# northeast line light rail stations plan

VOLUME ONE

FINAL REPORT DECEMBER 2007

## Northeast Line

Light Rail Stations Plan

Volume One

December 2007

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#### VOLUME ONE

## table of contents

TABLE OF CONTENTS	I
ACKNOWLEDGEMENTS	
INTRODUCTION	3
Project Background & Purpose	4
Previous & Current Planning	6
Overall Project Process	6
Document Overview	8
EXISTING CONDITIONS	11
Local & regional Context	12
History of Development	14
Assets	16
Challenges & Opportunities	28
Maximizing Development Opportunities	34
Maximizing Development Opportunities	39
Maximizing Development Opportunities	39 51
Maximizing Development Opportunities PLANNING STRATEGIES URBAN DESIGN CONCEPT	39 51 <b>52</b>
Maximizing Development Opportunities PLANNING STRATEGIES URBAN DESIGN CONCEPT Overarching Vision	39 51 52 57
Maximizing Development Opportunities PLANNING STRATEGIES URBAN DESIGN CONCEPT Overarching Vision Transit Station Areas	39 51 52 57 58
Maximizing Development Opportunities PLANNING STRATEGIES URBAN DESIGN CONCEPT Overarching Vision Transit Station Areas Globe Station	39 51 52 57 58 66
Maximizing Development Opportunities PLANNING STRATEGIES URBAN DESIGN CONCEPT Overarching Vision Transit Station Areas Globe Station Arden/Del Paso Station	39 51 52 57 58 66 74
Maximizing Development Opportunities PLANNING STRATEGIES URBAN DESIGN CONCEPT Overarching Vision Transit Station Areas Globe Station Arden/Del Paso Station Royal Oaks Station	39 51 52 57 58 66 74 85
Maximizing Development Opportunities	<ul> <li>39</li> <li>51</li> <li>52</li> <li>57</li> <li>58</li> <li>66</li> <li>74</li> <li>85</li> <li>86</li> </ul>

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# CHAPTER ONE

## Introduction

Cities are fantastically dynamic places, and this is strikingly true of their successful parts,

which offer a fertile ground of the plans of thousands of peoples.

Jane Jacobs

The Death and Life of Great American Cities, (The Modern Library)

# introduction

in this chapter

PROJECT BACKGROUND & PURPOSE PREVIOUS & CURRENT PLANNING OVERALL PROJECT PROCESS DOCUMENT OVERVIEW **THE REDEVELOPMENT OF THE NORTHEAST LINE LIGHT RAIL STATIONS,** Globe, Arden/ Del Paso and Royal Oaks, presents a strategic opportunity to transform the entire North Sacramento community into a vibrant, mixed-use transit district.

Though once a thriving suburb in its own right, North Sacramento has struggled to redefine itself as manufacturing and industrial needs have changed and employment patterns have shifted. Sitting in the shadow of Downtown Sacramento, North Sacramento remains underutilized, neglected and largely disconnected from the surrounding area.

By using transit-oriented development (TOD), which concentrates development in and around transit hubs, and by building upon the synergies of these interconnected stations, the fabric of this area can be stitched together to form one of the most livable neighborhoods in Sacramento.

## PROJECT BACKGROUND & PURPOSE

The Northeast Line Light Rail Stations Plan is a longrange, urban design/streetscape plan. Infrastructure needs and economic analysis will guide improvements in a quarter-mile radius around the Globe, Arden/Del Paso, and Royal Oaks Light Rail Stations. For the purposes of this report, "project area" refers to the collective quarter-mile radii around the three stations.

The scope of the project encompasses the creation of an overall vision for these three stations, an analysis of existing opportunities and challenges, land use and urban design recommendations, and development guidelines that will encourage transit-oriented development, increase pedestrian and bicycle movement in the area, and create vibrant urban villages.

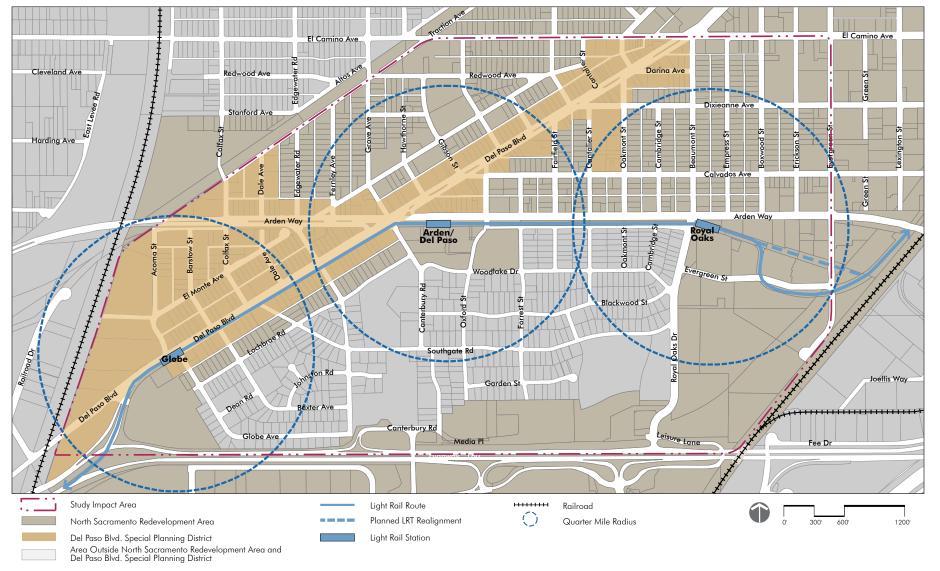
Primary goals of this project include the following:

 Support and build upon previous planning efforts to guide development and redevelopment within the area towards land uses that will support transit ridership, provide needed housing and employment opportunities, and support neighborhood retail uses;

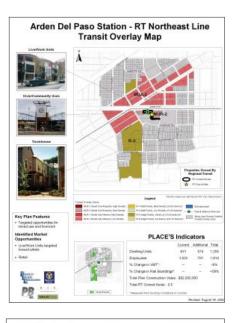
- Identify the necessary infrastructure and public improvement needs, cost estimates, including streetscape costs, phasing and implementation programs to realize the community's vision;
- Provide economic analysis of existing conditions and financially viable building prototypes, as well as pro-formas for transit-oriented development;
- Improve the pedestrian, bicycle and automobile circulation and access of the Globe, Arden/Del Paso, and Royal Oaks Light Rail Stations.
- Provide an implementation strategy to modify any existing plan documents and guidelines necessary to implement the Plan; and
- Identify any additional studies and analyses needed to obtain California Environmental Quality Act (CEQA) clearance for the Plan.

While the urban design improvements focus on the quarter-mile radius areas around each station, the larger study impact area was analyzed for the infrastructure and economic analysis. This study impact area is bounded by Highway 160 on the south, El Camino Avenue on the north, Western Pacific railroad lines on the east, and Traction Avenue and the Southern Pacific/Capitol Corridor railroad lines on the west.

#### FIGURE 1.1 PROJECT AREA

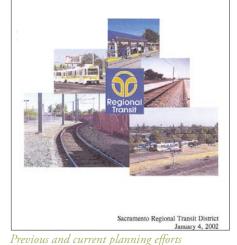


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#### NORTHEAST CORRIDOR SERVICE AND FACILITIES ENHANCEMENT PROJECT

INITIAL STUDY/ENVIRONMENTAL ASSESSMENT



#### **PREVIOUS & CURRENT PLANNING**

Since the early 1990s, the Northeast Corridor has been the focus of several planning studies. The following is a list of plans that are relevant to the Northeast Line Light Rail Stations Plan.

#### **Previous Planning Efforts**

- North Sacramento Community Plan (1984)
- North Sacramento Community Plan Land Use and Design Study - "Brady Study" (1993)
- Del Paso Boulevard Special Planning District Ordinance (1994)
- City of Sacramento & Regional Transit's Transit for Livable Communities (2002)
- Del Paso Boulevard Streetscape Improvement & Beautification Master Plan (2002)
- Northeast Area Transportation Study (2002)
- RT Northeast Corridor Rail Service and Facilities Enhancement Project (2002)

#### **Current Planning Efforts**

- City of Sacramento General Plan Update & EIR
- North Sacramento Community Design Guidelines Update
- Swanston Station Area Transit Village Plan

#### **OVERALL PROJECT PROCESS**

The City of Sacramento initiated the Northeast Line Light Rail Stations Plan in March of 2006. In order to develop the most comprehensive and feasible Plan possible, the City collaborated with partner agencies and with consultants representing a broad range of expertise.

The planning process involved over a year of dedication by City staff and consultants. During this time, the project team worked closely with different City departments including Long Range Planning, Current Planning, Parks and Recreation, Economic Development, the Transportation, the Public Works, Development Services & Utilities and other City agencies, including the Sacramento Housing and Redevelopment Authority (SHRA) and Sacramento Regional Transit.

The project's planning process, which was designed to facilitate a community consensus around a shared vision for the overall area of this part of North Sacramento, included six stakeholder interviews and five community workshops. The stakeholder interviews were conducted in April and May of 2006 and included representatives from community organizations, as well as business and political leaders. At the first three workshops, which were held in the spring of 2006, community members developed a vision for each of the three station areas. During the fourth workshop, which was held in September 2006, community members reviewed and commented on the urban design plan concepts that were based upon feedback received at the first three community workshops and subsequent technical analyses. At the fifth workshop in December 2006, more than 80 people reviewed and overwhelmingly approved the chief components of the draft Plan.

A summary report of each community workshop is available in the Appendices of Volume Three.



Walking Tour During Initial Visioning Workshops

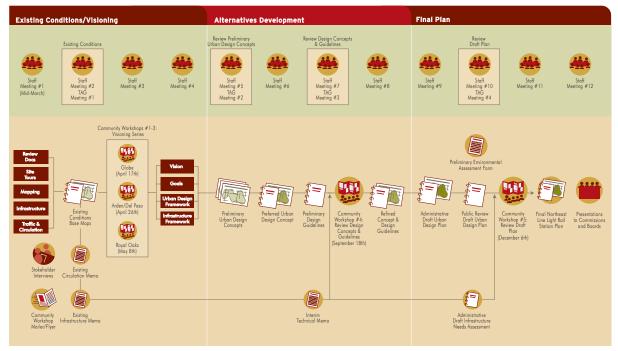


Council Member Sandy Sheedy at the Community Workshop



Final Workshop

#### FIGURE 1.2 PROCESS GRAPHIC



#### **DOCUMENT OVERVIEW**

The NE Line Light Rail Stations Plan is organized into three volumes. Volume One is organized in the following chapters:

- Chapter I: Introduction explains the Plan's background and purpose, provides an overview of the overall project process, and outlines the organization of the Plan document;
- Chapter II: Existing Conditions synthesizes existing physical, infrastructure & economic conditions, reviews the area's local, regional and historical context, and identifies the key assets, challenges and opportunities faced in the area's revitalization process;
- Chapter III: Planning Framework describes the five overarching planning strategies specific to this project's study area, that will guide urban design along the corridor;
- Chapter IV: Urban Design Development Concept – presents the overall urban design framework for the study area and the design concept for each station area, and highlights the key design parameters that will guide the character of the private and public realm; and

**Chapter V: Implementation** – presents recommendations for Plan implementation, including a list of high priority neighborhood improvements, characteristics of successful development pro-formas, and prospective financing tools and funding strategies to best move the project forward.

Volume Two is organized in the following chapters:

- Chapter I: Design Guidelines details the urban design guidelines that will shape the character of the public realm, including development of buildings, streetscape design, and open spaces in the study area; and
- Chapter II: Infrastructure Standards identifies the specific standards for infrastructure improvements that complement streetscape design recommendations.

Volume Three includes the following documents:

**Appendices** – includes economic analysis, development proformas, infrastructure assessment and community workshop summary memos.

# 

**Existing Conditions**  The two most potent factors in the development of property and appreciation of values in any suburb are: LOCATION AND TRANSIT. North Sacramento has both!

North Sacramento Brooke Realty Brochure (Early 1900s).

# existing conditions

#### in this chapter

LOCAL & REGIONAL CONTEXT

HISTORY OF DEVELOPMENT

ASSETS

CHALLENGES & OPPORTUNITIES

MAXIMIZING DEVELOPMENT OPPORTUNITIES **THIS CHAPTER DESCRIBES THE PROJECT AREA'S EXISTING CONDITIONS,** including the local and regional context, the historic pattern of development, assets, challenges, and potential opportunities. Future planning should build on the corridor's existing assets, work to counter challenges, and maximize promising opportunities.

Figure 2.11, at the end of this chapter provides a comprehensive summary of primary assets, issues, and opportunities as they relate geographically to the project area.

#### LOCAL & REGIONAL CONTEXT

The project area is located approximately three miles northeast of Downtown Sacramento, in the City's North Sacramento Community Planning Area. The project area includes two major arterial streets: Arden Way and Del Paso Boulevard. Arden Way is a four-lane facility with scattered retail and commercial uses. Del Paso Boulevard, a two- to four-lane road, is the area's primary mixed-use commercial and retail corridor, and it includes a concentration of art studios and galleries.

The area's residential land uses are concentrated in the Dixieanne and Woodlake Neighborhoods on the north and south side of Arden Way, respectively. The Dixieanne Neighborhood, which is predominately made up of utilitarian apartment buildings and small single-family homes, is bounded by Del Paso Boulevard to the west, El Camino Avenue to the north, and the Southern Pacific/ Capitol Corridor railroad line. The Woodlake Neighborhood is bounded by Arden Way, Del Paso Boulevard, Highway 160 and Royal Oaks Drive. The eastern section of Woodlake includes many of North Sacramento's historic single-family homes, which contrast with the more modern multi-family residences and mobile homes on the western side of the neighborhood. W hile all three stations are located within close proximity of downtown, each station also serves as an access point to key destinations and regional amenities:

- Globe Station offers the most convenient access to the American River Parkway and Downtown;
- Arden/Del Paso Station serves as the multi-modal transit gateway to the Del Paso Arts District along Del Paso Boulevard; and
- Royal Oaks Station is closest to the Arden Fair Mall and Cal Expo.

#### FIGURE 2.1 REGIONAL CONTEXT







Historical context of Del Paso Boulevard

#### **HISTORY OF DEVELOPMENT**

Historically, the area surrounding the Northeast Line Light Rail Stations was almost entirely devoted to agriculture. In 1910, Daniel W. Johnston, founder of the North Sacramento Land Company, purchased approximately 4,000 acres in the area and, with the help of his son, began laying out a vision. The North Sacramento Land Company touted North Sacramento to investors as a peaceful alternative to life in Downtown Sacramento. The establishment of streetcar service along Del Paso Boulevard in 1915 was a major turning point, as it spurred significant development in the area.

The City of North Sacramento was incorporated in 1924 and was soon recognized as a center for light and heavy industrial businesses, many of which were clustered around the area's railroad lines. Several of these factories and plants, including the Swanston Meat Packing Company, the Essex Lumber Company, and the Sacramento Wool Company, brought national recognition to the area. The 1930s also marked the establishment of Del Paso Boulevard as the main commercial and retail street of North Sacramento. By the 1950s, Del Paso Boulevard was known for its lively parade celebrations, the Streamline Moderne Iceland skating rink, and the Del Paso Theatre. In 1964, the City of North Sacramento merged with the City of Sacramento. According to the Del Paso Boulevard Streetscape Master Plan, the idea of consolidation originated in the City of North Sacramento in 1929 by residents who believed that "flood protection could be more easily achieved if the two cities joined forces."<sup>1</sup> With this merger, the City of Sacramento gained approximately 6.5 square miles and an estimated 15,000 residents.

