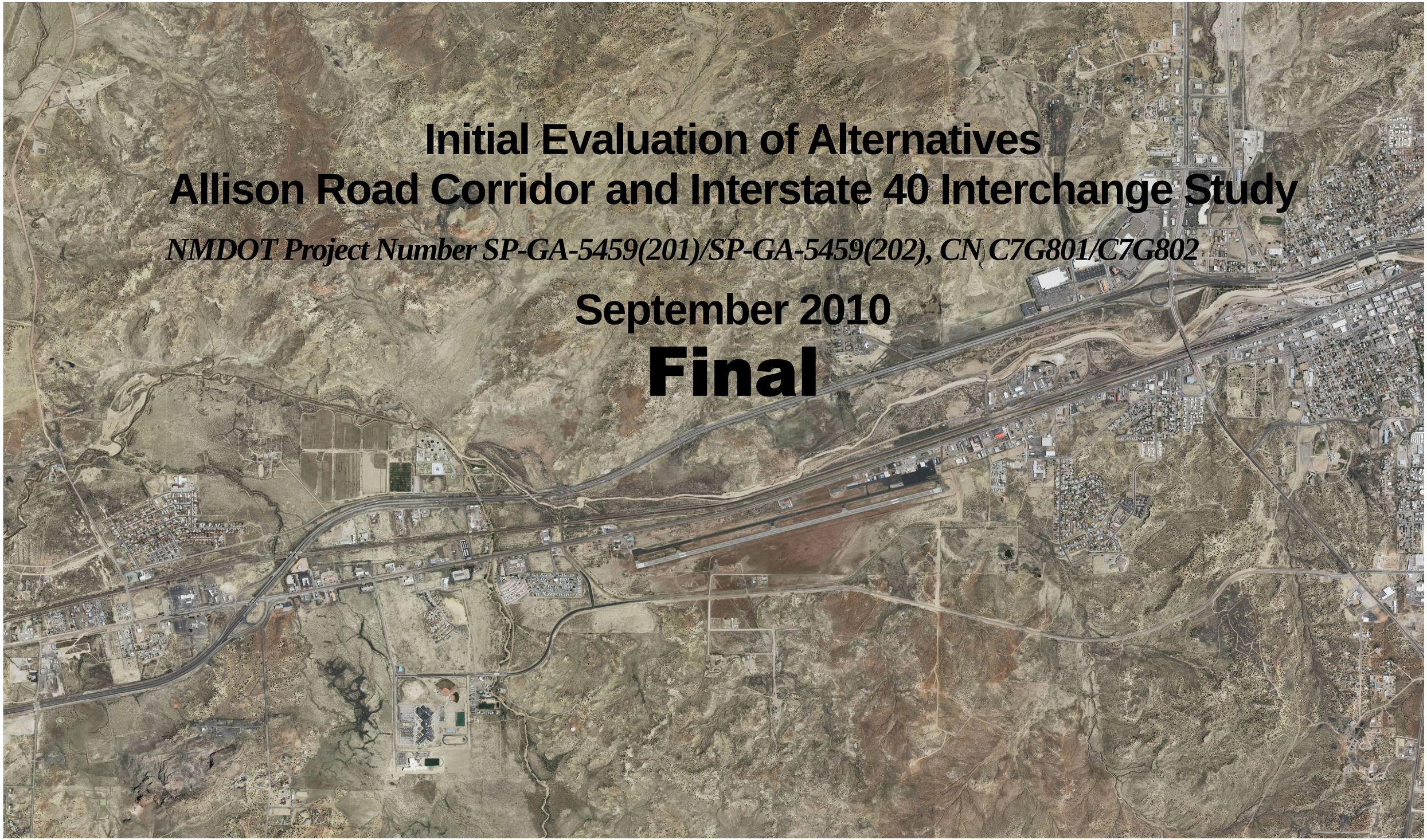
Initial Evaluation of Alternatives
Allison Road Corridor and Interstate 40 Interchange Study

NMDOT Project Number SP-GA-5459(201)/SP-GA-5459(202), CN C7G801/C7G802

September 2010

Final



U.S. Department of Transportation
Federal Highway Administration

New Mexico DEPARTMENT OF TRANSPORTATION

Bohannan ▲ Huston INC.

TABLE OF CONTENTS

1. INTRODUCTION 1-1
1.1 Project Background & Overview 1-1
1.2 Corridor History 1-4
1.3 Community Profile 1-4
2. AGENCY COORDINATION AND PUBLIC INVOLVEMENT 2-1
3. PROJECT PURPOSE AND NEED 3-1
3.1 Safety 3-1
3.2 Physical Deficiencies 3-2
3.3 Travel Demand & Congestion 3-3
3.4 System Connectivity 3-4
3.5 Access 3-4
3.6 Economic Development 3-4
3.7 Legislative Mandate 3-4
3.8 Purpose and Need Statement 3-4
4. EXISTING CONDITIONS AND CONSTRAINTS 4-1
4.1 Existing Transportation System 4-1
4.2 Interstate 40 4-6
4.3 US 491/NM 602 4-11
4.4 NM 118 4-13
4.5 Allison Road 4-13
4.6 Local Roadway Network 4-14
4.7 Existing Bridge Structures 4-18
4.8 Existing Drainage System Inventory and Assessment 4-24
4.9 Adjacent Land Use and Growth Trends 4-30
4.10 Operational Analysis 4-31
4.11 Existing Utilities 4-46
4.12 Environmental 4-47
4.13 Cultural Resources 4-48
4.14 Socioeconomic and Environmental Justice 4-49
5. DESCRIPTION OF STUDY ALTERNATIVES 5-1
5.1 Study Alternatives 5-1
5.2 Alternative 1 – Middle of Study Area 5-1
5.3 Alternative 2 – West End of Study Area 5-1
5.4 Alternative 3 – East End of Study Area 5-2
6. PRELIMINARY ALTERNATIVES EVALUATION 6-1
7. CONCLUSIONS AND RECOMMENDATIONS 7-1

TABLE OF FIGURES

Figure 1-1: Location Map 1-1
Figure 1-2: Vicinity Map 1-2
Figure 4-1: Existing Streets by Functional Classification 4-2
Figure 4-2: Existing Conditions 4-3
Figure 4-3: Gallup Express Route 1 4-4
Figure 4-4: Gallup -McKinley Trails and Open Space Master Plan 4-5
Figure 4-5: I-40 & Interchange Typical Sections (1 of 2) 4-7
Figure 4-6: I-40 & Interchange Typical Sections (2 of 2) 4-8
Figure 4-7: Existing System Typical Sections 4-16
Figure 4-8: Existing System Typical Sections 4-17
Figure 4-9: Structural Rating and Location Map Allison Rd & I-40 4-21
Figure 4-10: Existing Drainage Features & Basins 4-25
Figure 4-11: Hydraulic Analysis Locations 4-27
Figure 4-12: Alternative Corridor 1 – HEC/RAS Cross Section Corridor (Looking West) 4-28
Figure 4-13: Alternative Corridor 2 – HEC/RAS Cross Section Corridor (Looking West) 4-28
Figure 4-14: Alternative Corridor 3 – HEC/RAS Cross Section Corridor (Looking West) 4-29
Figure 4-15: Base Year (2010) PM Peak Traffic Volumes 4-37
Figure 4-16: Base Year (2010) Intersection Level of Service (LOS) 4-38
Figure 4-17: Base Year (2010) Link Level of Service (LOS) 4-39
Figure 4-18: Forecast Year (2030) PM Peak Traffic Volumes (with Future Network from Master Plan) 4-42
Figure 4-19: Forecast Year (2030) PM Intersection Level of Service (with Future Network from Master Plan) 4-43
Figure 4-20: Forecast Year (2030) Link Volume Level of Service (with Future Network from Master Plan) 4-44
Figure 4-21: Forecast Year (2030) Worst Movement / Intersection LOS 4-45
Figure 5-1: Alternative 1 Allison Road and I 40 5-3
Figure 5-2: Alternative 2 Allison Road and I-40 5-4
Figure 5-3: Alternative 3 Allison Road and I-40 5-5
Figure 5-4: Alternative 2 Typical Sections 5-6

LIST OF TABLES

Table 1-1: Project Area Demographic Characteristics 1-5
Table 1-2: Project Area Economic Characteristics 1-5
Table 3-1: Comparison to State & County Crash and Fatality Rates 3-2
Table 4-1: Interchanges and Grade Separations 4-6
Table 4-2: NM 118 Intersection Spacing 4-13
Table 4-3: Structures & Descriptions 4-22
Table 4-4: Conditions and Appraisal Ratings 4-23
Table 4-5: Transportation Analysis Zone Adjustments 4-30
Table 4-6: I-40 Total Crashes By Mile Post 4-32
Table 4-7: US 491 Crash Summary 4-32
Table 4-8: NM 118 Crash Summary 4-33
Table 4-9: Allison Road Crash Probable Cause Summary 4-33
Table 4-10: Comparison to State & County Crash and Fatality Rates 4-33
Table 4-11: Signalized and Unsignalized Intersection Level of Service Criteria 4-34
Table 4-13: Base (2010) Level of Service (LOS) Summary 4-35
Table 4-12: Corridor Weekday and Weekend ADT Capacity and Level of Service 4-35
Table 4-14: Linear Projection of Gallup Population to 2030 4-36
Table 4-15: Compound Annual Growth Rate Projection for Gallup 4-40
Table 4-16: Forecast (2030) Level of Service (LOS) Summary 4-40

Table 4-17: Previously Recorded Sites within 500m of the Project Area 4-48
Table 4-18: Previously Conducted Surveys within 500 m of the Project Area 4-48
Table 4-19: Noise Abatement Criteria 4-49
Table 4-20: PSTB LUST Sites 4-50
Table 6-1: Purpose and Need Evaluation Matrix 6-2
Table 6-2: Stakeholder Evaluation Matrix 6-4
Table 6-3: Community Evaluation Matrix 6-6
Table 6-4: Environmental Issues Evaluation Matrix 6-8

LIST OF PHOTOS

Photo 4-1: West Gallup Interchange 4-9
Photo 4-2: Existing Munoz Interchange 4-10
Photo 4-3: Existing Allison Underpass 4-10
Photo 4-4: NM 602/NM 118 Overpass 4-11
Photo 4-5: Munoz Interchange/Eastbound Ramps 4-12
Photo 4-6: West Jefferson Avenue/US 491 4-12
Photo 4-7: Munoz & Maloney /US 491 Interchange (westbound ramps) 4-12
Photo 4-8: Coal Basin Road/US 491 4-12
Photo 4-9: Aztec Avenue/Arnold Street 4-15
Photo 4-10: Maloney Avenue/Kachina Street 4-15
Photo 4-11: West Jefferson Avenue/US 491 4-15
Photo 4-12: Metro Avenue/US 491 4-15

APPENDICES

Appendix A – Right of Way Exhibits A-1
Appendix B – Bridge Inspection Reports B-2
Appendix C – Public Involvement Documents C-1
Appendix D – Intersection Turning Movements D-1
Appendix E – Existing Utility Exhibits ..... E-- 1 -
Appendix F – Crash Data F-1
Appendix G – 2030 Alternative Operational Analysis G-1

Appendix G Figures:

Figure G–1: Option 1 PM Peak Volumes (2030 Master Plan Network) G-2
Figure G–2: Option 1 Link LOS (2030 Master Plan Network) G-3
Figure G–3: Option 1 Node LOS (2030 Master Plan Network) G-4
Figure G 4 : Node LOS (2030 Master Plan Network) G-5
Figure G–5: Option 1 PM Peak Volumes (2030 Master Plan Network) G-6
Figure G-6: Option 2 Link LOS (2030 Master Plan Network) G-7
Figure G–7: Option 2 Node LOS (2030 Master Plan Network) G-8
Figure G–8: Option 2 Worst Movement G-9
Figure G–9: Option 3 PM Peak Volumes (2030 Master Plan Network) G-10
Figure G–10: Option 3 Link LOS (2030 Master Plan Network) G-11
Figure G–11: Option 3 Node LOS (2030 Master Plan Network) G-12
Figure G–12: Option 3 Worst Movement / Intersection LOS (2030 Master Plan Network) G-13

EXECUTIVE SUMMARY

PROJECT BACKGROUND & OVERVIEW

This project is located in the City of Gallup, McKinley County, New Mexico, as shown in Figure 1-1, page 1-1. More specifically the project limits are east and west along Interstate 40, from the West Gallup Interchange, approximately mile post 14, to the Munoz Interchange located at mile post 20. The Northern limit of the study area is approximately Maloney Avenue and the bluffs located to the north of I-40 and the project is bounded on the south by NM 118, formally US 66 refer to page 1-2, Figure 1-2.

This location study evaluates the existing Allison Road and considers potential corridors as alternates to Allison Road within the I-40 corridor from mile post 14 at the West Gallup Interchange to milepost 20 at the Munoz Interchange. The New Mexico Department of Transportation (NMDOT) is planning this project, which is designated as NMDOT project numbers SP-GA-5459(201) AND SP-GA-5459(202), CN C7G801/C7G802. In addition to the New Mexico Department of Transportation, the Federal Highway Administration (FHWA) and Northwest New Mexico Council of Governments (NWNMCOG) have oversight and review roles in this project. The study area also includes connectivity to existing NM 118 south of the interstate and Maloney Avenue north of the interstate.

The primary objective of this study is to evaluate existing conditions of Allison Road and within the study limits determine if there are other potential corridors to relocate the existing Allison Road. The aim of improving or relocating the Allison Road Corridor is the following:

- Provide an alternative north/south route besides US 491/NM 602 that relieves the travel demand on the existing Munoz Interchange;
- Improve intersection operations at the intersection of Allison Road and NM 118;
- Provide the opportunity to grade separate the existing Allison Road crossing of the BNSF railroad tracks;
- Identify replacement structures for the obsolete and aging structures currently in place on Allison Road;
- Improve pedestrian and bicycle mobility within the corridor;
- Provide the potential opportunity for a future interchange along I-40 with Allison Road;
- Provide better connections to the existing transportation system and the opportunity for future connections to the greater Gallup Transportation system.

This study has been developed according to NMDOT Location Studies Procedures: A Guidebook for Alignment and Corridor Studies. As set forth in the aforementioned guide, the objectives of this study are verification of the need for an action; development of a range of potential alternatives; and elimination of alternatives that are clearly not feasible. There are three transportation elements that are considered for this study. These are improving conditions of Allison Road, I-40 interchange operations, and connectivity to existing transportation systems (specifically NM 118 and Maloney Avenue). Each of these elements has been evaluated individually while looking at the corridor improvements in aggregate.

As part of this study the existing conditions of the transportation network and facilities were documented. This evaluation included researching and identifying: typical sections in the corridor; assessment of horizontal and vertical roadway geometry; bridge and drainage structure analysis; pavement survey; intersection spacing, geometry, and signalization; driveway locations, spacing, and access control. Current and future land use, as well as, current and design year traffic link volumes were evaluated based on traffic count data obtained in December of 2009. Additionally, intersections within the project limits had traffic counts and turning movement counts performed. These intersection turning movement counts were used to provide an understanding of how and where vehicles turn on and off of the system and how these turning movements effect the operational capacity and safety. A safety analysis was performed using crash data provided by NMDOT and the City of Gallup Police Department. The analysis period was from 2004 to 2008.

PUBLIC INVOLVEMENT AND AGENCY COORDINATION

A Public Involvement Plan (PIP) was prepared by Parametrix and Bohannan Huston, Inc. (BHI) and was approved by the New Mexico Department of Transportation (NMDOT) for Allison Road (Rd) Corridor and Interstate 40 (I-40) Interchange Study in December 2009. The process outlined in the PIP is a formal approach to implementing the public involvement requirements mandated by the Council on Environmental Quality's (CEQ's) National Environmental Policy Act (NEPA) guidelines, the NMDOT's Location Study Procedures, and the Federal Highway Administration (FHWA) Context Sensitive Design (CSD)/Context-Sensitive Solutions (CSS) process.

A Study Team was formed by NMDOT consultants and by Steve Lopez, NMDOT Central Regional Bureau Project Development Engineer (PDE). A Project Management Team (PMT) was formed by representatives from FHWA, NMDOT Central Region Design and NMDOT District 6, the City of Gallup Public Works Department (City), NMDOT Environmental Section, and other consultants including BHI, Wilson & Company, Inc., TBE Group, Parametrix, AMEC Earth and Environmental, Inc., and DePauli Engineering and Surveying, LLC. As the study progressed, other interested stakeholders were incorporated into the PMT including the Northwest Regional Planning Organization (NWRPO), McKinley County (County), Burlington Northern Santa Fe (BNSF) Railroad, and Gallup Joint Utilities.

Stakeholders are people who could potentially be positively or negatively affected by a project or who have a "stake" in the success or failure of a project. Examples of stakeholders include individuals, public and private groups, elected officials, non-governmental organizations, government agencies, and the owning agency. Every effort was made to reach traditionally underserved populations, including low income and minority households and persons with disabilities. As public meetings were held further stakeholders identified were added to the list of stakeholders. In addition to the Study Team and the PMT, there was an opportunity for key stakeholders to participate in a Stakeholder Advisory Group (SAG).

Purpose and Need

A detailed description of the existing transportation system, including safety analysis, existing & future traffic analysis and geometric analysis is presented in Chapter 4.8. Section 4.1.1 (see page 4-1) discusses the corridor, as well as, details the transportation facilities that are contained within the study limits. The purpose and need is specific to the corridor in aggregate not on the individual components that comprise the corridor.

There are seven factors that may establish the need for transportation improvements.

Safety

Safety can be defined in three ways: normative, substantive, and perceived. Normative safety is the measure to which designs meet applicable design standards (geometric compliancy). Substantive safety is the measure to which the historical safety record is favorable, irrespective of the whether the design standards are met or not. Perceived safety is the subjective measure of the level of comfort experienced by users of a facility. Consideration of these three safety measures individually and in aggregate is important when assessing existing conditions and potential improvements.

The standards to which the Allison Road corridor was compared to qualify normative safety were the 2004 AASHTO "Green Book" and the AASHTO Roadside Design Guide. Chapter 4 of this report presents a detailed evaluation of the existing geometric conditions of Allison Road as well as those of other facilities within the corridor. The existing Allison Corridor does have some elements that are normative safety concerns. Generally the typical section is narrower then recommended and without a shoulder. Stopping sight distance is limited by sharp horizontal curves at the north bridge approach. Both structures on Allison Road are structurally inadequate and/or functionally obsolete.

The substantive safety of the transportation facilities within the study corridor was quantified by reviewing crash data obtained from City and State law enforcement as well as by contacting BNSF rail operations. The findings and methodology of the crash data analysis is discussed in detail in section 4.10.1 and summarized in the following: Allison Road has a significantly higher crash rate than the State and McKinley County crash rates as well as that of the other facilities within the study limits. The average crash rate over the 5-year analysis period is 9.51. The statewide crash rate average for the years data is available is 2.07 and the McKinley County average is 1.11. Of the 22 crashes reported 3 (14%) involved drivers that had been drinking. The primary probable cause of crashes is attributed to following too close 32%, followed by driver inattention at 23% and excess speed/too fast for conditions also listed at 23%.

Perceived Safety is based solely on the perspective of the users of the facility and as such is anecdotal in nature. While there may not be either a normative or substantive safety concern, perceived safety issues may preclude some users from using a facility, because to them their perception is a reality. Discussions with stakeholders and public input during initial public meeting revealed that there exist perceived safety issues within the Allison Road Corridor that discourage the use of this facility.

Physical Deficiencies

Within the study limits physical deficiencies are manifested in several ways, including roadway geometrics, structural, pavement condition and drainage facilities. Considered individually each of these deficient conditions could justify improvements: collectively, they warrant improvement actions within the Allison Road Corridor.

Travel Demand & Congestion

Travel demand and associated congestion for the roadway within the study limits were estimated using a Travel Demand Model (TDM). The methodology and rationale employed are detailed in 4.10.6. For analytical purposes, the Base Year Analysis was established as 2010 and the 20-year forecast horizon year 2030. Existing traffic counts were performed at the onset of this study, December 2009, and were used to calibrate the TDM. The 2030 TDM roadway network was established based on the City of Gallup Long Range Growth Management Plan. The capacity of Allison Road does not justify the need for a project; however, the operations of the intersection of Allison Road with NM 118 do. The Allison Road/NM 118 intersection is currently unsignalized. Located approximately 200-feet north of the Allison Road/NM 118 intersection is a signalized railroad crossing with BNSF facilities. The 2009 average daily train traffic at Gallup was 60 trains every 24 hours. These train volumes do not include additional conflicts at the intersection caused by rail yard switching operations that activate the railroad

crossing. There is inadequate storage on Allison Road between NM 118 and the BNSF tracks for northbound traffic when the railroad crossing is activated. Because of this, traffic turning off of NM 118 onto northbound Allison Road routinely backs up on to NM 118.

System Connectivity

The Rio Puerco, Interstate, and the BNSF railroad tracks run east to west and are continuous throughout the City of Gallup and in effect divide Gallup into north and south halves. Within the study limits NM 602, Allison Road and Sanostee Drive are currently the only facilities that provide access across the railroad tracks and I-40. As such, improvements to Allison Road Corridor will directly impact the effectiveness of this facility to convey traffic between NM 118 and Maloney Avenue across the interstate and BNSF rail facilities which in turn will improve the overall system connectivity between the north and south side of Gallup between US491/NM602 and the West Gallup Interchange.

Access

In general terms, Allison Road currently provides minimal access. This is in large part to the limited extent of this facility between NM 118 and Maloney Boulevard. In regard to community access, this does not apply to the Allison Corridor due to the fact that there is not extensive development between NM 118 and the interstate that would necessitate the use of Allison Road to move within the community. The primary access provided by Allison Road is local access to City Maintenance and BNSF yards located between the interstate and NM 118. Some local traffic uses Allison Road to avoid congestion on NM 602/US 491 through the Munoz Interchange to access the commercial developments along Maloney Avenue and US 491. Allison Road is currently only a local roadway and thus provides no regional access.

Economic Development

The City of Gallup Growth Management Plan identifies a significant amount of developable land between I-40 and NM 118. The close proximity to the BNSF rail facilities makes these lands attractive locations for trucking, storage, and manufacturing facilities. These industries could provide much needed jobs within the City. However, the desire for businesses to locate in the area between I-40 and NM 118 is diminished due to the fact that Allison Road does not provide adequate community, local and/or regional access to facilitate economic development opportunities.

Legislative Mandate

Currently, there are no legislative mandates that are applicable to this corridor. However, keen interest in the Allison Road Corridor has been expressed by the City of Gallup, McKinley County and State Officials. This is evidenced by the special appropriations provided by the State Legislature in 2009 to conduct this study.

Purpose and Need Statement

The purpose of proposed Allison Road Corridor improvements is to mitigate existing geometric, physical, and operational deficiencies, improve safety, and provide system connectivity to the existing NMDOT and City of Gallup transportation network that is compatible with long range local and regional planning goals to facilitate economic growth. In particular, primary consideration should be given to the following needs in this corridor:

- Improve traffic operations at the intersection of NM 118 and Allison Road by reducing the impacts associated with rail operations;
- Correcting geometric, physical, and safety deficiencies within the Allison Road Corridor that limit the operational speed of the roadway and limit the potential to increase the functional classification of the facility;
- Location of the Allison Road Corridor, with respect to adjacent I-40 interchanges, to provide the opportunity for corridor preservation and future construction of an interchange with I-40;
- Location of the Allison Road Corridor to maximize developable land and access between I-40 and NM 118.

Description of Alternatives

Corridor alternatives were investigated between the I-40 / Gallup West Interchange with NM 118 / Business 40 and the US 491 / NM 602 Interchange. Three corridor locations were considered. Alternative 1 is in the middle of the study area approximately half way between the two existing interchanges, Alternative 2 on the west end of the study area approximately 1.6 miles from the Gallup West Interchange, and Alternative 3 on the east end of the study area near the existing Allison St. underpass alignment.

Alternative 1 – Middle of Study Area

Alternative 1 is located approximately 1.5 miles west of the US 491 / Munoz interchange and 2.9 miles east of the Gallup West Interchange. The new crossing could intersect the existing neighborhood street, Acoma Street. The Rio Puerco is located between Interstate 40 and the BNSF Railroad tracks. A river bridge crossing would be required. The City of Gallup Airport is located south of NM 118. Connects to the Allison Neighborhood on the north side of Interstate 40 and an existing network of streets.

Alternative 2 – West End of Study Area

The second corridor location alternative is located approximately 1.6 miles east of the I-40 / Gallup West Interchange as shown in Figure 5-5. South of NM 118 the cross street would intersect Armand Ortega St. with an at grade intersection so traffic would be able to access NM 118 or Mendoza Blvd.

The cross street encroaches on existing City of Gallup Airport property. The Rio Puerco is located between Interstate 40 and NM 118 in this area. A river bridge crossing would be required. The river crosses under I-40 approximately 1.4 miles east of the Gallup West Interchange.

Alternative 3 – East End of Study Area

The third corridor location alternative is to construct a new corridor on the east end of the study area. This alternative is in close proximity to the existing Allison and would replace the existing Allison Road alignment from NM 118 to the I-40 underpass. South of I-40 the existing Allison Road Bridge over the Rio Puerco is structurally and functionally obsolete. The existing bridge would be replaced by the new alignment. If an interchange is considered at this location, ramps would not impact the Rio Puerco. This alternative also eliminates an existing at grade railroad crossing and replaces existing bridge over the Rio Puerco that is in poor condition. There are multiple locations south of NM 118 where the cross street can tie into the existing transportation network. Improvements to the Allison corridor would provide an additional connection to trail systems proposed north and south of the Interstate.

RECOMMENDATIONS

The objective of the Allison Road Corridor and Interstate Study was to verify the need for improvements to the existing corridor; to develop alternative corridors that addresses the stated purpose and need; eliminate alternatives that are not feasible; and to recommend alternatives to be carried forward to the Phase B Study. It is recommended that Alternative 1 and Alternative 2 not be carried forward to Phase B because they do not satisfy the Purpose and Need of this project. It is however recommended that Alternative 3 be carried forward for further development in Phase B. Alternative 3 was unanimously selected by the Project Management Team and Stakeholders as the preferred alternative for the following reasons. This alternative is located approximately at the same location as existing Allison Road Corridor and therefore will reconstruct and replace existing Allison Road and the deficient Allison Road Bridge. There is adequate spacing between this location and the Munoz Interchange. This corridor alignment can easily be extended to the north to tie into existing transportation facilities such as Coal Basin Road, Gamerco and others. Equally important to the regional transportation system this corridor can be extended south beyond NM118 to tie the existing transportation. This alternative location also will provide good access and improve mobility to existing businesses in the area as well as lands north and south of I-40 that have potential for development. Congestion relief to US491/NM602 could be provided if the regional transportation connections are made to the north and south.

1. INTRODUCTION

This project is located in the City of Gallup, McKinley County, New Mexico, as shown in Figure 1-1. More specifically the project limits are east and west along Interstate 40, from the West Gallup Interchange, approximately mile post 14, to the Munoz Interchange located at mile post 20. The Northern limit of the study area is approximately Maloney Avenue and the bluffs located to the north of I-40 and the project is bounded on the south by NM 118, formally US 66 refer to Figure 1-2.

1.1 Project Background & Overview

This location study evaluates the existing Allison Road and considers potential corridors as alternates to Allison Road within the I-40 corridor from mile post 14 at the West Gallup Interchange to milepost 20 at the Munoz Interchange. The New Mexico Department of Transportation (NMDOT) is planning this project, which is designated as NMDOT project numbers SP-GA-5459(201) AND SP-GA-5459(202), CN C7G801/C7G802. In addition to the New Mexico Department of Transportation, the Federal Highway Administration (FHWA) and Northwest New Mexico Council of Governments (NWNMCOG) have oversight and review roles in this project. The study area also includes connectivity to existing NM 118 south of the interstate and Maloney Avenue north of the interstate. The current alignment of Allison Road is located at approximately I-40 milepost 18. Allison Road crosses I-40 at a concrete box culvert underpass. There is another underpass along I-40, at Sweet Water that is within the study limits.

The primary objective of this study is to evaluate existing conditions of Allison Road and within the study limits determine if there are other potential corridors to relocate the existing Allison Road. The aim of improving or relocating the Allison Road Corridor is the following:

- Provide an alternative north/south route besides US 491/NM 602 that relieves the travel demand on the existing Munoz Interchange;
- Improve intersection operations at the intersection of Allison Road and NM 118;
- Provide the opportunity to grade separate the existing Allison Road crossing of the BNSF railroad tracks;
- Identify replacement structures for the obsolete and aging structures currently in place on Allison Road;
- Improve pedestrian and bicycle mobility within the corridor;
- Provide the potential opportunity for a future interchange along I-40 with Allison Road;
- Provide better connections to the existing transportation system and the opportunity for future connections to the greater Gallup Transportation system.

