Roadway Planning & Design Engineering Services for

La Cholla Boulevard:

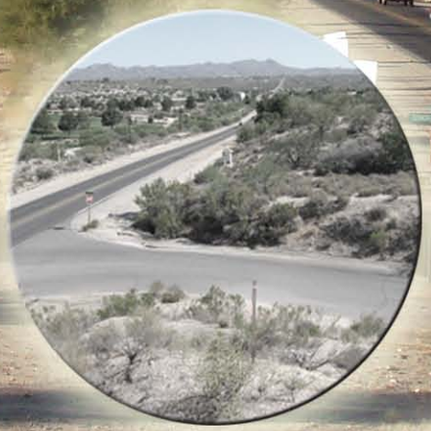
Magee Road to Tangerine Road (4RTLTM)

Final Design Concept Report

April 2010

Prepared by

URS



ORO VALLEY ARIZONA FOUNDED 1974

PIMA COUNTY DOT

RTA Regional Transportation Authority

La Cholla Boulevard:
Magee Road to Tangerine Road

Final Design
Concept Report

April 2010

Prepared for:
Pima County Department of Transportation
201 N. Stone Avenue
Tucson, AZ 85701
Project No. 4RTLTM

Prepared by:
URS Corporation
333 E. Wetmore Road, Suite 400
Tucson, AZ 85705
URS Project No. 24096890

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO.
35928
ERIC J.
SIBSON
Date Signed 4-28-10
ARIZONA, U.S.A.

Expires 3/31/2013

APPROVED:

_____ _____
Pima County Director of Transportation Date

Executive Summary

The Pima County Department of Transportation (PCDOT) in cooperation with the Town of Oro Valley and the Regional Transportation Authority (RTA) proposes to widen approximately 4.9 miles of La Cholla Boulevard from a two-lane roadway to a four-lane arterial roadway between Magee Road and Tangerine Road. This Design Concept Report (DCR) encompasses this 4.9-mile segment. Approximately 2.45 miles of the project are located within Pima County and 2.45 miles of the project are located within Oro Valley. The Intergovernmental Agreement (IGA) with the RTA calls for this project to be completed in two phases. During the first Phase of the project, PCDOT will lead the design concept stage for the entire 4.9-mile corridor, perform Stage II design from Magee Road to Lambert Lane, and will design and construct the roadway improvements from Magee Road to just north of Overton Road (approximately 1.5 miles). This will include major improvements such as a four-lane section, curb, raised medians, paved shoulders, multi-use pathway, and two separate two-lane bridges. During the second Phase of the project, the Town of Oro Valley will design and construct the roadway improvements from just north of Overton Road to Tangerine Road.

On May 16, 2006, the citizens of Pima County approved a $2.1 billion transportation plan to be funded by a one-half cent increase in the sales tax. Current project funding includes $42,233,000 from this sales tax revenue. Other funding includes $5,300,000 in Cañada Del Oro (CDO) Impact Fees and $800,000 in Highway User Revenue Funds (HURF) for total funding of $48,333,000. It is anticipated that the Pima County led Phase of this project (Magee to Overton) will be advertised for bids in late 2011 or early 2012, will be complete in early 2013, and will cost approximately $28.4 million. The portion of the project from Overton Road to just north of Lambert Lane is estimated to have $17.3 million in project costs. The portion of the project, from just north of Lambert Lane to Tangerine Road, is estimated to cost $18.7 million.

The purpose of the project is to improve La Cholla Boulevard to provide capacity for future traffic demands, improve traffic safety and operations, reduce congestion, and increase mobility. The widening is needed to accommodate the increased volumes of traffic projected in the year 2040. There are also several vertical deficiencies within the existing roadway profile which limit stopping sight distances. Constructing this new arterial roadway to current standards will increase traffic capacity and user safety in all weather conditions.

The design speed for this project is 50 miles per hour (mph). The posted speed limit for this corridor will be 45 mph. The existing right-of-way width varies throughout the corridor from 60 feet to 200 feet. New right-of-way with a minimum width of 150 feet will be required for the proposed four-lane roadway. Landscaping will be provided in the median and parkway areas. Artwork will also be included with this project.

Drainage improvements will include a new two-lane bridge structure for the northbound traffic and a new two-lane bridge structure for the southbound La Cholla Boulevard traffic over the CDO Wash. There will be several new culvert crossings (100-year conveyance) of La Cholla to replace existing dip crossings and open channels including a new channel to convey flow from the La Cholla Wash to the CDO and catch basins and storm drainage systems (10-year conveyance) required to convey a storm.

Driveways will be provided to La Cholla Boulevard or a side street for every property that currently is permitted access to La Cholla. Median openings will be provided at most side streets and at intermittent locations between the side streets based on spacing requirements to allow U-turn movements. Existing traffic signals will be upgraded at the intersections of Overton Road, Lambert Lane, Naranja Drive, and Glover Road. This project assumes that the signal improvements at the Tangerine Road intersection will be completed with the Tangerine Road Corridor Improvements prior to the improvements of La Cholla Boulevard between Lambert Lane and Tangerine Road. No additional intersections warrant traffic signals for this project.

In general, the alignment for La Cholla Boulevard is centered in the right-of-way. However, there are four areas that required alignment analysis. The first area is at The Bluffs subdivision. While individual access for Tortolita Bluffs and Morning Jewel Place functioned separately without a bridge in place, once a bridge is built, there is not adequate sight distance to allow each of these side streets to have unlimited access. Linking these two side streets with a two-way access road provides safe ingress and egress and allows for the maximum flexibility in turn movements.

The second area is north of Lucero Road in Oro Valley and east of Owls Peak Place. In this location, four parcels are located significantly lower than the roadway. To provide safe ingress and egress to these properties a one-way frontage road has been proposed. This prevents driveways from becoming too steep and provides safe sight distance to La Cholla Boulevard.

The third area is at Cross Road and La Cholla Boulevard. Currently La Cholla Boulevard swings to the west to avoid a wash along with a dip crossing on the southern portion of the alignment shift. For a four-lane roadway with a posted speed of 45 mph, it is safer to straighten this section of road.

The fourth area is at the new bridge crossing the CDO Wash. The alignment was shifted to the east in order to facilitate construction. With this shifted alignment, traffic can remain on the existing La Cholla Boulevard while the northbound structure is built.

Another design consideration, related to drainage, is between Overton Road and Lucero Road where there is a proposed drainage channel perpendicular to the right-of-way on the east side of La Cholla Boulevard. This channel would direct drainage efficiently to the CDO Wash. Although this drainage channel requires property acquisition, the advantages include limiting the impacts to jurisdictional washes while controlling the amount of water crossing over Overton Road and into The Bluffs subdivision. It also would not require additional reconstruction of Overton Road.

Significant utility relocations are required throughout the corridor in conjunction with the La Cholla improvements. Impacts include overhead as well as underground facilities. In addition to the Pima County Wastewater facilities that will need adjusting, Metropolitan Water has prior rights to a well site in the center of the right-of-way between Magee Road and McCarty Road that will require relocation at the project's expense.

The proposed design concept in this DCR provides a comprehensive plan to improve La Cholla Boulevard from Magee Road to Tangerine Road.

Table of Contents

Page

1.0 PROJECT OVERVIEW 1
1.1 Introduction 1
1.2 Authorization 1
1.3 Previous Work 1
1.4 Project Need 2

2.0 PROJECT DESCRIPTION 5
2.1 Project Type and Termini 5
2.2 Major Features 5

3.0 PROJECT AREA CHARACTERISTICS 10
3.1 Existing Topography and Terrain 10
3.2 Existing Roadway 11
3.3 Existing Rights-of-Way 12
3.4 Existing Drainage 14
3.5 Existing Utilities, Signals, and Lighting 15
3.6 Existing Biology 16
3.7 Archaeological and Historic Resources 17
3.8 Existing Visual Resources 17
3.9 Existing Land Use 17
3.10 Current Zoning 18
3.11 Proposed Developments 18
3.12 Existing Community Facilities 19
3.13 Existing Public Lands 19
3.14 Intergovernmental Agreements 20

4.0 TRAFFIC AND ACCIDENT DATA 22
4.1 Traffic 22
4.2 Crash Data and Analysis 34

5.0 DESIGN STANDARDS AND CRITERIA 35
5.1 Geometric Standards 35
5.2 Design Standards 35
5.3 Slope Standards 35
5.4 Pavement Structure 35
5.5 Design Speed 36
5.6 Drainage Design 36
5.7 Access Control 37
5.8 Cross Section Elements 37
5.9 Roadway Geometrics 38
5.10 Right-of-Way Width 38

6.0 MAJOR DESIGN FEATURES 39
6.1 Horizontal and Vertical Alignment 39
6.2 Access Control 39

6.3 Right-of-Way 40
6.4 Drainage 42
6.5 Earthwork Considerations 44
6.6 Intersections 45
6.7 Utilities 46
6.8 Structures 54
6.9 Pavement Design 60
6.10 Signalization and Lighting 60
6.11 Construction Issues 60
6.12 Design Exceptions 63

7.0 SOCIAL, ECONOMIC, AND ENVIRONMENTAL CONSIDERATIONS 65
7.1 Biological Resources 65
7.2 Water Quality and Clean Water Act 65
7.3 Air Quality 65
7.4 Noise 66
7.5 Hazardous Materials 66
7.6 Historical/Cultural Resources 67
7.7 Visual/Aesthetic Resources 67
7.8 Neighborhood Impact 67
7.9 Community Resource Impact 68

8.0 PUBLIC INVOLVEMENT 69
8.1 Public Participation Plan 69
8.2 Community Advisory Committee 69
8.3 Public Meetings 69

9.0 AGENCY COORDINATION 71
9.1 Environmental Review 71
9.2 Intergovernmental Agreements 71

10.0 ALTERNATIVES 72
10.1 Location 72

11.0 CONCLUSIONS AND RECOMMENDATIONS 85

12.0 COST ESTIMATE AND BUDGET CONSIDERATIONS 87

13.0 REFERENCES 89

14.0 ABBREVIATIONS 91

List of Figures

Figure 1. Location Map 3
Figure 2. Vicinity Map 4
Figure 3. Typical Roadway Cross-Section 8
Figure 4. Typical Roadway Section with Frontage Road/Access Road 9
Figure 5. Land Use Map 21
Figure 6a. Existing Traffic Conditions – Lane Configurations and Traffic Control Devices 24
Figure 6b. Existing Traffic Conditions – (2008) Average Daily Traffic 25
Figure 6c. Existing Traffic Conditions – (2008) Weekday AM Peak Hour (7:15am – 8:15am) .. 26
Figure 6d. Existing Traffic Conditions – (2008) Weekday PM Peak Hour (5:00pm – 6:00pm) .. 27
Figure 7a. Future Traffic Conditions – Lane Configurations and Traffic Control Devices 28
Figure 7b. Future Traffic Conditions with Existing Lane Configurations – (2040) Weekday AM Peak Hour (7:15am – 8:15am) 29
Figure 7c. Future Traffic Conditions with Existing Lane Configurations – (2040) Weekday PM Peak Hour (5:00pm – 6:00pm) 30
Figure 7d. Future Traffic Conditions with Added Capacity – (2040) Weekday AM Peak Hour (7:15am – 8:15am) 31
Figure 7e. Future Traffic Conditions with Added Capacity – (2040) Weekday PM Peak Hour (5:00pm – 6:00pm) 32
Figure 7f. Future Traffic Conditions 2040 ADT 33
Figure 8. Bridge Location Plan and Elevation 57
Figure 9. Typical Bridge Section 58
Figure 10. Alternative A Plan View 75
Figure 11. Alternative A Typical Sections 76
Figure 12. Alternative B Plan View 77
Figure 13. Alternative B Typical Sections 78
Figure 14. Alternative C Plan View 79
Figure 15. Alternative C Typical Sections 80
Figure 16. Alternative D Plan View 81
Figure 17. Alternative D Typical Sections 82

List of Tables

Table 1. Existing Utilities 6
Table 2. Crash Data – Intersections 34
Table 3. Crash Data – Segments 34
Table 4. Cross Section Elements 37
Table 5. Right-of-Way Cost 83
Table 6. Alternatives Matrix 84
Table 7. Overall Project Cost 87
Table 7a. Pima County (Magee to Lambert) Project Cost 87
Table 7b. Oro Valley (Lambert to Tangerine) Project Cost 87

List of Appendices

Appendix A – Construction Cost Estimate
Appendix B – Community Advisory Committee and Public Involvement Information
Appendix C – Stage I (15%) Design Concept Plans (Bound Separately)
Appendix D – Right-of-Way Requirement Plans (Bound Separately)

1.0 Project Overview

1.1 Introduction

This project is located along La Cholla Boulevard from Magee Road to Tangerine Road. This section of La Cholla will function as a principal urban arterial roadway that crosses the Cañada Del Oro (CDO) Wash as well as the major intersections at Overton Road, Lambert Lane, Naranja Drive, and Glover Road. Reconstruction of each of these intersections will involve the addition of turn lanes and tapers along La Cholla Boulevard. The northern limit of the project is the southern leg of the Tangerine Road intersection. Reconstruction of the Tangerine Road intersection will only include the addition of turn lanes and tapers along La Cholla Boulevard for the southern approach. The official title of this project is "La Cholla Boulevard, Magee Road to Tangerine Road." The Project Number is 4RTLTM. This project involves the reconstruction of La Cholla Boulevard from a two-lane roadway into a four-lane arterial street and includes a new bridge structure over the CDO Wash. The project is located in both unincorporated Pima County and the Town of Oro Valley. A location map is included as Figure 1 and a vicinity map is included as Figure 2.

With the exception to a 15-foot horizontal alignment shift, as La Cholla Boulevard crosses the CDO Wash, the new roadway centerline will follow the existing section line for the entire corridor. Therefore, a Location Report was not required for this project. An Initial Traffic Engineering Study was completed by the Pima County Department of Transportation (PCDOT) in September 2009, and the Final Traffic Report is anticipated by July 2010. An Environmental Screening Matrix and Memorandum were submitted by URS in August 2009. It is anticipated that the Final Environmental Assessment and Mitigation Report will be sent to the Board of Supervisors for approval in May 2010. Construction is anticipated to start in period two of the Regional Transportation Authority (RTA) plan, in 2011 or 2012 if no delays occur.

1.2 Authorization

The Pima County Board of Supervisors approved the contract for the design of this project in January 2009. The notice to proceed was issued by the Director of the Department of Transportation on April 17, 2009. On May 16, 2006, the citizens of Pima County approved a $2.1 billion transportation plan to be funded by a one-half cent increase in the sales tax. Current project funding includes $42,233,000 from this sales tax revenue. Other funding includes $5,300,000 in CDO Impact Fees and $800,000 in Highway User Revenue Funds (HURF) for total funding of $48,333,000.

1.3 Previous Work

The most recent work on this section of La Cholla Boulevard included the 5-foot shoulder addition and rubberized asphalt overlay from Lambert Lane to Tangerine Road by the Town of Oro Valley in May 2009, OV Project #30 08/09 06. This project also included the addition of a 10-foot asphaltic pedestrian path along the west side of La Cholla Boulevard between Naranja Drive and Glover Road as well as traffic signal improvements at the La Cholla Boulevard/ Naranja Drive intersection.

The Glover Road intersection improvements by the Town of Oro Valley were performed in June 2008, OV Project #30 04/05 03. The improvements included the widening of the western leg of the intersection in order to add additional turn lanes and a bike lane. There were also drainage and traffic signal improvements performed.

Oro Valley also completed the improvements to the La Cholla Boulevard/Lambert Lane intersection in April 2007, OV Project #30 04/05 04. This project improved the intersection sight distance issues by performing a lowering of the intersection. Improvements also included the widening of both La Cholla Boulevard and Lambert Lane to accommodate turn lane additions. Drainage improvements and utility adjustments were also performed.

The Pima County Regional Flood Control District (PCRFCD) performed the Cañada Del Oro River Park improvement in June 2008, Project No. 5FGOLF. This project included the addition of a 10-foot multi-use asphaltic pathway along the east bank of the CDO Wash from Magee Road to Hardy Road. The multi-use pathway terminates parallel to the La Cholla Hills Wash approximately 100 feet prior to La Cholla Boulevard. The project also included a 27-foot extension of the western segment of the Hardy Road box culvert.

The PCDOT performed an improvement of the La Cholla Boulevard/Overton Road intersection in July 2004, PCDOT Project No. 4LCHOV. This project included widening of the intersection to provide left-turn lanes on approaches, a right-turn lane on the eastbound approach, traffic signalization, and drainage improvements. A grade raise of the intersection was also performed to improve drainage.

1.4 Project Need

This section of La Cholla Boulevard is designated as a major arterial roadway in the Pima Association of Governments Metropolitan Transportation Plan. The proposed widening aims to provide capacity for the increased volumes of traffic projected in the year 2040. There are also additional storage lengths and turn lanes needed for the 2040 traffic projections. The addition of through lanes and proposed raised median to control access will improve the overall safety on La Cholla. There are also vertical deficiencies in the existing roadway profile which limit stopping sight distances (SSD). The constant closures of the La Cholla Boulevard crossing of the CDO Wash have been a major restriction to the traveling public for years. Closures cause the public and emergency response to use alternate routes. The proposed bridge structure over the CDO Wash will provide safe all-weather crossing. There are other areas of the project that will benefit from elimination of dip crossings by replacement of drainage culverts. Other drainage improvements will include a storm drain system combined with catch basins that will provide an all-weather roadway for the public. By constructing this new arterial roadway to current design standards, the traffic capacity will increase and the overall safety will be substantially improved.

Figure 1. Location Map

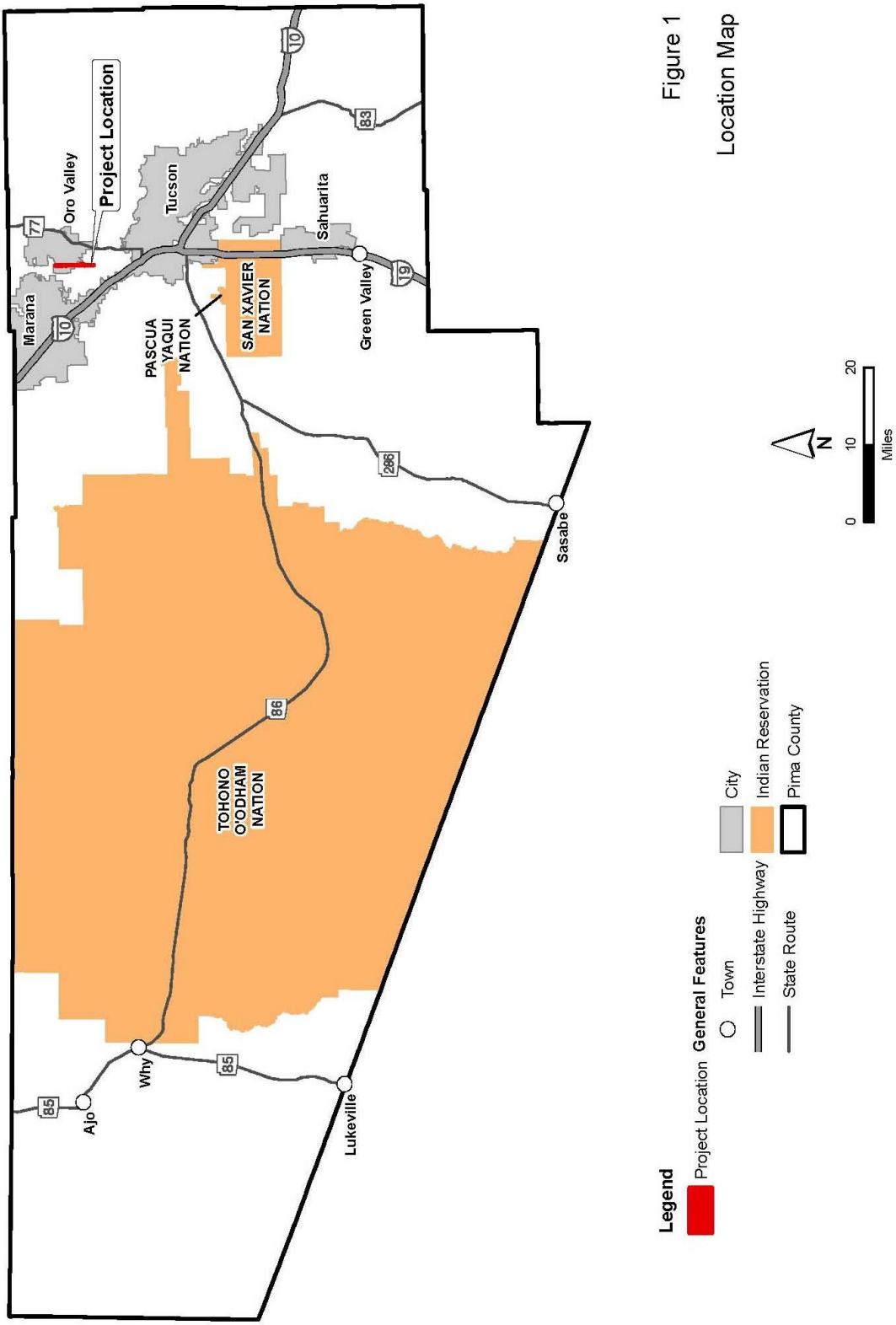


Figure 1
Location Map

Figure 2. Vicinity Map

2.0 Project Description

2.1 Project Type and Termini

This project involves the complete reconstruction of the roadway. The new roadway will contain four travel lanes, a paved shoulder in each direction, a raised and landscaped median, a multi-use pathway along the west side of La Cholla Boulevard, and small stretches of sidewalk along the east side of La Cholla between North Coral Ridge Loop and The Country Club Apartments and between the proposed Frontage Road entrance and exit approaches as well as between Naranja Drive and Glover Road. The multi-use pathway will tie into the existing pathway from the CDO River Park that currently terminates just west of La Cholla Boulevard along the La Cholla Hills Wash. The project will also replace the dip crossing of the CDO Wash with two new two-lane bridge structures over the CDO Wash. The existing signalized intersections will include additional turn lanes and storage lengths. The limits of the project are from about 200 feet north of Magee Road to Tangerine Road, totaling approximately 4.9 miles. The improvements to each of the major cross roads will be limited to the needed radii returns for the intersection.

2.2 Major Features

This section will give a general project overview. The detailed design features are discussed in Sections 5.0 and 6.0. The American Association of State Highway and Transportation Officials Geometric Design of Highways and Streets, 2004 (AASHTO) and the PCDOT Roadway Design Manual, 2003 (RDM) were used as design guidelines.

The design year for this project is 2040. The design speed is 50 miles per hour (mph). It will be posted at 45 mph. The existing right-of-way varies from 60 feet to 200 feet. A minimum right-of-way width of 150 feet will be required for the proposed four-lane section; therefore, new right-of-way will be required. The typical roadway section is shown in Figure 3. Landscaping will be provided in the median and parkway areas. Steven Weitzman of Creative Formliners, Inc. has been chosen by PCDOT to design the Pima County portion of the artwork as part of the improvements.

A new 600-foot bridge structure will be placed over the CDO Wash to replace the existing roadway dip crossing. This crossing will consist of two separate structures for the northbound and southbound La Cholla Boulevard traffic lanes. The northbound structure will also include a 6-foot paved shoulder and a 5-foot sidewalk area. The southbound structure will also include a 6-foot paved shoulder and an 8-foot multi-use path area. The typical bridge cross section is shown in Figure 9. Soil cement bank protection will be provided in front of both the north and south abutments and will be extend for a distance north and south along the eastern La Cholla fill slope. The soil cement along the north abutment will connect to the existing soil cement bank protection adjacent to The Bluffs Subdivision, immediately west of the proposed bridge crossing.

An alignment alternatives study for La Cholla Boulevard was performed to determine how to handle access to The Bluff's subdivision due to sight visibility issues in relation to the proposed bridge structure over the CDO Wash. This study is documented in Section 10.0 of this report. The PCDOT recommended alternative consists of the addition of a two-way access road. Two

access points will utilize the access road in order to achieve adequate intersection sight distance for the turning movements onto La Cholla. Figure 4 depicts the typical roadway section of La Cholla Boulevard with the proposed frontage road.

There are features included in the project to comply with the Americans with Disabilities Act (ADA). The features will ensure the project meets the guidelines set for accessibility. These include paved sidewalks, at minimal locations on the east side of La Cholla Boulevard, and multi-use paths along the west side of La Cholla Boulevard meeting the minimum width and maximum slope criteria. There will be curb ramps (PCDOT/COT Std. Detail 207) provided at intersections with a maximum slope of 12:1 and containing truncated dome warning strips at the bottom of each ramp. The crosswalk locations will have a maximum cross slope of 2%. There will be 42-inch high pedestrian railing at warranted locations and on the outside of the new bridge structures over the CDO Wash. The signals will have wheelchair accessible push buttons.

Drainage improvements along the corridor will include new box and pipe culvert crossings, riprap and/or concrete lined channels, and box and pipe culvert extensions; all of which will be designed to convey the 100-year event directed by Pima County. Inlets of the cross drainage structures will generally be lowered, and the inlet aprons will be concrete lined. In addition, pavement drainage will be collected in a storm drain system consisting of catch basins, scuppers, and storm drain pipe capable of conveying a 10-year event. Riprap lining will be required along the eastern La Cholla fill slope, between Overton Road and the new bridge soil cement, to protect the potential erosion due to the 100-year water surface elevation.

Existing utilities are found throughout the length of the project corridor and include distribution, transmission, storage, and service infrastructure. Relocation of utility facilities will be a significant component for the design and construction of this project. Utility facilities are described in greater detail in Section 3.5, Existing Utilities, Signals, and Lighting. Table 1 contains an overview of utility facilities by company.

Table 1. Existing Utilities

Owner	Utility
Metropolitan Water District	Potable and reclaimed water lines varying in size from 4 inches to 30 inches, well sites and storage reservoirs
Oro Valley Water	Potable and reclaimed water lines varying in size from 4 inches to 24 inches
Tucson Electric Power (TEP)	46 kilovolt and 14 kilovolt, 3-phase and single phase primary overhead and underground
Southwest Gas Corporation (SWG)	Gas lines that vary in size from 1/2-inch service lines to 8-inch distribution feeders
Pima County Regional Wastewater Reclamation Department	Sanitary gravity sewer systems from 8 inches to 30 inches, and a 24-inch reclaimed line
Comcast Cable	Cable & fiber optic TV & communication
Qwest Communications	Coaxial, copper, fiber optic telecommunications
Private – Offsite Sewer	8-inch sanitary sewer
Omni Tucson National Golf Course	Private water well site

There will be raised medians to control access along the corridor. The proposed median opening locations will be based on minimum spacing requirements, achieving adequate sight distance, and maximum spacing between openings to allow appropriate U-turning movements. This project will also include paved driveways in the right-of-way for those adjacent properties currently accessing La Cholla Boulevard.

There will be new striping and signing on the project in order to bring the corridor up to current Manual of Uniform Traffic Control Devices requirements. There is existing signalization and lighting at the La Cholla Boulevard intersections with Overton Road, Lambert Lane, Naranja Drive, Glover Road, and Tangerine Road. There will be no new signalized intersections with the project, but rather adjustments to the existing signals to accommodate the intersection improvements. The intersection improvements will only include widening of La Cholla Boulevard to accommodate additional through lanes and channelization. The Tangerine Road intersection will not be improved with this project, but rather match the improvements proposed in the Town of Marana, Tangerine Corridor, I-10 to La Cañada Project.

Several safety upgrades will be included in this project. The upgrades include the adjustment of the roadway profile to improve SSD, a new bridge structure over the CDO Wash, culvert additions and extensions within the new roadway prism, guardrail and concrete barrier to protect potential hazards, and metal handrail along warranted locations of the pedestrian facilities. A clear zone of a minimum of 20 feet will be provided in order to restrict hazardous obstructions within the recommended horizontal offset from the travel lanes.

This project will include the installation of landscaping improvements in the medians and the roadway shoulders to the right-of-way limit in accordance with the PCDOT Landscape and Irrigation Design Guidelines and the RDM. Placement of landscape improvements will consider the extensive network of existing underground utilities in the project area and follow the appropriate sight distance requirements.

Figure 3. Typical Roadway Cross-Section

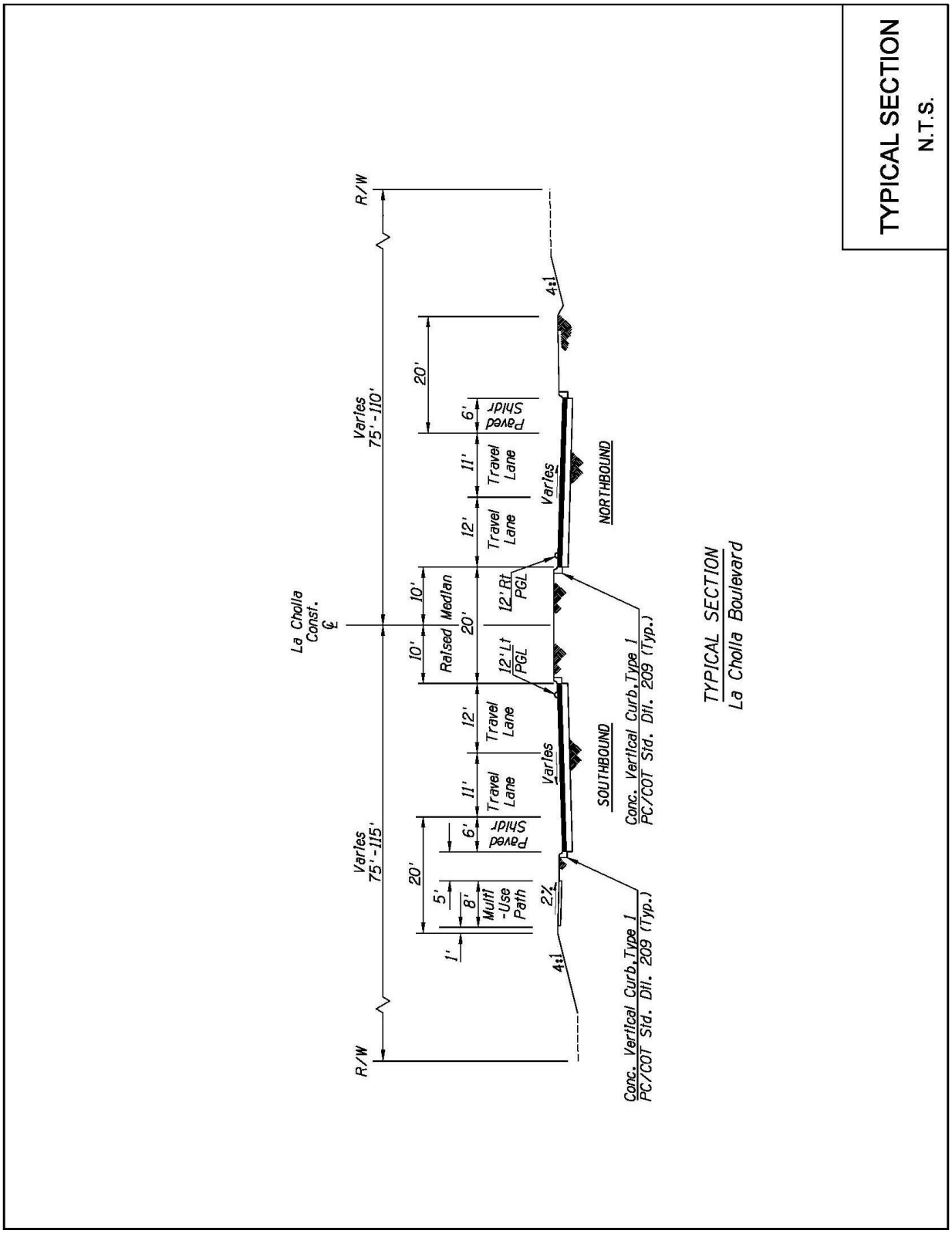
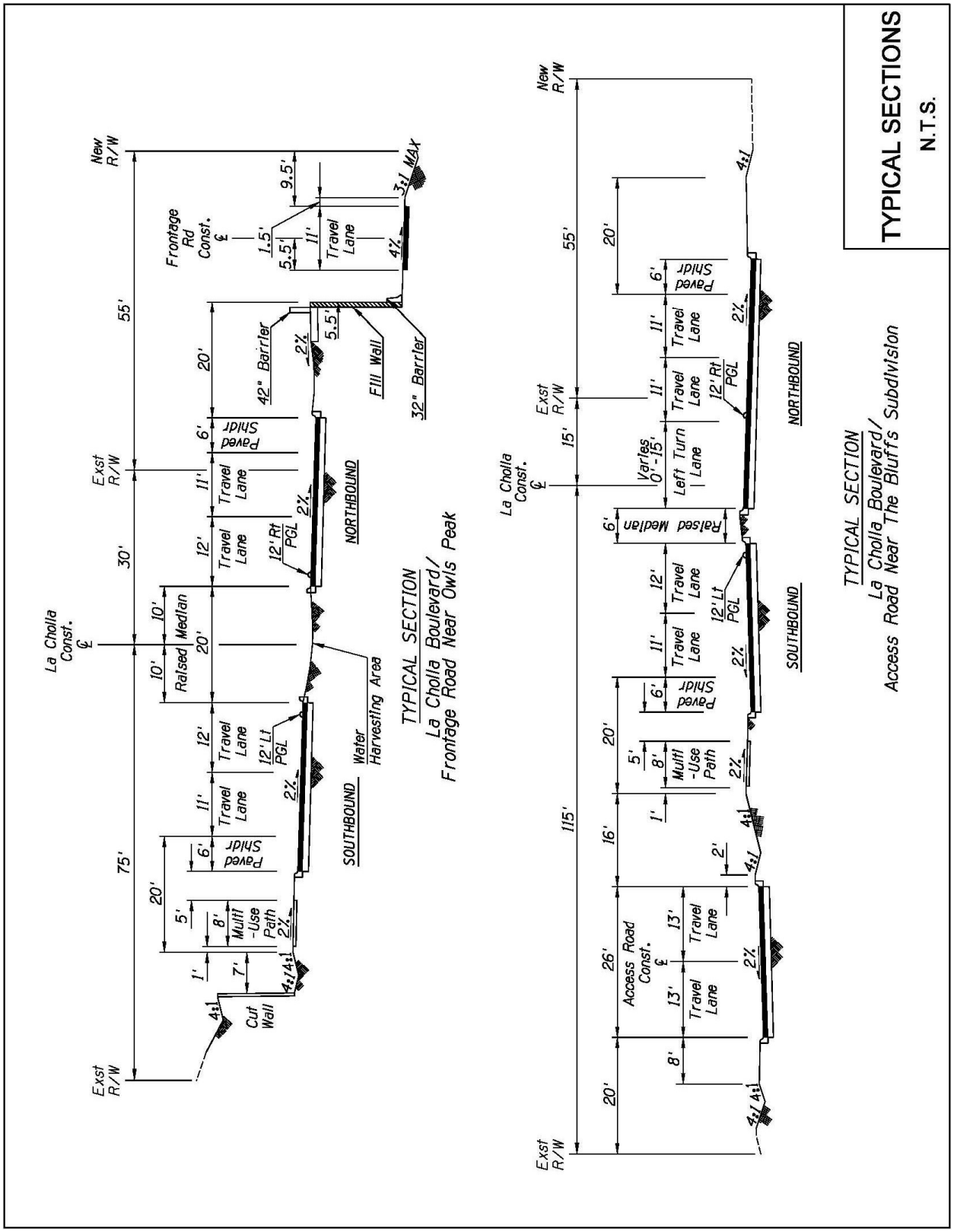


Figure 4. Typical Roadway Section with Frontage Road/Access Road



3.0 Project Area Characteristics

3.1 Existing Topography and Terrain

The roadway is classified as having a rolling terrain classification. The existing terrain varies greatly north and south of the CDO Wash. South of the CDO Wash the terrain slopes to the northwest until it meets the CDO Wash where it turns to the southwest. North of the CDO Wash from Tangerine Road, the terrain slopes to the southwest until south of Lambert Lane where it slope to the southeast until it meets the CDO wash where it turns to the southwest.

The existing La Cholla roadway low points and dip crossings are located:

- 650 feet north of Magee
- 450 feet south of Hardy Road
- At the CDO Wash
- 600 feet south of Owls Peak Place
- 300 feet north of Owls Peak Place
- 650 feet south of Canada Hills Drive
- 250 feet north of Canada Hills Drive
- 300 feet south of Double Eagle Drive
- 100 feet north of Arizona Rose Drive
- 350 feet north of Arizona Rose Drive
- 320 feet north of Glover Road
- 450 feet north of Glover Road
- 800 feet south of Tangerine Road

There is about 60 feet of vertical elevation difference between the southern limits of the project and the CDO Wash area. There is about 420 feet of vertical elevation difference between the north limits of the project, at Tangerine Road, and the CDO Wash area. Besides the previously mentioned low points, from the southern roadway limits the grade gradually falls from south to the CDO Wash and from the northern roadway limits the grade gradually falls from the north to the CDO Wash.

Along the west side of La Cholla Boulevard, between Magee Road and the CDO Wash, the existing terrain drops off severely toward the Omni Tucson National Golf Course, requiring large fill slopes and retaining walls. Between Magee Road and McCarty Road, there are areas where large cut hills exist along the roadway, requiring large cut slopes and cut walls. Between Lucero Road and Overton Road, there are both large cut hills and drop-off locations that will require both cut and fill slopes and walls. Immediately north of Overton Road, the terrain drops off to the west of the existing roadway, requiring a fill wall to support the widening of La Cholla

Boulevard. The same situation occurs just north of Glover Road, requiring a fill wall to support the widening of La Cholla Boulevard.

3.2 Existing Roadway

The existing La Cholla Boulevard roadway is uncurbed for the entire project limits. From Magee Road to Lambert Lane, the majority of the roadway contains two 12-foot travel lanes with unpaved shoulders. The area adjacent to The Bluffs Subdivision contains an additional 11-foot left-turn lane along with 2-foot paved outside shoulders. The areas immediately north and south of the Overton Road intersection contain additional 12-foot left-turn lane along with 2-foot paved outside shoulders. An additional 12 feet is provided for the Alive Church right-turn lane entrance. The areas immediately north and south of the Lambert Lane intersection contain additional 12-foot left-turn lanes along with 4-foot paved outside shoulders. The existing surface is asphaltic concrete. There is ADA access ramps located at the Overton Road intersection.

Recent improvements from Lambert Lane to Tangerine Road resulted in two 12-foot travel lanes with 5-foot paved shoulders for the majority of the roadway. There is an additional 12-foot left-turn lane at the Cañada Hills Drive, Double Eagle Drive, and Divot Drive entrances. At the Cross Road intersection, there is an additional 12-foot left-turn lane and 12-foot right-turn lane. The areas immediately north and south of the Naranja Drive intersection contain additional 12-foot left-turn lanes and the northern leg of the intersection contains an additional 12-foot right-turn lane. The Arizona Rose intersection contains an additional 12-foot right-turn lane. The areas immediately north and south of the Glover Road intersection contain additional 11-foot left-turn lanes. The southern leg of the Tangerine Road intersection contains additional 11-foot left- and right-turn lanes. The existing surface is asphaltic concrete. Also included along the west side of La Cholla is a 10-foot paved pedestrian pathway from Naranja Drive to Glover Road. A 10-foot paved pedestrian pathway is also located along the east side of La Cholla from Naranja Drive to Arizona Rose Drive. ADA access ramps are located at the Lambert Road, Naranja Drive, and Glover Road intersections.

For most of the corridor, the horizontal alignment runs straight north and south. There are a few areas where horizontal curves were introduced including; radius=1,910-foot reverse curves located just north of Magee Road to avoid an existing Metro Water Well site, radius=3,500-foot reverse curves located just south of Hardy Road, radius=1,200-foot reverse curves with a 750-foot curve between them located near the Cross Road intersection. None of these existing curves contain a superelevated roadway.

The vertical grades vary greatly throughout the corridor from 0.4% to 8.3%. This segment has been identified as having a rolling terrain classification, therefore allowing a maximum grade of 7% per the PCDOT RDM. Therefore, the area just north of Owls Head Place having a grade of 8.3% is substandard. There are 35 sag vertical curves on La Cholla Boulevard between Magee Road and Tangerine Road. Each of these sag vertical curves meets the required 425-foot SSD for 50 mph design speed, except for the following 16 locations that contain substandard curve lengths with respect to their tangent grades:

- two curves entering and exiting the CDO Wash
- three curves between Overton Road and Lucero Road
- five curves between Lucero Road and Lambert Lane
- one curve just south of Cross Road, one curve just north of Cross Road
- two curves between Arizona Rose Drive and Glover Road
- two curves between Glover Road and Tangerine Road

There are 40 crest vertical curves on La Cholla Boulevard between Magee Road and Tangerine Road. Each of these crest vertical curves meets the required 425-foot SSD for 50 mph design speed, except the following 13 locations that contain substandard curve lengths with respect to their tangent grades:

- one curve on the north side of the CDO Wash
- three curves between Overton Road and Lucero Road
- four curves between Lucero Road and Lambert Lane
- one curve just north of Cross Road
- two curves between Arizona Rose Drive and Glover Road
- two curves between Glover Road and Tangerine Road

The existing posted speed limit is 45 mph. There is an existing posted speed limit of 15 mph (when flashing) north and south of Glover Road. This is utilized during school hours for the adjacent Wilson K-8 School zone.

3.3 Existing Rights-of-Way

The existing right-of-way along La Cholla Boulevard varies significantly throughout the corridor. The existing right-of-way along La Cholla Boulevard is as follows:

- 200 feet (100-foot half widths) from Magee Road to the section line just north of McCarty Road.
- 175 feet (100-foot west and 75-foot east half widths) from the section line just north of McCarty Road to just south of Hardy Road. The only exception to this width is two short stretches (275 feet and 280 feet in length) along the Omni Tucson National Golf Course where the width narrows to 150 feet (75-foot half widths).
- 150 feet (75-foot half widths) from just south of Hardy Road up to the Hardy Road alignment.
- 60 feet (30-foot half widths) from Hardy Road to the north side of the CDO Wash.
- 130 feet (100-foot west and 30-foot east half width) from the north side of the CDO Wash to just south of Morning Jewel Place.

- 145 feet (100-foot west and 45-foot east half widths) from just south of Morning Jewel Place up to Overton Road.
- 90 feet (45-foot half widths) from Overton Road for a stretch of 525 feet north of Overton Road.
- 75 feet (30-foot west and 45-foot east half widths) for a stretch of 90 feet beginning 525 feet north of Overton Road.
- 60 feet (30-foot half widths) from north of Overton Road up to Linda Vista Boulevard.
- 105 feet (75-foot west and 30-foot east half widths) for a stretch of 215 feet north of Linda Vista Boulevard.
- 150 feet (75-foot half widths) from north of Linda Vista Boulevard up to Lucero Road.
- 105 feet (75-foot west and 30-foot east half widths) for a stretch of 175 feet north of Lucero Road.
- 60 feet (30-foot half widths) from north of Lucero Road for a stretch of 800 feet to the north.
- 105 feet (75-foot west and 30-foot east half widths) from 975 feet north of Lucero Road up to Lambert Lane.
- 60 feet (30-foot half widths) from Lambert Lane to Naranja Drive just south of Three Oaks Drive.
- 105 feet (30-foot west and 75-foot east half widths) from just south of Three Oaks Drive up to Glover Road.
- 60 feet (30-foot half widths) from Glover Road to Tangerine Road.

The existing right-of-way along the cross roadways are follows:

- Hardy Road – 75 feet (east of La Cholla Boulevard only)
- Birch Way – 60 feet (east of La Cholla Boulevard only) (the proposed bridge structure on La Cholla will block the end of Birch Way)
- Overton Road – 120 feet (west of La Cholla Boulevard), 90 feet (east of La Cholla Boulevard)
- Linda Vista Boulevard – 75 feet (west of La Cholla Boulevard only)
- Lucero Road – 60 feet (east of La Cholla Boulevard only)
- Owls Peak Place – 45 feet (west of La Cholla Boulevard only)
- Lambert Lane – 150 feet
- Naranja Drive – 150 feet
- Glover Road – 60 feet (east of La Cholla Boulevard only)
- Tangerine Road – 100 feet

3.4 Existing Drainage

Existing cross drainage improvements are generally limited to the section of La Cholla Boulevard between Magee Road and Hardy Road. These improvements range in size from 30-inch diameter pipe to a 5-cell 10'x 5' box culvert. There is one small diameter pipe crossing outside of the Catalina at Cañada Hills subdivision near Naranja. The condition of these culverts is good although sediment has built up in a few of the culverts. The remaining section of corridor uses at-grade crossings to convey flows across the roadway. Large portions of the road become impassible when storm events occur, particularly during the summer monsoons.

Flow typically runs from an easterly direction to the west, with the exception of the area between Overton Road and Lucero Road where the flow runs from west to east. There are no pavement drainage facilities along the existing roadway.

There are four major washes crossings La Cholla Boulevard within the project limits; the CDO Wash, the La Cholla Wash, the Garfield Wash, and the wash that crosses La Cholla Boulevard at Hardy Road. This wash is herein referred to as the Hardy Road Wash. Approximate 100-year flows for these washes are listed below.

CDO Wash	22,400 cfs
La Cholla Wash	2,845 cfs
Garfield Wash	1,285 cfs
Hardy Road Wash	1,275 cfs

As indicated in the flows above, the most significant drainage is the CDO Wash, which crosses La Cholla Boulevard south of Overton Road. This crossing is currently an at-grade crossing that becomes impassible during rainfall events of any significance. All flow events pass over the roadway with no provision in place for low flows under the existing roadway. Downstream of the roadway, there is bank protection on the north bank while the south bank is natural. However, upstream the banks are in their natural state.

The La Cholla Wash crosses La Cholla Boulevard between Overton Road and Lucero Road. Flow spreads out across the alluvial fan and crosses the roadway at several locations, all of which are at-grade crossings. Like the CDO Wash, there are no provisions for low flows under the existing roadway. However, an earthen berm along the west side of the roadway blocks a portion of the flows that cross La Cholla Boulevard. The berm directs the flows south to Overton Road and into a constructed channel that runs along the north edge of the Bluffs subdivision. This berm was installed as part of the 2008 intersection improvements project at Overton Road and La Cholla Boulevard. Improvements also included raising the intersection, which along with installing the berm, helped to alleviate flooding at the intersection. It is not known if a hydrologic and hydraulic analysis was performed to determine the impact of the berm on the Bluffs channel, but there are no flooding complaints on record with regards to the channel capacity being exceeded.

The Garfield Wash crosses La Cholla Boulevard at the south end of the project near Magee Road. Flow is conveyed under the roadway in an existing 5-cell 10'x5' concrete box culvert that extends from right-of-way to right-of-way. The wash is contained in a natural channel that is fairly incised both upstream and downstream of the roadway. There has been significant erosion on the downstream side of the box culvert outlet, and the roadway embankment over the box culvert headwall has also been eroding on the west end of the box culvert.

The Hardy Road Wash is a constructed channel with concrete side slopes and a sand bottom. The flows are conveyed under La Cholla Boulevard in an existing 2-cell 10'x6' concrete box culvert. The box culvert does not have capacity for the 100-year event, and flow from the watershed breaks out and crosses La Cholla to the west. The undersized box culvert limits the upstream channel capacity to something less than the 100-year event, but the downstream channel has capacity for the 100-year event.

Localized drainage issues have been occurring in the vicinity of the Lomas de Oro Wash on the east side of La Cholla Boulevard north of Lucero Road. Runoff from new paved roadways on the west side of La Cholla Boulevard has created gullies and erosion on the east side of La Cholla Boulevard. Area residents indicate that the runoff from the new roadways did not historically cross the road at that location, and the new roadways are the main cause of the erosion. In addition, headcutting has become more pronounced near the Lomas de Oro Wash, and has left a private water service line exposed. The Town of Oro Valley is currently designing channel improvements for bank protecting the wash. Although the La Cholla Boulevard improvements do not directly impact the wash, it is possible that the roadway improvements will also alleviate the drainage problems in this area.

3.5 Existing Utilities, Signals, and Lighting

Existing utilities are found throughout the length of the project corridor, on both the east and west sides of La Cholla Boulevard and including cross streets. Facilities include distribution, transmission, storage, and service infrastructure. The following is a list of facilities by company:

- Metropolitan Water District facilities include potable and/or reclaimed water lines including service connections; 4-inch, 6-inch, and 8-inch distribution lines; and 12-inch, 15-inch, 16-inch, 18-inch, 24-inch, and 30-inch transmission. Additionally, there are five well sites, only one of which will be directly impacted by the project, and four reservoir storage tanks.
- Oro Valley Water facilities include potable and/or reclaimed water lines including service connections; 4-inch, 6-inch, and 8-inch distribution lines; and 12-inch and 24-inch transmission.
- Tucson Electric Power Company (TEP) facilities include a 46 kilovolt (kV) electrical transmission – 3 phase primary with a 14 kV under build from Magee Road to Lambert Lane, and, 14 kV – single phase distribution, and service connections. Service connections and distribution infrastructure are both overhead and underground. TEP shares joint use with Comcast and Qwest, on some distribution power lines and in underground trenches.

- Southwest Gas Corporation (SWG) gas lines including 1/2-inch, 3/4-inch, and 1-inch service connections; 1 1/4-inch, 2-inch, 4-inch, and distribution lines, and 4-inch, 6-inch, and 8-inch distribution feeder lines.
- Pima County Regional Wastewater and Reclamation Department (PCRWRD) facilities include a 24-inch reclaimed waterline and sanitary sewer gravity systems with service connections; and 8-inch, 12-inch, 15-inch, 18-iinch, and 30-inch sewer lines.
- Comcast facilities include cable and fiber optic TV & communication infrastructure and service drops which are both underground and overhead on joint use TEP poles at varying locations. Underground facilities are in joint use trenches with TEP and/or Qwest in some locations.
- Qwest Communications facilities include copper and fiber optic telephone and communication infrastructure and service drops which are both underground and overhead on joint use TEP poles at varying locations. Underground facilities are in joint use trenches with Comcast and/or TEP in some locations.
- Omni Tucson National Golf Course has a private water well site for the Omni Tucson National Golf Course.
- Private development facilities include one 8-inch private offsite sanitary sewer near McCarty Road, currently under design, which will be constructed prior to the construction of this project. The developer design is being coordinated with the design team through the Pima County Development Department and PCRWRD.

Utility company facilities include various company above ground appurtenances that consist of valves, valve boxes, corrosion test stations, meters, regulator stations, pull boxes, pedestals, risers, poles, anchors, guy wires, manholes, and cabinets.

Existing utility easement records were provided by TEP, SWG, Metropolitan Water District, and Qwest.

The presence of utilities was determined initially by PCDOT, through a Blue Stake Center design request. The utility companies provided as-built information per Blue Stake regulations. In addition, mapping records of existing facilities were provided by the utility companies. Field survey of existing above-ground utility features and Blue Stake marking was performed as part of the cultural survey activity to aid in determining utility locations.

