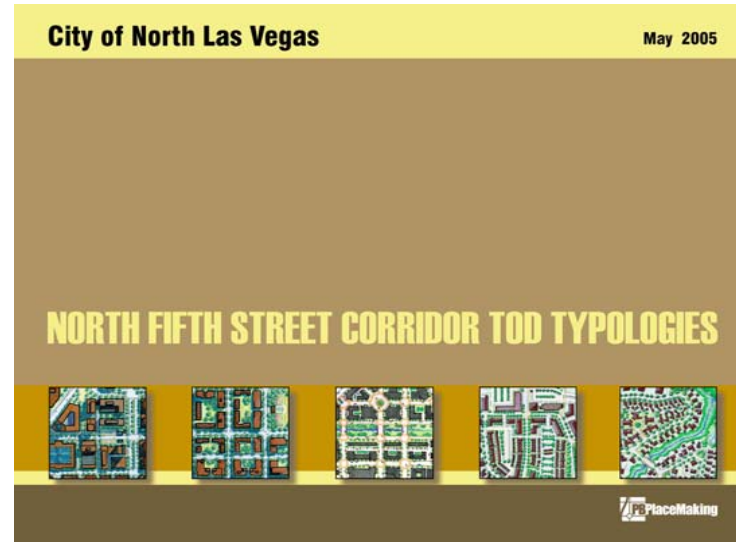
During the workshops, participants gathered in small groups with maps of the North Fifth Street Corridor study area. The participants were first asked to discuss where potential transit stations should be located. The groups were then asked to describe what types of neighborhoods would develop and grow around the station areas. To facilitate this discussion, participants were asked to discuss and select the most appropriate TOD typologies for each station area.

THE NORTH FIFTH STREET CORRIDOR TOD TYPOLOGIES

Transit supportive and pedestrian friendly communities can, and should, all be unique – responding to a community’s character. Recognizing this, five TOD typologies were created to represent a potential range of densities, land uses, and neighborhood characters appropriate to portions of the North Fifth Street Corridor.

The five TOD Typologies are illustrated on this page and the following page.

Each Workshop participant referred to the five “TOD Typologies” and selected the typology they felt best applied to each proposed station area in the corridor.



Urban Downtown

Land Use Mix: Office Center, Urban Entertainment, Multifamily Housing, Retail.
Minimum Housing Density: 60 Units per Acre.
Regional Connectivity: High - Hub of radial System.
Frequency: 10 Minutes or Less.

North Fifth Street Corridor TOD Typologies 1



Suburban Center

Land Use Mix: Primary Office Center, Urban Entertainment, Multifamily Housing, Retail.
Minimum Housing Density: 50 Units per Acre.
Regional Connectivity: High - Access to Downtown Subregional Hub.
Frequency: 10 Minutes Peak - 10-15 Minutes Off Peak.

North Fifth Street Corridor TOD Typologies 3



Urban Neighborhood

Land Use Mix: Residential, Retail, Class B Commercial.
Minimum Housing Density: 20 Units per Acre.
Regional Connectivity: Medium - Access to Downtown Subregional Circulation.
Frequency: 10 Minutes Peak - 20 Minutes Off Peak.

2 PBPlacemaking



Suburban Neighborhood (medium density)

Land Use Mix: Residential, Neighborhood Retail, Local Office.
Minimum Housing Density: 12 Units per Acre.
Regional Connectivity: Medium - Access to Suburban Centers and Downtown.
Frequency: 20 Minutes Peak - 30 Minutes Off Peak.



Suburban Neighborhood (low density)

Land Use Mix: Residential, Neighborhood Retail.
Minimum Housing Density: 7 Units per Acre.
Regional Connectivity: Low - Access to a Center.
Frequency: 25-30 Minutes, Demand Responsive.

North Fifth Street Corridor TOD Typologies 5

RESULTS OF THE WORKSHOP

Five separate groups developed alternative visions for future land use and development within the North Fifth Street Corridor (see following pages). Each group had a variety of ideas for future development in the corridor. However, the five alternatives shared many common ideas. The primary outcome of the visioning process included

- **Corridor Alignment.** The North Fifth Street and Pecos Road portions of the corridor were considered to be fixed, but the east-west connection was not. The majority of the vision alternatives chose the Deer Springs Way alignment for its potential TOD opportunities on the north and south sides of the street. Centennial Parkway was also identified as a possible alternative route. One group envisioned a loop at the northern end of the TOD corridor with a segment



paralleling the Beltway along Farm Road between Pecos Road and North Fifth Street.

- **Density.** Except for higher density infill immediately surrounding future transit stations, the density recommendations from the five groups were to maintain densities, or only raise them incrementally, along North Fifth Street. In contrast, the land along Deer Springs Way was regarded as the portion of the corridor for which higher densities, along with a mixture of land uses, were the most appropriate. Consistent with on-

going plans for the UNLV Campus and Veterans Administration Hospital, higher densities were also anticipated along Pecos Road.

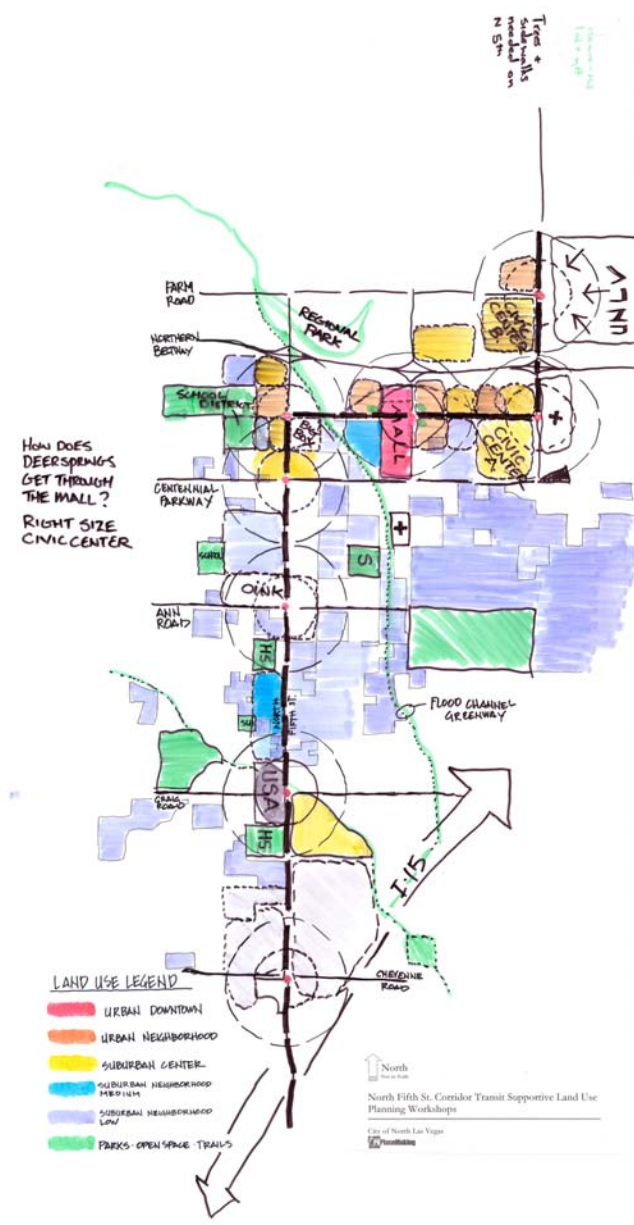
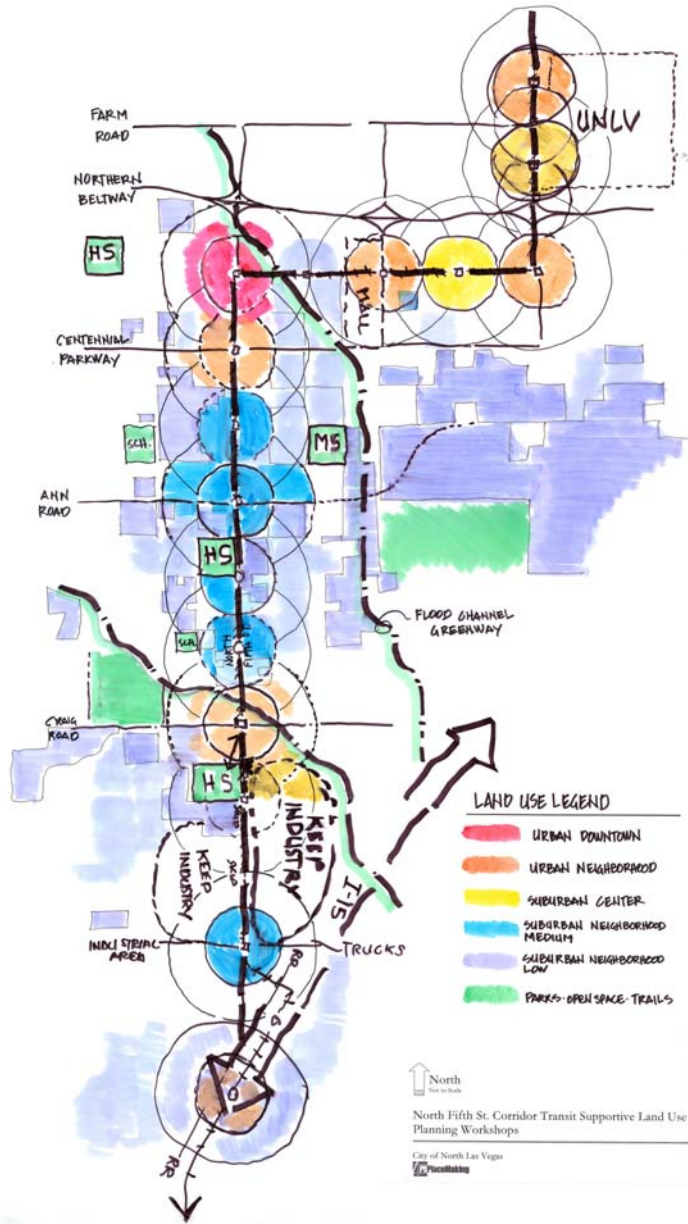
- **Land Use.** All of the alternatives favored a mix of land uses along the corridor. Concentrations of residential/commercial mixed use were identified near potential transit stations. Because North Fifth Street already has a considerable amount of lower density single family development, the alternatives tended to call for infill with compatible uses and densities as depicted in the