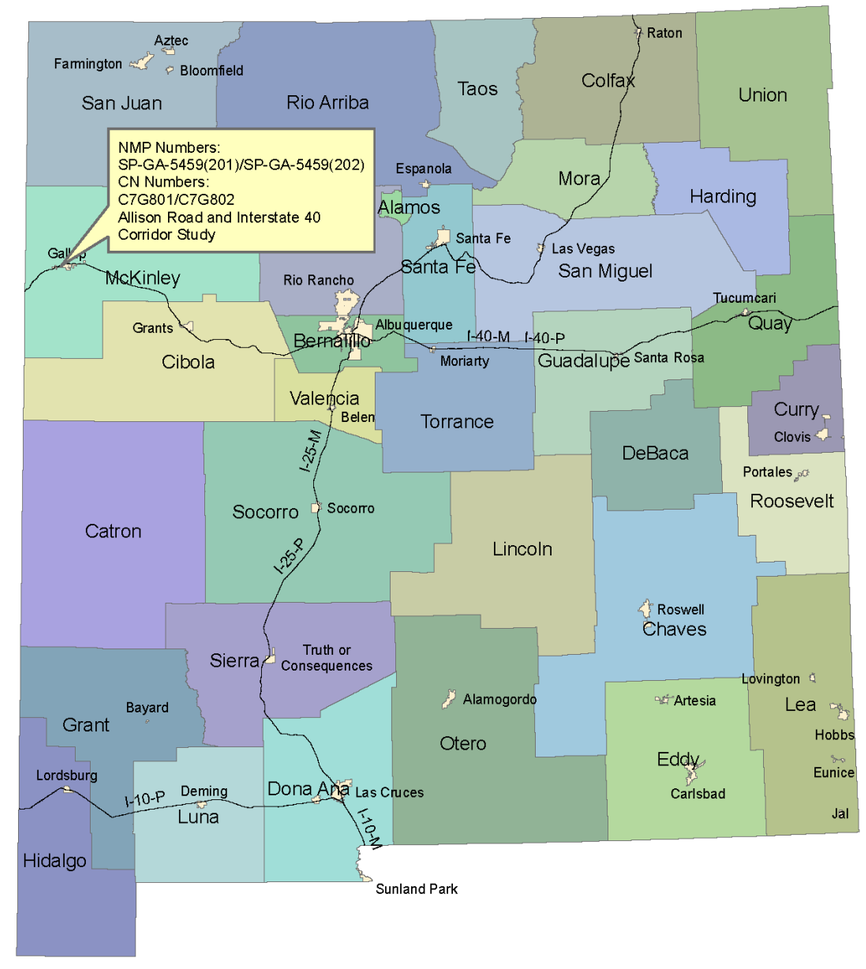
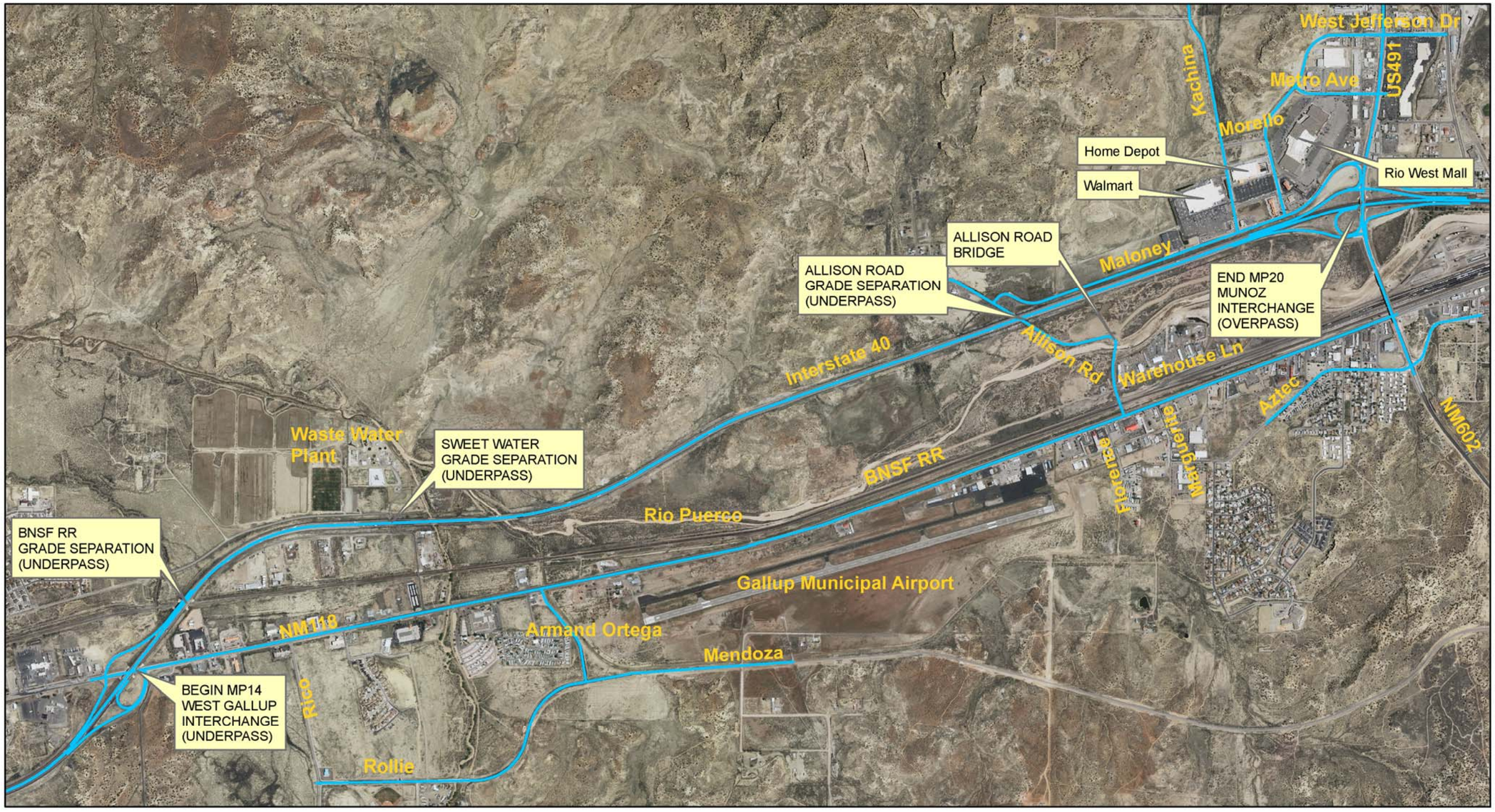


Figure 1-1: Location Map



Vicinity Map

NORTH

0 0.05 0.1 0.2 0.3 0.4
Miles

Figure 1-2: Vicinity Map

Potential factors that will be studied and evaluated as part of the location study include the following:

- Improving traffic operations of the Munoz Interchange;
- Right-of-Way impacts to existing businesses;
- Impacts to the Rio Puerco;
- New bridges across the Rio Puerco and crossing structures with I-40;
- Modal improvements, modal choice, congestion mitigation, and connection redundancy;
- Right-of-way requirements;
- Drainage improvements;
- Pedestrian, bicycle facilities;
- Public transportation; and
- Multi-modal transportation system improvements that support potential transit oriented development (TOD) or transit oriented mode transportation.

This study has been developed according to NMDOT Location Studies Procedures: A Guidebook for Alignment and Corridor Studies. As set forth in the aforementioned guide, the objectives of this study are verification of the need for an action; development of a range of potential alternatives; and elimination of alternatives that are clearly not feasible.

There are three transportation elements that are considered for this study. These are improving conditions of Allison Road, I-40 interchange operations, and connectivity to existing transportation systems (specifically NM 118 and Maloney Avenue). Each of these elements has been evaluated individually while looking at the corridor improvements in aggregate. There are six engineering factors identified in the NMDOT Location Studies Procedures that were considered to assess the need for transportation improvements:

1. Safety
2. Physical Deficiencies
3. Travel Demand and Congestion
4. System Connectivity
5. Access
6. Economic Development

To address these engineering factors there were five primary activities performed:

1. Develop a description of the existing transportation system;
2. Develop a description of the condition of the existing facility;
3. Analyze the land use and growth trends;
4. Analyze the existing and future traffic conditions;
5. Conduct a safety analysis.

The existing transportation network has national, regional and local importance. I-40 is a major east-west transportation route both nationally and regionally. Nationally it connects southern California to the mid-Atlantic seaboard. In the winter months, I-40 is generally preferred to other east-west routes because it generally has better driving conditions then northern cross-country routes. In fact, I-40 has a high level of cross-country freight traffic. This section of I-40 is used by over 20,000 vehicles daily. 40% of that traffic is truck traffic. It has been estimated that over 215 million tons of freight are shipped daily in this corridor. As a regional link I-40 provides connection between western New Mexican Cities such as Gallup and Grants to eastern Cities such as Santa Rosa and Tucumcari. Locally, I-40 is the primary transportation link between Albuquerque and Gallup. NM 118, or old US Route 66, runs south of and parallel to I-40 and sometimes interstate traffic is diverted to it when weather conditions or accidents close the interstate. NM 118 provides a valuable link throughout Gallup and provides access to many local businesses within this corridor. US 491 intersects I-40 at the Munoz interchange at the eastern limits of the project. US 491 is a vital link between northwestern New Mexico and Gallup but also to the Navajo Nation.

Another facet considered within this study is multi-modal facilities, such as park and ride facilities, and trails for pedestrian and bicyclists. Multi-modal access also provides safe paths that are handicapped accessible and provide a connection between the north and south sides of I-40.

As part of this study the existing conditions of the transportation network and facilities were documented. This evaluation included researching and identifying: typical sections in the corridor; assessment of horizontal and vertical roadway geometry; bridge and drainage structure analysis; pavement survey; intersection spacing, geometry, and signalization; driveway locations, spacing, access control.

Current and future land use, as well as, current and design year traffic link volumes were evaluated based on traffic count data obtained in December of 2009. Additionally, intersections within the project limits had traffic counts and turning movement counts performed. These intersection turning movement counts were used to provide an understanding of how and where vehicles turn on and off of the system and how these turning movements effect the operational capacity and safety. A safety analysis was performed using crash data provided by NMDOT and the City of Gallup Police Department. The analysis period was from 2004 to 2008.

1.2 Corridor History

The Native American tribes of the Navajo, Acoma, Hopi and Zuni have inhabited the areas around what is currently known as Gallup since antiquity. In approximately 1540 AD, the Spanish Conquistadors arrived in this region of the New World. In the late 1800's Europeans, Asians and Mexicans migrated to Gallup to work on the construction of the railroad system that still runs through the heart of Gallup today. The descendants of all of these people remain to this day and attest to Gallup's unique history and cultural diversity.

Interstate 40 has a colorful and storied history that began in 1857. At this time Lt. Edward Fitzgerald Beale using a team of camels as pack animals was assigned the job of building a wagon road across New Mexico and Arizona near the 35th parallel. For about 1,000 miles I-40 follows the general route of the Beale Wagon Road from Arkansas to California. The Beale Wagon Road is still visible in many places today and has been well documented in north central Arizona by Jack Beale Smith in a series of booklets called Tales of the Beale Road. Lewis Burt Lesley published one of Beale's reports in 1929 in the book Uncle Sam's Camels. [1]

In 1880, a paymaster for the Atlantic and Pacific Railroad, David L. Gallup, established headquarters along the construction right-of-way of the southern transcontinental route. The railroad workers began "going to Gallup" to get their pay; thus a town was born and named in 1881.

In the early days, Gallup was a typical, western frontier town, but comparatively quiet by most standards. There were occasional, minor Indian uprisings, but the soldiers of nearby Fort Wingate were able to discourage any major attacks. Most of the citizens carried arms until a law in 1896 limited that practice.

No U.S. roadway is more famous than Route 66 (renamed NM 118 within this area), which has been popularized in television shows, movies, literature and music. This route served as the main east to west interstate route and it crossed several other transcontinental roads. This roadway ran from Chicago, Illinois through Missouri, Kansas, Oklahoma, Texas, New Mexico, Arizona and California and was comprised of 2,448 miles of roadway.

> "...and they come into 66 from the tributary side roads, from the wagon tracks and the rutted country road, 66 is the mother road, the road of flight." – John Steinbeck, "The Grapes of Wrath".

US Highway 66 was officially commissioned November 11, 1926. Route 66 provided access to the West for migrant workers, especially during the "Dust Bowl" of the 1930's. Route 66 was officially removed from the U.S. Highway System on June 27, 1985 as it had largely been replaced by Interstate 40. Route 66 through New Mexico has been designated as a National Scenic Byway recognized by Congress in the National Scenic Byways Program of the Federal Highway Administration on September 22, 2005.[2]

Shortly after the Federal Highway Act of 1956 created the Interstate Highway System, planning and construction of Interstate 40 through New Mexico began. In the 1960's the first sections of I-40 through the state were completed. I-40 incorporated portions of the two-lane Route 66 as half of the 4-lane interstate while large portions were simply bypassed.[3] By the end of the 1960s, most rural sections of I-40 were completed across the state.

1.3 Community Profile

The majority of the City of Gallup population consists of American Indians at 36.6% and Hispanic or Latinos at 33.1% (see Table 1-1). The racial makeup of McKinley County is 74.7% American Indian with a smaller constituent of the White population at 16.4% and the Hispanic or Latino population at 12.4%. These racial characteristics for the study area illustrate the predominance of the American Indian populations within the region including a part of the Navajo Nation, the Zuni, and the Hopi. The Navajo Nation Chapters that are located in proximity to the study area include the following: Yah-tah-hey, Mexican Springs, Tohatchi, Naschitti, Sheep Springs, and the Newcomb Chapter.

[1] Interstate 40 in New Mexico. (2009, June 9). In *Wikipedia, The Free Encyclopedia*. Retrieved 14:09, June 9, 2009, from http://en.wikipedia.org/w/index.php?title=Interstate_40_in_New_Mexico&oldid=295374146

[2] Historic Route 66. Retrieved July 21, 2009, from http://www.byways.org/explore/byways/2489/designation.html

[3] A Noteworthy Yeay, by Richard Weingroff. In *Public Roads, November/December 2006.* Retrieved July 20, 2009, from http://www.tfhrc.gov/pubrds/06nov/02.htm

Approximately half of the Navajo population speak Navajo at home (45.75%) followed by English at 38.87%, Zuni at 9.03% and Spanish at 5.72% (U.S. Census Bureau 2000). McKinley County is one of only three County-level Census divisions of the United States where the most spoken language is neither English nor Spanish.

McKinley County is ranked the 20th poorest county in the U.S. with a per capita income of only $9,872 and 36.1% of individuals living below the poverty level (see Table 1-2). The City of Gallup has a higher per capita income of $15,789 and 20.8% of individuals living below the poverty level. The City of Gallup economy consists of a varied base of service, government, mining, and refinery industries and Native American jewelry production. The sales of Native American arts and crafts constitute a significant part of the economic system as well as tourism. Small manufacturing within the region includes printing, sheet metal production, food production, and the production of cattle and sheep by-products. Heavy manufacturing within the region includes gasoline refining, natural gas and coal mining, and mining uranium reserves.

TABLE 1-2: PROJECT AREA ECONOMIC CHARACTERISTICS

Income	City of Gallup	McKinley County
Median Household Income	$34,868	**$25,005**
Per Capita Income	$15,789	**$9,872**
Individuals below poverty level	**4,079 (20.8%)**	**26,664 (36.1%)**

TABLE 1-1: PROJECT AREA DEMOGRAPHIC CHARACTERISTICS

Racial Characteristics	City of Gallup	McKinley County
White	8,106 (40.1%)	**12,257 (16.4%)**
Black	219 (1.1%)	**296 (0.4%)**
Asian/Pacific Islander	289 (1.4%)	**344 (0.5%)**
American Indian/Alaska Native	7,404 (36.6%)	**55,892 (74.7%)**
Hispanic or Latino*	6,699 (33.1%)	**9,276 (12.4%)**
Elderly-greater than 65 years	1,805 (8.9%)	**5,160 (6.9%)**
Some other Race	2,985 (14.8%)	**4,095 (5.5%)**
Total Population	20,209 (100%)	**74,798 (100%)**

Source: U.S. Department of Commerce, U.S. Census Bureau, 2000 Census data
***Percentages do not add up to 100% because some individuals may be counted in multiple categories**
***Hispanic or Latino is a separate category of the population because the Hispanic or Latino population has both cultural and racial identifications.**

2. AGENCY COORDINATION AND PUBLIC INVOLVEMENT

A Public Involvement Plan (PIP) was prepared by Parametrix and Bohannan Huston, Inc. (BHI) and was approved by the New Mexico Department of Transportation (NMDOT) for Allison Road (Rd) Corridor and Interstate 40 (I-40) Interchange Study in December 2009. The purpose of the PIP was to ensure that information about the study was made available to the concerned public and that the public has an opportunity to participate in the decision-making process. The process outlined in the PIP is a formal approach to implementing the public involvement requirements mandated by the Council on Environmental Quality's (CEQ's) National Environmental Policy Act (NEPA) guidelines, the NMDOT's Location Study Procedures, and the Federal Highway Administration (FHWA) Context Sensitive Design (CSD)/Context-Sensitive Solutions (CSS) process.

The NMDOT is committed to the CSD/CSS process, which considers aesthetic, cultural, environmental, and community values in balance with more traditional design criteria in transportation infrastructure development such as safety, mobility, and protection of tort liability. A Study Team has been formed by NMDOT consultants and by Steve Lopez, NMDOT Central Regional Bureau Project Development Engineer (PDE). A Project Management Team (PMT) was formed by representatives from FHWA, NMDOT Central Region Design and NMDOT District 6, the City of Gallup Public Works Department (City), NMDOT Environmental Section, and other consultants including BHI, Wilson & Company, Inc., TBE Group, Parametrix, AMEC Earth and Environmental, Inc., and DePauli Engineering and Surveying, LLC. As the study progressed, other interested stakeholders were incorporated into the PMT including the Northwest Regional Planning Organization (NWRPO), McKinley County (County), Burlington Northern Santa Fe (BNSF) Railroad, and Gallup Joint Utilities. The Study Team and the PMT worked together to accomplish the goals of the CSD/CSS process.

Stakeholders are people who could potentially be positively or negatively affected by a project or who have a "stake" in the success or failure of a project. Examples of stakeholders include individuals, public and private groups, elected officials, non-governmental organizations, government agencies, and the owning agency. The stakeholders identified in Exhibit A of the PIP include also individuals or groups who have shown an interest or have participated in the public involvement activities of other transportation issues in the Gallup region. Every effort was made to reach traditionally underserved populations, including low income and minority households and persons with disabilities. As public meetings were held further stakeholders identified were added to the list of stakeholders.

In addition to the Study Team and the PMT, there was an opportunity for key stakeholders to participate in a Stakeholder Advisory Group (SAG). The public involvement process provided information to stakeholders and invited input during all phases of the study, including definition of purpose and need, identification of community impacts, and selection of feasible alternatives. Public involvement for this project has also been designed to provide project information to the public through local media advertisements, public involvement meetings, small group workshops, individual interviews, and written correspondence.

A detailed summary of all public involvement activities performed during this study follows:

The initial public involvement meeting was held on November 18, 2009 at the City of Gallup City Hall Council Chambers to provide information to interested members of the public and to collect input on possible impacts and community values pertaining to this corridor study. This first meeting included a review of project information such as scope, purpose and need, as well as, a review of the project development process and existing conditions. Factors considered during the engineering and environmental evaluation were covered and an overview of the proposed public involvement process was presented. Members of the public, City of Gallup Councilors, the City of Gallup Mayor, and a representative of the NWCOG were present at the meeting. There were a total of 18 members of the public and seven representatives of the project study team present. The main concerns expressed during the meeting were in regard to how the study team will look at connectivity in the corridor, how traffic will be affected during construction, and how the study team will address bike safety within the corridor.

The second public meeting was held at the City of Gallup City Hall Council Chambers July 22, 2010 at the conclusion of Phase A. This second public meeting focused on presenting the full range of alternatives developed by the Study Team and consultants during Phase A. Alternatives were graphically presented, and summaries of the major components of each were available for review. Minutes of this meeting are included in Appendix C of this report. The selected alternative, Alternative 3, will be further refined in Phase B. Study Team members were available at all of the public meeting to answer questions from the participants.

In order to solicit input from citizens and stakeholders located along the project corridor, several Stakeholder Advisory Group (SAG) workshop meetings were conducted. A SAG meeting was held on March 25th, 2010 at the City of Gallup City Hall Council Chambers. The purpose of this workshop was to obtain comments, concerns, and suggestions from the public about the proposed alternatives in an open house format that encouraged discussion among the participants.

On August 24, 2010, a briefing was conducted for the Gallup City Council. During this presentation, an overview of the project background, team, and alternatives were discussed.

3. PROJECT PURPOSE AND NEED

This chapter presents the purpose and need for improvements within the Allison Road Corridor and I-40 interchange study limits. A detailed description of the existing transportation system, including safety analysis, existing & future traffic analysis and geometric analysis is presented in Chapter 4.8. Section 4.1.1 (see page 4-1) discusses the corridor as well as details the transportation facilities that are contained within the study limits. The purpose and need is specific to the corridor in aggregate not on the individual components that comprise the corridor.

There are seven factors that may establish the need for transportation improvements. These factors are:

- Safety;
- Physical deficiencies;
- Travel demand & congestion;
- System connectivity;
- Access;
- Economic development;
- Legislative mandate.

Using these seven factors as a basis, the Allison Road corridor was reviewed with stakeholders, as set forth in the Public Involvement Plan (PIP) prepared for this study. During meetings with the stakeholders many issues and concerns, with both the existing and future state of this corridor were identified. These were documented and investigated to confirm that they represented a factor that should be included in the determination of the project need. Framed by the seven purpose and need factors, the existing conditions within the Allison Corridor are summarized in the following sections.

3.1 SAFETY

Safety can be defined in three ways: normative, substantive, and perceived. Normative safety is the measure to which designs meet applicable design standards (geometric compliancy). Substantive safety is the measure to which the historical safety record is favorable, irrespective of the whether the design standards are met or not. Perceived safety is the subjective measure of the level of comfort experienced by users of a facility. Consideration of these three safety measures individually and in aggregate is important when assessing existing conditions and potential improvements.

3.1.1 Normative Safety Assessment

The standards to which the Allison Road corridor was compared to qualify normative safety were the 2004 AASHTO "Green Book" and the AASHTO Roadside Design Guide. Chapter 4 of this report presents a detailed evaluation of the existing geometric conditions of Allison Road, as well as, those of other facilities within the corridor. The following is a summary of deficiencies on existing Allison Road that do not meet current AASHTO geometric design standards:

- The existing roadway typical section is 24-feet wide which is standard for a two-lane roadway, however, the typical section is lacking a shoulder, which for a collector roadway should be a minimum of 5-feet wide;
- Existing Allison Road Bridge crossing the Rio Puerco is only 23-feet wide. The recommended minimum standard is 30-feet wide;
- The horizontal curvature north of the bridge has inadequate stopping sight distance (i.e. blind curve) due to the temporary concrete wall barrier lining the roadway and no curve widening provided to accommodate off-tracking of large vehicles;
- The roadside barrier along Allison Road, that shields the Rio Puerco, is comprised of dilapidated temporary concrete wall barrier.
- The metal bridge barrier rail is listed as substandard in the bridge inspection report due to broken, dry and checked wooden posts with traffic damage;
- The existing concrete box culvert (CBC) crossing that carries I-40 over Allison Road is 25-feet wide; the recommended width is 30-feet. Additionally, this structure only has 14-feet of vertical clearance and is classified as functionally obsolete in the NMDOT bridge inspection reports.

3.1.2 Substantive Safety Assessment

The substantive safety of the transportation facilities within the study corridor was quantified by reviewing crash data obtained from City and State law enforcement, as well as, by contacting BNSF rail operations. The findings and methodology of the crash data analysis is discussed in detail in section 4.10.1. Summarized in the following, Allison Road has a significantly higher crash rate than the other facilities within the study limits.

Over the 5-year analysis period there were 4 crashes at the Allison Road/NM 118 Intersection. In 2005 one pedestrian was killed when struck by a train. The crash data provided by the City of Gallup for Allison Road only specified the probable cause of the crash and the sobriety of the driver. The following table shows the number of crashes and the corresponding crash rate per million vehicle miles (MVM).

TABLE 3-1: COMPARISON TO STATE & COUNTY CRASH AND FATALITY RATES

CRASH RATES:	2004	2005	2006	2007	2008
Total Crashes	5	3	8	5	2
Crash Rate per MVM	10.34	6.20	16.54	10.34	4.14
State Ave	2.11	2.23	2.05	1.90	n/a
McKinley	1.43	1.14	1.03	.86	n/a

The crash rate for this 7-tenth of a mile road is significantly higher than both the statewide and county average crash rates. The average crash rate over the 5-year analysis period is 9.51. The statewide crash rate average for the years data is available is 2.07 and the McKinley County average is 1.11. Of the 22 crashes reported, 3 (14%) involved drivers that had been drinking. The primary probable cause of crashes is attributed to following too close 32%, followed by driver inattention at 23% and excess speed/too fast for conditions also listed at 23%.

By comparison there were only four crashes on Maloney Avenue during the same 5-year analysis period: three crashes in 2004 and one in 2008. The crash in 2008 is the only one reported that involved a drunk driver. Based on the probable causes listed in the crash data there appears not to be any one single contributing factor. The average crash rate for Maloney Avenue is significantly lower than that of Allison Road. The average crash rate over the five year analysis period for Maloney Avenue was 0.71 per MVM although the average daily traffic, ADT, on Maloney Avenue is nearly double that of Allison Road. The average crash rate on NM 118 was reported to be 2.9 per MVM over the analysis period and that of US 491 was 6.10

3.1.3 Perceived Safety Assessment

Perceived Safety is based solely on the perspective of the users of the facility and as such is anecdotal in nature. While there may not be either a normative or substantive safety concern, perceived safety issues may preclude some users from using a facility, because to them their perception is a reality. Discussions with stakeholders and public input during the initial public meeting revealed the following perceived safety issues:

- In general, it was expressed that pedestrians and bicyclist avoid using Allison Road because there is no sidewalk or shoulder.
- Pedestrians and bicyclists do not like crossing the railroad tracks.
- During BNSF rail operations the intersection of NM 118/Allison becomes very congested. People become frustrated with the congestion. This frustration often leads to drivers making erratic traffic maneuvers that create an unsafe environment.
- Incident management on Allison Road can be impeded by rail operations due to a lack of redundant routes;
- Allison Road is perceived as unsafe by users because the existing bridge is viewed as “ready to fall down.”

3.2 PHYSICAL DEFICIENCIES

Within the study limits physical deficiencies are manifested in several ways, including roadway geometrics, structural, pavement condition and drainage facilities. Considered individually, each of these deficient conditions could justify improvements: collectively, they warrant improvement actions within the Allison Road Corridor.

3.2.1 Roadway Geometrics

Deficient roadway geometrics are a contributing factor to the normative safety issues discussed previously. The following are the geometric deficiencies noted during the evaluation of the Allison Road Corridor.

- No roadway shoulders provided on Allison Road;
- Insufficient roadway widening on curves north of bridge crossing Rio Puerco;
- Curve length on curve immediately north of bridge is too short for 130-foot radius resulting in a blind curve;
- Existing roadway curvature limits the operating speed of the facility to a design speed of 25mph (assuming 6% superelevation) and precludes upgrading the functional classification of the facility in accordance with the City of Gallup Growth Management Plan.

3.2.2 Structural

There are two structural elements on Allison Road, a timber bridge and a box culvert, both of which are structurally and/or functionally deficient. The timber bridge carries Allison Road over the Rio Puerco while the concrete box culvert carries Allison Road beneath I-40.

The existing timber bridge was constructed in 1940 and has a structural rating of 43.8. This structure is functionally obsolete because it has substandard width. Many of the girders on this bridge are warped, cracked or loose.

The existing concrete box culvert is structurally sound but is functionally obsolete because it has only 14-feet of vertical clearance.

Within the study limits the structure carrying WB I-40 travel lanes over NM 118 was determined to be functionally obsolete.

3.2.3 Pavement Condition

A cursory pavement assessment was performed as part of this study. In general, Allison Road pavement has excessive alligator cracking and is in need of maintenance or improvement.

3.2.4 Drainage Facilities

An existing structures evaluation was performed as part of this study. The methodology used is detailed in section 4.8. Most of the drainage facilities within the study limits perform adequately. It was noted that the existing culverts near Maloney and Allison are partially filled with sedimentary deposition. This has reduced the functional capacity causing water to backup and impound along the north side of Maloney. A field investigation revealed that the flows from these culverts are being impeded from out falling to Rio Puerco due to manmade detention facilities on private property between I-40 & NM 118.

During meetings with the City of Gallup, it was identified that at the Allison Road Bridge crossing of the Rio Puerco, water overtops the banks of the Rio Puerco near the structure during major storm events. To determine the impact of this, a Hydrologic Engineering Centers River Analysis System (HEC-RAS) analysis was performed to determine the water surface elevation of the Rio Puerco for a 100-year event. As detailed in section 4.8.1, the analysis computed the water surface elevation is 6491.10 at the Allison Road crossing. Based on the same digital terrain model used for the HEC-RAS analysis the existing top of roadway elevation for the Allison Road crossing is 6489.81, over a foot lower than the calculated water surface elevation.

3.3 Travel Demand & Congestion

Travel demand and associated congestion for the roadway within the study limits were estimated using a Travel Demand Model (TDM). The methodology and rationale employed are detailed in 4.10.6. For analytical purposes, the Base Year Analysis was established as 2010 and the 20-year forecast horizon year 2030. Existing traffic counts were performed at the onset of this study, December 2009, and were used to calibrate the TDM. The 2030 TDM roadway network was established based on the City of Gallup Long Range Growth Management Plan.

Current traffic volumes on Allison Road are very low. It is a local road that is used by local traffic to access properties in the area and occasionally it is used by some traffic to bypass congestion that occurs at the Munoz Interchange (US 491/NM 602). Based on traffic counts the Peak Hour Volume on Allison is 289 vehicles. This equates to an average daily traffic volume of nearly 2,000 vehicles per day. The current level of service based on capacity analysis for the roadway link is level of service (LOS) B. The expected 2030 peak hour volume is 463 and the estimated LOS is A. This increase in 2030 demand is attributed to the TDM model showing Allison Road connecting to Maloney Avenue on the north and to Mendoza Boulevard on the South. The capacity of Allison Road does not justify the need for a project; however, the operations of the intersection of Allison Road with NM 118 do, as further discussed below.

The Allison Road/NM 118 intersection is currently unsignalized. Located approximately 200-feet north of the Allison Road/NM 118 intersection is a signalized railroad crossing with BNSF facilities. The 2009 average daily train traffic at Gallup was 60 trains every 24 hours. This includes freight trains through Gallup both ways, and two Amtrak Passenger trains. In 2008, it was 76, in 2007 it was 83, and in 2006 it was 88. BNSF anticipates that daily train numbers will return to the higher volumes again as the economy recovers[4]. These train volumes do not include additional conflicts at the intersection caused by rail yard switching operations that activate the railroad crossing. There is inadequate storage on Allison Road between NM 118 and the BNSF tracks for northbound traffic when railroad crossing is activated. Because of this, traffic turning off of NM 118 onto northbound Allison Road routinely backs up on to NM 118.

[4] Train volume information provided by BNSF.

3.4 System Connectivity

The Rio Puerco, Interstate, and the BNSF railroad tracks run east to west and are continuous throughout the City of Gallup and in effect divide Gallup into north and south halves. Within the study limits NM 602, Allison Road and Sanostee Drive are currently the only facilities that provide access across the railroad tracks and I-40. As such, improvements to the Allison Road Corridor will directly impact the effectiveness of this facility to convey traffic between NM 118 and Maloney Avenue across the interstate and BNSF rail facilities which in turn will improve the overall system connectivity between the north and south side of Gallup.

3.5 Access

Within the study limits there are three modes of access that need to be assessed: community, local, and regional. Community access refers to access on either side of I-40 within either the north or south side of Gallup exclusively. Local access describes the access the facility provides across the interstate and between north and south Gallup. Regional access speaks to how well a facility provides access to other facilities that provide transportation to areas outside of the Gallup City Limits.