There are existing traffic signals at the intersections of Overton Road, Lambert Lane, Naranja Drive, Glover Road, and Tangerine Road. All signals, with the exception of Overton Road, is owned and maintained by the Town of Oro Valley. Each of these intersections is lighted. La Cholla Boulevard does not contain continuous street lighting.

3.6 Existing Biology

The project area is located within the Arizona Upland Subdivision of the Sonoran desert scrub biotic community. Additional vegetation communities include xeroriparian habitats along the

washes and disturbed desert upland primarily along the existing road. The CDO Wash is identified by the PCRFCD as an important riparian resource and serves as a potential wildlife corridor through the project area. A biological evaluation for Phase 1 of the project from Magee Road to Lambert Lane was completed to evaluate the project area's potential to support protected species, and focuses on impacts to the lesser-long nosed bat and the cactus ferruginous pygmy owl. In addition, a native plant inventory for Phase 1 of the project was conducted consistent with PCDOT RDM Environmentally Sensitive Roadway requirements.

3.7 Archaeological and Historic Resources

An intensive cultural resource survey was conducted to cover the area of potential effects for construction impacts and a substantial buffer. The survey identified a roasting pit feature at one previously recorded and tested aboriginal archaeological site; discovered six historical archaeological sites and 15 isolated occurrence of artifacts and features; and recorded and evaluated two previously unrecorded historic-age buildings. The Pima County Cultural Resources and Historic Preservation Office, in consultation with the State Historic Preservation Office and other interested agencies and tribes, determined that all nine of those resources, as well as fifteen isolated occurrences of artifacts and features, lack historical significance and are not eligible for the Arizona Register of Historic Places or National Register of Historic Places.

3.8 Existing Visual Resources

Background views along the project corridor consist of the Santa Catalina Mountains to the east, the Tucson Mountains to the west, and the Tortolita Mountains to the north. The middle-ground views are a mixture of medium- and low-density residential development interspersed with native and nonnative vegetation. The foreground views are of residences, businesses, and an unpaved roadway shoulder that is predominantly devoid of vegetation, with more vegetation visible at the numerous wash crossings.

3.9 Existing Land Use

Land use in the project area is predominantly low-density residential with some moderate- to high-density residential. Other land uses are commercial, public, church, and flood control/wash, with some vacant land located along the project area.

Between Magee Road and Overton Road, land use is primarily residential including medium- and high-density complexes at the La Cholla Hills and The Bluffs subdivisions, and The Country Club Apartments – with units for assisted living; commercial property (Omni Tucson National Resort and Golf Course); a linear park along the CDO Wash which terminates at Hardy Road; and Metro Water facilities.

Land use between Overton Road and Lambert Lane is mainly low-density residential with the exception of two churches (Alive Christian Church and Grace Community Church) and one commercial property (Sunkist Stables).

Along La Cholla Boulevard between Lambert Lane and Tangerine Road land use is primarily residential with medium-density complexes occurring at the Cañada Hills, Catalina at Cañada Hills, La Cholla Estates, and Iron Wood Ranch subdivisions. Other land uses include the Casas Baptist Church and El Conquistador County Club.

3.10 Current Zoning

Existing zoning for the project area in Pima County is Single Ranch (SR), CR-1 Single Residence, and Multiple Residences (CR-5). Town of Oro Valley existing zoning for the project area includes Single-Family Residential – 7,000 sq ft per lot (R1-7), Single-Family Residential – 10,000 sq ft per lot (R1-10), Single-Family Residential – 20,000 sq ft per lot (R1-20), Single-Family Residential – 144,000 sq ft per lot (R1-144), Multi-Family Residential (R-6), Commercial (C-2), and Planned Area Development (PAD).

3.11 Proposed Developments

There are several proposed developments throughout the corridor including:

- The Hills at Tucson National – This is a platted subdivision between Magee Road and McCarty Road on the west side of La Cholla Boulevard. There is currently a street connecting to La Cholla called Sonoran Hill Court that will supply access to the future subdivision.
- Sunset Mesa – The future development will be located southeast of the McCarty Road and La Cholla Boulevard intersection. This is a planned residential subdivision that will have access to and from McCarty Road.
- HSL Rio Cancion – This is a future retirement community that will be located south of Hardy Road on the west side of La Cholla Boulevard. This development plans to have two access points to La Cholla Boulevard.
- Northwest Bible Church – The future church site will be located north of Overton Road on the west side of La Cholla Boulevard. The development will have a single access location to La Cholla Boulevard.
- Iron Wood Estates – The access to La Cholla Boulevard for this future residential subdivision is currently in place. It is located just south of Lucero Road on the west side of La Cholla Boulevard.
- Casas Baptist Church – The existing church is planning an expansion of their facilities that will be located on the southwest corner of Cross Road and La Cholla Boulevard. Their current plat shows an additional access location to La Cholla Boulevard south of the Cross Road access.
- Saguaros Viejos – This is a large future residential subdivision that will be located between Naranja Drive and Glover Road on the west side of La Cholla Boulevard. This subdivision will not have additional access locations directly to La Cholla Boulevard, but rather to and from both Naranja Drive and Glover Road.

- Rancho Del Cobre – This is a large future residential subdivision that will be located between Glover Road and Tangerine Road on the east side of La Cholla Boulevard. This subdivision will have two additional access locations directly to and from La Cholla Boulevard as well as access locations to and from both Tangerine Road and Glover Road.
- Future subdivision on the northeast corner of La Cholla Boulevard and McCarty Road. There are currently six lots within the planned subdivision on a proposed cul-de-sac roadway off of McCarty Road.

3.12 Existing Community Facilities

There are two major schools west of La Cholla Boulevard:

- Ironwood Ridge High School – Located south of Naranja Drive
- Wilson K-8 School – Located north of Glover Road

There are several church communities along the La Cholla Boulevard corridor including:

- Alive Christian Church – Located on the southeast corner of La Cholla and Lucero Road
- Grace Community Church – Located just north of Lucero Road on the west side of La Cholla
- Casas Baptist Church – Located north of Lambert Lane on the west side of La Cholla
- Church of the Apostles – Located on the northwest corner of La Cholla and Tangerine Road

There are two golf courses along the La Cholla Boulevard:

- Omni Tucson National Golf Course – Located north of Magee Road along the west side of La Cholla
- El Conquistador Golf Course – Located east of La Cholla between Lambert Lane and Naranja Drive

3.13 Existing Public Lands

There are a few areas along La Cholla Boulevard that are in the ownership or jurisdiction of public agencies including:

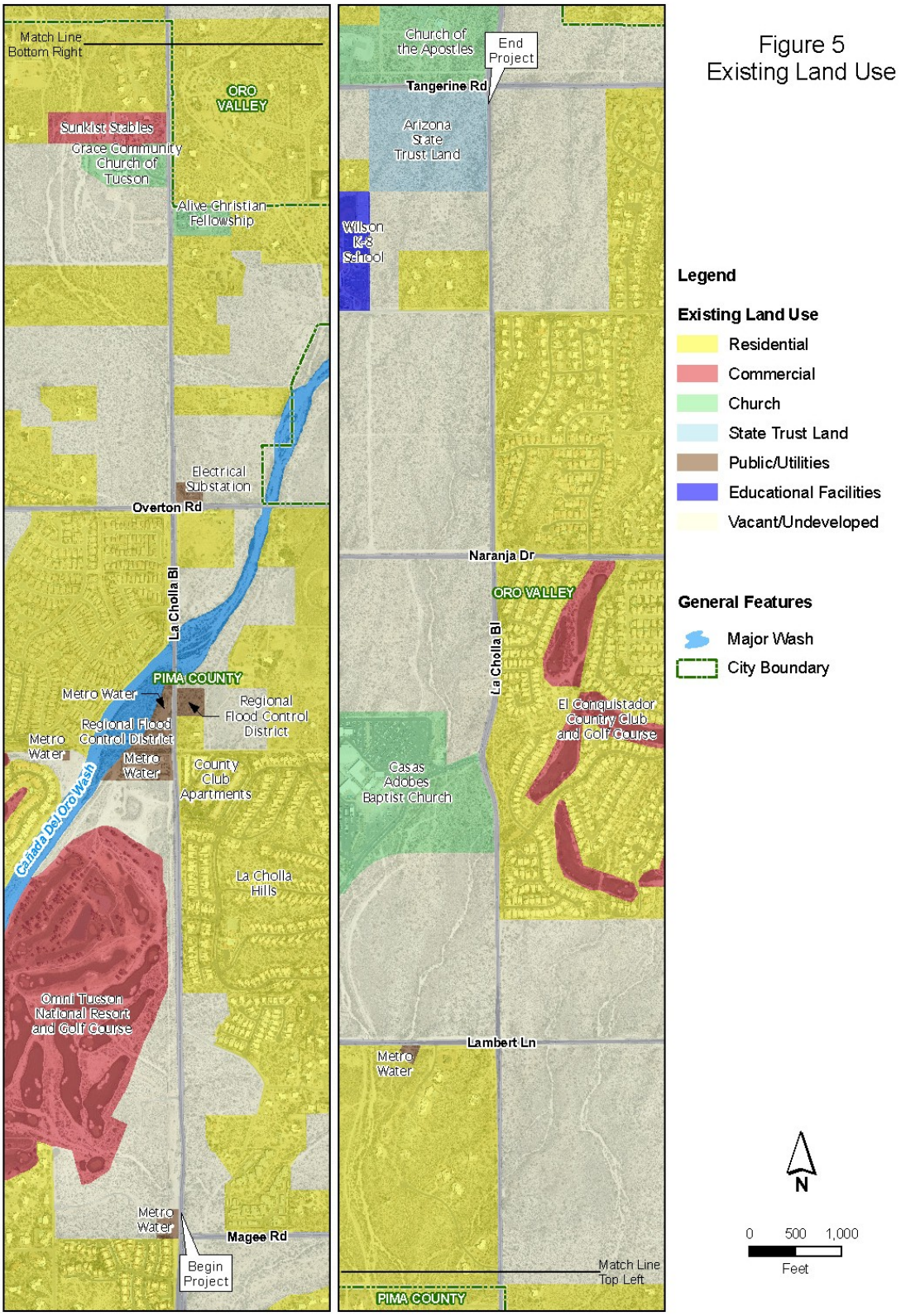
- Pima County Regional Flood Control District – The CDO Wash west of La Cholla Boulevard
- Pima County Regional Flood Control District – Parcels located west and east of La Cholla south of the CDO Wash
- Arizona State Trust Land – A single parcel located on the southwest corner of La Cholla and Tangerine Road

- Town of Oro Valley – Parcels located east of La Cholla between Lambert Lane and Naranja Drive

3.14 Intergovernmental Agreements

The RTA has identified this corridor as RTA Project #4. Pima County, Town of Oro Valley, and the RTA have an agreement in place that accelerated the design for this project from Period 2 to Period 1 of the overall RTA scheduling of project improvements. The Town of Oro Valley also agreed that Pima County would lead the design concept stage of the entire corridor. Pima County and the RTA have an existing Intergovernmental Agreement (IGA) that currently covers these preliminary design activities for the entire corridor. Once the design concept activities are completed for this project, Pima County, Town of Oro Valley, and the RTA will determine the Pima County construction limits as well as the appropriate funding. The existing IGA will then be amended to cover the final design, rights-of-way, and construction activities for the Pima County portion agreed to. The Town of Oro Valley does not plan to advance the remaining segment of La Cholla Boulevard to final design and construction activities until Period 4 of the overall RTA scheduling of project improvements.

Figure 5. Land Use Map



4.0 Traffic and Accident Data

4.1 Traffic

General

A traffic engineering study was prepared by PCDOT to document existing and Design Year 2040 traffic conditions, and to provide the recommendations for length and number of turning lanes at intersections, location of median openings, warranted traffic signal locations, pedestrian and bicycle facilities, and the need for roadway lighting.

The current average daily traffic volumes along La Cholla Boulevard between Magee Road and Tangerine Road vary from 9,900 to 15,800 vehicles per day. In general, the existing heavy vehicle percentage is about 3% which is consistent with other major arterials in the metropolitan are where 3-5% is typical. In the year 2040, the traffic volumes are expected to increase to between 21,800 to 29,800 vehicles per day. These volumes indicate a need for a four-lane roadway. Without the added capacity for 2040 conditions the Level of Service would be at a D or worse for all intersections. Per the PCDOT RDM, “the improvements shall be those needed to maintain a level of service D or better for the a.m. and p.m. peak hours in the design year.” The proposed four-lane roadway section will satisfactorily handle these quantities of traffic with Level of Service C or above.

Intersections

The five major intersections were analyzed in the Traffic Report. The existing traffic conditions and turning movements are shown in Figure 6. The future traffic conditions and turning movements are shown in Figure 7. The proposed intersection improvements for the north, east, and west legs of the Tangerine intersection will be included in the future Tangerine Corridor. The Magee Road intersection will be improved under a separate County project.

Pedestrians, Bicycle, and Equestrian Movements

There is an existing paved multi-use pathway that pedestrians use along the CDO Wash west of La Cholla Boulevard. This pathway terminates just west of La Cholla near Hardy Road. Also included along the west side of La Cholla is an existing paved multi-use pathway from Naranja Drive to Glover Road and along the east side of La Cholla from Naranja Drive to Arizona Rose Drive.

Proposed improvements include a multi-use pathway along the west side of La Cholla Boulevard meeting the ADA minimum width and maximum slope criteria. Along the east side of La Cholla Boulevard, where sidewalk will not be placed with this project, space in the right-of-way is reserved for sidewalk placement in the future. The multi-use pathway will connect to the existing linear park pathway near Hardy Road. The project also recognizes that the County may want to extend the linear park in the future along the CDO Wash farther upstream. Therefore, the project will accommodate a 10-foot wide paved pathway near the southern bridge abutment that will be utilized by a future Urban Loop. This will connect to the proposed path that will parallel

La Cholla Boulevard along the west side, pass under the proposed bridge, and connect to the northbound La Cholla shoulder area. The bridge will be required to provide the minimum clearance (8-foot minimum, 10-foot desirable for pedestrians/bicyclists) above the pathway as it crosses the proposed structures.

There will be ADA compliant curb ramps per PCDOT/COT Std. Detail 207 provided at every intersection with a maximum slope of 12:1 and containing truncated dome warning strips at the bottom of each ramp. Striped crosswalks will be provided at all signalized intersections and will have a maximum cross slope of 2%. There will also be non-striped crosswalk areas provided where pedestrians will be allowed to cross non-signalized median openings. There will be 42-inch high pedestrian handrail or barrier at warranted locations along the multi-use pathways and sidewalks and on the outsides of the new bridge structures over the CDO Wash.

The bicyclists utilizing La Cholla Boulevard currently use the existing 2-foot to 5-foot paved shoulder areas. This project will provide 6-foot paved shoulder areas on both sides of La Cholla for the entire project length. These paved shoulders will continue to serve as the primary bike facility for the project. Recreational cyclists may also utilize the paved multi-use pathway. “Bike Route” signs and pavement markings will be provided.

The project recognizes that equestrians may be crossing La Cholla Boulevard at McCarty Road and Lucero Road, which median openings will accommodate. In addition, narrow strips along the west right-of-way will remain clear of landscaping in order to accommodate equestrians. The proposed CDO Bridge will also accommodate adequate overhead clearance for equestrians.

Figure 6a. Existing Traffic Conditions – Lane Configurations and Traffic Control Devices

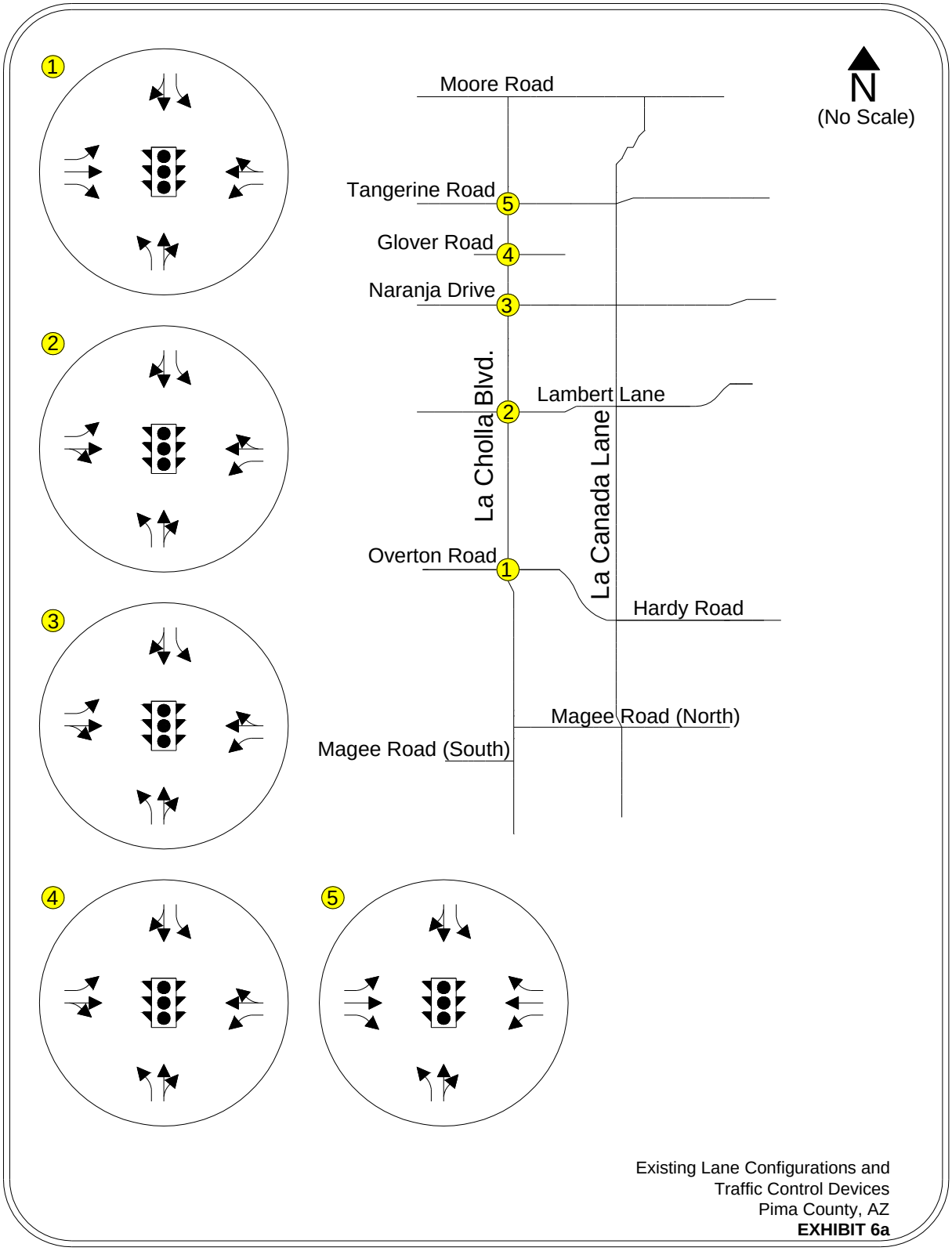


Figure 6b. Existing Traffic Conditions – (2008) Average Daily Traffic

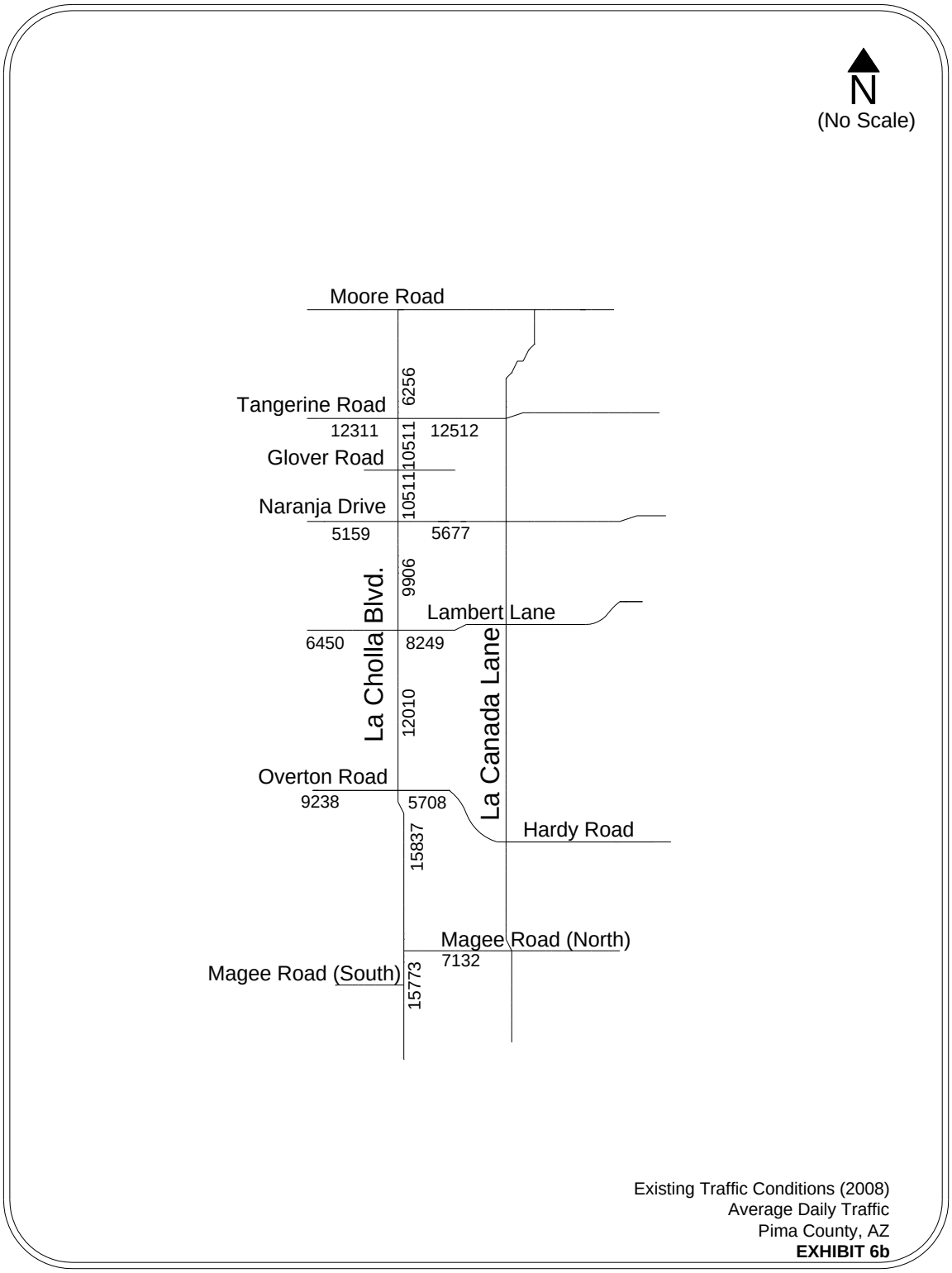


Figure 6c. Existing Traffic Conditions – (2008) Weekday AM Peak Hour (7:15am – 8:15am)

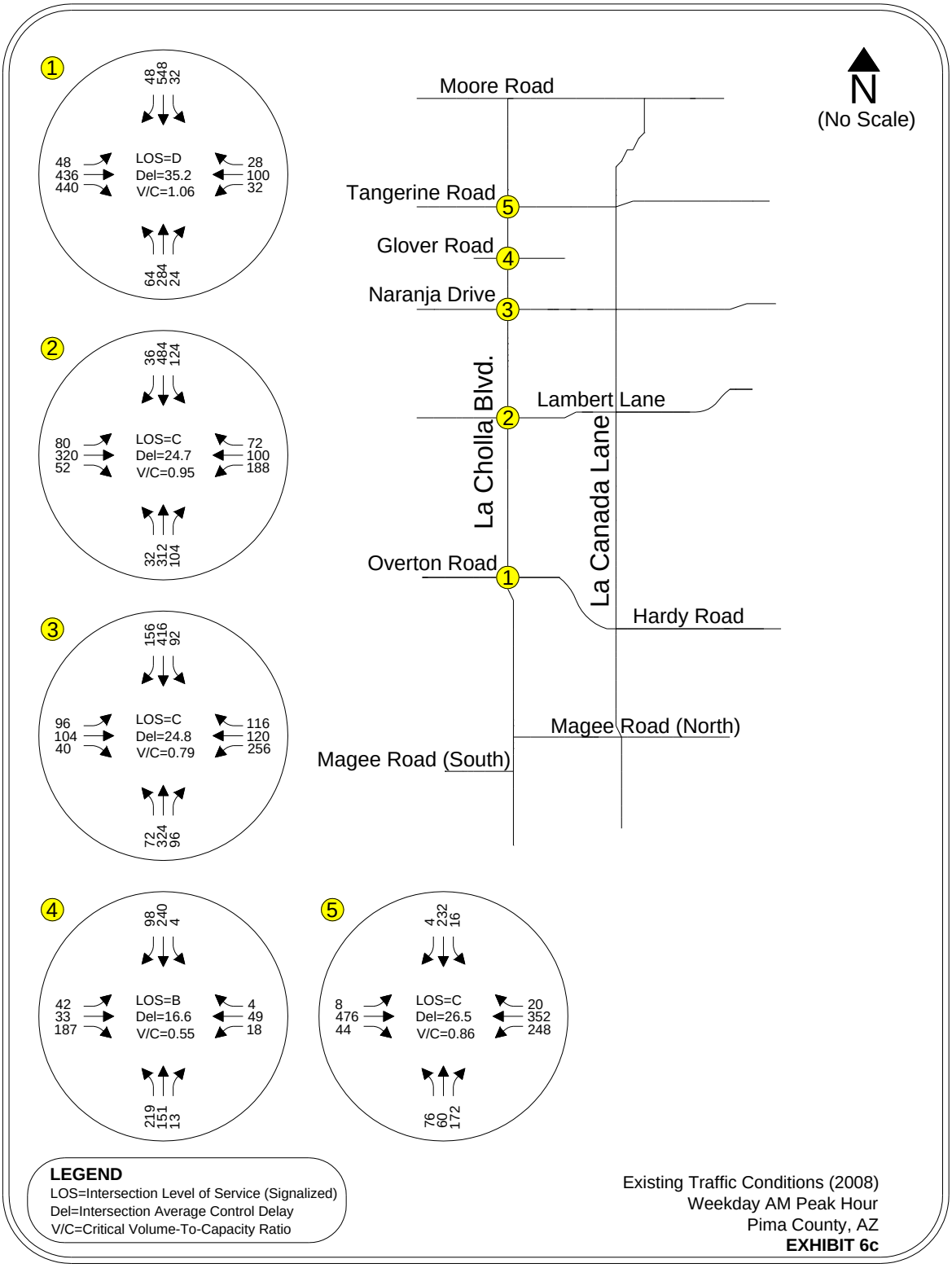


Figure 6d. Existing Traffic Conditions – (2008) Weekday PM Peak Hour (5:00pm – 6:00pm)

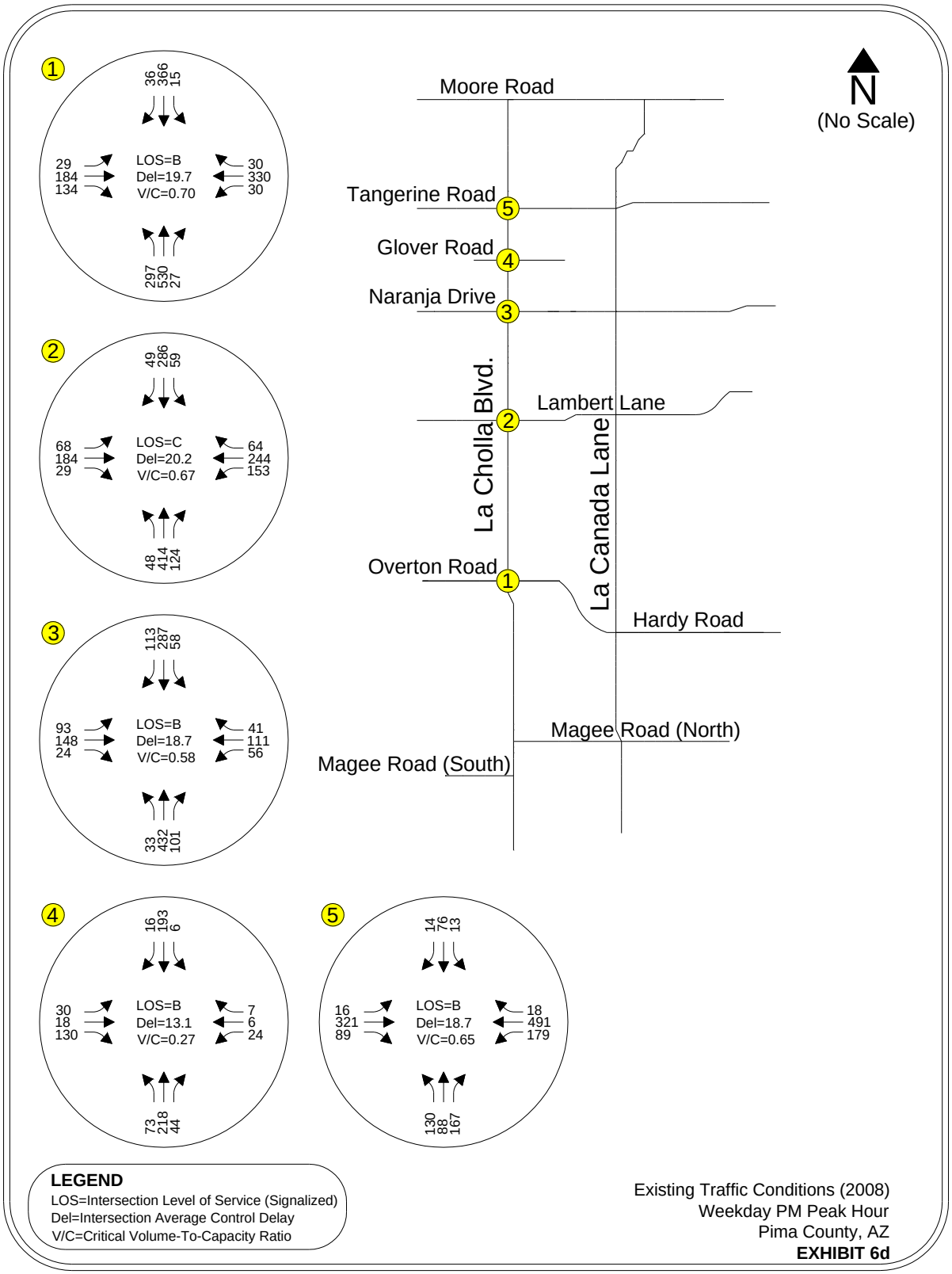


Figure 7a. Future Traffic Conditions – Lane Configurations and Traffic Control Devices

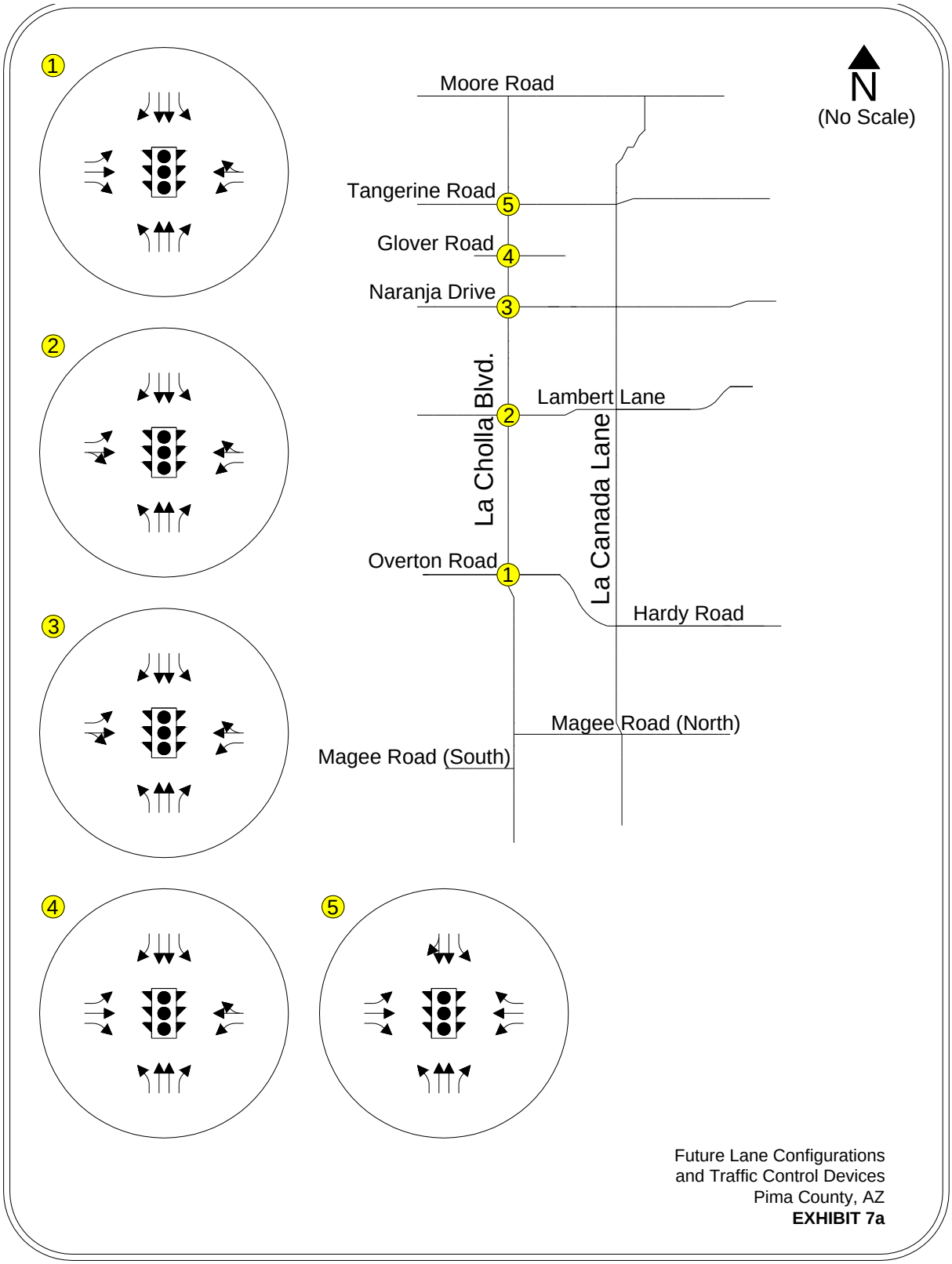


Figure 7b. Future Traffic Conditions with Existing Lane Configurations – (2040) Weekday AM Peak Hour (7:15am – 8:15am)

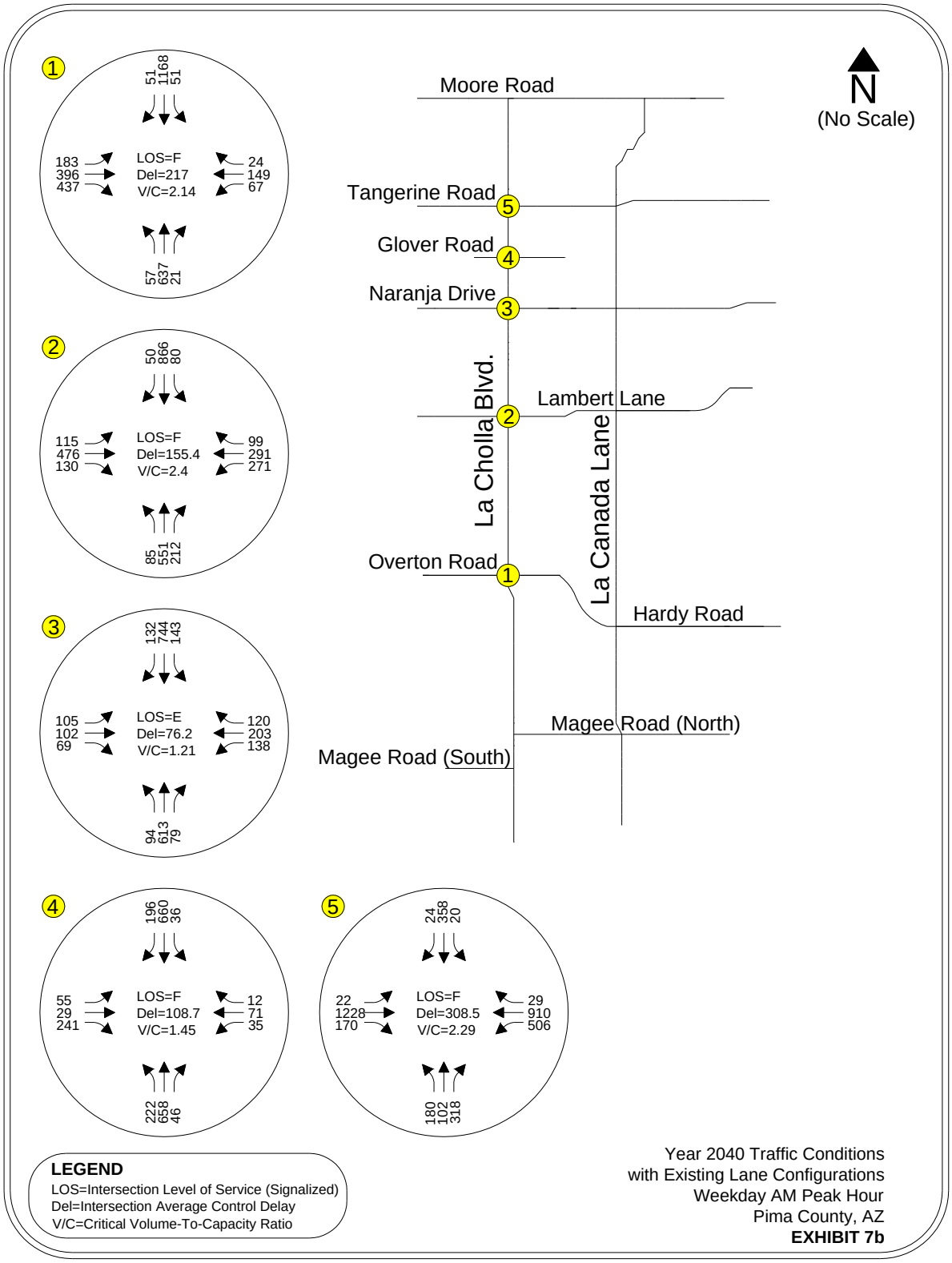


Figure 7c. Future Traffic Conditions with Existing Lane Configurations – (2040) Weekday PM Peak Hour (5:00pm – 6:00pm)

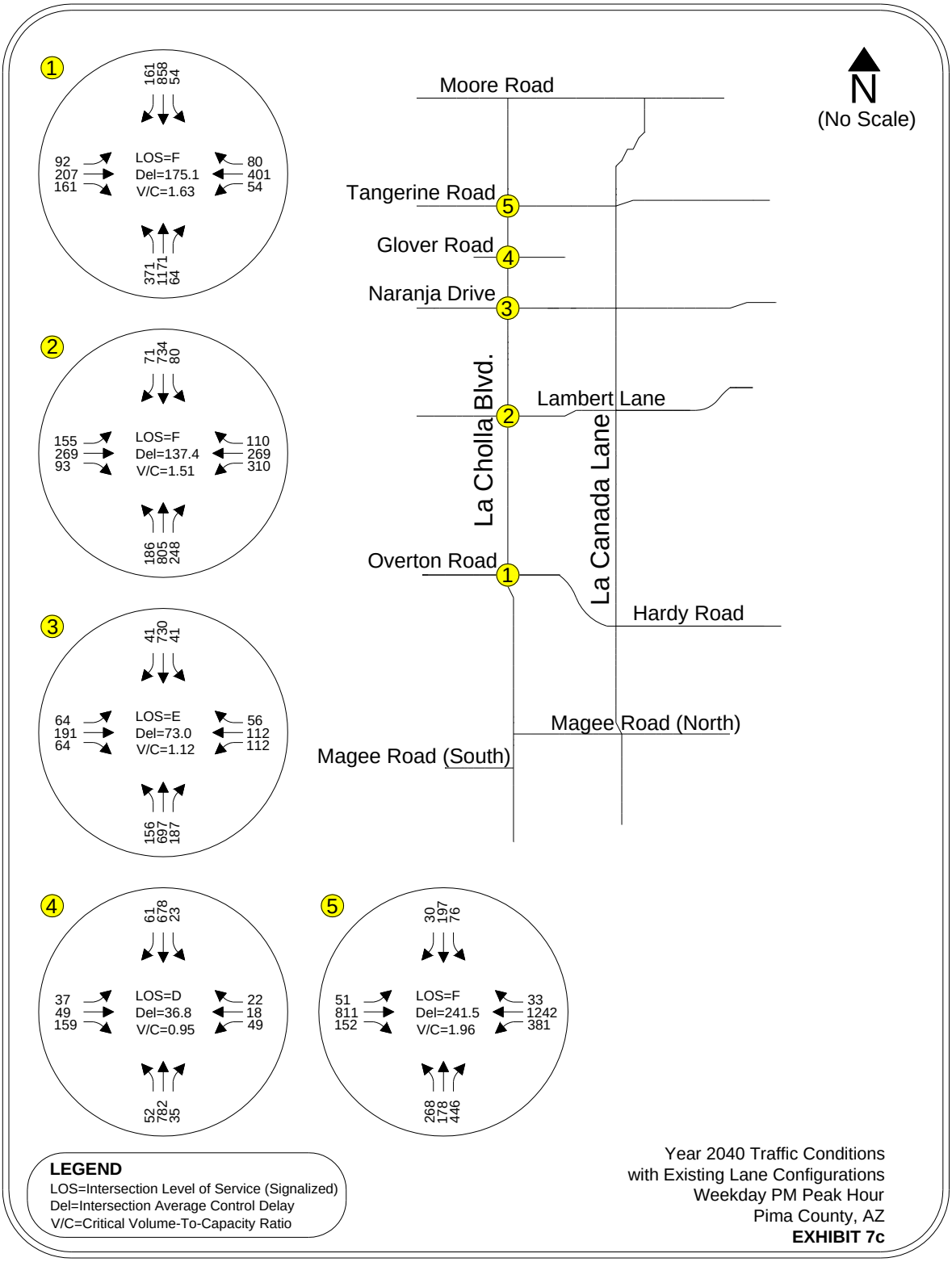


Figure 7d. Future Traffic Conditions with Added Capacity – (2040) Weekday AM Peak Hour (7:15am – 8:15am)

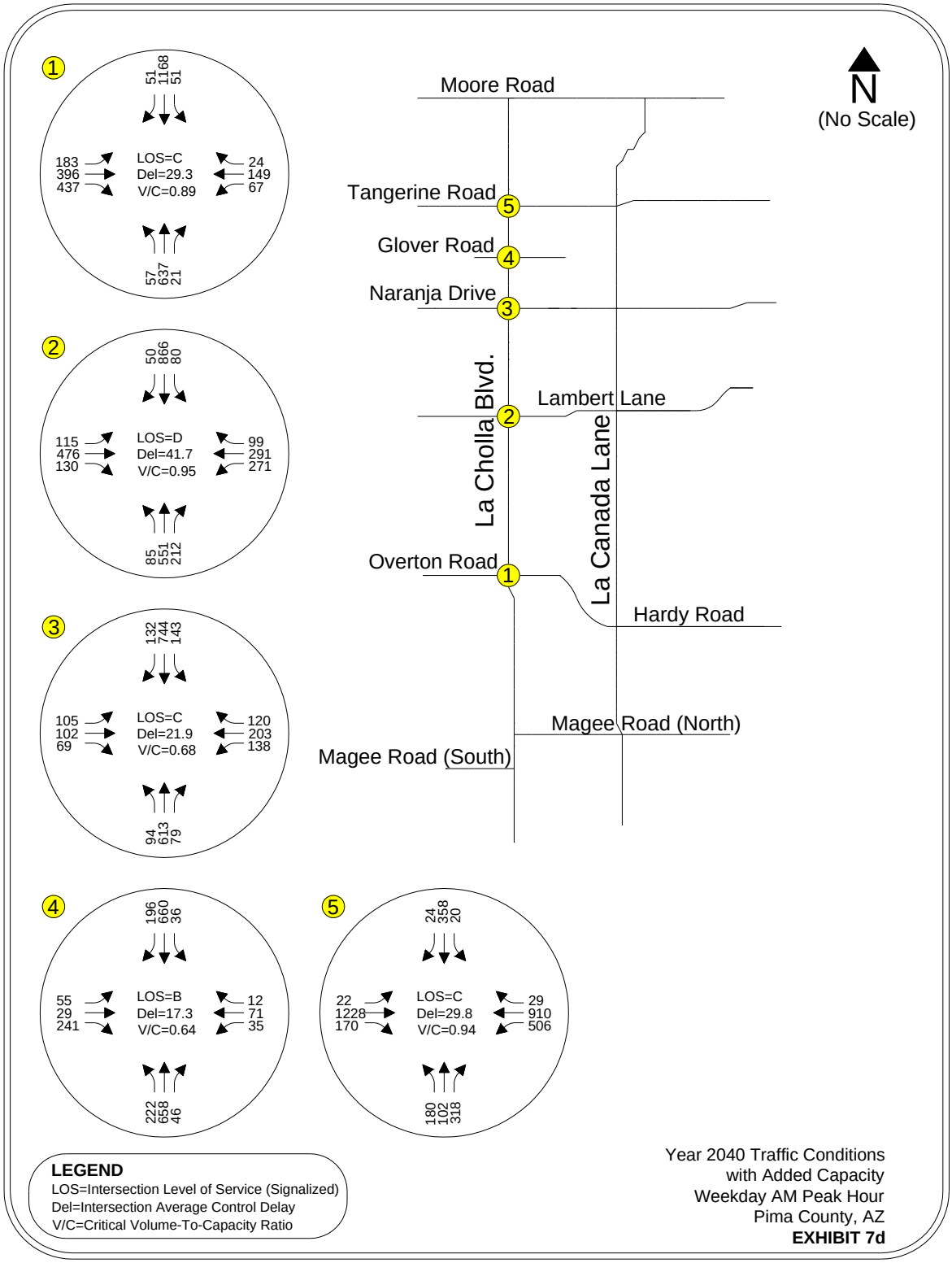


Figure 7e. Future Traffic Conditions with Added Capacity – (2040) Weekday PM Peak Hour (5:00pm – 6:00pm)

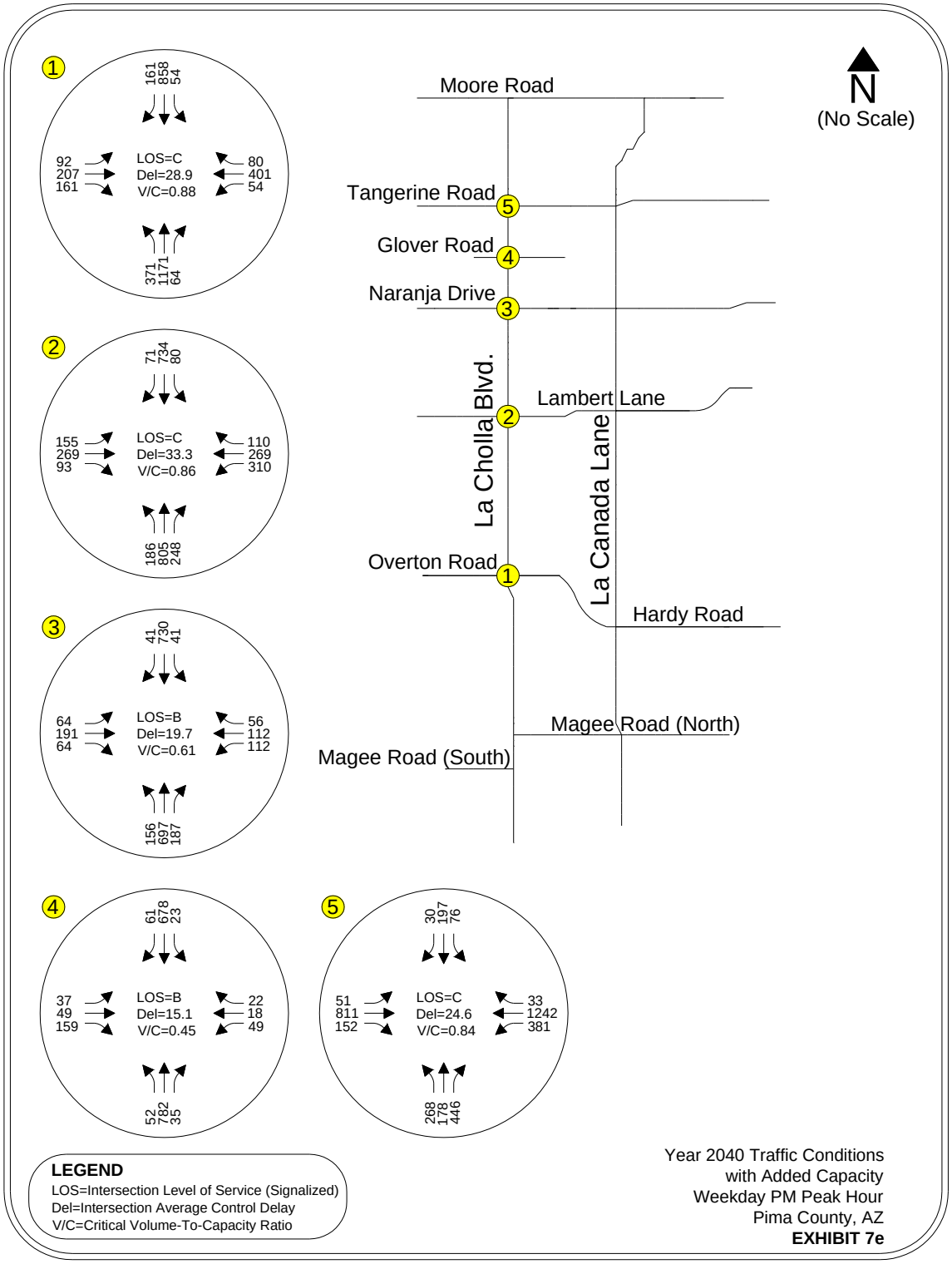
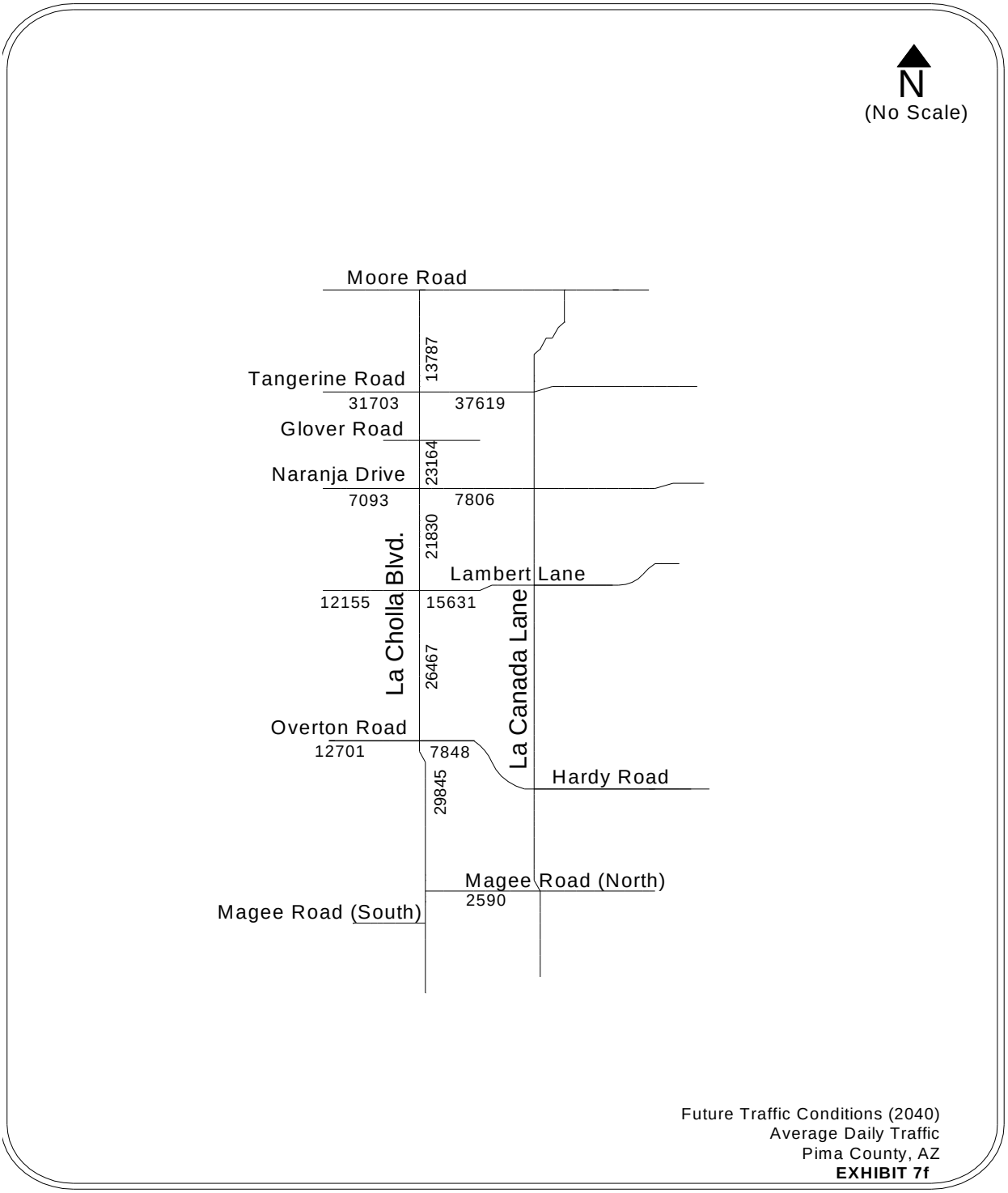


Figure 7f. Future Traffic Conditions 2040 ADT



4.2 Crash Data and Analysis

Crash data for the three-year period from January 1, 2006 to December 31, 2008 were obtained from PCDOT and the Oro Valley Police Department. The intersection and segment crash data were reviewed and are summarized in Table 2 and Table 3 below. The average crash rates for each segment are based on the average number of accidents per million vehicle miles of travel over the three-year period; the average crash rates for each intersection is based on the average number of accidents per million vehicles entering the intersection.