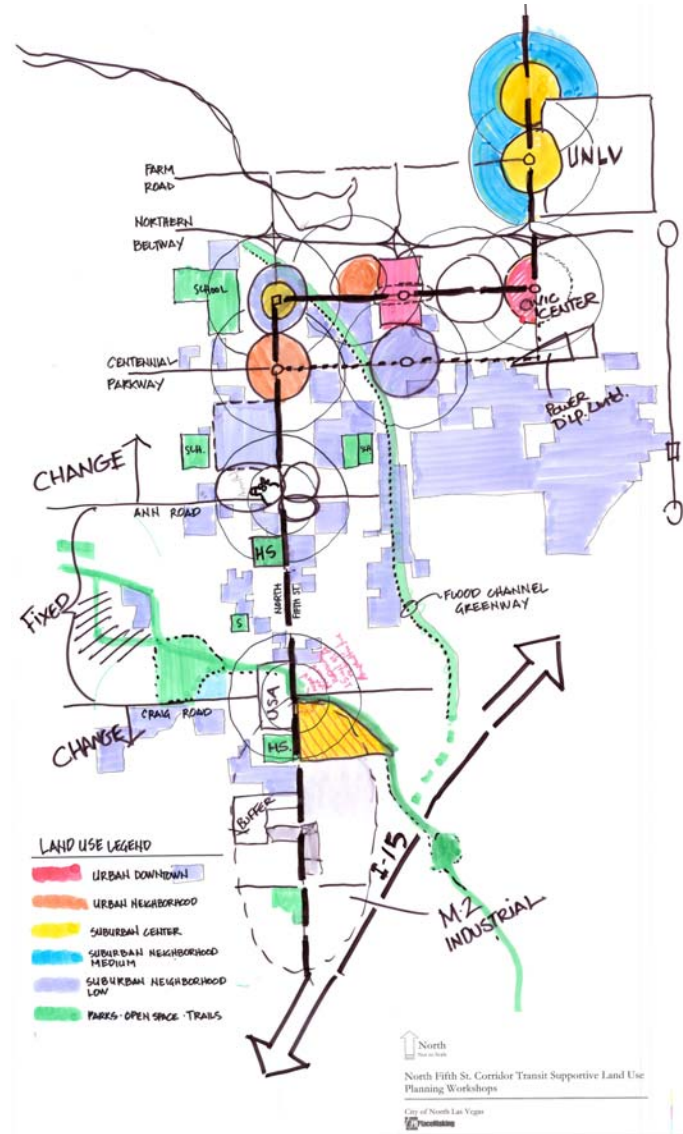
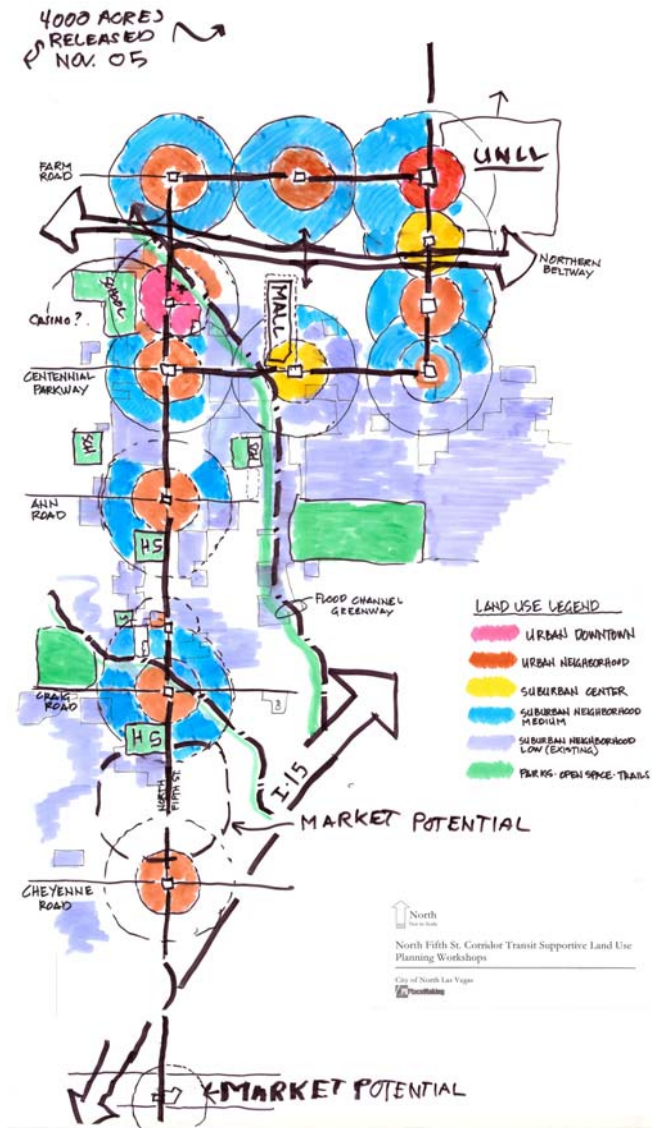
Suburban Neighborhood (Low and Medium Density) TOD Typologies. Deer Springs Way was identified for a higher percentage of mixed uses offered by the Urban Downtown, Urban Neighborhood, and Suburban Center TOD Typologies. Several groups identified the potential for a new civic center/city hall located in the vicinity of the planned Veterans Administration Hospital near the Deer Springs Way and Pecos Road intersection.

Using the ideas and concepts presented in the Vision alternatives, the consultant and city staff created a preferred Vision, which incorporated the key concepts from the alternatives.