In general terms, Allison Road currently provides minimal access. This is in large part to the limited extent of this facility between NM 118 and Maloney Boulevard. In regard to community access, this does not apply to the Allison Corridor due to the fact that there is not extensive development between NM 118 and the interstate that would necessitate the use of Allison Road to move within the community. The primary access provided by Allison Road is local access to City Maintenance and BNSF yards located between the interstate and NM 118. Some local traffic uses Allison Road to avoid congestion on NM 602/US 491 through the Munoz Interchange to access the commercial developments along Maloney Avenue and US 491. Allison Road is currently only a local roadway and thus provides no regional access.

The Allison Road Corridor has the potential to provide significant improvements to community, local and regional access. As discussed earlier, the long range growth plan for the City of Gallup shows Allison Road connecting to Mendoza Boulevard to the south of NM 118. This would provide access to planned housing developments in this area. By rectifying the geometric deficiencies that limit the design speed and thus the functional classification of Allison Road, local access could be improved. Ultimately, regional access could be provided, if the Allison Road corridor was located such that proper interchange spacing was obtained, a future interchange with I-40 could be constructed.

3.6 Economic Development

The City of Gallup Growth Management Plan identifies a significant amount of developable land between I-40 and NM 118. The close proximity to the BNSF rail facilities makes these lands attractive locations for trucking, storage, and manufacturing facilities. These industries could provide much needed jobs within the City. However, the desire for businesses to locate in the area between I-40 and NM 118 is diminished due to the fact that Allison Road does not provide adequate community, local and/or regional access to facilitate economic development opportunities.

3.7 Legislative Mandate

Currently, there are no legislative mandates that are applicable to this corridor. However, keen interest in the Allison Road Corridor has been expressed by the City of Gallup, McKinley County and State Officials. This is evidenced by the special appropriations provided by the State Legislature in 2009 to conduct this study.

3.8 Purpose and Need Statement

The purpose of proposed Allison Road Corridor improvements is to mitigate existing geometric, physical, and operational deficiencies, improve safety, and provide system connectivity to the existing NMDOT and City of Gallup transportation network that are compatible with long range local and regional planning goals to facilitate economic growth. In particular, primary consideration should be given to the following needs of this corridor:

- Improvements to the intersection of NM 118 and Allison Road that improve traffic operations by reducing the impacts associated with rail operations;
- Correcting geometric, physical, and safety deficiencies within the Allison Road Corridor that limit the operational speed of the roadway and limit the potential to increase the functional classification of the facility;
- Location of the Allison Road Corridor, with respect to adjacent I-40 interchanges, to provide the opportunity for corridor preservation and future construction of an interchange with I-40;
- Location of the Allison Road Corridor to maximize developable land and access between I-40 and NM 118.

4. EXISTING CONDITIONS AND CONSTRAINTS

4.1 Existing Transportation System

Roadways of national, regional, local and community importance comprise the existing transportation system. The general project limits for this study are bounded on the east by US 491/NM 602 (I-40 MP 20 Munoz Interchange) and on the west by the West Gallup Interchange (I-40 MP 16) on the south by Mendoza Boulevard, and on the north by the bluffs approximately 1000 feet north of Interstate 40. Within the study limits the transportation system is comprised of Interstate 40 and its interchanges, NM 118 (Old US 66) and Maloney Boulevard, a local roadway system north of and parallel to the interstate that provides east/west travel from Allison Road to US 491. The focus of this study, Allison Road, is a local collector roadway that provides access under Interstate 40 between Maloney Boulevard and NM 118. US 491, at the eastern limit of this study, is a primary route for access to the Navajo Nation and to portions of Northern New Mexico.

For the purpose of this study, regional access is defined as providing mobility to destinations within the state that are outside of the study limits. Local mobility is defined as mobility across I-40 from the communities located north and south of the interstate but within the study limits. Community mobility are those movements that are parallel to the interstate within the limits of the study.

Located to the south of and parallel to Interstate 40 adjacent to NM 118 is the Burlington Northern Santa Fe (BNSF) rail line and switch yard. The current Allison Road crossing with the BNSF tracks is a signalized at grade crossing. The rail operations have significant impacts upon the intersection level of service at Allison Road and NM 118 attributed to turning movements.

Figure 4-1: Existing Streets by Functional Classification, on the following page, is reproduced from the City of Gallup Growth Management Master Plan Update 2009. This figure provides an overview of the transportation system within the context of this study.

4.1.1 Corridor Overview

The existing typical sections on the roadways within the study limits vary from interstate to dirt roads. Pavement conditions within the corridor vary from good to complete failure. Generally, pavement conditions are adequate; however, some pavement on Allison Road has completely failed. Roadway geometrics, when possible, were derived from as-built plans. When as-built plans were not available, geometrics were developed based on using 2007 statewide orthophotography and digital terrain model. The existing geometrics have been compared to the 2004 edition of the AASHTO Policy on Geometric Design of Highways and Streets (Green Book) based on the posted speed limits. This section of the report details the existing conditions of facilities within this corridor. Figure 4-2 highlights some of the existing features within this corridor. The existing conditions of facilities are discussed in the following sections in order of jurisdictional ownership and then by decreasing functional classification. The NMDOT facilities evaluated are Interstate 40 (page 4-6), NM 602/491(page 4-11), NM 118 (page 4-13) and Allison Road (page 4-13). The physical aspects of each facility are reviewed for existing system connectivity, typical section, geometrics, and intersections. The City of Gallup local roadway network is comprised of several collector and arterial roadways. A brief overview of these facilities is provided to aid in developing an overall understanding of the entire system rather than just NMDOT facilities.

Also included in this chapter of the report is a review of the bridge inspection reports prepared by the NMDOT and a summary of a visual inspection by a professional structural engineer. Generally speaking, structures in this corridor were sound; however the Allison Bridge over the Rio Puerco is in poor condition. Refer to section 4.7, Existing Bridge Structures, beginning on page 4-18. Existing drainage structures were inspected and analyzed in this corridor. Meetings were held with the NMDOT district maintenance supervisors to review and identify any problem areas. This existing drainage system is discussed on page 4-24. Sections 4.10 and 4.10.1 discuss traffic operations data collected and analyzed. The crash data was obtained from the NMDOT and from the City of Gallup Police Department. The findings from these analyses are discussed in detail beginning on page 4-31. Within the project limits are many public utility facilities. Facilities and utility owners within the project limits have been identified. A detailed discussion and exhibits of existing utilities are given in section 4.11.

A preliminary evaluation of the existing environmental facets of this corridor has been performed. The existing environmental conditions are detailed beginning on page 4-47. Included in this section of this report is a discussion of the existing landforms and geology within the project limits. A preliminary geotechnical report was prepared by AMEC titled, Phase 1A – Geotechnical Engineering Reconnaissance Report I-40 Allison Road Corridor, Gallup, New Mexico. Site reconnaissance and literature review of the proposed transportation corridors did not reveal geological or geotechnical site conditions that would jeopardize or prevent development of the proposed project. Presence of a shale-sandstone formation along the central alignment and soft, wet alluvial soils along both sides of the Rio Puerco on all three alignments represent features and conditions to be studied during the geotechnical and foundation investigation phases of this project. A copy of this report is available under a separate cover.

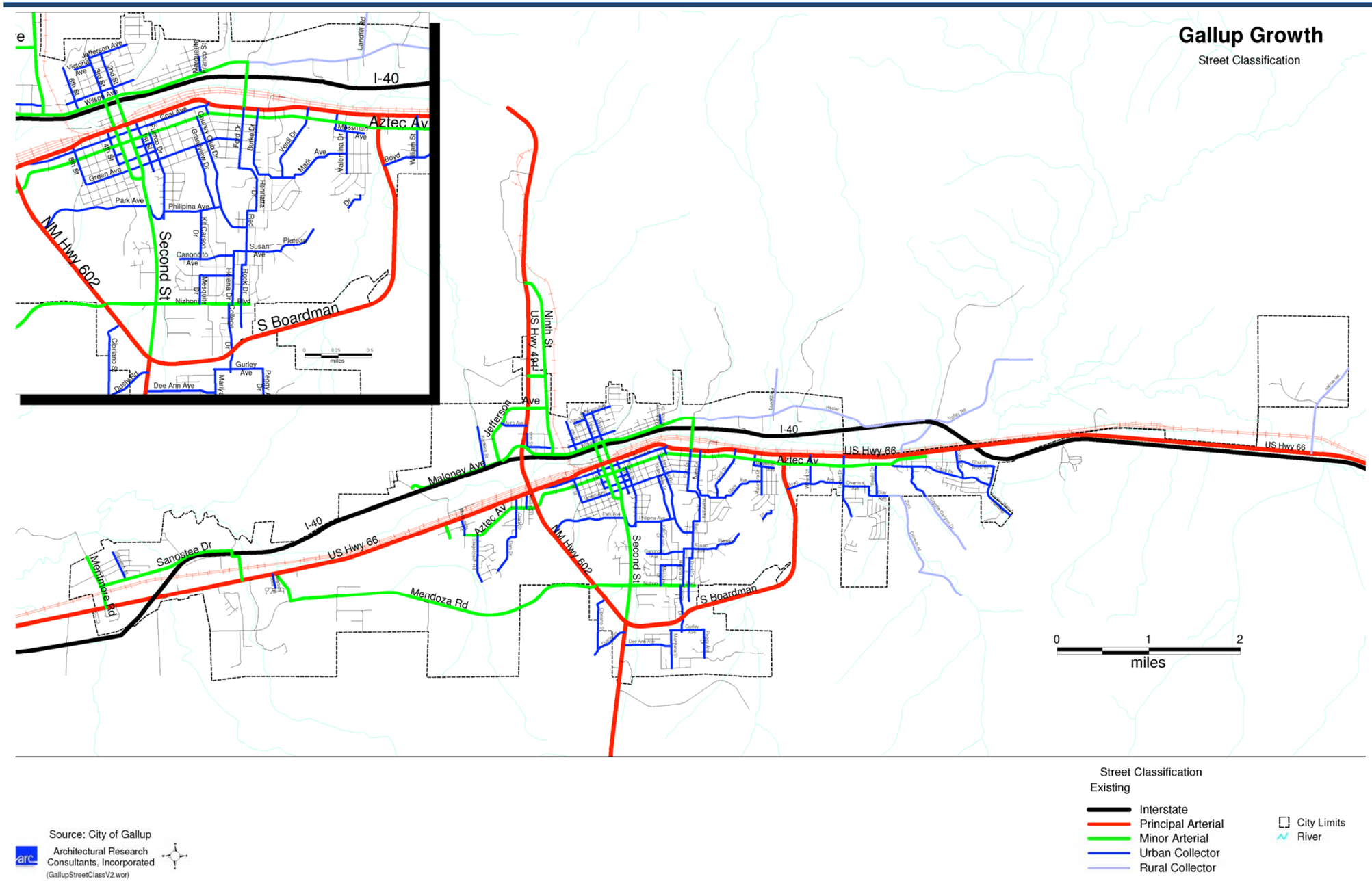


Figure 4-1: Existing Streets by Functional Classification

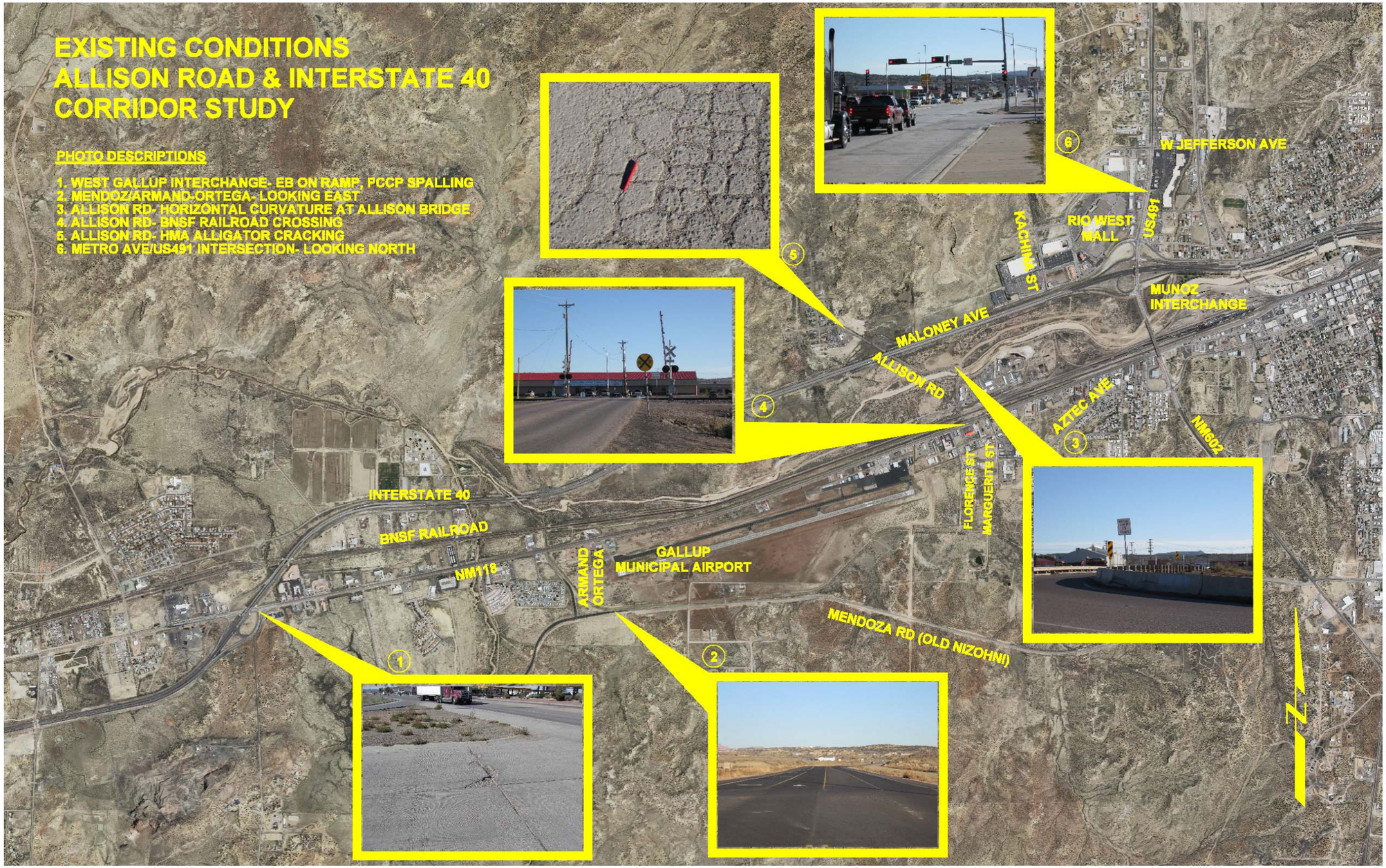


Figure 4-2: Existing Conditions

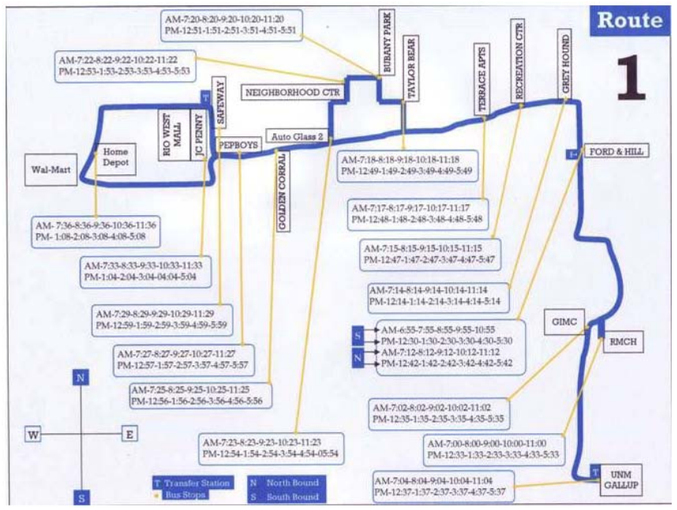
4.1.2 Existing Property Ownership and Right of Way

The existing property ownership and right of way maps were reviewed and compiled as part of this study, and can be found in Appendix A. These maps were compiled using available GIS data and using maps available from the NMDOT and McKinley County. Initial review did not reveal encroachments within the NMDOT right of way.

4.1.3 Multi-Modal Transportation Services

Five public transit services serve the Gallup area: Gallup Express, Saferide, Navajo Transit System, Zee Inc. and the Grey Hound Bus Line. Gallup Express serves the immediate Gallup area with three routes plus a para-transit service. Service is provided Monday through Friday 7:00 a.m. to 6:45 p.m. Major destinations include, but are not limited to, Downtown, the Gallup UNM campus, and the Rio West Mall. Refer to Figure 4-3 for route details. Improvements to the Allison corridor would improve the public transit system by providing community access north of Interstate 40 south to NM 118. Addition of a north – south route along the Allison corridor would create a loop system utilizing existing routes.

Figure 4-3: Gallup Express Route 1



Saferide provides special request para-transit service to the elderly. The Navajo Transit System operates daily on a fixed schedule providing service to and from Gallup and neighboring communities. Zee, Inc. provides special request transportation from the Zuni Pueblo to Gallup, including the Gallup UNM campus and neighboring communities. The Greyhound Bus line provides interstate service from Albuquerque two times per day.

The Gallup Municipal Airport is a general aviation airport which is owned and operated by the City of Gallup. Air ambulances, private planes and Federal Express provide services at the airport. There are no commercial airline providers to Gallup. Gallup Flying Service, Inc. and Gallup Med Flight provide air ambulance services to Gallup and surrounding areas. Private jet traffic results in approximately 10,000 enplanements a year. Federal Express flies in daily. Commercial service to the airport was discontinued in 2008. The runway length of 7,300 feet restricts the type of airplanes that can land at the airport. Lengthening the runway would provide important economic opportunities to the community but would have negative impacts to the housing developments adjacent to the airport.

The Gallup community has a high level of pedestrian activity. However, the existing conditions are not ideal for walking, bicycling and connecting to transit. The sidewalk system in Gallup is incomplete and disconnected. In some areas, the sidewalks are in disrepair. The Gallup-McKinley Trails and Open Space Master Plan, discussed below, contains some multi-modal elements that address safe routes to school and pedestrian needs but primarily serves recreational uses.

The Gallup-McKinley Trails and Open Space Master Plan, published in 2005, created a framework for the long-range planning of a trail and open space system. Public awareness of the many benefits that trails and open space provide to the community was solidified with the construction of the High Desert Trail. The Trails and Open Space Master Plan provides guidance on trail planning and design guidelines. Existing trails, proposed trails and open space areas are shown in Figure 4-4: Gallup -McKinley Trails and Open Space Master Plan. Maloney Avenue is designated as an existing Bike Path east and west of the Munoz Interchange. Allison Road is identified as a proposed urban trail system north of Interstate 40.

Gallup-McKinley Trails and Open Space Master Plan

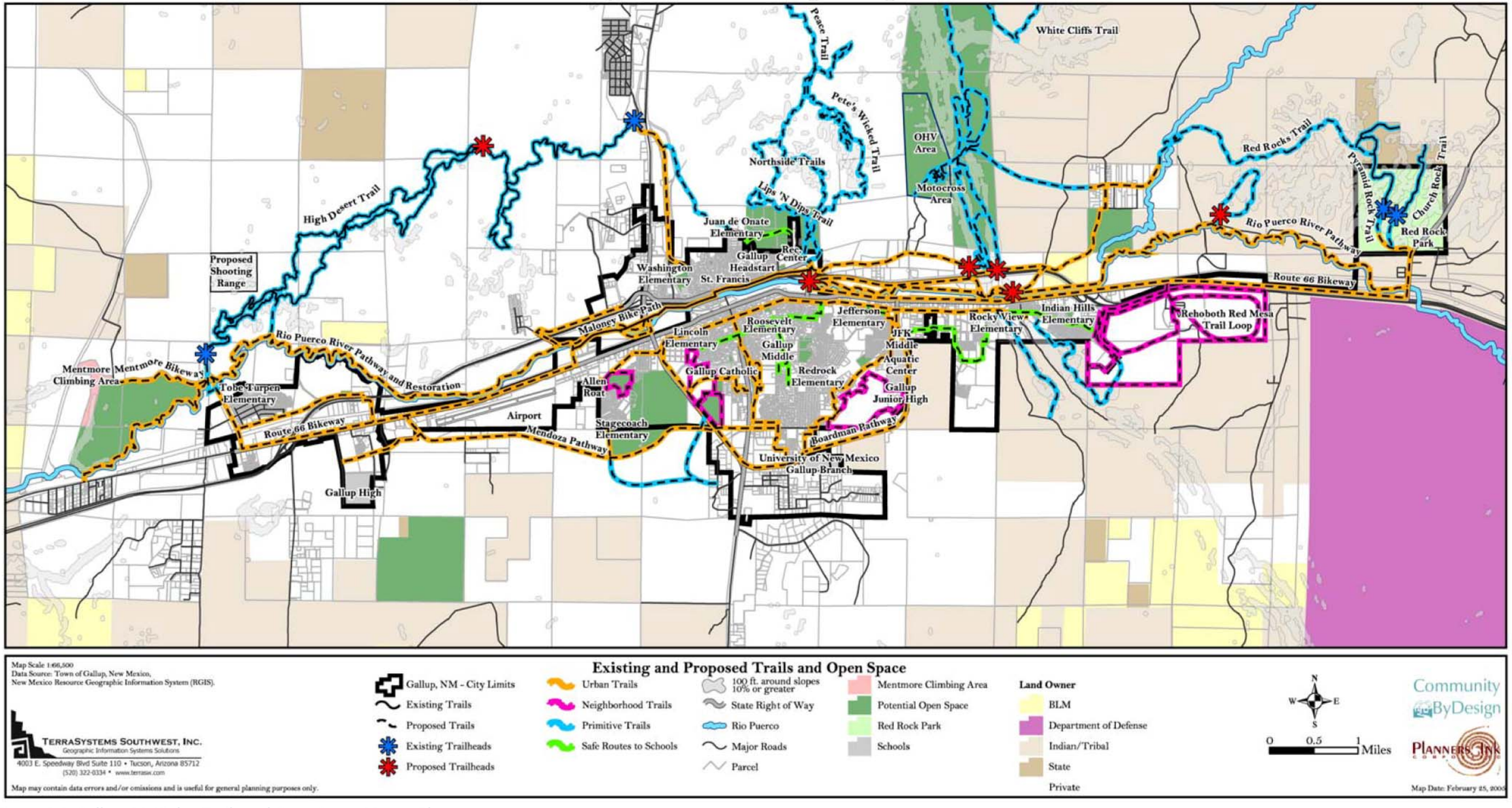


Figure 4-4: Gallup -McKinley Trails and Open Space Master Plan

4.2 Interstate 40

Approximately six miles of I-40 are within the limits of this study. The portion of I-40 studied in conjunction with this report is from approximately I-40 milepost 14 to milepost 20, as shown on page 1-2. The aforementioned mileposts correspond to the West Gallup Interchange and the Munoz Interchange respectively. While the intent of this study is the determination of feasible alternatives for the Allison Road corridor, this evaluation of I-40 was performed to ensure that the existing conditions of I-40 would not preclude any of the suggested alternatives.

4.2.1 System Connectivity and Multi-Modal Uses

I-40 is a major east-west corridor across the United States. It provides a direct link from the mid-Atlantic seaboard to southern California with good interstate highway connections to mid-western and southern states. I-40 has a high level of cross-country freight traffic and is used to transport Asian trade goods that are shipped through the Ports of Long Beach and Los Angeles. This interstate roadway provides good driving conditions across the western United States with few mountain passes and relatively good weather. I-40 has milder winter weather, with less ice and snow, than northern cross-country routes such as I-70 through Colorado, I-80 through Wyoming, and I-90 through Wyoming and Montana.

Regionally, I-40 handles much of the east-west traffic across New Mexico. It provides the main route through the middle of the state between western New Mexico communities, such as Gallup and Grants, and eastern New Mexico communities, such as Santa Rosa and Tucumcari. West Gallup and Munoz interchanges within the study corridor provide regional access to Gallup from I-40. The West Gallup Interchange provides direct access to NM 118. The Munoz interchange provides direct north-south connectivity via NM 491 and NM 602. NM 118 provides east-west connectivity south of I-40 between the interchanges.

The average daily traffic on I-40 within the study area is 20,000 vehicles with 40% truck traffic.

4.2.2 Typical Section

The typical section of I-40 consists of two lanes in each direction, 4’ inside shoulders, 10’ outside shoulders and a median that varies from 32’ to 36’ in width. The posted speed is 65 mph. See Figure 4-5 and Figure 4-6 for a graphical depiction of the existing typical sections. The pavement section of Interstate 40 is hot mix asphalt (HMA) pavement, which is generally in good condition. There is frequent minor longitudinal cracking and cracking at the pavement edge. The shoulders appear to have had pavement overlays and in some areas there are potholes and raveling.

Existing geometric conditions were evaluated using as-built plans. The horizontal geometry for I-40 consists of four curves which meet the 75 mph design speed. The eastbound and westbound vertical alignments of I-40 consist of 17 vertical curves. The EB and WB vertical curves west of the BNSF Railroad Grade Separation do not meet the 75 mph design speed criteria. In addition, the vertical curve at the Allison Grade Separation does not meet the 75 mph design speed criteria.

4.2.3 Interchanges and Grade Separations

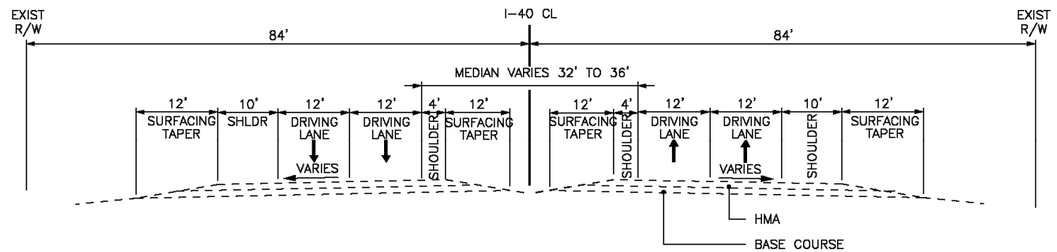
There are two interchanges and three underpasses within the corridor at the locations shown in Table 4-1 and in Figure 1-2: Vicinity Map on page 1-2.

Table 4-1: Interchanges and Grade Separations

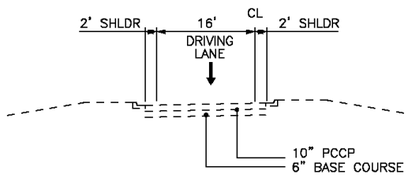
Cross Street Name	Exit / Milepost	Type of Crossing
West Gallup Interchange	16	Underpass
Munoz Interchange	20	Underpass
Allison Grade Separation	15	Underpass
Sweetwater Grade Separation	17	Underpass
BNSF Rail Road Grade Separation	16+	Overpass

As shown in Photo 4-1(page 4-9), the West Gallup Interchange is a modified diamond with an eastbound on loop-ramp. NM 118 is at a 40 degree skew with the interstate. The typical section of NM 118 under Interstate 40 consists of two 12’ driving lanes in each direction, 8’ shoulders, a closed median, curb and gutter and six foot sidewalks left and right. The exit ramps are stop controlled at NM 118.

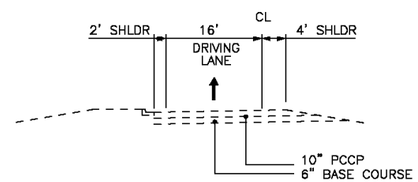
The westbound exit, eastbound exit and westbound entrance ramps tee into NM 118. The westbound entrance ramp has a 2050’ acceleration lane. Vehicles entering westbound Interstate 40 can accelerate to a speed of 50 mph before the acceleration lane. The westbound exit ramp is posted at 40 mph and has a deceleration lane of approximately 550’ feet. At an operation speed of 60 mph, a vehicle can decelerate to zero in this length. The eastbound off ramp is posted at 40 mph at the gore and has an 840’ deceleration lane. At an operation speed of 65 mph, a vehicle can decelerate to zero in this length. The eastbound entrance loop ramp has an 1195’ acceleration lane. At an initial speed of 25 mph, a vehicle can accelerate to an operation speed of 65 mph in 1220’. Existing geometric conditions were evaluated using as-built plans. The ramp typical sections are shown in Figures 4-5 and 4-6.