With the exception of the segment from Lambert Lane to Naranja Drive, the crash rate on all segments of the roadway was below the three-year average crash rate of 1.32 for all roadway segments within Pima County. This segment currently has a horizontal curve in the area of Casas Baptist Church that will be straightened out as a part of the design and construction of this project.

Table 2. Crash Data – Intersections

Intersection with La Cholla Boulevard	Number of Crashes (01/01/06 – 12/31/08)	Crash Rate (per Million Vehicles)
Magee Road (North)	23	0.72
Overton Road	15	0.75
Lambert Lane	16	0.79
Naranja Drive	17	1.03
Glover Road	5	0.45
Tangerine Road	18	0.85
Pima County Average	3449	0.96

Table 3. Crash Data – Segments

Segment of La Cholla Boulevard	Number of Crashes (01/01/06 – 12/31/08)	Crash Rate (per Million Vehicles)
Magee Road (North) to Overton Road	9	0.34
Overton Road to Lambert Lane	12	0.61
Lambert Lane to Naranja Drive	22	2.03
Naranja Drive to Tangerine Road	12	1.04
Pima County Average	5903	1.32

5.0 Design Standards and Criteria

5.1 Geometric Standards

The roadway will be designed in accordance with AASHTO's *A Policy on Geometric Design of Highways and Streets* (Reference 2), the RDM (Reference 3), and AASHTO's *Roadside Design Guide* (Reference 4).

5.2 Design Standards

Design standards for this project include the RDM (Reference 3), the City of Tucson/Pima County *Standard Details for Public Improvements* (Reference 5), AASHTO's *Guide for the Development of Bicycle Facilities* (Reference 6), Federal Highway Administration (FHWA) *Manual of Uniform Traffic Control Devices* (Reference 7), AASHTO's *Standard Specifications for Highway Bridges* (Reference 8), Town of Oro Valley's *Drainage Criteria Manual* (Reference 9), and Town of Oro Valley's *Bicycle and Pedestrian Standards* (Reference 10).

5.3 Slope Standards

The segment of La Cholla Boulevard between Magee Road and Lambert Lane has severe terrain changes with slopes as steep as 0.5:1. The segment between Lambert Lane and Tangerine Road is not as severe. Most cut and fill slopes beyond the hinge point will be 4:1. Due to the extreme change in terrain along this segment of La Cholla Boulevard and to avoid or minimize right-of-way acquisitions, a maximum cut or fill slope of 2:1 may be used. A Slope and Wall Type Selection, which is included within the DCR Level Geotechnical Report (Reference 12), also recommends that a maximum cut or fill slope of 2:1 be used in certain locations and that the appropriate slope treatment be placed to protect against potential erosion. The report makes recommendations for the slopes or wall treatments at several locations along the corridor. The report recommends that temporary cut or fill slopes not exceed 1.5:1 for stability purposes.

5.4 Pavement Structure

A Pavement Design Summary was included within the DCR Level Geotechnical Report (Reference 12) using the information contained in Section 3.13 of the Pima County RDM. The design criteria for the pavement design are as follows:

- Design Period – 30 years (Design Year – 2040)
- Design R-Value – 45
- Resilient Modulus – 20,400 psi
- Seasonal Variation Factor – 1.7
- Level of Reliability for Arterial Roadway – 95%
- Change in Serviceability Index – 1.4
- Minimum Structural Number for Arterial Roadway – 2.64

5.5 Design Speed

The design speed for this project is 50 mph. La Cholla Boulevard will be posted at 45 mph.

5.6 Drainage Design

The drainage design criteria applied for this project have been compiled from the scope of work, Town of Oro Valley's *Drainage Criteria Manual* (Reference 9), and RDM (Reference 3). It has been summarized here:

Cañada Del Oro Wash. The new bridge will be designed to convey the 100-year flow without significantly raising the floodplain or allowing it to neither be higher than the proposed roadway nor be increased at existing insurable structures along the wash. The low chord of the new bridge will be placed approximately 3 feet above the 100-year water surface. The depth of the bridge pier and abutment foundations will accommodate scour from a 500-year event.

Offsite Drainage. In general, the offsite drainage criteria that will be followed are the same between the Pima County and Town of Oro Valley segments. The following table summarizes the major criteria items relating to cross drainage.

Description	Criteria
Design storm	100-yr (storm must not flow into adjacent basins)
Maximum increase in WSE	No increase (Evaluate on Individual Basis)
Pipe culvert end treatments	Headwall on upstream side: End section on downstream side where practical
Minimum culvert size	36 inches

Onsite Drainage. The pavement drainage criteria vary between Pima County and the Town of Oro Valley. The following table summarizes the criteria relating to pavement drainage.

Description	Pima County	Town of Oro Valley
Design storm	10-year (non depressed roadway)	10-year
Spread criteria	One dry lane (11-foot Lane)	12 feet of clear pavement
Minimum storm drain size	18 inches	24 inches
Pipe material	No restriction	Only RCP under pavement
Design velocity	3 fps at full flow	4 fps for 5-year event
Pressure flow design	HGL 1-foot minimum below inlet	Not specified
Catch basin capture ratios	Per Table 2-4 RDM	Not specified
Minimum Time of Concentration	5 minutes	5 minutes
Ponding Depth in Pavement	100-year (1 foot max)	6 inches above pavement surface

At this level of concept development, it appears that there will be a small amount of localized off-site drainage that will be incorporated into the storm drain system. In particular, there are locations where pavement drainage from cross streets will flow into La Cholla Boulevard. These flows will need to be intercepted by catch basins and conveyed in the storm drain.

5.7 Access Control

In general, this corridor will not be access-controlled, although turning movements will be restricted using median openings. The only exceptions will be that driveways will not be allowed within 150 feet of the curb line of the major intersecting streets (McCarty Road, Overton Road, Lucero Road, Lambert Lane, Naranja Drive, Glover Road, and Tangerine Road). Exceptions may be made for existing driveways on a case-by-case basis.

An access road will be provided for the single family residents within The Bluffs Subdivision and along Morning Jewel Place. This access road will provide one access point onto La Cholla and allow all necessary movements while providing adequate sight distance toward the proposed CDO bridge.

A frontage road will also be provided for four residences located north of Lucero Road along the east side of La Cholla Boulevard. The existing terrain along with the roadway widening of La Cholla Boulevard would have resulted in substandard driveway grades to each of the residences. This one-way frontage road will provide the residents with safe access to and from La Cholla Boulevard.

Median openings will be provided along La Cholla Boulevard at locations and spacing recommended by the Pima County Traffic Operations Group. The locations will control where turning movements can be made. No median opening will be located within 660 feet of the signalized intersections (Overton Road, Lambert Lane, Naranja Drive, Glover Road, and Tangerine Road).

5.8 Cross Section Elements

The roadway classification for this section of La Cholla Boulevard is urban arterial.

Table 4. Cross Section Elements

Typical Section	Width
Inside Traffic Lane	12 feet (1 foot inside shoulder next to median curb)
Outside Traffic Lane	11 feet
Paved Shoulder	6 feet
Right Turn Lane	13 feet
Left Turn Lane	14 feet (1 foot striped shoulder next to median curb)
Bike Lane	6 feet within paved shoulders (5 feet next to right turn lanes)
Median	20 feet
Clear Zone	20 feet from vehicle travel lane per AASHTO (Reference 4)
Sidewalks	5 feet
Multi-use Pathway	8 feet

Note: See Figure 3 for La Cholla Typical Section.

Turn lanes will be provided at the cross roads and intersections as recommended in the Traffic Report discussed in Section 4.0 of this report.

5.9 Roadway Geometrics

Horizontal. Based on a 50 mph design speed, the minimum radius that will be used with a 4% superelevation is 926 feet. An angle point of 1° 08' or less between tangent alignments will be used without the requirement of a horizontal curve.

Vertical. The maximum grade for this stretch of roadway shall not exceed 7%. Since the new roadway will be curbed, the minimum grade shall be 0.5%. The minimum SSD shall be 425 feet or greater based on the vertical downgrade (483 feet for a 7% downgrade).

5.10 Right-of-Way Width

The existing right-of-way varies significantly throughout the corridor from 60 feet to 200 feet. A minimum right-of-way width of 150 feet will be maintained for the majority of the new 4-lane roadway. Additional right-of-way widths will be required in those areas, such as near the CDO Wash and locations between Magee Road and Lambert Lane. A minimum width of 150 feet will be required between Lambert Lane and Tangerine Road. Additional easements for drainage, slope, and construction will also be required.

6.0 Major Design Features

6.1 Horizontal and Vertical Alignment

Horizontal. At the southern most limits of the project, the construction centerline of La Cholla Boulevard will match the bearing of the planned Magee Road/La Cholla Boulevard Intersection Project 4RTMLI. From just north of McCarty Road to Hardy Road, the construction centerline follows the section line. As the alignment crosses the CDO Wash, there is a 15-foot shift east of the section line created by 0° 45' degree of curvature reverse curves at both ends of the bridge. This shift is to assist the maintenance of traffic during the construction of the bridge. From just south of Overton Road to Tangerine Road, the centerline follows the section line with small bearing breaks at the section corners.

Vertical. Independent grades will be used for the northbound and southbound traffic lanes of La Cholla Boulevard. This will assist in minimizing wall heights and the re-establishment of driveways. In general, the vertical alignment will follow the existing grade except at the following locations:

- The CDO Wash area will be raised to allow the appropriate freeboard under the proposed bridge structure
- Several dip crossings that will require a grade raise to allow clearance to proposed drainage structures
- Locations that require improvements to the existing sight distances

The Stage I (15%) Design Concept plans are provided as Appendix C.

6.2 Access Control

Since La Cholla Boulevard will function as a principal urban arterial, the roadway must provide for a high level of traffic safety and operations; therefore, a raised median will be provided. While a raised median does not lend itself well to maintaining the current level of access, the safety benefits outweigh those associated with no median or with a two-way left-turn lane.

The RDM recommends that median openings be spaced no closer than 660 feet to other median openings and require that they not be placed within the functional limit of a major intersection. The preferred median opening spacing is 1/4 mile. The project is recommending a total of 23 median openings along the corridor. All of these opening openings meet the minimum spacing requirement of 660 feet except the following locations:

- 215 feet between the median opening at the stables and the frontage road entrance, which is approximately 1,000 feet north of Lucero Road. The median openings at both locations are needed to provide direct left-turn access points.

- 415 feet between the median opening at Owls Peak Place and the frontage road exit location. The median openings at both locations are needed to provide both northbound and southbound movements.

Driveways will be provided to every property which currently has their primary access from La Cholla Boulevard except for the four parcels along the east side of La Cholla and across from Owls Peaks Place. A one-way frontage road will be provided and shared by the properties. A median opening would be provided at the entrance and exit of this proposed frontage road. This frontage road will be required due to the resulting steep grades associated with re-establishing the existing driveway locations.

Within The Bluffs subdivision, an access road will connect Tortolita Bluffs Drive and Morning Jewel Place. This will provide a common access point to and from La Cholla Boulevard and will establish the required sight distance from the proposed CDO Wash bridge.

An alignment study was performed to determine the optimal alternatives for maintaining access and is included in Section 10.0 of this report.

6.3 Right-of-Way

A copy of the right-of-way requirements plan is included as Appendix D. This plan includes the names and addresses of the affected property owners. A summary of the anticipated right-of-way acquisition is provided below:

Assessor Number	Owner	Acquisition Type	Area (acres)
225-21-0100 225-21-0090	Matte	Utility Easement (Metro Water Matter Well Site)	0.23
225-25-2110	TNR & S Acquisitions Inc.	New R/W Take	0.17
225-24-4310	Fairfield-La Cholla Hills HOA	Drainage Easement	0.02
225-25-210A	TNR & S Acquisitions Inc.	New R/W Take (Dedication TBD)	0.15
225-25-112C 225-25-2290	Title Security Agency of Az	Drainage Easement	0.46
225-04-025J	Pima County FCD	New R/W Take	0.59
225-06-041C	Marana Properties LLC.	New R/W Take Drainage Easement	0.34 0.15
225-06-041B	Pima County FCD	New R/W Take Drainage Easement	0.66 0.28
225-04-9570	Pima County FCD	New R/W Take	0.93
225-06-0360	Gilmore	New R/W Take	1.38
225-06-0310	Weinrib	New R/W Take Drainage Easement	1.00 0.36
225-06-025A	Neffson	New R/W Take Drainage Easement	0.57 0.35
225-04-003D	Harbour	New R/W Take Drainage Easement	1.28 0.96
225-06-018A	Unisource Energy Corporation	New R/W Take	0.15
225-06-017A	TEP	New R/W Take	0.27

Assessor Number	Owner	Acquisition Type	Area (acres)
225-06-0200	Neffson	Drainage Easement	0.28
225-06-0210	Pima County FCD	Drainage Easement	1.61
225-06-0140	Keen	New R/W Take Drainage Easement	0.34 2.23
225-06-016B	Borquez	New R/W Take	0.34
225-06-0080	Powell	New R/W Take Drainage Easement	0.42 0.07
225-06-0070	Powell	New R/W Take	0.42
225-04-002B	Northwest Bible Church	New R/W Take (Dedication TBD) Drainage Easement	0.76 1.14
225-04-001A	Khan	New R/W Take Drainage Easement	0.76 0.34
225-06-0060	Miller	New R/W Take	0.45
225-06-005D	9590 La Cholla LLC	New R/W Take	0.38
224-39-0160	Ellzey	New R/W Take	0.37
224-41-0310	Title Security Agency Of Az	Drainage Easement	0.04
224-39-0110	Stephenson	New R/W Take	0.33
224-39-0250	Blankenship	New R/W Take	0.02
224-39-0100	Kingsford	New R/W Take	0.33
224-41-008B	Grace Community Church	New R/W Take	0.49
224-41-005D	Hernandez	New R/W Take	0.34
224-39-0130	Bryans	New R/W Take Drainage Easement	0.66 0.04
224-39-0050	Bauer	New R/W Take	0.43
224-39-0040	Vandick	New R/W Take	0.29
224-39-0030	Dickerson	New R/W Take	0.29
224-39-0020	Future Arizona Inc.	New R/W Take Drainage Easement	3.24 0.22
224-23-001A 224-20-001C 224-20-001B	JMK Family Properties, Felker	New R/W Take Drainage Easement New R/W Take New R/W Take Drainage Easement	2.00 0.03 1.34 1.64 0.05
224-24-765A	Canada Hills Villages	Drainage Easement	1.37
224-24-0120	Hallaq	New R/W Take	1.29
224-49-2470	Catalina at Canada Hills HOA	Drainage Easement	0.10
224-11-061F 224-11-061E 224-11-061D	T/F Naranja Group LLC	New R/W Take (Dedication TBD) Drainage Easement	0.97 0.21
224-11-0600	Orson	New R/W (Dedication TBD) Drainage Easement	0.32 0.25
224-09-0810	Ironwood Canyon HOA	Drainage Easement	0.03
224-11-038A	Kuo-Ming Lin TR	New R/W Take (Dedication TBD) Drainage Easement	1.33 0.14
224-11-038B	Amphitheater School District.	New R/W Take	0.03
224-11-037F	Papke	New R/W Take	0.34
224-08-0030 224-08-0020	La Cholla Tangerine LLC.	New R/W Take (Dedication TBD) Drainage Easement	2.51 0.66
224-11-037G	Mimbs	New R/W Take Drainage Easement	0.29 0.02

Assessor Number	Owner	Acquisition Type	Area (acres)
224-11-034E	Levitt	New R/W Take Drainage Easement	0.68 0.32
224-11-0140	State of Arizona	New R/W Take Drainage Easement	1.15 0.03

6.4 Drainage

The drainage characteristics for La Cholla Boulevard can be grouped into three distinctive areas: Magee Road to Hardy Road, Hardy Road to Lucero Road, and Lucero Road to Tangerine Road. Magee Road to Hardy Road is characterized mostly by well defined natural channels and some constructed channels. All of the channels cross under La Cholla Boulevard through cross drainage structures. Runoff flows from east to west. Hardy Road to Lucero Road is characterized by the Federal Emergency Management Agency (FEMA) floodplains of the CDO Wash and La Cholla Wash. The CDO Wash crosses La Cholla Boulevard at grade and flows from northeast to southwest. However, runoff in the La Cholla Wash flows from northwest to southeast. Lucero Road is characterized by well defined natural channels with runoff flowing from northeast to southwest.

The major drainage improvements will consist of providing new cross culverts or improved cross culverts at all crossings that currently do not convey the 100-year event under the roadway. In addition, channels lined with hand-placed riprap will be used to direct flows impacting the new roadway embankment to the appropriate outfall location. Headwater elevations at cross culvert inlets will not be allowed to significantly increase, or create a situation where flows could run into adjacent watersheds. Detailed calculations for the offsite drainage analysis are contained in the drainage report being prepared for this project.

A summary of the existing and proposed cross culverts are included in the following table:

Station	Culvert Size and Material	Comments
286+13	5-10'x5' RCBC	Existing – good condition; no improvement needed; clean out sediment
289+13	2-36" RCP	Existing – good condition; clean out sediment and extend
296+98	2-72" CMP	Existing – good condition; extend
303+73	2-36" CMP	Existing – good condition; extend
312+90	1-36" CMP	Existing – good condition; extend
323+05	2-30" CMP	Existing – good condition; extend
325+73	Trench drain – 6' wide	Existing – good condition; extend
328+28	Trench drain – 2.5' wide	Existing – good condition; augment and extend
332+66	2-10'x6' RCBC	Existing – good condition; augment and extend
367+45	6-10'x6' RCBC	New culvert
375+77	2-8'x5'RCBC	New culvert
381+08	3-36" RCP	New culvert
385+00	3-36" RCP	New culvert
389+17	3-36" RCP	New culvert
423+20	4-8'x5' RCBC	New culvert
455+24	1-36" RCP	New culvert

Station	Culvert Size and Material	Comments
460+85	2-8'x5' RCBC	New culvert
484+71	2-42" RCP	Remove existing 2-36" CMP and replace with new culvert
503+65	1-36" RCP	New culvert
505+56	2-6'x5' RCBC	New culvert
511+29	1-36" RCP	New culvert
524+91	3-36" RCP	New culvert
534+92	4-42" RCP	New culvert

The alternative analysis for drainage focused on the approach for managing the flows from La Cholla Wash. As mentioned previously, as flows approach La Cholla Boulevard, a portion are captured by a dike that runs adjacent to La Cholla Boulevard, and a portion continue to cross the roadway and flow to the CDO Wash. The dike was installed as part of the 2008 intersection improvements at Overton Road and La Cholla Boulevard to alleviate flooding at the intersection. The flow that is captured by the dike is diverted south to an existing channel that was constructed for The Bluffs subdivision. This existing channel was designed for approximately 800 cfs, and according to the hydrologic analysis for this project, approximately 1,400 cfs is reaching the channel. Consequently, there is potential for the capacity of the Bluffs channel to be exceeded, and for flooding to occur. As such, five alternatives were developed.

Alternative 1 – Channelize Flow to Outfall at the CDO Crossing at Overton Road

This alternative would capture the majority of flow from La Cholla Wash and use a lined channel to convey the flow to the CDO crossing at Overton Road. The alignment for flow would consist of a parallel north-south channel on the upstream side of La Cholla, a cross culvert under La Cholla Boulevard on the north side of Overton Road, and an east-west channel continuing along the north side of Overton Road to the outfall at the CDO Wash.

Alternative 2 – Channelize Flow to Outfall at the New CDO Bridge

Alternative 2 is similar to Alternative 1 but rather than utilizing an east-west channel to the CDO Wash, the channel would continue south at Overton Road and outfall into the CDO Wash on the upstream side of the new bridge. In addition, the cross culvert under La Cholla Boulevard would cross from the northwest quadrant to the southeast quadrant through the intersection. This alternative would block access to adjacent properties.

Alternative 3 – Channelize Flow to the CDO One-tenth Mile North of Overton Road

Similar to Alternatives 1 and 2, Alternative 3 utilizes a parallel north-south channel to capture the flow, but conveys the flow under La Cholla Boulevard approximately 700 feet north of Overton Road, and continues conveying the flow directly east to the CDO Wash. This alternative requires the least amount of new channel.

Alternative 4 – Channelize Flow to the CDO One-quarter Mile North of Overton Road

This alternative is similar to Alternative 3. It utilizes a parallel north-south channel to capture the flow, but conveys the flow under La Cholla Boulevard approximately 1,300 feet north of

Overton Road. The flows are then conveyed directly east to the CDO Wash. This alternative will have permanent impacts to a water of the US by constructing a new lined channel with significantly more capacity over a natural channel within the 404 permit jurisdictional limits.

Alternative 5 – Channelize Flow south to the Bluffs subdivision channel

Alternative 5 would capture the majority of flow from La Cholla Wash and convey it in a lined channel south, and outfall into the existing channel on the north side of the Bluffs subdivision via a box culvert under Overton Road. The existing channel and its downstream sections would need to be reconstructed to their outfall at the CDO Wash to obtain adequate capacity.

The five alternatives were analyzed, and it was determined that Alternative 1 was not viable due to the limited grade difference between the CDO Wash and the intersection of La Cholla Boulevard and Overton Road. Alternative 2 is a viable solution, but the intersection of La Cholla Boulevard and Overton Road has a substantial number of utilities that would be impacted by placing a culvert through the center of the intersection. Consequently, this alternative was eliminated from consideration. Alternative 4 was considered to be unfeasible due to the significant disturbance to jurisdictional waters or the US. Alternative 5 was also considered to be unfeasible due to the extensive improvements that would be required on the existing channel system through the Bluffs subdivision. Alternative 3 was determined to be the best solution for managing the flow due mostly to the minimized impact to infrastructure and the minimized channel length. This alternative also avoids the natural wash north of it in order to preserve its natural state. Because of potential impacts on jurisdictional waters of the US, coordination with the U.S. Army Corps of Engineers (Corps) is required to obtain the 404 permit for this alternative.

The new roadway will encroach on the FEMA floodplain in the vicinity of the La Cholla Wash and the CDO Wash. In addition, a 404 permit will be required for this project. The jurisdictional delineations have been accepted by the Corps, but the extent of impact with respect to new construction and construction activities has not been finalized. Consequently it is not known at this time if the permit will require a nationwide or individual permit.

6.5 Earthwork Considerations

This project will involve a large amount of earthwork due to the vertical grade differences existing along La Cholla Boulevard. As described in Section 6.1 of this report, the vertical alignment for La Cholla will generally follow the existing roadway grade except for the following situations;

- La Cholla Boulevard will be raised at the CDO Wash to allow the appropriate freeboard under the proposed bridge structure. This will result in the approach grades that require additional roadway embankment.
- Several dip crossings that will require a grade raise to allow clearance to proposed drainage structures. This will require additional roadway embankment.

- At locations that require improvements to the existing sight distances. This will result in both additional roadway embankment and primarily additional roadway excavations.

Between Magee Road and Hardy Road, the existing grade along the west side of La Cholla Boulevard varies greatly with respect to the existing roadway grade. This will result in large embankment volumes as well as excavations with the widened roadway. To assist in the large grade differences, cut and fill retaining walls will be utilized in order to minimize the earthwork and right-of-way needs. Additionally, steepened slopes with slope protection will be utilized. This situation also occurs between Lucero Road and Lambert Lane along both the east and west sides of La Cholla Boulevard. Within the segment between Magee Road and Lambert Lane, it is anticipated that approximately 70,000 cubic yards of roadway excavation, 50,000 cubic yards of drainage excavation, and 127,000 cubic yards of roadway embankment will be required. Pipe and structural excavations will also be required. The DCR Level Geotechnical Report (Reference 12) recommends a shrinkage factor of approximately 10% for excavated material. With the anticipated shrinkage and ground compaction, it is estimate that approximately 20,000 cubic yards of borrow material will be required for this segment.

Between Lambert Lane and Tangerine Road, the existing grade does not vary as severely as the southern portion of the project. The resulting earthwork is primarily at the dip crossing locations and near Cross Road where the horizontal alignment will be shifted to the east. Retaining walls and steepened slopes with slope protection will be utilized at a few locations where the roadway widening or a grade is raised due to drainage improvements. This will reduce the amount of earthwork and right-of-way required. Within this segment of La Cholla, it is anticipated that approximately 30,000 cubic yards of roadway excavation, 10,000 cubic yards of drainage excavation, and 53,000 cubic yards of roadway embankment will be required. Pipe excavations will also be required. With the recommended shrinkage of 10% and ground compaction, it is estimated that approximately 19,000 cubic yards of borrow material will be required.

Other earthwork considerations are the use of on-site soils applied as backfill for retaining walls, drainage structures, and drainage pipes. The Draft Geotechnical Report states that the evaluation of the on-site soil appears to be suitable for use as mechanically stabilized earth (MSE) walls backfill using geosynthetic reinforcement, reinforced soil slope backfill, structural backfill, drainage pipe bedding, and general trench backfill. On-site material will not be adequate for bedding material and therefore require imported material.

The construction sequencing of each project segment will have an impact on whether the excavations will be available for use against the required roadway embankment and backfills. The final borrow required may be impacted if the sequencing used does not make the excavated material available.

6.6 Intersections

The Magee Road intersection will be improved by a separate Pima County project.

The Overton Road intersection improvements will involve the addition of dedicated single northbound and southbound right-turn lanes off of La Cholla Boulevard. The existing eastbound

dedicated right-turn lane will remain. The existing dedicated single left-turn lanes, at each leg of the intersections, will remain as well.

The Lambert Lane intersection improvements will involve the addition of dedicated single northbound and southbound right-turn lanes off of La Cholla Boulevard. The existing dedicated single left-turn lanes, at each leg of the intersections, will remain.

The Naranja Drive intersection improvements will involve the addition of dedicated single northbound and southbound right-turn lanes off of La Cholla Boulevard. The existing dedicated single left-turn lanes, at each leg of the intersections, will remain.

The Glover Road intersection improvements will involve the addition of dedicated single northbound and southbound right-turn lanes off of La Cholla Boulevard. The existing eastbound dedicated right-turn lane will remain. The existing dedicated single left-turn lanes, at each leg of the intersections, will remain as well.

The Tangerine Road intersection improvements, to the south leg of the intersection, will involve the addition of a dedicated single northbound right-turn lane off of La Cholla Boulevard. The existing dedicated northbound left-turn lane will remain. The improvements to the remaining legs of this intersection will be verified with a separate RTA project, but this project's Draft Initial Traffic Engineering Study (Reference 1) suggests that the existing eastbound dedicated right-turn and left-turn lanes, along with the existing dedicated single southbound left-turn lane, will still be required.

Intersection improvements are also described in Section 4.0 of this report.

6.7 Utilities

This roadway section is a primary utility corridor that includes service, distribution, and transmission of gas, electric, communications, potable water, reclaimed water, and wastewater. Utility facilities run parallel to La Cholla Boulevard on both sides of the roadway and along all major cross streets.

Throughout the project, overhead power, communications, and television will be impacted by roadway widening, alignment adjustments both vertically and horizontally, cut and fill sections, drainage structures, and retaining walls. Underground utilities such as gas, potable and reclaimed water, wastewater, power, fiber optic duct structures, copper and fiber optic cable communications will be impacted by drainage and bridge structures, fill heights, cut sections, and retaining walls. Utility impacts, design mitigation, and relocation design will be key elements in the design and construction of this project.

The RDM 2003 edition and Pima County Ordinance 2008-72 shall be referenced when identifying the presence of utilities, determination and mitigation of utility conflicts, and preparation and review of utility relocation designs.

Two significant design process adjustments will affect utility design aspects of the project. PCDOT has advanced coordination with utility companies in the design process to facilitate an

early partnership with utility companies in the design and construction of this project. This approach advances identification of utility facilities, design and construction conflicts, design mitigation alternatives, right-of-way and environmental impacts, relocation design, funding, and construction scheduling while maintaining an aggressive project schedule. Utility companies in turn are involved earlier in the coordination of utility impacts, mitigations, design, scheduling, and funding processes to address the use of company resources for the many regional projects they are currently involved in. This approach includes advancing other design elements such as right-of-way research, storm drain evaluation, prior rights research and determination, and utility easement and facility mapping.

The second process is the implementation of Pima County Ordinance 2008-72, "*Regulations to the Use of the Public Right-of-Way*," adopted December 2, 2008, just following the start of design for this project. Requirements of this ordinance related to design and location of facilities were implemented on this project. The ordinance requirements do not apply to privately owned facilities.

The following utility contact list represents the Utility Design Team which includes the utility company representatives, Pima County, and design consultant project managers and utility coordinators.

Utility Co.	Representative	Phone	Address
PCDOT	Dean Papajohn (Project Mgr)	520-740-6471	201 N. Stone Avenue, 4th Floor Tucson, AZ 85701
URS	Eric Sibson	520-407-2830	333. E Wetmore, Ste 400 Tucson, AZ 857
PCDOT	Ted Roberts Utility Coord.	520-740-6367	201 N. Stone Avenue, 4th Floor Tucson, AZ 85705
AECOM	Debra Sykes	520-917-4546	1860 E. River Road, Ste 300 Tucson, AZ 85718
Comcast	Mike Ginn	520-744-5477 520-906-4540 c	8251 N. Cortaro Farms Rd. Marana, AZ 85743
Oro Valley Water Utility	Mark Moore	520-229-5017 520-631-4940 c	11000 N. La Canada Dr Oro Valley, AZ 85737
Metropolitan Water District	Charlie Maish Timothy Dinkel	520-575-8100 520-877-1110	6265 N. La Canada Avenue Tucson, AZ 85740
Pima County Regional Wastewater & Reclamation Department	Souren Naradikian	520-740-6322	201 N. Stone Avenue Engineering & Design Section Third Floor Tucson, AZ 85701
Qwest	Earl Winters	520-292-7927 928-533-4993 c	333 East Wetmore Rd., Third Floor Tucson, AZ 85705
Southwest Gas	Melanie Rice	520-794-6043	3401 E. Gas Road Tucson, AZ 85714
Tucson Electric Power	Cynthia Garcia Gary Gaulin	520-918-8246 520-360-0197 520-918-8364	4360 E. Irvington Rd Mailstop DB101 Tucson, AZ 85714

Utility company base files were created using as-built and mapping records provided by the utility companies, field survey of aboveground features and Blue Stake marking provided by

utility companies, as part of the cultural survey activity. Blue Stake marking by TEP, SWG, and portions of Comcast and Qwest was provided.

The potential utility conflicts identified between Magee Road and Lambert Lane has been summarized in the following table:

FACILITY TYPE & SIZE	FACILITY OWNER	STATION LT.	STATION RT.	CONFLICT
UGCTV	COMCAST	349+65, 351+85,	392+55	CUT & FILL SLOPE
UG & OHCTV	COMCAST	358+85-410+15 (17 conflict locations)		ROADWAY PAVEMENT
UG & CTV	COMCAST	367+05-409+90		DRAINAGE PIPES & BOX CULVERTS
MATTER WELL SITE	METRO WATER	289+00 (relocate entire site)		ROADWAY
12" CA	METRO WATER	313+00-331-00, 385+50-392+00, 385+60,	285+00-313+00	ROADWAY
8" CA & 8" PVC	METRO WATER	332+00-333+00, 392+00-438+00	314+00, 324+90, 332+00-333+00, 390+00, 391+90, 399+00	ROADWAY, DRAINAGE
6", 8", 12" PVC LATERALS	METRO WATER	295+00-433+20 (12 conflict locations)		ROADWAY, DRAINAGE
CT STATIONS & METERS	METRO WATER	294+20, 327+00, 331+00		ROADWAY
24" DIP	METRO WATER	331+75-333+75		DRAINAGE
SS MH	PCWW	346+85-388+80 (12 MH locations)	295+95 to 379+10 (11 MH locations)	ROADWAY & PAVEMENT SECTION
8" SS	PCWW		296+80, 303+75	DRAINAGE PIPE
SS MH	PCWW		301+95	FILL SLOPE & DRAINAGE
SS MH	PCWW	353+50	302+85, 333+00,	CURB MEDIAN SIDEWALK
SS MH	PCWW		303+25, 306+35, 311+60,	FILL SLOPE
12" SS	PCWW		323+05, 325+70, 328+25, 332+20, 332+75	DRAINAGE PIPE BOX CULVERT
18" SS	PCWW	375+65-376+00, 381+10-381+40, 367+00-368+00		DRAINAGE PIPE BOX CULVERT
UGT	QWEST	284+07-284+58 298+45-299+22, 419+00-430+00	312+00-332+47 (six locations from 100'-300' in length)	FILL SLOPE
UGT	QWEST	284+85-293+37, 288+72, 392+62		CURB, MEDIAN, PAVEMENT SECTION
UGT	QWEST	288+00-409+50 (six areas of conflict)	412+10	RETAINING WALL

FACILITY TYPE & SIZE	FACILITY OWNER	STATION LT.	STATION RT.	CONFLICT
UGT	QWEST	297+30, 325+65, 422+00-423+00		EROSION (DRAINAGE)
UGT	QWEST	386+32, 398+94, 418+25, 419+00-430+00	307+66 to 361+18 (Ten – 200'-300' sections at various locations)	CUT SLOPE
UGT	QWEST	302+60-306+55, 328+28-339+00, 359+60 to 360+67, 392+24-392+62, 409+55	284+07-293+60, 332+87-339+64, 346+44-359+64, 352+87, 358+30, 386+00-392+17	ROADWAY PAVEMENT SECTION
UGT	QWEST	338+93-339+24	339+65-346+44, 340+87, 341+87, 342+87, 343+87, 344+87	BRIDGE, ROADWAY, PIER
UGT	QWEST	303+85, 312+80, 313+00, 323+00, 325+65, 328+28,	332+60, 389+15	DRAINAGE PIPE & BOX CULVERTS
UGT & UNG FO	QWEST		307+15-312+00	RIPRAP
OHE TELCO	QWEST	297+25, 304+00, 333+00		BOX CULVERT
4" PE Distribution	SWG	290+75 to 293+80		CUT WALL
4" PE Distribution	SWG		320+94 to 321+26	NEW NOISE WALL
4" PE Distribution 2" PE Distribution	SWG		325+00 to 327+75	CUT (1'-2'), CORAL RIDGE LOOP, COUNTRY CLUB DRIVEWAY
1/2" PE Service	SWG	369+50 to 372+50	369+50 to 372+50	CUT (= 1')
4" PE Distribution	SWG	352+00 to 353+30		CUT (= 1'), ACCESS ROAD
4" AA/PE Dist.	SWG		434+00 to 442+00	CUT (= 1')
4" AA Dist.	SWG		395+00 to 397+50 399+00 to 399+50	CUT (= 1')
4" PE Distribution	SWG	285+00 to 287+00 359+00 to 362+50 369+50 to 372+50 377+50 to 378+00 383+00 to 384+00 386+50 to 389+50	359+00 to 362+50 369+50 to 372+50 377+50 to 378+00 383+00 to 384+00 386+50 to 389+50	CUT (= 1')
6" Steel Dist. Feeder,	SWG	359+00 to 362+50	359+00 to 362+50	CUT (= 1')

FACILITY TYPE & SIZE	FACILITY OWNER	STATION LT.	STATION RT.	CONFLICT
8" Steel Dist. Feeder	SWG	359+00 to 362+50 369+50 to 372+50 377+50 to 378+00 383+00 to 384+00 386+50 to 389+50	359+00 to 362+50 369+50 to 372+50 377+50 to 378+00 383+00 to 384+00 386+50 to 389+50 395+00 to 397+50 399+00 to 399+50 434+00 to 442+00	CUT (= 1')
4" AA Dist. 8" Steel Dist. Feeder	SWG	405+00 to 410+50	405+00 to 410+50	CUT (1' +)
4" AA Dist. 8" Steel Dist. Feeder	SWG		415+00 to 420+00	CUT (1'-5'+)
2" PE Distribution	SWG	410+11		CUT (1' +), OWLS PEAK PL
4" AA/PE Dist. 8" Steel Dist. Feeder	SWG		428+00 to 434+00	CUT (1'-2')
1" PE Service	SWG	433+39		CUT (2')
4" AA Dist. 8" Steel Dist. Feeder	SWG		410+50 to 412+00	CUT (2')
4" AA Dist. 8" Steel Dist. Feeder	SWG		399+50 to 403+50	CUT (2'-4')
4" PE Distribution	SWG	366+45 375+77	366+45 375+77	6-10'x6' RCBC 2-10'x4' RCBC
4" AA Dist.	SWG		423+17	4-8'x5' RCBC
8" Steel Dist. Feeder	SWG	366+45, 375+77	366+45 375+77 423+17	6-10'x6' RCBC 2-10'x4' RCBC 4-8'x5' RCBC
4" AA Dist. 8" Steel Dist. Feeder	SWG		400+68, 403+90, 406+57, 409+89, 413+04, 413+92	1-24" RCP
4" PE Distribution	SWG	288+55		2-36" PIPES, PIPE AT OULET OF DRAINAGE.
4" PE Distribution	SWG	381+20, 385+00	381+20, 385+00	3-36" RCP
8" Steel Dist. Feeder	SWG	381+20, 385+00	381+20, 385+00	3-36" RCP
4" PE Distribution 8" Steel Dist. Feeder	SWG	389+17	389+17	2-36" RCP
4" AA Distribution	SWG		392+69 to 397+30 400+60 to 402+13 402+54 to 404+60 428+05 to 432+55	MEDIAN CURB

FACILITY TYPE & SIZE	FACILITY OWNER	STATION LT.	STATION RT.	CONFLICT
4" PE Distribution	SWG	290+75 to 293+80		CUT WALL
4" PE Distribution	SWG		320+94 to 321+26	NEW NOISE WALL
4" PE Distribution 2" PE Distribution	SWG		325+00 to 327+75	CUT (1'-2'), CORAL RIDGE LOOP, COUNTRY CLUB DRIVEWAY
1/2" PE Service	SWG	369+50 to 372+50	369+50 to 372+50	CUT (= 1')
4" PE Distribution	SWG	352+00 to 353+30		CUT (= 1'), ACCESS ROAD
4" AA/PE Dist.	SWG		434+00 to 442+00	CUT (= 1')
4" AA Dist.	SWG		395+00 to 397+50 399+00 to 399+50	CUT (= 1')
4" PE Distribution	SWG	285+00 to 287+00 359+00 to 362+50 369+50 to 372+50 377+50 to 378+00 383+00 to 384+00 386+50 to 389+50	359+00 to 362+50 369+50 to 372+50 377+50 to 378+00 383+00 to 384+00 386+50 to 389+50	CUT (= 1')
6" Steel Dist. Feeder,	SWG	359+00 to 362+50	359+00 to 362+50	CUT (= 1')
8" Steel Dist. Feeder	SWG	359+00 to 362+50 369+50 to 372+50 377+50 to 378+00 383+00 to 384+00 386+50 to 389+50	359+00 to 362+50 369+50 to 372+50 377+50 to 378+00 383+00 to 384+00 386+50 to 389+50 395+00 to 397+50 399+00 to 399+50 434+00 to 442+00	CUT (= 1')
4" AA Dist. 8" Steel Dist. Feeder	SWG	405+00 to 410+50	405+00 to 410+50	CUT (1' +)
4" AA Dist. 8" Steel Dist. Feeder	SWG		415+00 to 420+00	CUT (1'-5'+)
2" PE Distribution	SWG	410+11		CUT (1' +), OWLS PEAK PL
OHE	TEP	289+30-291+85		ROADWAY/MATTER WELL SERVICE
OHE	TEP	290+85-294+00, 299+05, 305+90, 308+75, 406+15, 406+30		RETAINING WALL
OHE	TEP	297+25, 304+00, 312+80, 333+00, 369+10, 375+85, 408+30	379+10, 412+10	DRAINAGE PIPE & BOX CULVERT

FACILITY TYPE & SIZE	FACILITY OWNER	STATION LT.	STATION RT.	CONFLICT
UGE	TEP	312+80-414+00 (10 various locations)		DRAINAGE PIPE
UGE/OHE	TEP	312+50-437+35	360+00-360+15, 385+51, 392+55, 407+60	ROADWAY FILL & PAVEMENT SECTION
UGE	TEP	349+45, 349+65, 351+85	328+00	CUT SLOPE
OHE	TEP	358+85, 358+90, 358+95, 359+70, 367+05, 437+85		CURB, MEDIAN, SIDEWALK

The potential utility conflicts identified between Lambert Lane and Tangerine Road have been summarized in the following table:

FACILITY TYPE & SIZE	FACILITY OWNER	STATION LT.	STATION RT.	CONFLICT
UG & OHCTV	COMCAST	490+60-529+15 (12 conflict locations)		ROADWAY, PAVEMENT SECTION
OHCTV	COMCAST		517+05, 517+25	SIDEWALK
6", 8", 12" PVC LATERALS	ORO VALLEY WATER	471+50-478+00, 491+80,	453+10, 491+80-502+75	ROADWAY CUT, PAVEMENT SECTION, SIGNALS
12" PVC	ORO VALLEY WATER	472+30	517+30	RETAINING WALL
SS MH	PCWW	501+40	491+35, 495+75, 496+40, 501+10, 504+60, 508+15, 509+90, 511+05	ROADWAY & PAVEMENT SECTION
8" SS	PCWW		503+75, 511+50	DRAINAGE PIPE
SS MH	PCWW		502+40	DRAINAGE
UGT	QWEST	439+25		RETAINING WALL
UGT	QWEST		505+87, 511+50-516+35	EROSION (DRAINAGE)
UGT	QWEST		478+16-479+40	CUT SLOPE
UGT & OT	QWEST	478+72-541+32 (19 conflict locations)	451+97-453+47, 505+00-506+30, 505+50	ROADWAY, PAVEMENT SECTION
OT	QWEST		517+05, 517+25	SIDEWALK
UGT	QWEST	455+00, 460+60, 505+30, 511+13, 534+60	505+65	DRAINAGE PIPE, BOX CULVERTS
4" PE Dist.	SWG	490+00 to 494+00	456+50 to 458+50	CUT (= 1')
8" Steel Dist. Feeder	SWG	475+00 to 482+00 490+00 to 494+00 498+50 to 500+50	456+50 to 458+50	CUT (= 1')
2" Steel Dist. Feeder	SWG		450+00 to 453+00	CUT (1'-2')

FACILITY TYPE & SIZE	FACILITY OWNER	STATION LT.	STATION RT.	CONFLICT
4" PE Dist.	SWG		450+00 to 453+00	CUT (1'-2')
8" Steel Dist. Feeder	SWG	474+00 to 475+00	450+00 to 453+00	CUT (1'-2')
2" & 4" PE Dist. 8" Steel Dist. Feeder	SWG	469+52		CUT (> 5'), CROSS ROAD
4" PE Dist.	SWG		453+30	1-24" RCP
8" Steel Dist. Feeder	SWG	518+42	453+30	1-24" RCP
4" PE Dist	SWG		455+24	1-36" RCP
8" Steel Dist. Feeder	SWG	503+55 511+18	455+24	1-36" RCP
8" Steel Dist. Feeder	SWG	524+82		3-36" RCP
8" Steel Dist. Feeder	SWG	485+34		2-42" RCP
8" Steel Dist. Feeder	SWG	534+72		4-42" RCP
4" PE Dist. 8" Steel Dist. Feeder	SWG		460+99	2-10'x5' RCBC
8" Steel Dist. Feeder	SWG	505+45		2-6'x5' RCBC
OHE/POLE	TEP	460+65		DRAINAGE PIPE, BOX CULVERT
UGE	TEP		502+85	DRAINAGE PIPE
UGE/OHE	TEP	440+85-538+75 (32 conflict locations)	541+71	ROADWAY, PAVEMENT SECTION
UGE	TEP	538+75-541+70		CUT SLOPE
OHE	TEP		492+75, 517+05, 517+25	CURB, MED, SIDEWALK

The project team, including the utility companies, will identify the need for utility potholing to confirm horizontal line location and verify vertical depth of facilities for assessment of conflicts and design mitigation solutions. All available and appropriate design options will be used to mitigate conflicts and relocation work to the extent possible. It is anticipated that extensive relocation of underground and overhead utilities will be required for most companies. Pothole work may be provided by the utility or the design consultant. Survey of pothole elevations will be provided by the design consultant. Costs for utility pothole work, not performed by the utility, will be the responsibility of the utility unless prior rights have been established.

There are planned utility system upgrades which will be coordinated with the project team and other utility companies to eliminate design and construction conflicts and maximize the use of limited right-of-way.

System upgrades identified to date between Magee Road and Lambert Lane has been summarized in the following table:

FACILITY TYPE & SIZE	FACILITY OWNER	STATION LT.	STATION RT.	CONFLICT
4" PE Distribution	SWG	295+76 to 320+94		BEGIN NEW SWG FACILITIES
4" PE Distribution	SWG		327+70 to 349+09	NEW SWG FACILITIES, INCLUDING NEW 4" STEEL ACROSS CDO BRIDGE

Utility companies are responsible for submission of prior right documentation for County verification to support any claim of prior rights. The utility companies have provided utility easement and prior rights documentation, which is currently being evaluated and plotted by the design team. Final determination of prior rights will conclude during final design. Prior rights are indicated for Metropolitan Water District, Qwest, TEP, and SWG.

The need for acquisition of right-of-way for utility relocation is anticipated for relocation of the Metropolitan Water District, Matter Well site. No other right-of-way needs for utility relocation have been indicated.

SWG distribution feeder lines have a seasonal work restriction window of September to April. Relocation or installation and tie-in of new facilities may only occur from April to September. This restriction will require coordination with design schedule and construction phasing for work anticipated during construction. Lead time for steel pipe and fittings for relocation of SWG facilities will require two to four months.

TEP facilities will be affected by the following seasonal requirements. The relocation of TEP facilities such as feeder, sub-transmission, and transmission lines is limited to TEP's off-peak season, October through April. Relocation or installation and tie-in of new facilities may only occur from April to October. TEP poles will remain in place until all other joint-use participants have transferred facilities from TEP poles. These restrictions will also require coordination with the design schedule and construction phasing.

6.8 Structures

Bridge Structure

General. A Bridge Structure Selection Report was prepared for the La Cholla Boulevard Bridge over the CDO Wash. The existing La Cholla Boulevard roadway crossing is an at-grade two-lane dipped roadway section. The roadway is on a tangent alignment with an edge-of-pavement width of approximately 35 feet. The north side of the channel downstream of La Cholla Boulevard is lined with soil cement bank protection associated with The Bluffs subdivision constructed in 1998-1999.

The new bridge crossing will utilize dual northbound and southbound structures that are 600 feet long. Each bridge will be a six-span continuous AASHTO Type IV girder superstructure with concrete piers and abutments supported by drilled shaft foundations. A plan and elevation and typical section showing the new bridge crossing are shown in Figures 8 and 9, respectively.

Bridge Geometrics. Each structure will provide for an 11'-0" traffic lane, a 13'-0" traffic lane with a 2'-0" striped shoulder, a 6'-0" outside shoulder, and a sidewalk area separated from traffic by a 32-inch Type 'F' bridge barrier. The northbound bridge will have a 5'-0" sidewalk area, and the southbound bridge will have an 8'-0" sidewalk area to accommodate a multi-use pathway. Combination pedestrian-traffic bridge railing will be located at the outside edge of each deck, and 42-inch Type 'F' bridge barrier will be located at the inside edge of each deck. Each bridge will have a 2% cross-slope starting from the inside edge of deck sloping down to the outside edge of the deck. The freeboard requirement limits the maximum superstructure depth to 5'-8" (see Section 5.6). The driving surface will consist of Portland cement concrete, and rubberized asphaltic concrete will not be placed on the deck.

The new northbound and southbound bridges will be located on a horizontal tangent with a bearing of N0°36'15"W. The centerline of construction is offset to the east of the centerline of the right-of-way to provide phased bridge construction of the northbound bridge while the existing roadway remains open to traffic. All of the bridge bents with bearings of N38°23'45"E, will be parallel to the channel of the CDO Wash, and all substructure skews will be 51°00'00". The proposed La Cholla Boulevard profile grade line is partially on a 700-foot vertical curve. The vertical curve starts at Station 338+50 and has a positive grade of 3.64% from south to north. The vertical curve ends at Station 345+50 and has a negative grade of 2.34% from south to north.