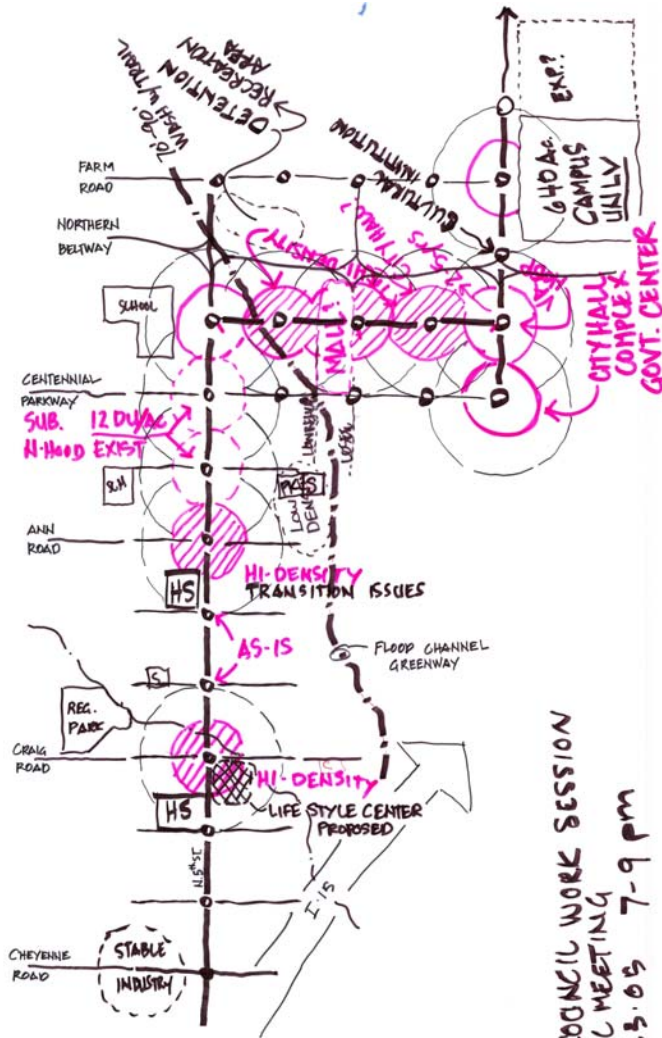
- **Pedestrian Environment.** Although specific pedestrian design issues were not addressed at this broad level, the groups all acknowledged the importance of connecting a variety of destinations including commercial areas, schools, parks, and trails.
- **Defined Centers.** The alternative visions all recognized the importance of having defined centers around transit stations. All of the groups called for the higher densities and greatest mix of uses near the transit stations.

APPENDIX III: THE VISIONING PROCESS





APPENDIX III: THE VISIONING PROCESS



CITY COUNCIL WORK SESSION
 PUBLIC MEETING
 5.23.05 7-9 PM

IV. FTA NEW STARTS

FEDERAL EVALUATION OF LAND USE AND TRANSIT

The current and future land use framework for the North Fifth Street Corridor will be evaluated by the Federal Transit Administration (FTA) in determining the merits of the project for federal “New Starts” funding.

In evaluating the land use potential for a successful New Starts transit project, FTA looks at projects based on three categories (existing land use, transit-supportive plans and policies and performance and impacts of policies) and applies eight transit-supportive land use measurement factors on a sliding scale. The closer the project is to moving into construction, the higher the standard. The significance for the corridor is that the bar for a high

FTA NEW STARTS LAND USE RATING	
Expected Performance of Plans & Policies for a High FTA Rating	
By the end of Preliminary Engineering	• Corridor & station area conceptual plans have been developed
	• TOD zoning recommendation prepared for individual stations
	• Transit agency is proactively working with local governments & developers
	• Transit-supportive development is occurring in the corridor
By the end of Final Design	• Station area plans adopted by local governments
	• TOD zoning adopted by local governments
	• Joint development program and appropriate financial tools in place
	• A number of TOD development proposals in station

rating will literally be a moving target as the project progresses through the development cycle.

The table above summarizes what FTA is seeking in order for a project to get a high land use rating. For

projects seeking to have the most competitive New Starts rating, it also serves as a useful guide for what level of planning is needed by when.

The eight factors FTA evaluates in rating projects for land use are

- Existing land use.
- Growth management.
- Transit-supportive corridor policies.
- Supportive zoning regulations near transit stations.
- Tools to implement land use policies.
- Performance of land use policies.
- Potential impact of transit projects on regional land use.
- Other land use considerations.

EXISTING LAND USE

This factor assesses the extent to which existing station area population and employment are at high levels and the presence of high-trip generators in the mix of land uses. The character of the station area and presence of pedestrian-friendly development, the existing

parking supply and regional parking policies are also considered.

GROWTH-MANAGEMENT

This factor assesses the extent to which urban containment and growth management policies are aimed at concentrating development in areas served by transit. The factor also considers concentration of development around activity centers and land conservation and management.

TRANSIT-SUPPORTIVE CORRIDOR POLICIES

This factor encompasses plans and policies that support transit-oriented land use patterns within transit corridors and station areas. Public plans and policies and private/institutional initiatives that support transit-oriented land use patterns within transit corridors and station areas. Plans and policies to increase station-area development; plans and policies to enhance the

transit-friendly character of development; and parking policies will also be considered.

SUPPORTIVE ZONING REGULATIONS NEAR TRANSIT STATIONS

Zoning ordinances that permit increased densities and mixed uses in transit station areas, require pedestrian-friendly design, and reduce parking requirements to achieve transit-supportive development in station areas are sought.

TOOLS TO IMPLEMENT LAND USE POLICIES

This factor assesses the extent transit agencies and local jurisdictions are developing tools (in addition to zoning) to promote and leverage transit-oriented station area development, including: outreach to government agencies and the community in support of land-use planning; regulatory and financial

incentives to promote transit-supportive development; and activities to engage the development community in station area planning and transit-supportive development.

PERFORMANCE OF LAND USE POLICIES

This factor assesses demonstrated cases of development affected by transit-oriented policies in station areas or the region. Factors include recent examples of TOD in station areas; examples of transit-supportive development elsewhere in the region; and the existing pattern of new and existing development consistent with the historic patterns of walkable neighborhoods.

POTENTIAL IMPACT OF TRANSIT PROJECTS ON REGIONAL LAND USE

This factor assesses the extent to which the proposed New Starts project, in conjunction with adopted and proposed land use policies, will

impact development patterns in the region. The factor also considers the adaptability of station area land for development and the environment for economic development in the corridor.

OTHER LAND USE CONSIDERATIONS

This optional factor allows project sponsors to explain other factors which influence local and regional land use policies, plans and implementation. Examples include economic development programs or serving special trip generators.

The Transit Supportive Concept Plan is one of the first steps towards increasing the opportunity for a more favorable New Starts rating. Transit supportive land use design policies that can help implement TOD in corridor station areas are some of the fundamental building blocks in obtaining FTA funding for mass transit projects.



Beaverton Creek, Portland OR
Transit-supportive land use strategies played a critical role in the federal government's decision to fund Portland's Westside light rail.

V. INNOVATIVE TOD FINANCE



The North Fifth Street Transportation Corridor represents a significant opportunity for the City of North Las Vegas to master plan and design the evolution of a section of the City still in the early stages of development. The vision of the corridor includes a backbone of transportation infrastructure to move the maximum number of individuals in the most fuel and time efficient manner possible, as well as other infrastructure elements including streets, sidewalks, curbs and gutters, etc.

This section identifies and briefly describes potential funding tools the

City may consider as it assesses its options for financing infrastructure improvements within the transportation corridor project. This summary includes brief descriptions of state and local financing vehicles as well as potential federal funding opportunities.

MUNICIPAL FINANCING

In a white paper discussion by Jennifer Stern, Swendseid and Stern L.L.C., titled *Municipal Finance in Nevada*, a variety of capital financing methods typically available to local governments were described. The different categories of obligations by security included the following

- Revenue obligations
- General obligations
- General obligations (additionally secured with pledged revenues)
- Certificates of participation
- Special assessment obligations

- Tax increment or redevelopment obligations
- Economic development revenue bonds

Each is briefly described below. Each of the funding techniques must be examined in context of the improvements the City is seeking to fund. Some of the options listed above may not be appropriate for every infrastructure funding need identified.

REVENUE OBLIGATIONS

Revenue Obligations are obligations secured only by a designated “special” fund, which consists of monies from a designated source not derived from ad valorem taxation. Frequently, such obligations are secured by an enterprise fund’s revenues (e.g., an airport revenue bond issue or a water and sewer revenue bond issue), but sometimes revenue bonds are secured by excise taxes—for example, highway

improvement revenue bonds issued by counties and by the State are payable from motor vehicle fuel taxes.