Throughout the latter half of the 20th century, many of the area's heavy industrial land uses gave way to additional commercial and retail development. During the 1970s and 1980s, much of North Sacramento began to decline and struggle financially. The area's economic downslide can be traced back to the construction of the North Sacramento Freeway (Highway 160) in 1955, which physically and psychologically isolated North Sacramento from the region.<sup>2</sup>

 <sup>1.</sup> Sacramento Housing & Redevelopment Agency.
 <u>Del Paso Boulevard</u>

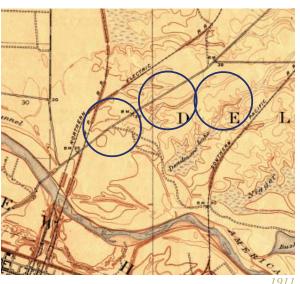
 <u>Streetscape Master Plan.</u>
 Sacramento: 2002 pg. 9

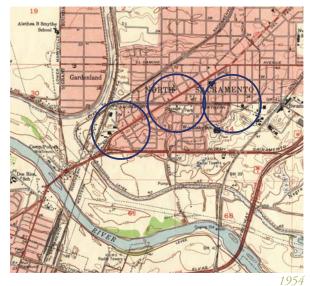
 2. Sacramento Housing & Redevelopment Agency.
 <u>Del Paso Boulevard</u>

 <u>Streetscape Master Plan.</u>
 Sacramento: 2002 pg. 11

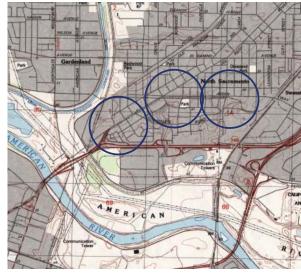
FIGURE 2.2 DEVELOPMENT PATTERNS

In 1987, Regional Transit (RT), Sacramento's transit provider, began light rail service at the Globe, Arden/Del Paso, and Royal Oaks Stations. The 18.3-mile system links the region's northeastern (Interstate 80) and eastern (Highway 50) corridors with Downtown Sacramento. The early 1990s marked the rebirth of Del Paso Boulevard as an arts and cultural district. In 1992, the City began the Phantom Galleries program, in which property owners lend their vacant spaces to local artists to create temporary gallery and performing art spaces on the second Saturday of each month. Today, the area features several permanent art galleries, unique retail stores, and local restaurants.









1967

#### **ASSETS**

With its strategic location, extensive public transit infrastructure, and eclectic mix of uses, the NE Line Light Rail Stations project area has many positive attributes. Recognizing and building upon these strengths will help create a unique neighborhood urban design concept.

#### EASY MULTIMODAL ACCESS - MAP 5

The overall project area, especially the area around the Arden/Del Paso Station, is well served by multiple modes of transportation. Major regional highways include State Highway 160 and the Capital City Freeway (Business 80), and major arterial roads include Del Paso Boulevard, Arden Way, the Arden Garden Connector and El Camino Avenue. The light rail stops at Globe, Arden/Del Paso and Royal Oaks, along with the bus transfer facility at the Arden/Del Paso Station, improve the project area's local and regional accessibility for both public and private modes of transportation. With respect to bicycle facilities, bike routes are located on portions of Arden Way, El Camino Avenue, and Royal Oaks Drive. In addition, the North Sacramento Bike Trail is located along Traction Avenue to the north of the project area, and it provides off-street access to the American River Bike Trail and the American River Parkway, the Ueda Multi-use Trail and Ueda Parkway, and the Sacramento Northern Bike Trail. The development of on-street pedestrian and bike connections to these regional amenities should be considered as part of an improved circulation system for the area.



Multiple modes of transportation serve the station areas



16

#### FIGURE 2.3 MULTI-MODAL CONNECTIONS





Residential development in the Woodlake neighborhood

#### **DIVERSE MIX OF USES**

The study area's wide mix of uses, including residential, commercial, institutional, industrial, and the arts and retail district along Del Paso Boulevard, helps create a broad and stable economic and social base.

The area around Globe and Arden/Del Paso Stations is characterized by regional and neighborhood-serving retail and commercial uses along Del Paso Boulevard and Arden Way. The area south of the stations is primarily residential development in the Woodlake Neighborhood, while the area north of the stations contains a variety of different uses, including residential, commercial, and industrial.

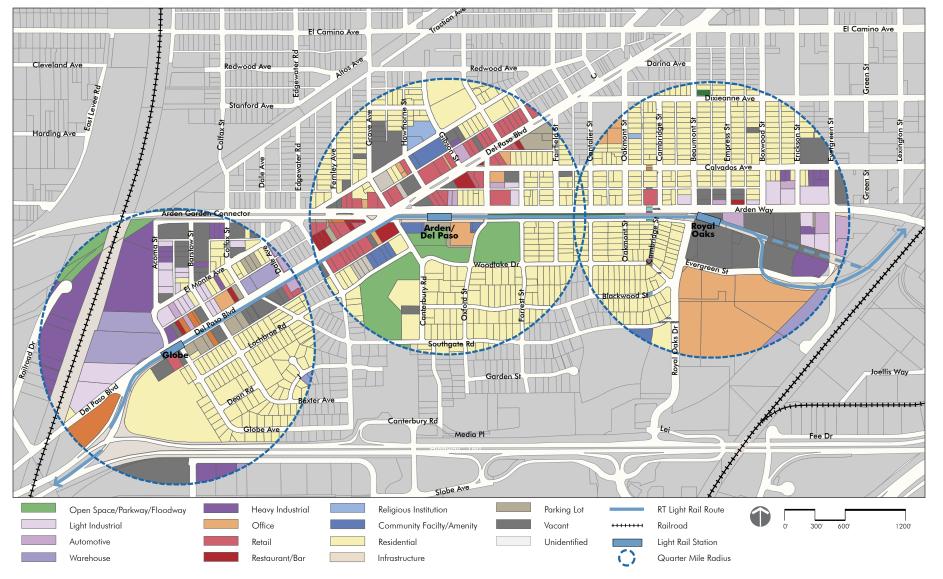
#### LOCAL AND REGIONAL AMENITIES

Certain local and regional amenities are common to the entire project area. The Arden Fair Mall is a regional destination which attracts people from all three station areas. The project area is also served by two schools: Woodlake and Northwood Elementary. However, certain amenities, such as parks and open spaces, are more closely akin to individual station areas.



Mix of uses southeast of Royal Oaks Station

#### FIGURE 2.4 ACTIVITY USE





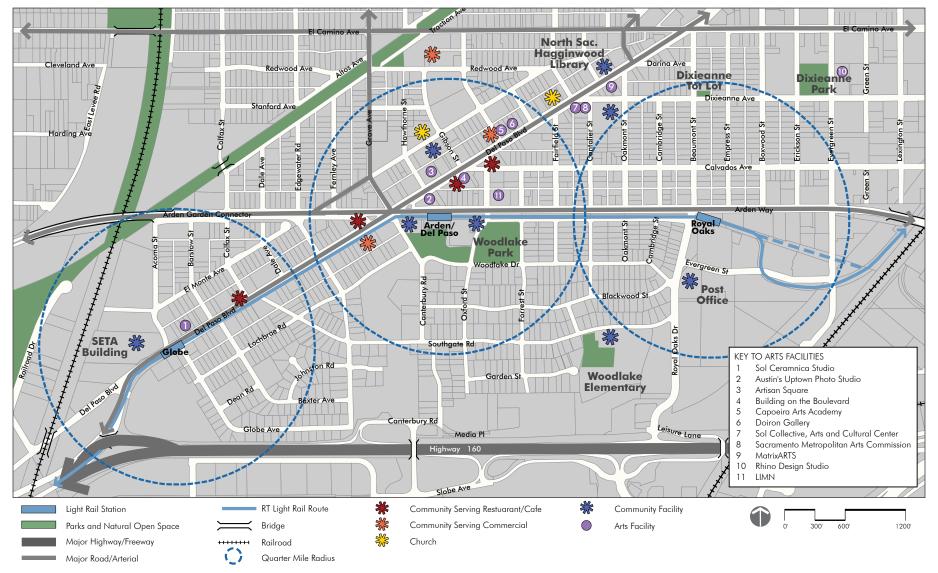
For example, Globe Station offers easy access to the American River Parkway, the Arden/Del Paso Station area is located adjacent to Woodlake Park, and the Royal Oaks Station area includes the Dixieanne Tot Lot. Del Paso Boulevard, especially between Arden Way and El Camino Ave, serves both local and regional constituents and proves most convenient for those people in the Arden/Del Paso Station area.

Dixieanne tot-lot











#### NEW AND PLANNED DEVELOPMENT PROJECTS

The approximate quarter-mile mile project areas around each of the three stations are seeing positive new developments. These projects include the Limn Furniture Store along Arden Way, the Victory Town Homes on Dixieanne Ave, the Dixieanne Tot Lot, and the Surreal Estates residential development, which is under construction, at the northeast corner of Calvados Avenue and Cantalier Street. In addition, \$2.3 million in streetscape improvements, including sidewalk replacements and the installation of angled parking and public art, are underway along Del Paso Boulevard and have served as catalysts for new development.





*New and planned development projects* VOLUME ONE - NE LINE LIGHT RAIL STATIONS PLAN



#### FIGURE 2.6 NEW AND PLANNED DEVELOPMENT PROJECTS

#### FIGURE 2.7 SOUTHGATE DRIVE SECTION



#### UNIQUE URBAN FABRIC

With its narrow and tree-lined streets, neighborhood scale, and one- to two-story architecturally significant houses, certain sections of the Woodlake Neighborhood have an intimate residential feel. This character is particularly evident on Fairfield, Forrest, Woodlake, Blackwood, and Oxford Streets. In contrast, the building footprints of the larger-grain industrial, institutional and warehouse buildings around Royal Oaks Station have a more gritty and urban character.



Narrow streets in the Woodlake neighborhood



Large-grain structures around the Royal Oaks Station

VOLUME ONE - NE LINE LIGHT RAIL STATIONS PLAN

#### FIGURE 2.8 BUILDING FOOTPRINTS



600'

1200



Art Deco signage and facades along Del Paso Boulevard

#### **CHARACTER DEFINING ELEMENTS**

The Globe and Arden/Del Paso Station project areas have a distinct set of urban design elements which are unique to these two stations. In contrast, there are no characterdefining elements at the Royal Oaks Station.

In the private realm of the Globe and Arden/Del Paso Station project areas, many structures have Art Deco/Moderne facades and Art Deco signage and building materials, including brick, glass blocks, and steel sections along Del Paso Boulevard. Off of Del Paso Boulevard, the private realm is defined by wide spacious front yards, common courtyards, and porches. In the public realm, the Globe and Arden/Del Paso Station project areas include unique lighting and street art/sculptural furniture on Del Paso Boulevard. The surrounding residential public realm in the Woodlake Neighborhood has "fenceless" front yards and rolled curbs. The narrow 20' roads and lack of sidewalks allows pedestrian and bicyclists to share the road, transforming a functional public right-of-way into a unique public open space.



Character-defining buildings at the Arden/Del Paso Station



Unique street lights at Globe and Arden/Del Paso Stations

#### COMMUNITY AND POLITICAL COMMITMENT

Through the development and implementation of several innovative programs, neighborhood and community organizations, including the North Sacramento Chamber of Commerce, Uptown Arts, and the recently-formed Property-Based Improvement District (PBID), have demonstrated their determination to improve the area and create visible results on the ground. The Phantom Galleries program has helped to activate the Del Paso Boulevard corridor while creating an identity for the area. City leaders have also made improvements in the Dixieanne Neighborhood by adding streetlights along Dixieanne Avenue and by closing several crime-ridden alleys.



Murals along Del Paso Boulevard activate the street edge



Commitment from city leaders to improvements in the area

#### **CHALLENGES & OPPORTUNITIES**

In order to create an implementable Urban Design and Development Plan for the area, it is important to understand the challenges facing this part of North Sacramento. Strategically identifying key opportunities of the project areas will also ensure a successful revitalization effort.

#### **USING THE TRANSIT STATIONS' SYNERGY FOR NEIGHBORHOOD REVITALIZATION** Creating a Walkable, Livable Transit-Oriented

#### Village

While the areas south of Arden/Del Paso Station and Globe Station are fairly built out with beautiful residential streets and buildings, a fair amount of vacant and underutilized buildings and parcels exist to the southeast of the Royal Oaks Station and north of Globe Station. These areas are characterized by an overall environment unfriendly to pedestrians. Numerous opportunities exist to create a higher density, vibrant, mixed-use neighborhood.



#### **Improving the Station Environments**

Surrounded by poorly maintained vacant and underutilized lots and by wide, fast-moving traffic-oriented arterial roads like Arden Way and Del Paso Boulevard, the existing station environments are ill-defined, lack adequate signage, and any significant sense of place.

#### **Expanding the Range of Housing Options**

Transit-Oriented Development (TOD) provides an exciting opportunity to build a mix of housing types around the three station areas, including high-density development such as town homes and condominiums.

#### **Increasing Ridership**

The abundance of surface parking in the area and the underutilized land surrounding all three stations hinders increased transit ridership. However, opportunities to boost ridership may increase as higher-intensity uses are built around the three stations.

Capitalize on transit station for neighborhood revitalization VOLUME ONE - NE LINE LIGHT RAIL STATIONS PLAN

#### INCREASING USABLE OPEN SPACE & QUALITY OF OVERALL PUBLIC REALM

The Arden/Del Paso Station is well-served by Woodlake Park and the unique use of its public roadways, and the Royal Oaks Station project area is home to the Dixieanne Tot Lot. However, the overall public realm, including streets, alleys, parks, and transit plazas, needs to be dramatically strengthened and improved. Additionally, connecting the light rail system with the regional bike and pedestrian trail system along the American River Parkway, the Northern Bike Trail, and the Ueda Parkway would increase access to regional recreation and open space opportunities.

#### IMPROVING SENSE OF SAFETY & OVERALL IMAGE

Without active uses surrounding them, all three stations are largely hidden from public view and have a certain sense of anonymity. The lack of "eyes" and the blankwalled buildings that face these stations create physical environments that encourage crime and undesirable elements.

In addition, boarded-up and dilapidated buildings, poor maintenance, inadequate street lighting, and lack of contiguous sidewalks all contribute to the perception of blight and neglect. Redesigned and revitalized station areas with increased activity levels would help to address safety and security problems, while improving the overall image of the larger area.



Dilapidated structures



Lack of "eyes on the street"



Poor maintenance

29



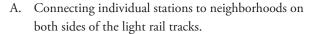
Narrow and interrupted sidewalks

#### STRENGTHENING PEDESTRIAN CONNECTIONS

Various transportation rights-of-way (roads and railroad tracks) bound and traverse through the study area, creating strong visual and physical barriers. Arden Way and Del Paso Boulevard inhibit connectivity and restrict movement from the stations to the surrounding neighborhoods. The following pedestrian improvements will help to establish strong connections to and through the stations.