Bridge Hydraulics. The bridge hydraulic analysis was performed by J.E. Fuller Hydrology & Geomorphology, Inc. The 100-year and 500-year peak discharge at the proposed La Cholla Boulevard crossing is 22,400 cfs and 37,200 cfs, respectively. The CDO Wash transitions from a braided channel system approximately 500 feet wide upstream of La Cholla Boulevard to a single 100-foot wide sand bed channel downstream of La Cholla Boulevard. At the proposed bridge crossing, the main channel width is approximately 200 feet wide, and the full channel width is 300 to 350 feet.

A scour analysis of the proposed bridge (six 100-foot spans) was performed using the Federal Highway Administration HEC-18 model. Results of the 500-year scour analysis are as follows:

- Pier Scour = 30.3 feet (measured from lowest downstream thalweg)
- North Abutment Scour = 23.0 feet (measured from top of bank)
- South Abutment Scour = 30.7 feet (measured from top of bank)

The 100-year and 500-year Water Surface Elevations (WSEL) are 2368.09 and 2371.53 feet, respectively. The proposed bridge results in a 1.9-foot increase in the 100-year WSEL at the upstream side of the bridge. No other changes in WSEL occur during the 100-year event.

Bridge Utilities. SWG and Qwest both have facilities that cross under the existing CDO Wash roadway crossing. Both utilities provided Blue Stake markings of these facilities for survey mapping of their locations. The pier columns for the new bridge over the CDO will impact the SWG distribution line and Qwest underground communication fiber optic ducts. Both utilities will require relocation and have requested accommodation across the CDO on the new bridge

structure. SWG has asked to be located on the west side of the new southbound bridge. Qwest will coordinate with the design team to determine a relocation alignment and most suitable accommodation on the structure. Costs associated with utility accommodation on the bridge structure will be the responsibility of the utility, unless prior rights have been established.

TEP power lines cross the CDO Wash outside the footprint of the bridge structure and will not be directly impacted. However, the overhead power lines include high voltage transmission and distribution lines, therefore specifications will be provided regarding safety requirements for the contractor while working in the vicinity of overhead lines for bridge construction and detours.

Bridge Substructure. Each pier will consist of a rectangular pier cap supported by three formed concrete columns. Each column will be supported by a single drilled shaft foundation. Spill-through abutments, or stub abutments, on drilled shaft foundations will be used at both ends of the bridge. The abutment caps will have an exposed face of approximately 2 feet. From the front face of the abutment walls, soil cement slope protection will provide a minimum 8-foot level area before sloping down at 1:1 H: V toward the existing channel grade. The slope protection will extend below the channel grade to the 100-year flow scour elevation.

Figure 8. Bridge Location Plan and Elevation

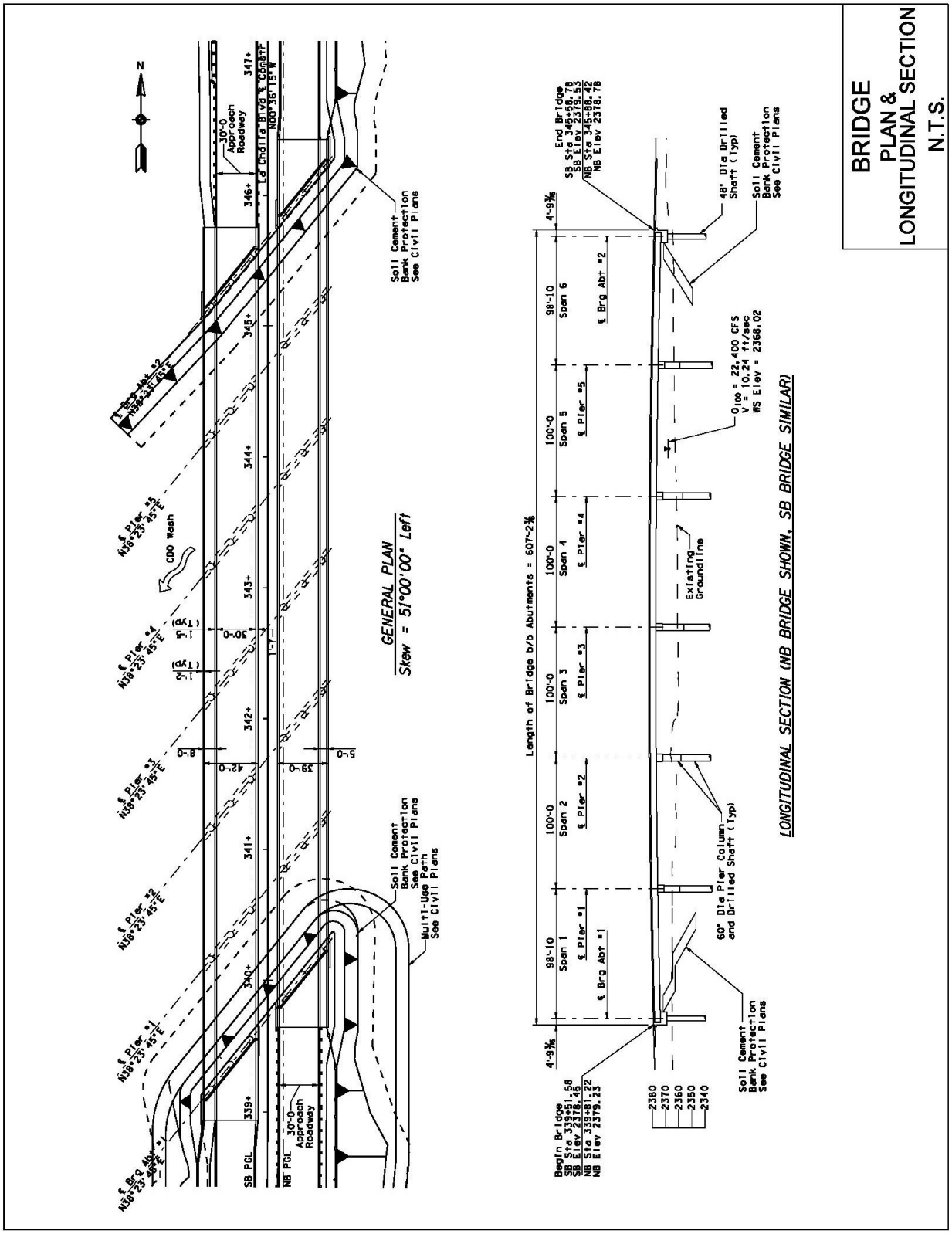
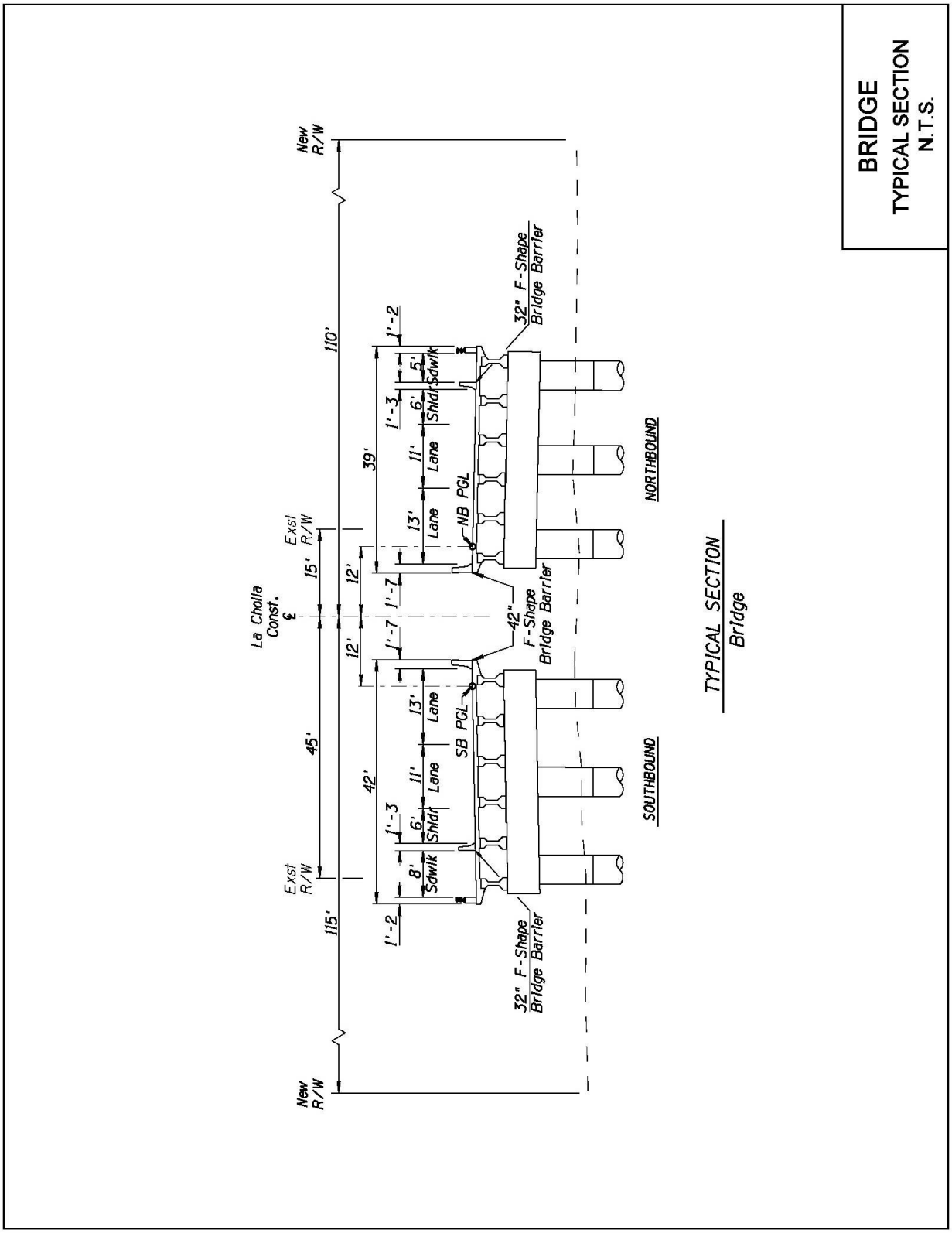


Figure 9. Typical Bridge Section



Bridge Superstructure. Four different superstructure alternatives and two span configurations were considered for the new bridge, including precast prestressed concrete AASHTO I-Girders and box girders with a composite deck, steel plate girders with a composite deck, and a prefabricated steel truss. Based mainly on geometric and hydraulic requirements, ease of construction within the channel, and cost, a six-span bridge with AASHTO Type IV Girders was recommended. The estimated cost for the new dual structures is $5.33 million, not including contingencies.

Retaining Wall Structures

General. A Wall Selection Report was summarized within the DCR Level Geotechnical Report (Reference 12) prepared for the La Cholla Boulevard corridor by NCS Consultants, LLC. Currently there are narrow unpaved shoulders through most of the corridor, but the proposed roadway section will be much wider than the existing section. Consequently, cuts, fills, and retaining walls will be needed for the proposed roadway width and changes to the vertical profile. There are 26 significant fill areas and 10 significant cut locations identified along the project corridor. Existing slopes fills are from 12 feet to 24 feet high with slope angles ranging from 3H:1V to 4H:1V. Existing cuts are from 6 feet to 21 feet high with slope grades between 2H:1V and near vertical in some locations. Anticipated wall locations are shown in the plans included within Appendix C.

The identification of slope and retaining wall options for this project was based on the following factors derived from the Earth Retaining Structures Reference Manual (Reference 24):

- Ground and Groundwater
- Construction Considerations
- Right-of-Way and Utility Considerations
- Aesthetics
- Environmental and Noise Concerns
- Durability and Maintenance
- Cost
- Tradition of Walls in Pima County

The main requirements on this project are similar to those for most projects of this nature, i.e., to provide safe, aesthetically pleasing slopes and walls while minimizing the project cost. Constraints include the presence of numerous existing utilities, the cost of new right-of-way acquisition, and the need to maintain two-way traffic during construction. The final wall selection process will occur during the final design phase through consultation with the project team, Pima County, and others. At that time, a detailed geotechnical analysis will need to be performed for each significant cut or fill wall and slope. From the project geotechnical report wall types being considered are: Cast-in-place concrete gravity walls, MSE walls, soil nail walls, and reinforced soil slope walls.

6.9 Pavement Design

Based on Section 3.13 of the PCDOT RDM (Reference 3), the DCR Level Geotechnical Report (Reference 12) and Draft Initial Traffic Engineering Study (Reference 1) were prepared. The pavement structural section recommended for La Cholla Boulevard consists of 2 inches of asphalt-rubber asphaltic concrete over 3 inches of asphaltic concrete over 6 inches of aggregate base. Minor improvements to the existing intersections will be paved with the same structural section as La Cholla Boulevard. The two proposed frontage roads will be paved with 2.5 inches of asphaltic concrete over 4 inches of aggregate base and will not include rubberized asphalt. The multi-use pathway and driveways will be paved with 2 inches of asphaltic concrete over 4 inches of aggregate base.

6.10 Signalization and Lighting

All existing signalized intersections will be modified with the La Cholla Boulevard proposed widening. The signal modifications will occur at Magee Road (with another Pima County project), Overton Road, Lambert Lane, Naranja Drive, Glover Road, and Tangerine Road (with another RTA project). There is no additional signalization warranted for this project.

All signalized intersections will have lighting as it exists currently.

Per Pima County policy and the direction of Oro Valley, ITS conduit with inner ducts will be included along one side of La Cholla Boulevard for future use by the Pima County traffic division.

6.11 Construction Issues

The construction phasing scheme will be driven by the need to adequately maintain two lanes of traffic while still maintaining access to the residents and cross roads. It is assumed that a minimum of two 11-foot traffic lanes with 2-foot shoulders will be required for maintaining two lanes of traffic. It is anticipated that some of the utility relocations will occur during the roadway construction phasing due to the large grading required for the project. It is anticipated that the Magee Road Intersection project will be complete prior to the completion of La Cholla Boulevard improvements.

One proposed construction sequencing approach would be as follows:

Pre-Construction Utility Relocations

Based on the anticipated relocations required for the project, the following utility relocations would occur prior to the contractor commencing roadway construction:

- TEP would relocate their existing overhead facilities (Qwest and Comcast would also participate) near the western portion of the proposed La Cholla right-of-way. The majority of the overhead relocation will occur north of Overton Road. Some undergrounding of the overhead facilities, other than transmission, may be required

between La Cholla Boulevard Stations 400+00 to 415+00, where the roadway widening will require large cut walls.

- Metro Water District will be required to relocate their existing Matter Well site, located at approximate Station 289+00. This well is currently planned for relocation and will move to outside the east right-of-way adjacent to its current La Cholla location which is west of the roadway and within existing right-of-way.
- Qwest would relocate or adjust underground copper and fiber optic lines from Magee to Hardy.

Phase 1 of Construction

Traffic Patterns:

- From La Cholla Boulevard Station 282+00 to 326+00, traffic would remain on the existing traffic lanes.
- From Station 326+00 to 329+00, traffic would switch to temporary pavement along the west side of existing southbound La Cholla.
- From Station 329+00 to 463+00, traffic would remain along the southbound portion of existing La Cholla with temporary pavement where necessary.
- From Station 463+00 to 477+00, traffic would remain entirely on existing La Cholla near the Casas Baptist Church.
- From Station 477+00 to Tangerine Road, traffic would move to the southbound portion of existing La Cholla with temporary pavement on the west side where necessary.
- Maintain access to residents at all times.

Construction:

- From La Cholla Boulevard Station 282+00 to 326+00, construct the full southbound width, retaining walls, and pedestrian path. Utility relocation and adjustments will be required in this stretch due to the excavations, embankment, and retaining walls.
- From Station 328+00 to 339+50, construct the eastern 25 feet of northbound La Cholla.
- Construct the northbound CDO Wash bridge and soil cement. Relocation of utilities on the new bridge structure will be performed in conjunction with bridge construction.
- From Station 346+00 to Tangerine Road, construct the eastern 25 feet of northbound La Cholla including retaining walls where required.
- Construct the one-way frontage road across from Owls Peak Place.

Phase 2 of Construction

Traffic Patterns:

- From La Cholla Boulevard Station 282+00 to 326+00, traffic is switched to the western portion of the newly constructed southbound La Cholla.
- From Station 326+00 to 328+00, traffic moves from constructed southbound to the 25-foot eastern portion of the new northbound with a temporary detour.
- From Station 328+00 to Tangerine Road, traffic remains on the 25-foot constructed portion of northbound La Cholla and the constructed northbound bridge.
- Maintain access to residents at all times.

Construction:

- La Cholla Station 282+00 to 326+00, construct the full width of northbound La Cholla, including the median.
- From Station 328+00 to 339+00, construct the 25-foot west portion of southbound and the pedestrian path.
- Construct the southbound bridge. Relocation of utilities on the new bridge structure will be performed in conjunction with bridge construction.
- From Station 346+00 to Tangerine Road, construct the 25-foot west portion of southbound La Cholla including retaining walls where required.

Phase 3 of Construction

Traffic Patterns:

- From Station 282+00 to Tangerine Road, traffic is switched to the outside of the newly constructed southbound and northbound lanes.

Construction:

- From La Cholla Station 326+00 to Tangerine Road, construct the median and remaining pavement where detours and access restricted construction within previous phases.

Alternative Bridge Construction Phasing

An alternative construction sequencing approach for the bridge would be as follows:

Phase 1 of Bridge Construction

Traffic Patterns:

- Traffic would be placed on a newly constructed paved detour located along the eastern most proposed right-of-way. This detour would connect to the existing La Cholla roadway well north and south of the proposed bridge.

Construction:

- Construct both northbound and southbound CDO Wash bridge structures and a portion of the new soil cement. A portion of the soil cement, along the east embankment of northbound La Cholla, would not be placed in this phase due to the toe down depth and its conflict with the traffic detour roadway.

Phase 2 of Bridge Construction

Traffic Patterns:

- A temporary tie-in from existing La Cholla roadway to the southbound bridge approaches would be placed.
- Traffic would switch to the temporary approaches and newly constructed southbound bridge.

Construction:

- Construction on the remaining soil cement, along the east embankment of the northbound La Cholla bridge approaches, would be completed.

This alternative to bridge construction will have additional environmental considerations with the paved detour within the CDO Wash and may require additional funding due to the permitting process.

6.12 Design Exceptions

Introduction. The study team compared the geometric design elements of the proposed La Cholla Boulevard improvements and the recommendations contained in AASHTO's *A Policy on Geometric Design of Highways and Streets* (2004), AASHTO's *Roadside Design Guide* (2006), and the RDM. Design exceptions will be discussed in each category. The roadway classification is a principal urban arterial with rolling terrain and is an environmentally sensitive roadway and therefore will utilize portions of the environmentally sensitive roadway guidelines.

Lane, Shoulder, and Median Widths. Because La Cholla will have a generally straight alignment, low truck traffic, generally low accident rate, and is an environmentally sensitive roadway, the proposed travel lane widths are 11 feet. AASHTO recommends 12 feet for a lane width but finds 11 feet acceptable for a reconstructed arterial. The RDM recommends 12 feet in general and accepts 11 feet for environmentally sensitive roadways.

The outside paved shoulder widths are 6 feet. AASHTO recommends 8 feet minimum for an outside shoulder. The RDM recommends 6 feet. The inside striped shoulder width is one foot throughout the project (2 feet on the proposed bridges) per the RDM. AASHTO does not recommend a minimum as long as the median curb is mountable as it is proposed on this project.

A 20-foot median is proposed for this project. The RDM recommends a median width of 24 feet and accepts 20 feet for environmentally sensitive roadways.

Vertical Alignment and SSD. For a 50 mph design speed, AASHTO recommends a minimum SSD of 425 feet. This project is being designed using the Pima County requirement for SSD of no less than 425 feet and greater based on the effective downgrade. All new vertical curves meet these criteria.

Horizontal Alignment and Superelevation. As specified in the RDM, the maximum angle point of 1°08' will be adhered to for horizontal grade breaks in the alignment.

AASHTO recommends the superelevation is not to exceed 12% for a high-speed urban street. Pima County allows a maximum superelevation rate of 4% for urban streets.

Design Speed. For urban arterial roadways, AASHTO recommends a design speed of 40 to 60 mph. Pima County has specified a design speed of 50 mph for this project.

Grades. AASHTO and RDM recommend a maximum grade of 7% in foothill or mountainous areas. The maximum grade proposed for this project is less than 7%. Due to the use of curbs on this project, a minimum grade of 0.5% will be maintained.

Cross Slope. The AASHTO recommended cross slope range for travel lanes is 1.5% to 2.0%. The travel lanes on this project will have a cross slope of 2.0%.

Bridge Width. AASHTO states that the minimum clear width for new bridges on arterial streets should be the same as the curb-to-curb width of the street. That criterion is met on this project. On the bridge, an additional one foot will be provided on the inside shoulders next to median barrier.

Design Exceptions. The Pima County design standards that will require an exception are for lane and median widths. Pima County and Town of Oro Valley granted these exceptions to help minimize the right-of-way impacts to adjacent properties as well as the roadway classification of environmentally sensitive. No other design exceptions will be required for this project.

7.0 Social, Economic, and Environmental Considerations

This section discusses social, economic, and environmental considerations related to construction of the proposed improvements to La Cholla Boulevard. PCDOT has prepared an Environmental Assessment and Mitigation Report (EAMR) which address social, economic and environmental impacts and mitigation.

7.1 Biological Resources

The project area is moderately to densely vegetated, primarily with native plants. PCDOT will follow the RDM Environmentally Sensitive Roadway Design Guidelines vegetation requirements and PCRFCD requirements for impacts to riparian areas. Plants will be preserved in place, salvaged and relocated, or replaced to match existing vegetation densities of the adjacent undisturbed areas. Project landscape plans will be developed to reflect these criteria. The Arizona Department of Agriculture will be notified regarding native plant removal.

The federally listed endangered lesser long-nosed bat has the potential to use the project area for forage. A federally recognized species of concern—the cactus ferruginous pygmy-owl—has the potential to occur within the project area. Surveys for cactus ferruginous pygmy-owl have been conducted since 2009 and will continue until construct begins. A biological evaluation for Phase 1 of the project was conducted to determine the potential effect on these species. The results stated that the project will not adversely affect either species or their habitats. During Phase 2, biological resources will be addressed in a separate study.

7.2 Water Quality and Clean Water Act

A preliminary jurisdictional delineation has been submitted to the Corps. A Clean Water Act (CWA) Section 404 permit will be required for work within these washes; however, it has not been determine whether the project would require a Section 404 Individual Permit or Section 404 Nationwide Permit. In addition, a CWA Section 401 water quality permit will be required from the Arizona Department of Environmental Quality. It has not been determined whether the project will require a Section 401 general certification or if a Section 401 individual certification permit is required. Jurisdictional delineation and Section 404 permitting was evaluated for Phase 1. During Phase 2, a jurisdictional delineation and Section 404 permitting will be addressed in a separate study. Because the project will disturb more than 1 acre of land, the project will require a CWA Section 402 permit for compliance with the Arizona Pollutant Discharge Elimination System program. Section 402 compliance can be obtained by filing a Notice of Intent to use the statewide Construction General Permit with the Arizona Department of Environmental Quality, along with the preparation and implementation of a Stormwater Pollution Prevention Plan. The project will affect designated washes (regulated riparian habitat) under the Pima County Riparian Ordinance. Impacts to regulated riparian habitat will be assessed in coordination with PCRFCD.

7.3 Air Quality

The proposed project is located within an area that is in attainment for all criteria pollutants. The La Cholla Boulevard widening from Magee Road to Tangerine Road is in conformity and was

analyzed for air quality impacts as part of the 2008-2012 Transportation Improvement Plan for Pima County.

The project will produce a temporary increase in particulate matter (i.e., dust) during construction. This impact will be short term in nature, and measures will be implemented to minimize this impact during construction. Prior to initiating any construction activities such as earthmoving, trenching, or road construction, the contractor will obtain an activity permit from the Pima County Department of Environmental Quality.

The overall impacts of the project on air quality will be positive for the following reasons: (1) the project will decrease traffic congestion, thereby reducing emissions associated with idling vehicles, and (2) the project will provide curb, thereby reducing the amount of particulate matter that is tracked onto the roadway from the currently unpaved right-of-way and released into the air.

7.4 Noise

The project will result in temporary noise impacts during project construction associated with the operation of heavy equipment. Mitigation measures are proposed to minimize short-term construction noise to the extent practicable; however, construction noise impacts will occur. Mitigation measures will be included that address construction impacts.

Regional growth and the increased traffic capacity from the project will result in increased traffic volumes along the roadway corridor. The resulting traffic noise levels may exceed acceptable noise levels, based on the Pima County Noise and Town of Oro Valley Abatement Procedure criteria. Rubberized asphalt will be used in roadway construction and will result in a noise reduction.

A noise analysis was conducted for Phase 1 of the project. Two churches and all residential locations adjacent to the roadway were considered for noise mitigation. Noise barriers were deemed reasonable and feasible at 2 residential properties. Noise barriers are recommended for construction at the following locations:

- La Cholla Hills subdivision south of West Coral Ridge Loop for the residences between La Cholla Boulevard and North Breezewood Place.
- La Cholla Hills subdivision north of West Coral Ridge Loop for the residences between La Cholla Boulevard and in front of the residences west of North Candlewood Loop.

A separate noise analysis would be conducted for Phase 2 of the project.

7.5 Hazardous Materials

A Preliminary Initial Site Assessment for Phase 1 of the project and a hazardous materials records review for Phase 2 of the project were conducted to determine whether any hazardous

materials sites are located within the project area. No hazardous material sites were identified as part of these investigations.

7.6 Historical/Cultural Resources

Because no properties listed in or eligible for the Arizona Register of Historic Places or National Register of Historic Places will be affected, the Pima County Cultural Resources and Historic Preservation Office made a determination of no historic properties affected. The Pima County cultural resources consultation process has been completed and no treatment measures need to be implemented prior to construction of Phase 1.

When the Town of Oro Valley implements Phase 2 of the project more than a decade into the future, the Town should review the results and recommendations of the cultural resource survey conducted for the project to ensure that the survey is adequate and appropriate in consideration of the final design for that segment of the project.

7.7 Visual/Aesthetic Resources

The greatest change in visual character in this project will occur in the foreground and middle ground by converting a two-lane roadway to a four-lane roadway with a multi-use pathway on the western side, un-landscaped areas for equestrians, and recommended noise barriers. Foreground and middle ground views will have a moderate increase in structured hardscape rather than the currently undeveloped right-of-way. The road will be raised at wash crossings, which are now dip crossings. Background views will be affected in the areas where the noise barriers will be constructed. Landscape plantings and artistic elements are recommended to soften the hardscape and improve the aesthetic appeal.

7.8 Neighborhood Impact

The project area predominantly consists of low-density residential, with some moderate- to high-density residential complexes. Other land uses include commercial (Omni Tucson National Resort and Golf Course, El Conquistador County Club, Sunkist Stables), public (Metro Water), churches (Alive Christian Fellowship, Grace Community Church and Casas Baptist Church), vacant land, and flood control/washes.

Project construction will temporarily produce dust, noise, and traffic delays within the project area. Standard measures to control dust and noise will be implemented during construction. Access to residences, schools, and businesses will be maintained during construction, but some traffic delays will be unavoidable.

The project will result in permanent neighborhood impacts as well. The construction of raised medians and turning lanes will improve safety and operations but will also modify current access by controlling turning movements. The project will promote overall connectivity by improving pedestrian facilities, bicycle lanes, and public use trails. The bridge crossing at the CDO Wash will provide all weather crossing and improve connectivity for neighborhoods and for emergency vehicles (policy, fire, and ambulance).

7.9 Community Resource Impact

Project activities will temporarily disrupt current use of the roadway right-of-way and shoulder. Bicyclists, pedestrians, and equestrians will be temporarily rerouted within the right-of-way during construction. However, the project will construct multi-use paths, striped on-street shoulders for bicyclists, access to public use trails, and roadway equestrian crossings that will provide enhanced recreation amenities for the corridor.

8.0 Public Involvement

PCDOT's Community Relations Division is responsible for the public involvement on this project.

8.1 Public Participation Plan

This plan includes public information meetings, selection and development of a Community Advisory Committee (CAC), ongoing contact with affected parties, media relations, development of informational materials, development and implementation of a project website and the maintenance of interdepartmental project file. The goals of the plan are to educate the public about the project's purpose and need, solicit the public's comments on the project, review public comments and adjust the roadway design concept to address the public concerns to the greatest extent possible and within the constraints of the project, including safety and cost.

8.2 Community Advisory Committee

Community Advisory Committee Meetings. CAC meetings were held on June 6, 2009, October 27, 2009, December 8, 2009, February 16, 2010, March 16, 2010, and April 6, 2010. The June 6, 2009, meeting was held to introduce project team members, present a project improvement overview, and review the responsibilities and role of the CAC. The October 27, 2009, meeting was held to discuss the artist selection process, traffic, roadway, bridge, drainage, environmental, project update question/answer session, introduction to the process of noise analysis, selection of CAC chair, and schedule. The December 8, 2009, meeting was held to review the results of the draft noise study report. The February 16, 2010, meeting was held to review the draft DCR roadway design elements and traffic analysis. A meeting was held on March 16, 2010, to review the draft DCR and the Draft EAMR. The April 6, 2010 meeting was held to introduce the project artist and landscape designer to the CAC and to review the draft EAMR letter to the Board of Supervisors. The minutes from these meetings are in Appendix B. Future CAC meetings will be update the members on the design progress and obtain additional input on the art and aesthetics.

Community Advisory Committee Concerns. The CAC has provided positive feedback on widening La Cholla Boulevard to a four-lane divided roadway with a center median, paved shoulders, pedestrian way, landscaped medians and safety features such as improvements in sight distance, drainage, intersection geometry, and pedestrian ways. Early in the project the CAC raised issues such as traffic volumes, access, noise, property values, and environmental concerns. The Stage I Design Concept Plans and this report explain how each of these issues is being addressed in the project. The top priority of the CAC is to see a bridge constructed over the CDO Wash as soon as possible.

8.3 Public Meetings

A public open house was held on December 1, 2009. Approximately 50 people attended this meeting.

The public meetings are publicized through news releases distributed to the appropriate media and through display advertisements placed in the *Daily Territorial* and *Arizona Daily Star* a minimum of 15 days prior to each meeting. Meeting announcements are mailed to the project contact list of approximately 2,300 addresses, which comprise impacted residents, businesses, and interested parties, as well as elected officials. Corresponding information is posted on the project website. Sign-in sheets are provided to record attendance at the meetings, and attendees are asked to submit comments on the forms provided at the meetings. Comments submitted during a two-week period following each meeting are documented and summarized within Appendix B.

A second public open house was held on March 30, 2010 to share the Draft EAMR and project updates with the public. Approximately 90 people attended this meeting. A public hearing of the EAMR is anticipated in June, 2010 along with a meeting of the Pima County Board of Supervisors.

9.0 Agency Coordination

9.1 Environmental Review

Environmental coordination will continue with the following agencies:

Federal Agencies

- U.S. Army Corps of Engineers – compliance with Section 404 of the Clean Water Act
- U.S. Fish and Wildlife Service – Federal threatened and endangered plant and animal species
- Federal Emergency Management Agency – Letter of Map Revision for the CDO Wash

Arizona State Agencies

- Arizona Department of Environmental Quality – compliance with Sections 401 and 402 of the Clean Water Act
- Arizona Department of Agriculture – native plant requirements
- Arizona Game and Fish Department – sensitive plant and animal species
- State Historic Preservation Office and interested tribes – impacts to cultural resources

Local Government Agencies

- Pima County Cultural Resources and Historic Preservation; Environmental Quality; Natural Resources, Parks, and Recreation; Regional Flood Control District – project coordination
- Town of Oro Valley – project coordination

9.2 Intergovernmental Agreements

The RTA has identified this corridor as RTA Project #4. Pima County, Town of Oro Valley, and the RTA have an agreement in place that accelerated the design for this project from Period 2 to Period 1 of the overall RTA scheduling of project improvements. The Town of Oro Valley also agreed that Pima County would lead the design concept stage of the entire corridor. Pima County and the RTA have an existing Intergovernmental Agreement (IGA) that currently covers these preliminary design activities for the entire corridor. Once the design concept activities are completed for this project, Pima County, Town of Oro Valley, and the RTA will determine the Pima County construction limits as well as the appropriate funding. The existing IGA will then be amended to cover the final design, rights-of-way, and construction activities for the Pima County portion agreed to. The Town of Oro Valley does not plan to advance the remaining segment of La Cholla Boulevard to final design and construction activities until Period 4 of the overall RTA scheduling of project improvements.

10.0 Alternatives

10.1 Location

There are four areas where alignment alternatives were considered, including:

- Access for the four parcels on the east side of La Cholla Boulevard, north of Lucero, and across from Owls Peak Place
- The Cross Road and La Cholla Boulevard intersection at Casas Baptist Church
- The new bridge at the CDO Wash
- Access for Tortolita Bluffs Drive and Morning Jewel Place at The Bluffs subdivision

An area north of Lucero Road in Oro Valley and east of Owls Peak Place has four parcels that are located significantly lower than the roadway. To provide safe ingress and egress to these properties a one-way frontage road has been proposed. The alternative would be to have individual driveways; however, these driveways would be steep and have poor sight distance to La Cholla Boulevard.

At Cross Road, there is currently a large curve in La Cholla Boulevard to avoid a wash on the east side of the road. To enhance safety, this curve should be eliminated and the proposed alignment straightened to match the center of the right-of-way. The alternative would be to leave the curve in the road and reduce the speed limit in this area.

At the new bridge crossing the CDO Wash, it is desirable to keep the existing road open while the first half of the bridge construction occurs. To accomplish this, the proposed alignment is shifted to the east. The alternative to this would be to close La Cholla Boulevard during construction, which would disrupt a significant number of travelers. Another alternative is to provide a wide detour around the bridge but adjacent to the right-of-way; however, this would slow vehicles significantly and may result in additional environmental impacts to the wash.

The alternatives for The Bluffs subdivision are described in detail below.

Alternatives Description for Access to The Bluffs Subdivision

Alignment alternatives for La Cholla Boulevard were studied near The Bluffs subdivision due to sight distance issues in relation to the proposed bridge structure over the CDO Wash. Each of the following alternatives was developed following the establishment of the required bridge parameters due to bridge hydraulics. The bridge hydraulics dictates that a 600-foot long bridge with six spans will be required. The beginning of the bridge (north abutment) was located approximately 260 feet south of the existing Tortolita Bluffs Drive entrance. Each of the alternatives that will be discussed includes a 15-foot easterly shift of the La Cholla horizontal alignment, measured from the existing section line. This shift is common for each of the alternatives and was necessary to assist the construction sequencing of the bridge; i.e., maintaining traffic and possible avoidance of detour construction in the CDO Wash. The resulting alternatives investigated under this study include the following:

Alternative A: Median Opening at Tortolita Bluffs

This alternative would maintain the existing access movements for Tortolita Bluffs Drive by providing a median opening at Tortolita Bluffs. Morning Jewel Place traffic would also use this median opening to make the northbound movement because the median opening spacing requirements will restrict a separate opening at Morning Jewel. AASHTO dictates that an Intersection Sight Distance (ISD) of 662 feet is required to safely make the left-turn movement out of Tortolita Bluffs onto La Cholla. This alternative would result in a sight line projected to the south that crosses the median area on the proposed bridge. In order to achieve the projection of a 3.5-foot object at the end of the sight line leg, the median of the bridge would be required to be curbed (closed) because the sight line would be blocked by inside bridge barriers required with independent bridge structures. The layout for this alternative is shown in Figure 10 with the typical roadway and bridge section shown in Figure 11.

Alternative B: Median Opening at Tortolita Bluffs with Refuge Area

This alternative would also maintain the existing access movements for Tortolita Bluffs Drive by providing a median opening at Tortolita Bluffs. Morning Jewel Place traffic will also use this median opening to make the northbound movement. This alternative would provide a median refuge area, for traffic making the left-turn movement out of Tortolita Bluffs onto La Cholla, by widening the median area from 20 feet to 26 feet. Per AASHTO, this would allow a place for passenger vehicles to cross the southbound La Cholla traffic lanes and legally stop in the median prior to making the left-turn movement onto northbound La Cholla. Per AASHTO, the resulting ISD required would be reduced to 551 feet. The sight line would still require the northernmost bridge span to be curbed (closed) in the median because the sight line would be blocked by the inside barrier of the northbound bridge, but the southernmost five spans could utilize independent structures for northbound and southbound La Cholla. A full width span would also be required to allow the formation of the northbound left-turn bay as La Cholla approaches the Tortolita Bluffs intersection. The vehicles, located within this left-turn storage area, will conflict with the sight line projected from the vehicles within the refuge area preparing to make the left turn onto northbound La Cholla. The layout for this alternative is shown in Figure 12 with the typical roadway and bridge section shown in Figure 13.

Alternative C: Median Opening at Tortolita Bluffs for Westbound Turns Only

This alternative would restrict left-turn movements out of both Tortolita Bluffs Drive and Morning Jewel Place and would only allow left-turn access from La Cholla to both roadways. Morning Jewel traffic heading northbound would be required to turn right onto La Cholla and make a U-turn at the Hardy Road median opening. Northbound Tortolita Bluffs traffic would make a similar movement or travel through the subdivision to Overton Road and the La Cholla/ Overton signalized intersection. This alternative would also require that the northernmost bridge span be curbed (closed) in the median to adequately form the northbound left-turn bay as La Cholla approaches the Tortolita Bluffs intersection. The layout for this alternative is shown in Figure 14 with the typical roadway and bridge section shown in Figure 15.

Alternative D: Median Opening for Two-way Access Road

This alternative was created to allow Tortolita Bluffs Drive and Morning Jewel Place a safe access location that would provide full intersection movements. It includes a two-way access road that both roadways would share. The single access location would provide the AASHTO required 662-foot ISD for traffic turning left onto northbound La Cholla. The right-turn movement directly from Tortolita Bluffs onto southbound La Cholla would also be provided. The resulting intersection location would not only achieve the appropriate sight distance but would also maintain independent structures for both the northbound and southbound bridges. It would require slightly more right-of-way along the east side of La Cholla to allow the appropriate separation between the La Cholla roadway and frontage road. The layout for this alternative is shown in Figure 16 with the typical roadway and bridge section shown in Figure 17.

Figure 10. Alternative A Plan View

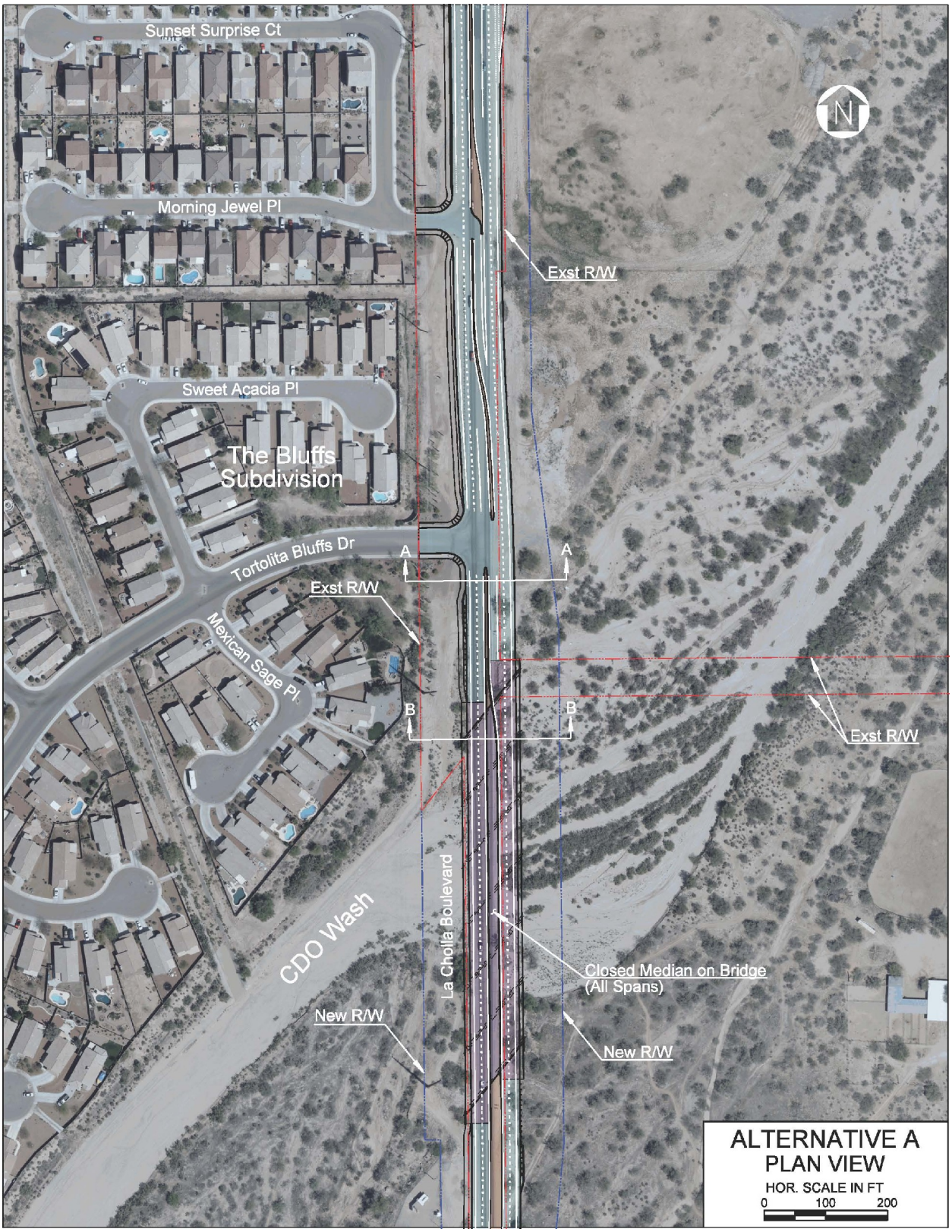
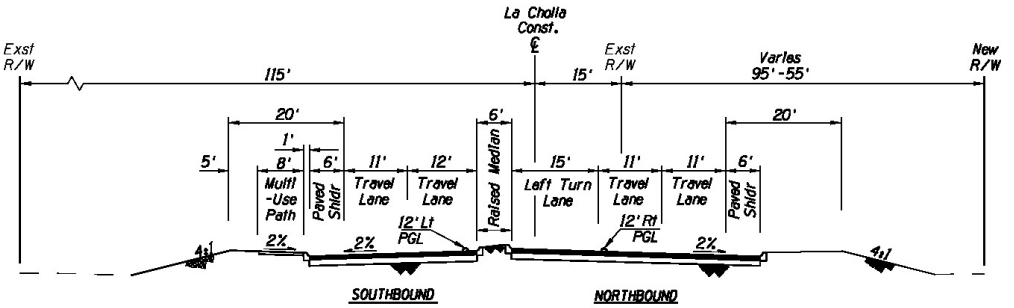
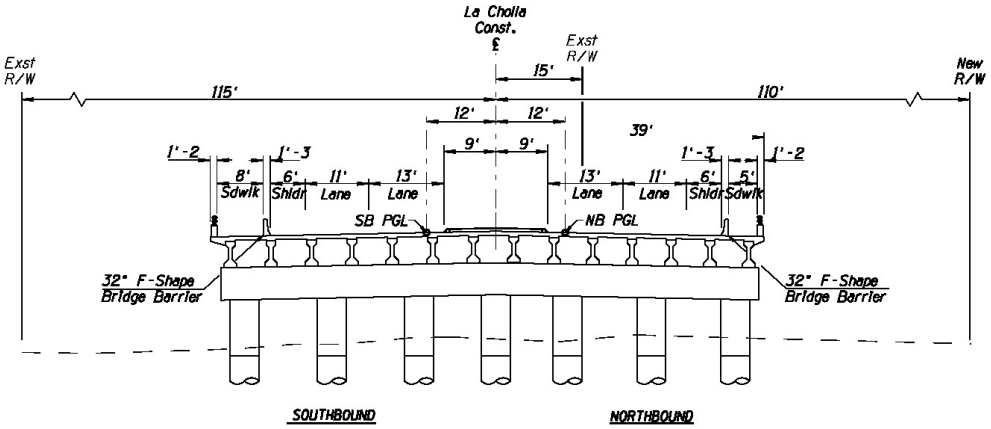


Figure 11. Alternative A Typical Sections



(A) TYPICAL SECTION
La Cholla Boulevard



(B) TYPICAL SECTION
Bridge

ALTERNATIVE A
TYPICAL SECTIONS
N.T.S.