Generally, revenue bonds may be authorized by an ordinance or resolution of the governing body. No election is typically required.

The Regional Transportation Commission of Southern Nevada has used revenue obligations extensively in its financing of transportation related capital improvements.

GENERAL OBLIGATIONS

General Obligations are secured by the full faith, credit and taxing power of the issuer. In most cases the issuance of long-term general obligations requires the approval of both the Debt Management Commission (“DMC”) of the County and approval of the electorate.

All general obligation bonds in Nevada are “limited tax” obligations – in most other states, general obligation bonds

are payable from taxes “without limitation as to rate or amount;”- however, in Nevada, the maximum ad valorem tax that can be levied for all purposes by all overlapping entities is \$3.64 per \$100.00 of assessed valuation (subject to certain exceptions) by statute and \$5.00 per \$100.00 under the State Constitution, and this includes levies for bonded indebtedness. There is currently \$0.0200 permitted outside of the \$3.64 cap.

General obligation bonds in Nevada can be “limited limited” tax obligations. These would be bonds to which the full faith and credit of the entity issuing the bonds is pledged, including the entities taxing power, but for which the issuer does not have the authority to levy an ad valorem tax exempt from the operating tax caps. The most frequent example of this is a medium-term obligation evidenced as a medium-term bond or note (with a maximum repayment term of ten years).

GENERAL OBLIGATIONS (ADDITIONALLY SECURED WITH PLEDGED REVENUES)

“Double Barreled” Obligations in Nevada are revenue-backed general obligation securities. These are securities to which the full faith and credit and taxing power of the issuer is pledged, but the debt service on which is paid from a designated revenue source other than ad valorem taxes. The revenue source is also pledged to secure repayment of the bonds. While the taxing power is pledged to the bonds, usually the only time the taxing power would be used for the bonds would be in an emergency situation – e.g., a revenue backed general obligation water bond might be paid from taxes if the water treatment facility went out of service and, consequently, the municipality was unable to adequately bill its residents for water.

Under NRS 350, to issue revenue-backed general obligations, an issuer

must first receive approval of the DMC. The governing body of the issuer then adopts a resolution of intent by a two-thirds majority vote authorizing the publication of two notices in a newspaper of general circulation in the municipality. One notice states that it is the issuer's intent to issue the revenue backed general obligation bonds without an election, based on a finding by the governing body that revenues (rather than ad valorem taxes) will be sufficient to pay the obligations. The property owners and voters in the municipality have 90 days during which to petition the governing body to hold an election and, if sufficient number petitions the governing body, an election must be held before the obligations may be issued. The other notice must be published at least 10 days in advance of a public hearing held before the governing body. If express statutory authorization exists, this method of financing may also be used when the proceeds of certain non ad valorem taxes are received in an amount sufficient to pay debt service.

CERTIFICATES OF PARTICIPATION

Certificates of Participation ("COP's") are similar to revenue bonds in that the payments of principal of interest are typically funded from a designated revenue fund. The primary difference between revenue bonds and COP's lies in the security structure – the facilities being financed under a COP's structure are actually owned (for legal purposes) by a trustee bank who then leases the facilities to the governmental entity. COP's payments are lease or "installment lease" payments and COP's investors purchase an interest in the lease cash flows; therefore COP's payments may not be considered debt payments under State law. Washoe County used a COP's financing to fund its regional public safety training facility in 2000. If project title issues or legal debt constraints are issues in a financing, COP's may offer a financing alternative – otherwise, the additional complexity of COP's compared to revenue bonds generally results in COP's requiring additional costs of

issuance and generally having slightly higher interest rates.

SPECIAL ASSESSMENT OBLIGATIONS

These are securities payable from "special" assessments levied against property within a municipality that is "specially" benefited by installation of the improvements financed with the bonds. Most frequently, these types of bonds are used, for example, on a street paving project or sidewalk project. A municipality may pave several blocks of street and assess property owners whose property fronts on the street for the cost of the paving. If the municipality decides to make the assessments payable over a term of years rather than immediately, the municipality can issue bonds secured by payments of special assessments made by the property owners. In Nevada, special assessment bonds can be additionally secured by a promise by the municipality to pay the bonds from its general fund or from ad valorem taxes levied throughout the

municipality. Thus, if a particular property owner defaults in his assessment, during the two or three years it takes to foreclose on the property the bonds would not go into default – rather, the municipality would pay principal and interest on the bonds and would reimburse its general fund for the money so expended after the foreclosure action has been completed.

The use of Benefit Assessment Districts is generally defined in Chapter 271 of the Nevada Revised Statutes, and is otherwise known as the “Consolidated Local Improvement Laws.” This law applies to counties, cities and unincorporated towns and prescribes procedures for the establishment of an assessment district by eligible municipalities. In the urban portion of Clark County, the County and the cities of Henderson, Las Vegas and to a lesser degree, North Las Vegas have all made use of the Benefit District Assessment funding vehicle as a component of their infrastructure financing. The current permissible uses of this financing vehicle are

Permissible Uses of Benefit Assessment District		
* Commercial area vitalization;	* Sanitary sewer;	* Transportation;
* Curb and gutter;	* Security wall;	* Underpass;
* Drainage;	* Sidewalk;	* Water;
* Off-street parking	* Storm sewer;	* Telephone (cities only)
* Overpass;	* Street;	* Electrical (cities only)
* Park;	* Street beautification;	

limited to the projects described in the table *Permissible uses of benefit Assessment District*.

The Benefit Assessment District funding tool, if the assessments are spread to the properties that benefit from the program on a reasonable and equitable basis, can be very effective at funding public facilities.

DEVELOPER SPECIAL IMPROVEMENT DISTRICTS

Another use of the Benefit Assessment District financing laws defined above involves similar circumstances for the development of improvements involving one or a small number of private owners who intend on developing their property for residential, commercial, industrial or other beneficial uses. These are

commonly referred to as Developer Special Improvement Districts and the municipalities generally establish specific guidelines under which these infrastructure development options may be applied.

The City of North Las Vegas does not currently have any additional guidelines/requirements specific to Developer Special Improvement Districts. Developers are allowed to fund infrastructure improvements pursuant to NRS 271.

TAX INCREMENT OR REDEVELOPMENT OBLIGATIONS

Tax increment or redevelopment obligations are generally considered special obligations. In Nevada, these

obligations are payable from taxes allocated to a redevelopment agency. If a city has created a redevelopment district, a redevelopment plan may contain a provision that each of the taxing entities in the redevelopment area are allocated only the portion of the ad valorem taxes which would be produced by the rate levied in the redevelopment area based upon the total sum of assessed valuation as shown on the assessment roll last equalized before the effective date of the ordinance approving the redevelopment plan. The portion of the taxes levied in each year in excess of that amount is paid into a special fund of the redevelopment agency to pay debt service on the redevelopment agency's bonds.

ECONOMIC DEVELOPMENT REVENUE BONDS

These are bonds issued by cities (NRS 268.512 - 268.568), counties (NRS 244A.669 to 244A.763), or the State (NRS 349.400 to 349.670) for private companies, including nonprofit and for

profit companies. They do not count against a municipality's debt limit but are payable solely from monies furnished by the company.

BOND BANKS

Another financing method available to qualifying local governments is through access to the State of Nevada Bond Bank and the Clark County Bond Bank. The significant benefit to those municipalities that do access the Bond Banks is the reduced interest cost that would otherwise be paid by borrowing through the Bond Banks, any bonds issued are based upon the rating strength of the State or Clark County rather than the municipality.

NEVADA MUNICIPAL BOND BANK

The State's Bond Bank Program was established to assist municipalities in undertaking local projects which foster and promote the protection and preservation of the property and natural resources of the State by

making loans to such municipalities which might not be otherwise available or which might be available only at prohibitive interest rates. The Bond Bank was established in 1981.

State general obligation securities issued under the Bond Bank Act are not subject to the Constitutional Debt Limitation. The Bond Bank Act provides a statutory limitation of \$1.8 billion of State general obligation securities which may be outstanding at any time to finance lending projects. This limit may be increased or decreased by the State Legislature. The Board of Finance must approve the issuance of State general obligation and revenue securities under the Bond Bank Act.