Lack of sidewalks in many areas

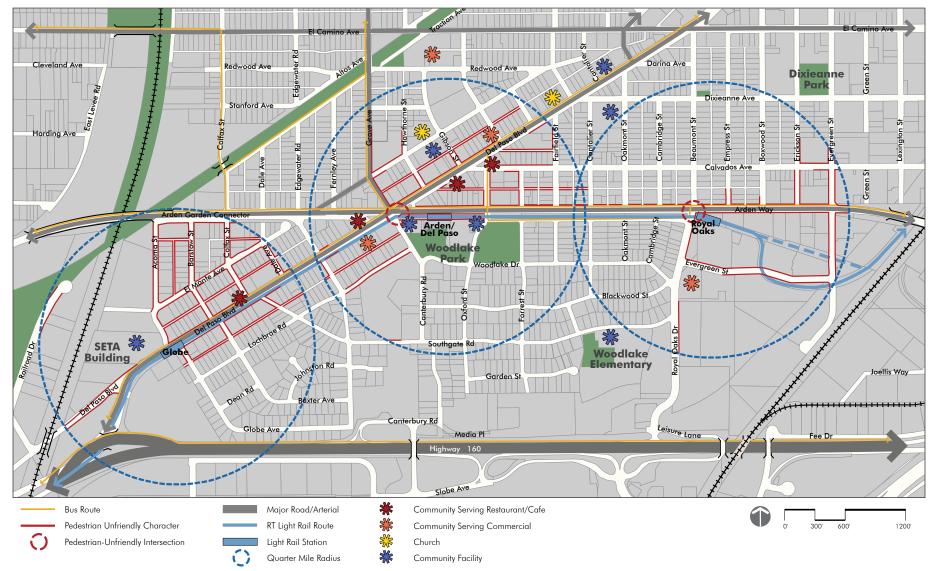


- B. Creating walkable, contiguous sidewalks that will strengthen existing pedestrian connections from the stations to the adjacent neighborhoods, open spaces, and built amenities, like Woodlake Park and the Dixieanne Tot Lot. Installing and widening sidewalks on the south side of Globe Station along Del Paso Boulevard.
- C. Improving the safety of current routes to neighboring schools, like Woodlake Elementary.
- D. Exploring the re-use of underutilized and closed alleys as viable pedestrian-friendly connectors, especially around the Royal Oaks Station.
- E. Adding more crosswalks across Arden Way to facilitate north-south pedestrian movement.
- F. Improving the safety and pedestrian-orientation of the Arden Way and Del Paso Boulevard intersection.



Poor pedestrian connections

#### FIGURE 2.9 PEDESTRIAN ENVIRONMENT





Auto and pedestrian conflicts

# ADDRESSING AUTO & PEDESTRIAN CONFLICTS

Two of the area's assets, its strategic location and easy freeway access, contribute to another constraint and potential opportunity. According to residents and a brief visual analysis, commuters often cut through North Sacramento's residential neighborhoods when traveling from Interstate 5 and North Natomas to the Capital City Freeway. For example, drivers often use Southgate Road and Royal Oaks Drive to access the retail centers along Exposition Boulevard. Similarly, fast moving traffic coming onto Del Paso Boulevard reduces pedestrian safety and overall street life. This "cut through" traffic undermines the character of local residential streets and creates pedestrian safety concerns. Reconfigured circulation patterns and strategic traffic calming could help to address these conflicts and maintain the residential integrity of the area.



"Cut-through" and fast-moving traffic through station areas

#### **IMPROVING INFRASTRUCTURE**

While new streetscape improvements along sections of Del Paso Boulevard and streetlights along Dixieanne Avenue have improved the street environment, many of the existing infrastructure and utility systems in the project area are dilapidated and in urgent need of improvement. The poor state of infrastructure poses a significant constraint to any future development. With respect to water supply, the Woodlake Neighborhood and the Arden Way and Del Paso Boulevard corridors are well served, but the Globe Station area and the Dixieanne Neighborhood contain undersized mains that need to be upgraded. The area has significant drainage problems, including street flooding and inadequate conveyance of runoff from the project area to local creeks and canals. The project area would benefit from new and upgraded pipelines, pump stations, and detention basins. The existing sewer needs of the area are adequately served by the current system, but new development may require additional sewer capacity.



Significant drainage problems in the Dixieanne neighborhood



Existing drainage basin



Vacant and underutilized lots and buildings

34

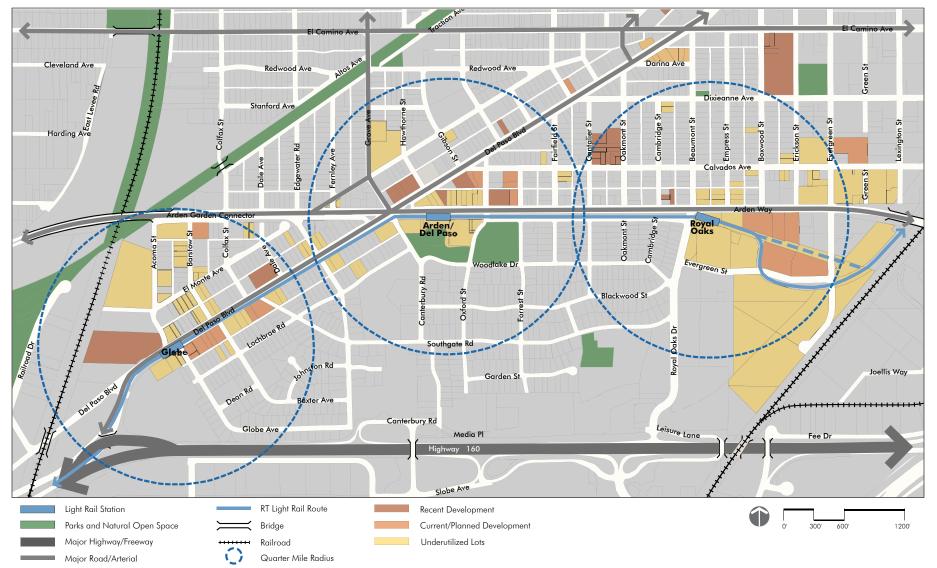
# MAXIMIZING DEVELOPMENT OPPORTUNITIES

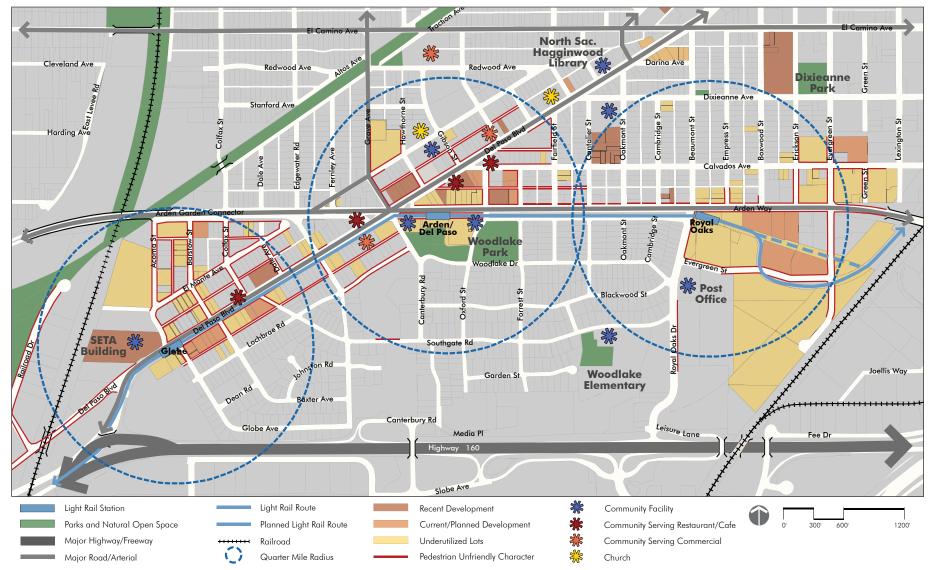
The Northeast Line Light Rail Stations Plan project areas present numerous opportunities for redevelopment and infill projects. All three station areas possess vacant and underutilized parcels that are well suited for transitoriented development. Overall, the project area has the potential to capture a strong increase in housing demand with more moderate demand for retail and office space.

A rapidly changing demographic picture coupled with regional housing pressures in the Sacramento region has created a significant demand for residential housing in the area. In the near-term, for-sale townhomes present the best transit-oriented development opportunity, with short-term development focused on the Globe Station area. Other desirable building types include condominiums and workforce-oriented housing units. Increasing the number of residents within the project area will also contribute to the area's potential for attracting neighborhood-serving retailers and restaurants, including cafés, florists, bakeries, and specialty food and beverage stores. These niche or boutique retail stores and restaurants can help to draw even more visitors and add a new dimension to the identity of the area. With its comparably lower rents, North Sacramento also has the potential to be an attractive alternative to higher priced commercial and office space in Downtown. Though relatively modest, there is a demand for small- to medium-scale commercial and professional office space in the project area.

The vast amounts of empty and underutilized land and open space provide a tremendous opportunity to create a series of interconnected TODs that will revitalize North Sacramento and increase transit ridership.







#### FIGURE 2.11 OVERALL ASSETS, ISSUES & OPPORTUNITIES

# CHAPTER three

Planning Framework The joy and pain of urban existence, the comfort or hardship of it, its efficiency or failure are

influenced by the wisdom or the thoughtlessness with which streets are platted

Charles Mulford Robinson

The Width and arrangement of streets. A study in Town Planning. (The Engineering News Publishing Company, 1911).

# planning framework

### in this chapter

CULTIVATE UNIQUE IDENTITY AND SENSE OF PLACE FOR EACH STATION

> MAXIMIZE TRANSIT ORIENTED DEVELOPMENT POTENTIAL

> > ENHANCE AND HUMANIZE THE PUBLIC REALM

> > BUILD UPON SYNERGY OF EXISTING RESOURCES

PROVIDE DEVELOPMENT INCENTIVES

**A FRAMEWORK OF PLANNING STRATEGIES IS ESSENTIAL** in guiding urban design and development in the area. This chapter describes the five overarching planning strategies specific to this project area.

# CULTIVATE UNIQUE IDENTITY & SENSE OF PLACE FOR EACH STATION

Utilize and respect the context of existing natural and man-made environments to create a unique identity and sense of place distinct to each station area.

#### ACTIONS:

- 1. Identify and articulate the distinctive role and identity of each station area based on its nearby context and potential opportunities such that:
  - Globe Station is the western bookend that serves as the gateway to not just North Sacramento, but also regional destinations such as the American River Parkway trailheads.
  - Arden/Del Paso Station is the multi-modal transit gateway to Del Paso Boulevard, North Sacramento's "main street."
  - Royal Oaks Station is the eastern bookend of North Sacramento drawing on its proximity to the major Sacramento County destinations of Arden Fair Mall and Cal Expo.
- 2. Reinforce the distinguishing sense of place through the design and nature of use of new built and open spaces within each station area. Utilize both past and modern ideas as cues to articulate the public and private realm. A modern interpretation of the streamlined moderne architectural style in new buildings within the Globe Station area can contrast with the industrial aesthetic of the buildings within the Royal Oaks Station area. Similarly, the landscaping along streets within the Globe Station area can contrast with the formal urban planting along arterials running through the other two stations.



Globe as gateway to North Sacramento & American River Parkway Trailhead at the end of Acoma (above)



Arden/Del Paso as transit gateway to Main Street Del Paso Boulevard



Royal Oaks as the eastern bookend

4 1





# MAXIMIZE THE TRANSIT-ORIENTED DEVELOPMENT POTENTIAL

Promote high density transit-oriented development to support the transit ridership and overall revitalization of this part of Sacramento.

#### ACTIONS:

- 1. Allow proximity to transit (both light rail and buses) to create higher intensity market-friendly non auto-oriented buildings that do not need traditional parking requirements, thereby reducing building costs and allowing more development to happen within existing lots and parcels.
- 2. Utilize vacant and underutilized opportunity sites to house a rich variety of different built and open space uses, thereby allowing a strong walkable and bikeable community to flourish.
- 3. Improve the physical environments at each station platform to make them more attractive to transit users by developing well conceived station plazas, aesthetically pleasing shelters, and canopy trees to provide shade.
- 4. Realize convenient, seamless connections amongst all modes of transportation, including light rail, buses, bicycle, and pedestrian facilities.



Pedestrian friendly environments along higher intensity residential development next to transit station



#### FIGURE 3.2 TRANSIT-ORIENTED DEVELOPMENT POTENTIAL

# ENHANCE & HUMANIZE THE PUBLIC REALM

Improve and augment existing open space to create an active and identifiable human-scale public realm that will provide a safe and enriching experience for all users, including pedestrians, bicyclists, and people with disabilities.

#### ACTIONS:

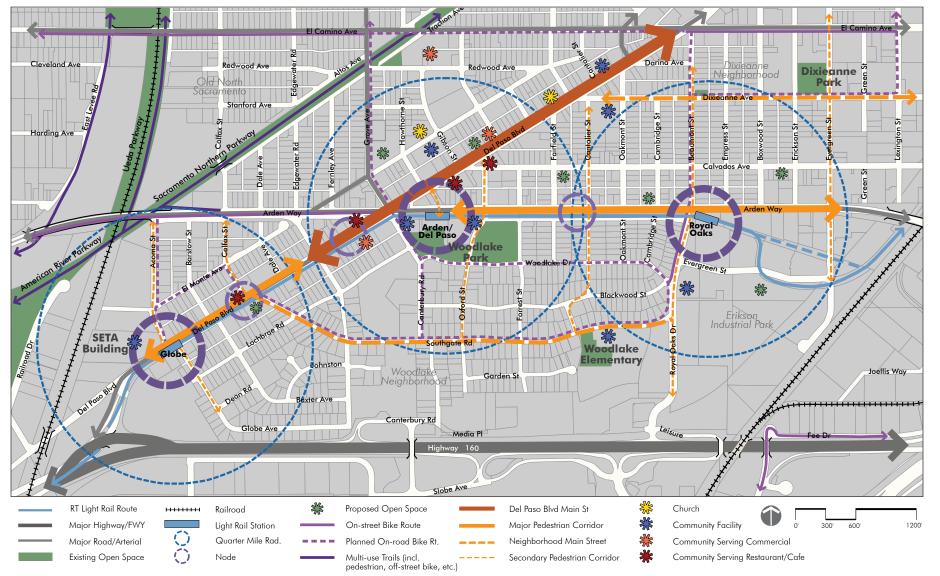
- 1. Improve the pedestrian experience by creating safe, comfortable, and enriching primary pedestrian-friendly corridors with desirable built and open space edges that enhance and relate to the pedestrian experience.
- 2. Articulate and remove barriers to the network of pedestrian-friendly streets that range from residential main streets that run through entire neighborhoods and connect major destinations to secondary pedestrian corridors that connect different neighborhoods. Enhance this network with potential new pedestrian corridors that maximize the transitfriendly development potential

### 3. Create and augment the existing bicycle framework by:

- Developing and reinforcing new and existing dedicated bike connections to key bicycle destinations that include the multiple trailheads at Acoma and neighborhood elementary schools;
- Creating Class III bike routes where the existing right-of-way or roadway is constrained, especially on all neighborhood main streets and collectors; and
- Providing bike friendly amenities at major open spaces. Create safe and convenient bike connections between transit stations and bike lanes and routes.

- Humanize the auto-oriented arterials of Arden Way and Del Paso Boulevard by creating contiguous and shaded sidewalks well-connected with crosswalks.
- 6. Maintain the shared roadway space by pedestrians, bicyclists, and automobiles as seen on most streets in the Woodlake Neighborhood. Where possible, extend this unique characteristic along other local pedestrian oriented streets of the neighborhood.
- 7. Create a variety of open spaces that include pocket parks and plazas that serve the needs of both existing and future residential and commercial resources. Ensure all new and existing users are within 1/8<sup>th</sup>-mile walking distance of an open space amenity. Approximately five acres of new park land per 1000 new residents is to be provided within or in proximity to new residential development, and in no instances shall park land dedication fall below two and a half acres per 1000 new residents.
- 8. Create a network of major and minor activity nodes, running through the three station areas that build upon existing and new pedestrian-friend-ly buildings and open spaces.

#### FIGURE 3.3 PUBLIC REALM



# BUILD UPON SYNERGY OF EXISTING RESOURCES

Leverage existing assets and resources that can be used to further enhance the three station areas and attract private investment.