Figure 12. Alternative B Plan View

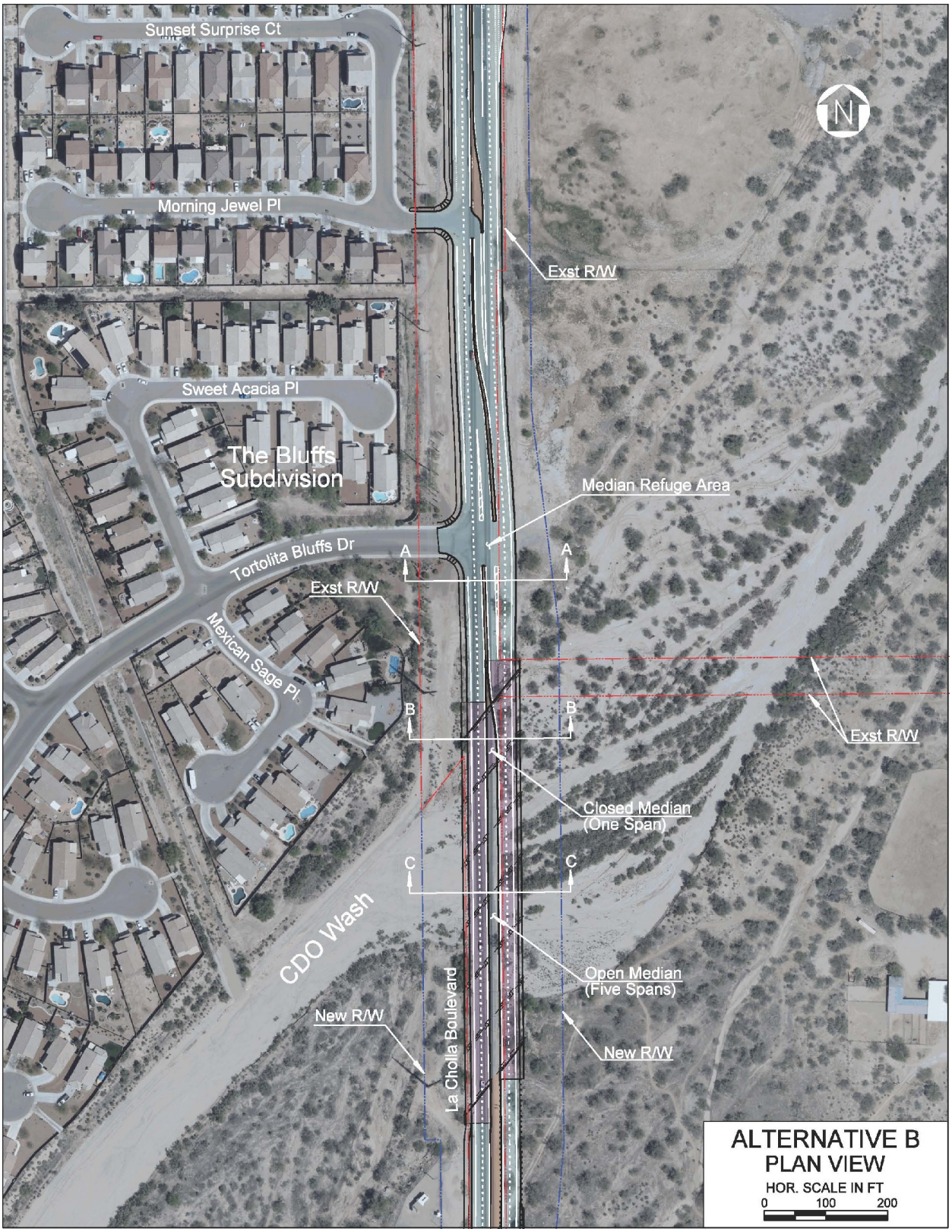


Figure 13. Alternative B Typical Sections

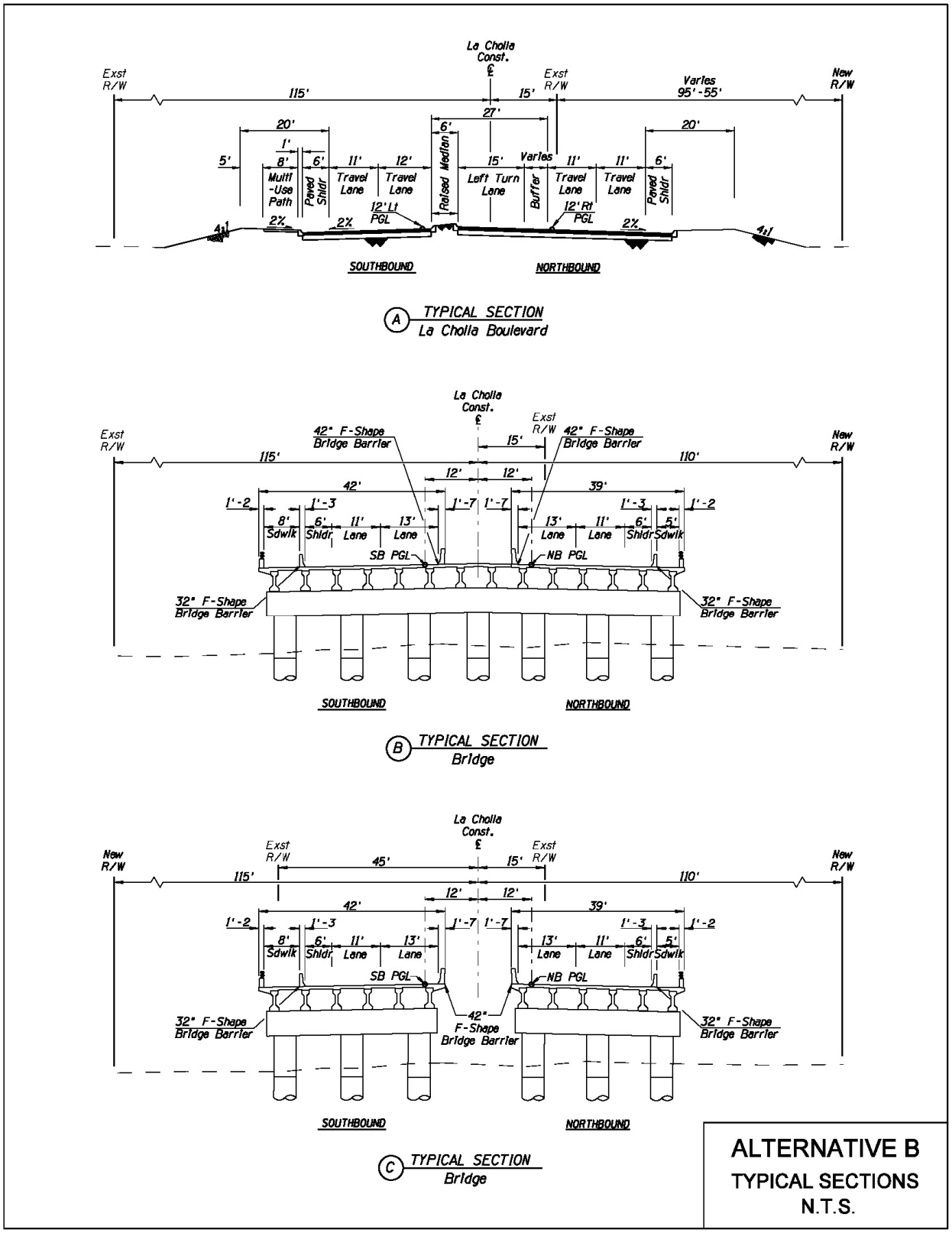


Figure 14. Alternative C Plan View

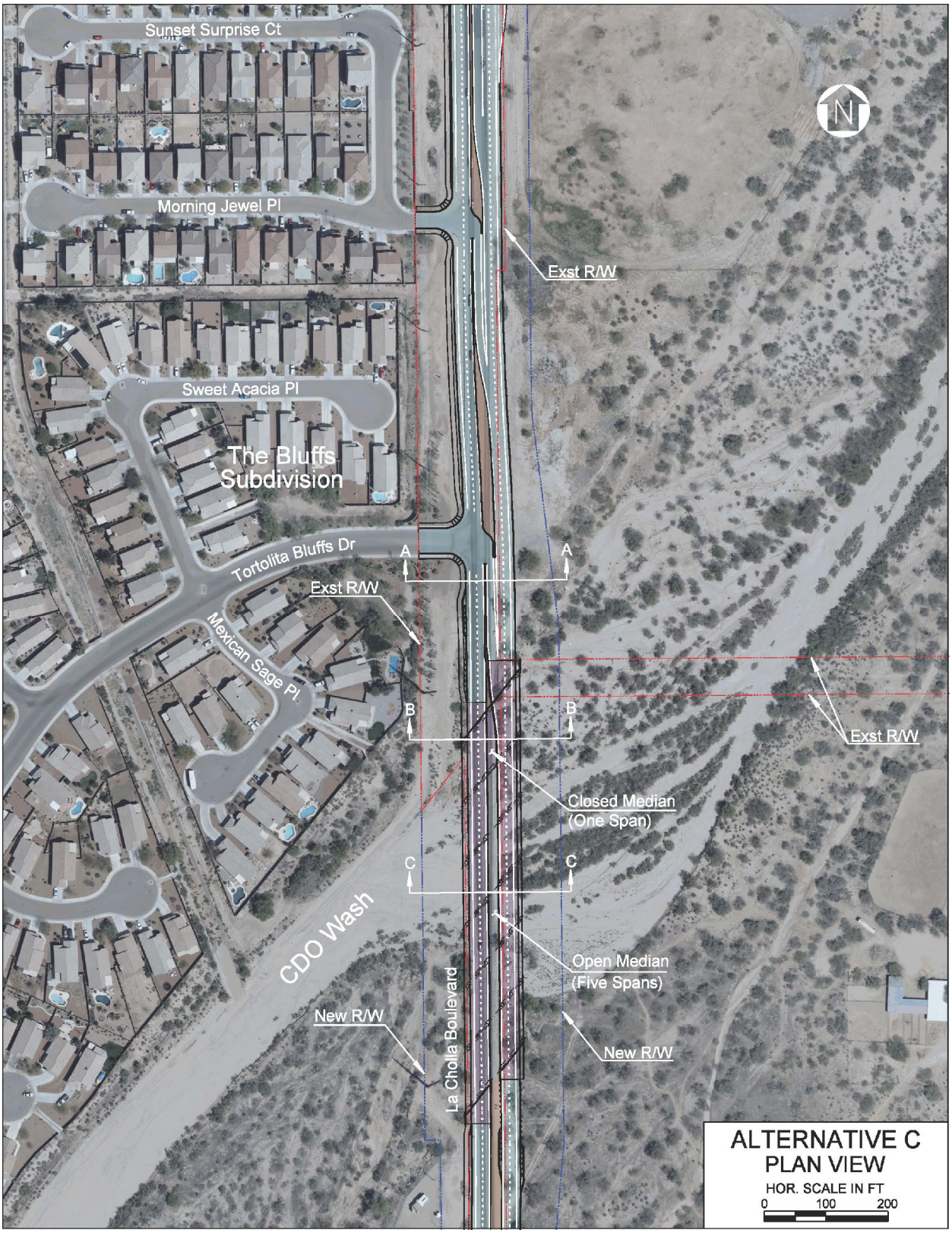


Figure 15. Alternative C Typical Sections

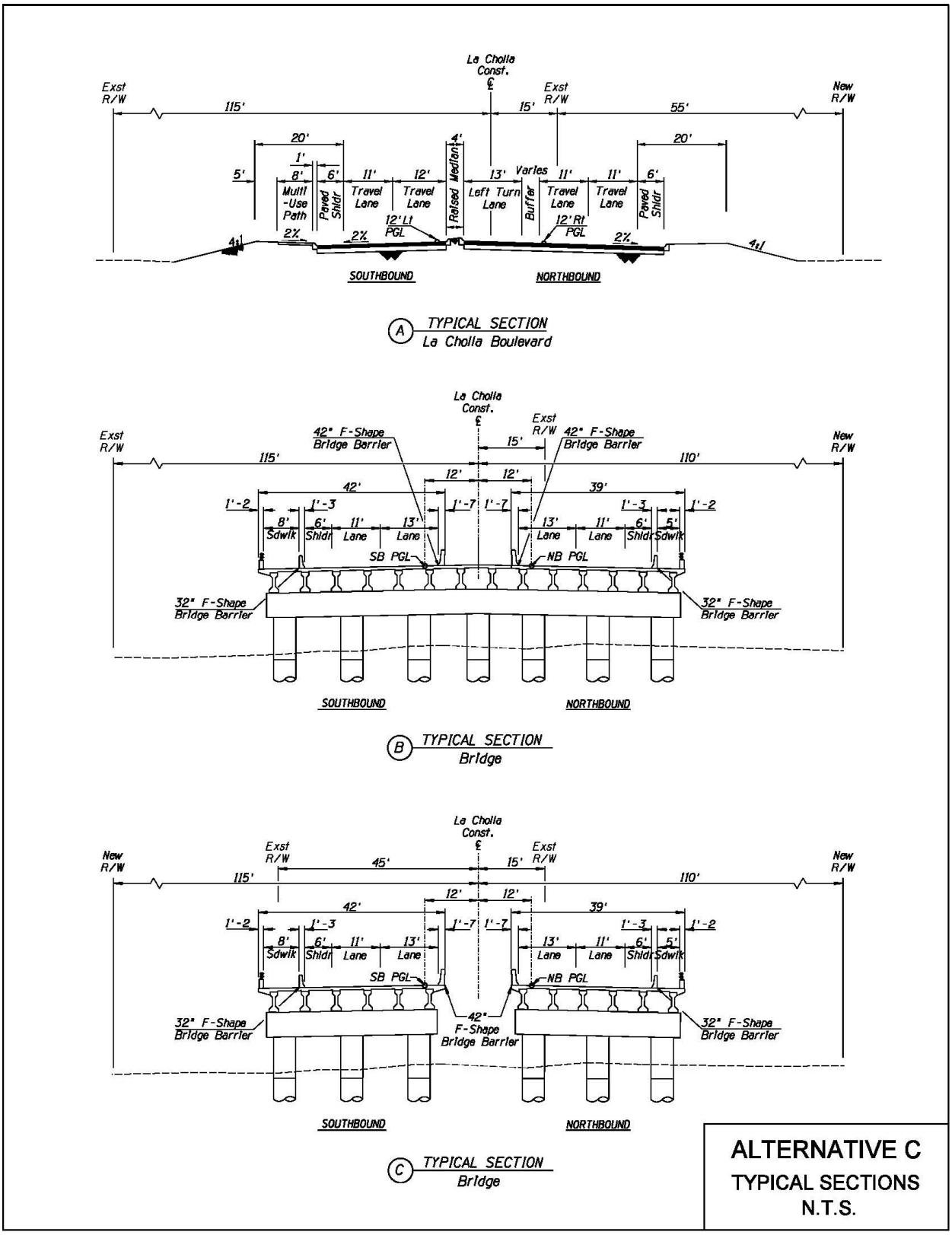


Figure 16. Alternative D Plan View

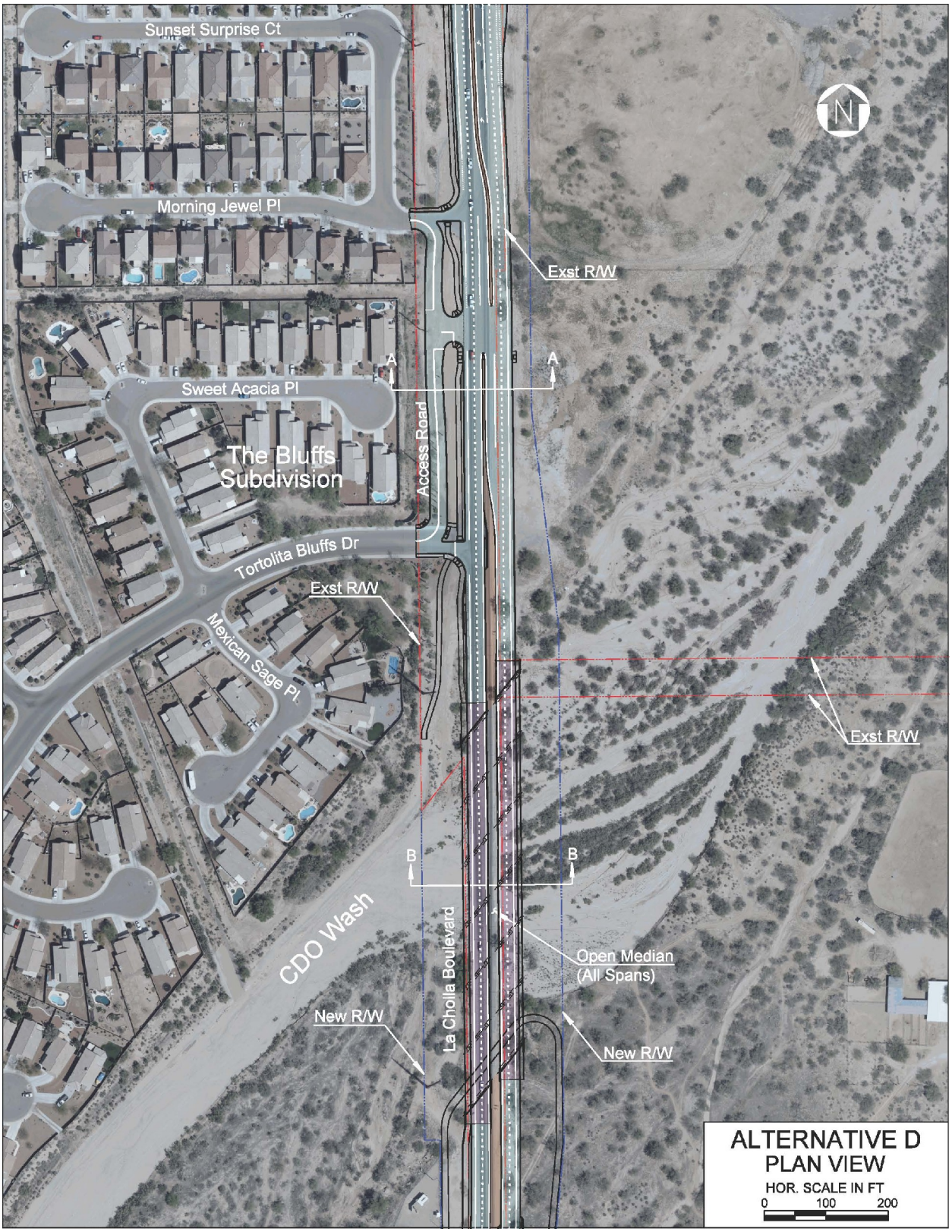
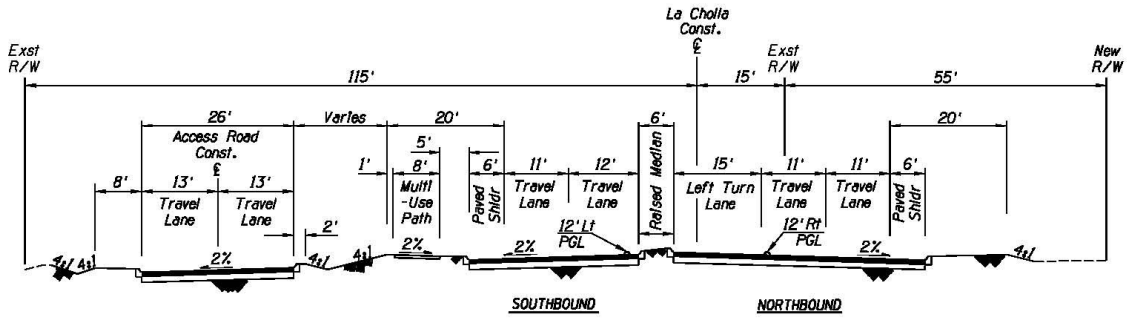
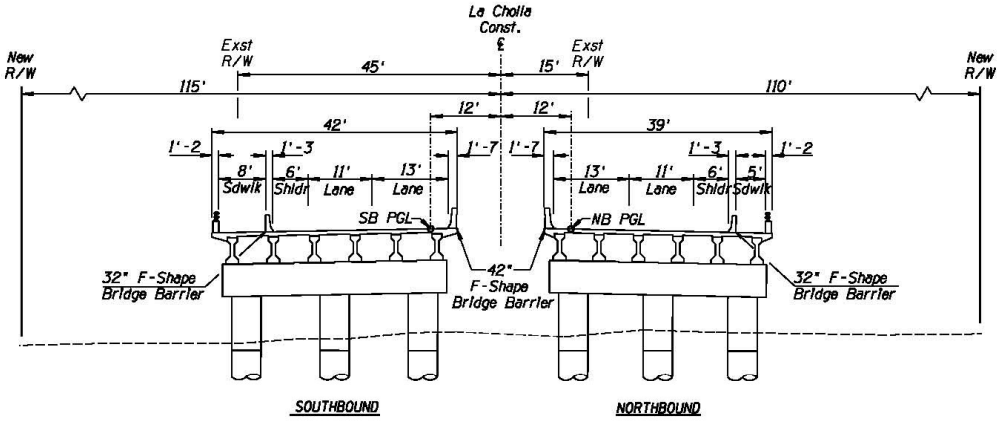


Figure 17. Alternative D Typical Sections



(A) TYPICAL SECTION
La Cholla Boulevard



(B) TYPICAL SECTION
Bridge

ALTERNATIVE D
TYPICAL SECTIONS
N.T.S.

Right-of-Way Cost

The amount of right-of-way required for each of the alternatives is the same except for Alternative D. The estimated cost of the right-of-way for the project was provided by Pima County Real Property. The estimated right-of-way costs include the entire corridor and are shown in Table 5:

Table 5. Right-of-Way Cost

Alternative	Right-of-Way Cost
A	$4.0 million
B	$4.0 million
C	$4.0 million
D	$4.0 million

Alternative D will require slightly more right-of-way (less than $50,000) due to the separation required from La Cholla and the access road as described in the alternatives description.

Environmental

The environmental issues would be similar for all alternatives. All alternatives would result in moderate impacts to native vegetation including saguaro cacti. Design and location of the access road would have impacts to access for residents of The Bluffs subdivision. No impacts would occur to other environmental resources including cultural resources, noise, and visual resources.

Bridge Location

As described in the alignment alternatives discussion, all alternatives share the same bridge location and span widths as recommended in the bridge hydraulics analysis for the CDO Wash. The only differences to the bridge configuration with each alternative are in relation to the deck treatment within the median area between the northbound and southbound bridges.

Impacts to Utilities

Utility impacts are common to all alternatives. The pier columns of the new bridge over the CDO Wash, will impact SWG distribution lines and Qwest underground communication fiber optic ducts. SWG and Qwest have both requested accommodation across the CDO Wash on the new bridge structure. SWG has asked to be located on the west side of the new southbound bridge. Qwest will coordinate with the design team to determine a relocation alignment. At this time, no other utilities have requested provisions for existing or future accommodation of utilities across the bridge structure.

Traffic Operations

Traffic operations are similar to all alternatives, with the exception of the ability to turn north. For all alternatives, the intersection of La Cholla Boulevard and Tortolita Bluffs and the intersection of La Cholla Boulevard and Morning Jewel Place will be stop controlled on the

minor street approaches. Alternative D traffic control would include stop control along the new access road intersection with La Cholla Boulevard.

Alternatives Matrix

A summary of the impacts for each of the alternatives is provided in Table 6.

Table 6. Alternatives Matrix

Criteria	Comments	A	B	C	D
Native Plants	Moderate impacts to native vegetation including saguaro cacti for each alternative	◒	◒	◒	◒
Neighborhood Access	Moderate disruption to neighborhood access with Alternative C being largest	◒	◒	○	◒
Noise Impacts	The location of the access road would not increase noise impacts	●	●	●	●
Utility Impacts	The utility impacts do not vary substantially between alternatives	◒	◒	◒	◒
Traffic Operations • Safety • Convenience	Alternative A provides the most convenient access to and from The Bluffs to La Cholla	●	◒	○	◒
Bridge Impacts • Constructability • Cost	The bridge configuration for Alternative D provides the most cost-effective and easiest structure to construct	○	◒	◒	●
Visual/Aesthetic Impacts • Roadway • Bridge	Alternatives have similar visual qualities. Alternative A eliminates the median barrier and therefore would provide the least visual impact	●	◒	◒	◒
Bridge Cost ($ millions)	Alternative D has least bridge cost	6.3	5.5	5.5	5.3
*Construction Cost ($ millions)	Construction costs do not include the Bridge Cost and includes contingency	38.4	38.5	38.5	38.6
Utility Cost ($ millions)	Similar	2.1	2.1	2.1	2.1
Public Art Cost (1%) ($ millions)	Similar	0.5	0.5	0.5	0.5
Construction Admin ($ millions)	Similar	6.6	6.6	6.6	6.6
Right-of-Way Cost ($ millions)	The right-of-way cost does not vary greatly between alternatives (less than $50k)	4.0	4.0	4.0	4.0
Planning and Design Cost ($ millions)	Similar	6.6	6.6	6.6	6.6
Environmental Mitigation ($ millions)	Similar	0.65	0.65	0.65	0.65
Total Project Cost ($ millions)	Budget from Regional Transportation Authority is $48.3 million	65.2	64.5	64.5	64.4

LEGEND: ● = no impact or minor impact ◒ = moderate impact ○ = major impact
*Costs based on the design concept plans from the spring of 2010. As the design progresses, the cost estimates will change.

Final Direction

With the consideration of traffic safety, cost, and bridge constructability, PCDOT recommends Alternative D.

11.0 Conclusions and Recommendations

It is concluded that this project should follow the recommendations set forth in this report. The design should follow the design criteria set forth in Section 5.0. In addition, the criteria for this project include:

- For alignment, a one-way frontage road should be provided north of Lucero Road; La Cholla Boulevard should be straightened at Cross Road; the alignment crossing the CDO Wash should shift to provide better constructability of the new bridge; and access to The Bluffs subdivision should be provided similar to Alternative D.
- For the portion of the project in Pima County, the noise walls shall be designed for those locations anticipated to have a noise level of 66.0 A-weighted decibel (dBA) or above or the predicted exterior noise levels at a sensitive receiver are 15 dBA or more above the existing levels, in the next 30 years, and that are deemed desirable by over 50% of the property owners affected. The use of rubberized asphaltic concrete allows a 3 dBA reduction in the predicted noise levels.
- For the portion of the project in Oro Valley, the noise walls shall be recommended in accordance with the Arizona Department of Transportation (ADOT) noise abatement policy. The policy states that, for those locations anticipated having a noise level of 64.0 dBA or above or "Substantially exceed the existing noise levels" to which is an increase of 15 dBA or more above the existing noise levels, Oro Valley is to consider noise barrier walls. The ADOT policy does not allow a noise reduction for the use of rubberized asphaltic concrete.
- In general, the existing vegetation shall be salvaged and replanted in accordance with the RDM's Environmentally Sensitive Roadway Design Guidelines, and the Floodplain and Erosion Hazard Management Ordinance.
- There are no new traffic signals warranted for this project. Existing traffic signals at Overton Road, Lambert Lane, Naranja Drive, Glover Road, and Tangerine Road shall be relocated and upgraded as necessary to accommodate the proposed roadway improvements.
- At the Overton Road, Lambert Lane, Naranja Drive, and Glover Road intersections, a dedicated right-turn lane shall be designed for both the northbound and southbound legs of La Cholla Boulevard. All other existing turning movements at those intersections shall remain as they currently exist. At the Tangerine Road intersection, a dedicated left- and right-turn lane shall be designed for the northbound leg of La Cholla Boulevard. The remaining legs of the Tangerine Road intersection shall be per the recommendations of the Tangerine Road Corridor Project. The Magee Road/La Cholla Boulevard intersection shall be improved under a separate Pima County project.
- A new bridge shall be designed to replace the La Cholla roadway dip crossing at the CDO Wash. It shall be approximately 600 feet in length with abutments at 51-degrees skewed from the proposed La Cholla roadway horizontal alignment. The superstructure shall consist of a concrete deck over Type IV AASHTO precast concrete girders.

Alternatives for the bridge construction phasing shall be considered during the 404 permitting process.

- A new channel shall be designed to channelize flow to the CDO Wash one-quarter mile north of Overton Road. This channel utilizes a parallel north-south channel to capture the flow and conveys the flow under La Cholla Boulevard approximately 700 feet north of Overton Road and continues conveying the flow directly east to the CDO Wash.

12.0 Cost Estimate and Budget Considerations

The overall project cost shown in Table 7 below is based on the preliminary design performed to date and will be refined as more detailed plans are prepared. Table 7a indicates the project cost associated with the Pima County portion from Magee Road to Lambert Lane. Table 7b indicates the project cost associated with the Oro Valley portion from Lambert Lane to Tangerine Road.

Table 7. Overall Project Cost

Task	Cost
Construction Cost	$38,200,000
Contingency	$5,700,000
Miscellaneous Utility Relocations (with Prior Rights)	$1,300,000
Metro Water Well Relocation	$800,000
Artwork	$500,000
Construction Administration	$6,600,000
Design and Planning	$6,600,000
Environmental Mitigation	$650,000
Right-of-Way	$4,000,000
Total	**$64,350,000**

Table 7a. Pima County (Magee to Lambert) Project Cost

Task	Cost
Construction Cost	$27,300,000
Contingency	$4,100,000
Miscellaneous Utility Relocations (with Prior Rights)	$800,000
Metro Water Well Relocation	$800,000
Artwork	$360,000
Construction Administration	$4,700,000
Design and Planning	$4,700,000
Environmental Mitigation	$400,000
Right-of-Way	$2,500,000
Total	**$45,660,000**

Table 7b. Oro Valley (Lambert to Tangerine) Project Cost

Task	Cost
Construction Cost	$10,900,000
Contingency	$1,600,000
Miscellaneous Utility Relocations (with Prior Rights)	$500,000
Artwork	$140,000
Construction Administration	$1,900,000
Design and Planning	$1,900,000
Environmental Mitigation	$250,000
Right-of-Way	$1,500,000
Total	**$18,690,000**

For additional breakdown of the construction costs, see Appendix A. This estimate is based on current day prices and has not been escalated based on inflation. Except for those utilities that have been identified as having prior rights, utility relocations will be paid for by the individual utility companies and therefore are not included in the project costs. The utility relocation costs that are anticipated to be borne by this project are preliminary and have been included in the construction costs. The total cost to Pima County and Oro Valley for this project is estimated to be $64.4 million. The budget for the project is currently $48.3 million.

13.0 References

1. "Draft Initial Traffic Engineering Study for La Cholla Boulevard, Magee Road to Tangerine Road," Project No. 4RTLTM, Pima County Department of Transportation, September 2009.

2. "A Policy on Geometric Design of Highways and Streets," American Association of State and Highway and Transportation Officials, 2004.

3. "Pima County Roadway Design Manual," Pima County Department of Transportation and Flood Control District, Second Edition, December 2003.

4. "Roadside Design Guide," American Association of State and Highway and Transportation Officials, Third Edition, 2006.

5. "Standard Details For Public Improvements," City of Tucson/Pima County, 2003 Edition, Revised April 2007.

6. "Guide for the Development of Bicycle Facilities," American Association of State and Highway and Transportation Officials, 1999.

7. "Manual of Uniform Traffic Control Devices," U.S. Department of Transportation, Federal Highway Administration, 2003 Edition.

8. "AASHTO Standard Specifications for Highway Bridges," American Association of State Highway and Transportation Officials, 17th Edition, 2002.

9. "Drainage Criteria Manual," Town of Oro Valley, October 2002.

10. "Bicycle and Pedestrian Standards," Town of Oro Valley, April 2001.

11. "Stage I Drainage Report for La Cholla Boulevard, Magee Road to Tangerine Road," Project No. 4RTLTM, AECOM, Inc., January 2010.

12. "DCR Level Geotechnical Report for La Cholla Boulevard, Magee Road to Tangerine Road," Project No. 4RTLTM, NCS, Inc., March, 2010 (includes Slope and Wall Type Selection and Pavement Design Summary).

13. "CDO Wash Bridge Final Structure Selection Report for La Cholla Boulevard, Magee Road to Tangerine Road," Project No. 4RTLTM, URS Corporation, January 2010.

14. "Evaluating Scour at Bridges," U.S. Department of Transportation, Federal Highway Administration, Hydraulic Engineering Circular No. 18, Fourth Edition, May 2001.

15. "HEC-RAS River Analysis System User's Manual," Hydrologic Engineering Center, U.S. Army Corps of Engineers, Version 4.0, March 2008.

16. "Final Cultural Resources Report for La Cholla Boulevard, Magee Road to Tangerine Road," Project No. 4RTLTM, URS, Inc., August 2009.

17. "Final Supplemental Cultural Resources Report for La Cholla Boulevard, Magee Road to Tangerine Road," Project No. 4RTLTM, URS, Inc., February 2010.

18. "Final Preliminary Initial Site Assessment for La Cholla Boulevard, Magee Road to Tangerine Road," Project No. 4RTLTM, URS, Inc., July 2009.

19. "Final Supplemental Preliminary Initial Site Assessment for La Cholla Boulevard, Magee Road to Tangerine Road," Project No. 4RTLTM, URS, Inc., February 2010.

20. "Final Biological Evaluation for La Cholla Boulevard, Magee Road to Tangerine Road," Project No. 4RTLTM, URS, Inc., March 2010.

21. "Preliminary Jurisdictional Delineation for La Cholla Boulevard, Magee Road to Tangerine Road," Project No. 4RTLTM, URS, Inc., January 2010.

22. "Draft Environmental Assessment and Mitigation Report for La Cholla Boulevard, Magee Road to Tangerine Road," Project No. 4RTLTM, URS, Inc., March 2010.

23. "Final Noise Analysis for La Cholla Boulevard, Magee Road to Tangerine Road," Project No. 4RTLTM, Sound Solutions, LLC, December 2009.

24. "Earth Retaining Structures Reference Manual," Federal Highway Administration Publication No. FHWA-NHI-99-025, U.S. Department of Transportation, Federal Highway Administration, National Highway Institute, Washington, D.C.

14.0 Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
ADOT	Arizona Department of Transportation
CAC	Community Advisory Committee
CDO	Cañada Del Oro
cfs	cubic feet per second
Corps	U.S. Army Corps of Engineers
County	Pima County
CWA	Clean Water Act
dBA	A-weighted decibel
DCR	Design Concept Report
EAMR	Environmental Assessment and Mitigation Report
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
HURF	Highway User Revenue Funds
IGA	Intergovernmental Agreement
ISD	Intersection Sight Distance
kV	kilovolt
MSE	mechanically stabilized earth
mph	miles per hour
PCDOT	Pima County Department of Transportation
PCRFCD	Pima County Regional Flood Control District
PCRWRD	Pima County Regional Wastewater and Reclamation Department
R/W	right-of-way
RDM	Pima County Department of Transportation Roadway Design Manual (2003)
RTA	Regional Transportation Authority
SSD	stopping sight distance
SWG	Southwest Gas Corporation
TEP	Tucson Electric Power Company
URS	URS Corporation

Appendix A

Construction Cost Estimates

STAGE I - DCR PCDOT ESTIMATE

La Cholla: Magee to Lambert

Item No	Item Description	Unit	Quantity	Unit Price	Amount
1090001	Fuel and Market Adjustment	F.A.	50,000	$1.00	$50,000
2010011	Clearing and Grubbing	ACRE	66	$700.00	$46,200
2020001	Removal of Structures & Obstructions (Wall Removal, Misc. Removals)	L.S.	1	$30,000.00	$30,000
2020007	Removal of Miscellaneous Concrete (Sidewalk Removal, Misc. Str. Conc.)	L.S.	1	$7,600.00	$7,600
2020020	Removal of Curb	L.F.	3,112	$8.00	$24,896
2020029	Removal of Bituminous Pavement	S.Y.	56,428	$2.00	$112,856
2020061	Relocate Mailbox	EACH	17	$200.00	$3,400
2020071	Removal of Guard Rail	L.F.	1,346	$4.00	$5,384
2020110	Miscellaneous Relocation (Traffic Signals)	L.S.	1	$600,000.00	$600,000
2030300	Roadway Excavation	C.Y.	70,299	$6.00	$421,794
2030307	Debris Excavation (Remove Sediment at Garfield Wash)	F.A.	1,500	$1.00	$1,500
2030401	Drainage Excavation	C.Y.	50,000	$5.00	$250,000
2030902	Borrow	C.Y.	20,403	$8.00	$163,224
3030003	Aggregate Base	C.Y.	21,908	$23.00	$503,884
4040111	Tack Coat	TON	30	$750.00	$22,500
4040125	Fog Coat	TON	6	$700.00	$4,200
4060001	Asphaltic Concrete (No. 1)	TON	21,401	$49.00	$1,048,649
4060500	Bituminous Material Price Adjustment	F.A.	75,000	$1.00	$75,000
4130040	Asphaltic Concrete (Asphalt-Rubber)	TON	12,330	$28.00	$345,240
4130042	Asphalt Rubber Material (For AR-AC)	TON	1,048	$530.00	$555,440
4130044	Mineral Admixture (For AR-AC)	TON	113	$100.00	$11,300

STAGE I - DCR PCDOT ESTIMATE
La Cholla: Magee to Lambert

Item No	Item Description	Unit	Quantity	Unit Price	Amount
5010018	Pipe, Corrugated Metal, 30"	L.F.	252	$100.00	$25,200
5010025	Pipe, Corrugated Metal, 36"	L.F.	140	$125.00	$17,500
5010055	Pipe, Corrugated Metal, 72"	L.F.	92	$250.00	$23,000
5012518	Storm Drain Pipe, 18"	L.F.	1,600	$70.00	$112,000
5012524	Storm Drain Pipe, 24"	L.F.	5,900	$80.00	$472,000
5012536	Storm Drain Pipe, 36"	L.F.	4,485	$100.00	$448,500
5012542	Storm Drain Pipe, 42"	L.F.	2,400	$135.00	$324,000
5014030	Flared End Section, 30" (ADOT C-13.25)	EACH	3	$900.00	$2,700
5014036	Flared End Section, 36" (ADOT C-13.25)	EACH	2	$1,000.00	$2,000
5014136	Concrete End Section, 36" (ADOT C-13.20)	EACH	8	$1,000.00	$8,000
5019004	Pipe, Steel (4") (On Bridge)	L.F.	600	$50.00	$30,000
5030048	Catch Basin	EACH	60	$3,000.00	$180,000
5030203	Drainage Structure (Scupper)	EACH	10	$5,000.00	$50,000
5030204	Energy Dissipation Structure	EACH	1	$35,000.00	$35,000
5050006	Manhole (Storm Drain) PC/COT Std. Dtl. 300	EACH	25	$3,000.00	$75,000
6010104	Box Culvert 4 (7 - 10'x6')	L.F.	146	$4,690.00	$684,740
6010105	Box Culvert 5 (2 - 10'x6')	L.F.	44	$2,000.00	$88,000
6010106	Box Culvert 6, Augment (1 - 10'x6')	L.F.	126	$1,000.00	$126,000
6010107	Box Culvert 7 (1 - 8'x4')	L.F.	144	$1,000.00	$144,000
6010108	Box Culvert 8 (3-20'x6' ARCH)	L.F.	115	$4,000.00	$460,000
6010203	Retaining Wall (Fill Areas)	S.F.	18,093	$54.00	$977,022

STAGE I - DCR PCDOT ESTIMATE
La Cholla: Magee to Lambert

Item No	Item Description	Unit	Quantity	Unit Price	Amount
6010721	Concrete Apron	S.Y.	107	$35.00	$3,745
6016087	Concrete Headwall	EACH	10	$5,000.00	$50,000
7010001	Maintenance and Protection of Traffic	L.S.	1	$1,500,000.00	$1,500,000
7040010	Pavement Marking (White Hot-Sprayed Thermoplastic) (0.060")	L.F.	66,991	$0.70	$46,894
7040020	Pavement Marking (Yellow Hot-Sprayed Thermoplastic) (0.060")	L.F.	32,521	$0.70	$22,765
7040030	Pavement Marking (White Hot-Sprayed Thermoplastic) Sgl. Arrow (0.090")	EACH	20	$130.00	$2,600
7040060	Pavement Legend (White Hot-Sprayed Thermoplastic) (ONLY) (0.090")	EACH	9	$130.00	$1,170
7040110	Pavement Marking (White Hot Sprayed Thermoplastic)(Transverse) (0.09")	L.F.	4,692	$0.90	$4,223
7060025	Pavement Marker, Reflective, (Type D, Yellow, Two-Way)	EACH	42	$4.00	$168
7060030	Pavement Marker, Reflective, (Type G, Clear, One-Way)	EACH	982	$4.00	$3,928
7080001	Pavement Marking Painted	L.F.	104,204	$0.10	$10,420
7080010	Painted Pavement Symbol or Legend	EACH	29	$50.00	$1,450
7320042	Electrical Conduit (PVC) (4 "), Fiber Optic w/ 3-1.5" Interduct)	L.F.	15,180	$17.00	$258,060
7320440	Pull Box (Fiber Optic)	EACH	51	$600.00	$30,600
7320628	Conductor (No. 8) (Bare)	L.F.	15,180	$0.35	$5,313
8080011	Miscellaneous Landscape & Irrigation Work	F.A.	1,500,000	$1.00	$1,500,000
9010001	Mobilization	L.S.	1	$2,500,000.00	$2,500,000
9050001	Guard Rail, W-Beam, Single Face	L.F.	787	$17.00	$13,379
9050011	Guard Rail, Thrie Beam	L.F.	75	$80.00	$6,000
9050020	Guard Rail Terminal (SKT 350)	EACH	4	$1,800.00	$7,200
9080001	Concrete Curb (PC/COT Std. Dtl. 209) (Type 1)	L.F.	58,823	$11.00	$647,053

STAGE I - DCR PCDOT ESTIMATE
La Cholla: Magee to Lambert

Item No	Item Description	Unit	Quantity	Unit Price	Amount
9080201	Concrete Sidewalk	S.F.	3,005	$4.00	$12,020
9080280	Curb Access Ramp, PC/DOT Std. Dtl. 207 (Type I)	EACH	78	$1,200.00	$93,600
9080282	Curb Access Ramp, PC/COT Std. Dtl. 207 (Type III)	EACH	17	$1,200.00	$20,400
9080301	Concrete Driveway	S.F.	4,520	$5.00	$22,600
9100008	Concrete Half Barrier Transition	EACH	5	$4,000.00	$20,000
9130001	Riprap (Dumped)	C.Y.	2,000	$100.00	$200,000
9130009	Rip Rap (Hand Placed) (Grouted)	S.Y.	21,465	$70.00	$1,502,550
9130100	Concrete Channel Lining	S.Y.	16,900	$65.00	$1,098,500
9140001	Noise Barrier Wall	S.F.	16,600	$40.00	$664,000
9140401	Miscellaneous Wall (Cut Areas)	S.F.	7,525	$65.00	$489,125
9200401	Soil Cement Bank Protection	C.Y.	13,239	$100.00	$1,323,900
9200451	Cementitious Material	TON	1,853	$150.00	$277,950
9300001	Incidental Items	F.A.	350,000	$1.00	$350,000
9300008	Miscellaneous Work (SWPP)	L.S.	1	$220,000.00	$220,000
9300114	Miscellaneous Work (Signing)	L.S.	1	$71,000.00	$71,000
9300115	Miscellaneous Work (Barrier Sidewalk)	L.F.	3,350	$120.00	$402,000
9330003	Handrail	L.F.	2,390	$25.00	$59,750
9999901	Lump Sum Structure (Bridge)(LaCholla/CDO)	L.S.	1	$5,330,000.00	$5,330,000
				TOTAL =	$27,300,000
	CONTINGENCIES (15%)	Cost			$4,100,000
				CONSTRUCTION COST =	**$31,400,000**

STAGE I - DCR PCDOT ESTIMATE
La Cholla: Magee to Lambert

Item No		Item Description	Unit	Quantity	Unit Price	Amount
		OTHER COSTS NOT PART OF BID:				
		DESIGN AND PLANNING (15% of Construction)	Cost			$4,700,000
5150001		Miscellaneous Utility Relocation	F.A.	800,000	$1.00	$800,000
5150003		Miscellaneous Utillity Relocation (Metro Water Well)	F.A.	800,000	$1.00	$800,000
		ARTWORK (1% of Planning, Design, and Construction)	Cost			$360,000
		CONSTRUCTION ADMINISTRATION (15% of Construction)	Cost			$4,700,000
		ENVIRONMENTAL MITIGATION	L.SUM	1	$400,000.00	$400,000
		RIGHT-OF-WAY (Estimate From Real Property)	Cost			$2,500,000
					OTHER COSTS TOTAL =	**$14,260,000**
					GRAND TOTAL PROGRAM AMOUNT =	**$45,660,000**

STAGE I - DCR ORO VALLEY ESTIMATE

La Cholla: Lambert to Tangerine

Item No	Item Description	Unit	Quantity	Unit Price	Amount
1090001	Fuel and Market Adjustment	F.A.	50,000	$1.00	$50,000
2010011	Clearing and Grubbing	ACRE	27	$700.00	$18,900
2020001	Removal of Structures & Obstructions (Misc. Removals)	L.S.	1	$20,000.00	$20,000
2020007	Removal of Miscellaneous Concrete (Sidewalk Removal, Misc. Str. Conc.)	L.S.	1	$1,450.00	$1,450
2020020	Removal of Curb	L.F.	1,818	$8.00	$14,544
2020029	Removal of Bituminous Pavement	S.Y.	50,824	$2.00	$101,648
2020110	Miscellaneous Relocation (Traffic Signals)	L.S.	1	$600,000.00	$600,000
2030301	Roadway Excavation	C.Y.	29,752	$6.00	$178,512
2030401	Drainage Excavation	C.Y.	10,000	$5.00	$50,000
2030902	Borrow	C.Y.	19,205	$8.00	$153,640
3030003	Aggregate Base	C.Y.	14,088	$23.00	$324,024
4040111	Tack Coat	TON	20	$750.00	$15,000
4040125	Fog Coat	TON	3	$700.00	$2,100
4060001	Asphaltic Concrete (No. 1)	TON	13,693	$49.00	$670,957
4130040	Asphaltic Concrete (Asphalt-Rubber)	TON	8,145	$28.00	$228,060
4130042	Asphalt Rubber Material (For AR-AC)	TON	692	$530.00	$366,760
4130044	Mineral Admixture (For AR-AC)	TON	75	$100.00	$7,500
5012524	Storm Drain Pipe, 24"	L.F.	3,000	$80.00	$240,000
5012536	Storm Drain Pipe, 36"	L.F.	1,950	$100.00	$195,000

STAGE I - DCR ORO VALLEY ESTIMATE
La Cholla: Lambert to Tangerine

Item No	Item Description	Unit	Quantity	Unit Price	Amount
5012542	Storm Drain Pipe, 42"	L.F.	1,590	$135.00	$214,650
5014136	Concrete End Section, 36" (ADOT C-13.20)	EACH	3	$1,000.00	$3,000
5014142	Concrete End Section, 42" (ADOT C-13.20)	EACH	2	$1,100.00	$2,200
5030048	Catch Basin	EACH	35	$3,000.00	$105,000
5030203	Drainage Structure (Scupper)	EACH	20	$5,000.00	$100,000
5050006	Manhole (Storm Drain) PC/COT Std. Dtl. 300	EACH	8	$3,000.00	$24,000
6010101	Box Culvert 1 (2 - 6'x5')	L.F.	154	$1,250.00	$192,500
6010102	Box Culvert 2 (2 - 10'x5')	L.F.	165	$1,700.00	$280,500
6010103	Box Culvert 3 (4 - 8'x5')	L.F.	184	$3,000.00	$552,000
6010203	Retaining Wall (Fill Areas)	S.F.	2,279	$54.00	$123,066
6010721	Concrete Apron	S.Y.	937	$35.00	$32,795
6016087	Concrete Headwall	EACH	10	$5,000.00	$50,000
7010001	Maintenance and Protection of Traffic	L.S.	1	$1,000,000.00	$1,000,000
7040010	Pavement Marking (White Hot-Sprayed Thermoplastic) (0.060")	L.F.	46,348	$0.70	$32,444
7040020	Pavement Marking (Yellow Hot-Sprayed Thermoplastic) (0.060")	L.F.	18,728	$0.70	$13,110
7040030	Pavement Marking (White Hot-Sprayed Thermoplastic) Sgl. Arrow (0.090")	EACH	23	$130.00	$2,990
7040060	Pavement Legend (White Hot-Sprayed Thermoplastic) (ONLY) (0.090")	EACH	10	$130.00	$1,300
7040110	Pavement Marking (White Hot Sprayed Thermoplastic)(Transverse) (0.09")	L.F.	5,388	$0.90	$4,849
7060025	Pavement Marker, Reflective, (Type D, Yellow, Two-Way)	EACH	8	$4.00	$32
7060030	Pavement Marker, Reflective, (Type G, Clear, One-Way)	EACH	706	$4.00	$2,824
7080001	Pavement Marking Painted	L.F.	70,464	$0.10	$7,046

STAGE I - DCR ORO VALLEY ESTIMATE
La Cholla: Lambert to Tangerine

Item No	Item Description	Unit	Quantity	Unit Price	Amount
7080010	Painted Pavement Symbol or Legend	EACH	33	$50.00	$1,650
7320042	Electrical Conduit (PVC) (4 "., Fiber Optic w/ 3-1.5" Interduct)	L.F.	10,265	$17.00	$174,505
7320440	Pull Box (Fiber Optic)	EACH	34	$600.00	$20,400
7320628	Conductor (No. 8) (Bare)	L.F.	10,265	$0.35	$3,593
8080011	Miscellaneous Landscape & Irrigation Work	F.A.	750,000	$1.00	$750,000
9010001	Mobilization	L.S.	1	$1,200,000.00	$1,200,000
9080001	Concrete Curb (PC/COT Std. Dtl. 209) (Type 1)	L.F.	38,344	$11.00	$421,784
9080201	Concrete Sidewalk	S.F.	14,062	$4.00	$56,248
9080280	Curb Access Ramp, PC/DOT Std. Dtl. 207 (Type I)	EACH	39	$1,200.00	$46,800
9080282	Curb Access Ramp, PC/COT Std. Dtl. 207 (Type III)	EACH	11	$1,200.00	$13,200
9130001	Riprap (Dumped)	C.Y.	1,500	$100.00	$150,000
9130009	Rip Rap (Hand Placed) (Grouted)	S.Y.	15,376	$70.00	$1,076,320
9140401	Miscellaneous Wall (Cut Areas)	S.F.	2,614	$70.00	$182,980
9300001	Incidental Items	F.A.	250,000	$1.00	$250,000
9300008	Miscellaneous Work (SWPP)	L.S.	1	$150,000.00	$150,000
9300114	Miscellaneous Work (Signing)	L.S.	1	$45,500.00	$45,500
9300115	Miscellaneous Work (Barrier Sidewalk)	L.F.	3,137	$130.00	$407,810
9330003	Handrail	L.F.	400	$25.00	$10,000
				ROADWAY TOTAL =	**$10,900,000**
	CONTINGENCIES (15%)	Cost			$1,600,000
				CONSTRUCTION COST =	**$12,500,000**

STAGE I - DCR ORO VALLEY ESTIMATE
La Cholla: Lambert to Tangerine

Item No		Item Description	Unit	Quantity	Unit Price	Amount
		OTHER COSTS NOT PART OF BID:				
		DESIGN AND PLANNING (15% of Construction)	Cost			$1,900,000
5150001		Miscellaneous Utility Relocation	F.A.	500,000	$1.00	$500,000
		ARTWORK (1% of Planning, Design, and Construction)	Cost			$140,000
		CONSTRUCTION ADMINISTRATION (15% of Construction)	Cost			$1,900,000
		ENVIRONMENTAL MITIGATION	L.SUM	1	$250,000.00	$250,000
		RIGHT-OF-WAY (Estimate From Real Property)	Cost			$1,500,000
					OTHER COSTS TOTAL =	**$6,190,000**
					GRAND TOTAL PROGRAM AMOUNT =	**$18,690,000**

Appendix B

Community Advisory Committee and Public Involvement Information

Includes:

- Community Advisory Committee Meeting Minutes
- Open House No. 1 Meeting Summary
- Open House No. 1 Equestrian Comment Form
- Open House No. 1 Comment Summary
- Open House No. 2 Meeting Summary
- Open House No. 2 Comment Summary
- Summary of Public Participation Plan
- Letter From the CAC to PC B.O.S. Dated April 14, 2010
- Letter From the PCDOT to PC B.O.S. Dated April 23, 2010

La Cholla Boulevard:
Magee Road to Tangerine Road

Agenda

La Cholla Boulevard: Magee Road to Tangerine Road

Community Advisory Committee (CAC) Meeting
Tuesday, July 30, 2009
6-7:30 p.m.
Grace Community Church, 9755 N. La Cholla Blvd.

1. Welcome and Introductions (Dean Papajohn)
    - Ann Day
    - Rick Ellis

2. Project Overview (Dean Papajohn, Eric Sibson, Leslie Watson)

3. CAC Purpose (Carol Brichta)
    - Roles and Responsibilities
    - Pima County Ordinance
    - Communications with the Project Team/Board of Supervisors
    - EAMR/Comment Process/Recommendation Letter
    - Electing Chairperson
    - Representatives to Artist Selection Panel

4. Questions/ Discussion (All)

4RTLTM
La Cholla Blvd: Magee to Tangerine
CAC Meeting

MINUTES JUNE 30, 2009 6:00 PM – 7:30 PM GRACE COMMUNITY CHURCH 9755 N. La Cholla Blvd.

TYPE OF MEETING	Community Advisory Committee Meeting
FACILITATOR	Dean Papajohn & Eric Sibson
ATTENDEES	**Community Advisory Committee (CAC) Members Present:** Fred DiNoto, DeDe Betten, Andrea Calabro, Bob Iannarino, Danny Goldmann, Brent Bartz Loren B. Christenfeld, Jane Perry, Robert Ewens John Reynolds, Barbara Wisot, Randall Abbey John Lacky **CAC Members Not Present:** Thomas Tucker **Pima County Team Members:** Supervisor Ann Day, District 1 Jacqui Andrade, Supervisor Ann Day's Office, District 1 Dean Papajohn, Project Manager Rick Ellis, Engineering Design Division Head Carol Brichta, Community Relations Program Coordinator Julie C. Simon, Community Relations Program Coordinator **URS Group**: Eric Sibson, Project Manager Leslie Watson, Environmental Manager **Interested Parties**: George Ward, Robert A. Nall, Mr. & Mrs. R. McBride Judy Moll, Peter Archuleta
DISCUSSION	La Cholla Blvd: Magee Road to Tangerine Road Project

The meeting was called to order at 6:00 pm by Supervisor Ann Day. Supervisor Ann Day welcomed the CAC members and thanked them for their participation on this project. Supervisor Day briefly discussed what the committee's participation would entail, how their participation represented the citizens along the project corridor, described the anticipated design for this project, the RTA's reprioritization of this project from the 2nd quarter to the 1st quarter so that it could be built sooner, and the importance of communication. CAC members will be responsible for providing information received from CAC meetings to their HOA and vice-versa bringing these communications to the committee.

Mr. Dean Papajohn addressed the committee. Mr. Papajohn outlined the agenda for tonight's meeting:

Introductions
Project Improvement Overview
CAC Input
Review of CAC Responsibilities/Role
Additional Concerns

Mr. Papajohn introduced the team members that would be working with the CAC members on this project.

Project Team Members:

Dean Papajohn - Project Manager from Pima County's Department of Transportation

Eric Sibson - Project Manager form URS – Will be leading the design team and working on various aspects of the project such as Engineering Surveys, Biological Surveys, Cultural Surveys and working with the real property group about rights of entry.

Leslie Watson – From URS will be working closely with Eric Sibson to develop environmental aspects for this project

Rick Ellis – Design Division Manager, Pima County Department of Transportation

Jacqui Andrade – Representative from Supervisor Ann Day's office.

J**ulie Simon** – Community Relations Program Coordinator, Pima County Department of Transportation, will be handling Community outreach – and working with CAC members.

Carol Brichta – Community Relations Program Coordinator, Pima County Department of Transportation, Working with CAC members

Introduction of CAC Members

Mr. Papajohn asked the CAC Member to introduce themselves and identify there goals for the project.

Each member of the CAC introduced themselves and expressed why their participation on this project was important.

Loren Christenfeld – Has been a resident since 1970. Would like to see the flooding issue resolved and ensure bank protection and equestrian access is addressed

Andrea Calabro – Has lived in the area for the past 8 years. Concerns include adequate bank protection, alleviating traffic congestion, traffic safety, and bicycle/pedestrian access.

Fred DiNoto – Has lived in La Cholla Hills for 6 and half years. Multiple concerns include biking, congestion, transportation, and potential perch. Additionally, flooding of the CDO Wash and how that will be alleviated. Would like to see better communication to the public when there are road closures.

Randy Abbey – Area traffic.

Brent Bartz – Represents the Northwest Bible Church. There is a proposed building project of a new

church; he is concerned with what impact the project will have on this proposed development.

Bob Iannarino – Has been a resident for 15 years. Concerned with the regional connectivity La Cholla will bring to the area, the surges in traffic, and wants to ensure safe corridors in the area.
.
Ron Staub – Has been a resident for 13 years. He is also concerned with connectivity, washes, and the entire corridor.