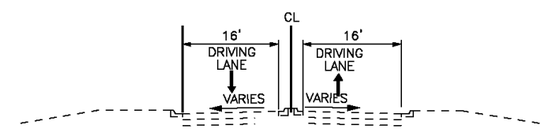
INTERSTATE 40



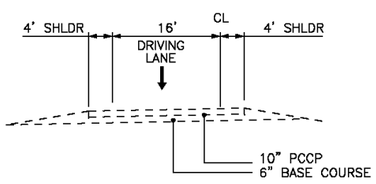
GALLUP WEST INTERCHANGE WB ENTRANCE RAMP
TYPICAL B



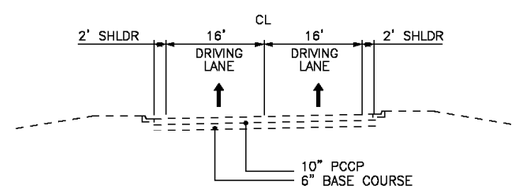
GALLUP WEST INTERCHANGE WB EXIT RAMP
TYPICAL B



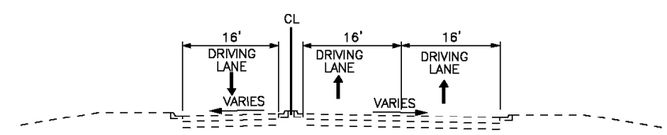
EB EXIT & EB ENTRANCE RAMP
TYPICAL B



GALLUP WEST INTERCHANGE WB ENTRANCE RAMP
TYPICAL A

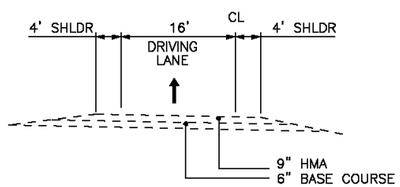


GALLUP WEST INTERCHANGE WB EXIT RAMP
TYPICAL A

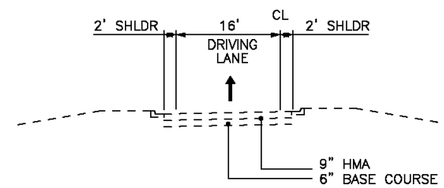


EB EXIT & EB ENTRANCE RAMP
TYPICAL A

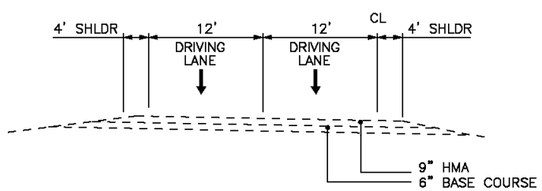
Figure 4-5: I-40 & Interchange Typical Sections (1 of 2)



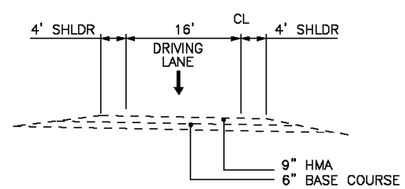
MUNOZ INTERCHANGE EB EMTRANCE RAMP
TYPICAL B



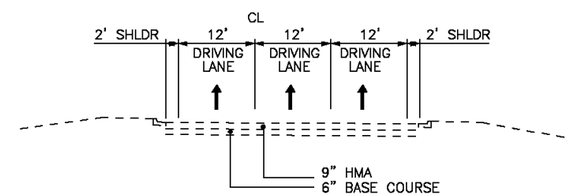
MUNOZ INTERCHANGE EB & EB LOOP ENTRANCE RAMP
TYPICAL A



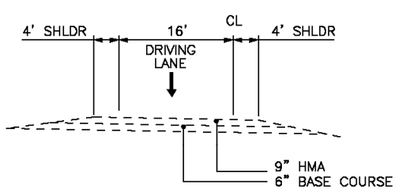
MUNOZ INTERCHANGE WB ENTRANCE RAMP
TYPICAL B



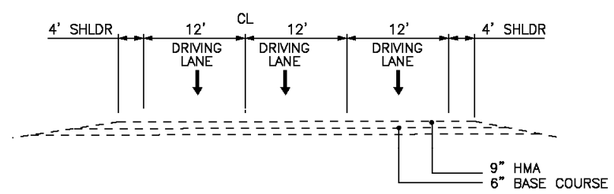
MUNOZ INTERCHANGE WB EXIT RAMP
TYPICAL B



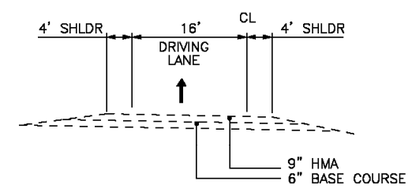
MUNOZ INTERCHANGE EB EXIT RAMP
TYPICAL B



MUNOZ INTERCHANGE WB ENTRANCE RAMP
TYPICAL A



MUNOZ INTERCHANGE WB EXIT RAMP
TYPICAL A



MUNOZ INTERCHANGE EB EXIT RAMP
TYPICAL A

Figure 4-6: I-40 & Interchange Typical Sections (2 of 2)

The ramps are Portland cement concrete pavement (PCCP). The condition of the pavement is good at the connections with the interstate; however, there is severe transverse and longitudinal cracking with some potholes at the intersections with NM 118. Refer to Figure 4-5 and Figure 4-6 for ramp typical sections.

Existing geometric conditions were evaluated using as-built plans. The horizontal and vertical alignments and roadway superelevation are adequate for the posted speeds.

The recently reconstructed Munoz Interchange, shown in Photo 4-3, is a modified diamond with a southbound to eastbound loop entrance ramp. The overpass is at a 10 degree skew with Interstate 40 which is a horizontal curve. The westbound ramp and the eastbound exit ramp tee into NM 602-US 491. The eastbound entrance ramps are free flowing off of NM 602-US 491. The westbound entrance ramp is a taper entrance. Vehicles can accelerate to a speed of 65 mph before entering westbound Interstate 40. The westbound exit ramp is a taper exit, which is posted at a speed of 40 mph and is signalized at NM 602-US 491. At an operating speed of 60 mph a vehicle can decelerate to 0 mph in 530', the approximate location of the transition to turning lanes. The eastbound exit ramp is a taper type which is posted at a speed of 40 mph and is signalized at NM 602-US 491. Vehicles can decelerate from 65 to 0 mph well before the transition to turn lanes. The eastbound entrance ramp has an acceleration lane of 300 feet. Vehicles can reach an operating speed of 65 mph before the acceleration lane. The eastbound loop entrance ramp has an acceleration lane of 1350'. Vehicles can accelerate from 25 mph to an operating speed of 65 mph. The ramps are HMA pavement with the exception of the exit ramp connections at US 491-NM 602 which are Portland cement concrete. The pavement on the ramps is in good condition.

Existing geometric conditions were evaluated using as-built plans. The typical section of NM 602-US 491 over Interstate 40 consists of three 12' lanes in each direction, a divided median, left and right turn lanes, outside curb and gutter, and a 6' shoulder.

The Allison Road Underpass, shown in Photo 4-2, is a 25' x 14' concrete box culvert which is skewed 50 degrees with the interstate. Allison is a two lane roadway with no shoulders through the box culvert.

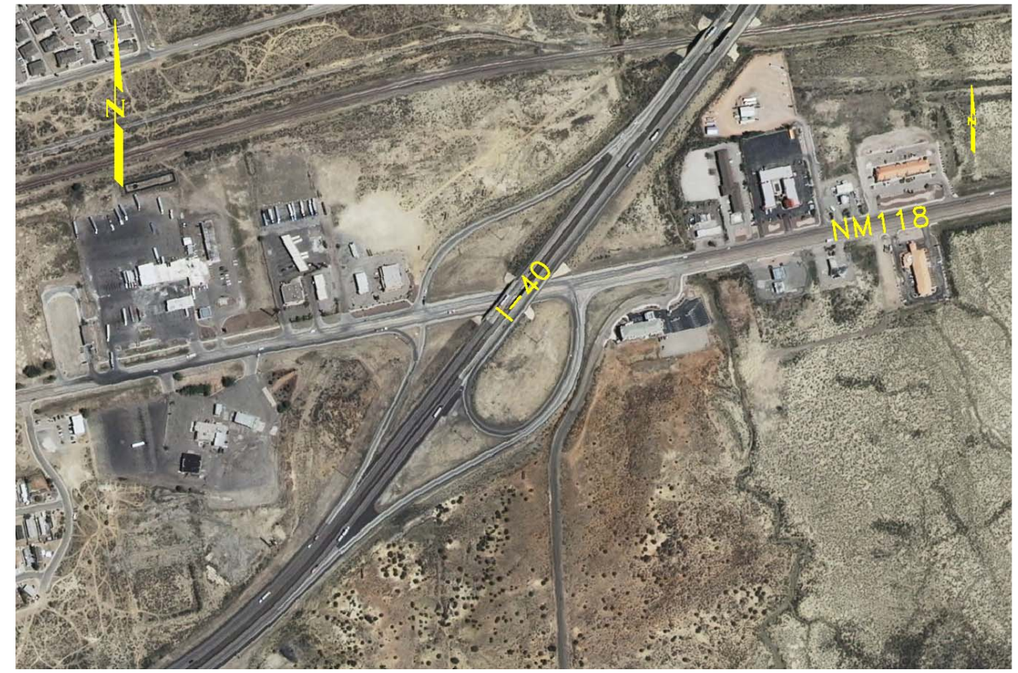


Photo 4-1: West Gallup Interchange

Photo 4-2: Existing Munoz Interchange

Photo 4-3: Existing Allison Underpass

4.3 US 491/NM 602

US 491/NM 602 was evaluated to serve as a general overview of transportation facilities within the study limits. As shown in Figure 1-2 on page 1-2, US 491-NM 602 is located on the eastern limits of the project limits. The study limits of US 491/NM 602 are between Aztec Boulevard south of I-40 to Coal Basin Road north of I-40. In general, US 491 is considered a rural principal arterial; however, within the study limits is more appropriately defined as a multi-lane divided urban arterial. NM 602 designation applies to the roadway south of the intersection with the westbound off ramp of I-40. US 491 designation is that portion of the roadway north of the I-40 westbound off ramp.

4.3.1 System Connectivity and Multi-modal Uses

NM 602 runs south from the City of Gallup to its terminus with NM 53 just west of Pescado. It is a two-lane paved highway. US 491 is a major transportation corridor connecting Interstate 40 and the Four Corners area. US 491 is also one of the primary roads within the Navajo Indian Reservation. US 491 serves as a primary link in the State's transportation network to move commercial goods, tourists, and access to local communities in this area of the state.

Within the study limits US 491/NM 602 is one of the four access points from Gallup to the interstate. This roadway also provides access to the commercial developments located to the north of the interstate. South of the interstate NM 118/Aztec Boulevard is a signalized intersection.

As discussed in section 4.1.3 of this report US 491/NM 602 is used to provide mass transit to the communities of the Navajo Nation. The City of Gallup bus routes also run on US 491/NM 602. Within the study limits a continuous 6-foot wide sidewalk is provided. There are no bike facilities designated on this portion of the roadway.

4.3.2 Typical Section

To the north from Gamerco and south to approximately Catalpa Wash, the roadway is classified as urban primary arterial. US 491-NM 602 has a Portland cement concrete section and is in good condition. US 491 (north of the Munoz Interchange) includes three 11' lanes in each direction, a 28' median, left and right turn lanes, and 6.5' sidewalks left and right. At the westbound ramps of the Munoz Interchange, US 491 terminates and NM 602 begins. NM 602 has a typical section which includes three 11' lanes in each direction, a median that varies in width from 8' to 18', left and right turn lanes, and a six foot sidewalk.

Refer to Figure 4-8: Existing System Typical Sections on page 4-17.

4.3.3 Geometric Conditions

The posted speed limit is 40 mph. Existing geometric conditions were evaluated using as-built plans. The horizontal and vertical alignments and roadway superelevation are adequate for the posted speeds.

4.3.4 Intersections

As shown in Photo 4-4, NM 602 passes over the BNSF Rail facilities and NM 118, as it approaches I-40 and the Munoz Interchange. Photo 4-5 shows the intersection of NM 602 and the eastbound ramps of I-40 while Photo 4-7 shows the westbound ramp and Maloney Avenue intersections. This portion of NM 602/US 491 was reconstructed in 2007. Shown in Photo 4-6 is US 491/West Jefferson Avenue. There is significant commercial development adjacent to this portion of the road which leads to high traffic volumes in this area. West Jefferson Avenue provides access to and around the Rio West Mall and connects back to the south with Maloney Avenue. Coal Basin Road intersection with US 491 is shown in Photo 4-8. Coal Basin provides access to a number of residences.

North of the Munoz Interchange the intersections with Maloney Ave, Metro Avenue and West Jefferson are signalized. There are 12 access points in this half mile section of roadway.

Photo 4-4: NM 602/NM 118 Overpass

Photo 4-5: Munoz Interchange/Eastbound Ramps

Photo 4-6: West Jefferson Avenue/US 491

Photo 4-7: Munoz & Maloney /US 491 Interchange (westbound ramps)

Photo 4-8: Coal Basin Road/US 491

4.4 NM 118

NM 118 was evaluated to serve as a general overview of transportation facilities within the study limits. As shown in Figure 1-2 on page 1-2, NM 118 is located south of and parallel to I-40. This roadway runs from Lupton, NM on the Arizona state line through the entire length of the study limits and terminates at I-40 Exit 36. This roadway is approximately 36 miles in long. NM 118 is part of the Historic Route 66 and was redesignated as NM 118 in the mid-1980's.

4.4.1 System Connectivity and Multi-modal Uses

As shown in Figure 4-1: Existing Streets by Functional Classification, on Page 4-2, within the study limits the roadway is classified as urban primary arterial. NM 118 in conjunction with US 491/NM 602 and South Boardman comprise the principal arterial network within the City of Gallup. The Gallup -McKinley Trails and Open Space Master Plan, on Page 4-5, shows that NM 118 within the study limits is planned for as an urban trail facility.

4.4.2 Typical Section

NM 118 has a typical which includes two 12' lanes in each direction, 8' shoulders, a 20' continuous left turn lane, and a sidewalk of varying widths right. NM 118 has a HMA pavement section and is in good condition. Refer to Figure 4-8 on page 4-17.

4.4.3 Geometric Conditions

Existing geometric conditions were evaluated using as-built plans and orthophotography. The horizontal and vertical alignments are adequate for the posted speeds.

4.4.4 Intersections

The intersections with Armand Ortega, Marguerite St and Arnold Street are signalized. In general, a continuous left turn lane provides access to the intersections with NM 118. However, at the intersections of NM 118 with Rico and Allison raised channelizing islands are provided to accommodate left turns off of NM 118.

There are numerous businesses that front NM 118. The continuous left turn lane does not provide a positive means of access control. The intersection spacing between adjacent intersections was evaluated and is provided in Table 4-2.

TABLE 4-2: NM 118 INTERSECTION SPACING

CROSS STREET W/ NM 118	DISTANCE BETWEEN CROSS STREETS (MILE)	DRIVEWAYS BETWEEN CROSS STREETS (EACH)	DRIVEWAY DENSITY (DRIVEWAY PER MILE)
W INTERCHANGE	-	-	-
TWIN BUTTE	0.09	0	
RICO	0.39	21	53
DAY	0.18	4	23
INDUSTRY	0.27	12	44
ARMAND ORTEGA	0.39	9	23
FLORENCE	1.92	19	10
ALLISON	0.07	1	15
MARGUERITE	0.12	3	26
ELISON	0.52	22	43
DEAN	0.07	2	29
CLARK	0.06	2	33
BRADLEY	0.06	4	64
ARNOLD	0.05	1	18
OVERPASS NM 602	0.06	1	17
	101	TOTAL DRIVEWAYS	
	4.24	MILES BETWEEN W INTERCHANGE AND NM 602	
	23.82	AVERAGE DRIVEWAY PER MILE	

As shown above, the density of driveways along NM 118 is significant within the study limits.

4.5 ALLISON ROAD

As shown in Figure 1-2 on page 1-2, Allison Road begins at NM 118, across the BNSF railroad tracks, across the Rio Puerco, under Interstate 40 and terminates north of the intersection with Maloney Ave. The roadway is classified as a future minor arterial, see Figure 4-1: Existing Streets by Functional Classification, on Page 4-2. This portion of the report discusses roadway geometrics and pavement conditions. The structural and drainage evaluations for Allison are provided in sections 4.7 (page 4-18) and section 4.8 (page 4-24). It is important to note that the two structures on Allison Road, the Rio Puerco Bridge and the I-40 Underpass, are deficient. The Rio Puerco Bridge also appears not to have adequate freeboard for the 100-year storm event.

4.5.1 System Connectivity and Multi-modal Uses

The Rio Puerco, Interstate, and the BNSF railroad tracks run east to west and are continuous throughout the City of Gallup and in effect divide Gallup into north and south halves. Within the study limits Allison Road is a vital facility that provides access across the railroad tracks and I-40.

In general terms, Allison Road currently provides minimal access. This is in large part to the limited extent of this facility between NM 118 and Maloney Boulevard. In regard to community access, this does not apply to the Allison Corridor due to the fact that there is not extensive development between NM 118 and the interstate that would necessitate the use of Allison Road to move within the community. The primary access provided by Allison Road is local access to City Maintenance and BNSF yards located between the interstate and NM 118. Some local traffic uses Allison Road to avoid congestion on NM 602/US 491 through the Munoz Interchange to access the commercial developments along Maloney Avenue and US 491. Allison Road is currently only a local roadway and thus provides no regional access.

Figure 4-4, page 4-5, shows that the Gallup -McKinley Trails and Open Space Master Plan designates Allison as an urban trail. However, because the current typical section does not specifically accommodate bicycles or pedestrians it is rarely used in this capacity. During public meetings it was identified that some pedestrians feel unsafe crossing the railroad tracks and the existing bridge.

4.5.2 Typical Section

The typical includes two 12’ driving lanes with no shoulders. Allison Road north of Maloney Ave is not striped. A cursory pavement assessment was performed as part of this study. In general, Allison Road pavement has excessive alligator cracking and is in need of maintenance or improvement. Refer to Figure 4-8 which shows the existing typical section of this facility.

4.5.3 Geometric Conditions

A speed limit is not posted on Allison Road. There is a 15 mph advisory speed on the sharp curve north of the bridge over the Rio Puerco. On either side of the curve is concrete wall barrier (CWB) which is in poor condition and interferes with stopping sight distance. There are four horizontal curves on Allison. With the exception of the horizontal curve immediately north of the Rio Puerco Bridge all of the curves have an acceptable radius for the assumed traveling speed of this roadway, 25mph. The curve immediately north of the Rio Puerco crossing has a radius of 130-feet. AASHTO design guidelines for this type of facility recommend a minimum radius of 230-feet. It appears that the vertical sight distance provided is adequate. However, there are some flat longitudinal grades that may lead to localized ponding.

4.5.4 Intersections

There are four transportation facilities that have at grade intersections with Allison Road: NM 118, BNSF Railroad tracks, Warehouse Lane and Maloney Avenue. All of the Allison Road intersections with other roadways are unsignalized. The Allison/BNSF Railroad crossing is a signalized crossing. Intersection sight distance appears to be adequate at all of the intersections. Intersection operations and crash analysis is provided in Section 4.10, beginning on page 4-31.

4.6 Local Roadway Network

The following sections provide a brief overview of the City of Gallup jurisdictional roadways within the study limits.

4.6.1 Mendoza Road (Old Nizhoni Blvd)

Mendoza Rd (Old Nizhoni Blvd) runs east-west within the study limits. The Nizhoni Blvd alignment was modified to become Mendoza Road and extended further to the west intersecting with Rico Street, see Figure 1-2 on page 1-2. Where Nizhoni Blvd used to intersect with NM 118 a new roadway to the south, Armand Ortega, was constructed and extended to Mendoza Road forming a tee intersection. Rollie Blvd was built from the intersection of Mendoza and Armand Ortega to the west and intersects with Rico St. Mendoza Rd is classified as urban primary arterial (COG classification minor arterial). With the exception of the intersection at Rollie St, the Mendoza Rd typical section includes a two lane roadway with 12’ lanes and no shoulder. An 8’ two-way bicycle lane has been scabbed onto the right side of the roadway. The roadway is HMA pavement and is in poor condition. The posted speed limit is 45 mph. Existing geometric conditions were evaluated using as-built plans and orthophotography. The horizontal and vertical alignments and roadway superelevation are adequate for the posted speeds.

The Rollie St typical section includes two 12’ lanes with 8’ shoulder/bicycle lanes, a 2’ buffer and a 6’ asphalt path left and right. The roadway is HMA pavement and is in good condition. The posted speed limit is 45 mph. Existing geometric conditions were evaluated using as-built plans. The horizontal and vertical alignments and roadway superelevation are adequate for the posted speeds.

4.6.2 Aztec Boulevard

Photo 4-9: Aztec Avenue/Arnold Street

Aztec Blvd runs east-west within the study limits. Aztec Blvd is classified as urban primary arterial (COG classification minor arterial). The typical section varies in the project area. Generally, the typical section west of NM 602 includes two 12' driving lanes with a continuous left turn lane. The roadway is HMA pavement and is in poor condition. The posted speed limit is 35 mph.

Existing geometric conditions were evaluated using as-built plans and orthophotography. The horizontal and vertical alignments and roadway superelevation are adequate for the posted speeds.

4.6.3 Maloney Avenue

Photo 4-10: Maloney Avenue/Kachina Street

Maloney Ave runs east-west within the project limits. West of US 491 the roadway is classified as a minor arterial. The typical section varies in the study area. In the commercial area proximate to US 491 the typical includes two 11' westbound driving lanes, an 11' painted median, an 11' eastbound driving lane, 6' sidewalk & curb and gutter left, 4' shoulder & surface taper right. West of the Wal-Mart Store the typical section transitions to include two 12' lanes with no shoulders. Maloney Ave has an HMA pavement section which is in poor condition west of Wal-Mart. The intersection with Kachina St is signalized.

4.6.4 West Jefferson Avenue

West Jefferson Ave intersects US 491, curves southwest and intersects Maloney Ave. The roadway is classified as a minor arterial. The typical includes two 18' driving lanes with a 12' continuous left turn lane, curb and gutter, and a 6' sidewalk right. The roadway is a PCCP section. The pavement is in good condition with the exception of approximately a 1200' section that has experienced heaving and buckling. The posted speed limit is 35 mph. Existing geometric conditions were evaluated using as-built plans. The horizontal and vertical alignments and roadway superelevation are adequate for the posted speeds.

Photo 4-11: West Jefferson Avenue/US 491

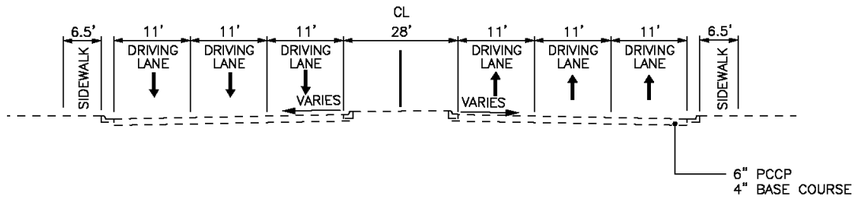
4.6.5 Metro Avenue and Kachina Street

Metro Ave and Kachina St are classified as urban collectors. The typical for both roadways include two 20' driving lanes with curb and gutter left and right, a 4' sidewalk right and a 6' sidewalk left. The pavement section is HMA which is in good condition. Metro Ave is stop controlled at the intersections with US 491 and West Jefferson Ave. Kachina is signalized at the intersection with Maloney Ave. A speed limit is not posted on Metro Ave. and Kachina St.

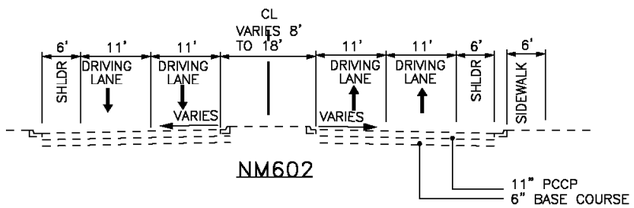
Photo 4-12: Metro Avenue/US 491

4.6.6 Morello Avenue

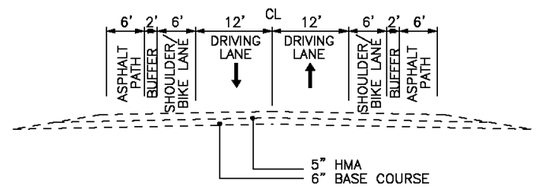
Morello Ave is not classified on the City of Gallup Street Existing and Proposed Major Streets. The typical includes 20-feet of pavement on either side of the centerline, with curb and gutter left and right. The pavement section is HMA which is in good condition. Morello Ave is stop controlled at the intersections with US 491 and West Jefferson Ave. A speed limit is not posted on Morello Ave.



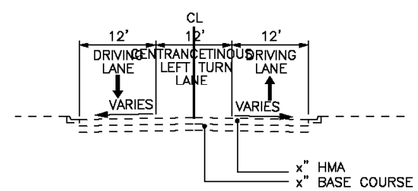
NM491



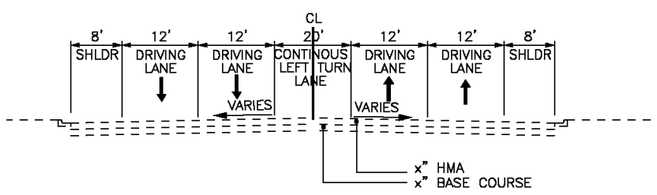
NM602



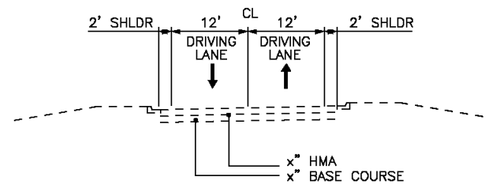
ROLLIE



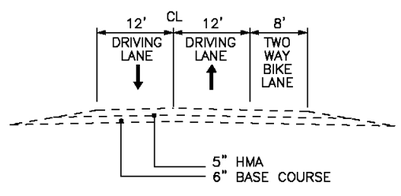
AZTEC (BRADLEY WEST & NM602 EAST)



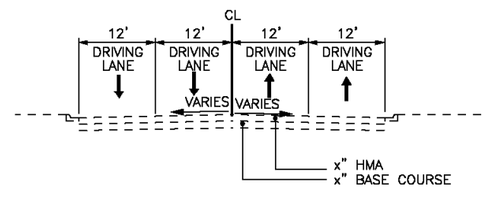
NM118 (HISTORIC RTE 66)



AZTEC (ARNOLD WEST)

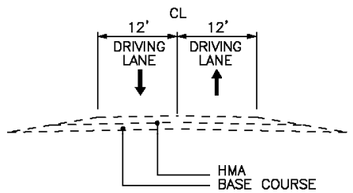


MENDOZA

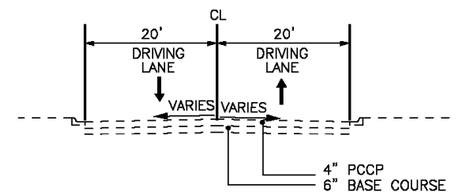


AZTEC (NM602 WEST)

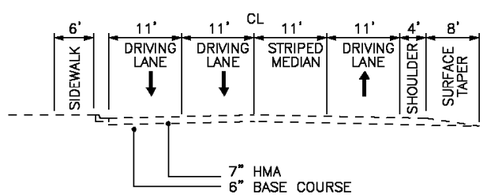
Figure 4-7: Existing System Typical Sections



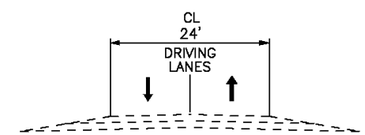
MALONEY (ALLISON EAST), ARMAND–ORTEGA & ALLISON (MALONEY SOUTH)



METRO, MORELLO & KACHINA (MORELLO SOUTH)



MALONEY (KACHINA EAST)



KACHINA (MORELLO NORTH) & ALLISON (MALONEY NORTH)

Figure 4-8: Existing System Typical Sections

4.7 Existing Bridge Structures

Information regarding the existing structures located within the Allison corridor, including location, year built, geometry, structure, sufficiency and deficiency, may be found in Table 4-3. Complete DOT bridge inspection reports for all bridges are available in Appendix B. See Figure 4-9 for bridge structure locations.

4.7.1 Ratings

Bridges are required to be inspected regularly. With each inspection report, a series of ratings is provided based on the bridge conditions observed during the inspection. These ratings include an overall Sufficiency Rating, Condition Rating, and Appraisal Rating.

4.7.1.1 Sufficiency Rating

Each vehicular bridge is inspected, rated, and assigned a sufficiency rating. The Sufficiency rating is indicative of a bridge's sufficiency to remain in service. The sufficiency rating is also used to define the eligibility for federal funding available for a bridge; in general the lower the rating, the higher the priority. A bridge typically must have a sufficiency rating of 80 or less to qualify for federal funds for rehabilitation and a rating of 50 or less for replacement funds.

Sufficiency ratings are determined using the sufficiency rating formula. This formula is defined in the U.S. Department of Transportation's report titled "Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges". The numeric value is a percentage in which 100 percent represents an entirely sufficient bridge and zero percent represents a totally insufficient bridge. The sufficiency rating formula utilizes the following four components to calculate the overall Sufficiency Rating for a bridge. The four components of the sufficiency rating listed in descending order of importance are:

- Structural Adequacy and Safety
- Serviceability and Functional Obsolescence
- Essentiality for Public Use
- Special Reductions

4.7.1.2 Condition Rating

Three items that characterize the overall existing physical condition of the bridge are the condition ratings of the superstructure, substructure and the deck. The condition rating is one of several values used to calculate the overall Sufficiency Rating. The condition rating is a numerical value ranging from zero to nine with a zero representing a failed condition and a nine representing an excellent condition. The rating is determined by the bridge inspector based on field observations during the inspection. The condition ratings of the superstructure and substructure have a much greater influence on the overall sufficiency rating than the condition rating of the deck.

4.7.1.3 Appraisal Rating

Appraisal ratings are used to evaluate the level of service a bridge provides in relation to the highway system of which it is a part. The structure is compared to a new one built to current standards for that particular type of road. Appraisal ratings are assigned (where applicable) for structural evaluation, deck geometry, waterway adequacy, approach alignment, underclearances, and scour. Appraisal rating values range from zero to nine. A rating of zero is used for bridges that are closed. A rating of two indicates that the bridge is far below the current standards and should have a high priority for replacement. A rating of nine indicates that the bridge is superior to present desirable criteria.

In this corridor, there are three bridges with low sufficiency ratings, which are discussed further in the following section. The low sufficiency ratings are due to low appraisal ratings for structural evaluation, underclearances, and roadway geometry. The Structural Evaluation Appraisal Rating is determined using the Condition Rating of the substructure and superstructure. Horizontal and vertical underclearances are evaluated for sufficiency for current traffic loads and rated accordingly. The Deck Geometry Rating is determined using the current ADT and/or the number of lanes on the roadway.

4.7.2 Allison Corridor Bridge Ratings

The sufficiency rating of nine of the bridges in this corridor are 85 or above, which indicates that they have adequate deck geometry and vertical clearances and that they do not have any elements in poor condition. Three bridges have a sufficiency rating less than 80, two of these structures are located on Allison Road. Bridge 4231 (Allison Road over Rio Puerco) has a sufficiency rating of 43.8, and bridge 6730 (Allison Road CBC Underpass at I-40) has a sufficiency rating of 55. The structure carrying westbound I-40 over NM 118 at the West Gallup Interchange, bridge 8835, has a sufficiency rating of 79.

Constructed in 1940, Bridge 4231, Allison Road Bridge over Rio Puerco, has a deficiency status of "Structurally Deficient." This is due to a very poor deck geometry rating and a low structural evaluation rating. The deck geometry rating is 2, which is considered intolerable. The curb-to-curb

width of 23 feet is not sufficient for 2- lane traffic. The low Structural Evaluation rating is due to the poor condition of the superstructure. There are two wooden girders with splits and one with a diagonal crack. One girder is warped 20 degrees out of plumb. There is a loose beam which vibrates and makes noise when traffic crosses the bridge. In general, the girders are very dry, checked, and water stained. Several also have dry rot and decay at the ends.

The low sufficiency rating of the Allison Road & I-40 underpass, bridge 6730, is due to a Structural Evaluation Appraisal Rating of 5 and an Underclearance Appraisal Rating of 3. The Structural Evaluation rating is due to the deteriorated condition of the concrete. The top slab and walls of the culvert have cracking with moderate to heavy leaching and rust stains. The walls also have delamination and small spalls. The underclearance rating is due to poor vertical and horizontal clearances for the roadway running under the bridge.