#### ACTIONS:

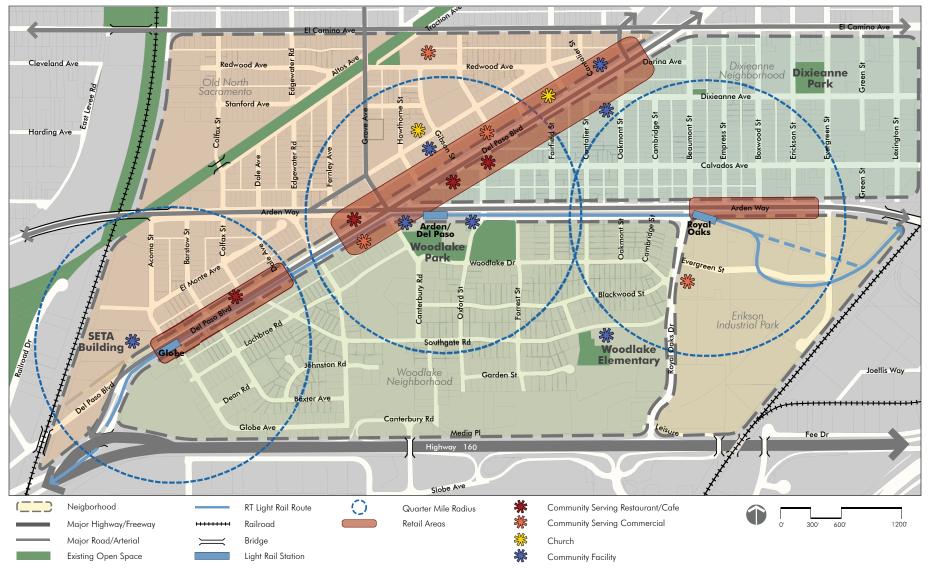
- 1. Maximize positive momentum along Del Paso Boulevard by ensuring that new design concepts build upon the recent and planned improvements that have taken place along the resurgent main street of North Sacramento.
- 2. Capitalize on the Woodlake and Dixieanne Neighborhoods, with their stable population and strong economic base to locate new minor commercial corridors that in turn enhance the overall walkability and bikability of the project area.
- 3. Strategically locate initial catalytic developments such that they take maximum advantage of existing amenities including Woodlake Park, Woodlake Elementary School, the library, neighborhood restaurants and shops.



New developments at Arden/Del Paso Station



New streetscape improvements to Del Paso Boulevard



#### FIGURE 3.4 SYNERGY OF EXISTING RESOURCES

- VOLUME ONE - NE LINE LIGHT RAIL STATIONS PLAN

# PROVIDE DEVELOPMENT INCENTIVES

Facilitate transit-oriented development by ensuring that development strategies are streamlined and all existing and potential new incentives for desired types of development are explored.

#### **ACTIONS:**

- **1. Facilitate infill development** by assembling parcels that allow for design and construction efficiencies.
- 2. Explore cost effective infrastructure improvements, especially for storm water drainage, so that lack of basic essential utilities is no longer a disincentive for new development.
- 3. Realign regulatory framework to encourage transit oriented development by studying existing zoning guidelines and regulations, including parking standards, density, and height standards, that restrict high density mixed-use development.

- 4. Provide financial incentives by:
  - The Redevelopment Agency purchasing and preparing sites for private development by clearing unwanted structures, remediating brownfields, etc., thereby reducing the risk and cost of these projects; and
  - Waiving development fees (e.g. fees for new water service).



Integrated stormwater solutions along streetscape

# CHAPTER **FOUT**

Urban Design Concept A great street should be a most desirable place to be, to spend time, to live, to play, to work, at the same time that it markedly contributes to what a city should be. Streets are settings for activities that bring people together.

> Allan B. Jacobs Great Streets, (Cambridge: MIT Press, 1993), 8).

# urban design concept

in this chapter

OVERARCHING VISION TRANSIT STATION AREAS GLOBE STATION ARDEN/DEL PASO STATION ROYAL OAKS STATION **THE URBAN DESIGN CONCEPT FOR THE QUARTER-MILE AREA** around the three Light Rail Stations articulates the overall preferred community vision, character, and experience of existing and future built and open spaces. It emphasizes improvements to the public realm, circulation patterns, and open space networks that link new developments together. It also identifies strategic development opportunity sites. The Urban Design Development Framework Concept (Figure 4.1) is the visual blueprint or "road map" for the area's future development.

The urban design concept builds upon the existing conditions analysis and the planning strategies. There are a number of design concepts and features that apply to the entire project area, while others have been tailored to the unique experience and identity of each station. As the role and identity of each station is somewhat different, each station requires a different type of design response. Design components specific to each station, Globe, Arden/Del Paso, and Royal Oaks, are described in detail later in this chapter.

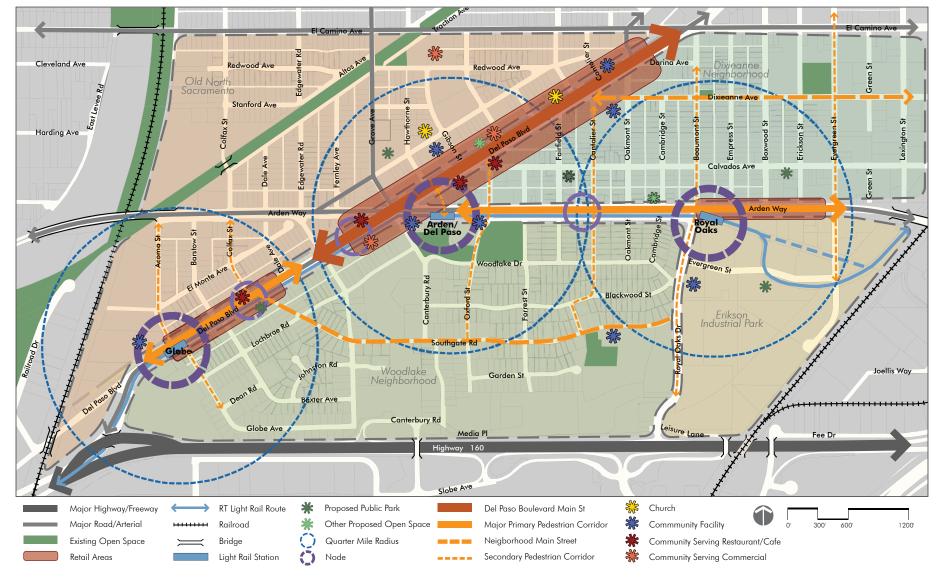
#### **OVERARCHING VISION**

The overall design concept envisions the project area as a series of interconnected, mixed-use, bikable, and pedestrian-oriented stations. Each station has a distinct role and identity that builds upon its location within the existing natural and built context, North Sacramento, and the larger Sacramento region. Globe Station serves as the gateway to North Sacramento and the American River Parkway, Arden/Del Paso as the multi-modal entrance to Del Paso Boulevard, and Royal Oaks as the eastern bookend to the project area, close to the regional destinations of Cal Expo and Arden Fair Mall. Each station continues to serve the existing neighborhoods of Dixieanne and Woodlake.

These three interconnected station areas, along with the adjoining Swanston Station area, provide the critical residential mass necessary to create a vibrant main street on Del Paso Boulevard between Arden Way and El Camino Avenue. Del Paso Boulevard includes a concentration of pedestrian and activity-generating uses such as restaurants, art galleries, studios, neighborhood-serving retail, and high-density residential development.



Vibrant, pedestrian friendly public realm along major arterial roads such as Arden Way articulated by tree lined sidewalks and mix of uses



#### FIGURE 4.1 URBAN DESIGN CONCEPT



Activated and welcoming pedestrian realm

#### PUBLIC REALM

The revitalized public realm is characterized by a series of activity nodes, which help to further tie the station areas together. These nodes vary in character and scale from redesigned public plazas to special crosswalks and pathways. The variety of public spaces provides places at which people can sit, gather, eat, see, and be seen.

The public realm is greatly strengthened by a lattice of pedestrian and bike connections that criss-cross the area, connecting existing and new neighborhoods to destinations in the area. Del Paso Boulevard and Arden Way are redesigned and humanized to foster a safer and more welcoming pedestrian realm. The quality of the pedestrian experience is also enhanced with attractive, well-articulated facades and welcoming building entries fronting Arden Way and Del Paso Boulevard.

The number and size of the project area's open spaces are expanded to form an integrated network of parks, pocket parks, green spaces, and tot lots. With this extensive system of open spaces, most residents are within walking distance of recreational opportunities.



Globe Station activity node



Arden/Del Paso Station activity node



Royal Oaks Station activity node

#### Circulation

The envisioned circulation system balances the overlapping needs of automobiles, transit, bicyclists, and pedestrians while strengthening the walkable and bikable character that is intrinsic to transit-oriented development.

Del Paso Boulevard between Globe Avenue and Arden Way, and Arden Way between Del Paso Boulevard and Evergreen Street, remain key arterial roads to accommodate regional and local traffic. However, both streets are reconfigured to enhance the pedestrian experience. The character of Arden Way changes, depending on the allowable right-of-way.

Many existing streets, especially in the Woodlake and Dixieanne Neighborhoods, should retain their existing roadway curb and gutter. Improvements would primarily focus on improving the landscaping, including the addition of shade-providing trees within the existing rightof-way. However, certain local streets, including Colfax Street, are reconfigured to allow for pedestrian-friendly sidewalks.

A strong, interconnected network of bike routes is created along existing streets. Their designation varies depending on the existing use and right-of-way. Key collectors, like Royal Oaks Drive, are reconfigured to allow for wide bike lanes that are especially safe for children. The bike character of main neighborhood streets, including Southgate Road and Dixieanne Avenue, is strengthened with signs to allow them to function as class III bike routes. Similarly, other local streets are made bicycle-friendly. Acoma Street, the primary connector between a major transit stop and the American River Parkway, is improved to strengthen the connection to this regional amenity.

Transit routes along key arterials and collector streets are continued. However, as per Regional Transit's planned improvements, the multi-modal transfer station at Arden/Del Paso is moved to Swanston Station, thereby allowing more public realm improvements for the light rail station.



'Calmed' tree-lined arterials with central median



Shared pedestrian and bike paths





*Example of desirable front (top) and back building facades of high intensity mixed-useTOD building* 

#### **PRIVATE REALM**

All three station areas have a mix of uses. The lots facing Del Paso Boulevard and some sections of Arden Way have the most potential of having mixed-use residential buildings with ground-floor retail or commercial that activates the pedestrian realm. However, with the proposed reconfigurations of Del Paso Boulevard and Arden Way, residential developments should be encouraged. A wide variety of residential buildings, including row houses, townhomes, condominiums, and live/work lofts should be explored, while allowing different building prototypes that make the built environment more interesting.

The overall character of development should respect the residential use, scale, and character of the Woodlake and Dixieanne Neighborhoods. However, the development of the project area's opportunity sites should leverage the overall transit-rich character of the <sup>1</sup>/<sub>4</sub>-mile radius zones and be three or more stories tall. The massing, height, and intensity of development should be greatest along the arterial corridors to create a sense of enclosure for pedestrians. The overall architectural style should also reflect the surrounding physical context and, in some cases, such as Del Paso Boulevard, respect the historic Art Deco/Moderne architectural style.

The area's private open spaces should enhance the overall residential character of the streets. Wherever the right-ofway is narrow, buildings should be set back to allow for outdoor seating. Similarly, new residential buildings, including those along the Arden Way and local streets like Canterbury Road, should be set back to create front yards and gardens.

Parking, especially for commercial and mixed-use buildings along Del Paso Boulevard and Arden Way, should be located in the rear or back of buildings to create a strong, engaging edge that respects the pedestrian experience. Any planned parking garage should have pedestrian-friendly ground-floor uses along the street.

56

#### **TRANSIT STATION AREAS**

The urban design concept recognizes the distinct characteristics of the three stations of the Northeast Line Light Rail Stations Plan. This character is based on the nature of uses, architectural form/design, historic elements, and significant clusters of underutilized buildings and vacant open space. The description of each station includes: a definition of boundaries; a review of existing character; a description of long term vision and ideal character; a discussion of design treatment of the public realm (including streets, parks and plazas); characterization of key circulation components; and an outline of preferred types and character of future development as appropriate for each area.

Highlighted with the dotted circled areas on the Concept Diagram (Figure 4.1), this section is organized by station, proceeding from west to east within the project area:

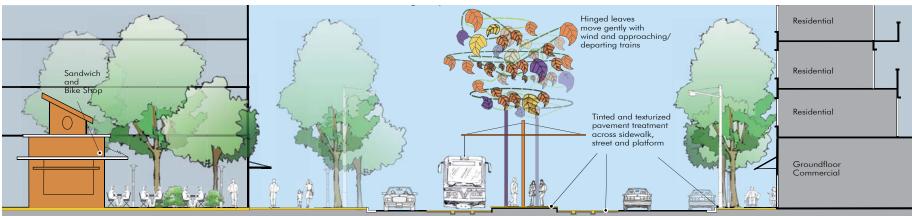
- Globe Station,
- Arden/Del Paso Station, and
- Royal Oaks Station

57

#### **GLOBE STATION**

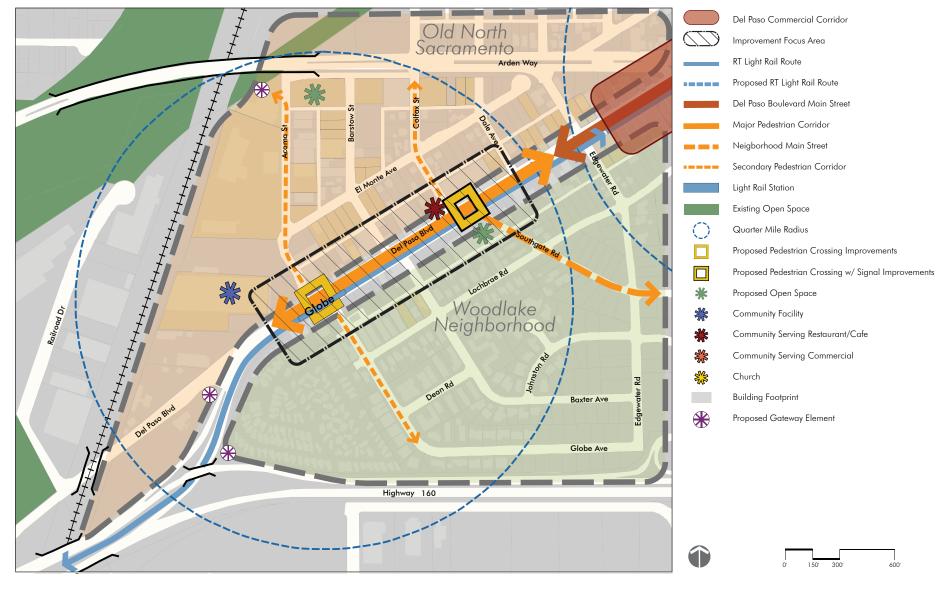
#### VISION

Globe is envisioned as a vibrant, mixed-use, transit-oriented development that builds upon its unique location in terms of both its role and planned identifiable character. It fulfills its potential as the key gateway station of North Sacramento by ensuring a mix of context-sensitive public and private realm improvements that include a multi-use shared pedestrian and bike pathway connecting the station to the American River Parkway trailhead, and positioning architecturally significant multi-story buildings along Del Paso Boulevard. Public art, such as a unique sculptural element, further heralds the entry to North Sacramento and a strengthened transit station. Maximizing infill opportunities along Del Paso Boulevard helps to animate the corridor between Arden Way and El Camino Avenue. The triangular area north of Del Paso Boulevard and south of Arden Way provides an exciting opportunity to create an eclectic neighborhood that allows new residential, mixed-use development to thrive alongside existing industrial and institutional uses. With the relatively well-established section of Woodlake Neighborhood south of Del Paso Boulevard, the new planned infill development provides an important critical residential mass necessary to sustain an active street life along the main street of North Sacramento.