The State Treasurer is the Administrator of the Bond Bank. Bond Bank Act loans are made by the Administrator by purchasing securities which are obligations of one of the State's municipalities (i.e., cities, counties, districts and certain water authorities organized as political subdivisions.). A municipality must receive whatever authorization is

required by statute, including, in some cases, approval of its electorate, before it may issue general obligation securities, and such securities are subject to all statutory restrictions, including local indebtedness limitations.

The Bond Bank Act does not, in and of itself, authorize the issuance of general obligation securities by the municipalities. Both State general obligation securities issued under the Bond Bank Act and municipality general obligation securities purchased in connection with a lending project may, but need not be, additionally secured with other pledged revenues.

The Bond Bank Act also authorizes the Bond Bank to issue revenue bonds of the State to purchase local government obligations for any purpose permitted by law (subject to certain exceptions). Bonds issued to acquire such local government obligations would not be general obligations of the State, but would be secured solely by repayments of local bonds and certain

revenues distributable by the State to the local governments.

STATE OF NEVADA AND CLARK COUNTY BOND BANKS

The County's Bond Bank Program was established pursuant to the County Bond Law for the purpose of financing a municipal bond bank for local governments in the County by making loans to such municipalities which might otherwise be available at higher interest rates.

The Bond Bank may finance certain infrastructure projects for other local governments located wholly or partially in the County. The type of security the County must receive in connection with financing of a project depends on the nature of the project and of the municipality. Pursuant to the Bond Bank Ordinance, in order to finance a project for a municipality, the County Bond Bank must receive from the municipality the following

1. General obligations payable from ad valorem taxes that are approved by the voters of the municipality for capital improvement of a library or park;
2. General obligations payable from ad valorem taxes that are approved by the voters of the municipality or are approved pursuant to subsection 3 of NRS 350.020 for a capital improvement for fire protection, police protection or a public building or, for municipalities whose governing body is the Board of County Commissioners, a capital improvement of a water or sanitary sewer system; or
3. Revenue obligations of SNWA for capital improvements for SNWA that are payable from revenues of:
 - a. the water system of SNWA;
 - b. one or more of the municipalities that are members of SNWA; or
 - c. any combination of the sources described in a and b above.

Given the specific restrictions under which the County Bond Bank is available, each financing opportunity must be evaluated on a case by case basis to determine whether the County Bond Bank is an option that may be pursued.

MAJOR FEDERAL FUNDING SOURCES FOR TRANSIT INVESTMENT

As the Clark County Regional Transportation Commission (the “RTC”) and the City of North Las Vegas proceed with the implementation of mass transit improvements for the North 5th Street Corridor, federal funding will be a critical component of the financial plan. This section describes the major federal funding programs for transit, the federal funding authorization levels for each program and describes how the federal funds may be leveraged within a financing strategy.

Federal funding for transportation typically operates under six-year authorization cycles. The latest six-year federal authorization bill was recently signed into law in August, 2005. On August 10th, 2005, President Bush signed into law the new federal funding bill reauthorizing federal

funding for highway and transit improvements across the U.S. through 2009. The Safe, Accountable, Flexible and Efficient Transportation Equity Act – A Legacy for Users (SAFETA-LU) provides \$286.4 billion in guaranteed funding for federal surface transportation programs over a six year period; FY 2004 through FY 2009. Of this amount, \$52.6 billion in federal funding is authorized for transit programs.

Most federal funding for transit flows from programs administered by the Federal Transit Administration (FTA). However, federal legislation provides increased flexibility to localities regarding the use of certain traditional highway funding programs that may be applied to transit that are administered by the Federal Highway Administration (FHWA). The relevant FTA and FHWA programs that may be used to support transit investment are described below.

FEDERAL TRANSIT ADMINISTRATION (FTA) PROGRAMS

There are over twenty different transit funding programs in SAFETEA-LU intended to meet a wide range of transit investment needs from the Clean Fuels grant program to formula grants for the elderly and disabled. However, consistent with federal legislation from prior years, there are two major federal funding programs to support capital investments and operations and maintenance for transit: the Section 5307 Urbanized Area Formula Grants Program and the Section 5309 Transit Capital Investment Grants and Loans Program. These two programs account for \$44.8 billion, or 85 percent of total SAFETEA-LU transit funding through 2009. Both programs are administered by the Federal Transit Administration (FTA). Each program is briefly described below along with the pertinent project eligibility requirements.

SECTION 5307 URBANIZED AREA FORMULA GRANTS PROGRAM

The 5307 formula grants program provides transit capital and operating assistance to urbanized areas with populations of more than 50,000. Annual grant funds are based on various demographic, level of service, and ridership variables. Federal legislation limits the application of these grants to capital purposes (e.g., bus and rail vehicle replacement and facility recapitalization), but preventative maintenance expenses in the operating budget may be considered as “capital” for this purpose. This broad definition of “capital” expense effectively allows transit agencies the option of funding routine maintenance from Section 5307 funds, thereby providing great flexibility from this funding source.

Given the recurring, formulaic nature of these grant funds, Section 5307 funds are often programmed for recurring operation and maintenance needs in order to keep a system

operating after construction. As such, these funds are often a limited source of capital funding for the initial construction. That said, it is a policy decision for a regional transit operator to determine the most effective use of these grant funds, within the broad permissible federal funding guidelines. Total funding for the 5307 formula grants program is authorized at \$22.2 billion through FY 2009.

SECTION 5309 CAPITAL INVESTMENT GRANTS AND LOANS PROGRAM

Federal section 5309 grant programs provide transit capital assistance for new fixed guideway systems and extensions to existing fixed guideway systems (New Starts), fixed guideway modernization, and bus and bus related facilities. Each sub-program of Federal Section 5309 is described below.

SECTION 5309 - NEW STARTS PROGRAM

“New Starts” grants are discretionary grants used to support the construction

of new or extended fixed guideway programs. Fixed guideway systems can include heavy rail, light rail or bus rapid transit systems. Transit agencies that propose fixed guideway programs within the New Starts program have to begin with an alternatives analysis, select a locally preferred alternative, proceed through preliminary engineering and, finally, enter into final design and construction upon FTA approval. The sponsoring agency will submit an annual New Starts evaluation report that justifies the project's transportation benefits and documents the financial strategy to provide resources to both construct and operate the New Starts undertaking and to operate and maintain the existing transit network. Based on submitted information, FTA is congressionally mandated to rate each project. The ratings system under SAFETEA-LU includes a five-level system: High, Medium High, Medium, Medium-Low and Low. A project must receive FTA approval to enter into preliminary engineering as well as final engineering. Upon final approval from FTA, a transit agency typically

enters into a Full Funding Grant Agreement (FFGA).

FFGAs constitute a project specific contractual commitment of the FTA, subject to annual congressional appropriation. Funds may be earmarked for an additional two years beyond the current authorization period. The maximum amount of FTA funding under an FFGA will equal the lesser of the maximum amount permitted by U.S. law or regulations, the maximum amount stated under the grant agreement or the maximum percentage of FTA participation as set under the grant agreement. SAFETEA-LU authorizes the FTA to fund up to 80% of project costs with New Starts grants. Project costs can include interest on debt. The balance is funded by the transit agency from other sources such as a local dedicated sales tax, state and local inter-governmental grants, private contributions and/or certain other federal sources. As the demand for New Starts funds has grown, FTA is strongly encouraging and favorably evaluating project sponsors that fund project costs with a

greater share of non-New Starts funds (typically closer to 50% of project costs). However, the non-New Starts funding commitment may also be from federal funds from other sources, such as formula grants.

The FFGA is not adjusted for cost overruns, which are the responsibility of the local transit agency. New provisions under SAFETEA-LU allow a grantee to keep a portion of the cost savings when projects are completed under budget. Unexpended funds before project closeout can be deobligated by the federal government. Therefore, the process does not allow for over-collateralization of project obligations (either project capital costs or debt service) from federal funding. In circumstances where litigation results in a positive settlement involving the project, the federal government retains "the right to a proportionate share" of the settlement, based upon its level of participation in the project's cost.

Funding for the New Starts program is authorized at \$9.4 billion through 2009.