Bob Ewens – Resident for 11 years. Concerned with maintaining washes, wash banks, and removing the possibility of people moving barriers during floods to travel through an area.

John Lakey – Resides near Overton & La Cholla. Concerned about the quality of life in this area and the traffic flow.

Barbara Wisot – Resides near Tucson National. Placed importance in getting people together.

John Reynolds – Resident for 6 years. Currently resident and board member of HOA. Concerned about the high density in the area. The preservation of the quality of life in the area, ridges, run-off, dips being washed out and noise factors.

Jane Perry – Resides in the Copper Ridge Estates south of Tangerine, east of La Cholla. Concerned about congestion, traffic flow, speed and pedestrian safety.

Danny Goldmann – General Manager of Tucson National. Communication is through this process is very important.

DeDe Betten – Resides in La Canada Hills, Oro Valley, for 2 years. Concerned with the aesthetics, and improve safety.

Mr. Rick Ellis addressed the committee regarding the expectations of the CAC and it members, the importance of feedback and input. How membership on the committee is viewed as representation for their community. How important their communication with team members and their community is critical to this process. Members will be tasked with being educators and advocates for their communities and community advisors on the project's progress. Mr. Ellis also thanked them for their participation.

Mr. Dean Papajohn addressed the committee regarding the project overview. Proposed improvements include 4 lane roadway, multiuse path, sidewalks, intersection improvements (signalized and non-signalized), medians, major drainage structures, curb and storm drain, bridge crossing at CDO Wash, landscaping, art, and noise mitigation (rubberized asphalt, warranted noise wall, etc.) Other potential improvements include: Utility company upgrades and right of way acquisitions.

This project encompasses La Cholla starting at the northern Magee intersection and ending at Tangerine Road. This is a 5 mile corridor with main intersections at Overton, Lambert, Tangerine and Narjana. These intersections have stop lights and will continue to have stop lights. The roadway is a 2 way road that will be improved to a 4 lane roadway. Multiuse paths and/or sidewalks will be added. A raised median with curb & drainage structures in addition to the bridge. We will be studying all of that along with the roadway.

Landscape and art along the corridor is 1% of the budget dedicated to this project. Two CAC members will be asked to volunteers on the selection for art along this corridor.

Noise mitigation will be examined and designed where mitigation is warranted.

The improved four lanes will be divided by a median approximately 20 feet wide. There will be landscape in the median, but no large trees, there is a clear zone that needs to be maintained within the median and 20 feet on the outside travel lanes.

A bridge will be constructed over the CDO Wash. The road currently goes down and there is a dip crossing across the CDO Wash. The road will be higher, above the existing grade of the wash. Turn lanes will impact the construction of the bridge.

Road elevation will be examined along with the existing bank protection along the Bluff Subdivision.

Connectivity to the walk way along Omni which is located farther up the wash will be incorporated.

Staff is working closely with Oro Valley to coordinate both jurisdictions (Pima County & Oro Valley). Staff will also need to work with property owners to acquire property.

Mr. Eric Sibson addressed the CAC regarding Existing Conditions.

Photos of the existing roadway were displayed for CAC members to view.

The design speed for La Cholla will 50 mph, however the posted will remain at 45 mph.

Mr. Straub inquired about the road variations.

Mr. Sibson responded this area is considered a mountainous area, because there is more than 20 ft of fall. We are allowed a 7% grade but we are going to flatten that out as much as we can. There may be some cut backs to hills and those might be areas where you will see some walls.

Mr. Sibson continued with his presentation

Existing Intersections

Intersections that will be included in the traffic study: La Cholla / Glover, La Cholla / Naraja, La Cholla / Lambert, & La Cholla / Overton.

Earthwork

There will be excavation on top of the hill. There will be embankments at the approach to the bridges. The CDO Wash is one of the main focuses of this corridor. Work has started on the hydraulic analysis of the wash. The existing floodway will be analyzed to show how high we need to make that bridge to make free board clearance. Scour for the long term will be studied.

Drainage

Dip crossing will need reconstructed with culverts. Safety issues will be addressed for potential affect by weather conditions. Road alignment will also be studied.

Mr. Iannarino inquired as to whether the washes have been mapped.

Ms. Watson responded that the mapping process is underway.

Mr. Sibson added that classification of washes have also been identified preliminarily.

Utilities

Utility coordination includes the following companies:

Metro Water, Tucson Electric Power (TEP), Southwest Gas (SWGas), Regional Wastewater, Reclamation Dept. (RWRD), Comcast Cable, Qwest Communications, Oro Valley Water.

Staff is currently mapping the existing utilities that are in the corridor.

Metro water has indicated an interest in putting in some extra facilities along the project corridor. Metro Water has also been informed about the need to relocate a current well site.

TEP power pole cables will need to be relocated. A TEP substation located on corner of Overton/La Cholla

shouldn't be impacted by the improvements.

Southwest Gas staff is examining the locations of a pressure stations to check for conflicts.

These utilities run parallel to the project: Sewer Pima County Wastewater, Comcast Cable, and Qwest Communications. These utilities all run parallel to La Cholla for a major part of the project limits.

Oro Valley water runs through Oro Valley. It runs Parallel to La Cholla from Lambert Rd to Tangerine Rd.

Adjacent Property

All properties adjacent to the project limits that will be impacted have been identified. The following subdivisions, churches and public schools have been identified:

Iron Wood Ranch Subdivision
La Cholla Estates Subdivision
Catalina at Canada Hills Subdivision
Canada Hills Subdivision
Chaparral Heights Subdivision
Iron Wood Estates Subdivision
The Bluffs Subdivision
La Cholla Hills Subdivisions
Church of the Apostles
Casas Church
Alive Christian Church
Grace Community Church
Northwest Bible Church
Wilson K-8 School
Ironwood Ridge High School

Also being examined are what impacts future developments will have on the project: These are some proposed developments:

Rancho Del Cobre Subdivision
Saguaros Viejos Subdivision
Casas Adobes Baptist Church Expansion
Ironwood Ridge Estates
The Hills at Tucson National Subdivision

Mr. John Reynolds inquired about the 45 foot right-of-way and as to whether that would exist throughout the entire project?

The full right-of-way is anticipated at 150'. Mr. Sibson responded that the area which might create the tightest spot was north of Overton.

Leslie Watson addressed the committee

Environmental - Steps in the Process

Data Gathering – staff is currently in this stage of the process.
Environmental Screening – Tells us what is important and what needs to be considered.
Technical Reports – These are cultural delineation and hazmat reports.
Design Concept Report – This report is for the entire project limits from Magee to Tangerine. It examines alternatives, how things can be done differently, and what ways/options are for building.
Environmental Assessment & Mitigation Report - CAC members will be asked to review the environmental assessment & mitigation report and compose a recommendation letter for consideration and approval by the Board of Supervisors.

Loren Christenfeld inquired as to whether the Army Corp would be involved?

Ms. Watson responded that the Army Corp would be involved and that a permit form them is necessary. Mr. Papajohn added that environmental permits have stricter regulations. The County's goal, especially for water, is to have zero impact. Recommendations include removing the dip section on La Cholla Road at the CDO Wash and bridging the Wash with the intent of not raising the water level.

Mr. Dean Papajohn addressed the committee

Project Schedule

Planning & Engineering

Stage I (15% concept plans)
January 2010
Design Concept Report (DCR)
Draft DCR, February 2010
Final DCR, April 2010
Environmental Assessment and Mitigation Report (EAMR)
Draft Noise Report, November, 2009
Final Noise Report, December 2009
Draft EAMR, December 2009
Final EAMR, March 2010

Mr. Bob Iannarino inquired about the CAC's involvement with EAMR and whether or not this document goes for federal review? Is this the final document that allows you to move forward into design?

Mr. Papajohn responded that the EAMR is the final planning document and CAC members will be asked to provide their recommendations to the Board of Supervisors. The document will then go before the Pima County Board of Supervisor's for approval and once it is approved it will become our plan for the final design. This document will include information regarding washes, permitting, and a strategy for obtaining the necessary permits. We will not have the permits in hand when the EAMR is approved but the strategy for moving forward and obtaining those permits will be in place.

Mr. Iannarino inquired as to what were the project limits of the EAMR?

Mr. Papajohn responded that the DCR would encompass the entire corridor from Magee Road to Tangerine Road and the EAMR would encompass only the county's portion of the project from Magee Road to Lambert Lane.

Mr. Robert Ewens inquired as to where this portion of the project would end?

Mr. Sibson responded the project limits will extend from Magee Road to Lambert Lane intersection. The intersection itself will be the ultimate improvement it will then taper back into an existing two lane roadway north of Lambert and Oro Valley will handle constructing the remaining portion.

Mr. Iannarino inquired as to whether the section between Lambert Lane and Tangerine Road would be separated out of the DCR to expedite the southern DCR?

Mr. Papajohn responded that this is a potential strategy. The County's goal and the RTA's desire is that we do this 15% design for the entire corridor. RTA has budgeted for the full 5 miles and the money will be divided between Pima County and Oro Valley.

Mr. Papajohn Continued to address the committee regarding the CAC meeting schedule.

CAC Schedule – (Tentative)

CAC Meeting #1 – (introductions/CAC Role/Project Overview)
June 30, 2009

CAC Meeting #2 – Preliminary Design Review/Project Update)
October, 2009
CAC Meeting #3 – (Noise Study Introductions)
November 2009
CAC Meeting #4 – (Noise Results/Draft EAMR/Draft Traffic Report)
January 2010
CAC Meeting #5 – (Draft Letter to Board of Supervisors)
February 2010
CAC Meeting #6 – (Finalize Letter to Board of Supervisors)
March 2010

Planning Stage

Magee Road to Tangerine Road
Stage I (15% concept Design)
DCR
Magee Road to Lambert Lane
Stage II (30% design)
EAMR

Ms. Carol Brichta addressed the committee thanking them for their participation and explained the responsibilities of the committee. Attendance is critical to the project's process. Committee members are considered community representatives. Committee members were provided a binder for placing all the materials they receive. A website for this project can be found on Pima County's Department of Transportation Road Project webpage. This website will be updated as new material becomes available. The CAC meetings are designed to provide CAC members with the projects progress. Interested parties are always welcome to attend however the information will be provided to the CAC committee first. Once that is accomplished the meeting will be opened to all interested parties to ask questions.

If any members of the CAC are unable to attend, staff asks that they please contact us and let us know. CAC members may also send a representative, just let us know.

The biggest part of this process is the DCR and EAMR. These reports will be provided and the Committee will be asked to compose a recommendation letter to the Board of Supervisors. During this process there will also be public meeting to receive feedback from the public.

If necessary the committee can meet more than what has been tentatively scheduled.

Also, if any of the HOAs would like us to meet with them to discuss this project, staff is willing to do that on a one on one basis.

CAC members were advised that there were certain aspects of this project that would not be brought before them for review. These instances are regulations that are mandated and that can not be changed. On these regulations we do not ask for the committee to comments.

The Committee will need to select a chair person for the committee. The Chairperson/co chairs will be responsible for getting everybody together, drafting the letter for the BOS, and making sure enough meetings have been scheduled for the group.

Two committee members will also be asked to sit on the artist panel. Their responsibilities will include: review of art submittals, attend meeting with the art panel, and attending the presentations by the selected artists

Mr. Randy Abbey and Jane Perry **v**olunteered to sit on the artist committee.

Mr. Peter Archuleta asked that the project team please consider accommodations during construction for individuals that jog and ride their bikes along Magee and to the Northwest Pima Community College Campus.

Mr. Bob Iannarino inquired about transit?

Mr. Sibson responded coordination would be done with Suntran

Mr. Fred DiNoto asked about the project's start and finish date?

Mr. Papajohn responded that construction takes approximately 1 ½ year for a project this size.

Ms. Brichta asked the committee if they had any objections to staff placing the committee members email addresses on the project website. There were no objections.

Mr. Bob Iannarino asked about the cost and funding challenges?

Mr. Papajohn responded the original funding estimate for this project was 53 million dollars for the entire 5 miles. That total represents the county's portion and Oro Valley's portions. Staff is looking at the budget or alternatives to keep within the budget.

Ms. Brichta asked the committee if they objected to continue to hold future CAC meeting on Tuesday nights at 6:00 p.m. There were no objections

Call to the Audience

Ms. Judy Moll addressed staff about whether a signal light would be constructed at Coral Ridge Loop, and La Cholla? There is some difficulty coming out of that area for the senior citizens that live there.

Mr. Papajohn responded that this area will be part of the traffic study.

Mr. Robert Nall inquired as to whether TEP can move their overhead lines underground?

Mr. Papajohn Dean's responded that the line would be maintained overhead due to the large voltage of the transmission lines and the large cost of undergrounding utilities that utility companies will not cover.

Conclusion of Meeting

Mr. Papajohn shared a quote from Henry Ford which stated: "Coming together is a beginning. Keeping together is progress. Working together is success." Tonight we have made a beginning by coming together. We look forward to making progress at future meetings, and ultimately resulting in a successful project. Then Mr. Papajohn closed the meeting and thanked the group for their participation.

La Cholla Boulevard:
Magee Road to Tangerine Road

Agenda

La Cholla Boulevard: Magee Road to Tangerine Road

Community Advisory Committee (CAC) Meeting
Tuesday, October 27, 2009
6:00-8:00 p.m.
Grace Community Church, 9755 N. La Cholla Blvd.

1. **Welcome** (5 min., Dean Papajohn)

2. **Project update**
   - Artist selection (5 min., Dean Papajohn)
   - Traffic (5 min., Quinn Castro)
   - Roadway (10 min., Eric Sibson)
   - Bridge (5 min., Dave Perrotti)
   - Drainage (10 min., Edie Griffith-Mettey)
   - Environment (10 min., Leslie Watson and J.P. Charpentier)
   - Project Update Question/Answer Session (5 min., All)

3. **Introduction to the process of Noise analysis** (45 min., Bill Holiday)

4. **Selection of CAC chair** (5 min., Carol Brichta)

5. **Schedule** (5 min., Dean Papajohn)
   - Open House: Tentatively Tuesday Dec. 1, 2009
   - Draft Noise Report: Jan. 2010
   - Draft Environmental Assessment & Mitigation Report (EAMR): Mar. 2010
   - Construction: possibly late 2011 or early 2012

6. **Questions/ Discussion** (10 min., All)

4RTLTM
La Cholla Blvd: Magee to Tangerine
CAC Meeting

SUMMARY OCTOBER 27, 2009 TIME:6:00 PM–7:30 PM LOCATION: Grace Community Church, 9755 N. La Cholla Blvd.

TYPE OF MEETING	Community Advisory Committee Meeting
FACILITATOR	Dean Papajohn
ATTENDEES	**Community Advisory Committee (CAC) Members Present:** Fred DiNoto DeDe Betten Bob Iannarino John L. Reynolds Barbara Wisot Randall Abbey John Lakey **CAC Members Not Present:** Jane Perry Robert Ewens Andrea Calabro Danny Goldmann Ronald Staub Brent Bartz Loren Christenfeld **Pima County Team Members:** Jacqui Andrade, Supervisor Ann Day's Office, District 1 Dean Papajohn, Project Manager Carol Brichta, Community Relations Program Coordinator John McManus Xavier De La Garza **Oro Valley** Jose Rodriguez, Engineering Division Manager **URS Group**: Eric Sibson, Project Manager Leslie Watson, Environmental Manager & J.P. Charpentier, Environmental Planner Thomas Wolf **Supervisor Ann Day's Office** Jacqui Andrade **Interested Parties**:
DISCUSSION	La Cholla Blvd: Magee Road to Tangerine Road Project

Welcome

The meeting was called to order at 6:00 pm by Dean Papajohn. Dean introduced himself as the Project Manager. Dean briefly mentioned that there have been a lot of activities that have transpired since the last CAC meeting, including: the initial traffic study, environmental study, cultural study, utility coordination is underway, and the drainage study for the CDO wash as well as minor washes. Design work has begun based on this initial data collection. The design presented tonight is still preliminary and information is still being collected that could change the design.

Dean mentioned that the intent of the meeting is to get the CAC members up to date and also there will be a sounds analysis expert to talk to them and share with them about the process that goes on in conducting a noise analysis for a project. Results of the noise analysis will be available later, likely after the new year. At that time, we will talk more about the noise analysis results and the potential noise mitigation as it applies specifically to the La Cholla project.

Agenda

- Update on the artist selection (Dean Papajohn)
- Traffic (Quinn Castro)
- Roadway (Eric Sibson)
- Bridge (Dave Perrotti)
- Drainage (Edie Griffith-Mettey)
- Environment (Leslie Watson & J.P. Charpentier)
- Project Update Question/Answer Session (All)
- Introduction to the process of Noise analysis (Bill Holiday)
- Selection of CAC chair (Carol Brichta)
- Schedule (Dean Papajohn)
- Questions / Discussion (All)

Update on the artist selection

Dean stated that the Tucson Pima Arts Counsel (TPAC) led the procurement process for selecting an artist. The advantage of using TPAC is they have contacts with artists not only in the Tucson area, but all over the nation. Also, they are aware of all of the procurement laws and regulations that must be followed to establish a contract with an artist. Randy Abbey and Jane Perry are the two CAC members that were selected to be on the art selection committee. There were also some design professionals from the design team and artist professionals from the community on the artist selection committee. Thirty four artist applications were received; out of those three were invited for interviews. The artist recommended for the La Cholla project is Steven Weitzman studios in Maryland. Their experiences range from concrete work with concrete form liners as applied to bridges, walls, as well as integral concrete color work, metal sculpture. The many variety of art forms the artist has experience with provides flexibility for the direction of art on the La Cholla project. (Paper examples of the art that Steven Weitzman has done in the past were passed around to the CAC members to view.) The County is currently developing a scope of work and contract with the artist. Within the next few months a contract should be in place. The artist can then come and visit with the CAC members and collect data about the location and project.

Fred DiNoto's Question:

- What is the process and how does it work?

Dean Papajohn's Response:

- Once the artist is on board a meeting between the CAC and artist will be arranged. The artist will come to town to conduct research, including meeting with the design team and the CAC. The artist will get ideas about what the community likes and doesn't like. The goal is for the artist to capture the flavor of this community. He will then take that and he will start developing some preliminary concepts or themes to present to the committee. The artist will work very closely with the CAC. Once we get a consensus among the CAC members, then there will be public open houses to present the concept. It will be provided to the wider community, so they can also provide input as well.

Barbara Wisot's Question:

- Where do you pick the art to go?

Dean Papajohn's Response:

- The art can be associated with the bridge, or wall, or sidewalk, or a free standing sculpture. It can be made of concrete, metal, stone, or some other type of material. It may or may not include lights. Our team has a landscape designer whom the artist will work closely with. The artist will work with the whole project team; that is why we want to get the artist on board early in the project.We have our structural engineer and our artist will work with our structural engineer if they are working with some of the structural elements such as the walls or bridge.

Traffic

Quinn Castro works for Pima County Department of Transportation, Traffic Division. She states that the initial transportation engineering study for this corridor was recently finished and she has a copy of it tonight for the CAC members to view. Recommendations for the roadway are made based on analysis of existing conditions now and the future conditions for the project projected out to the year 2040. Then a design is developed for the footprint of the roadway and how it should look as far as length, width, number of lanes, medians, and intersection treatment. Future developments have been taken into account that are likely to go into construction around the time of this project. Quinn's asks if there are any questions.

Name N/A:

- Last meeting there was mention of 150 ft of easement. Where is that shown on the map?

Quinn Castro's Response:

- The exhibit shows the lines of the existing and the proposed right-a-way.

Name N/A:

- It shows that the new right-a-way is really stretched along this entire road. It looks like you are going to take a lot from and add to your existing easement, is that correct?

Quinn's Response:

- Yes.

Dean Papajohn's Comment:

- Usually where properties have been developed, like at the Bluff Subdivision, ROW has already been dedicated there, so there won't be additional need to purchase property. Often in the areas that have not been developed, that is where the County will need to purchase property.

John Reynolds' Question:

- Regarding his property in Tecolote de Oro, I can see where the easement is marked there currently, is that slated to have land taken from me?

Dean Papajohn's Response:

- Since this question is a personal questions, let's discuss this in more detail after the CAC meeting.

John Reynolds' Comment:

- He would like to see the right-of-way location so he can inform all the properties in Tecolote del Oro.

Dean Papajohn's response:

- Even at this early stage Pima County Real Property has been contacting a number of property owners that will be affected by the project.

Quinn Castro's comment:

- At this point this is an initial study.
- It's going to be developed further.

John Lakey's Question:

- I have seen in your map where it says West Hardy Road, the dirt road. Another homeowner was asking if they still have access, will that road still exist?

Quinn Castro's Response:

- Yes

Bob Iannarino's Question:

- Even with the bridge approach?

Quinn Castro's Response:

- Yes

Bob Iannarino's Question:

- Can you give an overview of the regional traffic impacts, some of the assumptions that were being made on these criteria for collection of traffic from Tangerine? Early on there was talk about how they were going to deal with some type of demand coming from 77, but also from Tangerine South. Is there another regional east west connector in here that the traffic study is going to have to assume, in lieu of Magee, Overton area, like Lambert as a regional east-west connector taking in a lot of traffic over this 2040 horizon?

Quinn Castro's Response:

- At this point we don't have anything that is projected, that is in the Oro Valley region, but as far as PAG (Pima Association of Governments) they haven't identified anything major like that. I know that at one point it had been proposed to continue La Cholla up north of Tangerine, but that is no longer the thinking. A fairly conservative approach was taken for the projected traffic volumes. La Canada and Oracle Road will be the north-south routes people will use in addition to La Cholla..

Bob Iannarino's Question:

- How about Lambert as an east-west corridor with any new impacts from Twin Peaks Linda Vista?

Quinn Castro's Response:

- PAG has not provided us with anything connected to that.

Jose Rodriguez Comment:

- Jose Rodriguez is the Head of the Engineering Design Division for Oro Valley. Pima County & Oro Valley are working closely on this project. Oro Valley is advertising for a design consultant to study the Tangerine Corridor. Oro Valley is working very closely with the Town of Marana and Pima County on this. Issues related to eas-west connection will be addressed in the Tangerine Road studies.

Bob Iannarino's Question:

- Regarding the new cut walls, will there be no reinforcement or does it mean it is going to be re-inforced?

Quinn Castro's Response:

- That will be determined in future design work.

Bob Iannarino's Question:

- Are you estimating where signalization might be besides where we have it right now?

Quinn Castro Response:

- At this point we are keeping it as existing. The County is aware of areas of concern, specifically, Coral Ridge Loop North. The studies group will take a look at that. Based on the information that so far, a signal is not warranted.

Barbara Wisot's Question:

- Will there be consistent traffic, or will there be any impact to them?

Quinn Castro's Response:
- There is going to be growth in the area.

Barbara Wisot's Question:
- But anything out of the ordinary or dramatic?

Quinn Castro's Response:
- No.

Eric Sibson's Response:

- Eric works for URS Corporation. URS is the Prime consultant for our roadway project. Based on the Traffic Division's recommendation, the new road will be a four lane roadway. This segment of La Cholla Boulevard is classified as environmentally sensitive roadway, so 11 ft travel lanes will be built with a 20 ft median. In the area of the bridge we have a reverse curve; it is a little curve that you can barely see because it is so gradual. The purpose of that is for future constructability of the bridge, being able to maintain traffic on the existing roadway and being able to construct a portion of the bridge. Another location where a big difference is seen is up in Oro Valley. Overall the roadway is a straight road. We have very good vertical alignment for the roadway as well. The design is intended to eliminate a lot of deficiencies in the existing road. There are site distance issues north of Lucero. There are a lot of existing access points for driveways and crossroads that need to be maintained. We will try to match those locations and keep them out of the drainage improvements. Anytime we have a culvert that is added underneath roadway, obviously the road will be higher than where it is at now. Most of those existing dips for drainage are going to be taken care of. There are a couple of locations with special needs that I wanted to point; these have proposed frontage roads or access roads. We have had some issues with drivers exiting Tortolita Bluffs Drive because of insufficient site distance with the new bridge. There are certain criteria that indicate how far a driver needs to look back to make that turn movement safely. With the bridge being raised so much and with barriers protecting the outside of the bridge, a driver wouldn't be able to see far enough to turn safely. The solution is combining these two access points –Morning Jewel and Tortilita Bluffs Drive - to a point where it is far enough away that you can safely make that turn movement. It can be called a frontage road or an access road and it can be seen on the map. This is still in the planning stage. That is one location. The other location is north of Lucero. The property falls a lot from the west to the east and there is an existing wash that eventually meets with the CDO wash. So you can tell there is a low point there. The improvements on La Cholla could produce steep driveways. The solution is a one-way frontage road below the fill wall to provide safe access to these driveways. This is a good and safe that would serve four parcels. The County has already started to meet with these property owners.

John Reynolds' Comment:
- Tecolote is labeled incorrectly. It is on the west side of La Cholla.

Eric Sibson's Comment:
- There are two locations where there are access issues. There are a lot of walls we are going to need. We are not sure what type of walls will be built at this point. On the west side we will probably need cut walls. On the east side it falls off so we'll need fill walls.

Bob Iannarino's Question:
- Are most walls tovbe on the west?

Eric Sibson's Response:
- Possibly fill & cut on west and east sides.

Fred DiNoto's Question:
- What are the criteria for these walls?

Eric Sibson's Response:

- It's based on the vertical line we end up having. We may need an extra foot or so of right-a-way for slopes or walls.

Bob Iannarino's Comment:

- In the golf course area can you obtain a slope easement?

Eric Sibson's Response:

- There are some locations we are taking advantage of using easement, but it's more for drainage.

Barb Wisot's Question:

- What is the difference between a multi-use path and a multi-use lane?

Eric Sibson's Response:

- Multi-use lane is for cars. A multi-use path is for pedestrians.

Bridge

Dave Perrotti of URS thanked the CAC members for coming to the meeting tonight. There are two bridges, a Northbound & Southbound. The bridges will be 600 ft long total. We have to provide clearance between the bottom of the bridge & the high water level at 100 year flood. If we did a one span bridge the girders get too deep and the profile grade of the roadway as it is going up & over the CDO wash gets too high. There will be six spans to provide clearance for 100 year flood. The super structure depth is estimated at 5 ½ ft. Prestressed concrete, steel girders, and some other types are still being reviewed. Each bridge section has two travel lanes and a 6 ft shoulder. The South-bound bridge has the 8ft sidewalk. The North-bound bridge has a standard 5ft sidewalk.

John Lakey's Question:

- How much higher than the surrounding roadway does this bridge have to be?

Eric Sibson's Response:

- It's highest point over 20 ft. Less on the outsides, under 20 ft.

John Lakey's Question:

- If you come down La Cholla, will you go up then back down?

Eric Sibson's Response:

- Yes

Bob Iannarino's Question:

- Will the multi-purpose path meet on bridge?

Eric Sibson's Response:

- Yes, they will meet and merge in.

Drainage

Edie Griffith-Mettey of AECOM explained that **a**ny wash crossings over the streets will now be taken care of by the proposed culverts. The 100 year flow is going to be passing underneath the roadway. In the Tangerine Road area, most of the flow is crossing NE to the SW. To minimize some of the culvert crossings, some might be combined. A drainage channel is proposed north of Overton Road.

John's Lakey's Question:

- Regarding dips, will we raise or drop the roadway?

Eric Sibson's Response:

- Yes, the road will go over culvert crossings at the dips.

Edie Griffith-Mettey's Comments:

- Box culverts will be put in, in smaller areas we'll keep it down to 36 inch diameter pipes. We are proposing to put a series of culverts. Honey Bee Loop wash is captured on the west side in a channel and then directed to a culvert away from the Bluff Subdivision. This is a challenging area. This should take the flow away from the Bluff Subdivision. There will be CDO Wash bank stabilization to protect the bridge. There's already bank stabilization on the north of the CDO Wash, but on the south side there isn't any. On the south side of the CDO Wash there are already some culverts. The intent will be to extend the existing pipes under the widened roadway. The Garfield Wash is another drainage issue to be looked at.

John Lakey's Question:

- East of the bridge by Hardy, is there going to be any change to the flood plane designation?

Edie Griffith-Mettey's Response:

- In general there will be no great change, but the hydraulic engineer is working on a letter of map revision and impacted property owners will be contacted.

Dean Papajohn's Comments:

- The area by the CDO Wash, shown in green on the exhibit, has water problems now and those will continue to stay the way they are, at this point. Whoever is in that area, they are already experiencing water problems and will continue to have problems.

Bob Iannarino's Question:

- Have you talked to the Flood Control District about this problem? Are there any additional funds to assist in some bank protection?

Dean Papajohn's Response:

- We have been dialoging with flood control since the beginning of the project. A number of Flood Control staff are on the project team.
- The problem with channelizing the CDO Wash with man-made bank protection is that it will create permitting issues with the Army Corps of Engineers. This would likely delay the project construction.

Bob Iannarino's Question:

- The bridge will be protected, but what happens upstream? If the CDO tends to migrate, then it could have an impact outside the bridge, is that correct?

Dean Papajohn's Response:

- Yes, but the bridge abutments and approaches will be protected.

Fred DiNoto Question:

- Is the roadway creating a waterfall effect?

Eric Sibson's Response:

- Yes, and once we take that out it should go back to its natural state.

Bob Iannarino's Question:

- Will the design integrate a more frugal look at the storm culvert design to take care of the roadway drainage?

Edie Griffith-Mettey's Response:

- We are looking at a couple of locations where water harvesting in the medians might be possible.

Environment

Leslie Watson

J.P. Charpentier has been the primary person out in the field collecting all the data. There have been no major issues on the following studies: hazardous material investigation, reviewing clean-water act, and

permitting requirements. We are in the middle of performing the inventory for clean-water and permitting. This information will be compiled into the Environmental Assessment and Mitigation Report (EAMR). A draft will be submitted to Pima County after the new year. A draft will be submitted to the CAC members sometime next year and at that point we will hold an extensive discussion on the environmental issues.

Randall Abbey's Question:

- Will there be a large report?

J.P. Charpentier's Response:

- Yes, we have technical reports that have been submitted or are in the process of being written, including:
  1) Cultural Resources Report: Written & submitted to Pima County (PC)
  2) Biological Resources: Draft has been submitted. Working on the final.
  3) Haz. Mat. Report: Submitted and is final.
  4) Clean-Water Act Report: Draft

John Lakey's Question:

- What about the Pigmy Owl?

J.P. Charpentier's Response:

- They are unlisted. However, they may be re-listed some time. Currently the owl does not appear to be a major issue.

Dean Papajohn's Comment:

- Pima County does yearly owl studies in case it is ever re-listed.

John Lakey's Question:

- The work that is being done, will it impact access for coyotes and javelinas?

J.P. Charpentier's Response:

- We work closely with Arizona Game and Fish and Pima County to make sure our drainage structures are designed in a way that will allow for wildlife movement.

Bob Iannarino's Question:

- Are we on schedule for EAMR?

J.P. Charpentier's Response:

- Yes.

Bob Iannarino's Question:

- Will there be wildlife corridor studies conducted?

J.P. Charpentier's Response:

- We have been in contact with Arizona Game and Fish Department. These are the people that are conducting the study. However, the study has not begun yet.

Question:

- Is there concern about the Desert Tortoise?

J.P. Charpentier's Response:

- The tortoise issue is currently on a 12 month review.

Other Questions

Fred DiNoto's Question:

- What is the speed limit going to be?

Quinn Castro's Response:

- 45 mph

Fred DiNoto's Question:

- Why do some speed limits change?

Eric Sibson's Response:

- If unsafe conditions exist, then a speed limit might change.

John McManus' Response:

- The Traffic Engineering Division studies crash history every year. A list of dangerous sections of road or intersections is prepared. This is used to evaluate conditions and make changes. On Cortaro Farms Road west of Thornydale, the speed limit was lowered due to the proximity of a school.

John Reynolds' Question:

- When construction occurs in the ROW, is the construction crew required to stay in the ROW, or can they go on private property?

Edie Griffith-Mettey's Response:

- They can enter private property only if we have right-of-entry.

John Reynolds' Comment:

- The County did not obtain right-of-entry from land owners near his house and workers came on private property.

Edie Griffith-Mettey's Response:

- We will pass that information on.

Dean Papajohn's Comment:

- If there are any questions about people on private property, people can call Carol Brichta in Community Relations to inform the County.

Eric Sibson's Comment:

- The road improvements will create a lot of impact on utilities. We have identified where all of the existing utilities are.

Dean Papajohn's Commennt:

- The County has developed an Equestrian Survey. Please take one to fill out if you are an equestrian. Take extra to pass out to neighbors who are equestrians. Please return the Equestrian Survey by Nov. 30th. We are interested in knowing where people are crossing La Cholla with their horses.

Sound Analysis

Bill Holliday of Sound Solutions went over the noise process for the sound study. The limit of the noise analysis is from Magee to Lambert. Almost all of it is in Pima County except one little stretch which is in Oro Valley. There are two different noise regulations: 1) For Pima County. 2) For Oro Valley. In the Noise Analysis there are three basic parts: 1) Verifying the model. 2) Predicting future noise levels. And 3) Looking at mitigation such as sound walls. The model required is from the Federal HighWay Administration (FHWA)-The Traffic Noise Model. It takes in data from the traffic study, like the volumes during the peak traffic hour. It takes into account the ground type; if it is grass or hard soil. It also takes the speeds. Measurements are taken during the peak traffic hours and compared to the model. When comfortable with the model, future predictions are made with the existing layout and also with the proposed improvements. Noise levels predictions are generated at the existing homes and the site of future developments. Wherever it is 66 dBA or above we'll look at mitigation. Rubberized Asphalt Concrete (RAC) is the primary noise mitigation. Pima County allows a 3 point reduction for RAC. Feasibility is looked at as well. If walls are needed, will those walls reduce the sound level at least a 5dBA? Cost is also evaluated. The benchmark is $25.00 per square foot of wall or $35,000.00 per benefit receiver maximum. Also, a wall cannot be built for a single receiver.

Fred DiNoto's Question:

- On the La Canada Project walls were priced at $17.00 per square foot?

Dean Papajohn's Response:

- The cost will vary from year to year. La Canada had a range of costs - average bid was $25.00. The County can only build a wall through the roadway contractor for a project. The County is required to accept the lowest overall bid, the County can not pull out the wall and ask a different contractor to build the wall.

Bill Holiday:
Bill provided to the CAC a summary of the three main steps that are used and the prediction locations included in the La Cholla analysis.

Bob Iannarino's Question:

- Studies nationally show that RAC provides a mitigation greater than 3dBA. I thought the RTA had voted on that, using greater than 3 decibal credits for the use of rubberized asphalt?

Jacqui Andrade's Response:

- The RTA recommended that local jurisdictions apply their own noise policies.

John Lakey's Question:

- Are these walls typically reflective in nature?

Bill Holiday's Response:

- Generally reflectivity is not a problem. In a worst case scenario you might get a 1-2 DB increase from reflection.

John Lakey's Question:

- What happens if one side warrants a wall and the other side doesn't?

Bill Holiday's Response:

- The model takes it into account. It models the walls in place. The perfect reflector is a 3DB increase.

Randall Abbey's Question:

- The locations that are marked on the map, are they primarily driven by the 66 dBA or are they driven by the benefited receivers?

Bill Holiday's Response:

- We don't know right now what the levels are until we run the model with these locations. We just picked 25 representative locations. We usually pick the closest to the road, within each traffic section. Also, if it's up the hill, if there's an elevation change or grade change, then we will pick up an extra receiver.

Randall Abbey's Question:

- What is the significance of 66 dBA?

Bill Holiday's Response:

- It comes from FHWA criteria. 66 DBA is equivalent to a talking conversation from 3 ft away.

Barbara Wisot's Question:

- Why didn't La Canada get the walls promised in the original studies?

Jacqui Andrade's Response:

- The original report in 2001 was without RAC. Once RAC was used in the 2007 design and the 3 dBA was credited, then many of the walls were no longer warranted. Rubberized asphalt. La Cholla is different from La Canada because it doesn't have an old project report to compare to.

Barbara's Wisot's Question:

- What is the height of walls?

Bill Holiday's Response:

- It depends on the topography of the area. It also depends on the where there are impacted receivers. If the house is higher we are going to need a higher wall.

John Lakey's Question:

- When will it be done?

Bill Holiday's Response:

- January 2010

Question:

- Have you met with Metro Water?

Dean Papajohn's Response:

- We have had 4 or 5 meetings with Metro Water.

Selection of CAC Chair

Carol Brichta stated that at the first CAC meeting we discussed having co-chairs. Now that you have had time to think about it we would like to formalize who will be chairing the committee. Last time we discussed Bob Iannarino and Ron Staub serving as co-chairs. Are there any objections to this?

CAC Members:

- All agreed – No objections.

John Lakey's Question:

- Where the electric lines are at right now, are they in an easement? Will they be moved?

Eric Sibson's Response:

- They will be impacted. We are in contact with TEP. Existing lines will be located on the plans, and TEP will relocate lines as necessary to make room for the proposed road improvements.

Barb Wisot's Question:

- Can the overhead lines be placed underground?

Dean Papajohn's Response:

- They are overhead now and most likely they will remain that way. If CAC members would like to pursue this issue, TEP can be invited to speak with CAC members. The high voltage of these lines will make it very difficult to put them underground.

Schedule

Dean Papajohn suggested that an open house for the public to learn more about the project be held on Dec. 1, 2009. All the CAC members agreed that was good. The goal is to present the EAMR to the CAC in March and allow the CAC four weeks to review and write a response letter. Then the EAMR goes to the Board of Supervisors for review and approval. This takes 4-6 weeks.

Bob Iannarino's Question:

- The CAC doesn't see the EAMR until March? This doesn't match the schedule given at the first CAC meeting.

Dean Papajohn's Response:

- The noise report and design plans will be presented to the CAC before then. But a full EAMR document will not be ready until March with the way the schedule is now.

Carol Brichta's Comment:

- We can review our minutes from last meeting to see what was discussed about schedule.

Dean Papajohn's Comment:

- While the EAMR is completed in early 2010, the public approval process must follow certain guidelines, like a public notice to the board for 30-45 days.

Discussion

The CAC discussed the schedule and how much time it takes to review the EAMR and get it to the Board for approval. Jacqui Andrade stated that this project is moving faster than most. Design wasn't supposed to start until 2011, but the design was advanced to 2009. Dean Papajohn mentioned that typically the County takes over a year to go from zero Design to the 30% design in an EAMR, but this project is doing that under a year. The next CAC meeting is in January. If the CAC is willing it may be possible to meet sooner. In addition to the design documents, there are other activities that impact the start of construction. For example, the utilities will not relocate until plans are well developed. There is a lot of work for utilities. Also, right-a-way acquisition impacts construction dates. Even if the EAMR is done sooner it doesn't mean we are going to start construction sooner because of the time needed to accomplish these other activities. Eric Sibson showed a 4 page project schedule to the CAC.

Randall Abbey's Comment:

- He has informed neighbors about the project and now feels that announcing a different date for the EAMR is saying something different and the project team will loose capital with the neighborhood.

Dean Papajohn's Response:

- The key date is to get construction started in 2012 or sooner. This is still the case. Completion dates for interim activities may be completed ahead of or behind schedule, but the team is committed to having design documents ready for construction by 2012. We are on target to meet this schedule, so this should not be a point of concern with the neighborhood.

DeDe Betten Question:

- Is it 18 months for construction from start to finish?

Dean Papajohn's Response

- Yes

Conclusion of Meeting

Dean Papajohn thanked the CAC for their input and asked the Design Team to stay after the meeting to speak to anyone who had questions. Also, the Open house will be held in December.

La Cholla Boulevard:
Magee Road to Tangerine Road

Agenda

La Cholla Boulevard: Magee Road to Tangerine Road

Community Advisory Committee (CAC) Meeting
Tuesday, December 8, 2009
6:00-8:00 p.m.
Grace Community Church, 9755 N. La Cholla Blvd.

1. **Welcome** (5 min., Dean Papajohn)

2. **Review of Open House** (10 min., Dean Papajohn)

3. **Presentation of Noise analysis** (45 min., Bill Holiday)

4. **Schedule** (10 min., Dean Papajohn)

Activity	**Tentative Schedule, June 30, 2009**	**Tentative Schedule, Dec. 8, 2009**
15% concept plans	January 2010	January 2010
Draft Design Concept Report	February 2010	February 2010
Final Design Concept Report	April 2010	April 2010
Draft Noise Report	November 2009	November 2009
Final Noise Report	December 2009	December 2009
Draft EAMR	December 2009	March 2010
Final EAMR	March 2010	April 2010
CAC EAMR letter	March 2010	May 2010
EAMR to BOS		June 2009
Start construction	2012	Late 2011 or 2012

- Schedules are listed as tentative due to variables outside the control of DOT, including unforeseen field conditions, permit approvals from outside agencies like the Army Corps of Engineers, and coordination with outside utility agencies.
- The RTA plan had the start of design between 2011 and 2016. The County requested to advance the project and begin design in 2009.

5. **Questions/ Discussion** (15 min., All)

4RTLTM
La Cholla Blvd: Magee to Tangerine
CAC Meeting

SUMMARY TUESDAY, DECEMBER 8, 2009 TIME:6:00 PM–7:30 PM LOCATION: Grace Community Church, 9755 N. La Cholla Blvd.

TYPE OF MEETING	Community Advisory Committee Meeting
FACILITATOR	Dean Papajohn
ATTENDEES	**Community Advisory Committee (CAC) Members Present:** Barbara Wisot Bob Iannarino Brent Bartz Danny Goldmann DeDe Betten Fred DiNoto John L. Reynolds John Lakey Robert Ewens Ronald J. Staub, PE **CAC Members Not Present:** Andrea Calabro Loren B. Christenfeld Randall Abbey Thomas Tucker **Interested Parties/Community Members:** Ed & Ellen Stephenson Kathryn & William **Pima County Team Members:** Dean Papajohn, Project Manager Eric Sibson, Project Manager Rick Ellis, Engineering Design Division Head Jackie Andrade, Supervisor Ann Day's Office, District 1 Julie Simon, Community Relations Program Coordinator **Oro Valley:** Jose Rodriguez, Engineering Division Manager **URS Group:** J.P. Charpentier, Environmental Planner **Sound Solutions:** Bill Holliday, Acoustical Engineer
DISCUSSION	**La Cholla Blvd: Magee Road to Tangerine Road Project**

Agenda

1. Welcome (Dean Papajohn)
2. Review of Open House (Dean Papajohn)
3. Presentation of Noise Analysis (Bill Holliday)
4. Schedule (Dean Papajohn)
5. Questions/Discussion (All)

1. Welcome

The meeting was called to order at 6:00 p.m. by Dean Papajohn. Mr. Papajohn extended a thank you to Grace Community Church for allowing the County to utilize their facility. Mr. Papajohn also indicated to the committee that they would be updated about the Open House that was held at this same location on December 1, 2009. He further indicated that several individuals attended the open house and provided feedback on the project.

Mr. Papajohn introduced all the project team members and extended a welcome to all the community members that were present.

2. Review of Open House

Mr. Dean Papajohn provided the CAC with an overview of the Open House held Tuesday, December. 1, 2009. He indicated that he was pleased with the attendance. Approximately 50 individuals attended the open house. This open house allowed the project team to discuss the project with community members and explain the preliminary plans for this project. The following feedback was received at the open house:

- **Positives:** All weather access over the CDO wash, which includes the construction of a new bridge. Individuals were anxious to know when construction was going to begin. Individuals were pleased with the expansion to 4 lanes allowing for an increase in capacity, implementation of turn lanes, and improved access, paved shoulders for bicycles, improvement to site distances (especially when traveling over the hills and dips along La Cholla), landscaping, medians, and recreational paths. Several individuals commented on that they liked how the new multiuse path would tie into the linear park that was recently built and the Magee Intersection Project, as well as how the multiuse path would increase the safety of pedestrians along La Cholla.
- **Concerns:** The increase of traffic, noise levels, and accessibility to Lucero. Individuals expressed their concerns regarding a median opening or access to Lucero. Attendees were advised that the traffic engineer was looking into providing access onto Lucero. An additional access point that brought up some concern was at Fairfield La Cholla Hills. Mr. Fred DiNoto, a representative for Fairfield La Cholla Hills, mentioned that several individuals from that area expressed their desire to have a traffic signal installed at that location. Mr. DiNoto was advised that the County's Traffic Engineers have conducted a study of this area and that the current traffic volumes do not warrant the installation of a traffic signal. The major concern of residents in this area is not necessarily traffic volumes but the wait time that may be experienced by individuals trying to access La Cholla. The County's Traffic Engineer will look into this matter and try to determine what kind of wait times might be experienced my motorists.

Mr. Papajohn asked those CAC members that attended the open house if there was any feedback they wanted to share with the other CAC members.

Mr. Bob Iannarino provided the following feedback. He indicated that it would be beneficial to provide citizens with some dialogue by responding to the feedback received at that meeting. He indicated that representative from the Bluffs subdivision were concerned with the increase of noise. He further expressed his concerns about attendance at the CAC meetings by CAC members. As CAC members, we are liaisons in the community; lack of attendance could jeopardize that communication. Staff was asked to send out a reminder message two days before the CAC meetings in the future. Mr. Iannarino further expressed his support to move forth with the project.

Mr. Ronald Staub provided the following feedback: Individuals had concerns with noise mitigation, drainage, and access. The access to Lucero was a major concern.

Mr. Fred DiNoto provided the following feedback: He felt that there was good representation from the community. Individuals were concerned with noise and signal lights. He also feels that attendance is not adequate.

Robert Ewens indicated that he was concerned with the fact that he did not receive notice about the open house.

Mr. Papajohn indicated that if the attendance at future CAC meetings continues to dwindle, staff will evaluate the situation. He extended his appreciation to all CAC members for their participation. All CAC members serve on a voluntary basis and currently we have a strong committee, but in the future if we find that CAC members may not be able to continue with the group we will look at the possibility of replacing that individual as necessary.

Mr. Papajohn indicated that at the open house there were several inquiries about the noise study and noise mitigation. Tonight staff will be presenting Part II of the Noise Analysis. Mr. Papajohn introduced Mr. Bill Holliday. Mr. Holliday previously presented the noise process for the noise analysis. Tonight he will share the results of that process. It is the staff's intention to conduct further dialogue with the community, especially to La Cholla Hills, and other HOAs regarding these findings.

3. Presentation of Noise Analysis

Mr. Bill Holliday addressed the committee about the noise study process: (a copy of this noise analysis will be made available on the project website at a later date). A copy of the Draft Noise Analysis Report was provided to each member of the CAC. The noise model used was approved by the Federal Highway Administration. It is used to predict current and future noise and utilizes the following criteria for mitigation to be considered:

- A reduction of at least 5dBA must be achieved at noise sensitive receivers.
- The barrier must benefit two or more adjacent receivers.
- Using a cost of $25/sf, the cost of the barrier will not exceed $35,000 per benefitted receiver.
- A majority of the property owners must approve the mitigation.
- Mitigation is only for the first floor of multi-story residences.
- Barriers must be less than 10 feet tall.
- No mitigation will be provided for undeveloped properties unless building permits have been issued prior to the final EAMR.

This phase of the study only includes La Cholla Boulevard from Magee Road to Lambert Lane. It does not include those areas that fall within Oro Valley's phase of the project; no receivers within Oro Valley were identified. It was noted that Tacolote De Oro is not in Oro Valley. The noise report recommends consideration of two walls in front of Fairfield Hills. Twenty five predictions locations were used in the study. Traffic volumes from the Traffic Study were used in the noise analysis. In general, the barrier height is effective in blocking noise if it blocks the line of site. To be considered effective a barrier must provide a 5dBA reduction. The second row of houses does not get this level of reduction even if a wall were constructed. Properties impacted by a noise barrier get to vote on whether a wall is desirable. Over 50% of the vote is needed to approve a wall. Individuals can not veto a wall near them since breaks in the wall reduce the wall's effectiveness. Page 7 of the report shows a reduction in future traffic volumes on Overton Road. This might be due to vehicles using the improved La Cholla with a bridge rather than Overton without a bridge. Undeveloped properties are not considered eligible for mitigation. If there are any recommendations for noise barrier walls, these should be included in the EAMR. Board Approval of the EAMR is anticipated in the summer of 2010. Weather conditions are used as input in the noise model. The model is conservative in that it uses noise levels at the high range not the low or average. Rubberized asphalt provides noise mitigation for all properties along the project as well as for the drivers.

Figures 5 and 6 are similar to figures 3 to 4, but include an overlay of the proposed future alignment. Figure 5 shows the two barrier locations at Fairfield. The prediction results for the 22 locations that are in Pima County are on page 19. Three receiver locations were modeled where the walls are to be considered. The bridge was modeled with and without rubberized asphalt and no change in the results was noted. Traffic signal locations are input into the model. No new signalized intersections are planned. Table 6 shows proposed height and length of potential noise barrier walls. Table 5 shows three areas in Oro Valley

that exceed ADOT decibel requirements. However, barriers aren't feasible because they are isolated receivers and driveways place breaks in the walls that hinder mitigation.

On a hill vehicles may accelerate and decelerate thus creating additional noise. The model does not take into account potential turn lanes for future subdivisions. The report makes recommendations on how to mitigate construction noise. The appendices include references and some acoustic terminology.

Mr. Papajohn inquired as to whether the committee had any questions regarding the results of the study.

Mr. John Reynolds asked if the results made sense. Were you surprised by the results or did you see what you expected to see?

Mr. Holliday responded. Yes, more or less. La Cholla Hills was so elevated. With the model we only look at the first floor receivers, we only consider the first story.

Mr. Iannarino inquired: What about the Bluffs? They have the closest proximity to the road way.

Mr. Holliday responded: Parts of the Bluffs already have barriers. Measurements are taken in the patio areas in the back yards which are behind the barriers. With the existing mitigation, the results didn't exceed the threshold levels.

Mr. Robert Ewens inquired: Did you measure the Bluffs behind the walls of the homeowners? The walls are 6 ft tall? You didn't measure at the top of the wall, but behind the wall?

Mr. Holliday responded: Yes, all the measurements were made 5 ft off the ground behind the wall.

Mr. Ewens inquired: What was the noise level in front of the wall?

Mr. Holliday responded: Similar to other stretches of La Cholla. We did do some prediction locations at undeveloped parcels or in other sections that didn't have any barriers. There weren't a lot of properties with walls already.

Mr. Iannarino inquired: One section of the Bluffs is at the corner of La Cholla and Overton; it is closest to the intersection. Will they have noise problems?

Mr. Holliday responded: There are two story homes there. Mitigation is for the first story only. Noise levels don't require mitigation. At the Bluffs and at Country Club Apartments there are no barriers at the entry points and no chance of there being barriers because of the entrance. However, the rubberized asphalt mitigates noise even with an increase in traffic volumes in the future.

Mr. Reynolds inquired: Looking farther north in the area south of Lambert, you got predicted locations up against houses. You took measurement at the street, correct?

Mr. Holliday responded: Some of them are just predictions. Where there are circles, they are just predictions.

Mr. Reynolds inquired: You took the measurements at the street level for those, correct?

Mr. Holliday responded: They were taken the same distance from the road. If the residence is 300 feet from the road, then the prediction locations were taken at that distance. They are not closer to the road than the rest.