#### FIGURE 4.2 GLOBE TRANSIT STATION LOOKING NORTHEAST

#### FIGURE 4.3 GLOBE DEVELOPMENT FRAMEWORK





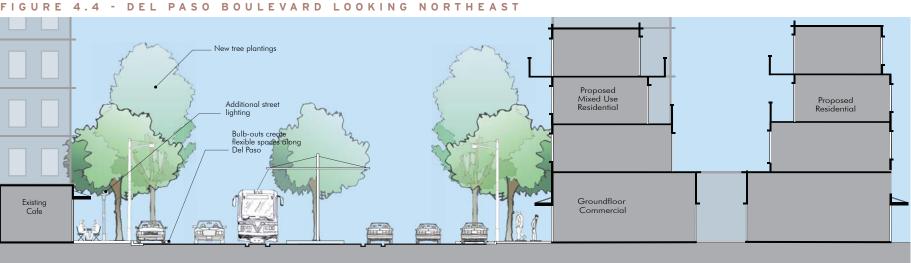
#### Potential long term articulation of Southgate Node

#### PUBLIC REALM

The public realm framework is built upon the concept of a series of interconnected major and minor nodes. Pocket plazas at the four street corners of the station linked with special paving on sidewalks, crosswalks, and the station platform, creates the major node at the station. At the same time, vertical streetscape elements, sculptural features, and well-articulated streamlined buildings emphasize and celebrate this important node in North Sacramento.

A minor node at Southgate Road, which serves as the residential main street, complements the major gateway node along Del Paso Boulevard. In the long term, a potential new open space at this intersection would also help to further strengthen this node.

In order to maximize public funds, the public realm improvement focuses on high visibility strategic areas that include the station, and streetscape improvements along Del Paso Boulevard and Acoma Sreet. Existing 12-foot sidewalks with proposed mid-block bulbouts along Del Paso Boulevard will allow for outdoor seating for cafés and restaurants, similar to Uptown Café.



60

#### FIGURE 4.5 GLOBE ILLUSTRATIVE





Shared pedestrian and bike path

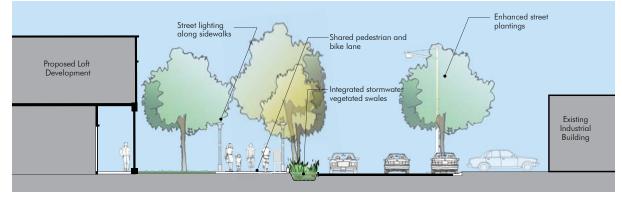
A shared pedestrian and bike path along the west edge of Acoma St. will provide an enriching experience for users going to the trailhead for the American River Parkway and other trails. A six-foot planter space separates nonmotorized travelers from truck and automobile traffic. At the same time, distinctive native planting within integrated storm water planter space provides the street and the northern edge of the station with a unique sense of identity.

Constrained rights-of-way allow for minor streetscape improvements on residential streets such as Globe Avenue and Colfax Street Other streets, such as Southgate Road in the Woodlake Neighborhood, are maintained because its tree-lined streets provide a strong sense of enclosure.



Example of integrated storm water planter area VOLUME ONE - NE LINE LIGHT RAIL STATIONS PLAN

#### FIGURE 4.6 ACOMA STREET - CONNECTION TO TRAILHEAD



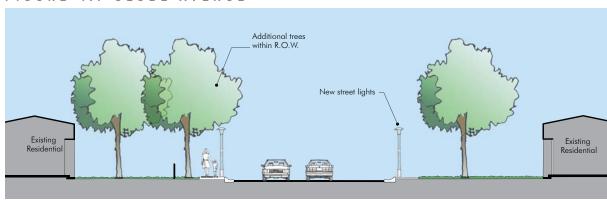
#### Circulation

Del Paso Boulevard is a multi-modal corridor along most of its length between Globe Station and Arden Way. However, in front of the station, a travel lane is eliminated to calm the traffic coming in and out of North Sacramento. This, in turn, builds on the City's planned traffic-calming measures for Del Paso Boulevard south of Globe Avenue. On-street parallel parking is maintained along both sides of the street. A new traffic light along Del Paso Boulevard at Colfax Street and Southgate Road strengthens overall pedestrian safety.

Creating a shared bike path along Acoma Street and designating Southgate Road as a Class III bike route (on the road with signage but with no dedicated lane) strengthens the overall bicycle circulation. Existing roadway configurations along local streets in Woodlake Neighborhood such as Globe Ave are maintained. However, pedestrian realm is enhanced with new street lights and shade providing trees. The ridership and level of transit service along Del Paso Boulevard is maintained for both buses and light rail.



Existing Globe Avenue



#### FIGURE 4.7 GLOBE AVENUE





Different mixed-use building prototypes



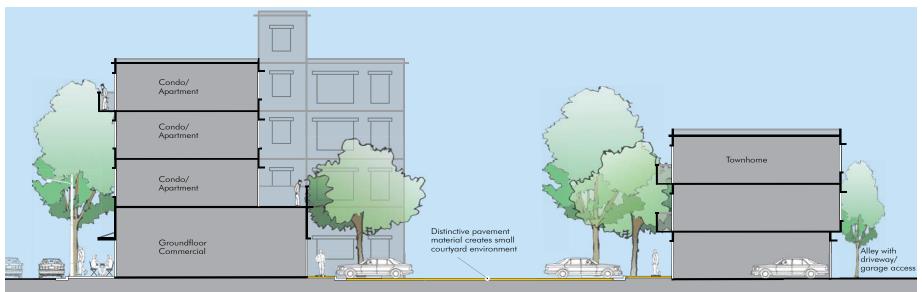
Mixed-use friendly building along transit corridor VOLUME ONE - NE LINE LIGHT RAIL STATIONS PLAN

#### PRIVATE REALM

The mixed-use development, especially around the station, aims to create an active street life by providing pedestrian-friendly, ground-floor uses such as restaurant, cafes, and shops, which in turn will provide 'eyes on the street' and the station plaza. New buildings, especially those immediately around the station and along Del Paso Boulevard, should be four- to five-story, high-density buildings that maximize the station's transit-oriented development potential and provide a strong sense of definition to the 100-foot-wide street. Development within the triangular neighborhood can continue to have a strong industrial feel by incorporating architectural elements such as saw tooth roofs, and by housing different uses, including live/ work lofts and incubator businesses. While few buildings along Del Paso Boulevard speak to its historic past, new buildings can use their architectural articulation to reflect the Art Deco/Moderne character of the area. Curving forms, long horizontal lines, and strong vertical elements, especially at the corners of buildings, can be modulated to create a strong sense of place in a very modern context.



FIGURE 4.8 GLOBE CATALYTIC SITE





#### Woodlake Park

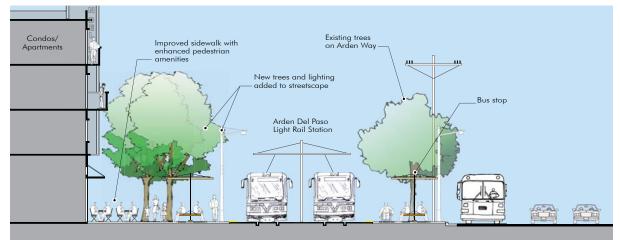
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#### **ARDEN/DEL PASO STATION**

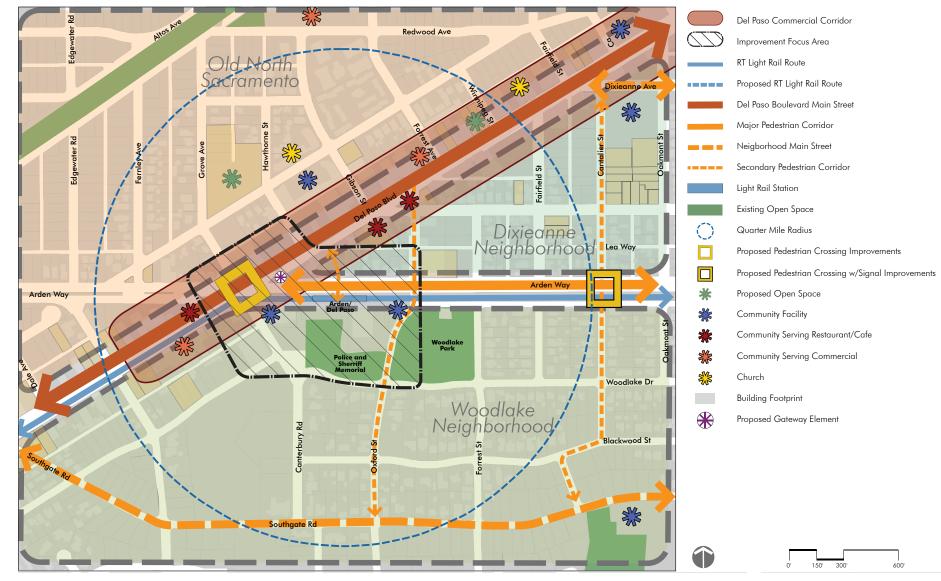
#### VISION

The Arden/Del Paso Station area is largely built out and has limited development opportunities. The area consists of three distinct areas: Woodlake Neighborhood, Dixieanne Neighborhood, and North Sacramento's main street (Del Paso Boulevard between Arden Way and El Camino Avenue). While the station has the maximum transit usage amongst all the stations in North Sacramento and a wide variety of open space, it is also perceived as unsafe and unable to maximize its transit-oriented potential. Arden/Del Paso station area is envisioned as a safe and vibrant transit-oriented development area that aims to connect these three distinct anchors with a public realm framework of strengthened pedestrian connections and revitalized open spaces.

The public faces of the Woodlake and Dixieanne Neighborhoods, especially along Arden Way between Del Paso Boulevard and Oxford St., are strengthened with transitoriented, mixed-use buildings that provide a strong sense of identity and an overall sense of safety to the neighborhood residents and transit users. These improvements, in turn, increase the positive momentum along Del Paso Boulevard to successfully achieve the desired mix of uses and an active street life.



#### FIGURE 4.9 ARDEN/DEL PASO TRANSIT STATION LOOKING WEST



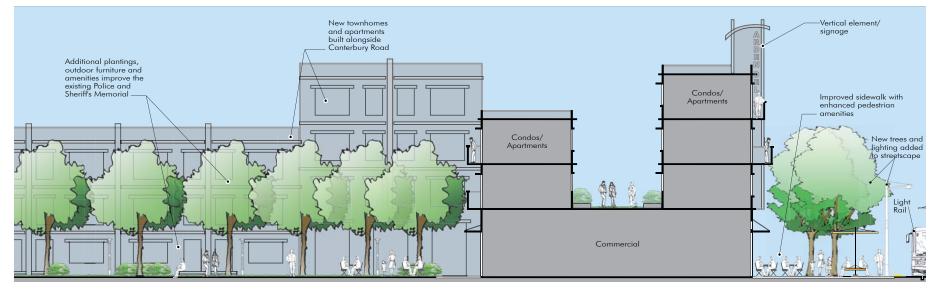
#### FIGURE 4.10 ARDEN/DEL PASO DEVELOPMENT FRAMEWORK



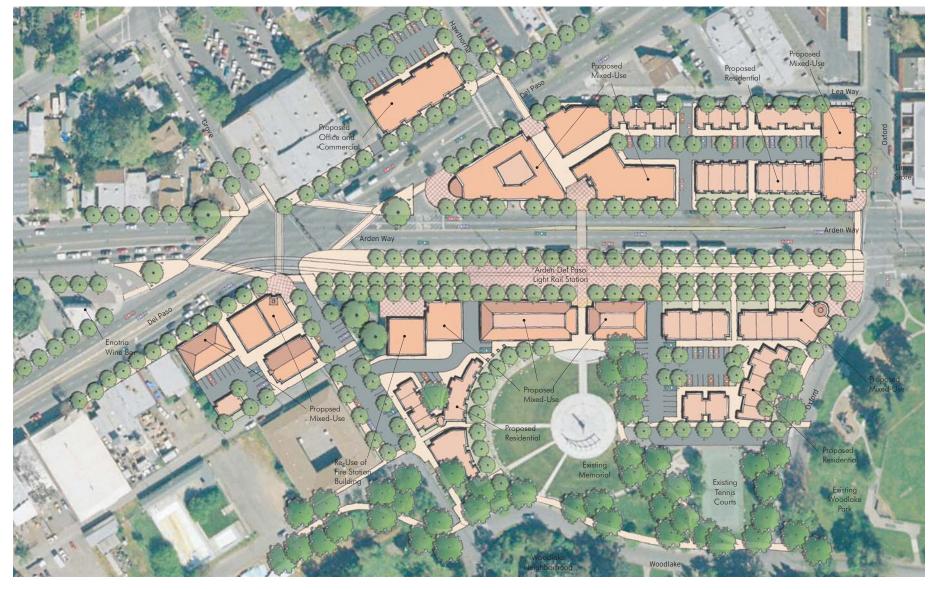
#### **PUBLIC REALM**

The proposed redesign of the public realm creates a transit plaza around the station with a well-defined built edge that helps to activate the plaza and provides an opportunity for people to monitor the area throughout the day. The overall safety of the area is further improved by reconfiguring the underutilized area around the Police and Sheriff Memorial to create an active, identifiable and interactive building edge around this curving open space. The revitalized memorial includes strong pedestrian connections between the new transit plaza and the Woodlake residential areas. A new diagonal crosswalk at the intersection of Arden Way and Del Paso Boulevard decreases the current physical and psychological distance between the transit station, the Woodlake Neighborhood, and the "main street" section of Del Paso Boulevard. A signalized, mid-block crosswalk across Arden Way dramatically reduces the convoluted path a pedestrian has to follow to go from the station to Del Paso Bouelvard. The overall connectivity between the Dixieanne and Woodlake Neighborhoods is further enhanced by adding a signalized pedestrian connection across Arden Way at Cantalier Street.

#### FIGURE 4.11 REVITALIZED POLICE AND SHERIFF MEMORIAL LOOKING WEST



#### FIGURE 4.12 ARDEN/DEL PASO ILLUSTRATIVE

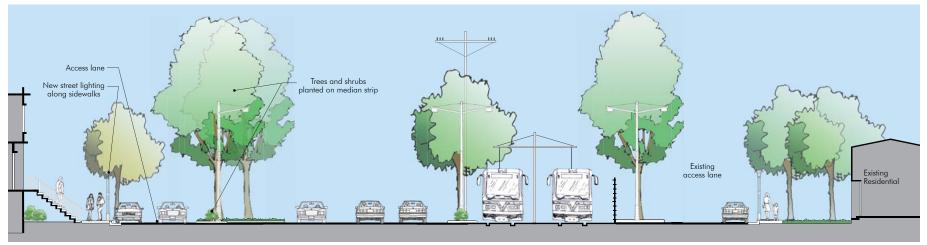




Multi-way boulevard with pedestrian & bike-friendly access lane

#### Circulation

The overall flow of traffic circulation is maintained with Arden Way serving as the primary arterial street, complemented by Del Paso Boulevard and Grove Avenue. However, Arden Way's auto-oriented character is dramatically transformed by creating a pedestrian and bike-friendly multi-way boulevard along its length between Oxford Street and Royal Oaks Drive. The existing right-of-way is reconfigured to create a local access lane along the northern edge of Arden Way that is separated from the fast-moving through lanes by a tree-lined median. Either side of the dedicated light rail lanes also has landscaped medians, which helps to shade and calm the fast-moving traffic.