SECTION 5309 - SMALL STARTS PROGRAM

A new funding program called the Small Starts Program was established under SAFETEA-LU. The Small Starts Program provides funding for smaller projects with a federal New Starts share below \$75 million, including streetcar, trolley, bus rapid transit (if a substantial portion of the project operates in a separate right of way in a defined corridor dedicated for public transit use during peak hours or it has other characteristics of a fixed guideway system), and commuter rail projects. Small Starts projects can not total more than \$250 million. Simplified procedures and criteria apply to the program.

Funding for the Small Starts program is treated as a subprogram to the New Starts program and a draw on the New Starts authorization of \$9.4 billion. The Small Starts program is authorized at \$600 million through 2009.

FIXED GUIDEWAY MODERNIZATION

This component of the Section 5309 program provides discretionary grants that are derived by formula; a function of vehicle revenue miles and route miles. These funds may be applied to a wide array of capital improvements to existing fixed guideway systems. This funding source is not used to construct new fixed guideway systems.

SECTION 5309 BUS RELATED

These discretionary grants are applied to the purchase of buses and bus-related assets. Funding for the 5309 Bus program increased significantly under SAFTEA-LU and is authorized at \$4.8 billion through 2009.

APPLICATION OF FEDERAL HIGHWAY ADMINISTRATION FUNDS TO TRANSIT

There are five major funding programs administered by the Federal Highway Administration (FHWA). Two of these programs are sometimes applied to support transit investment at the

discretion of the regional transportation planning agency: the Congestion Mitigation and Air Quality Improvement Program (CMAQ) and Surface Transportation Program (STP). Of these two, CMAQ funds are the most common source of FHWA funds that supports transit capital investments.

CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM (CMAQ)

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) is administered by the Federal Highway Administration (FHWA), the funds from which are used to support projects and programs in air quality nonattainment and maintenance areas for ozone, carbon monoxide (CO), and small particulate matter (PM-10) which reduce transportation related emissions. CMAQ funds enjoy flexible applications with respect to projects that meet the broad goals of the program: vehicle emissions reduction

and vehicle congestion reduction. CMAQ Program funds are apportioned annually among the states and regions within the states largely based on air quality need as described in the federal Clean Air Act and population.

Mass transit is a common solution that meets both CMAQ program objectives and, as such, mass transit improvements are often an ideal candidate for CMAQ funds. For example, the North San Diego County Transit Development Board (NCTD) recently used CMAQ funds to support the construction of the 22-mile light rail “Sprinter” project. In the case of San Diego County, the regional metropolitan planning organization, SANDAG, is responsible for the allocation of the CMAQ program funds to projects and programs throughout the County. NCTD worked with SANDAG to draft a memorandum of understanding (MOU) that specified the timing and amount of CMAQ funds that would support the Sprinter project. Furthermore, the MOU was drafted with the appropriate language

**North Fifth Street Transit Supportive Land Use Plan
APPENDIX**

and guarantees from SANDAG so that the CMAQ funds could be used as a security source to support the issuance of Certificates of Participation (COPs) by NCTD in order to accelerate project delivery. Not only were CMAQ funds used as a funding source for the Sprinter project, but through an innovative security structure, they were also “leveraged” and used to support debt financing by NCTD.

SURFACE TRANSPORTATION PROGRAM (STP)

The STP Program is administered by the FHWA and provides flexible funding that may be used by states and localities for projects on any Federal-aid highway, including the National Highway System, bridge projects on any public road, transit capital projects, and intracity and intercity bus terminals and facilities. While transit improvements, including rail and bus, are permitted uses of STP funds; due to the capital requirements that regional governments have with regard to highway and other roadway improvements, and the non-restrictive

use of these funds towards roadway improvements, STP funds are often allocated in their entirety to support highway and roadway improvement.

LEVERAGE FEDERAL FUNDS

Leveraging federal transportation funds has become a more common method used by states and agencies to generate funds up-front to accelerate project construction. Grant anticipation revenue vehicles (GARVEEs) are increasingly popular state authorized debt instruments issued to advance construction of certain highway projects or, in the case of transit authorities, to advance the purchase of rolling stock or other transit facility improvements. With accelerated project construction through debt financing, GARVEE debt instruments are an alternative to the traditional federal grant reimbursements for pay-as-you-go financings. The primary security for these debt instruments consists of federal transportation grants or transit grants for transit authorities.

There are three primary sources of federal transportation funds that may be leveraged and issued as GARVEE debt: (1) federal highway funds, (2) federal transit Section 5307 funds and, (3) federal transit Section 5309 funds obligated with a full funding grant agreement. The most common form of GARVEE debt is GARVEE bonds secured by federal highway funds. Under this structure the debt is generally issued by the state or a state authority that directly receives and administers the federal funds and has bonding authority. This organizational structure has certain advantages over the GARVEE debt issued by a transit agency that may have to submit their budget to a county agency for approval and may rely on a state or regional MPO to administer federal transit funds.

GARVEE BONDS – GENERAL OVERVIEW

The rating agencies range for GARVEE debt instruments is fairly high compared with that of other transportation credits ('A' through 'AAA'). Coverage by pledged revenues and general strengths associated with the established federal surface transportation grant programs are key rating considerations, but many existing GARVEE debt programs have additional structural protections. These protections include debt service reserves, self-imposed debt limits, additional bonds test, a limited maturity profile, and the pledging of other unencumbered federal or state aid for debt service, among others.

A key risk to GARVEE debt instruments is federal reauthorization, since surface transportation funding typically operates under six-year authorization cycles. Upon a reauthorization, Congress may alter the amount of money available for surface transportation, the amounts allocated to transit, allocations by state,

and even the presence or nature of funding firewalls. The best protections against reauthorization risk are strong debt service coverage and limited maturities.

There is a long history of federal grant funding to the states for transportation projects, including contract authority that permits continued obligation of funds even in the absence of a new appropriation bill. The following are GARVEE program strengths: in general, a favorable history by the states in managing federal funds for transit programs is a plus; broad base of federal motor fuel and truck-related taxes that provide transportation funding to the states; direct payment method represents a contractual obligation of the federal transit administration if revenues are available; often times, the bonds are over-collateralized with additional pledged funds; Federal funding firewalls provide additional protection, particularly for credits with constrained coverage levels; structural elements, such as debt service reserves, debt limits, and a medium-term

maturity profile that limits reauthorization risks, can also enhance the rating.

LEVERAGING SECTION 5307 GRANT FUNDS

Some transit agencies have leveraged Section 5307 formula funds to accelerate the acquisition of buses and rail cars. Federal transit fund reimbursements can be used to meet transit GARVEE debt service requirements. Specifically, Section 5307 funds are not discretionary and are allocated on a formula basis directly to transit systems serving urbanized areas based on such factors as population served, ridership levels, operating costs, and operating efficiency. Similar to the New Starts program, Section 5307 formula funds feature minimum guaranteed funding levels incorporated as part of federal legislation, whereby a budgetary firewall provides a level of protection for the program. Although subject to federal budget constraints, the firewall provides a more predictable level of funding by not allowing a reduction in

transit spending to provide for increased spending on other federal programs.

Rating considerations that are unique to transit agencies include their ability to maintain the requisite local funding match under FTA programs and the bankruptcy remoteness of the structure to that of private sector manufacturers and servicers under the various lease-leaseback arrangements for transit rolling stock.

TRANSIT NEW STARTS – LEVERAGING FFGAS

An innovative alternative to the Federal Transit Administration’s (FTA) traditional grant funding approach, and one that is broadening the financial toolbox of U.S. transit authorities, involves the debt leveraging of full funding grant agreements (FFGAs) in order to advance construction of transit projects. SAFETEA-LU authorized \$9.4 billion under the Section 5309 “New Starts” discretionary funding program that is conveyed through FFGAs. Grant

agreements can be executed between the FTA and the corresponding local transit authority for eligible transit projects. Most transit authorities have utilized the traditional method of grant reimbursements for pay-as-you-go projects.

While this program advances construction through debt leveraging of federal transportation grants like GARVEEs, the political, appropriation and project performance risks associated with this program will likely keep most FFGA-backed notes in the ‘BB’ to ‘BBB’ rating categories. For example, FitchRatings advises that external events, such as congressional political intervention at the project level and the “haircutting” of funding targets in FFGAs that takes place in the federal appropriation process, can affect both the timing and the amount of grant payments. This situation could be aggravated further by general pressure on Congress and the FTA to increase FFGA disbursements as new projects enter the pipeline. While these factors can create problems for full and timely payment of principal and

interest on debt instruments backed by FFGAs, they are unlikely to affect ultimate payment. This rating range will likely pertain to notes that have a debt service reserve fund, and other structural features, but no additional revenue source other than payments under the FFGA. The capacity to have a secondary revenue pledge, such as a sales tax, can improve expected credit ratings.