The structure carrying westbound I-40 over NM 118 at the West Gallup Interchange, Bridge 8835, has a low sufficiency rating due to an extremely low deck geometry appraisal rating. The deck geometry rating is 2, which is considered to be intolerable and puts the bridge on a high priority for replacement. Because the bridge carries 3 lanes of interstate traffic, the curb-to-curb width of 40 feet is not sufficient.

4.7.2.1 Deficiency Status

In addition to the Sufficiency Rating, the Federal Highway Administration (FHWA) classifies bridges as deficient or not deficient using a formula that considers both structural capacity and geometric configuration. Bridges classified as deficient may be structurally deficient or functionally obsolete. A bridge that is in poor condition due to deterioration or damage to the substructure, superstructure or deck is considered structurally deficient. The classification of functionally obsolete refers to a bridge with a configuration that is not adequate for the traffic it serves or a bridge with geometric characteristics such as clearances, widths and roadway alignment that no longer meet current geometric design standards. Thus a bridge that is classified as deficient may be in good condition and have adequate structural capacity if it is classified as functionally obsolete rather than structurally deficient.

Within this corridor, nine structures are not deficient and three are functionally obsolete. Bridges 4231, 6730 and 8835 are functionally obsolete due to inadequate deck geometry. The two structures on Allison Road are deficient. To determine whether deck geometry is adequate, two evaluations are made. The curb-to-curb width of the bridge is compared to factors such as ADT, the type of traffic it carries (i.e. interstate traffic), and number of lanes on the bridge. The other evaluation involves the minimum vertical clearance of the roadway.

Bridge 4231, Allison Road crossing Rio Puerco, is both structurally deficient and functionally obsolete. Inspection reports note that it has been on the priority list to be replaced since 2001. The condition of the superstructure is considered poor due to the condition of the aging timber girders. Although temporary repairs have been made to the substructure, keeping it at a fair rating, there is cracking and splitting in the piles. There are missing tiebacks and broken crossbracing in certain locations. In addition to the poor condition rating, the bridge is functionally obsolete. The current bridge geometry rating is 2, which indicates that the bridge should be replaced. Based on the current ADT, the bridge width (curb to curb) should be at least 26 ft to warrant a deck geometry rating of 3. To achieve deck geometry rating higher than 4, a bridge width of 34 to 44 feet would be required.

Bridge 6730, Allison Road underpass at I-40, is functionally obsolete because of limited height and width restrictions on Allison Road, which runs below the bridge. Bridge 6730 is a concrete box culvert. Although the vertical clearance between bridge 6730 and Allison Road is posted at 13’-2”, a recalculation of vertical clearance during bridge inspections indicate a vertical clearance posting of 11’-10” would be more accurate. Lateral underclearance for Allison Road is 1.6 feet on the right and 0 feet on the left. Although 2 lanes run under the bridge, curb-to-curb distance for Allison road (within the CBC) is only 22’-2”.

Bridge 8835 is functionally obsolete due to the narrow curb-to-curb width for traffic on top of the bridge. Interstate traffic carrying 3 or more lanes of traffic requires a curb-to-curb width several feet wider than the 40 feet that are provided on this bridge.

4.7.2.2 Inventory and Operating Rating

The inventory rating of a bridge reflects the safe load carrying capacity of the bridge for normal service conditions. The operating rating of a bridge is a measurement of the maximum permissible load of a bridge for occasional use. All of the structures within this corridor satisfy the load-carrying requirements and do not require load restriction posting. All of the structures have an HS19.8 inventory load rating or higher.

4.7.2.3 Traffic Safety Features

The majority of the bridges within the corridor have adequate traffic safety features that meet current standards. However, the safety features of structure 9330 do not meet standards. Although the bridge railing for this structure has a sufficient height, it does not have an approach railing. The concrete bridge railing simply tapers to curb height at the end of the bridge.

4.7.2.4 Structural Conditions

Several of the bridges have structural and maintenance issues which were noted in the inspection reports and which should be addressed.

4.7.2.5 Slope Protection

The slope protection of several bridges in this corridor have isolated areas which are recommended to be repaired. Bridge 6553 has cracking up to 1/4" in size and some buckling near the bottoms. At the SE corner of the bridge, approximately 7” of settlement has occurred. There is minor undermining and a sink hole approximately 6’x4’x3’ in size with a wooden patch. Approximately 4” of separation exists between the slope protection and the abutment.

The slope paving of bridge 6554 has approximately 4 1/2” of settlement at all four corners of the bridge. There is separation between slope paving and the wingwall up to 3” and an area of undermining measuring approximately 8’x5’x2’ at the NE corner.

Bridge 7871 has a sinkhole at the NW corner of the bridge. There are areas of undermining and separation of the slope paving from the bridge up to 2”.

4.7.2.6 Joints

Several bridges have issues with the joints that should be repaired. The joints of bridge 6553 are filled with dirt and debris. Additionally, they have loss of adhesion up to 2’ and broken joint armor.

Bridge 6554 has joints filled with dirt and debris and a loss of adhesion.

The joints of bridge 7870 leak due to a loss of adhesion up to 3’. Additionally, the concrete headers at the joints have isolated spalls up to 1’x1’ with exposed rebar and several patched areas up to 5’x1’.

4.7.2.7 Cracking, Spalls, and Delamination

Cracking, spalls and delamination in two bridges in the corridor are severe enough to need repairs. The girder ends of bridge 7870 have full depth patches. There are also two girders at this bridge with large 1/8” cracks with exposed rebar and rusting prestressing strands. The outer columns of this bridge have isolated area of full height delamination. The pier walls and caps also have areas of delamination and spalling.

The deck of bridge 7871 requires repair of moderate to heavy deterioration and soot build up.

4.7.2.8 Bearings

The bearings of bridge 7871 are missing some bolts and have heavy rust with minor section loss. It has been recommended that they be cleaned and painted.

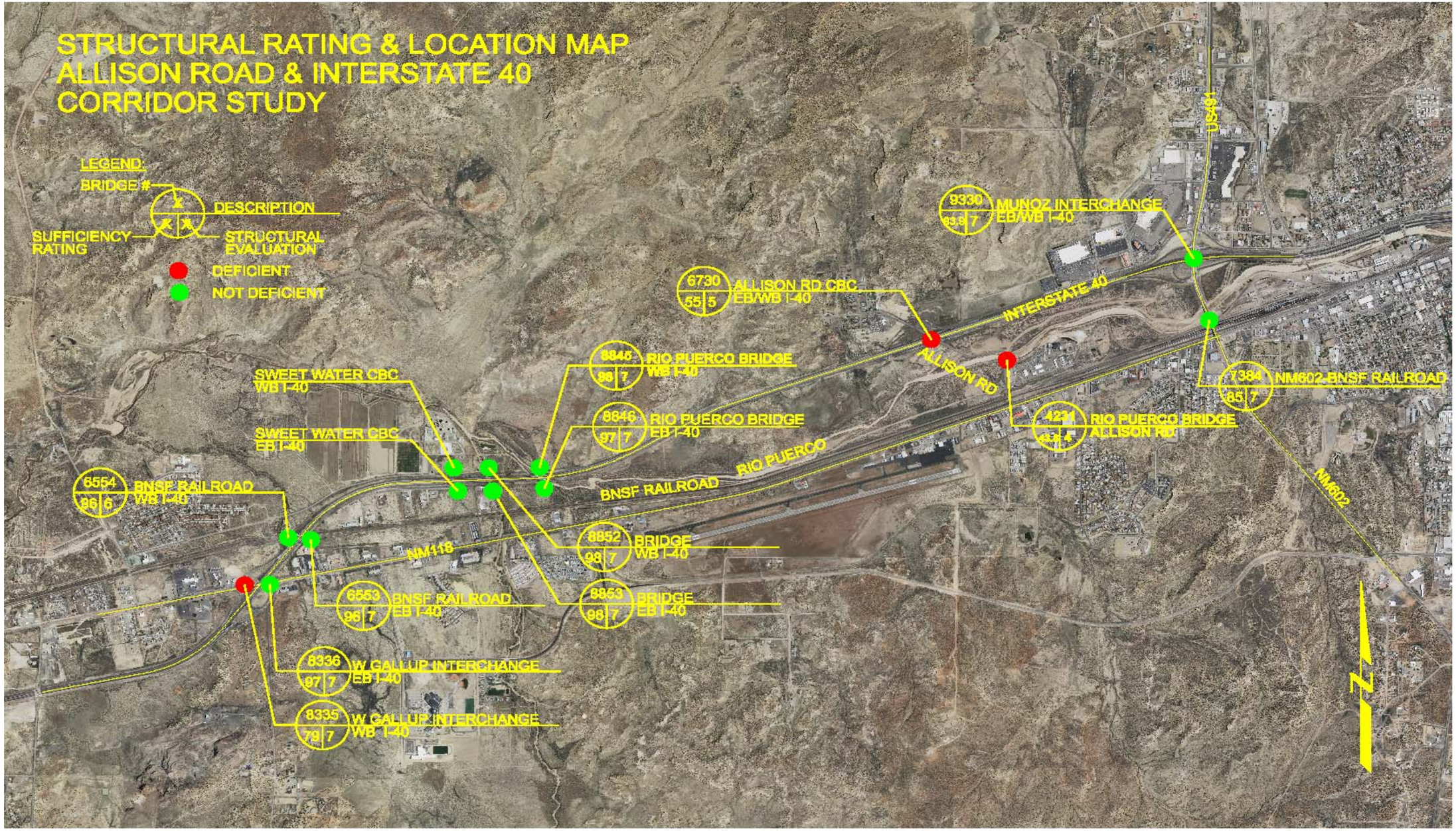


Figure 4-9: Structural Rating and Location Map Allison Rd & I-40

TABLE 4-3: STRUCTURES & DESCRIPTIONS

Bridge No.	Structure Length [ft]	Lanes On	Lanes Under	Skew [deg]	Span											Width Curb to Curb [ft]	Width Out to Out [ft]	Deck		Superstructure		Substructure	
					# Spans	1	2	3	4	5	6	7	8	9	10			Deck Type	Wearing Surface	Structure Type	Pier Cap Type	Abutment Type	Foundation Type
4231	96.0′	2	0	10.00°	5 Simple Spans	19.0′	19.0′	19.0′	19.0′	19.0′						23.0′	24.3′	Wood or timber	Timber	Timber	Timber	Timber	Timber Piling
6553	194.0'	3	0	45.00˚	3 Cont	58.0'	74.0'	58.0'								52.1'	55.1'	Concrete - Cast in place	Monolithic Concrete	Steel Plate Girders	Concrete Cap, Columns, and Walls	Concrete Stub Abutments	Stub Abutments
6554	194.0'	3	0	45.00˚	3 Cont	58.0'	74.0'	58.0'								51.6'	55.1'	Concrete - Cast in place	Monolithic Concrete	Steel Plate Girders	Concrete Cap , Columns, and Walls	Concrete Stub Abutments	Stub Abutments
6730	33.1'	4	2	40.00˚	Culvert	33.1'										---	---	NA	NA	Culvert	NA	NA	NA
7384	955.1'	4	4	24.00˚	9 Simple and Cont	---										72.8'	109.9'	Concrete - Cast in place	Monolithic Concrete	Steel Girders w/ Structure Pinned Connection	Concrete Cap, Columns, and Walls	Concrete Stub Abutments	Stub Abutments
7870	827.0'	2	6	45.00˚	10 Simple	84.0'	84.0'	84.0'	84.0'	84.0'	69.0'	65.0'	93.0'	93.0'	65.0'	42.0'	48.6'	Concrete - Cast in place	Epoxy Overlay	Prestressed AASHTO Girders	Concrete Cap, Columns, and Walls	Concrete Stub Abutments	Stub Abutments
7871	827.0'	2	6	45.00˚	10 Simple	84.0'	84.0'	84.0'	84.0'	84.0'	69.0'	65.0'	93.0'	93.0'	65.0'	38.1'	52.2'	Concrete - Cast in place	Epoxy Overlay	Prestressed AASHTO Girders	Concrete Cap, Columns, and Walls	Concrete Stub Abutments	Stub Abutments
8835	165.0'	3	5	49.00˚	1 Simple Span	160.0'										40.4'	43.0'	Concrete - Cast in place	Monolithic Concrete	Steel Plate Girders	Concrete Cap, Columns, and Walls	Concrete Stub Abutments	Stub Abutments
8836	165.1'	3	4	49.00˚	1 Simple Span	160.0'										51.5'	52.2'	Concrete - Cast in place	Monolithic Concrete	Steel Plate Girders	---	Full Height Concrete Abutments	Full Height Abutments
8845	392.7'	2	0	43.00˚	5 Simple Spans	73.0'	78.0'	78.0'	78.0'	73.0'						38.4'	41.0'	Concrete - Cast in place	Monolithic Concrete	Prestressed AASHTO Girders	Concrete Cap on Concrete Columns	Concrete Stub Abutments	Stub Abutments on Drilled Shafts
8846	392.7'	2	0	43.00˚	5 Simple Spans	73.0'	78.0'	78.0'	78.0'	73.0'						38.1'	41.0'	Concrete - Cast in place	Monolithic Concrete	Prestressed AASHTO Girders	Concrete Cap on Concrete Columns	Concrete Stub Abutments	Stub Abutments
8852	100.1	2	0	19.00°	1 Simple Span	97.0										38.4′	41.0′	Concrete - Cast in place	Monolithic Concrete	Prestressed AASHTO Girders	---	Concrete Stub Abutments	Concrete-filled steel pipe piles
8853	100.1	2	0	19.00°	1 Simple Span	97.0										38.1′	41.0′	Concrete - Cast in place	Monolithic Concrete	Prestressed AASHTO Girders	---	Concrete Stub Abutments	Concrete-filled steel pipe piles
9330	252.0'	4	4	9.00˚	4 Simple Spans	36.0'	95.0'	90.0'	36.0'							89.9'	99.1'	Concrete - Cast in place	Monolithic Concrete	Prestressed AASHTO Girders	Concrete Cap on Concrete Columns	Concrete Stub Abutments	Stub Abutments

TABLE 4-4: CONDITIONS AND APPRAISAL RATINGS

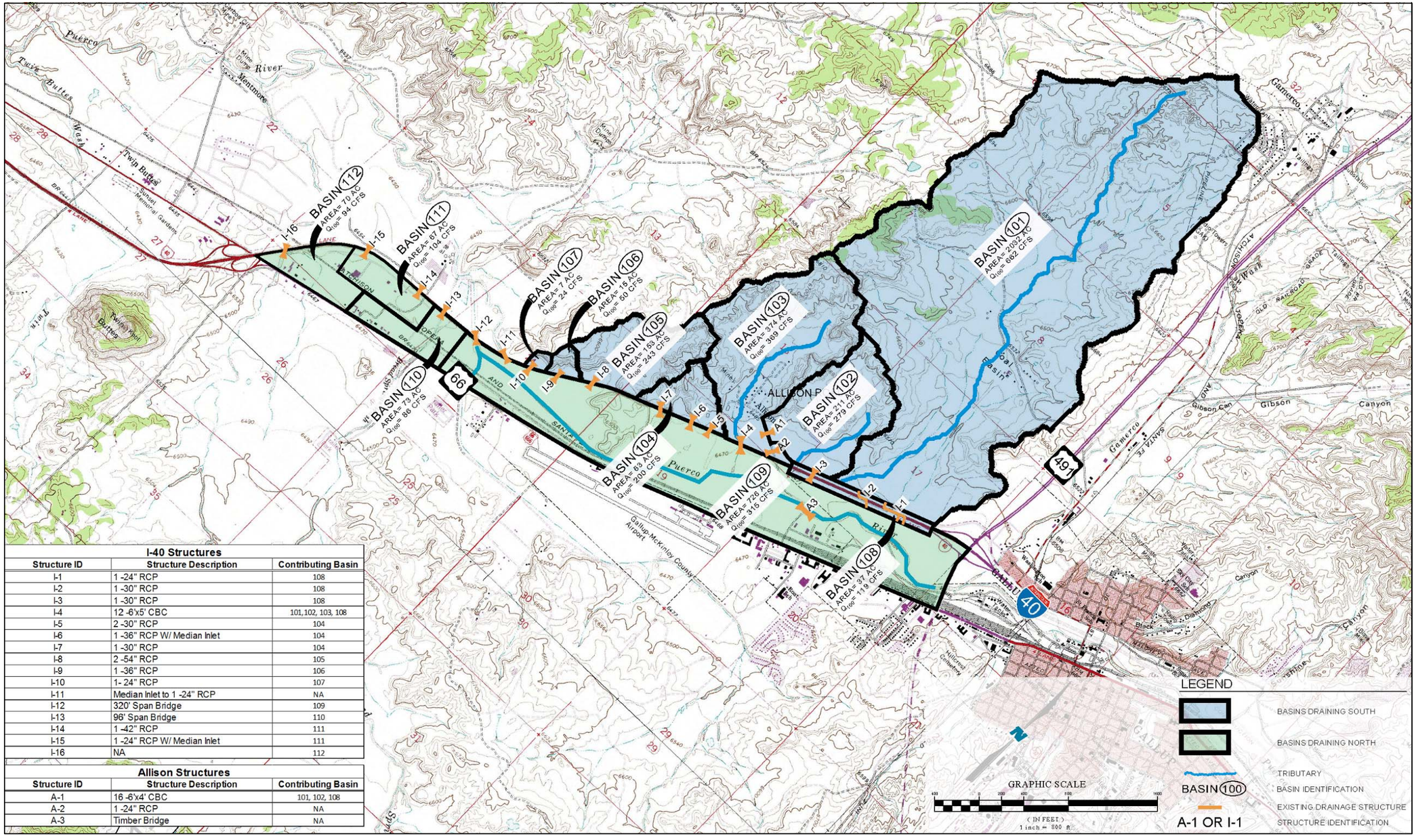
Bridge No.	Year Built	County	Location	Feature Intersected	Facility Carried	Mile Post [mi]	Sufficiency Rating	Deficiency Status	Traffic Safety Features	Condition					Appraisal		
										Deck	Super-structure	Sub-structure	Channel/ Channel Protection	Culvert	Structural Evaluation	Inventory Rating	Operating Rating
4231	1940	McKinley	0.2 Mi. N NM 118	Rio Puerco	Allison Rd	0.300	43.8	Structurally Deficient	Sub-Standard	5	4	5	7	NA	4	HS16.8	HS22.8
6553	1966	McKinley	0.2 Mi E Jct I-40/NM-118	BNSF Railroad	I-40 EB	16.668	96	Not Deficient	Meets Standards	7	7	7	NA	NA	7	HS20.8	HS37.7
6554	1966	McKinley	0.2 Mi E Jct I-40/NM-118	BNSF Railroad	I-40 WB	16.658	96	Not Deficient	Meets Standards	7	6	6	NA	NA	6	HS20.8	HS37.7
6730	1966	McKinley	19.9 Mi E of Ariz St Line	Allison Rd	I-40 EBL/WBL	19.630	55	Functionally Obsolete	Meets Standards	NA	NA	NA	NA	5	5	HS19.8	HS40.7
7384	1974	McKinley	Jct US-602/NM-118/Gallup	NM-118/SF RR/ Rio Puerco	US-491	20.837	85	Not Deficient	Meets Standards	7	7	7	7	NA	7	HS19.8	HA34.7
7870	1980	McKinley	5.0 Mi E of US-491/Gallup	NM-118/SF RR/ Rio Puerco	I-40 EB	25.759	87	Not Deficient	Meets Standards	6	5	6	7	NA	6	HS24.8	HS41.6
7871	1980	McKinley	5.0 Mi E of US-491	NM-118/SF RR/ Rio Puerco	I-40 WB	25.769	98	Not Deficient	Meets Standards	7	7	7	7	NA	7	HS24.8	HS41.6
8835	1993	McKinley	West Gallup Interchange	NM-118	I-40 WB	16.445	79	Functionally Obsolete	Meets Standards	7	7	7	NA	NA	7	HS34.7	HS54.6
8836	1993	McKinley	West Gallup Interchange	NM-118	I-40 EB	16.460	97	Not Deficient	Meets Standards	7	7	7	NA	NA	7	HS30.7	HS51.6
8845	1994	McKinley	1.3 Mi E Jct I-40 & NM-118	Rio Puerco	I-40 WB	17.761	98	Not Deficient	Meets Standards	7	7	7	7	NA	7	HS19.8	HS50.6
8846	1993	McKinley	1.3 Mi E Jct I-40 & NM-119	Rio Puerco	I-40 EB	17.810	97	Not Deficient	Meets Standards	7	7	7	7	NA	7	HS20.0	HS50.6
8825	1994	McKinley	1.1 Mi E Jct I-40 & NM 118	West Yard Draw	I-40 WB	17.570	98	Not Deficient	Meets Standards	7	7	7		NA	7	HS29.0	HS52.2
8853	1993	McKinley	1.1 Mi E Jct I-40 &NM118	West Yard Draw	I-40 EB	17.569	98	Not Deficient	Meets Standards	7	7	7	7	NA	7	JS29.0	HS52.2
9330	2007	McKinley	Junction of I-40/US-491	I-40 EB and WB	US-491 NB	0.560	93.9	Not Deficient	Sub-Standard	7	7	7	NA7	NA	7	HS19.8	HS38.7

4.8 Existing Drainage System Inventory and Assessment

A structural inventory of existing culvert crossings under Interstate 40 (I-40) was evaluated from US 491 (Munoz Drive) to BNSF's road grade separation, which is approximately 4.0 miles west bound from Munoz Drive. A structure inventory was assessed for Allison Road from the Rio Puerco to 250 feet north of I-40's bridge at Allison Road. Site visits were conducted in December of 2009 to obtain location, size, and material of each culvert crossing. Each structural was inventoried by using a GPS unit for mapping location and for inputting the structures description. Sixteen culvert crossings were inventoried along I-40 and three for Allison Road. Crossing structures include reinforced concrete pipe (RCP), concrete box culvert (CBC), and bridges. Drainage structures identified that are preceded with an "I" represent structures that cross I-40, those with "A" pertain to Allison Road. The Rio Puerco and Bread Springs Wash are two major drainage ways that cross I-40 within the studied corridor. Capacities for the culvert crossings were not calculated; however, their adequacy was determined based on a high level drainage analysis. The objective of the high level analysis is to determine if any of the structures are noticeably undersized. Peak flow rates at the drainage crossings were either calculated or obtained from previous studies. See Figure 4-10 for the culvert inventory and basin delineation.

Previous drainage studies were gathered to determine the flow at the Rio Puerco and Bread Springs Wash. Basins were delineated by using USGS Quad Maps. Culvert locations helped guide the basin delineation process by creating outlets for the basins. Hydrologic procedures in the City of Gallup Storm Drainage Criteria Manual were followed to determine the peak discharge for the 100 year return interval. Drainage basins less than 150 acres were evaluated using the Rational Method. The Simplified Peak Flow Method was utilized for drainage basins between 150 acres and 5 square miles. Delineated basins range from 7 acres to 3.17 square miles. Culverts I-1 through I-3 and I-11 through I-16 convey flow from south to north. Culverts I-4 through I-10 convey flow from north to south. Allison culverts convey flow from east to west.

No apparent damage of the culverts was evident with the exception of I-9. The northern edge of this culvert was damaged; however, it does not appear to affect its hydraulic capability. Median inlets in I-40 connect to structures I-6, I-11, and I-15. These inlets seem to function properly and were free of debris at the time of site visit. Allison's bridge (A-3) is a vehicular timber bridge which is structurally deficient. No severe scour was observed at the bridge. Most culverts had minor flow restrictions at the entrance due to tumble weeds accumulating around the barrel's entrance and overgrown vegetation at the inlet. This simply can be maintained by periodically clearing vegetation around the upstream end of the culvert. Sediment deposit was observed in the following culvert structures: A-1, I-3, I-4, I-7, I-11, and I-15. Hydraulic capacities of these culverts are greatly restricted due to the reduced flow area. It is recommended that these culverts be cleared of all deposit and inspected after heavy rains. Field investigations downstream of structure I-4 identified two stock tanks that appear to be causing sediment deposition upstream through structures I-4 and A-1. Also there does not appear to be a clear discharge point for the flow from I-4 to enter the Rio Puerco. This may also be causing additional sediment deposition. From a high level drainage analysis and assessment of the existing storm drain infrastructure, culverts are believed to be adequately sized for their contributing basins.



I-40 Structures

Structure ID	Structure Description	Contributing Basin
I-1	1 -24" RCP	108
I-2	1 -30" RCP	108
I-3	1 -30" RCP	108
I-4	12 -6'x5' CBC	101, 102, 103, 108
I-5	2 -30" RCP	104
I-6	1 -36" RCP W/ Median Inlet	104
I-7	1 -30" RCP	104
I-8	2 -54" RCP	105
I-9	1 -36" RCP	106
I-10	1- 24" RCP	107
I-11	Median Inlet to 1 -24" RCP	NA
I-12	320' Span Bridge	109
I-13	96' Span Bridge	110
I-14	1 -42" RCP	111
I-15	1 -24" RCP W/ Median Inlet	111
I-16	NA	112

Allison Structures

Structure ID	Structure Description	Contributing Basin
A-1	16 -6'x4' CBC	101, 102, 108
A-2	1 -24" RCP	NA
A-3	Timber Bridge	NA

Figure 4-10: Existing Drainage Features & Basins

4.8.1 Rio Puerco Hydraulic Analysis

The Rio Puerco is a significant drainage feature within the study limits. The Puerco River, the major stream flowing through the City of Gallup, is known locally as the Rio Puerco, the Rio Puerco of the West and the Perky. Both the North and South Forks of the Puerco River originate at the Continental Divide and flow westerly to their confluence approximately 3 miles east of downtown Gallup. The Puerco River drains an area of approximately 646 square miles at Mentmore, New Mexico. Runoff in the basin is very erratic with almost no flow for several months at a time. Climate and drainage area characteristics are not conducive to continuous flow, and little to no stream flow occurs, except during and immediately after large storm events.

Much of the upper portion of the watershed lies in the Cibola National Forest, outside the corporate limits of McKinley County. In the upper part of the South Fork basin, mesas contain considerable amount of rock. However, there is still sufficient soil to sustain pine trees at higher elevations and pinon and juniper trees with sage brush flats at lower elevations. Soils throughout the watershed are mostly impervious, low porosity clays. Ground surfaces often have light sand cover. In general, the abundance of clay soul allows appreciable runoff with little infiltration. Elevations in the watershed range from 8745 feet at Mount Powell Lookout on the Continental Divide to 6445 feet near the confluence of the Puerco River and Bead Springs Wash. Stream gradients in the area studied vary from approximately 12 feet per mile in the Puerco River to approximately 130 feet per mile in the Little Puerco Wash.[5]

The USACE Hydraulic Engineering Center River Analysis System (HEC-RAS) software program was used to model the water surface profile in the arroyo and aid in the conceptual design of the Rio Puerco bridge crossing for three proposed interchange alignment options. A preliminary model was developed by BHI for initial analysis of the water surface profile through the arroyo in the vicinity of the bridge crossings using existing topography data from statewide mapping. The HEC-RAS model extends from approximately 4,000' upstream of the US 491/NM 602 crossing to approximately 200' downstream of the I-40 crossing. Figure 4-11, Rio Puerco Hydraulic Analysis, shows the three proposed interchange alignment options and the HEC-RAS cross sections at each option. The HEC-RAS cross sections are included as Figure 4-13 thru Figure 4-14.

Manning's roughness coefficients ('n' value) of 0.035 and 0.05 were used for the main channel and overbank areas, respectively. Two flows were used in the preliminary analysis: 20,000 cfs and 12,000 cfs. The Federal Emergency Management Agency; Flood Insurance Study (FIS) for McKinley County, New Mexico. February 17, 2008 (FIS # 35031CV000A) report for the area lists a flow of 20,000 cfs for the Rio Puerco. However, design calculations previously done within the project limits used a flow of 12,000 cfs. Both flows were included in this analysis; however, for design consideration only the highest flow should be considered. These flows are based on a 100-year return period.

For Alignment Option 1, the model shows that the water surface elevation at the Rio Puerco bridge crossing will be approximately 6480.0 for the 12,000 cfs flow and 6481.9 for the 20,000 cfs flow. For Alignment Option 2, the model shows that the water surface elevation at the Rio Puerco bridge crossing will be approximately 6478.8 for the 12,000 cfs flow and 6481.0 for the 20,000 cfs flow. For Alignment Option 3, the model shows that the water surface elevation at the Rio Puerco bridge crossing will be approximately 6487.5 for the 12,000 cfs flow and 6488.5 for the 20,000 cfs flow.