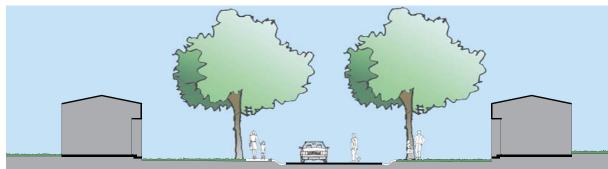


#### FIGURE 4.13 ARDEN WAY LOOKING EAST

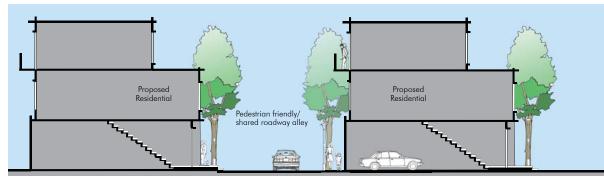
The unique shared roadway characteristic of most of the streets in the Woodlake Neighborhood is maintained. Certain sections of existing streets with proposed new developments, such as Canterbury Road between Arden Way and Woodlake Drive, and Lea Way between Oxford Street and Del Paso Boulevard, are reconfigured to encourage more pedestrian-friendly shared roadway use characteristics. The bus system maintains its existing network of routes and level of service. However, as part of the City and Regional Transit's vision, the bus transfer facility is moved to Swanston Station, thereby providing greater space for creating a vibrant transit plaza. The overall bicycle circulation is improved with the addition of class III bike facilities along Southgate Road and Dixieanne Avenue.



#### FIGURE 4.14 SOUTHGATE ROAD



#### FIGURE 4.15 LEA WAY



Existing Southgate Road

71



Example of shared roadway alley for residential uses



ARDEN/DEL

PASO

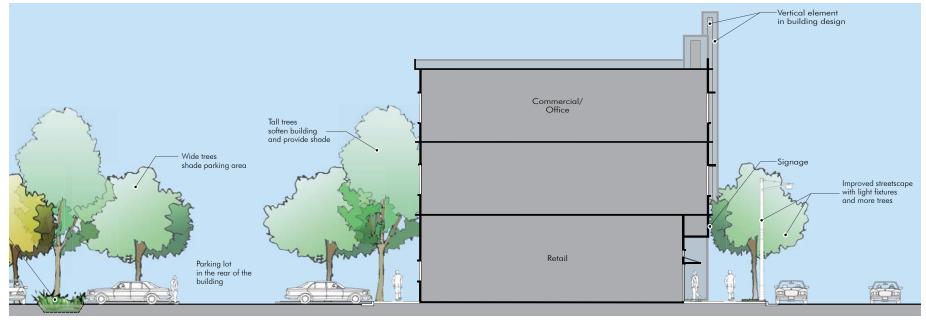
#### **PRIVATE REALM**

CATALYTIC SITE

A wide mix of residential uses, including townhomes and condominiums, retail, and commercials buildings, including shops, offices, restaurants, and cafes are proposed to create a transit-friendly character. Compared to other stations, Arden/Del Paso Station provides the least amount of development opportunities in the short term. However, long-term scenarios of redeveloping underutilized buildings along Arden Way should maximize opportunities for creating active pedestrian-friendly edges on the ground level, as well as creating unique facades that

provide the station with a distinct sense of place and identity. Proposed long-term developments along the edges of the Police and Sherriff Memorial plaza would need the approval of the Department of Parks and Recreation and the Sacramento City Council. Displaced park land could be provided in other appropriate locations.

Commercial and mixed-use buildings with ground-floor commercial/retail are proposed along Arden Way in front of the transit station to physically and psychologically



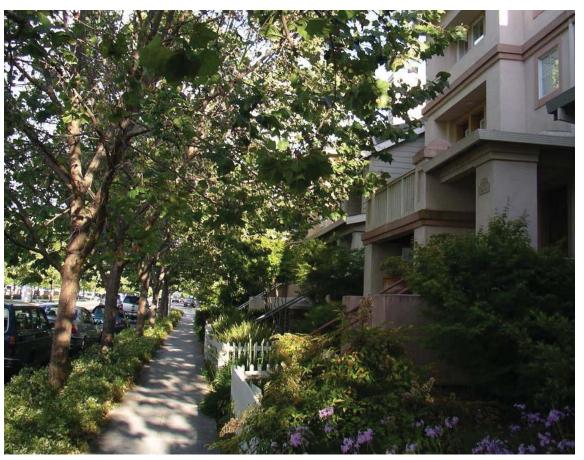
FIGURE

4.16

72

connect to the main street character of Del Paso Boulevard. The multi-way boulevard also creates opportunities for residential uses along the northern edge of Arden Way. While the overall scale and character of the buildings along Arden Way should be at least three- to four-floors-high to better define the pedestrian realm, residential buildings should step down to meet the one- to two-story character of the Woodlake and Dixieanne Neighborhoods.

Parking, especially for commercial and mixed-use buildings along Del Paso Boulevard and Arden Way, should be tucked away in the rear or back of buildings to create a strong and engaging edge along the right-of-way. Conversely, new residential buildings, including those along the multi-way boulevard and local streets, like Canterbury Road, should step back to create front yards and gardens, thereby enhancing the residential character of existing neighborhoods.



Desirable three- to four-story TOD residential buildings

#### **ROYAL OAKS STATION**

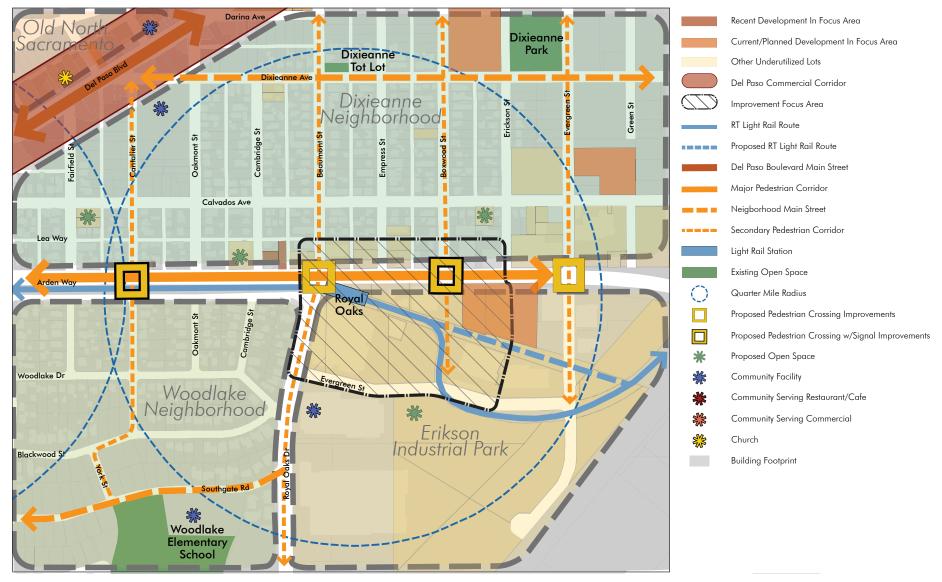
#### VISION

The well-established Woodlake Neighborhood defines the southwest part of the Royal Oaks Station area. In contrast, empty and underutilized buildings, auto-oriented uses, warehouses, and storage sheds characterize the remaining area. Thus, the revitalization of this area presents the largest long-term opportunity of creating a holistic, transit-oriented development in North Sacramento. Pedestrian improvements within the public realm and new transit-sensitive development in the private realm can help alter the experience of entering North Sacramento from the eastern end into a walkable and bikable mixed-use residential neighborhood. The vast amounts of underutilized buildings and open space in the southeast corner of the station area and infill development along Arden Way will help create a transit-oriented village that complements the Woodlake Neighborhood on the west and the Dixienanne Neighborhood on its north.



#### FIGURE 4.17 ROYAL OAKS TRANSIT STATION LOOKING NORTHWEST

#### FIGURE 4.18 ROYAL OAKS DEVELOPMENT FRAMEWORK





**PUBLIC REALM** 

The proposed framework of public realm improvements connect destinations like Woodlake School to the Dixieanne Neighborhood, and Dixienanne Park to the Woodlake Neighborhood, helping to create a safe and enriching experience for all people, especially children.

The entryway into the Royal Oaks Station area, as one drives westwards from the Arden Way overpass, features a distinctive tree-lined boulevard with landscaped medians that provides an attractive contrast to the harsh paved character of the area around the Business 80 interchange. The open space around the station is celebrated as an active transit plaza, thereby becoming a focal point of the area that brings together people from the existing Dixieanne and Woodlake Neighborhoods and the potential new transit village south of the station. The transit village is articulated with built edges and identity-providing elements that include trees, lighting and special paving.

The existing roadway configuration along most northsouth streets in the Dixieanne Neighborhood is maintained. However, new trees are added to help provide shade and improve the overall aesthetic experience. Similarly, the neighborhood's long blocks are broken up by

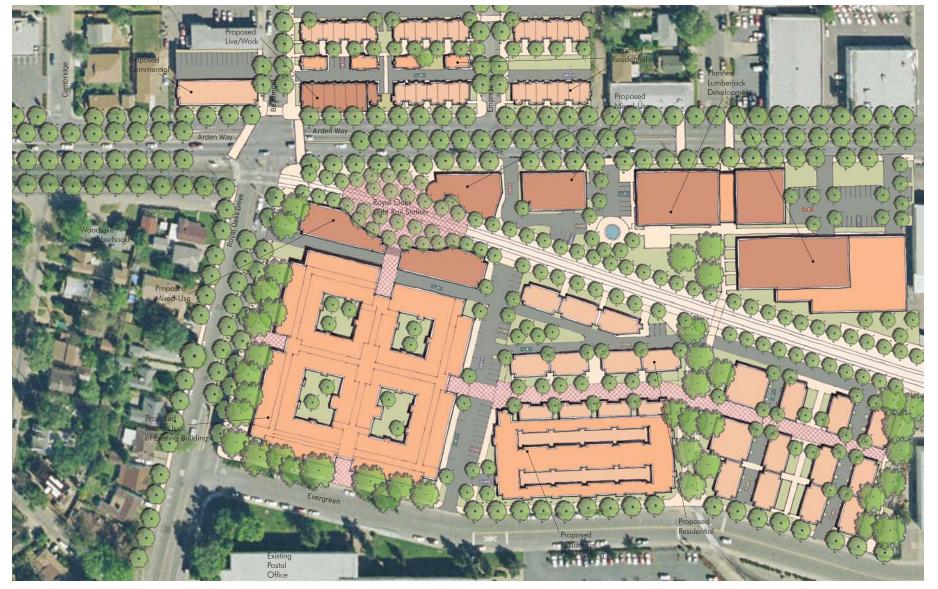


FIGURE 4.19 ARDEN WAY EAST OF ROYAL OAKS

Tree-lined arterial with central median

76

#### FIGURE 4.20 ROYAL OAKS ILLUSTRATIVE



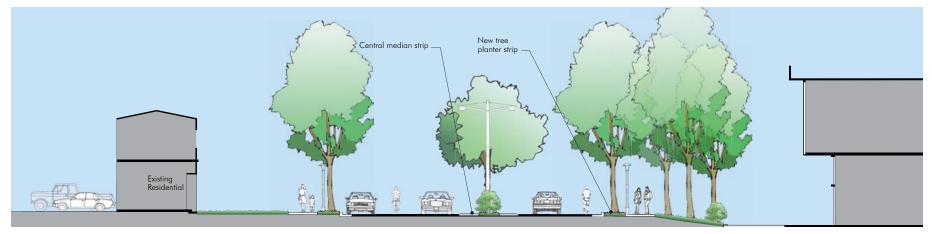
landscaped mid-block crossings that humanize the pedestrian experience and calm traffic along local and collector streets. A new signalized pedestrian light at the Cantalier Street intersection and a new traffic light at Boxwood Street enhance pedestrian connectivity along Arden Way.

#### Circulation

The four blocks to the west of Royal Oaks Drive are a multi-way boulevard with medians, while the four blocks to the east are characterized by a tree-lined median with shade-providing trees. These medians help to calm the high-volume and fast-moving traffic along Arden Way. In addition, every other block of Arden Way has a pedestrian crossing, which ensures that the north-south connections between Dixieanne and Woodlake Neighborhood are maintained.

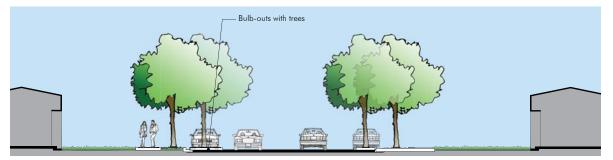


#### FIGURE 4.21 ROYAL OAKS DRIVE

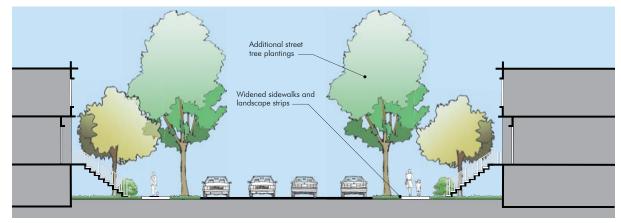


The network of bikable paths is strengthened to provide safe and desirable bike routes for people of all ages, especially children. Royal Oaks Drive is reconfigured with a central median and dedicated bike lanes in either direction. Roads with relatively constrained right-of-way, such as Southgate Road, Dixieanne Avenue, and Evergreen Street are dedicated class III bike routes. Royal Oaks Station continues to serve as an important transit center for both light rail and buses. While Arden Way continues to serve as the primary bus route, Evergreen Street, south of Arden Way will assume its new role as a bus route serving the planned new transfer station at Swanston Station.

FIGURE 4.22 TYPICAL 60' NORTH-SOUTH STREET



#### FIGURE 4.23 BEAUMONT STREET





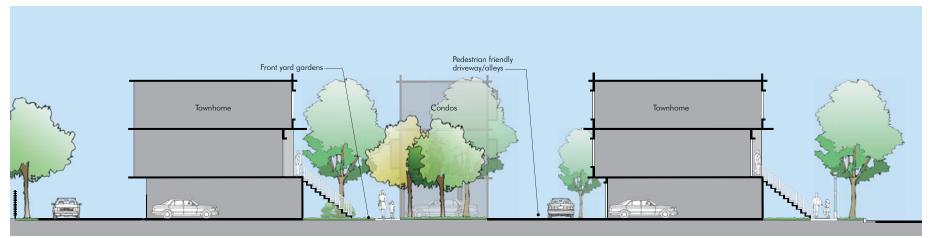
Residential development north of Arden Way



Residential development south-east of station

#### PRIVATE REALM

While industrial, warehouse and storage buildings, and open space characterize the existing land uses around the station, the new mix of uses is envisioned as a variety of residential uses, which supports office and retail. Live/ work lofts that provide the flexibility to accommodate the changing needs of the occupant can reflect the industrial character of this area. The southeast area of the station presents the opportunity for a mid-rise, high-density transit village, while still respecting the residential character of nearby Woodlake Neighborhood.

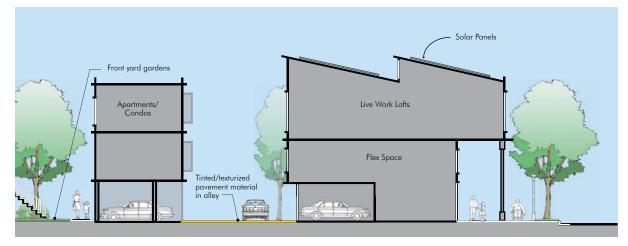


#### FIGURE 4.24 ROYAL OAKS RESIDENTIAL DEVELOPMENT

The overall character of the buildings should be at least three- to four-stories-high to define the wide right-of-way especially along Arden Way. Again, as in the other stations, the on-site parking should be positioned away from the pedestrian realm, preferably in the rear of lots. Any planned parking garage should have pedestrian-friendly ground-floor uses.