Mr. Iannarino inquired: Are these the only types of mitigation?

Mr. Holliday responded: Mitigation that blocks the line of site is the best. Vegetation won't do.

Mr. Ronald Staub inquired: Is the best mitigation a block wall?

Mr. Papajohn responded: Other mitigation may not be feasible. Shifting the road to one side only pushes

the noise closer to someone else. Lowering the road can cause drainage problems. Rubberized asphalt is the most common noise mitigation. The possible wall at Fairfield may cause a loss in the existing vegetation that currently serves as a nice buffer.

Mr. Eric Sibson addressed the committee: Other issues impacting types of mitigation include utilities close to the right-of-way as well as the mature vegetation.

Mr. Papajohn added: We will meet with Fairfield and allow the affected property owners to vote whether they want a wall or not. There are approximately two dozen properties. The vote is taken one time before the constructions starts. Before the meeting, the approximate wall location can be marked in the field. The wall will likely be a concrete block wall of one solid color.

Mr. Iannarino inquired: Did you model the proposed service road in front of the Bluffs?

Mr. Holliday responded: Yes.

4. Schedule

Dean Papajohn reviewed the schedule shown on the agenda. Mr. Papajohn asked if there were any comments or questions. Mr. Iannarino wanted to know when the CAC will have access to the EAMR. The CAC is already seeing the information that will go into the EAMR, including the noise report, traffic study, and preliminary roadway plans. Barbara Wisot asked about the Equestrian Survey. Ten to twelve responses were received so far. We phoned a number of the respondents to get more detailed information. Mr. Iannarino asked if there were any surprises with utilities. DOT has been in contact with all the utilities for several months. Metro has a well site that will need to be relocated.

The next meeting is anticipated to be in February.

La Cholla Boulevard:
Magee Road to Tangerine Road

Agenda

La Cholla Boulevard: Magee Road to Tangerine Road

Community Advisory Committee (CAC) Meeting
Tuesday, February 16, 2010
6:00-8:00 p.m.
Grace Community Church, 9755 N. La Cholla Blvd.

1. **Welcome** (5 min., Dean Papajohn)

2. **Review of meetings with Fairfields La Cholla Hills** (10 min., Dean Papajohn & Fred DiNoto)

3. **Presentation of Stage I (15%) roadway and drainage design** (20 min., Eric Sibson)

4. **Presentation of Traffic Engineering** (15 min., Quinn Castro)

5. **Project documents** (10 min., Dean Papajohn & Eric Sibson)

    - Draft DCR
    - Draft EAMR
    - Stage I roadway plans and cross sections
    - Stage I Right-of-Way plans
    - Stage I Drainage Report
    - Bridge Selection Report
    - Noise Analysis Report
    - Draft Traffic Report
    - Draft Geotechnical Report
    - Biological Report
    - Preliminary Site Assessment Report
    - Cultural Resources Report
    - Jurisdictional Delineation submittal to ACOE
    - Phase I Environmental Site Assessment

6. **Schedule** (10 min., Dean Papajohn)

Activity	**Tentative Schedule, Feb. 16, 2010**
Draft Design Concept Report	February 2010
Final Design Concept Report	April 2010
Draft Noise Report	November 2009
Final Noise Report	December 2009
Draft EAMR to DOT	February 2010
Draft EAMR to CAC	March 2010
Final EAMR	April 2010
CAC EAMR letter	May 2010
EAMR to BOS	June 2010
Start construction	Late 2011 or 2012

- Schedules are listed as tentative due to variables outside the control of DOT, including unforeseen field conditions, permit approvals from outside agencies like the Army Corps of Engineers, and coordination with outside utility agencies.
- The RTA plan had the start of design between 2011 and 2016. The County requested to advance the project and begin design in 2009.

7. **Questions/ Discussion** (15 min., All)

4RTLTM
La Cholla Blvd: Magee to Tangerine
CAC Meeting

SUMMARY TUESDAY, FEBRUARY 16, 2010 TIME: 6:00-7:30 PM LOCATION: Grace Community Church 9755 N. La Cholla Blvd.

TYPE OF MEETING	Community Advisory Committee Meeting
FACILITATOR	Dean Papajohn
ATTENDEES	**Community Advisory Committee (CAC) Members Present** Fred DiNoto Robert Ewens DeDe Betten Bob Iannarino John L. Reynolds Barbara Wisot Randall Abbey John Lakey Danny Goldmann Roland J. Staub, PE Brent Bartz **CAC Members Not Present** Andrea Calabro Dallas & Carmen Bigelow Jane Perry Loren B. Christenfeld Thomas Tucker **Pima County Team Members** Dean Papajohn, Project Manager Eric Sibson, URS Julie Simon, Community Relations Program Coordinator Quinn Castro, Traffic Engineering **URS Group:** Eric Sibson, Project Manager **Sound Solutions:** Bill Holliday, Acoustical Engineer
DISCUSSION	**La Cholla Blvd: Magee Road to Tangerine Road Project**

1. **Welcome** (5 min., Dean Papajohn)
2. **Review of meetings with Fairfields La Cholla Hills** (Dean Papajohn & Fred DiNoto)
3. **Presentation of Stage I (15%) roadway and drainage design** (Eric Sibson)
4. **Presentation of Traffic Engineering** (Quinn Castro)
5. **Project documents** (Dean Papajohn & Eric Sibson)
    - Draft DCR
    - Draft EAMR
    - Stage I roadway plans and cross sections
    - Stage I Right-of-Way plans
    - Stage I Drainage Report
    - Bridge Selection Report
    - Noise Analysis Report
    - Draft Traffic Report
    - Draft Geotechnical Report
    - Biological Report
    - Preliminary Site Assessment Report
    - Cultural Resources Report
    - Jurisdictional Delineation submittal to ACOE
    - Phase I Environmental Site Assessment

1. Welcome

Dean Papajohn addressed the committee and welcomed them to tonight's meeting. Mr. Papajohn equated a quote by Albert Einstein "Life is like riding a bicycle you have to keep moving in order to keep your balance" to the progress of this roadway project. Mr. Papajohn directed the Committee to item #5 of the agenda. He indicated that at tonight's meeting CAC members will begin receiving the initial results and studies of these reports.

2. Review of meetings with Fairfields La Cholla Hills

Mr. Papajohn briefly discussed the outcome of two meetings held with the Fairfields at La Cholla Hills community. The first meeting was held on Thursday January 21, 2010. This meeting was held to present and discuss noise mitigation and potential location of sound barrier walls for those residents that live on Candlewood Loop and Breezewood Place. There were two voting groups; one group included all the residents on Breezewood Place. The second group included the residents on Candlewood Loop. A margin of 50% in agreement was required from each group in order to construct a wall. The north wall along the Candlewood Loop section has been approved for a barrier wall. Staff is still waiting final voting from those residents along the Breezewood section. The second meeting was held on Tuesday February 9, 2010, with the entire Fairfield at La Cholla Hills community. This meeting was held to present and discuss the planned access into the Fairfield at La Cholla Hills community. Mr. Papajohn further discussed some of the concerns presented at the February 9th meeting. Some of the major concerns included ingress/egress into Fairfields. Several residents expressed the need to have a traffic signal installed for access into Fairfields. The County project team has been working on determining if a traffic signal is warranted at that location. Quinn Castro, from Traffic Engineering, will be giving the committee an update on this item later on in the meeting.

Mr. Fred DiNoto addressed the committee advising them that the project team did an excellent job presenting the project and that there was a high level of community participation. Some of the community concerns he received involved a signal light at Fairfield. Some residents felt strongly about having a signal at Fairfield. Other concerns were graffiti on the walls. Mr. DiNoto congratulated Dean on his attention to the residents. A majority of the residents were pleased with the project even though there would be no signal light.

Mr. Papajohn informed the committee that on March 2nd the project team will be meeting with the residents from the Bluffs to discuss access. The team will also be meeting with residents along Lucero to discuss the impact the project will have to there area. That meeting date is yet to be determined

3. Presentation of Stage 1 (15%) roadway and drainage design

Mr. Eric Sibson addressed the committee. Mr. Sibson discussed the project elements: 50 mph design with a speed posted at 45 mph. Typical Section Elements, 11' lane with 6' shoulders; Two way Frontage roads; curbing throughout; 4:1 slopes typical, in some areas steeper; slope protection will be necessary: La Cholla will be rubberized asphalt. Drainage would require construction to accommodate a 100 year flow, this includes box culverts, open channels, and culverts at drip crossings; pavement will have catch basins for storm drainage in the 10 year event. There are specific areas that will require additional work. The configuration at the Bluffs includes a two way access road. The bridge elevation will affect the site distance in this area. The geometry of the road is a straight alignment. The only exception is that the bridge will shift to the east in order to construct a two way access road. Earthwork will require embankment for the bridge. The project will require the Right-of-Way acquisition of 44 acres. Mr. Papajohn added that as the project is being prepared the County tries to not acquire any property that is not needed. Mr. Sibson continued by stating several one-on-one discussions have taken place with property owners about ROW acquisition. Retaining walls will be 9-10 feet tall. The Bridge will be 6 spans (600 feet). The Bridge will have an approximate 51 degree skew. No rubberized asphalt will be used on the bridge surface. Soil cement will wrap around the bridge. It will not continue upstream.

One utility location that has been identified for relocation is a metro water well site. Other utility coordinations include Comcast, Pima County Wastewater (manhole adjustments), Qwest, Southwest Gas and TEP's relocation of overhead power poles. Pot holing for utilities is being planned now. One construction scenario could be to complete the work in three phases: the first phase will be the south bound section of roadway. Phase two will be the north bound section. Third phase will be the medians. Construction phasing will be determined by the contractor at the time of construction.

4. Presentation of Traffic Engineering

Ms. Quinn Castro addressed the committee. Pima County looks at a 20 year outlook in order to project the numbers of users that will be using this roadway in the future. These numbers come from different studies, such as Oro Valley and Pima Association of Governments. These numbers also come from looking at parallel roadways (i.e. La Canada, Thornydale, Shannon) and can be applied to what we are looking at here. Some of the numbers were changed and a more conservative estimate was done for the south portion of the project. However, the numbers received from Oro Valley were used for the north portion which is located in Oro Valley. Several traffic studies were done throughout the corridor to see if a traffic signals or dual turn lanes were warranted. These studies showed that no additional traffic signals are warranted. The roadway design calls for a median that will be between the north and south directional lanes. There will be a 20 foot wide median. These mediums will provide left and right turn access to smaller intersections as well as u- turn access. Staff looked at all of the intersections. They looked at vehicles heading through the intersections, left hand turns, and right hand turns, to determine the projected volume and to determine if additional traffic signals were warranted or if a dual turn lanes were warranted. The current projections do not warrant the installation of any additional traffic signals. For all the intersections there will be dedicated lefts for all north and dedicated rights for southbound traffic. This will alleviate any back up situations that people are experiencing now.

Mr. Papajohn asked the committee if they had any more questions about any of the activities/overview. On March 16th the committee will receive a Draft of the Design Concept Report (DCE), as well as the Environmental Assessment and Mitigation Report (EAMR).

Mr. Papajohn Dean closed the meeting and advises CAC Members that staff will remain to answer any questions they have.

La Cholla Boulevard:
Magee Road to Tangerine Road

Agenda

La Cholla Boulevard: Magee Road to Tangerine Road

Community Advisory Committee (CAC) Meeting
Tuesday, March 16, 2010
6:00-8:00 p.m.
Grace Community Church, 9755 N. La Cholla Blvd.

1. **Welcome** (5 min., Dean Papajohn)

2. **Review of meetings with the Bluffs Subdivision** (10 min., Dean Papajohn & Bob Ewens)

3. **CAC Review Letter** (5 min., Dean Papajohn)

4. **Presentation of the Design Concept Report (DCR)** (20 min., Eric Sibson)

5. **Presentation of the Environmental Assessment and Mitigation Report (EAMR)** (25 min., JP Charpentier)

6. **Schedule** (10 min., Dean Papajohn)

Activity	Tentative Schedule
Draft EAMR & DCR to CAC	March, 16 2010
CAC discussion	March ?
Open House	March 30, 2010
CAC Meeting	April 6, 2010
CAC Review letter	April 13 or sooner
Revisions to EAMR & DCR	April 2010
1 month public comment	May 2010
EAMR to BOS for approval	June 2009
Start construction	Late 2011 or 2012

? = Date(s) to be determined by the CAC.

- Schedules are listed as tentative due to variables outside the control of DOT, including unforeseen field conditions, permit approvals from outside agencies like the Army Corps of Engineers, and coordination with outside utility agencies.
- The RTA plan had the start of design between 2011 and 2016. The County requested to advance the project and begin design in 2009.

7. **Questions/ Discussion** (15 min., All)

4RTLTM
La Cholla Blvd: Magee to Tangerine
CAC Meeting

SUMMARY TUESDAY, MARCH 16, 2010 TIME: 06:00 PM–7:30 PM LOCATION: Grace Community Church 9755 N. La Cholla Blvd.

TYPE OF MEETING	Community Advisory Committee Meeting
FACILITATOR	Dean Papajohn
ATTENDEES	**Community Advisory Committee (CAC) Members Present** Fred DiNoto DeDe Betten John Reynolds Randy Abbey Bob Ewens John Lakey Barb Wisot Ron Staub Bob Iannarino **CAC Members Not Present** Andrea Calabro Brent Bartz Loren B. Christenfeld Thomas Tucker **Pima County Team Members** Dean Papajohn, Project Manager Carol Brichta, Community Relations Program Coordinator Quinn Castro, Traffic Engineering Rick Ellis, Pima County Dept of Transportation **URS Group:** Eric Sibson, Project Manager J.P. Charpentier, Environmental Planner/Biologist
DISCUSSION	**La Cholla Blvd: Magee Road to Tangerine Road Project**

Welcome

Dean Papajohn welcomed everyone and reminded the committee what their objective is. Their objective is to review the reports given to them and provide the information back to the Pima County Board of Supervisors with their likes and dislikes and what could be different.

Introduction

Staff
Dean Papajohn – PCDOT
Carol Brichta – PCDOT
Eric Sibson – URS
J.P. Charpentier – URS
Rick Ellis – PCDOT
Quinn Castro - PCDOT

CAC Members
Fred DiNoto – President of La Cholla Hill's HOA
DeDe Betten – Canada Hills
John Reynolds – Tecolote De Oro
Randy Abbey – East of La Cholla, near McCarty Road
Bob Ewens – Community Association for the Bluffs
John Lakey – West of La Cholla and north of Overton
Barb Wisot – Omni
Ron Staub – Alta Mira
Bob Iannarino – Canada Ridge

1. Review of meetings with the Bluffs Subdivision

Mr. Dean Papajohn provided an update of the meeting with the Bluffs Subdivision that was held approximately a week ago. There was good feedback about the access design and there was concern about potential noise.

Mr. Bob Ewens was also at the Bluffs Subdivision meeting and he shared some information with the group. Mr. Ewens mentioned that there was concern about the height of the bridge being 22 feet, lighting at the Bluffs entry, northbound movements out of the Bluffs subdivision, and drainage issues at the east side of the Bluffs.

Mr. Bob Iannarino mentioned that the team was commended on handling ingress and egress. Some people also commented on the noise made by the steel grate near Fairfields La Cholla Hills.

Mr. Eric Sibson addressed the committee. The design team is looking at options to see if this steel grate over a box culvert can be changed. It is a challenge because the drainage is so shallow.

Bob Ewens inquired if there will be an answer regarding the grate by the open house.
Mr. Sibson responded. The drainage engineer will be at the open house to respond to questions, even if the final solution to this drainage issue hasn't been determined.

Mr. Papajohn mentioned that there will be a meeting with the Lucero neighborhood held at the Alive Church on Mach 23, 2010.

2. CAC Review Letter

Mr. Papajohn provided a sample letter to the CAC as a reference to assist them in composing their letter to the Board of Supervisors detailing their response to the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Blvd. Dean mentioned that an Open House is scheduled for March 30th. A comment form was mailed to property owners within a half mile of the project and the comment form is available on the project website. Our goal is to have a draft EAMR review letter ready by the April 6th CAC Meeting. In addition to discussing the EAMR review letter on April 16, we will meet with Artist. If the draft letter looks

good by April 6, then the goal is to have the final letter by April 13th.

Mr. Iannarino inquired as to whether that was the final letter? What about the art design?
Mr. Papajohn responded. The EAMR letter does not have to include comments on art since the art concepts have not been developed yet. The CAC will be expected to provide information and feedback to the artist.

Ms. Wisot inquired. Is there a separate committee to work with the artist?
Mr. Randall responded. There was a special committee to select the artist. The CAC will work with the artist on the actual art design.

Mr. Staub inquired as to whether the CAC has any control or input on the construction phasing?
Mr. Sibson responded. The phasing concept is in the Design Concept Report (DCR).

Mr. DiNoto inquired. Do you know the time frame of the construction of the bridge?
Mr. Papajohn responded. It is up to the contractor to set up the construction schedule. It partially depends when we go out to bid. For example, if we have a construction contract in August they are going to wait a couple of months to start the bridge, because they will not want to start it during the monsoon season.

Mr. John Lakey inquired. The design has pedestrian walk ways, but are there any other crossings?
Mr. Sibson responded. Pedestrian crossings occur approximately every quarter mile.

Mr. Iannarino inquired. Will the pedestrian crossings be signalized or striped?
Mr. Sibson responded. Crossings at major intersections will be signalized and striped. Other crossings not at major intersections will not be signalized or striped.

Mr. Papajohn mentioned that the handout that was given to them is the Online Feedback from the public that has been collected so far.

3. Presentation of the Design Concept Report

Mr. Sibson went over the Design Concept Report (DCR) in detail.

Ms. Wisot inquired. What is the timeline for property acquisitions?
Mr. Papajohn responded. For acquisitions we wait until we have Board of Supervisor (BOS) approval.

Additionally it was mentioned that the Magee Intersection project is expected to start construction in early 2011.

4. Presentation of the Environmental Assessment and Mitigation Report (EAMR)

Mr. J.P Charpentier gave a detailed presentation about the EAMR that covered the Pigmy Owl, Native plants, Army Corps of Engineers review, flood plain, bridge, construction, air quality, and dust control. There are two locations that warrant walls for noise mitigation.

Ms. Wisot inquired. Does the Town of Oro Valley have a different noise ordinance?
Mr. Charpentier responded. Yes, they follow ADOT standards.

Other issues that were discussed were Hazardous Materials, DCR and the CAC review letter.

5. Schedule

Mr Papajohn went over the tentative schedule of meetings, activities and due dates. He explained that the Environmental report is approved by the Board of Supervisors; it should be the focus of the review letter. Dean explained that the Environmental report is based on the Design Concept report. The Environmental report is what J.P. Charpentier reviewed with the CAC members. The Design Concept report is more of a Technical report and that goes to the Director of the Department of Transportation for approval. The Army Corp of Engineers reviews the jurisdictional delineation of washes.

The CAC members talked about a location to meet to discuss their review of the EAMR. Ms. Brichta will work with Bob to find a location for CAC members.

CAC members inquired about the walls going up and the removal of vegetation. Mr. Papajohn reminded the group that the design team will look at the slopes to see if they are stable and whether they can be seeded or planted. Also, it was mentioned that the EAMR is not intended to provide a final landscape concept – that comes in the final design stages. The Artist & Landscape Architect will develop concepts and they will share it with the CAC for feedback.

The CAC discussed how to conduct their review of the EAMR.

Mr. Papajohn closed the meeting.

La Cholla Boulevard:
Magee Road to Tangerine Road

Agenda

La Cholla Boulevard: Magee Road to Tangerine Road

Community Advisory Committee (CAC) Meeting
Tuesday, April 6, 2010
6:00-8:00 p.m.
Grace Community Church, 9755 N. La Cholla Blvd.

1. **Welcome** (5 min., Dean Papajohn)

2. **Review of meetings** (10 min., Dean Papajohn)
   - Lucero neighborhood and Alive Church
   - Open House

3. **CAC's EAMR review letter** (15 min., Ron Staub)

4. **Discussion of public art and landscape design** (45 min., Steven Weitzman and Laura Mielcarek)

5. **Schedule** (10 min., Dean Papajohn)

Activity	Tentative Schedule
Open House	March 30, 2010
CAC Meeting	April 6, 2010
CAC Review letter	April 13 or sooner
Revisions to EAMR & DCR	April 2010
1 month public comment	May 2010
EAMR to BOS for approval	June 2009
Start construction	Late 2011 or 2012

   - Schedules are listed as tentative due to variables outside the control of DOT, including unforeseen field conditions, permit approvals from outside agencies like the Army Corps of Engineers, and coordination with outside utility agencies.
   - The RTA plan had the start of design between 2011 and 2016. The County requested to advance the project and begin design in 2009.

6. **Questions/ Discussion** (15 min., All)

4RTLTM
La Cholla Blvd: Magee to Tangerine
CAC Meeting

SUMMARY TUESDAY, APRIL 6, 2010 TIME: 06:00 PM–7:45 PM LOCATION: GRACE COMMUNITY CHURCH 9755 N. La Cholla Boulevard

TYPE OF MEETING	Community Advisory Committee Meeting
FACILITATOR	Dean Papajohn
ATTENDEES	**Community Advisory Committee (CAC) Members Present** Barbara Wisot Brent Bartz Danny Goldmann DeDe Betten Fred DiNoto John Lakey John Reynolds Robert Ewens Ronald Staub **CAC Members Not Present** Andrea Calabro Bob Iannarino Loren B. Christenfeld Randall Abbey Thomas Tucker **Pima County Team Members** Dean Papajohn, Project Manager Jacque Andrade, Supervisor Ann Day's Office, District 1 Julie Simon, Community Relations Program Coordinator Rick Ellis, Pima County Department of Transportation Xavier De La Garza, Pima County Department of Transportation **URS Corporation** Eric Sibson, Project Manager **Creative Design Resolution** Steven Weitzman Nancy Lamon-Kritikos **Wheat Scharf Associates** Laura Mielcarek **Tucson Pima Arts Council (TPAC)** Sally Krommes
DISCUSSION	**La Cholla Blvd: Magee Road to Tangerine Road Project**

1. Welcome / Introduction

Mr. Dean Papajohn expressed his gratitude to the CAC members for their active participation in the project. He then provided background information on the artist and landscape architect. The following introductions were made:

Laura Mielcarek, Wheat Scharf Associates, landscape architect for the project
Steven Weitzman, Creative Design Resolutions, artist
Nancy Lamon-Kritikos, Creative Design Resolutions
Julie Simon, Pima County Department of Transportation (PCDOT)
John Lakey, Living off of Cresta Rd., west of La Cholla Blvd.
Barbara Wisot, Living in Omni Tucson National
Bob Ewens, Community Association for the Bluffs
Fred DiNoto, Fairfields La Cholla Hills
Ron Staub, Alta Mira
Danny Goldman, Omni Tucson National
Brent Bartz , Northwest Bible Church
John Reynolds, representing Tecolote Del Oro
DeDe Betten, Canada Hills
Eric Sibson, URS
Rick Ellis, PCDOT, Division Manager Design Engineering
Jacque Andrade, Supervisor Ann Day's Office, District 1
Xavier De La Garza, Pima County Department of Transportation
Sally Krommes, TPAC

2. Review of Meetings

Mr. Papajohn recapped the Lucero neighborhood meeting that was held March 23, 2010. Mr. Papajohn mentioned that the Lucero neighborhood requested a median opening at Lucero and the project plans have been revised to include that median opening. Additionally, the County recommends providing a driveway to Lucero for the Alive Church for safety reasons. This was a concern that the Lucero neighborhood had, but the Lucero neighborhood understands now that with the 4-lane divided roadway there is a need to provide a safe access for church ingress/egress. Lucero may experience more traffic, but it will make the intersection at La Cholla and Lucero safer for the residents on Lucero as well as the Church.

Mr. Papajohn mentioned that there were approximately 80 people present at the Open House last week. He thanked Supervisor Ann Day and her staff for their involvement on the project and their attendance at many meetings. At the Open House the following exhibits were presented: roadway, right-of-way that is needed, drainage, bridge structure, and environmental issues. There was positive feedback given about the project, but some individuals do not want the project to start until La Canada is finished. Other individuals want the project to start as soon as possible. Mr. Papajohn reminded the CAC members that the County's goal is to move forward to final design and get La Cholla to construction as quickly as possible.

Ms. Barbara Wisot inquired about the Magee intersection design.

Mr. Eric Sibson responded: the Magee intersection is at the 60% design stage. Construction is anticipated to start in early 2011.

Mr. Papajohn mentioned that residents in the La Cholla corridor expressed concerns about the south bound La Cholla to east bound Magee turn movement.

Mr. Rick Ellis addressed the CAC about the movement on Magee east bound. Multiple lanes on La Cholla will help create more gaps in traffic thus improving the operation. Vehicles that turn east bound on Magee will come to a stop sign and be required to make a left turn onto the new portion of Magee. This movement will require two turns in the new configuration of Magee instead of the one that currently exists. There will be no left turn at the new traffic signal at the Magee jug handle. The traffic study indicates that a signal at east bound Magee is not warranted. The County can continue to monitor this intersection after construction.

Ms. Jacque Andrade talked about how the design team, the CAC, and public went through a time consuming and intensive review of this intersection to come up with this design.

Mr. Papajohn advised the CAC members that there will still be more CAC meetings and an Open House on the Magee project.

Mr. Ellis provided the date of the next Public Meeting for the Magee intersection, which is on May 6th.

Mr. Papajohn mentioned that if there was anyone on the CAC or people in their neighborhood that would like to be on the Magee Project mailing list, they can contact Julie Simon.

Mr. John Reynolds inquired as to where they could get the latest set of plan and profile drawings.

Mr. Papajohn responded that it is shown on the exhibit displayed at tonight's meeting as well as the exhibit which was available on March 30th at the open house. The full set of design plans is constantly being advanced and updated, and if specific information is wanted, the design team can provide it.

Mr. Fred DiNoto reiterated concerns about the Magee intersection.

Mr. Ellis reminded CAC members the importance of passing along all the feedback they received from residents.

Ms. Julie Simon responded that the Public meeting that is being held on May 6th will be at the Mesa Verde Elementary School.

Mr. Reynolds commented about the concerns expressed by individuals at the Open House about the noise walls.

Mr. Papajohn stated that the written feedback received from the Open House will continue to be updated by Julie Simon who will continue to provide current updates to the CAC members.

Mr. Ron Staub requested that item three on the agenda (CAC's EAMR review letter) be delayed until after the presentations by the Artist and Landscape Architect.

4. Discussion of public art and landscape design

Mr. Papajohn initiated the conversation on Art, Aesthetics, and Landscape and introduced Steven Weitzman and Laura Mielcarek. Mr. Papajohn also introduced Sally Krommes from Tucson Pima Arts Council (TPAC). Ms. Krommes coordinated the selection process for the artist. CAC members Randy Abbey and Jane Perry were the CAC volunteers for the artist selection panel and served with other art professionals on the panel. The purpose of tonight's meeting is to introduce the artist and landscape architect to the CAC, and for the CAC to share ideas, priorities, and values with the design team. Based on this, design concepts will be prepared and shared with the CAC later in the year.

Mr. Steven Weitzman addressed the committee. Mr. Weitzman indicated that he represents Creative Design Resolutions (CDR) an organization that focuses on public art for transportation infrastructure. Mr. Weitzman presentation consisted of a PowerPoint presentation which displayed numerous examples of various projects undertaken by CDR and he discussed the following elements of various projects:

1) Retaining Walls
The walls are part of a bas relief sculpture that is 25 feet high, and over 4 miles long. It was poured in place and it is one foot thick and 72 feet wide. These forms are reusable.

2) Bridges
Over the last 2 years Mr. Weitzman has designed and built 14 bridges for the state of Oklahoma.

3) Fotera
Cast, full color, structured concrete with recycled glass, stone, polymers, pigments, etc.
An example of a 2 mile walking project was displayed. Another project presented was of a plaza near the Washington Bridge.

4) Urban Environments
Example projects included metal sculptures (Fredrick Douglas, water workers, etc.), and fotera benches, etc.

Mr. Steven Weitzman inquired as to what type of bridge designs the CAC members would like to see constructed.

Mr. Bob Ewens pointed out the fact that he lives in the Bluffs subdivision and that the people that live behind where the bridge will be would probably like for the bridge to be as "invisible" as possible, but for it to keep the natural environment imagery.

Mr. John Lakey commented that in the future the roadway will be transitioning to urban, but he would like the bridge art style to be kept to a rural type feel, invisible but at the same time noticeable and interesting when you go by.

There was discussion between the CAC members and Mr. Weitzman concerning the surroundings such as the lighting, the dark skies and the proximity of Kitt Peak (astronomy observatory). People seeing or using the bridge include motorized vehicles, pedestrians, equestrian, bikes, and dirt bikes. The various views from which the bridge will be observed will occur from under the bridge, from neighbors near the bridge, drivers and walkers over the bridge. Discussion took place about individuals not wanting the noise barrier wall and that most individuals want the walls to blend into the environment preserving the view of the Golf Course. There was also discussion as to how the bridge could be illuminated, either on top or beneath. Safety is a key concern and lighting can be a part of that, i.e., pedestrians walking under the bridge. Lighting can also impact nocturnal animals. The color tan for the bridge was suggested.

Ms. Laura Mielcarek who works primarily on transportation projects. She has worked with Arizona Department of Transportation (ADOT) and is looking forward to working on a County project. She is also excited about applying Pima County's Environmentally Sensitive Roadway (ESR) guidelines for the La Cholla project. The ESR guidelines are intended to maintain a rural feel. She mentioned as far as the landscape architecture, her firm will be responsible for the planting plans, irrigation, hardscape, and possible water harvesting.

Mr. Danny Goldmann talked about walkers using CDO linear park. As homes sell, younger families are moving in and will want to access and use the linear park. Currently Omni visitors who like to jog are directed to the linear path. The linear path should accommodate equestrians and dog walkers in the future as well.

Ms. Mielcarek commented that a seating area at the entry to the linear park could be considered, with consideration of elements like paving patterns, rocks, and benches. A seed mix is developed based on a plant inventory of the roadway environment.

Ms. Wisot inquired: How do you develop your plan?

Ms. Mielcarek responded. First plantable areas are identified, then concepts are developed for areas based on the vegetation native to the area, then details and final plans are prepared. Limitations to landscape include utilities, utility access, site distance, and clear zone from the travel lanes.

Mr. John Lakey inquired: How do you design the median?

Laura Mielcarek responded. The County has specific guidelines for landscape design. Desert plants are used. For safety, no large trees are planted in the median.

Mr. Papajohn asked each CAC members to share their comments and suggestions about the public art and landscape design with Mr. Weitzman and Ms. Mielcarek, so they can have a clear understanding of what is desired for the project.

Mr. John Lakey suggested that they drive around town and see some of the existing projects. He indicated that some of the projects are uninteresting. One of his examples for them to view is the concrete block wall

on Thornydale south of Ina. He felt that this wall might be too decorative, but he liked the desert colors and the stone used on the pilasters.

Mr. Bob Ewens mentioned that art with photo tiles (located in the South Tucson and Downtown area) was not good for this part of La Cholla. He liked Mr. Weitzman's bridge examples. He liked the texture and relief, and the life they bring.

Ms. Wisot mentioned color and texture. She doesn't like the brightly colored walls on La Cholla north of River Road. She does like the walls on Overton across from Bluffs which use earth toned muted multicolored blocks.

Mr. Fred DiNoto indicated that he was impressed with Mr. Weitzman's samples; they are creative, living, and exciting. His art tells a story and is pleasing to the eye.

Mr. Danny Goldmann believes the art should be developed with the idea it will be viewed from different distances. It should spark interest from up close, but disappear from a distance.

Mr. Ron Staub emphasized that this part of La Cholla is leaving an urban area with shopping and transitioning to a rural area. The art should convey a sense of arrival and provide a transition between the two areas. Since graffiti occurs it should be easily repaired. The mountains called Pusch Ridge changes colors throughout the day and especially at sunset the red hues are striking. Light, color and shadows should be reflected in the art.

Brent Bartz had no comments.

Mr. John Reynolds was also impressed with Mr. Weitzman's examples. He pointed out that the environment on La Cholla transitions from a shopping mall, to the CDO Wash, to ranch and desert. He would like to see the art carry a story line. He would also like to see the art change during the day or by season. Mr. Reynolds mentioned that a bad example of retaining walls and art are the ADOT project at 12000 N. Oracle. The walls are tall and sterile and block the views.

Ms. DeDe Betten was impressed by the designs presented and thought they were spot on. She commented that although 4 lanes were needed along with the bridge, she wants the corridor to maintain a rural feel. She observed that the corridor is unique, it is very quiet, and has a distinct appeal. She wants this to be preserved as much as possible. In sum, it has a rustic elegance to it.

Mr. Weitzman expressed his gratitude to Dean, Sally, Laura and everyone involved. He thanked the CAC members for their input.

5. Schedule

Dean Papajohn reviewed the schedule listed on the agenda.

3. CAC's EAMR review letter

Ron Staub talked about the meeting that the committee had a few weeks ago. He mentioned that he and Bob Iannarino worked on putting together the EAMR draft letter. Mr. Staub distributed the letter to the CAC members present. The CAC quickly skimmed the letter. Mr. Papajohn asked if Mr. Staub would like to go over the items in the letter with the CAC at this time. Instead, Mr. Staub asked the CAC to provide him with feedback via email before April 13.

Mr. Papajohn closed the meeting mentioning that Steven Weitzman and Laura Mielcarek will be available at the end of the meeting for any comments or questions. The next CAC meeting will be in July or August when preliminary art concepts are ready for discussion.

Pima County Department of Transportation

NOTICE OF PUBLIC MEETING
La Cholla Blvd.: Magee Rd. to Tangerine Rd.

Tuesday, December 1, 2009
6:00 P.M. to 8:00 P.M.
Grace Community Church
9755 N. La Cholla Blvd.

Pima County Department of Transportation (P.C.D.O.T.) will be holding an open house meeting to provide information on roadway improvements for La Cholla Boulevard from Magee Road to Tangerine Road. Proposed improvements consist of widening the existing roadway from two lanes to four lanes (with turning lanes to be provided at intersections and cross streets where warranted) including a new bridge structure over the Canyon Del Oro Wash. Some of the potential improvements that are being considered and evaluated include: a raised landscaped median, multi-use lanes, outside curbs and storm drains, provisions for pedestrians and other uses, landscaping, and noise mitigation where warranted.

This five mile corridor lies within both Pima County and Oro Valley. Pima County is anticipating construction of the southern portion starting in 2011 or 2012. Oro Valley is anticipating construction of the northern portion between 2021 and 2026.

The format is open house so community members can stop by any time between 6:00 – 8:00 p.m. to view displays and talk with design team members. Comment forms will be available for the public to share their thoughts and feedback on the project. Individuals with disabilities who require accommodations for effective participation and communication in the meeting may call Community Relations at 740-6410 by November 24 to make appropriate arrangements. All meeting sites are accessible.

Pima County Department of Transportation

NOTICE OF PUBLIC MEETING
La Cholla Blvd.: Magee Rd. to Tangerine Rd.

Tuesday, December 1, 2009
6:00 P.M. to 8:00 P.M.
Grace Community Church
9755 N. La Cholla Blvd.

Pima County Department of Transportation (P.C.D.O.T.) will be holding an open house meeting to provide information on roadway improvements for La Cholla Boulevard from Magee Road to Tangerine Road. Proposed improvements consist of widening the existing roadway from two lanes to four lanes (with turning lanes to be provided at intersections and cross streets where warranted) including a new bridge structure over the Canyon Del Oro Wash. Some of the potential improvements that are being considered and evaluated include: a raised landscaped median, multi-use lanes, outside curbs and storm drains, provisions for pedestrians and other uses, landscaping, and noise mitigation where warranted.

This five mile corridor lies within both Pima County and Oro Valley. Pima County is anticipating construction of the southern portion starting in 2011 or 2012. Oro Valley is anticipating construction of the northern portion between 2021 and 2026.

The format is open house so community members can stop by any time between 6:00 – 8:00 p.m. to view displays and talk with design team members. Comment forms will be available for the public to share their thoughts and feedback on the project. Individuals with disabilities who require accommodations for effective participation and communication in the meeting may call Community Relations at 740-6410 by November 24 to make appropriate arrangements. All meeting sites are accessible.

Pima County Department of Transportation
La Cholla Boulevard: Magee Road to Tangerine
Open House Summary

Date, Location and Time

- Tuesday, December 2, 2009
- Grace Community Church
- 6 to 8 p.m.

Public Notification

- Postcard announcing meeting mailed:
  - Week of November 1, 2009
  - Mailed to approximately 2400 residents and businesses in a one-half-mile radius of the project area
- Newspaper notification:
  - Arizona Daily Star – November 6, 2009
  - Daily Territorial – November 10th, 2009
- Web site:
  - Meeting date and time was posted on project Web site
- Business outreach
  - Only a few businesses on this project.

Team Attendance

- **Pima County**: Priscilla Cornelio, Rick Ellis, Dean Papajohn, Annabelle Quihuis, Carol Brichta
- **URS Engineering:** Eric Sibson, Thomas Wolf, J.P. Charpentier
- **AECOM:** Edie Griffith-Mettey
- **Sound Solution**: Bill Holiday

Public Attendance

Comments

- 15 comments received at the open house

Materials

- Comment forms
- Fact sheets
- Sign-in sheets
- Equestrian Survey

Agenda

- Introductory remarks: Ann Day, Pima County Board of Supervisor
- Review displays with one-on-one interaction

Displays

- Bridge design
- Environmental
- Roadway Design (two display tables)
- Environmental

Room Set-up

- Sign-in table
- Refreshment table
- Eight display tables set up around the room

Signs

- A-frame signs to direct traffic into parking lot and facility

La Cholla Boulevard: Magee Road to Tangerine Road

Equestrian Survey
Fall 2009

This survey is intended to assess the various equestrian uses in the area near La Cholla Boulevard from Magee Road to Tangerine Road. If you are an equestrian, please take a few minutes to complete this survey and return it to Pima County Department of Transportation at the address listed at the bottom of the page.

1. Where do you stable your horse?

Address: _____

_____

This address is: ☐ My home address ☐ A boarding address

2. What is your destination when you are riding near La Cholla Boulevard?

_____

_____

3. On the map provided on the back side of this page, please indicate clearly where you cross La Cholla Boulevard on your horse and if there are any areas where you ride parallel to La Cholla Boulevard. Please describe the existing conditions of these areas you ride.

_____

_____

_____

4. What days of the week do you typically ride in the area of La Cholla Boulevard? (check all that apply)

☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

5. What time of the day do you typically ride in the area of La Cholla Boulevard? _____

_____

6. How frequently do you ride in the area of La Cholla Boulevard? _____

_____

7. Please provide any other comments related to La Cholla Boulevard and equestrian issues.

_____

_____

8. Please provide your contact information

Name: _____ Date: _____

Address: _____

Please return before Nov. 30, 2009 to: Carol Brichta, Pima County Community Relations Office, 201 N. Stone 4th floor, Tucson, Arizona 85701 or Fax to 740-6439 or email to carol.brichta@dot.pima.gov

Project information can be viewed at: http://www.roadprojects.pima.gov/LaChollanorth/

La Cholla Boulevard: Magee Road to Tangerine Road

Equestrian Survey
Fall 2009

City: _____ State: _____ Zip: _____

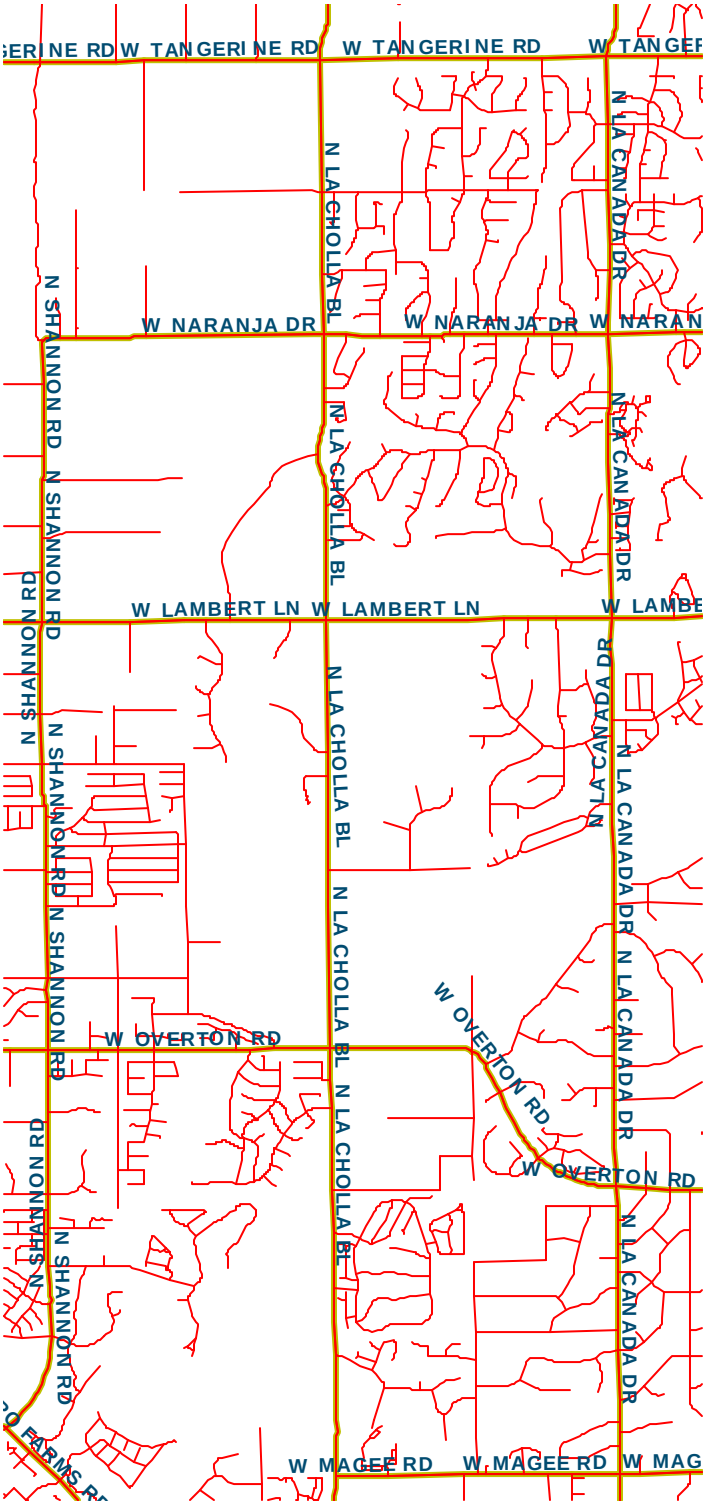
e-mail: _____ Telephone: _____

Please return before Nov. 30, 2009 to: Carol Brichta, Pima County Community Relations Office, 201 N. Stone 4th floor, Tucson, Arizona 85701 or Fax to 740-6439 or email to carol.brichta@dot.pima.gov

Project information can be viewed at: http://www.roadprojects.pima.gov/LaChollanorth/

La Cholla Boulevard: Magee Road to Tangerine Road

Please indicate clearly where you cross La Cholla Boulevard on your horse and if there are any areas where you ride parallel to La Cholla Boulevard.



La Cholla Boulevard: Magee Road to Tangerine Road (4RTLTM)

Equestrian Survey, Fall 2009

Summary

Stable location	Riding destination	La Cholla touch-points	Riding days	Riding hours	Riding frequency	Comments
9131 W. Calle Loma Linda	CDO Wash	Behind TEP substation; Lucero Road and the wash that crosses	Sun, Sat	7-10AM; a4-7 PM	2/mo	Equestrian activities are an important part of the culture, lifestyle and heritage in NW Tucson. Please help to preserve them.
1002 W. Wilkenson Dr.	CDO Wash	Behind TEP substation	Sun, Fri, Sat	6:30 AM	1/mo	Please keep the trails open and in good condition.
1510 W. Avocado St.	CDO Wash north		Sun, Mon, Fri, Sat	AM and PM	as often as my time allows	Lots of people have horse and need a safe place to ride. This has always been a horse area.
1961 W. Dawn Dr.	CDO Wash	McCarty to CDO Wash	Tu, Thu, Sat	AM and PM	varies by time of year	This area I cross over is the only way from my house to get to the CDO Wash. If you don't give me a safe way to go I will have to ride down La Cholla.
8160 N. Boreal Dr.	CDO Wash	McCarty to CDO Wash	Sun, Sat	6-8 AM; 5-8 PM	every time	Cars go too fast, difficult to cross, too narrow at some places.
1892 W. Dawn Dr.	NA	NA	NA	NA	NA	I am physically disabled, do not own a horse, but moved here to be near and see horses on a daily basis. It makes my day to see someone on horseback riding near our home. I wish there were more horse trails.

La Cholla Boulevard: Magee Road to Tangerine Road (4RTLTM)

Equestrian Survey, Fall 2009

Summary

Stable location	Riding destination	La Cholla touch-points	Riding days	Riding hours	Riding frequency	Comments
1621 W. Avocado St.	CDO Wash, Head to Tail Riding School, Milagros, trail riding	At CDO Wash	Sun, Fri, Sat	9-11 AM; 3-5 PM	once per week	Speed of the cars is most disconcerting for the horses.
1950 W Lucero Rd.	Wash (Lomas de Oro) up to Lambert or Wash (CDO) towards La Canada	none	Sun, Thurs, Fri, Sat	summer-early hours; winter-anytime	weekly	none
1947 W. Camino Bajio	CDO Wash area	Rarely cross La Cholla	daily	Summer-AM; Winter-anytime	daily	horse trailers need to enter and exit Lucero Road
3001 W. Appaloosa Rd.	La Canada Wash	at Lambert; and at Lucero	Sun,Mon,Thu,Fri, Sat	weekdays 7:00-10:00; Weekends varies	4x/week	Please have a safe cross walk for horses and riders.
2606 W. Bountiful Ln.	CDO Wash	at Lambert; and at Lucero	Sun,Fri,Sat	morning or afternoon	1-3x/week	We need a safe way to cross.
Sunkist Stables	CDO Wash	at Lucero	daily	all hours depending on lesson schedule	daily	For safety reasons, a cross walk with red flashing light. Especially since La Cholla will be 4 lanes plus a median.
Sunkist Stables	CDO Wash	at Lucero	daily		a lot	Need safe crossing
Sunkist Stables	CDO Wash	at Lucero	daily	all times of daylight	4x/week	This access provides an opportunity for wide use of our horses.
Sunkist Stables	CDO Wash	at Lucero	Sun, Fri,Sat	afternoons	3-4x/week	La Cholla is very busy and high volume, hard to cross.

La Cholla Boulevard: Magee Road to Tangerine Road (4RTLTM)

Equestrian Survey, Fall 2009
Summary

Stable location	Riding destination	La Cholla touch-points	Riding days	Riding hours	Riding frequency	Comments
Sunkist Stables	CDO Wash	at Lucero	Mon, Wed, Fri	mornings	3x/week min.	I ride a thoroughbred and it would help a lot to cross being that La Chollo is so busy.
Sunkist Stables	CDO Wash	at Lucero and the small wash north of Owl Head Place	Sun,Mon,Tue,Fri, Sat	Summer-morning to mid afternoon; Winter-afternoon	4x/week	need cross walk
Sunkist Stables	CDO Wash	at Lucero and the small wash north of Owl Head Place	daily	PM	5x/week min.	Very busy street (La Cholla). Cars do not slow or stop when riding next to or try to cross street.
Sunkist Stables	CDO Wash	at Lucero	Sun, Mon,Tue,Wed,Thu,Fri	8:00	5x/week	none
Sunkist Stables		at Lucero	daily	8:00-11:00	almost daily	Due to the high volume of traffic, near impossible to cross during morning riding hours.
Sunkist Stables	CDO Wash	at Lucero	Sun,Tue,Wed,Fri,Sat	AM	5x/week	none
Sunkist Stables	CDO Wash	at Lucero	Sun,Tue,Thu,Fri, Sat		5x/week	none
Sunkist Stables	CDO Wash	at Lucero	Sun, Fri, Sat		3x/week	none
Sunkist Stables	CDO Wash	South of Lambert; and south of Lucero	Mon,Wed,Fri	afternoons or mid morning	several x/week	I like to ride across in CDO Wash because there has been a lot of construction in the wash behind the barn.
Sunkist Stables	CDO Wash & various trails	at Lucero	daily	varies according to lesson	almost daily	Cars do not follow speed sign laws. Dangerous for riders, bikers, walkers. Spooks horses! My students cross with me. Novice riders are at risk.
Sunkist Stables	CDO Wash	at Lucero	Sun,Tue,Thu,Sat	daily	all day	Heavy traffic very dangerous to cross road. Please make safe.
Sunkist Stables	CDO Wash	at Lucero	Sun,Fri,Sat	Mornings and afternoons	3-4x/week	La Cholla road is very unsafe to equestrian riders-very heavy -fast paced traffic.
Sunkist Stables	CDO Wash	at Lucero	daily	all day	always	Heavy traffic makes it very unsafe to cross La Cholla Blvd.

La Cholla Boulevard:Magee Road to Tangerine Road
1st Open House Meeting
December 2, 2009
Grace Community Church
6-8 p.m.

Name	Address	1. What is your primary interest in La Cholla blvd	2. What do you like most about the proposed projectt?	3. Please list any questions or concerns about the project	
Pi Polletta	1950 W. Lucero Rd	Live & regular drive through and walk. Horseback	Landscape, median and walking path	increase traffic, difficulty exiting onto la cholla, noise level	
Edward and Ellen Stephenson	2040 W. Lucero	Live, own rental property, drive through regularly	better access for public from Tangerine Rd to Tucson Center	needs sound wall for noise protection and property value will negotiated. Access to w Lucero form La Cholla feels without being able to go south without having to make U-Turn is unsafe.	
No name	No address	Live near, regulary drive and walk	All weather crossing @CDO, extension of bike ln, multi use lanes pedestrian access on bridge	N/a	
No name	No address	live	n/a	Need to consider age of drivers & sight visablilty	
Susan Parcells	8439 N. Coral Ridge	live near, regulary drive	very happy about project and bridge and new lanes	Traffic Signal @ La Cholla & Coral Ridge Loop Points of conflicting MPH, older drivers in area, EMS fire are always on la cholls hills drive, environmental crossings @la Cholla Hills	
Johanna Watters	1972 W. Misty Hollow	live near, regualary drive and walk	n/a	N/a	
Ludwig Hill	2756 W. Call San Isidro	live near	bridge, bike lanes, sidwalks	N/a	
Norman Cameron	1940 W. Misty Hollow	live near, regulary walk	4 lanes, paved shoulders for bike, median space	wants right turn only lane at N enterance of La cholla hills it will be safer. Does not think U-Turn lane at so. Enterance to La cholla Hills is needed feels that a Traffic light at n. enterance of La Cholla Hills will radically change traffic flow inside La Cholla Hills	

La Cholla Boulevard:Magee Road to Tangerine Road
1st Open House Meeting
December 2, 2009
Grace Community Church
6-8 p.m.