[5] Excerpt from Federal Emergency Management Agency; Flood Insurance Study (FIS) for McKinley County, New Mexico. February 17,2008 (FIS # 35031CV000A)

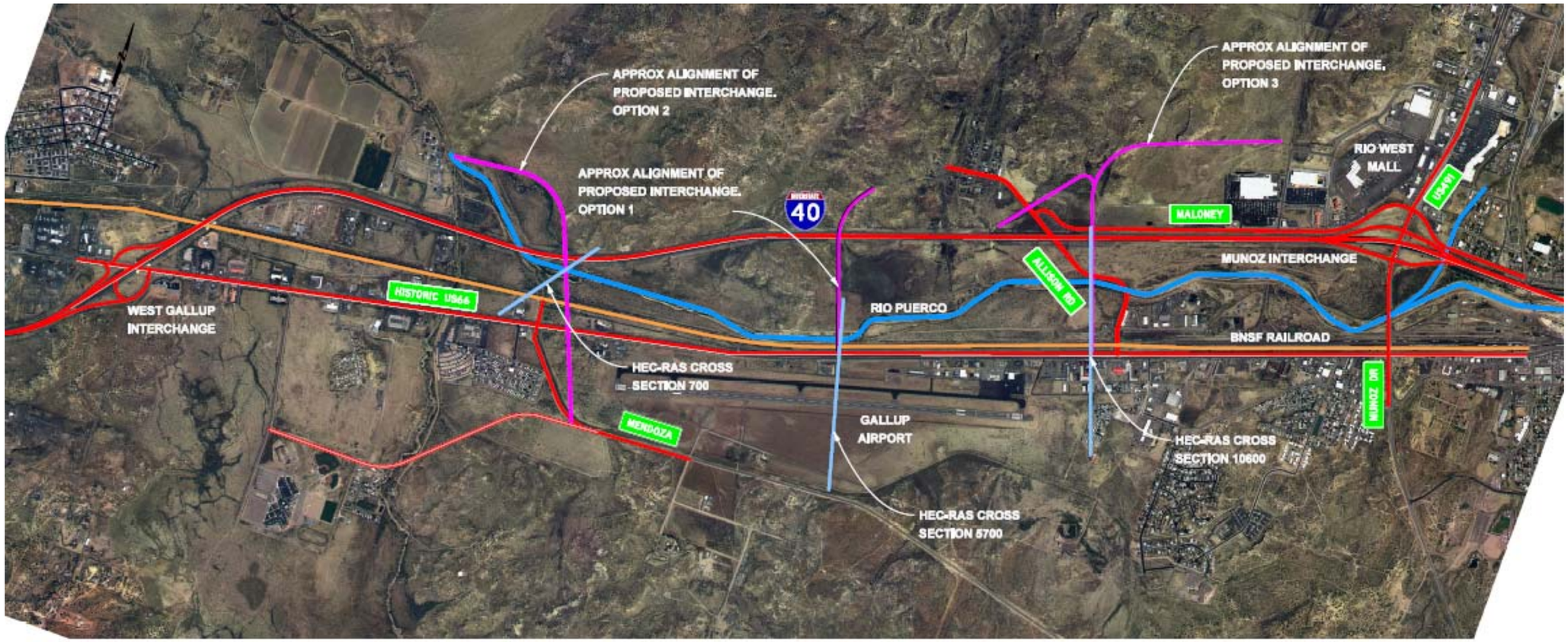


Figure 4-11: Hydraulic Analysis Locations

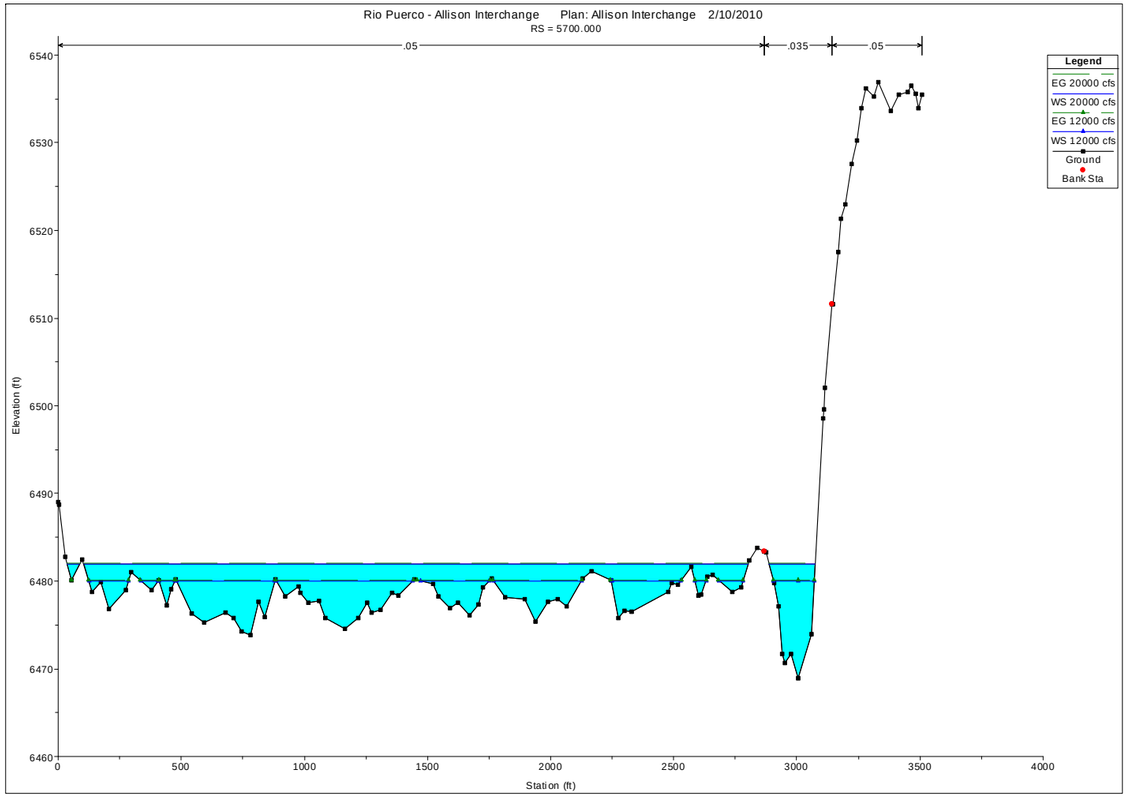


Figure 4-12: Alternative Corridor 1 – HEC/RAS Cross Section Corridor (Looking West)

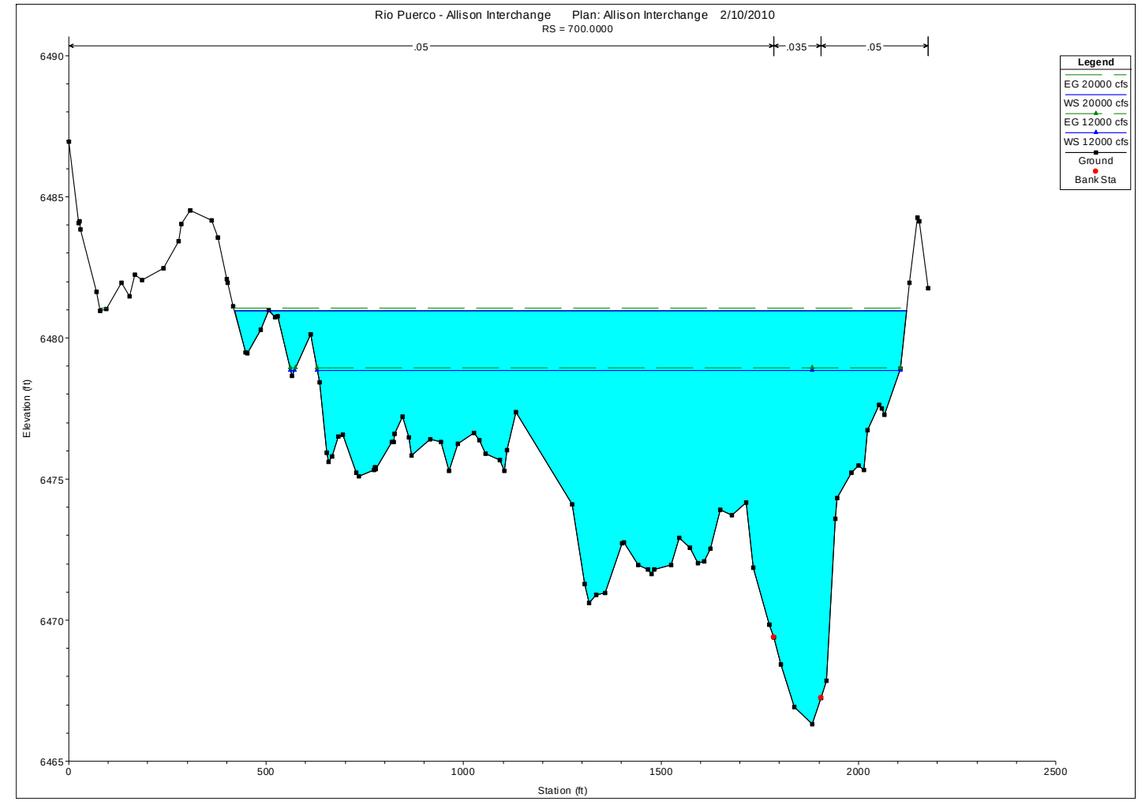


Figure 4-13: Alternative Corridor 2 – HEC/RAS Cross Section Corridor (Looking West)

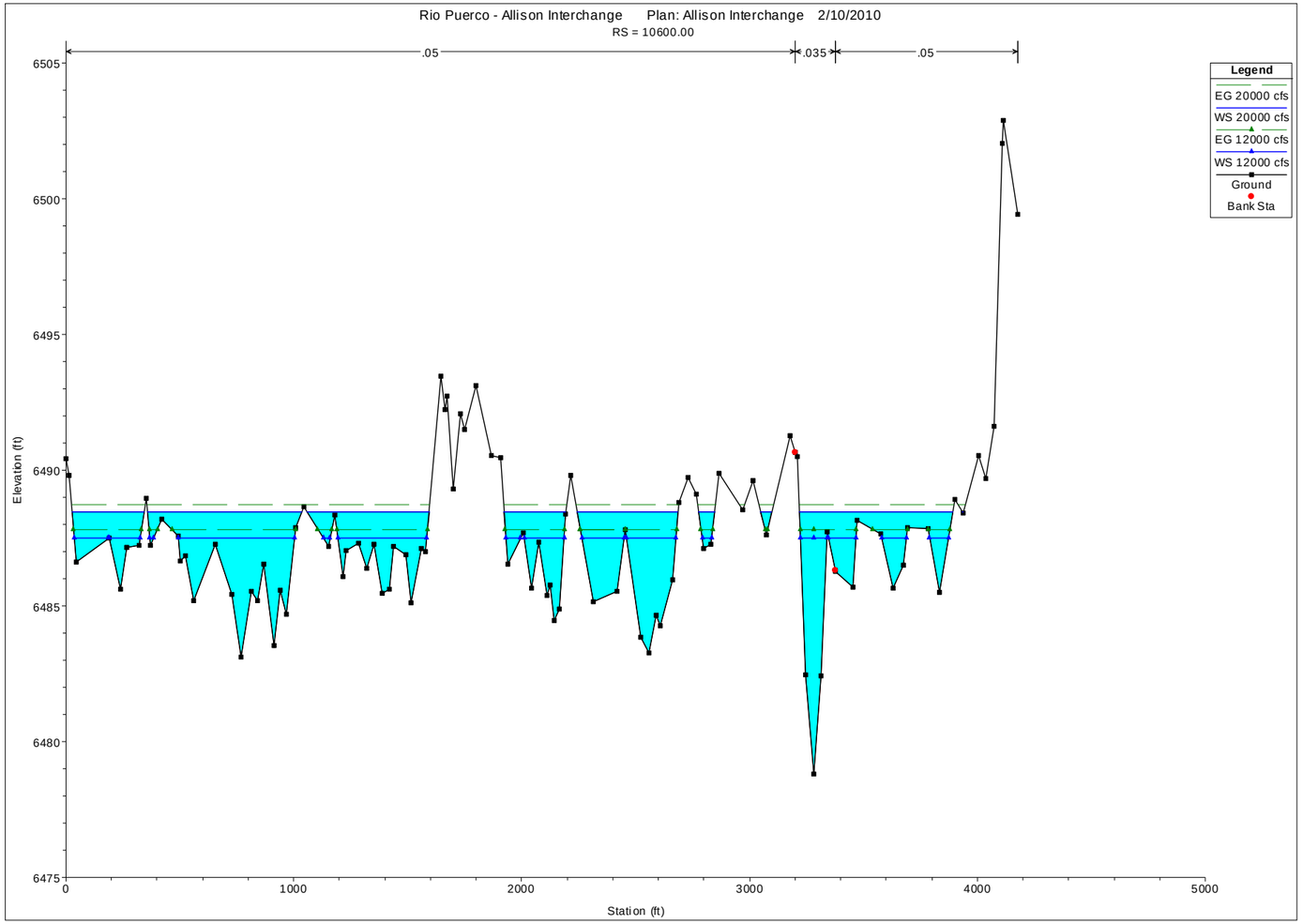


Figure 4-14: Alternative Corridor 3 – HEC/RAS Cross Section Corridor (Looking West)

4.9 Adjacent Land Use and Growth Trends

According to projected population estimates from the University of New Mexico Bureau of Business and Economic Research (BBER), between 2000 and 2010, the population in McKinley County has increased by an estimated 7.95 percent from a total population of 74,798 in 2000 to a total projected population of 80,747 in 2010. The projected population for McKinley County in 2035 shows an estimated increase of 26.79% from 74,798 in 2000 to a total projected population of 94,837 in 2035. BBER has developed population projections that show a steady increase in the population in McKinley County over the next 25 years. BBER's research is based on other economic and demographic indicators for the state, which are not included in the U.S. Census analysis.

4.9.1 Background

The general land use within the project corridor consists of primarily industrial, commercial, and transportation corridors. The extent of the study area north of Interstate 40 (I-40) encompasses a commercial shopping center with the majority of the existing commercial development within the project corridor. Since the existing terrain becomes more rugged to the west of the project corridor, the physical constraints and lack of infrastructure discourage growth on the western edge of Gallup north of I-40. The Gallup Municipal Airport, the Burlington Northern Santa Fe Railway (BNSF) line, and NM 118 (Old Route 66) are located to the southern extent of the project corridor. Scattered residential areas are located throughout the project corridor.

In 2009, the City of Gallup updated their Growth Management Plan to provide a strategic framework for growth over the next 20 years. This documentation was utilized as a resource to validate existing land use data and for the development of forecast land use data. This data was essential for the development of a traffic simulation model that was used for the purpose of analyzing existing traffic operations as well as forecast conditions and alternatives analyses.

4.9.2 Land Use Data Update

The last modeling effort in support of transportation planning for the Gallup community occurred in 1992. This effort involved identification of a Transportation Analysis Zone (TAZ) structure to permit the allocation of land uses and, thereby, establish a basis for trip generation/attraction analysis/modeling. It also included an allocation of land use types by TAZ. Since 1992, new growth has occurred in the Gallup area; therefore, the type and magnitude of land uses allocated to these TAZs needed to be reviewed and updated, as necessary. The initial review/update focused on existing land use, which recently was identified during preparation of the City of Gallup Growth Management Master Plan Update — Land Use Element, August 2009.

The resulting table of values established by the process outlined below reflects the best estimate of the existing land use and employment levels in each TAZ based on readily available sources. Table 4-5 shows the results of the adjustments adopted.

Table 4-5: Transportation Analysis Zone Adjustments

Land Use Characteristic	2010 Estimate	Adjusted 2010 Estimate
# of Single-Family Dwelling Units (SFDU)	7,424	6,120
# of Multi-Family Dwelling Units (MFDU)	5,107	2,230
Retail Employment	3,203	3,240
Non-Retail Employment*	5,738	4,930
Retail Employment 10 13**	1,371	1,371
Hospitality Employment	687	843
Hospital Employment	1,114	1,114
University Employment	176	176
TOTAL	**24,820**	**20,024**

Notes:
* This category was assumed to include Service, Professional, Office, and Warehouse employment.
** This was a special category establish to reflect the different trips generation/attraction characteristics of the regional shopping focus of retail developments located in the northwest and northeast quadrants of the intersection of US 491 and Interstate 40 (TAZ 10 & TAZ 13, respectively) compared to other decentralized retail activities.

The land use update/review process was accomplished through implementation of the following outlined steps:

- The 1992 modeling effort identified 68 TAZs. This TAZ structure was rectified to and overlaid on the 2009 Existing Land Use map (Figure IV-9) presented in the Master Plan. This map represents the most recent and comprehensive survey of land uses in the Gallup area.

  - # of Single-Family Dwelling Units (SFDU)
  - # of Multi-Family Dwelling Units (MFDU)
  - Retail Employment
  - Non-Retail Employment
  - Retail Employment 10 13*
  - Hospitality Employment
  - Hospital Employment
  - University Employment

  * Note: This was a special category establish to reflect the different trips generation/attraction characteristics of the regional shopping focus of retail developments located in the northwest and northeast quadrants of the intersection of US 491 and Interstate 40 (TAZ 1o & TAZ 13, respectively) compared to other decentralized retail activities.

- Land use and employment data were developed for each TAZ during the 1992 planning effort. Revised estimates of these data were prepared in 2009 to reflect 2010 conditions, during the Master Plan Update process. Data categories include:

- Employing the rectified 1992 TAZ structure as a guide, existing land use depicted on the 2009 Existing Land Use map was compared to recent aerial photography of the Gallup area available through Google Maps and Bing Maps. Land use types and magnitude displayed on the aerial photography was used to verify the 2010 data values. Discrepancies, where noted, were evaluated to determine whether data values should be adjusted up or down. For example, if the map indicated the presence of SFDUs and TAZ data identified a number of SFDUs, the aerial images were examined to verify the presence or absence of SFDUs. TAZ data values were adjusted to reflect the evidence provided by the aerial photography. In some cases, adjustments were required to reflect a greater number of units; in other cases, adjustment was necessary to reflect fewer units. This process was followed for each TAZ to determine and adjust the 2010 estimates until all 2010 TAZ values had been reviewed and evaluated for accuracy.

- Employment data was more challenging, as it is difficult to determine the number of employees associated with a specific land use or building from aerial photography. The 2010 employment estimates were evaluated to determine whether they were reasonable, i.e., was there adequate evidence presented in the aerial photography to justify the estimate. For example, the 2010 estimate may indicate 200 retail employees in a TAZ. Aerial photography was examined to determine whether there was sufficient commercial development to justify the estimate of 200 employees. Unless there was overwhelming evidence to the contrary, the 2010 estimate of employment was adopted. In some instances, commercial employment establishments were present in aerial photography; however, the 2010 estimate was unreasonably low (or nonexistent) for the magnitude of commercial development present. In these cases, an estimate of employment associated with the type of commercial development (size and type estimated from aerial photography, if possible) present was developed through simple assumptions regarding the maximum number of employees during the day and general knowledge of the type of commercial activity. For example, a thirty-unit motel was assumed to employ up to six persons, including management, housekeeping, and maintenance; a fast-food restaurant was assumed to have 4-6 employees, including Manager, Assistant Manager and 2-4 employees. Short of conducting an on-the-ground survey of business establishments or a detailed and lengthy assessment of each "potential" type of commercial development, this estimation method was adopted to provide a reasonable magnitude of employment and a basis for evaluating trip general/attraction associated with various commercial sites within a TAZ.

4.10 Operational Analysis

4.10.1 Crash Analysis

Crash data was provided for the time period of 2004 through 2008 by the NMDOT and by the City of Gallup Police Department for City streets within the study area. The data included summary statistics by roadway segment as well as detailed records for the crashes. The detailed records were tabulated into crash summary sheets arranged by crash type, severity, roadway conditions, and probable causes for the major study corridors including I-40, US 491, NM 118, and NM 602 (see Appendix F – Crash Data) The summaries were organized by rural road and by urban street categories. In certain cases, crash records were not included in the detailed summaries shown in the Appendix if they were outside of the study limits.

The focus of this summary was to identify potential “high hazard” locations within the study area that may require more detailed investigations and potential mitigation measures during the detailed analysis and design phases of the project. This data provides useful information to assess existing conditions, project purpose and need, and for consideration in the alternatives analysis with respect to potential deficiencies that could be corrected with an alternative project concept.

4.10.2 Rural Roads

For the rural roadways of I-40 and NM 602, the crash data was summarized by mile post. I-40 was divided into segments while the reported crashes along NM 602 were focused at or near the intersection with Aztec Avenue. The following paragraphs summarize the results of the tabulation.

4.10.2.1 Interstate 40

As shown in Table 4-6, the highest incidence of crashes for the segment of I-40 from mile point (MP) 16 to 22 occurs between MP 17 and 18, which is in a curvilinear section of the interstate. It should also be noted that three curvilinear segments occur along I-40 between MP 16 and 19. The next highest incidences occur adjacent to the West Gallup (MP 16) and Muñoz (MP 20) interchanges. In addition, the total number of crashes spiked in year 2005 and then decreased by half in year 2006, the year the Exit 20 interchange was reconstructed. The general trend for crashes within this section of I-40 during the study period was downward.

TABLE 4-6: I-40 TOTAL CRASHES BY MILE POST

Mile Post	Total	%	Remarks
16 – 17	8	20	West Gallup Interchange
17 – 18	13	33	
18 – 19	3	7	
19 – 20	8	20	Muñoz Interchange
20 – 21	7	18	
21 – 22	1	2	Miyamura Interchange
Total	**40**	**100**	

The accident rate within this portion of I-40 was approximately 23% below the system-wide average. Other important considerations include:

- The predominant collision type was Fixed Object (38%), followed by Sideswipe collisions (25%);
- The predominant contributing factor was 'Excess Speed/Too Fast for Conditions' (35%) followed by 'Driver Inattention' (28%), possibly suggesting motorists are traveling too fast to negotiate the curved alignments and/or merge/weave conditions at the interchange ramps;
- Approximately 38% of the collisions occurred during wet conditions while 63% occurred during dry conditions;
- Potential I-40 access points should take into consideration the roadway alignment (i.e. tangent versus curvilinear) as well as geometry of the ramp termini.

4.10.3 NM 602

Crashes on NM 602 were tabulated within 0.2 mi. (1000') of the Aztec Ave. intersection, and considered the influence limits given the high speed conditions and lengths of auxiliary turn lanes approaching this intersection. Several observations are summarized below:

- 41 collisions were recorded over the analysis period, translating to approximately 8 per year;
- The predominant collision type was Rear End (46%), followed by Left Turn (22%);
- The vast majority occurred during daylight (85%) and dry (90%) conditions;
- The accident rate of 2.77 million vehicle miles (MVM) along this segment of NM 602 was substantially higher than the system-wide rate of 0.53 MVM for minor arterials in 2007;
- The high proportion of Rear End collisions suggests the traffic signal clearance interval should be evaluated at Aztec Avenue.

4.10.4 URBAN STREETS

For the urban streets US 491 (Muñoz) and NM 118 (Old US 66), the crash data were summarized by intersection. The following paragraphs summarize the highlights of the tabulation.

4.10.4.1 US 491

The reported data was summarized by major intersection from I-40 (MP 0) to MP 2 as summarized below.

TABLE 4-7: US 491 CRASH SUMMARY

Intersection	Total	%	Remarks
I-40 Ramps	23	23	Signalized
Maloney	4	4	Signalized
Lincoln	26	26	Unsignalized
Metro	32	32	Signalized
Jefferson	11	11	Signalized
Coal Basin Rd.	4	4	Unsignalized
Total	**100**	**100**	

The following observations were noted:

- Rear End collisions predominated at the signalized intersections with Left Turn, Sideswipe, and Rear End collisions accounting for the highest proportions at the unsignalized intersections;
- The crash rate for this section of US 491 was reported at 6.103 per MVM, significantly higher than the 2007 system-wide average of 3.302;
- For this summary, the crash records reviewed for Lincoln Ave. were all listed in year 2004 for reasons that are not clear. The condition appears to have been mitigated with the elimination of left turns from the minor street; however, further review and analysis of this location may be warranted.

4.10.4.2 NM 118

The reported data was from I-40 (MP 16) to Miyamura Interchange (MP 22). However, data provided by NMDOT only listed 2 records. Data provided by the Gallup City Police Dept. was more extensive, though sufficient information was not always available to discern the crash type. The majority of the collisions occurred at the intersections of Allison, Marguerite, and Florence as summarized in the following table.

TABLE 4-8: NM 118 CRASH SUMMARY

Intersection	Total	%	Remarks
Florence	5	23	Unsignalized
Allison	4	18	Unsignalized
Marguerite	13	59	Signalized
Total	**22**	**100**	

Other important considerations include:

- The crash rate for this section of NM 118 was reported as 0.0298 per MVM, however the comparable system-wide rates were listed as '0';
- Sufficient details were not available to discern a pattern of types or contributing factors;
- The highest incidence of crashes occurred at the signalized intersection of Marguerite Street, averaging 2.6 per year.

4.10.4.3 Allison Road & West Maloney Road

Data was provided by the Gallup City Police Dept. for Allison Road from NM 118 to W. Maloney Road, and for W. Maloney Road from Allison Road to US 491. The records did not indicate crash type, severity, road conditions, or lighting; and provided only limited information on probable cause and sobriety. For the 5-year study period, 22 crashes were reported on Allison Road and 4 on W. Maloney Road, respectively. A number of probable causes were identified; these are summarized in the following table.

TABLE 4-9: ALLISON ROAD CRASH PROBABLE CAUSE SUMMARY

	Year					Totals	
Probable Cause	**2004**	**2005**	**2006**	**2007**	**2008**	**#**	**%**
Following too close	-	-	4	2	1	7	32%
Driver Inattention	2	-	1	1	1	5	23%
Excessive Speed/Too Fast for Conditions	1	2	2	-	-	5	23%
Improper Driving	-	-	1	-	-	1	4%
Under Influence of Alcohol	-	1	-	-	-	1	4%
Other	1		-	2	-	3	14%
TOTALS	**5**	**3**	**8**	**5**	**2**	**22**	**100%**
Note: Data provided by City of Gallup only provided probable cause and sobriety information							

No vehicle-train crashes were contained in the data set at the Allison Road/BNSF crossing. A request to BNSF yielded one (1) vehicle-pedestrian crash within the study period, which resulted in a fatality. Summarized in the following Allison Road has a significantly higher crash rate than the other facilities within the study limits. Over the 5-year analysis period there were 4 crashes at the Allison Road/NM 118 Intersection. In 2005, there was one pedestrian who was killed when struck by a train. The crash data provided by the City of Gallup for Allison Road only specified the probable cause of the crash and the sobriety of the driver. The following table shows the number of crashes and the corresponding crash rate per million vehicle miles (MVM).

TABLE 4-10: COMPARISON TO STATE & COUNTY CRASH AND FATALITY RATES

CRASH RATES:	2004	2005	2006	2007	2008
Total Crashes	5	3	8	5	2
Crash Rate per MVM	10.34	6.20	16.54	10.34	4.14
State Ave	2.11	2.23	2.05	1.90	n/a
McKinley	1.43	1.14	1.03	.86	n/a

The crash rate for this 7-tenth of a mile road is significantly higher than both the statewide and county average crash rates. The average crash rate over the 5-year analysis period is 9.51. The statewide crash rate average for the available data is 2.07 and the McKinley County average is 1.11. Of the 22 crashes reported 3 (14%), involved drivers that had been drinking. The primary probable cause of crashes is attributed to following too close 32%, followed by driver inattention at 23% and excess speed/too fast for conditions also listed at 23%.

4.10.5 Crash Summary

The data summarized in this section and tabulated in Appendix F – Crash Data, was developed to provide an overview of the operating conditions within the study area. As such, this summary was intended to identify "hot spots" that may require further evaluation and more detailed considerations with respect to the alternatives analyses and study recommendations. Factors to be considered in the evaluation of potential alternative concepts include geometric alignment, e.g. interchange ramp geometry and length; careful selection of operating speeds for proposed roadway improvements; and traffic signal timing.

4.10.6 Base Year (2010) Traffic Analysis

For analytical purposes, the Base Year was established as 2010. The forecast year of 2030 will be analyzed to assess future conditions. Traffic and demographic data were projected to the year 2030 for analysis of forecast conditions.

4.10.7 Traffic Data

New traffic counts were collected in December 2009 for purposes of evaluating existing traffic operations within the study area roadway network. A summary of the count sites is included in Appendix D – Intersection Turning Movements. These included 20 manual turning movement counts at signalized and unsignalized intersections as well as 10 mechanical counts at various roadway segments to measure traffic volumes, speeds, and vehicle classification. See Table 4-13.

Supplemental data was obtained from the NMDOT's Consolidated Highway Database (CHDB), namely seasonal adjustment factors and historical count data along regional routes. The count data were input into the VISUM travel demand forecasting software for calibration and for analysis of existing conditions on the network.

The calibration effort for the travel demand model uses existing (2010) average daily traffic (ADT) count data taken from location around the study area. These volumes are then compared against similar locations within the travel demand model to determine if the model is accurately producing existing conditions (2010) demand volumes. Typically models produce the best calibration results for the highest volume roadway facilities such as freeways and highways, while lower volume roads such as local roads and collector roads are typically not as well calibrated. The Allison Road project VISUM model is typical and shows typical calibration results. In testing the calibration versus acceptable levels of variance, it was determined that the model results fall well within the acceptable tolerances for model calibration and can be used to produce acceptable modeling forecasts.

The Highway Capacity Manual, Special Report 209, Updated 2000 (HCM 2000) defines operational measures of effectiveness for all types of roadways and junctions in terms of qualitative levels of service (LOS). This study is concerned with levels of service for unsignalized and signalized intersections, as well as roadway and ramp segments. LOS at intersections is measured in terms of average vehicle delay, in seconds, for each approaching vehicle. Control delay is the sum of the deceleration, queue, stop, and acceleration delays, computed for each approach movement. Table 4-11 summarizes LOS definitions and criteria for both unsignalized and signalized intersections.

Attainment of an overall LOS D or higher generally is the desirable base condition for intersection operations in urban areas. However, LOS E may be acceptable for certain low-volume approaches or minor movements, especially where a higher LOS may significantly degrade a major movement or where the default is LOS E based upon the intersection cycle length or low approach volumes.

TABLE 4-11: SIGNALIZED AND UNSIGNALIZED INTERSECTION LEVEL OF SERVICE CRITERIA

Level of Service	Signalized Intersection Control Delay (sec/veh)	Unsignalized Intersection Control Delay (sec/veh)	Definition
A	≤ 10	≤ 10	Very Low Delay – Free Flow
B	> 10 - 20	> 10 – 15	Minimal Delays - Good Progression
C	> 20 - 35	> 15 – 25	Moderate Delay
D	> 35 – 55	> 25 – 35	Significant Delay
E	> 55 - 80	> 35 – 50	High Delay
F	> 80	> 50	Excessive Delay

Source: Exhibits 16-2 and 17-2, Highway Capacity Manual 2000.

The predominant focus of the capacity analysis was at the intersection 'nodes' as these typically control the traffic network. The VISUM travel demand forecasting software was used to analyze the existing conditions for the network described in Section 4.1. This analytic tool employs the HCM capacity analysis techniques to assess traffic operations for the roadway segments (links), intersections (nodes), and other network elements including interchange ramps and highway segments. A base year travel demand model was developed for the PM Peak period and calibrated to replicate existing conditions. Documentation describing the data and process used to calibrate the model is available under separate cover and entitled Gallup, New Mexico 2010 Travel Demand Model Update Documentation (February 2010).

Base year (2010) traffic volumes on the study network were computed in the VISUM travel demand model and presented in Figure 4-15. Future conditions will be compared against this base condition. The results of the base year traffic operations analysis are summarized in Table 4-12 on page 4-36 and presented in Figure 4-16 on page 4-38. All network elements currently operate within acceptable levels of service (LOS).

Levels of service were analyzed in the traffic simulation model for the roadway segments (links), which included streets, freeways, ramps and merge/weave areas. The results, which are depicted in Figure 4-15, indicate that most of the network elements operate at satisfactory levels of service with the exception of several intersection approach segments and the loop ramp weave area at the I-40/Maloney interchange.