FFGA backed debt structures may adopt a custom-tailored feel depending upon each project's expected risk profile over its development cycle. Traditional grant-based debt features will include mitigation of federal reauthorization risk through a shortened maturity schedule, and mitigation of transit authority financial risk through the use of a trustee to handle grant funds, related investment income and scheduled debt service payments. These structural features enhance available liquidity for debt service payments, and can provide considerable wiggle room for certain reductions or delays in grant disbursements. Unlike the GARVEE

transactions, which often rely on either extra layers of protection beyond the committed project grant monies, little cash flow over-collateralization is expected for FFGA-backed debt from section 5309 funds.

FitchRatings advises that competition within the FTA's project pipeline may result in "just-in-time" grant payments, which together with the typical haircutting of requested funds in the federal appropriation process, could cause the debt service reserve fund to act as an internal liquidity facility. The direct linkage of FFGA disbursements to scheduled debt service payments is not present as it is for direct pay GARVEEs for highway projects. Grant disbursement schedules will be constrained by Congressional appropriation; the FTA's authorized funding, and its need to reimburse FFGA-eligible capital costs. Only time and the project pipeline will determine if an unintended relationship develops between FFGA disbursements and debt service requirements. Transit agencies may address this potential federal funding delay with the

implementation of a commercial paper program for interim financing purposes.

OTHER CONSIDERATIONS

Depending upon the financing method employed by the City, there are certain actions required within specified time frames. Sample timetables for various municipal financing methodologies that demonstrate procedures for debt issuance are included for the readers' information as Exhibit 1.

EXHIBIT 1

PROCEDURES FOR DEBT ISSUANCE TIMETABLES

Procedures for Debt Issuance/Timetable
(See sample schedules attached)

1. General Obligation Bonds (NRS 350 Voter Approved)
2. General Obligation Revenue Bonds (NRS 350)
3. Revenue Bonds/Certificates of Participation
4. Medium-Term General Obligation Bonds (NRS 350)
5. Assessment District Bonds

GENERAL OBLIGATION BONDS (NRS 350)

Sample Schedule

No. of Weeks <u>From Start</u>	<u>Event</u>
0	-City Council ("Council") adopts Debt Management Commission ("DMC") Notice Resolution
3	-DMC meets and adopts Approval Resolution
4	-City adopts Election Resolution
6	-Bond questions submitted to City Clerk or the Registrar of Voters (3rd Mon in July*)
21	-General election / Bond election (1st Tuesday in November)
22	-Board adopts Canvass Resolution
23	-Board adopts Sale Resolution
26	-Due diligence meeting to review the official statement
29	-Bond Sale -Board adopts Bond Ordinance
32	-Bond Closing

* Subject to Legislative adjustment

GENERAL OBLIGATION REVENUE BOND (NRS 350)

Sample Schedule

No. of Weeks <u>From Start</u>	<u>Event</u>
0	- Revenue source entity requests the City to issue bonds
1	- City Council (the "Council") adopts DMC Notice Resolution
3	- DMC meets and adopts Approval Resolution
5	- Council adopts Resolution of Intent and Resolution calling for hearing of Resolution
6	- Publish Notice (Begin 60 day Petition Period) and Notice of Hearing
9	- Hold Hearing
14	- End of 30 day Petition Period
15	- Council adopts Sale Resolution
16	- Due diligence meeting to review the official statement
19	- Bond Sale - Council adopts Bond Ordinance
22	-Bond Closing

REVENUE BONDS

Sample Schedule

<u>No. of Weeks From Start</u>	<u>Event</u>
0	- Council adopts Sale Resolution
3	- Due Diligence Meeting
7	- Bond Sale - Council Adopts Bond Ordinance
8	- Bond Closing

MEDIUM-TERM GENERAL OBLIGATION BOND (NRS 350)

Sample Schedule

<u>No. of Weeks</u> <u>From Start</u>	<u>Event</u>
0	- The Council adopts Resolution calling for Public Hearing
1	- Publish Notice of Hearing
3	- Public Hearing; Council adopts Resolution authorizing Medium - Term financing (10 days after Notice of Hearing published) - Council adopts Sale Resolution
5	- Send information packet to Department of Taxation
8	- Due diligence meeting to review the official statement
11	- Bond Sale - Council adopts Bond Ordinance
14	- Bond Closing

ASSESSMENT DISTRICT BONDS

Sample Schedule

<u>No. of Weeks</u>	<u>Event</u>
	(Various assessment procedural steps take anywhere from 6 to 18 months prior to the events listed below.)
0	- Council adopts Assessment Ordinance
2	- Assessment Ordinance Effective - Begin 30-day Cash Payment Period
6	- End of 30-day Cash Payment Period
9	- Council adopts Bond Sale Resolution
9	- Due Diligence Meeting
12	- Bond Sale - Council Adopts Ordinance Authorizing Issuance of Bonds - Council Adopts Resolution Establishing Assessment Rate of Interest
15	- Bond Closing

VI. NATIONAL EXAMPLES OF SUCCESSFUL TOD

The following TOD case studies are examples of TOD implementation across the western United States. Each TOD profiled has its own unique context

- Redevelopment of a vacant suburban mall.
- Urban infill development site.
- Development of an underutilized park and ride lot.
- New development in a suburban Greenfield.
- Infill development in a suburban downtown.

Each case study provides a brief summary of the site statistics and describes the development process.

TOD Case Studies

CITYCENTER ENGLEWOOD ENGLEWOOD, COLORADO

DEVELOPMENT OF A "DEAD" MALL INTO THE REGION'S FIRST TOD

- Miller Weingarten Reality, Trammell Crow Residential

KEY SITE STATISTICS

- Acreage: 55-acre site
- TOD zoning: Englewood Town Center Master Plan
- Land uses: 438 rental units, 380,000 Sq Ft retail; 150,000 Sq Ft office; plus city hall and library
- Project Financing: \$160million project. \$123 million developer investment. \$18.5 million public improvements funded by city. \$5.7 million in RTD transit improvements.
- Transit elements - LRT station, 8 bus bays, 910 space park & ride

Located next to Denver's SW corridor light rail CityCenter Englewood is the region's first TOD. The million square foot 55-acre project features 438 apartment units, 380,000 square feet of retail, and 150,000 square feet of office over ground floor retail. A new city hall and library was carved out of an old department store fronting onto a community amphitheater and sculpture plaza.

CityCenter Englewood is the transformation of the former 100-acre 1.3 million square foot Cinderella City Mall into a new urban center. In 1997 the 29-year-old mall's last tenant closed for good. Although the site had been previously planned for redevelopment as a big box retail center, city leaders became interested in pursuing a mixed use transit oriented development to take advantage of the planned Regional Transportation District (RTD) light rail stop.

The City of Englewood took the lead in moving the project forward in partnership with a private non-profit interested in promoting TOD. The city assembled the site and provided financing for streets and structured parking. The project has five key objectives: 1) Revitalizing the inner suburbs; 2) Replacing mall footprint with urban streets, parks, and pathways; 3) Integrating new development with transit; 4) Providing adequate parking for all uses; and 5) Integrating big-box retail.



Parsons Brinckerhoff



City of Englewood



Parsons Brinckerhoff



City of Englewood



Parsons Brinckerhoff

TOD Case Studies

MOCKINGBIRD STATION DALLAS, TEXAS

DEVELOPMENT OF A NEW MIXED-USE TOD

- Developer: Kenneth H. Hughes/David W. Dunning

KEY SITE STATISTICS

- Acreage: 10 acre site
- TOD zoning: mixed-use zoning, no TOD provisions
- Land uses: 211 upscale loft residences, 180,000 square feet of retail, theater and restaurants, 140,000 square feet of offices, 1,418 parking spaces
- Project Financing: \$145 million privately financed project
- Transit elements: LRT station, park & ride and bus transfer center, developer paid for pedestrian bridge connecting station to project

Located next to Dallas Texas's DART light rail and the North Central Expressway Mockingbird Station is the first mixed-use project in Texas specifically designed and built for a light rail station. Mockingbird Station is a \$145 million 10-acre mixed-use TOD project featuring an art house movie theater, 211 loft apartments, at a density of 234 units per acre, upscale retail, a planned new hotel, offices, and restaurants.