Name	Address	1. What is your primary interest in La Cholla blvd	2. What do you like most about the proposed projectt?	3. Please list any questions or concerns about the project	
Phil & Leah Bergstein	9084 N. sweet Acacia	live near, regularyly drive1	the bridge	wants sound walls near bridge	
Ron Staub	2420 W. Caltapard	live near,	Bridge over wash	n/a	
Leroy Schiller	1961 W. Sunset	live on and near	n/a	N/a	
Keith Copelan	P.O. Box 85066	live near, own property	increased capacity	need left turn form Lucero onto La cholla. Travel trailers could be an issue.	
Judy Moll	1941 W. Sunse Knoll	live near, regularly drive	n/a	Wants traffic signal at one entrance in la cholla hills	
Paul Jeshor	9949 N. Camini Paramo	live near, regularly drive	like 4-lane and bridge	concerned with the area of la Cholla and Lucero and left turn movements onto Lucero	
Ken Johsnon	1947 w. camino Bajio	live near, regularly drive	will help flow of traffic and safety signt concern	#1 concern is a lack of left turn in the Lomas del Oro Subdivision turn bay from south la cholla onto Lucero	
Nancy Irick	9069 N. Sweet Acacia Place	Live near, regularly drive regularly walk & bike through area	improve safe lanes for pedestirans & Bicyclest. Also some left turn lanes are needed by ajacent to the golf course	does not like single enterance into the Bluffs to close to entrance. Also concerned with the additional lighting and light polution. Would like to know if there will be noise walls and how high	
Herminio & Judy Walby Diaz	8619 N. Candlewood Loop	Live on La Cholla, regulary drive through area	reducing sound impact with rubberized asphalt. And walls if possible. Accelerated timming, mulit use plaths for pedestrians safety lns for bikes.	we face La Cholla (fairfield La Cholla Hills) concern for increase noise levels since road will be even closer to back patio.hoping we take more from the west side of the road since a wall doesn't sound feasible for were they are.	

La Cholla Boulevard:Magee Road to Tangerine Road
1st Open House Meeting
December 2, 2009
Grace Community Church
6-8 p.m.

Name	Address	1. What is your primary interest in La Cholla blvd	2. What do you like most about the proposed projectt?	3. Please list any questions or concerns about the project	
Carol Richards	8637 N. Candlewood loop	Live on La Cholla, regulary drive through area	Would like a 3 to 5 pm presentation at there golf course. We can work through Fred DiNoto to set up. we seem to be very helpful in providing info &listening to them.some peopl need to know its not to late to give input	Construction noise, dust, errosion and after constuction noise, dust and errosion. Depresiation of home value.what will happen to large tree behind house that gives them shade?	
William & Kathryn Berry	8451 N. Breezewood Pl	Live on La Cholla, regulary drive through area walk & bike through the area ownes property off of la Cholla Blvd that backs onto la cholla	we appreciate the use of rubberized asphalt for noice reduction. We appreciate that you hve asked for input. We are netural and know the project is necessary not happy about it but we are okay with it.	How will people access the trail that runs west on the south side of the CDO wash from La Cholla? Will there be a paved parking area? Are residents of La Cholla Hills and leaving requires a left turn the additional lanes of the completed project will make it more complex & dangerous. we need a traffic light or threeway stop.	
Robert & Diane Peters	11553 N. Kelly Rae Pl	Live on la Cholla	We do not like anything about the project voted against RTA	backyard adjacent to la cholla with six lanes directly in there backyard which is outside master bedroom. Feels it will destroy there view and peace and quiet and distroying property value. Also learn no plans to plant large trees in median to cut down noise and headlights feels there needs as taxpayers are not being considered.	
Jane W. Berson	8639 N. Candlewood Loop	Lives on La Cholla Boulevard and regularly drive through this section of La Cholla Boulevard	New roadway - rubberized Traffic signal at north entrace with left turn signal	Noise abatement. Tinted glass on roadway side, or thicker glass in windows-with tint. Keep same zoning - loss of property valuation glass pitting during construction. No need for medium - too much land use	

La Cholla Boulevard:Magee Road to Tangerine Road
1st Open House Meeting
December 2, 2009
Grace Community Church
6-8 p.m.

Name	Address	1. What is your primary interest in La Cholla blvd	2. What do you like most about the proposed projectt?	3. Please list any questions or concerns about the project	
Francis L Wamsley	1305 Bayview Drive, Polson, MT 59860-9685	Live on La Cholla Boulevard. Own rental property on La Cholla Boulevard. Regulary drive through this section of La Cholla Boulevard. I own lot #342 - purchased January 15, 1988 - health causes sell or rent.	Everybody seems to work together. Necessary give and take attitude.	Actual start date. Consider strongly the actual need of sound walls. Possible 3 pane glass to help breaksound noise on home facing blvd.	
Margaret Murry	8625 N. Candlewood Loop	Live on La Cholla Boulevard. Regularly drive through this section of La Cholla Boulevard. My Back yard faces La Cholla Blvd	Nothing - I understand noise damperning pavement will be used, that is a good thing	The back of my home faces La Cholla and the golf course and several large pine trees - why does that road have to be widened by taking land on this east side of La Cholla instead of the west side (fill in the west sideñ). Will I be compensated for the loss of value to my property?	
Dawn & Alan Dixon	8589 N. Candlewood	Live on La Cholla Boulevard. Regularly drive through this section of La Cholla Boulevard.	Potential traffic lights. Concerns - lack of concrete commitment to protect La Cholla Hills Residents. Lacl of design elements most likely to be incorporated regarless of our input	Noise , lost of view, lost of shade increased traffic more pedestrial traffic, inability to go south on La Cholla without traffici light, increased southwest sun exposure. Do not like theidea of a walkway - why can't that just be relagated to the riverbed path? DO NOT want to lose the view of the golfcourse	
Marcia & Rodney Olson	8607 N. Cadlewood Loop, (mailing address P.O. Box 36142, 40	Own rental property onLa Cholla Boulevard. Regularly drive through this section of La Cholla Boulevard	It is a much needed improvement. The present road is narrow, no shoulders and needs repaving.	Increased noise of traffic. Increased emissions fumes. Increased crime during construction phase along with increased dust.	
Michelle D. Rocco	8583 N. Candlewood	Live on La Cholla Boulevard	Rubberized asphalt for road.	Health: "Valley Fever" all the construction all the spores flying around. All that dust going into air condition filters	

La Cholla Boulevard

Magee Road to Lambert Lane

Pima County Department of Transportation

NOTICE OF PUBLIC OPEN HOUSE
La Cholla Blvd. – Magee Rd. to Tangerine Rd.

Tuesday, March 30, 2010
6:00 P.M. to 8:00 P.M. • Presentation at 6:15 P.M.

Grace Community Church
9755 N. La Cholla Blvd.

The Pima County Department of Transportation (P.C.D.O.T.) would like to invite you to attend a Public Open House for the La Cholla Boulevard: Magee Road to Tangerine Road improvement project. Proposed improvements include widening to 4 lanes, a bridge at the CDO Wash, paved shoulders, raised medians, multi-use path, intersection improvements, and landscape. The purpose of the meeting is to present and discuss the roadway design plans based on the draft Environmental Assessment and Mitigation Report (EAMR) and the draft Design Concept Report (DCR).

Representatives from Pima County and the project team will be available to answer questions and address concerns about the project. The meeting will start promptly at 6:00 P.M. with a brief presentation at 6:15 P.M., followed by an open house to review project displays. Public opinion forms will be available for public feedback.

For more information about the public Open House, visit **www.roadprojects.pima.gov**.

Individuals with disabilities who require accommodations for effective participation and communication in the meeting may call Julie Simon with PCDOT Community Relations at (520) 740-6410 by March 25, 2010 to make appropriate arrangements. All meeting sites are accessible.

Pima County Department of Transportation
La Cholla Boulevard: Magee Road to Tangerine Road
Open House Summary

Date, Location and Time

- Tuesday, March 30, 2010
- Grace Community Church, 9755 N. La Cholla Blvd.
- 6 to 8 p.m.

Public Notification

- Postcard announcing meeting mailed:
    - Week of March 8, 2010
    - Mailed to approximately 2400 residents and businesses in a one-half-mile radius of the project area
- Newspaper notification:
    - Arizona Daily Star – March 8, 2009
    - Daily Territorial – March 9, 2010
- Web site:
    - Meeting date and time was posted on project Web site
- Business outreach
    - Omni Tucson National is represented on the CAC.

Team Attendance

- **Pima County**: Ann Day, Jacqui Andrade, Priscilla Cornelio, Rick Ellis, Dean Papajohn, Quinn Castro, Carol Brichta, Julie Simon
- **URS Engineering:** Eric Sibson, Thomas Wolf, J.P. Charpentier, Dave Perrotti, Brian Ravesloot, Debra Sykes
- **AECOM:** Edie Griffith-Mettey
- **Sound Solution**: Bill Holliday
- **Wheat Scharf Associates**: Laura Mielcarek

Public Attendance

- 88 members of the community

Comments

- 12 comments received at the open house
- 53 received via fax, US Postal Service, or e-mail

Materials

- Public Opinion forms
- Fact sheets
- Sign-in sheets

Agenda

- Welcome: Dean Papajohn
- Construction Update: Priscilla Cornelio
- Featured Speaker: Ann Day, Pima County Board of Supervisors. The following are Supervisor Day's remarks:

GOOD EVENING AND THANK YOU FOR COMING TO THE LA CHOLLA NORTH, MAGEE TO LAMBERT LANE 2nd OPEN HOUSE!

IT IS GREAT TO SEE YOU HERE AGAIN. THE LAST OPEN HOUSE WE HAD WAS IN DECEMBER AND I TOLD YOU THEN THAT THIS PROJECT WAS MOVED FORWARD ON THE RTA SCHEDULE TO THE 1ST PHASE THANKS TO ORO VALLEY AND RTA AGREEING WITH ME THAT WE NEED THIS PROJECT SOONER THAN LATER BECAUSE OF THE NEW BRIDGE OVER THE CDO. I KNOW YOU ALL ARE TIRED OF THE BARICADES EVERY TIME IT RAINS. WHEN THIS PROJECT IS COMPLETED, YES, YOU WILL BE ABLE TO DRIVE THRU THIS AREA DURING MONSOON SEASON WITHOUT BARRICADES AND THOSE DREADED DETOURS!

I UNDERSTAND THAT IF ALL GOES WELL ROAD CONSTRUCTION COULD TAKE PLACE LATE OF 2011 OR EARLY OF 2012.

THIS PROJECT WILL TRANSFORM LA CHOLLA RD FROM MAGEE TO LAMBERT LANE INTO A BEAUTIFUL, FUNCTIONAL 4 WAY DIVIDED ROADWAY WITH MEDIANS, PEDESTRIAN PATHS, BICYCLE LANES, PUBLIC ART AND THE NEW BRIDGE. ACTUALLY, THIS ROAD PROJECT CAN BE VIEWED AS A FLOOD CONTROL PROJECT TOO BECAUSE WITH THE NEW ROAD WILL COME NEW CULVERTS AND MAJOR DRAINAGE IMPROVEMENTS.

DO WE HAVE ANYONE ON THE CITIZENS ADVISORY COMMITTEE (CAC) PRESENT, PLEASE RAISE YOUR HANDS?

THESE ARE THE PEOPLE WHO REPRESENT YOU AND YOUR NEIGHBORS TO THE PROJECT TEAM. PLEASE KEEP IN CONTACT WITH THEM AND STAY INFORMED. IT IS THE CAC'S JOB TO SHARE THE LATEST INFORMATION ABOUT THE ROAD PROJECT WITH YOU AND TO TAKE BACK YOUR CONCERNS TO THE PROJECT TEAM. THEY ARE VOLUNTEERS AND WILL DO THEIR BEST TO KEEP THE LINES OF COMMUNICATION OPEN BETWEEN YOU AND THE TEAM.

I UNDERSTAND THE 1ST REVIEW OF THE DRAFT ENVIRONMENTAL ASSESSMENT AND MITIGATION REPORT (EAMR) WAS PRESENTED TO YOUR (CAC) AT THEIR MEETING ON MARCH 16TH. I ALSO UNDERSTAND THEY ARE PREPARING THEIR LETTER FOR THE BOARD OF SUPERVISORS AND WILL SUBMIT THAT LETTER TO DEAN AND HIS TEAM BY APRIL 13TH. THAT LETTER WILL THEN GO TO THE BOARD ALONG WITH THE EAMR FOR APPROVAL AT

ONE OF OUR BOARD MEETINGS IN JUNE. YOU CAN ALSO KEEP UP WITH THE LATEST INFORMATION AND UPDATES ON THE PROJECT WEBSITE: WWW.ROADPROJECTS.PIMA.GOV SO AS YOU CAN SEE THIS PROJECT IS MOVING ALONG QUICKLY.

SO AGAIN, THANK YOU ALL FOR COMING TONIGHT. TAKE THE TIME TO VIEW THE DISPLAYS, SPEAK TO DEAN PAPAJOHN AND HIS TEAM AND ASK YOUR QUESTIONS NOW. THIS IS THE TIME TO SHARE AND WRITE DOWN YOUR CONCERNS AND LEAVE THE COMMENT FORMS. IT IS IMPORTANT FOR YOU TO ATTEND THESE OPEN HOUSES AND I ASK FOR YOUR CONTINUED PATIENCE AS WE GO THROUGH THIS PROCESS. IT TAKES TIME, PATIENCE AND COMMUNICATION, BUT IN THE END I'M CONFIDENT THAT THIS PROJECT WILL BE A SUCCESS AND THAT THE COUNTY WILL DELIVER A BEAUTIFUL, FUNCTIONAL NEW ROADWAY, THAT WILL KEEP TRAFFIC MOVING MORE SAFELY AND SMOOTHLY AND ENHANCE THIS AREA AND OUR QUALITY OF LIFE.

THANK YOU.

Displays: Review displays with one-on-one interaction

- Bridge design
- Environmental
- Roadway Design
- Environmental
- RTA Main Street

Room Set-up

- Sign-in table
- Refreshment table
- 5 display set up around the room

La Cholla Boulevard: Magee Road to Lambert Lane
Public Opinion Form
March 30, 2010

	1. What is your primary interest in La Cholla Boulevard	2. Please describe what you like about this project?	3. Please list any comments you have about design elements of the proposed roadway improvements, such as vehicle lanes, bike lanes, sidewalk, median, intersections, utilities, drainage, access, etc.	4. Please list any other comments you have about environmental elements of the proposed roadway improvements, such as landscape, noise visual impacts. Etc.	5. Please provide any other general comments you have about the project.
1	I live near La Cholla Boulevard	I like that a bridge is going in at the wash. I also like there will be a multi-use path (I hope there will be a path on both sides of the street)	As well as the 4 lanes I hope there will be additional turn lanes put in		I hope this project won't start until the work on La Canada is complete. Evening traffic is a nightmare right now with La Canada Down to 25 MPH
2	I live near La Cholla Boulevard I regularly drive through this section of La Cholla		I think the intersection of Magee and La Cholla is ideal for a turn about design. I see them in Europe and a lot of them in Norway. The merging is so easy and keeps traffic moving.	Will there be a privacy wall near McCarty and North on La Cholla to protect property values from noise, etc?	
3	I live near La Cholla Boulevard I work in a business on this section of La Cholla I regularly drive through this section of La Cholla Boulevard I regularly walk or bike through this section of La Cholla Boulevard	Great, about time	Need some exercise stations perhaps water fountain and 1-2 shade structures along this site plan		
4	I live near La Cholla Boulevard I own rental property on La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard				Please complete the Ina Road project before starting this one
5	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard	I love this idea, its been a long time coming, lets get started	Its about time the northwest got some good roadways. Just do it right.		Great idea
6	I live near La Cholla Boulevard	I anticipate amelioration, at least temporarily, of the congested north south traffic flow. A bridge across the CDO wash on La Cholla will help greatly in preventing inconvenient, time consuming and costly detouring	I feel that a bridge across the CDO was (but not full road construction on Overton) should precede the La Cholla project if it could be done quickly		Widening La Cholla is badly needed. I hope that the La Canada project is completed prior to initiation of the La Cholla project. There is currently severe restrictions of north-south traffic flow, especially during rush hours and if there is closure of passages across the CDO wash at either Overton or La Cholla. I ask this question as to what entity or entities are paying for the project

La Cholla Boulevard: Magee Road to Lambert Lane
Public Opinion Form
March 30, 2010

7	I live near La Cholla Boulevard			Noise factor - need for a light to get out into traffic. It's hard enough with two lanes of traffic. I can't imagine four. If the residents were in their 30's or 40's I can understand, but when you have elderly people with slower reflexes it will be difficult. I chose this community back in 1991 because it was easy to shop and get about now it seems like it will be difficult for me to get out to get my food weekly. This project would not have bothered me 20 years ago but I'm a lot older and alone now.	Why do you need four lanes for Magee to Overton anyways. Traffic is moving along alright now
8	I live near La Cholla Boulevard	It is long past due. The increase in traffic since I moved to La Cholla Hill calls for subject improvement	My major concern is having reasonable (time) at ingress and egress in a safe manner. Traffic has a tendency to speed between Magee and Overton creating a dangerous situation.	Since I live up hill from La Cholla - I do hear rush hour traffic. Barriers, from my experience would not only be unsightly as is ineffective. I believe that planting suitable trees and shrubs would be more effective and compatible with the desert.	Please keep mind that there are 385 (t1) property owners in Fairfield development not just those living on Breezewood and Candlewood.
9	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard				This project is needed, however please hold off until the La Canada project is completed
10	I live near La Cholla Boulevard I live in Fairfield La Cholla Hills	Better traffic flow	Bridge over Canada de Oro wash and La Cholla	We have been told that there is not enough traffic flow to justify a stop light for exit from La Cholla Hills Community. I think you are missing the main point for needing a light. The age of the residents of La Cholla Hills and the slowing _____ because of the age	
11	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard I regularly walk or bike through this section of La Cholla Boulevard	Compared to the existing La Cholla, what's not to like!	Consideration should be given to the considerable volume of traffic entering and exiting La Cholla from McCarty Road. This is a difficult access point onto La Cholla, especially to La Cholla Southbound. I wonder if it won't be more difficult when you must cross a median	If it looks generally like La Canada in O.V. I'll be happy	This road should have been built at least 10 years ago.
12	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard	A bridge across the CDO wash! A new smooth surface. La Cholla is like a wash board in places, pot holes, etc.	Trees in medians are nice as well as along the sides of the road. Not enough trees	Please beautify the area by using oleanders or trees to block unsightly areas	This should have been done a long time ago. The project was to have been started 10 years ago when we moved here
13	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard I regularly walk or bike through this section of La Cholla Boulevard	Looks thought out			

La Cholla Boulevard: Magee Road to Lambert Lane
Public Opinion Form
March 30, 2010

14	I live on La Cholla Boulevard	Needs to be done. Especially bridge over CDO wash	Need bike lanes. Two lane each way would be great		
15	I live on La Cholla Boulevard I regularly drive through this section of La Cholla	Mainly, I expect traffic that will go quicker past the two inlets and exists on La Cholla Blvd, since there will be two roads each way. I am expecting to see a much more beautiful blvd., something like La Canada. I think you have done a good job there	I am concerned mainly with the 4 lanes and our ability to get into them and off them	No effect on me nor my property	I can't wait until it's completed.
16	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard I regularly walk or bike through this section of La Cholla Boulevard	I like the widening project for more efficient and safe traffic flow. We especially are looking forward to the bridge. This is long overdue and will provide a more safe means for traveling especially during monsoon season. We also like multi-use paths and paved shoulders.	Please be sure it is well lit, as it is currently a dark road. Because of the proximity of the traffic light on Overton and La Cholla to the Bluffs entrance/exit, it is difficult to make a turn onto La Cholla and it is a safety concern. Please consider the safety when designing this intersection	We are concerned about noise abatement, because currently with the two lane road, residents at the back of the bluffs can clearly hear traffic noise day and night. With a 4 lane road it will get worse. Please build aesthetically pleasing walls to block out noise. Please consider landscaping that is attractive and maintainable	Can you consider making the river walk way to connect from the current one on La Cholla to go northeast to La Canada and beyond? Also, it is currently paved on one side of the CDO wash, can it be paved on the other side too?
17	I live near La Cholla Boulevard I regularly drive through this section of La Cholla	The bridge over the wash	Bike lanes, sidewalk		
18	I live near La Cholla Boulevard	Nothing		The noise from traffic is bad now. I believe it will get worse with more lanes closer to the house	Our winter home is in Fairfield La Cholla. Our address is 8469 Breezewood place, which backs up to La Cholla. Our view is beautiful, we love it here. We did vote against the noise wall because of our view. We realize this all is necessary for traffic, we just liked it the way it was. Thanks you
19	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard I regularly walk or bike through this section of La Cholla Boulevard Live on Canada Hills Drive for 16 years	Thank you for asking for our input.	Have issues that people use Canada Hills Drive to cut through La Canada and La Cholla Drive. Too fast and we have blind spots along La Cholla. We need bike lanes and walking paths for kids going to school and church.		
20	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard	Bridge over CDO, 4 lanes.			

La Cholla Boulevard: Magee Road to Lambert Lane
Public Opinion Form
March 30, 2010

21	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard I regularly walk or bike through this section of La Cholla Boulevard	Bike in Oro Valley 3-5x/wk 80-120 miles/wk (we live in Omni Tucson Nat'l). Increases bike access and safety near us. Since this area has become so busy we have learned to take other routes. Bridge over CDO will reduce or eliminate traffic redirected into the Omni area when wash over-runs La Cholla. Can you also bridge over CDO @ Overton, nearby to complete safe bike access from the new La Cholla, East on Overton to the quiet neighborhood street of "Rancho Feliz?" This gets us safely to the good bike lanes on La Canada and bike trail between La Canada and 1st.	Bike lanes, please. We live in Omni Tucson Nat'l and are surrounded by poor old unsafe roads with barely any space outside of white lines. We load our bikes and drive to the nearest access to the Oro Valley roads where we can ride 20-30 miles on good, wide bike lanes even though the proposed widening of La Cholla will help get us out of our neighborhood - there still are not "safe connections" from La Cholla over to La Canada allowing bikers to access the entire system of Oro Valley, unsafe shoulders will still exist on Naranja, Lambert and Overton between the new La Cholla and La Canada. Please complete at least 1 safe connection. Bike turn lanes also improve safety.	Continue use of desert trees/shrubs as you have been doing on Ina, Thornydale, Rancho Vistoso area.	We look forward to the improved safety and road being able to finally handle the increased traffic flow. Should relieve somewhat, traffic peaks around Omni when traffic is diverted as roads/washes flood. Possible to connect bikeway along CDO thru Omni to new bike path from La Canada to First?? Lots of segments - but not enough connections to make for meaningful walking, jogging, or biking distances.
22	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard	Everything we've heard	Keep us informed		Delighted - glad it is to be 4 lanes rather than the six on La Canada. Overpass obviously needed over the wash.
23	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard I regularly walk or bike through this section of La Cholla Boulevard	I think it would benefit the area/improve safety and beauty. Avoid road closures due to storms			Will there be another project occurring simultaneously with the n/s route, (i.e.. La Canada, oracle or thorny dale)
24	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard I regularly walk or bike through this section of La Cholla Boulevard		Most concerned about traffic noise which widening will generate toward the Bluffs neighborhood	Noise	
25	I live on La Cholla Boulevard	What we like the most is that finally we think is going to be done. We have complained since we move here in 2001	We like the design and most important we like the wall	The only problem we are worried about is the excessive dust during construction. Most of us suffer from breathing problem like COPD - valley fever, etc. But we are thankful is going to be done. So thanks	How long is going to last? Thank you for such a good job you are doing. Please don't answer any questions until the end of the presentation at the next meeting.
26	I live on La Cholla Boulevard	Fairfield at La Cholla Hills. Easier to pull-out onto La Cholla Blvd. Hopefully less traffic noise. Better traffic pattern at intersection of Magee and La Cholla, especially traveling south and trying to turn left (east) - accident waiting to happen.	Right and left turn lanes sounds great	South wall - Breezewood side (southwall) - could you Stop wall at Breezewood Place. Drainage area and leave open near south entrance area - save those trees. No wall last 100 feet or so before south entrance. This would save trees, look better at entrance and Richard Franks, who live there, would like this arrangement.	Would like to see a decorative wall at "Fairfield at La Cholla Hills." Money saved on elimination of sidewalk could help pay for a decorative wall.

La Cholla Boulevard: Magee Road to Lambert Lane
Public Opinion Form
March 30, 2010

27	I live on La Cholla Boulevard (Fairfield) I regularly drive through this section of La Cholla Boulevard				
28	I live on La Cholla Boulevard I regularly drive through this section of La Cholla	Having 4 lanes. There are 2 residential areas for the elderly. They drive very slow and hold up traffic. We'll be able to pass them. Most important is the bridge over CDO. We've lived in the bluffs subdivision for 12 years and are tired of having to drive to Shannon and Magee to avoid CDO when it rains	Installation of the bridge may cause erosion of the banks of the CDO by directing the flow of water towards the homes in the lower Bluffs sub'd. Please take this into consideration when designing the bridge abutments, and support columns so that the flow is away from the bank abutting the sub'd.	I hope this project won't take 10 years (like Cortaro Farms)	Keep the speed limit 45. Don' lower it like you did on Thornydale (4 lanes + 40 mph, should be 45 mph)
29	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard	Approve project and general design	Very concerned regarding utility relocation - will this project include thru RTA funding for relocations? Or can I expect an utility relocation fee on my monthly statement as the case of the La Canada Project? Please respond.		Very concerned of extra fees attached to relocations of utilities. I believe this should be included in the entire RTA project estimate.
30	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard Our home is 300 feed off La Cholla and we drive this route daily	Offers better traffic flow, answers flood water problems	Needs to address _____ to developments (La Cholla Estates). Traffic control issues. Wall construction to provide safety, securing and noise reduction for areas affected by road widening and construction	Noise will be a big issue and needs to be addressed for all residential areas. Wall construction, design and _____	Great initiation a bit late but good _____ this _____
31	I live near La Cholla Boulevard (La Cholla Hills Community) I regularly drive through this section of La Cholla Boulevard I regularly walk or bike through this section of La Cholla Boulevard	Simply to have new pavement (current La Cholla Blvd - very very choppy) I can see from now La Canada project however - How long and inconvenient (with no alternate routes out of our neighborhood) that road construction will take	I went to a recent La Cholla Blvd. Grace Community Church meeting and was not aware before that that the community had so much potential for input. I was impressed at the Pima County presentation, but felt great individual community selfish and inappropriate questions.		I saw much expertise at the Grace Community presentation on La Cholla (i.e.: 3 year study results of traffic flow numbers to see if traffic lite needed) and will trust that the experts know what is best and works for our area. I don't plan to attend another meeting - I shall await the work being planned.
32	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard	Bridge over the wash. Widening of La Cholla - it has really gotten to be a busy street	I attended the last meeting. I was glad I did. I didn't realize that this was going to be such a big project. And I'm glad we're going to be able to continue to use La Cholla during construction.		Can't wait for it to be done
33	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard	I like all the features described. The bridge at CDO wash very important to improve traffic safety	They all sound good to me		

La Cholla Boulevard: Magee Road to Lambert Lane
Public Opinion Form
March 30, 2010

34	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard I regularly walk or bike through this section of La Cholla Boulevard I am concerned about the ever-increasing volume of traffic on La Cholla	I hope a sound wall boarding Tucson National will go up	Will wildlife be able to cross La Cholla?	Noise will ever increase	
35	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard	I live in the Bluffs-Sunset Surprise ct. I feel trapped by CDO wash. If I am forced to go up to Shannon to get to Magee - the traffic goes on for miles. The light is so short it takes 30 + minutes to get out. Only about 3 cars pass then the light changes. Adds 15 to 30 minutes time to get out on Magee. La Cholla needs this.	I would suggest that instead of a new turn lane between Morning Jewel and Tortolino that all traffic go into the Morning Jewel entrance and then turn left to go to Tortolino and right to get to Sunset Surprise. This would avoid a new entrance and congestion in the middle with traffic going in all directions	There is already a light at Morning Jewel so this would help illuminate that corner, if this were the entrance to the Bluffs off La Cholla. Might avoid accidents	The sooner the better
36	Own a property in Fairfield La Cholla Hills that my mom live in - sometimes she waits 5 minutes to get out	A light at La Cholla and major entrance to Fairfield. Easiest _____			
37	I live near La Cholla Boulevard We own a home in the El Conquistador Neighborhood	We hope the multi-use path includes bicycles	We believe it is very important to leave sufficient shoulders on the north and south bound lanes and bike paths	Landscaping is important	
38	I live near La Cholla Boulevard		Rubber asphalt please please. Work hours promote terrible noise from cars	Please use rubber asphalt. The noise from La Cholla at certain times is deafening as far away as 3/4 mile	It will help tremendously as Shannon becomes overloaded during floods as does Magee
39	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard	This is an excellent and needed production. Which includes street design and wash.	What I have read. I do like what I have heard. I really do like the walk and bike addition		
40	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard	The bridge on the CDO was is a good idea since this is a serious flood area. Magee road definitely needs to be widen - traffic during rush hours, is bumper to bumper. A lot of vehicle on this road	There should be some kind of control outlet for the residents of the retirement community on La Cholla. Its' rather risky a times just to be able to enter onto La Cholla		
41	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard I regularly walk or bike through this section of La Cholla Boulevard	Bridge for no more road closures	What about the path promised by the was?	Noise will be a huge impact for several sub divisions, need to have noise barrier wall. Visually pleasant with good landscape.	My biggest concern is a noise barrier wall must be built.
42	I regularly drive through this section of La Cholla Boulevard	Better access to Tucson from Oro Valley	There should be thought about bus stops as its only a matter of time before they will be in operation		Please do not start this project, until the project on La Canada is finished

La Cholla Boulevard: Magee Road to Lambert Lane
Public Opinion Form
March 30, 2010

43	I live on La Cholla Boulevard	Hope will improve looks improve traffic flow	Need a light at Foothills La Cholla retirement community		Could make _____ really _____
44	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard	We definitely need a bridge over the wash and 4 lanes	I would like to see 4 lanes, bike lanes, sidewalk, and attractive medians		
45	I live near La Cholla Boulevard I own rental property near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard	If it straightens out the curve on La Cholla were Casas Baptist Church is I will be happy. That curve is dangerous - people go too fast going south and is a hazard to those going north at the same time	Drainage issues need to be fixed on La Cholla at Grace Community Church and just north of Canada Hills Drive	Need noise barriers above Lambert to at least Naranja	I am concerned about the timing of this project. We cannot have La Canada, La Cholla and Thronydale under construction at the same time. Its too much of a burden on commuters
46	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard I live in the Fairfield at La Cholla Hills community and La Cholla Blvd is the only access and egress	In the long run La Cholla should be safer	Are you going to be able to turn south out of Fairfield? Or will you have to go north and make a U-turn to go south? How much additional traffic might the future Rio Cancion Retirement Community on the west side of La Cholla opposite Fairfield create? Enough to warrant a light?		Concerned about all constructions going on at same time. La Canada no finished: Cortaro/Magee from Thornydale to Oracle going to start late this year. La Cholla Blvd starting.
47	I live on La Cholla Boulevard I work in a business on this section of La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard I regularly walk or bike through this section of La Cholla Boulevard	I don't have internet.	Need access of La Cholla - the traffic is long now. I would be nice to ride my bike to the store, off the main road, " I will not ride with cars."	Don't care other than noise	I don' have your plan
48	I live near La Cholla Boulevard neighborhood bordered by La Cholla I regularly drive through this section of La Cholla Boulevard I regularly walk or bike through this section of La Cholla Boulevard	The bridge over the wash is long overdue. For safety reasons and better traffic flow, the proposal seems right.	Please do not use high allergen, high maintenance trees i.e., Palo Verde/Mesquite. Bike paths are a must. Use some bike lane/walkway template as is used along Tangerine and Naranja	Simple cati/ocatillo/agave that requires little maintenance and h2o once established is best. Select "noise wall" should be created with input of residents in affected areas	DO NOT start during monsoon. Please don't tear up La Cholla/La Canada at same time - to few n/s options. La Cholla Bridge is #1 Priority for this project.
49	I live near La Cholla Boulevard (Fairfield La Cholla Hills) I regularly drive through this section of La Cholla Boulevard Other: I own property in Fairfield. It is a second home for me.	The widening of the road is fine as is the bridge at CDO. I hope paved shoulders includes drainage	I understand that no stoplights are proposed. This is a mistake. Now, cars come quickly down the hill. There is no coordination between the lights at Magee and Lambert Lane. There are times of day when your cannot turn left. A "U" turn wont help. With seniors trying to get out - someone will get killed. Also, more units are planned further down La Cholla. There has to be a time when no one comes down or goes up La Cholla	What will the noise barriers look like? Those on the other side of Ina or La Cholla are attractive. Landscape - in Phoenix near Sun City somewhere - they put saguaros in the middle area and they took them all down. Why? Did one fall on a car or something?	
50	I live on La Cholla Boulevard - Bluffs	Progress - and of course the bridge over the wash	All sounds well planned and thoughtful for all users		Interested when starting date ad will it start at Magee (new planed road)?

La Cholla Boulevard: Magee Road to Lambert Lane
Public Opinion Form
March 30, 2010

51	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard	Bridge over the CDO will be really really nice. Please provide right and left hand turn lanes so that all traffic doesn't have to stop for the person turning ahead at 4.00 mph	Also needs sidewalk/bike lane. Also please no 2 to 1 mergers	Nice landscape always nice	
52	I live near La Cholla Boulevard I own vacant property on La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard Other: Impact on personal property? River front property? Impact? Equestrian ingress/egress on east side of La Cholla bridge and any provision for same?	Traffic flow has the most positive impact. Less erosion along CDO	Bridge over La Cholla - elevation - underside to CDO River bed - clearance? Ingress/Egress for equestrian use of river bed? What is the road elevation in relation - ship to existing topography on both sides of bridge? How will embankments be secured from further erosion of each side of bridge? Is this the same concept as applied at the La Canada Bridge?	CDO River way is a riparian habitat and corridor for 4 legged wildlife; raptors, falcon. Do you plan to extend the "Trail" northeast of bridge as in now in use near golf course?	What is to become of Hardy Road east of La cholla at present not county maintained road. Will the road still exist for those living on Hardy?
53	I live near La Cholla Boulevard Other: live at La Cholla Hills	Hope it will be easier and safer to enter and exit to La Cholla Hills	What will be speed limits on La Cholla Blvd? With extreme amount of cars entering and exiting from La Cholla Hill (344 homes) and no stop lights speed limits should be at a minimum and strictly enforced	Should have tope trade trees and landscaping (palm trees etc.) to make up for mature growth destroyed	In the meantime before construction there should be safety measures, such as speed control etc. on La Cholla. It is presently congested and dangerous from McGee north to La Cholla Hills. Should be a left turn signal turning east on McGee from La Cholla Boulevard.
54	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard We own a home at 9810 N. Paseo Corona. Lucero is our only access to our home. We have a 36 foot motor home which we regularly use and need entry and egress on La Cholla Boulevard	We have not seen the project design yet so we're unable to comment	It is imperative that Lucero has continuous access to La Cholla during and after construction. This should include a signal light upon completion.		
55	I live on La Cholla Boulevard	The road needs to be widened for all the traffici that goes by. Before the construction starts - singals at Overton and Magee need to be set so there is a break in traffic and we can pull out. Also a left turn signal at Magee would prove helpful	I feel with the economic crisis and Tucson's bad streets that too much money is spent on medians, curbs and sidewalkd that really aren't needed. People can walk safety around their own complexes. Just improve our roads.	We have plenty of natural landscape without spending money on the medians. Half the people that drive pay little attention to the scenery as they are too busy talking on their phones or texting, which needs to be outlawed as it causes most accidents.	My biggest concern is your proposal for turning left out of our complex to have to turn right and make a U turn south is about as dangerous as trying to pull out when the traffic is heavy. There is no Hardy Road on La Chollas st stated in your

La Cholla Boulevard: Magee Road to Lambert Lane
Public Opinion Form
March 30, 2010

56	I live near La Cholla Boulevard	I appreciate both the well-thought out planning and the public forums	I have strong concerns about the current midian at Divot Drive and La Cholla that limits our homeowners from making a left turn - southbound - from Divot Drive onto La Cholla. This should be removed because going north bound to go southbound is not really an option - that intersection at Naranja and La Choll is extremely busy in the mornings as recent improvements there attest so turning a U-turn is not an option - or a safe one. Additionally, driving thru the subdivision to turn left onto Naranja from Par to negotiate traffic to turn left (south) onto La Cholla is also not very safe - esp. at the busy times. A solution similar to what's at Tangerine and La Canada (post office) allowing left turns south is a better option		
57	I live on La Cholla		I need to have my drive way (maybe) a little wider for my horse trailer to be able to get in and out. This is very important to me and my life style. I am right on the new frontage road.		
58	I live near (very) La Cholla Boulevard in the 10800 block of Sand Canyon Place I regularly drive through this section of La Cholla Boulevard I regularly walk or bike through this section of La Cholla Boulevard La Cholla is my primary road north and south	The bridge over the wash and the drainage culverts	Don't need sidwalks - but hopefully will have a noise barrier wall on the east side of La Cholla to protect our Canada Hills homes. (we already are too noisy)	see question 3 concerning noise	Que sera sera
59	I live on La Cholla Boulevard	The county has done an extraordinary job of making people understand that their input matters. Thank you for that and a special thank you to Dean Papajoh for his _____ guidance and even calming communication at all meetings	Orur strong preference would be to see the Fairfield La Cholla walls be constructed prior to the road (either side) being started. It would hopefully help in at least a little of sound allievation and maybe even some dust control	We're interested in maintaining the natura - scape fill of the La Cholla Fairfields deelopment so trees/shrubs/cactui would be great - sound (noise control) is also critical to us	
60	I live near La Cholla Boulevard I regulary drive through this section of La Cholla Boulevard		Put a yellow traffici light at La Choll and McCarty Drive		
61	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard live in Bluffs	Changes on Magee improvement on flow of traffic. Bridge over wash. Entrance to Bluffs. Art. Time and effort to communite is commendable			Good Luck

La Cholla Boulevard: Magee Road to Lambert Lane
Public Opinion Form
March 30, 2010

62	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard I regularly walk or bike through this section of La Cholla Boulevard	Bridge over CDO wash, wider roadway, bike lanes	McCarty road - La Cholla intersection what needs to happen. 1. Traffic light; 2. re-align McCarty and La Cholla to a 90 degree intersection; 3. Right turn lane for northbound La Cholla; 4. increased visibility at intersection for west bound McCarty traffic	#3 continued: McCarty is the only access to La Cholla for a large number of residents and the Mera Verde Elementary School (from Magee to Overton and La Canada to La Cholla) having 4 lanes of traffic and competing with heavy traffic to the school is going to be as bad if not worse than it is at present.	#3 Continues: Supervisor Day successful negotiated some improvement of this intersection with developers of property north and south of McCarty. Neither of those projects has materialized.
63	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard		The planned widening of La Cholla restricts a left turn at Divot. The back up of traffic due to Ironwood school at La Cholla and Naranja coes not allow for a left turn out of Par Drive and all residences use Divot to turn left onto La Cholla (DO NOT RESTRICT LEFT TURN AT DIVOT TO LA CHOLLA)		
64	I live near La Cholla Boulevard I regularly drive through this section of La Cholla Boulevard	It is certainly needed to accommodate curren traffic			I hope they don't start until La Canada is finished. I hope they don't slow down really long stretches of road at a time like they are doing on La Canada. Let's make this as painless as possible
65	I live near La Cholla Boulevard I regularly drive through this section of La Cholla	The bridge over CDO wash			
66	I live on La Cholla Boulevard (Bluffs)	The bridge over the wash will be wonderful	Will there be a sidewalk on the access road? (Closer to the Bluffs development)	Landscape - should match existing landscape at entrance to the Bluffs. Who decides on Artwork for the wall?	Build both bridges at the same time - to cut down on construction time. Please start as soon as possible - sooner than 2011
67					
68					
69					
70					
71					
72					
73					
74					
75					
76					
77					
78					
79					
80					
81					
82					

Table 1: Summary of Public Participation Plan

	Public Participation Plan	**Activities Completed**	**Activities Remaining**
	Public meetings	First public meeting held on December 1, 2009 Second public meeting held on March 30, 2010	Anticipated schedule for third public meeting in early 2011.
	Public hearing	Public Notices for this public hearing will be mailed out 30 days prior to the Public Hearing in accordance with County Ordinance. Also this public hearing will be advertised in the Daily Territorial.	To be held concurrent with a Board Meeting for the Board's consideration of the EAMR, June 1, 2010 .
	Comment for December 1, 2009 Comments for March 30, 2010	Comment form handed out at public meeting held December 1, 2009. See appendix for summary Public Opinion Forms were mailed out and handed out at the March 30, 2010, Open House. See appendix for summary.	Comment forms will be distributed at each of the public meetings.
	Community Advisory Committee (CAC)	Seven CAC meetings have been held with the County: June 30, 2009, October 27, 2009, December 8, 2009, February 16, 2010, March 9, 2010, March 16, 2010 and April 6, 2010.	Meetings were held to discuss the design plans, noise mitigation, Traffic Study, Environmental Assessment and Mitigation Draft Report, Design Concept Report and public art.
	Contact with affected parties	Contact information on affected parties is updated on a continuing basis. RTA/Mainstreet is communicating with affected businesses; Pima County has responded to various phone calls and e-mail inquiries	Ongoing as needed
	Media relations	Public notices have been sent out for the CAC selection, the December 2009 open house and the March 30, 2010 open house	Ongoing
	Informational materials	A project Web sit is available at: http://www.roadprojects.pima.gov/lachollanorth	The Web site will be updated as needed

Community Advisory Committee
LaCholla Blvd. – Magee Rd. to Tangerine Rd.

April 14, 2010

Pima County Board of Supervisors
130 West Congress
Tucson, AZ 85701

RE: LaCholla Blvd. – Magee Road to Tangerine Road
Project # 4RTLTM

Members of the Board of Supervisors:

The Community Advisory Committee (CAC) for the above project has reviewed the EAMR, dated March 2010, and supporting DCR, dated January 2010 as presented at our March 16, 2010 meeting with transportation staff. The committee subsequently met independently on March 23, 2010 at the Omni Golf Course Clubhouse to discuss the document in some detail and held a follow-up meeting on April 6th with the County's design team to discuss the various elements of the EAMR and incorporate any new and relevant comments received at the March 30th, 2010 open house. Members in attendance spoke of the adequacy of the document as well as to their specific concerns.

The CAC, in keeping with its primary function, reviewed the EAMR to confirm that the document had adequately addressed the concerns of those most directly affected by the project. Overall, the mitigation efforts outlined in the EAMR are satisfactory to the committee. However, the CAC offers the following list of concerns and/or elements that should be considered by the County in developing the final construction documents for the Roadway.

1. Even though traffic was adequately addressed, the committee suggests further studies, when warranted, to address the intersection of North Coral Ridge Loop in order to determine if a "traffic actuated" signal could be added to assist the elderly drivers residing in the La Cholla Hills community.
2. While the design team should be commended for their innovative frontage road configuration at the intersection to the Bluffs community, enhancement of the existing single street light to further illuminate the new intersection configuration should be considered.
3. It is suggested that the EAMR language clarify "will experience a slight rise in flood elevation but remains in compliance with Pima County Flood Control Regulations".
4. Language should be added that clarifies the location of the 16 washes described in the EAMR.
5. Language should be better defined when describing "utility interruption during construction".
6. Reconsideration should be given to the use of rubberized asphalt *(ARAC)* on the bridge deck to assure continuity of the road surface throughout the project and to optimize noise reduction.

7. Rubberized asphalt should be used on all the service road improvements.
8. Accommodations should be made to allow the future access to Northwest Bible Church property over the proposed drainage channel.
9. Sidewalk improvements need to be included along the frontage road between Morning Jewel and Tortolita Bluffs. Also, sidewalk improvements should be along the west side of the frontage road to provide connectivity between the two subdivisions.
10. The committee was in general agreement that a temporary re-route of the two lane roadway would be acceptable to allow simultaneous construction of both bridge spans in order to accelerate the construction schedule.
11. A minor reconfiguration of the McCarty Rd intersection should be considered in order to alleviate the acute angle for vehicles turning left onto LaCholla.

Landscaping & Art: As a whole the committee is looking forward to remaining active in establishing an appropriate landscape and artistic theme that best reflects the transitional change from the typical dense and "urbanized" streetscape to a theme that best suits the "sense of arrival" to the CDO wash and uplands/foothills area. In particular, artistic enhancement of the CDO Bridge on both approaches, the proposed sound walls fronting the La Cholla Hills development, and the retaining walls in areas of cut that are seen visually from the street. Earthen colors should be integrated into the sound walls, the cut/fill walls and rock rip-rap erosion protection, as a minimum, in lieu of the typical "gray" concrete color found on most roadway projects.

Finally, the committee would like to commend Pima County, the Town of Oro Valley and the RTA for working collaboratively in prioritizing earmark funds to assure proper funding for the La Cholla reach from Magee to Overton, thus allowing for acceleration in the roadway improvements.

Sincerely,

Community Advisory Committee
LaCholla Blvd. – Magee Rd. to Tangerine Rd.

CAC Member:	Signature:
Robert J Iannarino, PE	
Ronald Staub, PE	
DeDe Betten	
Barbara Wisot	
John Lakey	
John Reynolds	
Randy Abbey	

Robert Ewens	
Brent Bartz, PE	
Andrea Calabro	
Danny Goldman	
Fred DiNoto	
Loren B. Christenfeld	
Jane Perry	
Thomas Tucker	

Robert Ewens	
Brent Bartz, PE	Brent A. Bartz
Andrea Calabro	
Danny Goldman	
Fred DiNoto	
Loren B. Christenfeld	
Jane Perry	
Thomas Tucker	

Bob Iannarino

From: Andrea Calabro [andrea@performancegolfstore.com]
Sent: Tuesday, April 20, 2010 3:27 PM
To: Bob Iannarino
Subject: Fwd: RE: LaCholla CAC Letter
Attachments: RE: LaCholla CAC Letter

The letter looks good and I agree with it. I will not be able to make it to the meeting tonight.
Andrea Calabro

--- On **Mon, 4/19/10, Leo Calabro** ***<Leoandphx@netscape.com>*** wrote:

From: Leo Calabro <Leoandphx@netscape.com>
Subject: Fwd: RE: LaCholla CAC Letter
To: "Andrea Calabro" <andrea@performancegolfstore.com>
Date: Monday, April 19, 2010, 8:17 PM

Netscape. Just the Net You Need.

Dean Papajohn

From: Bob Iannarino [biannarino@diamondven.com]
Sent: Wednesday, April 21, 2010 10:22 AM
To: Dean Papajohn
Subject: RE: La Cholla: EAMR letter
Attachments: img-421090007.pdf; Fwd: RE: LaCholla CAC Letter

Dean,

Attached herewith is the executed CAC EAMR letter.

I've attached Andrea Calabro's e-mail approval also, as she could not make last night's meeting.

As noted Jane Perry asked to be removed from the CAC.

We had no response from Loren Christenfeld (attended one CAC meeting in June 2009), and Thomas Tucker (never attended any meetings), therefore it is the consensus of the active CAC members that we are presenting you a unanimous approval of the letter.

I will bring the original to you sometime today or tomorrow.

Let us know if you have any questions.

Bob

MEMORANDUM

Department of Transportation

DATE: April 23, 2010

TO: The Honorable Chairman and Members
Pima County Board of Supervisors

FROM: Priscilla S. Cornelio, P.E., Director

SUBJECT: La Cholla Boulevard: Magee Road to Lambert Lane (4RTLTM) – Request for Approval of Environmental Assessment and Mitigation Report

At the June 1, 2010, Pima County Board of Supervisors meeting, there will be a request to approve the Environmental Assessment and Mitigation Report (EAMR) for the above mentioned project. The EAMR is currently available to review in our website at the following link:
http://www.roadprojects.pima.gov/LaChollanorth/pdfs/La%20Cholla%20Boulevard%20Final%20EAMR410.pdf

Summary - The Pima County Department of Transportation (PCDOT) and the Regional Transportation Authority (RTA) are proposing to widen La Cholla Boulevard to four lanes in order to accommodate increased traffic demands in the area for the year 2040; to improve motorized vehicle, pedestrian, bicycle, and equestrian safety; and to provide a key north-south all-weather surface for residents, commuters, and emergency service providers in northwest Pima County.

Although the EAMR covers La Cholla Boulevard from Magee Road to Lambert Lane, phase one construction will be from Magee Road to Overton Road due to limits in period 2 funding available from the RTA. The RTA has additional money for La Cholla Boulevard scheduled in period 4. It is anticipated that Oro Valley will take the lead in final design and construction of La Cholla Boulevard from Overton Road to Tangerine Road in period 4.

This project has a very diligent and effective Citizens Advisory Committee (CAC). In their review of the EAMR, they have developed a number of suggestions. Presented below is a brief summary of their concerns and how PCDOT intends to address their concerns:

- Ingress and Egress at Coral Ridge Loop North -
  - PCDOT has collected traffic data at this intersection. Additional traffic counts will be conducted at the prime occupancy time of year. Installation of ducts for a potential traffic signal in the future will be considered.

- Lighting for the new entry point for the Bluffs subdivision -
  - PCDOT will investigate appropriate lighting during final design.

- Clarification of flood plain impacts, location of 16 washes, and utility impacts -
  - PCDOT added clarifying information to pages 6-6, 6-7, 6-9, 6-10, and 6-17 of the EAMR.

- Request for rubberized asphalt on the bridge deck and access roads -
  - PCDOT will analyze this during final design.

- Sidewalk improvements adjacent to the Bluffs -
  - PCDOT has added this segment of sidewalk to the design plans.

- Reduce the acute angle at the McCarty Road intersection -
  - PCDOT will analyze this during final design.

- Public art that suggests a transition and arrival to a more rural area -
  - PCDOT had the project artist meet with the CAC on April 6 to receive input from the CAC. The artist will be presenting preliminary art concepts to the CAC later in the year.

Conclusion - This project is intended to provide multiple benefits to the citizens of Pima County and is an important component of the overall transportation network approved by voters in the 2006 RTA Plan. Extensive analysis and public involvement efforts have been undertaken in the development of the EAMR. By implementing feedback from community members as well as design professionals, the EAMR provides a well thought out plan that provides motorized vehicles, pedestrians, bicyclists, and equestrians with a safe, functional roadway system.

Should you need any additional information, we would be pleased to provide it.

PSC:DP:sap

c: C.H. Huckelberry, County Administrator
John M. Bernal, Deputy County Administrator – Public Works
Ana Olivares, Deputy Director – Infrastructure
Rick Ellis, Engineering Division Manager
Dean Papajohn, Project Manager – Engineering Division
Annabelle Valenzuela, Community Relations Manager

Appendix C

Stage I (15%) Design Concept Plans
(Bound Separately)

Appendix D

Right-of-Way Requirement Plans
(Bound Separately)