TABLE 4-13: CORRIDOR WEEKDAY AND WEEKEND ADT CAPACITY AND LEVEL OF SERVICE

Location	Description	Weekday ADT				Weekend ADT			
		NB	SB	EB	WB	NB	SB	EB	WB
1	NM 118 - Between I40 Ramps			5,987	4,604				
2	NM 118 - Between Rico and Mendoza			5,291	5,013			4,379	4,037
3	NM 118 - Between Allison and Arnold			6,286	5,582				
4	Aztec Between Arnold and Munoz			5,863	6,602				
5	Munoz Between Aztec and Mendoza	7,468	7,593			4,276	4,332		
6	Munoz Between Aztec and I40 South Ramps	11,449							
7	Munoz Between Maloney and Metro	13,834	15,032						
8	Munoz Between Metro and Jefferson	10,690	12,737						
9	Munoz Between Jefferson and Coal Basin	13,143	15,015			11,059	10,986		
10	Maloney Between Allison and Kachina			1,987	1,690				
11	West Gallup Interchange EB I40 Off Ramp			1,516					
12	West Gallup Interchange EB I40 On Ramp			3,014					
13	West Gallup Interchange WB I40 Off Ramp				3,599				
14	West Gallup Interchange WB I40 On Ramp				1,662				
15	I40 West of West Gallup Interchange			6,778	8,193				
16	I40 Between West Gallup Interchange and Munoz Interchange			8,160	10,011				
17	I40 East of Munoz Interchange			12,517	13,611			11,066	13,808

TABLE 4-12: BASE (2010) LEVEL OF SERVICE (LOS) SUMMARY

Node	Name	Control Type	V/C	Avg Delay	Avg LOS
81	I40 WB - FORD DR	TWSC	0.00	6.95	A
91	METRO AVE - MUNOZ DR	Signalized	0.42	26.47	C
95	I40 EB - FORD DR	TWSC	0.00	7.03	A
102	LINCOLN AVE - MUNOZ DR	TWSC	0.00	0.82	A
123	MALONEY AVE - MUNOZ DR	Signalized	0.55	35.37	D
150	I40 WB - MUNOZ DR	Signalized	0.45	26.96	C
188	I40 EB - MUNOZ DR	Signalized	0.34	13.20	B
220	MALONEY AVE - ALLISON RD	TWSC	0.00	0.59	A
241	NM 118 - ARNOLD ST	Signalized	0.29	13.48	B
249	AZTEC AVE - MUNOZ DR	Signalized	0.63	39.98	D
263	NM 118 - ALLISON RD	TWSC	0.00	5.16	A
289	MENDOZA RD - MUNOZ DR	Signalized	0.58	48.89	D
304	NM 118 - I40 EB	TWYC	0.00	1.08	A
385	JEFFERSON AVE - MUNOZ DR	Signalized	0.51	44.50	D
396	NM 118 - FLORENCE ST	TWSC	0.00	0.95	A
412	NM 118 - ARMAND ORTEGA DR	Signalized	0.20	20.21	C
417	NM 118 - I40 WB	TWSC	0.00	4.57	A
426	COAL BASIN RD - MUNOZ DR	Signalized	0.38	34.61	C
428	HAMILTON RD - MUNOZ DR	TWSC	0.00	2.56	A
430	NM 118 - RICO ST	Signalized	0.26	20.66	C
435	NM 118 - MARGUERITE ST	Signalized	0.42	27.85	C
438	MALONEY AVE - KACHINA ST	Signalized	0.51	30.24	C
450	J. M. MONTOYA BLVD - FORD DR	Signalized	0.15	32.67	C

Allison Road suffers additional delays due to the frequent train crossings, which are not reflected in this PM Peak Hour computation. According to the Grade Separation Study Allison Road Crossing (2007) by Wilson & Company: "…train traffic combined with the BNSF yard operations result in the crossing being blocked for up to 8-9 hours a day." More recently, BNSF indicated that on average 60 trains/day utilize this track, which is anticipated to increase once economic activity increases. This translates to an average of between 2 and 3 train crossings per hour. Switching operations occur 4 to 5 times per day on average. The variable train lengths and other factors make it impractical to measure the train delays; however, the impact of these delays along with emergency vehicle response times and potential out-of-direction travel, should be considered as part of the purpose and need evaluation.

4.10.8 Forecast Year (2030) Traffic Analysis

The forecast horizon year of 2030 has been established for assessment of future conditions and as a baseline condition against which proposed alternative project concepts will be measured. Development of this forecast 2030 No-Build Scenario traffic operations analysis was conducted as described in the following paragraphs.

4.10.9 Future Land Use Methodology

Forecasting future land use data for the travel demand modeling effort was accomplished through extension of the existing data for each TAZ. Land use and employment estimates established for 2010 were extended to 2030 at an annual compound growth rate of one percent (1.0%). This involved four steps:

- Projection of Population based on Historic Trend 1910 – 2000;
- Projection of Population based on Anticipated Annual Growth Rate;
- Extension of TAZ Unit Values to 2030 based on Share of Total Population in 2010;
- Adjustment of Extended 2030 Unit Values based on Examination of Future Land Use Map.

The first step was to prepare a projection of population growth for Gallup for the years 2010, 2020, and 2030. An initial direct linear equation was determined, based on the population reported for the decades from 1910 through 2000. The result of this exercise compared to the population of McKinley County is shown in Table 4-14.

TABLE 4-14: LINEAR PROJECTION OF GALLUP POPULATION TO 2030

Gallup (1)	Decade	McKinley County (2)
2,204	1910	12,963
3,920	1920	13,731
5,992	1930	20,643
7,041	1940	23,641
9,133	1950	27,451
14,089	1960	37,209
14,596	1970	43,208
18,167	1980	56,536
19,340	1990	60,686
20,209	2000	74,798
23,407	2010	80,747
25,579	2020	88,155
27,751	2030	93,294

Prepared by Wilson & Company, February, 2010.
(1) 1910 – 2000: Chapter III, Existing Conditions, City of Gallup Growth Management Plan Update, August, 2009, P. III-1.
2010, 2020, 2030: Linear projection based on 1910-2000.
(2) New Mexico County Population Projections July 1, 2005 to July 1, 2035, Bureau of Business and Economic Research, University of New Mexico. Released August 2008.

The Land Use Element of the City of Gallup Growth Management Plan Update states, "the city's population is projected to increase at an average annual rate of 0.5% to 1.5% during the planning period." Given this information, the second step involved preparing a second population projection by extrapolating the 2000 population to 2010, 2020, and 2030 at compound annual growth rates of 0.5%, 1.0%, and 1.5%. The projections derived from this second method are shown in Table 4-15 on page 4-40. Comparing the two projections revealed the 1.0% growth rate for 2030 from Table 4-14 most closely coincided with the linear projection for 2030 from Table 4-16. Therefore, the 2030 growth projection of 1.0% was adopted for extending land use and employment data from the 2010 base data to create a projection for 2030.

The third step involved extending the 2010 TAZ data to 2030 by carrying forward the relative share of the population each TAZ had in 2010 with the 1.0% growth rate projection as the base. For example, the number of Single-Family Dwelling Units (SFDU) in TAZ 1 in 2010 is 249. Apportionment of growth in the TAZ relative to the projected increase in population from 2010 to 2030 results in an estimate of 289 SFDUs in 2030. A value from 2030 was created for each TAZ in this manner. It was understood that a straight line extension would not fairly represent growth, as it would not recognize opportunities and constraints associated with land and growth dynamics within the model study area.

Thus, the fourth step – adjustment of data based on the future land use map. The magnitudes of values generated for each TAZ were evaluated by examining the future land use map contained in the City of Gallup Growth Management Plan Update. It was assumed that this map represented the best estimate of the magnitude, type, and location of growth in the community. The map specifically differentiates between "existing" and "new" residential areas. Therefore, each TAZ could be evaluated to determine whether the straight line extrapolation was reasonable.

In some TAZs, the projection of SFDUs and Multi-Family DUs (MFDUs) underestimated the future condition, i.e., the projected value was not consistent with the amount of land forecast to be absorbed for "new" residential. An estimate of expected SFDU and MFDU growth was prepared by applying typical square footage for developed residential in or near the TAZ (both SFDU and MFDU) to the map area forecast to experience new residential growth. The area of forecast growth was determined and the square footage used to estimate the number of DUs that could be developed in that area. A 20 percent allowance was used to account for circulation elements. In other TAZs, the map showed no "new" residential growth; therefore, any increase over 2010 would be unreasonable. In this case, the projected DU values for the TAZ were held to the number of DUs in 2010. This interpretation of the future land use map provided a reasonable estimate of SFDUs and MFDUs for each TAZ.

A similar, though considerably less sensitive to anticipated growth patterns, methodology was followed with respect to employment. Because the future land use map does not identify "new" employment areas, it was necessary to evaluate the potential for growth based on a comparison with the existing land use map and available aerial photography. Unless the projected employment, based on population growth, appeared to be totally unreasonable, no adjustments to employment in the TAZ were performed.

As this process was intended to create an estimate of land uses in TAZs for the purpose of forecasting travel demand, a control total for the projected population was not maintained. The belief is that this process creates the best possible representation of future land use, as determined by community planners. As such, the travel demand modeling process can better reflect the anticipate pattern of growth and development.

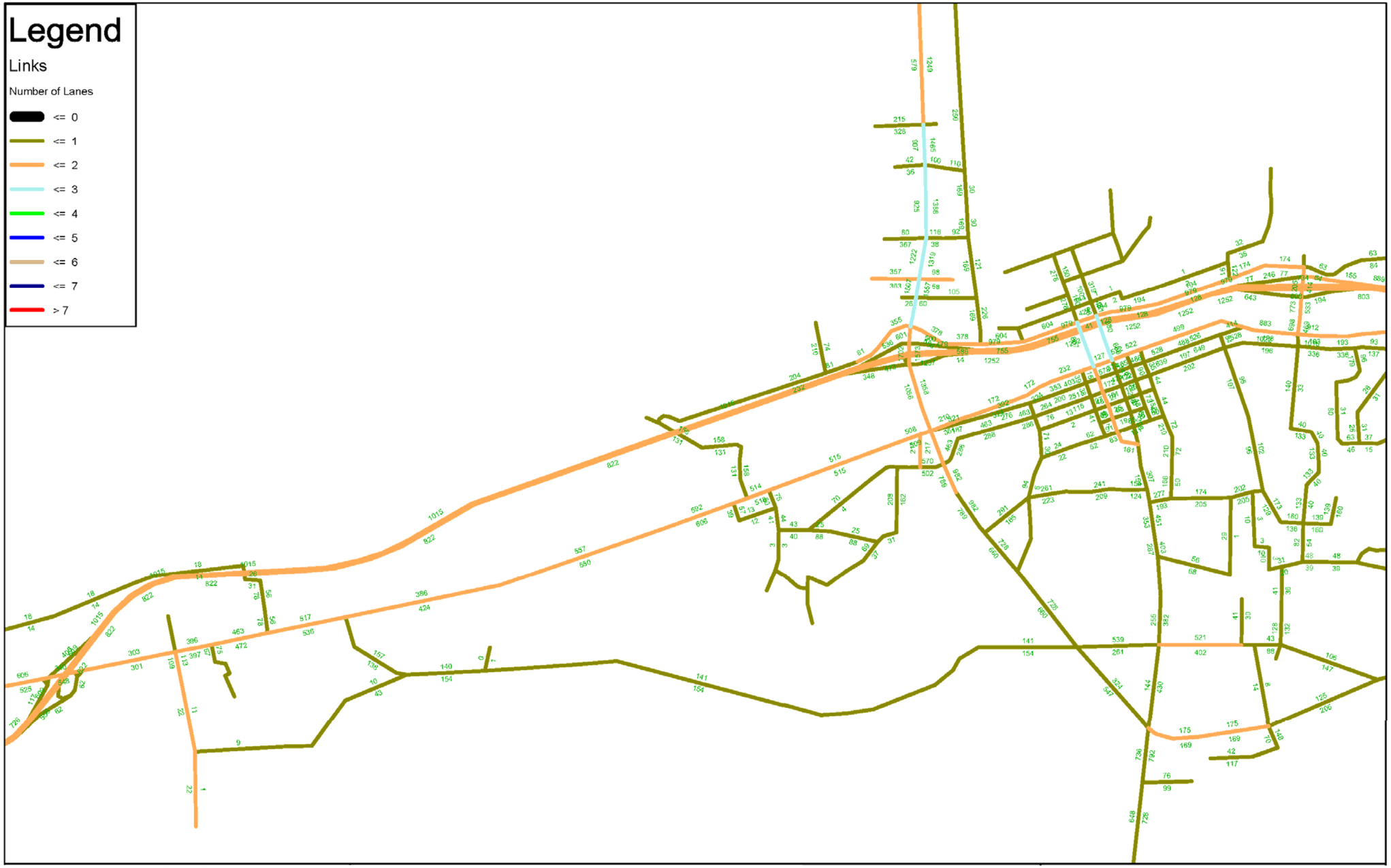


Figure 4-15: Base Year (2010) PM Peak Traffic Volumes

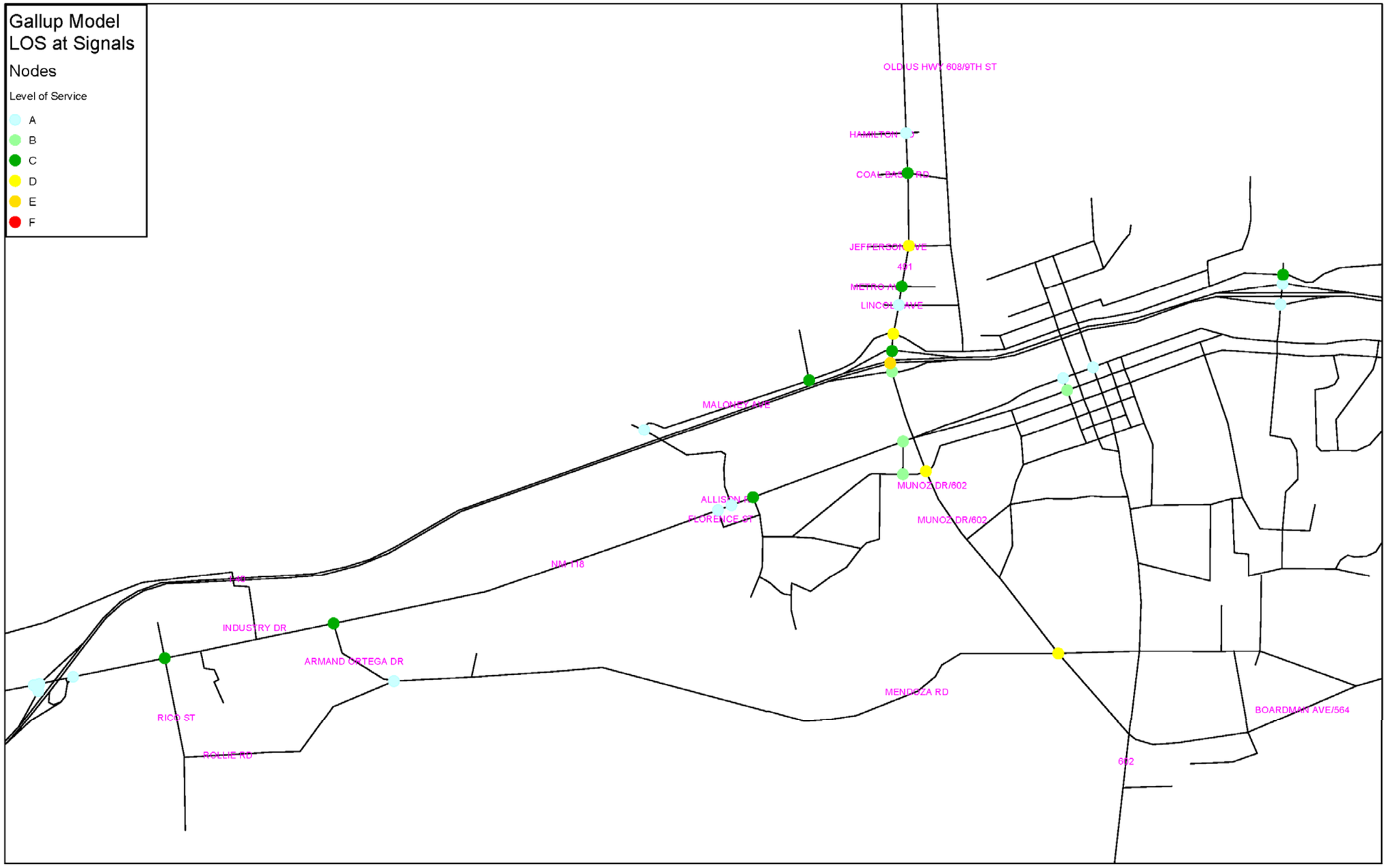


Figure 4-16: Base Year (2010) Intersection Level of Service (LOS)

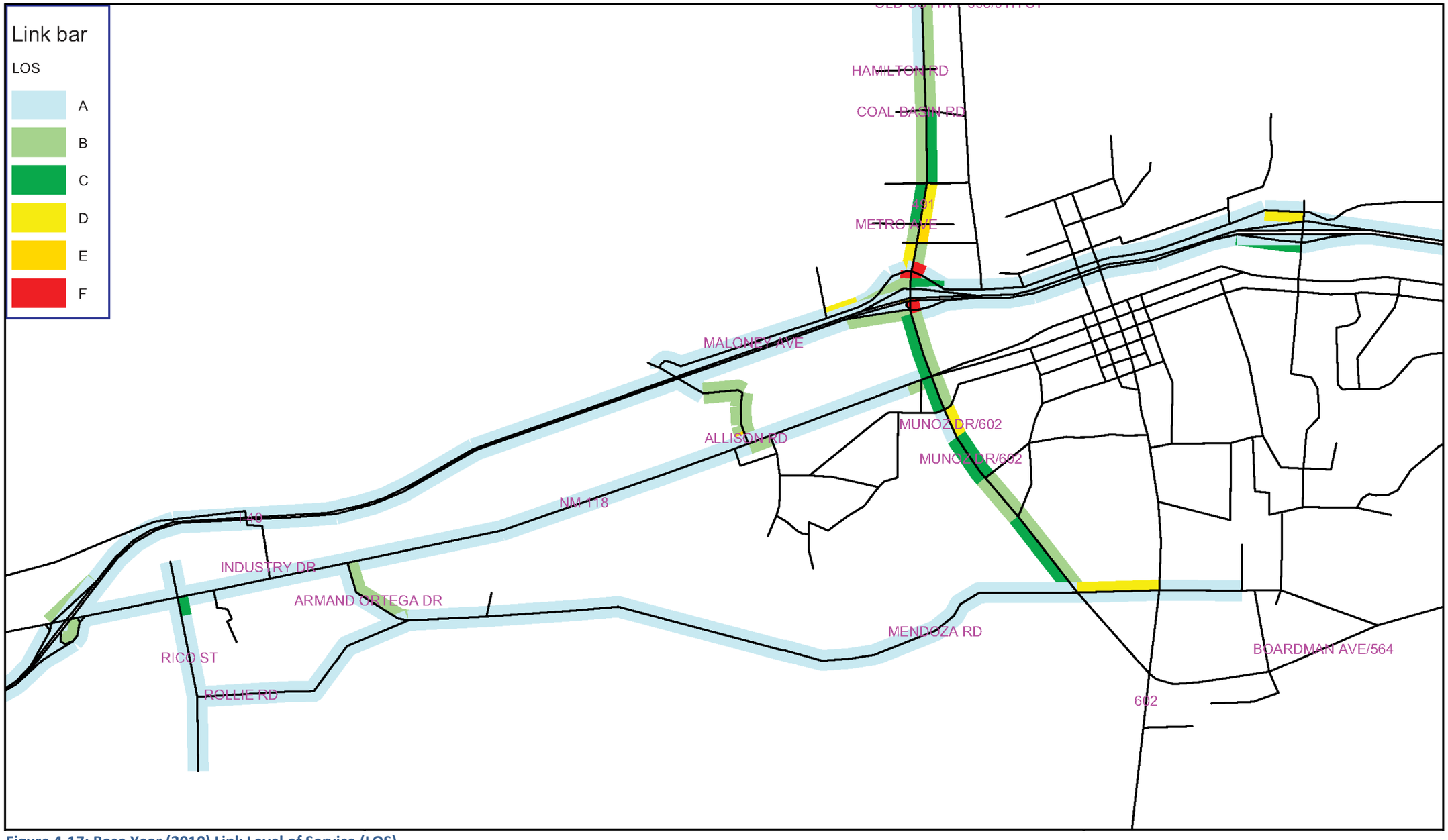


Figure 4-17: Base Year (2010) Link Level of Service (LOS)

4.10.10 Forecast Year (2030) Traffic Operations

A forecast (2030) travel demand model was developed utilizing the projected land use demographic data described in Section 4.9.2. The base roadway network was utilized and with the addition of future network improvements as presented in the Gallup Growth Management Plan Update. Projected traffic volumes resulting from the forecast land use data are presented in Table 4-15. Results of the capacity analysis are summarized in Table 4-16 and presented in Figure 4-19.

TABLE 4-15: COMPOUND ANNUAL GROWTH RATE PROJECTION FOR GALLUP

Year	0.5% Growth	1.0% Growth	1.5% Growth
2010	21,242	22,323	23,453
2020	22,329	24,659	27,219
2030	23,471	27,239	31,588

Prepared by Wilson & Company, February, 2010.
Source: Chapter IV, Land Use Element, City of Gallup Growth Management Plan Update, August, 2009, P. III-1.

All network elements are projected to operate at acceptable levels of service (LOS) with the exception of the NM 118/Florence Street intersection (#396), which is expected to fall to LOS F due to a heavy volume of westbound left turns and the two-way stop control condition for the north and south approaches. It should also be noted that Allison Road was realigned in the model with Florence Street south of NM 118 as presented in the Gallup Growth Management Plan Update. An additional analysis was conducted to highlight intersection movements that are at LOS or F. As shown in Table 4-16 and Figure 4-18, the following intersections are expected to have failing or at capacity movements for the base year 2030:

- NM 118 / industry Dr (#298)
- Jefferson Ave / Munoz Dr (#385)
- NM 118 / Florence St (Allison Rd) (#396)
- NM 118 / I-40 Westbound Off Ramp (#417)

In addition, several roadway segments are expected to degrade to LOS E or F and are also shown on Figure 4-19.

TABLE 4-16: FORECAST (2030) LEVEL OF SERVICE (LOS) SUMMARY

Number	Name	Control Type	V/C	Overall Intersection		Worst Movements <LOS E	
				Avg Delay	Avg LOS	Movement	LOS
81	I-40 WB - Ford Dr	TWSC	0.00	7.7	A		
91	Metro Ave - Munoz Dr	Signalized	0.44	27.6	C		
95	I-40 EB - Ford Dr	TWSC	0.00	7.3	A		
102	Lincoln Ave - Munoz Dr	TWSC	0.00	0.9	A		
123	Maloney Ave - Munoz Dr	Signalized	0.60	35.5	D		
150	I-40 WB - Munoz Dr	Signalized	0.46	28.6	C		
188	I-40 Eb - Munoz Dr	Signalized	0.34	13.6	B		
220	Maloney Ave - Allison Rd	TWSC	0.00	0.5	A		
241	NM 118 - Arnold St	Signalized	0.31	12.5	B		
249	Aztec Ave - Munoz Dr	Signalized	0.50	38.1	D		
263	NM 118 - Allison Rd	TWSC	0.00	0.00	A		
289	Mendoza Rd - Munoz Dr	Signalized	0.55	37.8	D		
298	NM 118 - Industry Dr	TWSC	0.00	4.0	A	SB Approach	E
301	NM 118 EBR - I-40 WB Onramp	TWSC	0.00	0.00	A		
304	NM 118 – I-40 EB	TWYC	0.00	1.2	A		
307	NM 118 WB_- I-40 Onramp Junction	TWSC	0.00	5.1	A		
339	9th St - Munoz Dr	Signalized	0.42	61.3	E		
385	Jefferson Ave - Munoz Dr	Signalized	0.52	52.1	D	EB Left WB Right	E F
396	NM 118 - Florence St	TWSC	0.00	205.9	F	NB Approach SB Approach	F F
412	NM 118 - Armand Ortega Dr	Signalized	0.29	21.7	C		
417	NM 118 – I-40 WB	TWSC	0.00	8.7	A	SB Shared Thru/Left	E
424	Aztec-Arnold	TWSC	0.00	5.3	A		
426	Coal Basin Rd - Munoz Dr	Signalized	0.40	45.4	D		
428	Hamilton Rd - Munoz Dr	TWSC	0.00	2.7	A		
430	NM 118 - Rico St	Signalized	0.32	21.8	C		
432	Mendoza Blvd - Rico St	TWSC	0.00	2.7	A		
433	Mendoza - Armand Ortega	TWSC	0.00	3.9	A		
435	NM 118 - Marguerite St	Signalized	0.45	25.0	C		
438	Maloney Ave - Kachina St	Signalized	0.53	29.9	C		
450	J. M. Montoya Blvd - Ford Dr	Signalized	0.16	32.4	C		

4.10.10.1 Weekend Traffic

Weekend traffic volumes in Gallup swell over the weekends following the 1st and 15th days of the month, which corresponds to receipt of government and other paychecks. Residents of surrounding rural areas including adjacent Indian reservations travel to Gallup for access to goods and services, typically concentrated in the vicinity of the commercial land uses adjacent to the US 491/Maloney intersection.

The traffic volume counts described in Section 4.10.6 above included some weekend count volumes. However, due to scheduling constraints, these were collected following the second weekend of the month and thus did not capture a weekend traffic spike; rather, the weekend traffic volumes represent a decrease of 5% (I-40) to 43% (Munoz south) below the weekday averages.

The travel demand forecast model utilized for this analysis encompasses typical weekday conditions. A weekend model does not exist and would require significant effort to develop. Furthermore, designing traffic capacity for spikes that occur over two weekends a month could result in over-design where excess capacity exists for a majority of the time. A balanced approach to addressing the prevailing traffic characteristics would be desirable. Toward this end, the turning movement volumes collected for this analysis at two key locations were inflated by 20%, representing an increase of more than 40% of the weekend count. The capacity analyses were computed at the intersections of Maloney and Jefferson at Munoz (US 491), resulting in levels of service (LOS) D and C, respectively. This capacity analysis represents isolated intersection operations; a more detailed progression analysis and/or simulation would be useful to evaluate cumulative delay and excessive vehicle queues under a comprehensive analytical investigation.