With the exception of federal contributions towards local infrastructure, the development has been 100 percent privately financed. Mockingbird Station was created without any subsidies, TOD planning or supportive policies by the regional planning agency, the City of Dallas or DART.

The developer estimates that he had to build \$6 million worth of excess (structured) parking for the project. The City allowed the project to build only 1,600 spaces (2,200 were required, 1,400 are built thus far) by granting a mixed-use parking reduction credit, it refused to reduce parking further to reflect transit's proximity. The developer estimates he may have only needed to provide 1,300 spaces, acknowledging that some tenants may have resisted the lower figure.



Ken Hughes



Parsons Brinckerhoff



Parsons Brinckerhoff

Parsons Brinckerhoff

Ken Hughes

TOD Case Studies

OHLONE-CHYNOWETH COMMONS SAN JOSE, CALIFORNIA

AN AFFORDABLE TOD DEVELOPED ON A UNDER USED PARK AND RIDE LOT

- Developer: Eden Housing

KEY SITE STATISTICS

- Acreage: 7.3 acre site
- TOD zoning: Planned Unit Development with project specific zoning, required 2 spaces per unit
- Land uses: 197,000 Sq Ft with 195 units, 4,400 Sq Ft retail
- Project Financing: \$31.6 million project. \$14.5 million in tax-exempt bonds, \$824K in federal transportation funds for improvements, a \$500K Affordable Housing grant, and
- Transit elements: LRT station, 3 bus routes, 240 space park-and-ride

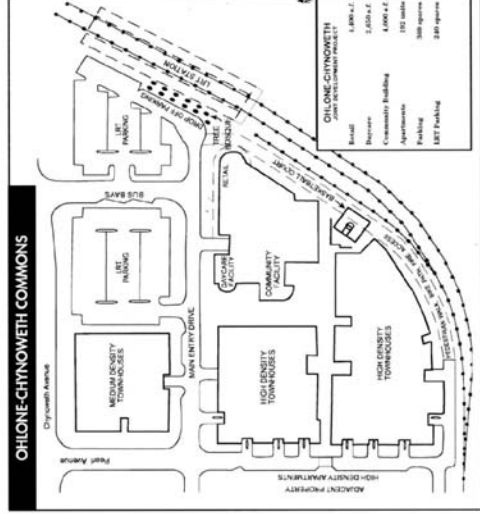
Located on Guadalupe light rail transit line in San Jose, Ohlone-Chynoweth Commons is a medium density mixed-use TOD. The projects housing, retail and community facilities were developed on an under-used light rail park-and-ride lot. For this project, Valley Transportation Authority (VTA) issued a request for proposal seeking a developer for the 7.3-acre site. The former 1,100-space park-and-ride now includes: 240 park-and-ride spaces, 195 units of affordable housing, 4,400 sq. feet of retail and a day care center.

At 27 dwelling units per acre, the residential density of Ohlone-Chynoweth Commons is relatively high compared to the predominantly single family neighborhood surrounding it. Ohlone-Chynoweth is a rare example of where a park and ride has been converted to TOD without replacement of the commuter parking in structures or on another site. The developer, Eden Housing has a 75 year lease for the site from VTA.

Ohlone-Chynoweth Commons provides affordable housing for families earning between 30% and 60% of the area median income in a community where an average market-rate two bedroom apartment is renting for as much as \$1,600 a month. The City has aggressively sought to locate housing next to transit. Since 1990 over 20,000 units of housing have been built or approved next to transit in San Jose.



Parsons Brinckerhoff



Parsons Brinckerhoff



Parsons Brinckerhoff



Parsons Brinckerhoff



Parsons Brinckerhoff



ORENCO STATION PORTLAND, OREGON

DEVELOPMENT OF A NEW TRANSIT-ORIENTED COMMUNITY

- Pacific Realty Associates, L.P. Master Developer; Costa Pacific Homes, Residential

KEY SITE STATISTICS

- Acreage: 190 acre site
- TOD zoning: Orenco Station Master Plan
- Land uses: 1,834 units, 70,000 Sq Ft retail/dinning, 31,000 Sq Ft office
- Project Financing: \$76.3 million development cost for core residential
- Transit elements: LRT station, 2 bus lines, 180 space park-and-ride

Orenco Station is a 190-acre, transit-oriented new community on the Westside light rail transit line in the suburbs of Portland, Oregon. Its pedestrian-oriented master plan provides for 1,834 dwelling units, including single-family homes, townhouses, accessory units, loft units, and apartments. The project also includes a mixed-use town center with offices and housing above ground-floor retail. Residential sales prices at Orenco Station are running 20 to 30 percent above the local area average. Commercial occupancies have been high, and rents are estimated to be roughly ten percent higher than surrounding properties.

The site was originally zoned for industrial use and later for subdivision housing. Zoning for the development changed, however when the site was designated a "town center" in the Portland Metro Area 2040 Plan. Importantly, the Plan specifies legally binding requirements for all Westside station areas, and mandates: minimum densities and residential density targets at varying distances from light-rail stops, mixed-use development in station areas, pedestrian oriented buildings, prohibitions on auto-oriented land uses, and reduced parking.

The project was completely privately financed, with the exception of a \$500,000 federal clean air grant for wider sidewalks and ornamental lighting. Surveys of residents reveal that 18.2% of work trips are on bus or LRT, nearly 7 in 10 residents report that their transit use has increased since moving to the neighborhood.



Parsons Brinckerhoff



Fletcher Fair Ayotte



Parsons Brinckerhoff



Parsons Brinckerhoff



Parsons Brinckerhoff



Parsons Brinckerhoff

TOD Case Studies

EASTSIDE VILLAGE PLANO, TEXAS

DEVELOPMENT OF A MIXED-USE TOD IN A SUBURBAN DOWNTOWN

- Developer: Robert Shaw, Amicus Partners

KEY SITE STATISTICS

- Acreage: 3.6 site
- TOD zoning: base zoning of 40 DU acre, developer initiated planning process which resulted in density increase to 100 DU acre
- Land uses: 234 residential units, 15,000 Sq Ft retail, 5-story 351-space structure, and 47 surface spaces
- Project Financing: \$17.7 million project. Developer investment \$15.7 million, City assembled the site, selected developer from RFO, and paid for all off-site public infrastructure and streetscape improvements at a cost of \$2 million. A 70-year lease with 3 10-year options
- Transit elements: LRT station, 4 bus lines

Helping anchor the rebirth of downtown Plano, Eastside Village is a \$17.7 million high-density mixed-use project fronting directly onto DART's light rail station plaza. The 3.6-acre 245,000 square foot project features 234 apartment units and 15,000 square feet of ground floor retail. The three and four story building wraps around 3-sides of a 5-story 351 space structure.

Eastside Village was the first major step to achieve the City's vision to "Transform downtown into a compact, mixed-use, urban center consistent with the principles of new urbanism and transit oriented design to enhance the community's quality of life and provide a model for sustainable development within a maturing suburban city."

The City of Plano provided the leadership to make the project happen. They advocated for the station location, saw opportunity to marry development with the DART LRT platform, assembled the site, offered it for development, leased the land to Amicus Partners, paid for public infrastructure and streetscape improvements, increased the allowable density from 40 to 100 dwelling units per acre, and waived fees.



15th Phase Development



DART Plaza Redevelopment



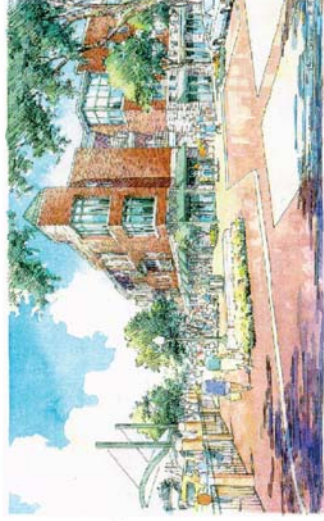
Parsons Brinckerhoff



Parsons Brinckerhoff



City of Plano



City of Plano