#### FIGURE 4.25 ROYAL OAKS LIVE/WORK LOFT



Live/Work lofts with industiral character

## CHAPTER **five**

### Implementation

Collectively, a city's abundant small spaces have a major impact on the quality of life. If those spaces are unattractive, people will likely retreat from the city street, perhaps from the city itself - to the suburbs and country if they can manage it, to fortified shelters in cities if they cannot. But if we learn to advantage of our small urban spaces, if we design new ones well, and fix up the old ones, we will keep the streets alive. We may even encourage people to use them, and to smile about it.

> William K. Reilly, President, The Conservative Foundation William H. Whyte. The Social Life of Small Urban Spaces (The Conservation Foundation, 1979), 7

## implementation

in this chapter

PRIORITY IMPROVEMENTS

FUNDING RESOURCES

CATALYZING TRANSIT-ORIENTED DEVELOPMENT **THE PURPOSE OF THE IMPLEMENTATION COMPONENT OF THE PLAN** is to outline the "how to" steps for directing future investment in the project area. The implementation strategy will put forth an efficient and economical approach for creating a vital, thriving, transit-oriented development. The implementation strategy as well as the urban design improvements will enhance and highlight the unique characteristics of the areas around each of the light rail stations.

The City should review the existing zoning to allow for more transit supportive land uses, that include zones such as RMX-TO, C-2-TO, etc. However, the focus of this chapter is to create a refined set of priority improvements and an inventory of potential funding mechanisms, which form the basis of this chapter's two primary sections. First, the Priority Improvements section describes improvement actions defined as being of particular importance. Second, the Funding Resources section includes a list of funding mechanisms that City or Sacramento Housing and Redevelopment Agency staff could pursue to support revitalization efforts. A more detailed list of potential funding sources is included in the appendix.

#### FINANCIALLY FEASIBLE PROJECT TYPES

A mixed-use project in the Northeast Corridor is likely to require some form of public investment in order to be financially feasible. Residential projects are the closest to achieving profitability under current conditions, and a relatively high-density townhouse project could be profitable at market rates. Retail and office projects are less feasible, due to the relatively low rents in the area. Since retail and mixed-use retail/residential projects are desirable near Globe Station in the short term and near Arden/Del Paso in the longer term, the City and/or the Redevelopment Agency will need to consider how to best facilitate this kind of development.

Based on the information obtained from both the market analysis and the pro-forma analysis, the creation of transit-oriented development in North Sacramento can begin with a project with a large for-sale residential component at a site near the Globe Station or on Del Paso Boulevard near the Arden/Del Paso Station.

#### **PRIORITY IMPROVEMENTS**

Resource constraints make it impossible to implement all proposed improvement actions at once. Rather, early resource allocations must be directed towards actions that will make the most tangible difference. This section outlines a number of potential improvements that have been prioritized for early implementation due to their particular relevance in transforming the project area and their likelihood of bringing positive change in the area.

The consultant team, in coordination with the City staff, reviewed the full range of the Plan's suggested improvements to determine which improvement actions might have the greatest potential to transform the area's image and catalyze further activity in the area. Evaluation criteria included: project cost, funding availability, time frame, ease of implementation, catalytic effect, visibility, and community support. The project team also drew on their understanding of growth trends in the region and on their knowledge of constraints that have hindered development in the past.

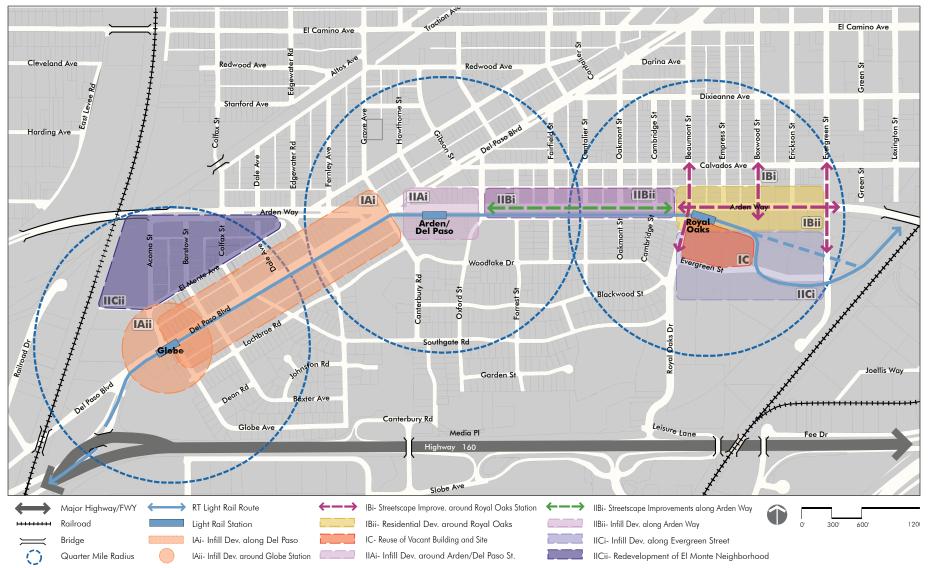
Projects designated as top priority have the strongest potential to invite further investment in the area from both the private and public sectors. They also have the potential to remove real and perceived barriers to development. The project team recommends directing energy toward the following priority projects:

#### I. Short Term

- A. Focus new infill development along Del Paso Boulevard between Globe and Arden/Del Paso Stations and at Globe Station.
- B. Create public realm improvements that enhance character and encourage walkability to Royal Oaks Station (including streetscape improvements along Arden Way between Royal Oaks Drive and Evergreen Avenue) and encourage mixed-use residential development opportunities around Royal Oaks Station.
- C. Reuse the vacant site at Royal Oaks Station.

#### II. Long Term

- A. Promote infill development around the Arden/ Del Paso Station
- B. Explore public realm improvements that encourage walkability and overall character of Arden Way between Oxford Street and Royal Oaks Drive and encourage residential infill development opportunities along the north side of Arden Way between Oxford Street and Royal Oaks Drive.
- C. Promote infill development along the east west section of Evergreen Street and redevelopment of the El Monte Neighborhood located south of Arden Way and north of Del Paso.



#### FIGURE 5.1 SHORT & LONG TERM IMPROVEMENTS

- VOLUME ONE - NE LINE LIGHT RAIL STATIONS PLAN



Example of infill mixed use development

#### **FUNDING RESOURCES**

Three key resources exist that should be utilized for synergizing transit-oriented developments:

#### **CITY OF SACRAMENTO**

The City of Sacramento's Economic Development Department has Capital Improvement Program funds amounting to \$2 million per year for projects throughout the City. These funds are set by the transportation and utility departments for economic development projects developed in cooperation with the two departments. Funds can be used for off-site improvements, including streets, gutters, sidewalks, and streetlights, and for bringing utilities to the property line for new construction.

California Proposition 1C is a new \$2.8 billion bond focused on affordable housing that includes \$850 million for a range of capital improvements that promote infill housing and \$300 million for a TOD Implementation Program. Transportation improvements related to infill development and traffic mitigation are also eligible for this funding. It is important to note that the measure leaves most details of this program up to the Legislature to determine in subsequent legislation. With regard to the TOD Implementation Program, Proposition 1C provides:

- Grants for cities, counties or transit agencies for infrastructure to make TOD feasible.
- Loans for housing developments, including mixeduse and commercial. At least 15 percent of the housing development's units must be affordable for at least 55 years. The housing developments must also be on parcels at least a portion of which are within a quarter-mile of a transit station.

#### SACRAMENTO HOUSING & REDEVELOPMENT AGENCY (SHRA)

SHRA is a joint powers authority separate from the City with funding from tax increments in the redevelopment area and also Community Development Block Grant (CDBG) funds from the Department of Housing and Urban Development (HUD).

For new construction, SHRA programs include Developer's Assistance, under which custom deals can be structured for the Agency to provide gap financing for individual projects. This program does not trigger a requirement for affordable units if tax increment funding is used. The Housing Development Assistance program provides funding for multi-family housing. This program does have an affordable housing requirement.

The Grow Sacramento fund is administered by SHRA for the City and County of Sacramento, and it provides Small Business Administration (SBA) guaranteed loans of \$25,000 to \$2 million for a wide range of uses, including land acquisition, construction, equipment leases, and long-term working capital.

The City of Sacramento, through its parkland dedication ordinance (Quimby) and Park Development Impact Fee (PIF), secures land and fees from Developers (based on number of new residential units, and square footage of proposed retail, commercial &/or industrial use) for the acquisition and development of parks. Although projectrelated park land acquisition and development may be at sites anywhere within the greater "Planning Area", park land acquisition and development is best kept within the project from which the park land and fees are collected.

#### SACRAMENTO AREA COUNCIL OF GOVERNMENTS (SACOG)

The SACOG Community Design Program provides grants to local government agencies and their partners to promote plans and physical development that supports SACOG's Blueprint Project. Grants are awarded every two years, and the next award will be made in January 2008. For the 2005-07 program, funds of \$12 million were available, and in the 2003-05 program, grants ranged from \$100,000 to \$2 million. In most cases, a local funding match requirement of 11.47% of the total project cost applies. All projects awarded through the Community Design Funding Program must conform to federal transportation funding requirements.



Example of transit-oriented development

#### CATALYZING TRANSIT-ORIENTED DEVELOPMENT

The best opportunities for public funding to assist catalytic transit-oriented development projects are prior to construction, after construction, or by providing the offsite requirements related to the project. While it is not always feasible for public funding to be provided directly for the construction of a project, the City or SHRA can make a project much more attractive for development by reducing the risk and time associated with the project, or by improving efficiency by assembling small parcels into a larger site. The following list summarizes some of these opportunities:

- Assemble parcels. The per-square-foot cost of development is lower on a relatively large site, which allows for design and construction efficiencies. SHRA can improve the financial feasibility of a project by assembling parcels to provide a site of at least one acre.
- Purchase and prepare site for sale to developer. The cost and risk of a project can be reduced if the City or SHRA buys improved land and does all demolition. SHRA then sells the cleared land to the developer at the market rate, absorbing the cost of demolition and the lost value.

- **Provide ready-to-build site.** Cost and risk are also reduced if SHRA ensures that utilities and other infrastructure requirements are brought directly to the site and any underground issues such as contamination are evaluated and addressed.
- Purchase and entitle site for sale to developer. In this case, the risk is further reduced and the developer can take a lower return on investment, since the return will be generated faster. If a specific building design is entitled, SHRA will issue a request for proposals for developers, and sell the land after architecture, design, and engineering are complete.
- Finance necessary public improvements. In the case where the Development Services Department determines that off-site public improvements are necessary for a project, the City could finance these as part of general improvements in the area. Public improvements might include lighting, landscaping, or changes to an intersection or median.

90

- Small-business loans or grants for finishing retail space and making tenant improvements. Loans or grants which provide funding of approximately \$50 per square foot to finish the retail space can increase the chance that early retail tenants will be successful and reduce the negative effects of tenant turn-over or unleased space.
- Support retail and office uses. The pro-forma anlaysis shows that a retail/office project is likely to need considerable assistance in the early years, until lease rates increase. One way to do this would be for the City or agency to rent space at a higher rate than market, either for their own use, or to sub-lease at lower rates to non-profits, incubator companies, or other pioneers. This will require a significant political commitment to implement, since it is likely to require a lease of at least five years, and possibly longer, if the lender is concerned about the investment.
- Designate a revolving low-interest loan to support new commercial projects in the area. An alternative way that the City or SHRA could support a retail/office project would be to provide a low-interest loan that would cover the financing gap until market rents in the area increased sufficiently to provide an appropriate return.

Identify and remove barriers to infill development. Infill development is notoriously challenging, partly due to City regulations. The City currently encourages infill development by offering a waiver for water development fees, but the waiver would not apply to our catalytic prototype projects because it is only for single-family detached units. A study to identify and remove regulatory and cost barriers to infill development could have lasting effects in revitalizing North Sacramento through transit-oriented development.

## northeast line light rail stations plan

VOLUME TWO

FINAL REPORT DECEMBER 2007

## Northeast Line

Light Rail Stations Plan

Volume Two

December 2007

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#### VOLUME TWO

## table of contents

ACKNOWLEDGEMENTS	ii
DESIGN GUIDELINES	
	rivate Realm4
	lation8
1B BUILDING PROTOTYPES	
1Bi Row Houses and Town Homes	
1Bii Lofts & Live-work Units	
1Biii Mixed-Use Buildings	
2. Site Design and Planning of the F	Public Realm18
2Ai Roadway	
2Aii Pedestrian Realm	
2B STREET DESIGN	
	al Oaks)
	I Evergreen)
2Ciii Royal Oaks Station Plaza	
INFRASTRUCTURF	
Natural Gas	64

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#### WITH SPECIAL THANKS TO THE California department of Transportation

# 

### Infrastructure

Designers need to work together with engineers to understand the multiple uses for streets and to place an emphasis on residents rather than vehicles, while acknowledging traffic patterns and street engineering.

> Michael Southworth and Eran Ben Joseph Streets and the Shaping of Towns and Cities (Island Press, 2003), 140

## infrastructure

in this chapter WATER SUPPLY STORM DRAINAGE SANITARY SEWER ELECTRICAL NATURAL GAS

**THE STREETSCAPE GUIDELINES ARE INTRINSICALLY LINKED** to infrastructure practices and policies. In order to create a comprehensive and effective urban design plan, it is essential to provide cost efficient infrastructure systems without compromising the character of the area.

The proposed alignment of new underground utilities has been developed to avoid conflict with existing underground utilities and surface features, such as railroad tracks. The existing utility information utilized to compile these recommendations is based upon field observations and a review of existing infrastructure studies. Utility conflicts may arise during the detailed design process and alternative utility alignments may be required.

For a complete analysis of the project area's infrastructure and estimates of construction costs, please refer to the Appendix in Volume III of this document.

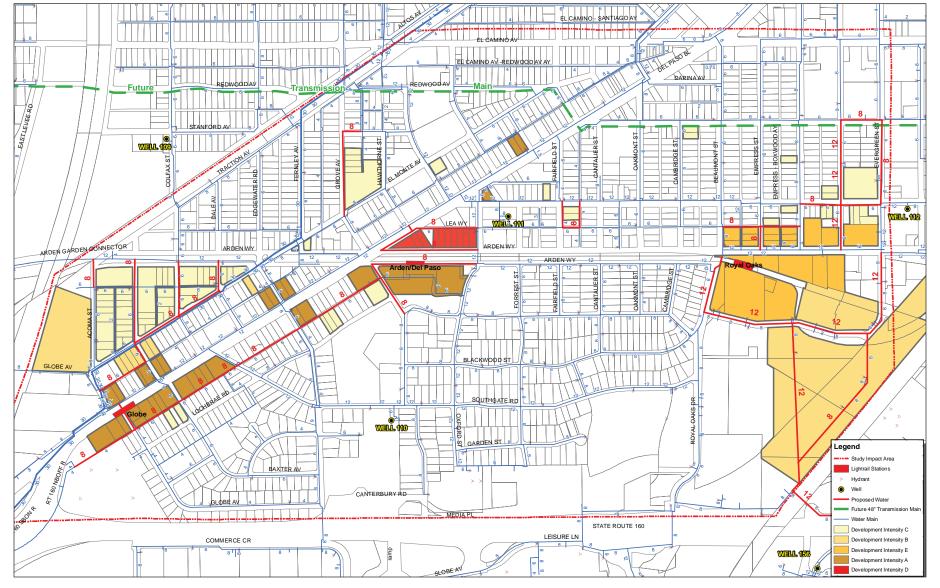
For the purposes of the infrastructure analysis, development intensity of potential oppportunity sites was calculated and is reflected in the various maps in this chapter. The following summarizes the assumptions used in the analysis:

- **Development Intensity 'A'** envisions residential density of 60 du/ac and 0.4 F.A.R for non-residential commercial use.
- **Development Intensity 'B'** envisions residential density of 60 du/ac and no non-residential commercial use.
- Development Intensity 'C' envisions residential density of 40 du/ac and no non-residential commercial use.
- **Development Intensity 'D'** envisions residential density of 25 du/ac and 0.6 F.A.R for non-residential commercial use.
- **Development Intensity 'E'** envisions residential density of 40 du/ac and 0.4 F.A.R for non-residential commercial use.

#### WATER SUPPLY

The Northeast Line Light Rail Stations Plan project area is served by an extensive system of service mains ranging in size from four to eight inches in diameter, which was constructed between the 1920s to 1960s. A 30-inch transmission main serving North Sacramento enters the area at the west end of Del Paso Boulevard and continues through the area northeasterly along Acoma Street, El Monte Avenue, and Fernley Avenue where it leaves the project area following the alignment of the Sacramento Northern Parkway.

The Del Paso Boulevard and Arden Way corridors are both well served by twelve-inch distribution mains, and the Woodlake Neighborhood is also well served by eightand twelve-inch water mains. However, in the Globe Station area and the Dixieanne Neighborhood, the existing distribution system consisting of small four- and six-inch mains is considered undersized to meet the current design fire flow criteria. Extensive modifications of upsizing the existing mains to a system of eight, ten and twelve inch mains are envisioned for both of these areas. The area south of Royal Oaks consists of a sparse system of eight-inch mains due to the low-intensity parking/storage facility uses that currently exist. This area is expected to need a revised system of larger eight, ten and twelve inch mains if redevelopment of this area occurs. The City Utilities Department has also identified a need for a future 48-inch transmission main within the project area.



#### FIGURE 2.1 PROPOSED WATER UTILITIES

- VOLUME TWO - NE LINE LIGHT RAIL STATIONS PLAN

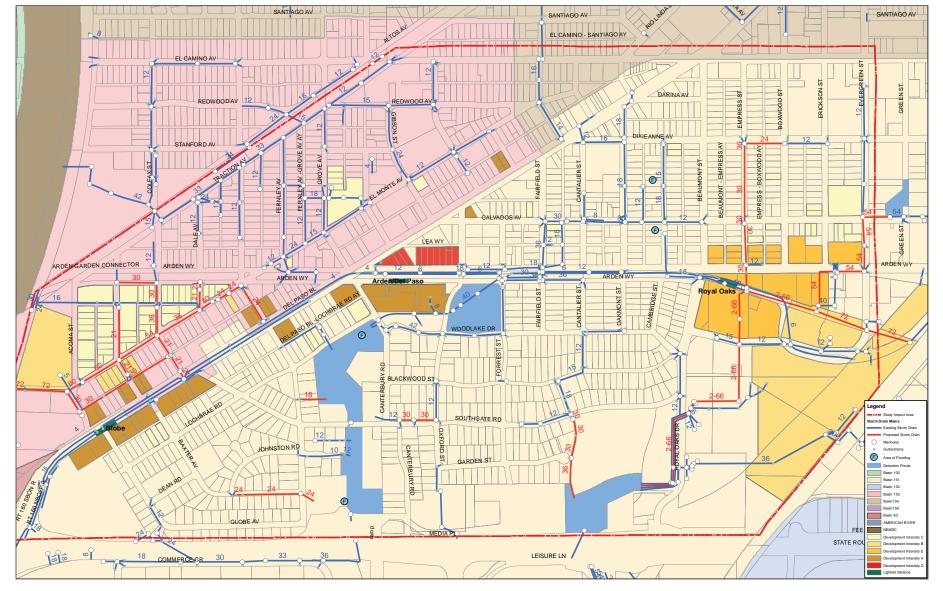
#### STORM DRAINAGE

The North Sacramento area has drainage issues ranging from street and property flooding to possible future flood hazard and public safety hazards. Existing systems are inadequate to convey runoff from the area to the creeks and canals. Facility improvements that have been suggested to improve these problems include flood proofing, upgraded and new pipelines, pump stations, and new detention basins.

The Northeast Line Light Rail Stations Plan project area is located primarily within two separate drainage basin areas, basins 151 and 153. These two Basins are generally divided along the Del Paso Boulevard corridor. The Plan area northwesterly of Del Paso Boulevard drains to sump 153 located near the western end of Stanford Avenue which pumps into the Natomas East Main Drainage Canal. The Plan area southeasterly of Del Paso Boulevard drains to Sump 151 located east of Lathrop Way which pumps into the American River. The project area also cuts across small portions of basins 83 and 154.

The City has identified Basin 151 as one of the critical areas needing infrastructure improvements to reduce the flooding in the Basin area. Although some improvements have been made, Basin 151 still requires upgrades in its water quality/flood control basins, flood proofing existing structures, and further collection system upgrades to reduce the level of flooding in the area by providing an improved drainage system. The City has not defined basins 83, 153, and 154 as critical areas needing infrastructure improvements at this time.

The proposed improvements within the Northeast Line Light Rail Stations plan area are not expected to increase the drainage runoff from the area since most of the proposed development areas already contain a high percentage of impervious surfacing from existing buildings and paved parking lots.



#### FIGURE 2.2 STORM DRAIN PLAN

- VOLUME TWO - NE LINE LIGHT RAIL STATIONS PLAN

#### SANITARY SEWER

The Northeast Line Light Rail Stations Plan project area is primarily served by two separate Sewerage Collection Basins, Basins G304 & G305. A small portion of the northeast corner of the project area is located in Basin G303.

The existing collection systems within the project area range in size from six inches to eighteen inches in diameter. These mains are generally located within the streets or alleys. Exceptions to this include portions of the Globe Station and Woodlake areas where some sections of the service mains are located at the rear property line between two adjacent residential homes.

A 72-inch County interceptor main crosses the project area in a north-south direction entering from the north at the El Camino Avenue/Del Paso Boulevard/Beaumont St. intersection, following Beaumont St. south and then along Royal Oaks Drive south until it crosses Highway 160 and leaves the project area.

The development of the project area is expected to increase the sanitary sewer flows due to the increase in the residential, office, and commercial uses. The addition of nearly 4,000 new residences and over 450,000 square feet of non-residential uses will overwhelm the existing sewer system.

Significant improvements together with the rerouting of the existing system will be needed to insure adequate capacity for the proposed development.

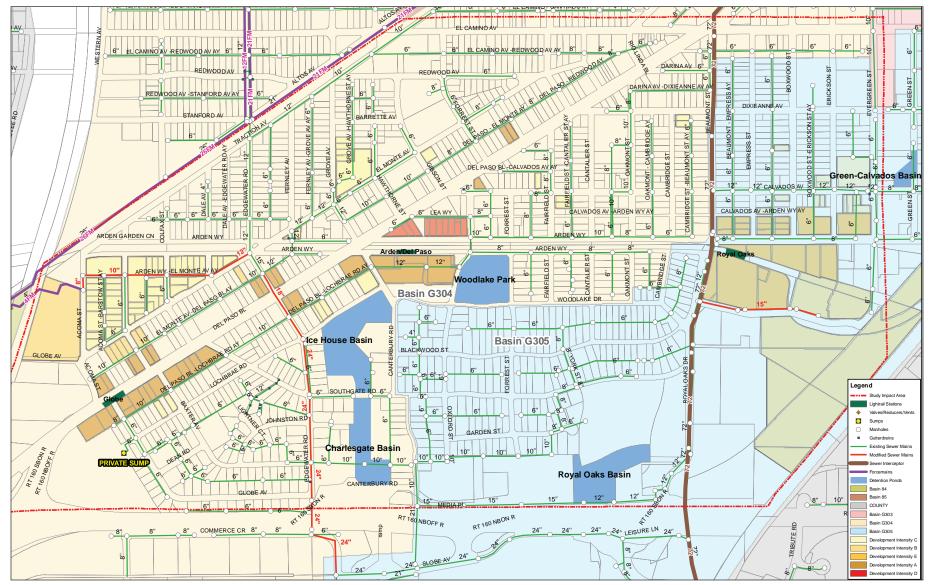
#### G304

With the proposed development in the Globe and the Arden/Del Paso stations areas, the main collection pipeline located in Edgewater Road will need to be upsized from the current 15- to 18-inch pipeline to a proposed 18- to 24-inch pipeline. The Del Paso Boulevard corridor is well served by an existing ten-inch main located in the Del Paso Blvd./Lochbrae Rd. Alley.

#### G305

The main collection pipeline located in Royal Oaks Drive does not have sufficient capacity for the increased flows from the proposed development around the Royal Oaks Station. Rather than upsize the entire length of the main pipeline, it is instead recommended to create a new direct connection to the 72-inch interceptor at the Royal Oaks Drive/Evergreen Street intersection.

#### FIGURE 2.3 SEWER PLAN

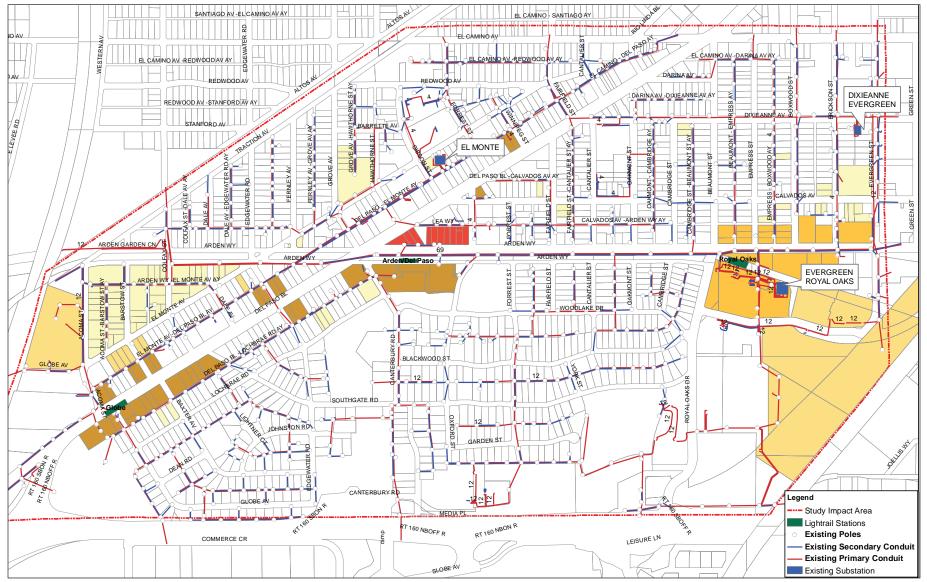


#### **ELECTRICAL**

There are three existing substations located within the plan area. The El Monte Substation is located on the southerly side of El Monte Avenue between Gibson Street and Forrest Street. This substation is a 69-4kV substation. The Dixieanne – Evergreen Substation is located on the southerly side of Dixieanne Avenue between Erickson Street and Evergreen Street. This substation is also a 69-4kV substation. The Evergreen – Royal Oaks Substation is located south of Arden Way between Evergreen Street and Royal Oaks Drive. This substation is a 69-12kV substation and feeds the majority of the project area via an existing overhead/underground distribution system. The portion of the Plan area north of Arden Way is generally served by a 4kV overhead distribution system.

Based on proposed land use projections for the Northeast Line Light Rail Stations Plan, Sacramento Municipal Utility District (SMUD) estimates that the additional electrical load from development may be approximately 15 to 23 megawatts at final build out. With typical system improvements, SMUD's distribution system should be able to handle this new load growth.

The Evergreen - Royal Oaks Substation is located on a 0.2-acre parcel just south of the Light Rail Tracks within the middle of proposed development for the area. The development of the area around the substation will need to include proper building setbacks, screening, etc. to the station as well as the transmission lines leading to the station

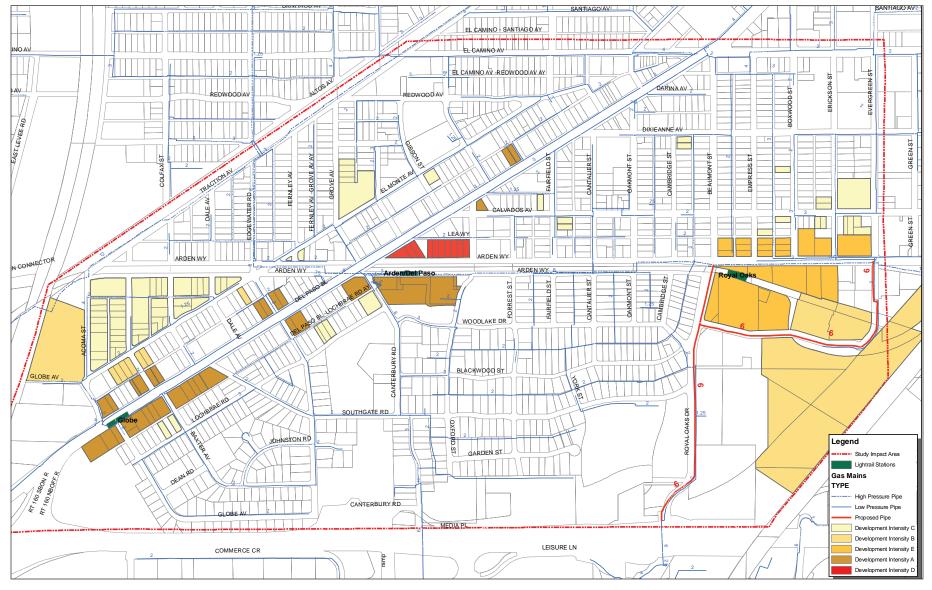


#### FIGURE 2.4 ELECTRICAL PLAN

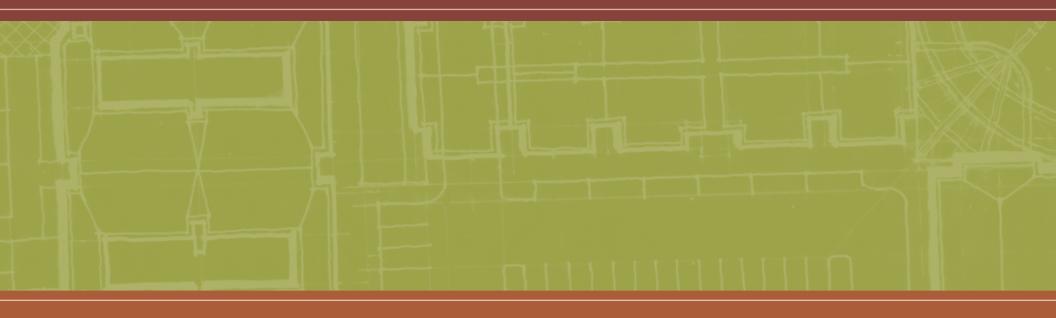
63

#### **NATURAL GAS**

The gas system in the Northeast Line Light Rail Stations Plan project area is generally served by a grid system throughout the project area. A 12-inch transmission main is located on the west side of the project area running along the old railroad/Traction Avenue corridor. An 8-inch high pressure main crosses the project area connecting to the 12-inch main at Edgewater Road, where it turns and follows the Arden Way corridor eastward and leaves the project area at the eastern boundary. Several small diameter (2-4 inch) connections exist in the surrounding residential neighborhoods. Pacific Gas & Electric, the natural gas supplier in the area, has stated that the existing gas infrastructure in the Line Light Rail Stations Plan area should be adequate to serve the level of development proposed in the majority of the Globe Station and Arden/Del Paso Station areas with relatively minor additions, unless an unusually large gas user locates in the area. In that case, facilities will be upgraded as necessary in order to accommodate the user. However, with the development of the Royal Oaks Station area, it is anticipated that a new transmission main loop will be needed to serve the development south of the light rail tracks



#### FIGURE 2.5 NATURAL GAS PLAN





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