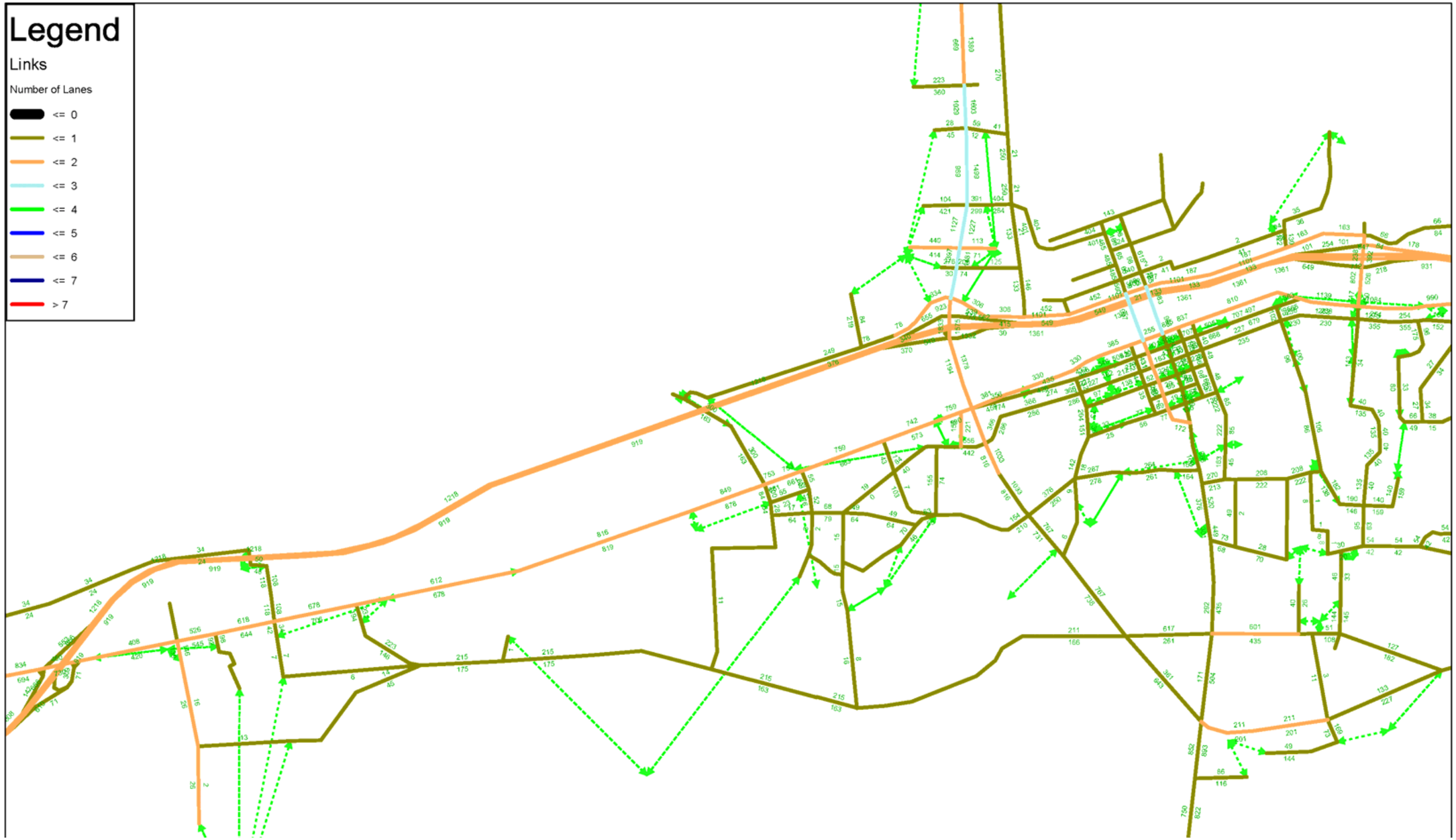


Figure 4-18: Forecast Year (2030) PM Peak Traffic Volumes (with Future Network from Master Plan)

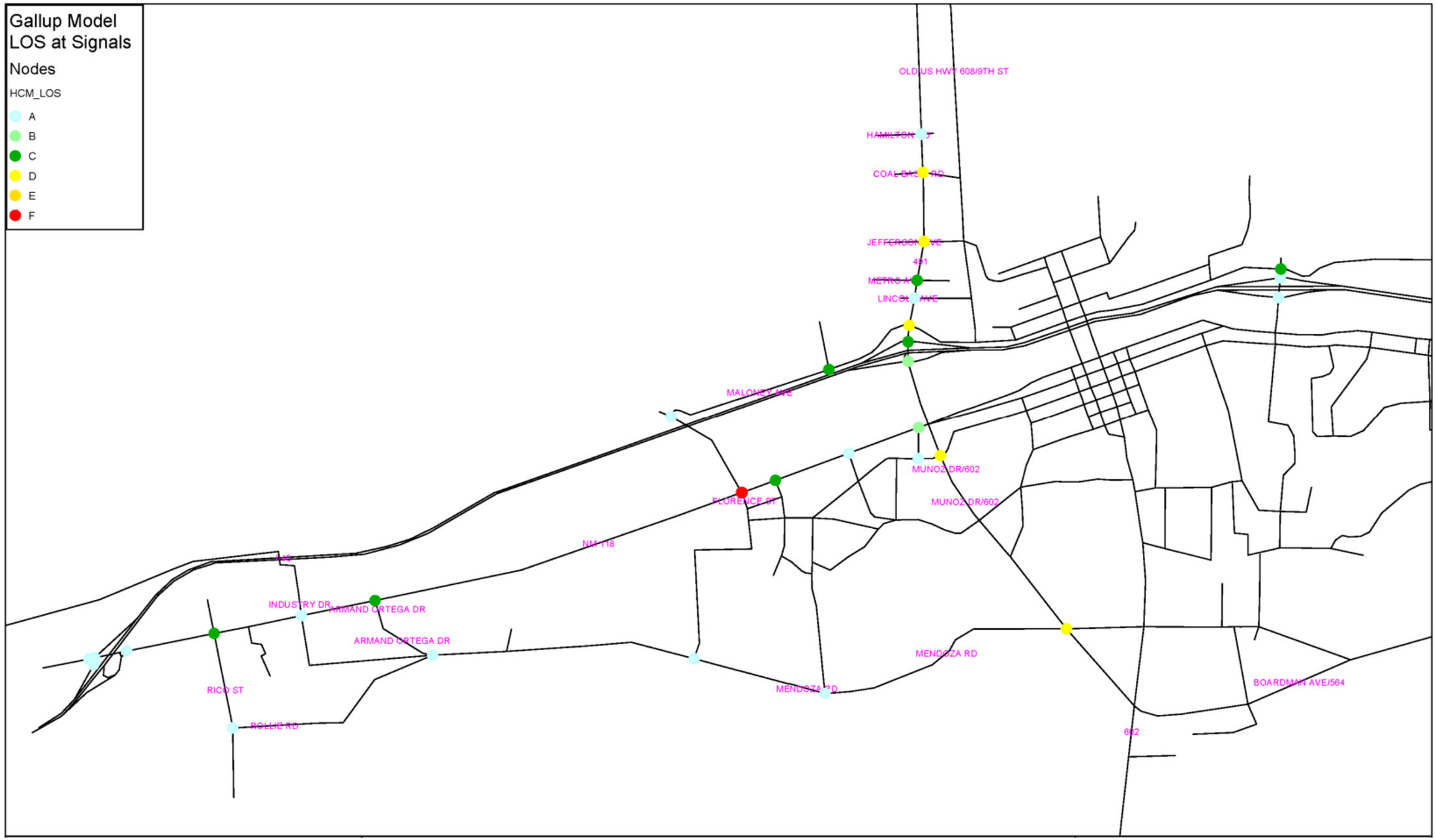


Figure 4-19: Forecast Year (2030) PM Intersection Level of Service (with Future Network from Master Plan)

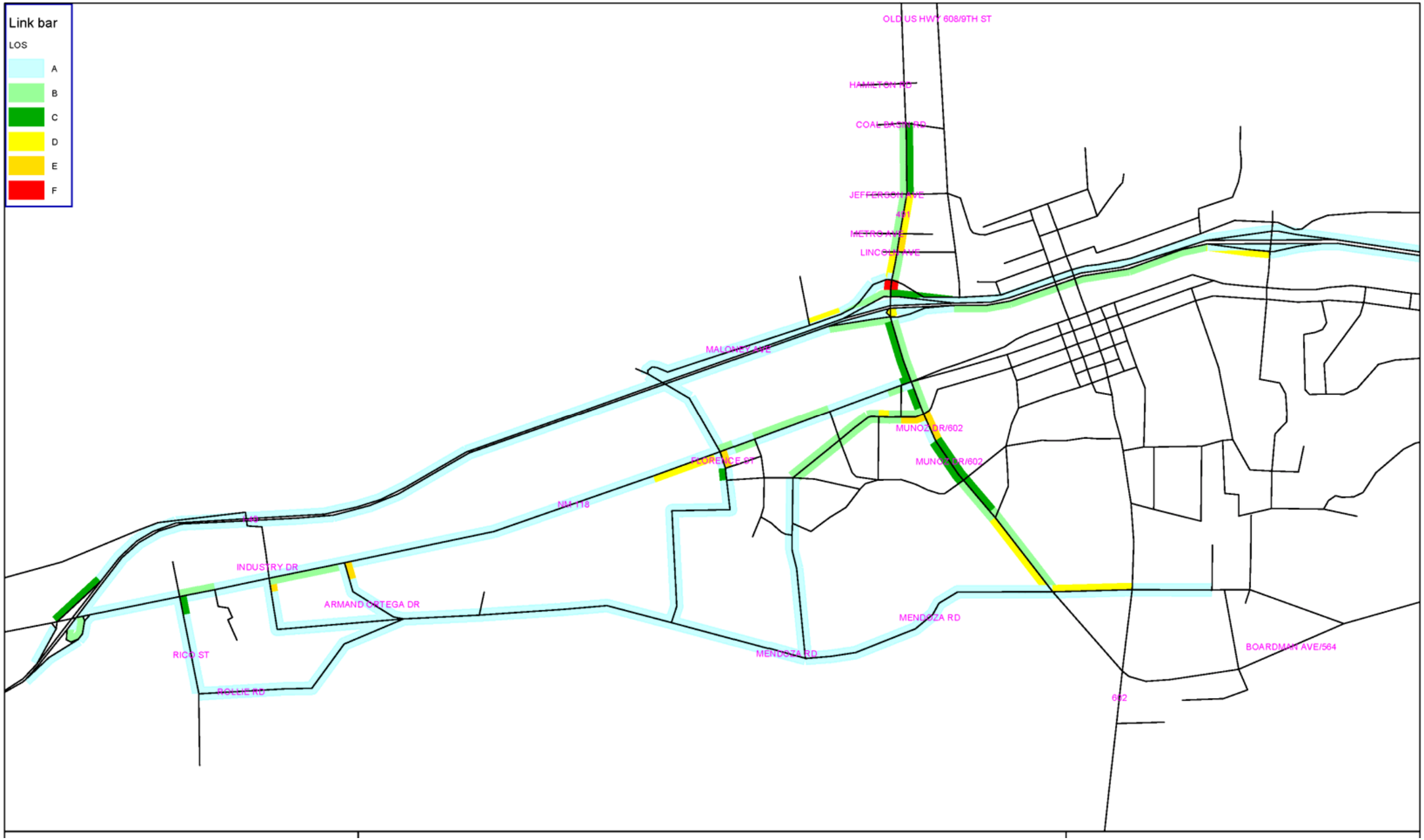


Figure 4-20: Forecast Year (2030) Link Volume Level of Service (with Future Network from Master Plan)

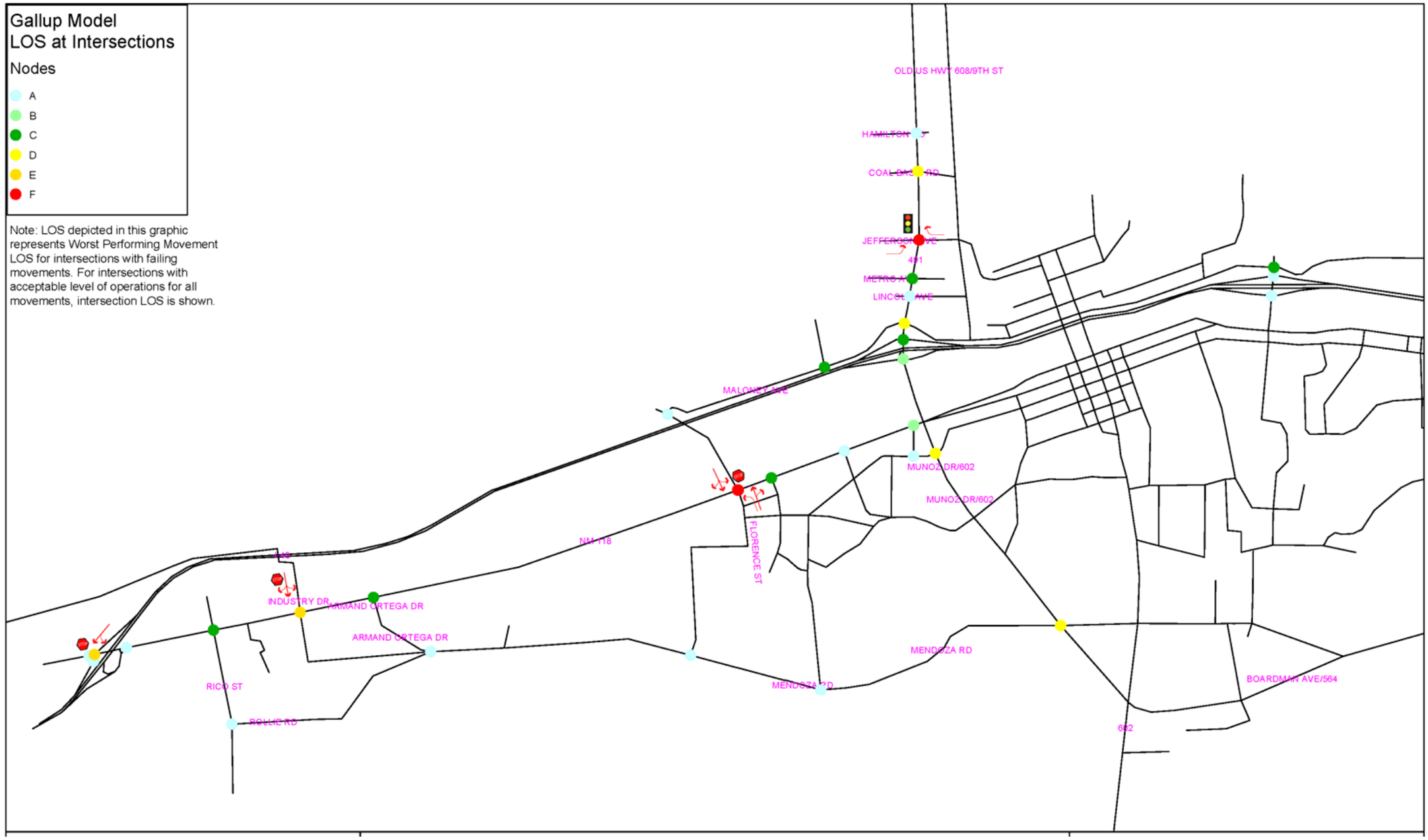


Figure 4-21: Forecast Year (2030) Worst Movement / Intersection LOS

4.11 Existing Utilities

To start the project's overall utility process and determine what utilities currently exist in and around the entire project area, a Subsurface Utility Engineering (S.U.E.) Level 'D' effort (Records Research) was first conducted. New Mexico One-Call was initially contacted and requested to send out a wide area design conference notification to all its member utility companies that might have any of their utility infrastructure within the intended project design limits. The affected utility owners were directed to contact the design team's utility coordinators and to provide copies of 'as-built' plans, facility maps, and relevant utility plant information that they could to the team so as to give assistance in the project design development.

Positive responses were received from:

- New Mexico Gas Company for natural gas pipe line facilities.
- Qwest Communications for aerial and buried land line communication facilities.
- The City of Gallup for water line facilities, sanitary sewer line facilities, and electrical power line facilities including street lighting and traffic signalization systems.
- A response was received from Comcast Cable TV Company stating that they had none of their communication facilities within the currently prescribed project area.
- The BNSF Railroad Company was contacted separately, and they were asked to provide any information that they could about any of their utility facilities or about any of their joint use utility tenants that might be residing within their railroad rights-of-way. They have so far not responded. An in-field site inspection was made along their right-of-way, and nothing was observed other than their normal operational power and communication equipment.
- Gas main distribution line runs were principally east/west along US Route 66 on one side of the roadway or the other. Service line feeds to businesses and nearby residential developments teed off of these lines either to the north or south. There is a gas line crossing of the BNSF railroad tracks at existing Allison Road. It then turns east along Warehouse Lane serving the City and County Yards, the NMDOT Warehouse, and the Detention Center. There are gas lines in the commercial areas to the north of I-40 on both sides of US 491 (Munoz Drive). A gas line runs south along Munoz Drive crossing the railroad tracks and connecting into the east/west line along US Route 66.
- The Qwest aerial and buried communication lines are located and run mostly along and within the many public street and road rights-of-way of the City of Gallup, McKinley County, and the NMDOT. There are just a couple of exceptions where lines run along either just outside the railroad right-of-way or in between the railroad and US 66 rights-of-way or over open land cutting north/south straight across an Allison Road loop towards the east.

City of Gallup water and sanitary sewer lines are clustered in residential, commercial, and industrial areas throughout the entire project limits. There are some open cross-country water and sewer interceptor lines with various parallel runs along and crossing locations of the Rio Puerco and the BNSF railroad. The same is true for the electrical power distribution system and the street lighting network. Traffic signals are mainly located at major intersections along US Route 66 and Munoz Drive (US 491).

A more detailed description of actual utility locations can be given once all alternatives are more completely identified and defined and after site surveying (SUE Level 'C') and designating (SUE Level 'B') are accomplished.

4.12 Environmental

4.12.1 Geology and Landscape

The project corridor is located within the Navajo Section of the Colorado Plateau physiographic province of northwestern New Mexico. The area is west of the Continental Divide and is part of the Rio Puerco River Valley, an area that has been eroded by ephemeral streams in the San Juan Basin. All of the proposed project alternatives cross the Rio Puerco within the City of Gallup limits. Named and distinct landforms in the area include the Gallup Hogback rising immediately east of the project area, the Chuska Mountains at a distance to the north, and the Zuni Mountains to the southeast. Elevations within the study area range from 6580 ft above mean sea level (amsl) to 6609 ft amsl.

4.12.2 Soils

Sediments in the project corridor are of alluvial deposition, and originate from Upper Cretaceous age sandstones and mudstones of the Crevasse Canyon Formation and Gallup Sandstone. Soil types within the corridor include unconsolidated deposits of silt and clay with minor amounts of sand and gravel. The soil type located along Interstate 40 consists of Breadsprings and Nahodish soils which have 0 to 2 percent slopes. These soils are very deep, well drained fine loam that is moderately slowly permeable with low runoff. The Nahodish association consists of fine textured soils located on stream terraces.

The next most prominent soil type located within the project corridor consists of Eagleye-Athchee-Rock outcrop complex with 2 to 35 percent slopes. These soils are formed in slope alluvium and are found on footslopes and backslopes on escarpments, hills, ridges, and structural benches. They Eagleye series has very high runoff, are well drained, and consist of slowly permeable saline clay loam soils. The majority of these soils are located north of I-40 and scattered throughout the City of Gallup within the corridor limits.

The prominent soil type located along the Rio Puerco channel that crosses each of the three alternatives is the Riverwash-Escawetter association with 0 to 1 percent slopes. These soils are very deep, moderately well drained soils that are formed in stratified alluvium and stream alluvium derived from sandstone and shale. This soil series are found on floodplains of intermittent rivers and streams and have negligible to very low runoff. However, the Riverwash-Escawetter soils are subject to occasional, very brief periods of flooding between July and September.

4.12.3 Water

4.12.3.1 Floodplains

Protection of floodplains is required by Executive Order 11988, Floodplain Management, which requires that potential impacts to floodplains be assessed to reduce the risk of flood loss, minimize impacts from flooding on human safety, and protect the natural resource value of healthy floodplains.

The project corridor has been mapped by the Federal Emergency Management Agency (FEMA) on Flood Insurance Rate Map, Community-Panel Number 35031C1520E. The project corridor crosses drainages, such as the Rio Puerco, that is classified as a high risk for flooding. Interstate 40 is located within Zone X which is an area determined to be outside of the 0.2% annual chance floodplain. The areas within the corridor located to the north of the BNSF railway line are determined to be in Zone AE which is an area of 1% annual chance floodplain with average depths of less than 1 foot or with drainage areas less than one square mile. This area is also determined to be protected by levees from the 1% annual chance flood. The areas within the corridor located to the south of the BNSF railway line are determined to be floodway areas within Zone AE. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without a substantial increase in flood heights.

4.12.3.2 Surface Water

Section 404 of the Clean Water Act authorizes the U.S. Army Corps of Engineers (USACE) to prohibit or regulate, through a permitting process, discharge of dredged or fill material in waters of the U.S.

The Rio Puerco is the most prominent waterway within the project corridor; all three proposed alternatives cross the Rio Puerco. This segment of the river located within Gallup is considered an intermittent stream that flows only during precipitation events or during other discharge events.

4.12.4 Vegetation

The project corridor lies within the Great Basin Desert Scrub vegetation community. Dominant species characteristic of this community include big sagebrush (Artemisia tridentate), fourwing saltbush (Atriplex canescens), broom snakeweed (Guttierrezia sarothrae), and in this suburban project area Siberian elm (Ulmus pumila), a non-native species.

4.12.5 Wildlife

Fauna associated with this vegetation community (in areas less developed than the project area proper) may include mule deer (Odocoileus hemionus), mountain lion (Felis concolor), coyote (Canis latrans), bobcat (Lynx rufus), blacktail jackrabbit (Lepus californicus), Colorado chipmunk (Tamias quadrivittatus), rock squirrel (Spermophilus variegatus), wood rat (Neotoma lepida), white-footed mouse (Peromyscus leucopus), cottontail rabbit (Sylvilagus floridanus), and gray fox (Urocyon cinereoargenteus).

4.12.6 Threatened and Endangered Species

Lists of protected species occurring in McKinley County were obtained from the United States Fish and Wildlife Service (USFWS 2010), the New Mexico Rare Plant Technical Council (NMRPTC 2010), and the Biota Information System of the New Mexico (BISON-M 2010) to identify those species that may be present in or adjacent to the project area. A preliminary investigation of listed species, their preferred habitat, and 2005 aerial photography indicates that the project area does not provide suitable habitat for any of these species. The on-going commercial and infrastructure development has already fragmented any existing natural areas. In addition, the majority of rare plants require limestone ridges in piñon-juniper habitat, which is not present in the project area.

4.13 Cultural Resources

4.13.1 Known Archaeological Sites and Historical Properties

Parametrix personnel conducted a pre-field records search using the NMCRIS database provided by the Archaeological Records Management Section (ARMS) of the New Mexico Historic Preservation Division (HPD). The purpose of the search was to identify any previous surveys and previously recorded cultural properties within a 500 m (1,640 ft) radius of the project area. Current listings of the National Register of Historic Places (NRHP) and the New Mexico State Register of Cultural Properties (NMSRCP) were also consulted to identify listed properties that may be affected by the proposed undertaking. All three potential corridors were subject to this record search, which resulted in the identification of no previously recorded archaeological sites in the immediate vicinity. In fact, the nearest previously recorded site is located approximately 300 m (984 feet) west of Corridor 1. Table 4-17 is a summary of the previously recorded archaeological sites within 500 m (1,640 ft) of the proposed alignments and Table 4-18 shows the previously conducted surveys within 500 m (1,640 ft).

Table 4-17: Previously Recorded Sites within 500m of the Project Area

Site Occupation Type/Alignment	Cultural Temporal Affiliation
Prehistoric/Structural: Corridor 1&3	Anasazi Pueblo III AD 1100-AD 1300
Historic/Structural: Corridor 1	Unspecified Navajo AD 1500-1993
Unknown/Structural: Corridor 1	Unknown 9500 BC-1993
Unknown/Structural: Corridor 1	Unknown 9500 BC-1993
Historic/Structural: Corridor 1	Unspecified Navajo AD 1500-1993
Historic/Structural: Corridor 1	Anglo Recent Historic AD 1945-1993

Table 4-18: Previously Conducted Surveys within 500 m of the Project Area

Alignment	Performing Agency	Acreage	No. of Sites	Completion Date
Corridor 2	Pueblo of Zuni, Zuni Archaeology Program	37	1	1986
Corridor 2	New Mexico State Highway and Transportation Department	20.3	0	1992
Corridor 2	Quivira research Center/Associates	113.62	2	1994
Corridor 2	New Mexico State Highway and Transportation Department	71.45	0	1995
Corridors 1,2, and 3	New Mexico State Highway and Transportation Department	104.7	2	1997
Corridor 2	Quivira research Center/Associates	178	2	1997
Corridor 1	Louis Berger Group	88.6	0	1998
Corridor 2	Cibola Research Consultants	12	0	2000
Corridor 2	Zuni Cultural Resource Enterprise, Pueblo of Zuni	71.02	0	2005

4.13.2 Undiscovered Sites

In addition to the ARMS database search, Parametrix personnel also examined historic aerial photographs in an effort to identify any historic buildings or structures that may be present within any of the three Corridors. None were identified. However, it should be noted that a segment of Route 66 and a historic segment of the BNSF Railroad is present within all three Corridors, and will need to be documented as part of the cultural resource investigation.

The alignment of Route 66 that is within the general project area has not been identified as a contributing element in the National Register of Historic Places Nomination Form (Kammer 1993). However, the evaluation of this resource and subsequent recommendations regarding potential impacts to it from the proposed undertaking will need to be conducted during the cultural resource investigation that will be implemented as part of Phase C.

The portion(s) of the BNSF Railway that fall within the area of potential effects will need to be evaluated for its significance and NRHP-eligibility status during the intensive survey and recording efforts, as well as archival research, conducted as part of Phase C.

4.14 Socioeconomic and Environmental Justice

4.14.1 Air Quality

The Clean Air Act (CAA) of 1970 established National Ambient Air Quality Standards to protect public health from impacts associated with six criteria pollutants. The City of Gallup is in attainment for the six criteria pollutants managed under the CAA; therefore, no significant impacts to air quality are expected as a result of any of the proposed build alternatives.

4.14.2 Noise

Noise impacts occur when future traffic noise levels resulting from a project approach or exceed the noise abatement criteria in Table 4-19 (67 decibels for residential land uses), or substantially exceed existing noise levels. Under federal (23 CFR 772) and state (CP 86, 2002 and AD 236, 2002) policy, a noise study must analyze potential project-related noise impacts at existing and proposed land-use activities, and evaluate mitigation if impacts are expected to occur.

Table 4-19: Noise Abatement Criteria

Category	dBA Leq(h)	Description of Activity
A	57 (Exterior)	Lands on which serene and quiet are of extraordinary significance and serve an important public need and where preservation of those qualities is essential if the area is to continue to serve its intended purposes.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not covered in Category A or B.
D	--	Undeveloped lands.
E	52 (Interior)	Residences, motels, public meeting rooms, schools, churches, libraries, hospitals, or auditoriums.

Sensitive lands, as defined by Category B in Table 4-15, include residences, churches, and schools. Typically, commercial and institutional land uses are less sensitive to noise. The majority of the land uses along the project corridor include commercial centers and industrial areas. There are some scattered residences located adjacent to the Corridor including the USA RV Park located at 2925 W Historic Hwy 66, the Western Skies Mobile Home Park located at 200 Western Skies Rd, residences north of I-40 near the Munoz interchange and south of Old route 66, as well as residences off of the Armand Ortega interchange.

Schools located within the corridor include the Gallup High School located at 1055 Rico St, Gallup Central Alternative School located at 325 Marguerite St, and Stagecoach Elementary School located at 725 Freedom Dr.

Proposed build alternatives could result in a greater impact from traffic noise and may require additional analysis of noise mitigation measures. The potential effectiveness of noise mitigation with barriers will be determined in subsequent phases of the corridor study.

4.14.3 Hazardous Materials

Contamination of soils or waterways is a concern related to right-of-way acquisition and construction activity due to liability with regard to cleanup and human health issues. There are approximately 9 leaking underground storage tanks (LUST) located in the project corridor. As shown in Table 4-20, on page 4-50, the majority of these sites have been issued a status of no further action and two sites are still under investigation including the Thriftway/Malco 185 at 510 N. US 491 and Northside Chevron at 1118 Wilson Avenue.

In addition, a review of Environmental Protection Agency Region 6 data determined that nine Resource Conservation and Recovery Act Information System (RCRA) sites exist along the project corridor. Two Comprehensive Environmental Response, Compensation and Liability

Information System (CERCLIS) or Superfund sites are located in proximity to the project corridor including La Linda Texaco which is approximately 1 mile east of the corridor at 1100 E Hwy 66 and the U.S. Fort Wingate Army Depot located approximately 10 miles east of the corridor off of I-40. La Linda Texaco is not listed on the National Priorities List (NPL) and is listed by the EPA at a low priority for further assessment. The Fort Wingate Army Depot was a formerly utilized defense site for storing and demolishing ammunition from 1918-1993. The site is not listed on the NPL and has a designated Base Clean Up Team as part of the EPA Environmental Cleanup program.

The nine RCRA sites include conditionally exempt small generator businesses such as the B&F Used Cars located at 3050 W Hwy 66, Home Depot #3514 and Walmart #906 located at 1650 W. Maloney Ave., Midas Auto Service Experts located at 503 US 491, Pep Boys stores at #855 and #770 located at 702 and 906 US 491, and Rico Motor Co. Paint and Body Shop and Gurley Motor Co. east of US 491, south of I-40. The large quantity generator of hazardous substances is BNSF, located at 811 Roundhouse Rd. All of the sites have been in compliance with the RCRA.

TABLE 4-20: PSTB LUST SITES

Name	Address	Corridor Alternative	Status	Status date
Bill's Radiator Shop	3020 E Hwy 66	Corridor #2	Cleanup, Responsible Party	10/22/01
A1 Tire Co	300 W Maloney	East of Corridor #3	Investigation, State Lead CAF	1/13/06
Eagle Exxon	1715 W 66 Ave	East of Corridor #3	Investigation, Responsible Party	4/2/93
Gallup Shell	1898 US 66	West of Corridor #3	Investigation, Responsible Party	12/9/03
Gallup Whse 1	1910 Warehouse Ln	East of Corridor #3	Cleanup, Responsible Party	8/28/90
Pit Stop Texaco	1615 Hwy 66	East of Corridor #3	Cleanup, State Lead CAF	9/2/98
West Conoco	1921 W 66 Ave	East of Corridor #3	Investigation, Responsible Party	12/1/91

4.14.4 Visual

The majority of the project corridor has been disturbed or obscured by residential development during the last 35 years. Most of the urban study area has also been disturbed by utility and transportation development and construction including the City of Gallup maintenance yard, Interstate 40 and associated interchanges, and the Gallup Municipal Airport. The visual context of the corridor study is predominately an urban and disturbed environment with surrounding vistas of the distinct landforms in the area including the Gallup Hogback, the Chuska Mountains, and the Zuni Mountains.

4.14.5 Section 4f

Section 4(f) of the 1966 Department of Transportation Act included provisions that stipulated restricted use of publicly-owned parks, recreation areas, wildlife refuges, and historical sites for transportation projects.

Potential Section 4(f) resources just east of the project corridor include Hillcrest Cemetery east of Munoz Dr/602 and John B Romero Park east of the Hillcrest Cemetery. In addition to these properties, other 4(f) properties in the project corridor may include historic sites such as the BNSF railroad tracks as well as additional historic sites that may be identified during field surveys.

4.14.6 Recreation

There are many opportunities for recreation within Gallup and the surrounding natural landscape within this region. The Red Rock Park is located in Churchrock, just 3 miles from Gallup that includes campgrounds, Quaking Aspen Campground located in McKinley County 9 miles from Gallup, McGaffey Lake located 11 miles from Gallup, and the El Morro National Monument in Ramah, NM, 23 miles from Gallup. There are several mountain biking trails within the region as well.

4.14.7 Wilderness Areas

Due to the urban character of each proposed alternative, there are no wilderness areas located within the project corridor.

4.14.8 Farmland

US Congressional Public Law 95-87 (Federal Register January 31, 1978: Part 657) requires the Natural Resource Conservation Service (NRCS) to identify and locate prime and unique farmlands. These farmlands are protected in accordance with the Farmland Protection Act of 1981. Prime farmlands are defined as land that has the best combination of physical and chemical characteristics for producing food and agricultural crops. Unique farmlands are land under cultivation other than prime farmland that is used for production of high value food and fiber crops.

Based on soils information reviewed from NRCS, no soil units occurring within the project corridor are classified as prime, unique or other important farmland.

4.14.9 ROW

If right-of-way acquisition is required, property owners will be compensated per 49 CFR, Part 24, Uniform Relocation Assistance and Real Property Policies Act of 1970, as amended.

Given the urban nature of the corridor, any need for property acquisition includes the possibility of displacement of businesses or residents. Further analysis of the potential impacts as a result of right-of-way acquisition within the project corridor will be completed during the environmental process.

4.14.10 Cumulative Impacts

Cumulative impacts for the proposed project will be determined in subsequent phases of the proposed corridor study. There are other municipal and regional community and transportation plans that must be evaluated for any cumulative impacts from proposed alternatives to the transportation system recommended as a result of this study for the Allison Corridor and the I40 Interchange.

4.14.11 References

Carroll, Terry Lee. 1971. Gallup and Her Ceremonials. Unpublished Ph.D. dissertation, University of New Mexico, Albuquerque.

DeBuys, William. 1988. Enchantment and Exploitation: The Life and Hard Times of a New Mexico Mountain Range. University of New Mexico Press, Albuquerque.

Kammer, David. 1992.The Historic and Architectural Resources of Route 66 Through New Mexico (Santa Fe: New Mexico Historic Preservation Division).

Myrick, David F. 2003. New Mexico's Railroads: A Historical Survey. Revised edition. University of New Mexico Press, Albuquerque.

New Mexico County Population Projections. July 1, 2005 to July 1, 2035. Bureau of Business and Economic Research, University of New Mexico. Released August 2008.

U.S. Department of Commerce, U.S. Census Bureau. 2000 Census Data. Website: http://factfinder.census.gov/home/saff/main.html?_lang=en Accessed October 20, 2009.

U.S. Environmental Protection Agency Enviromapper Envirofacts. Website: http://www.epa.gov/emefdata Accessed March 2, 2010.

5. DESCRIPTION OF STUDY ALTERNATIVES

5.1 Study Alternatives

Corridor alternatives were investigated between the I-40 / Gallup West Interchange with NM 118 / Business 40 and the US 491 / NM 602 Interchange. The distance between the two existing interchanges is approximately 4.4 miles. The minimum interchange spacing used to determine potential locations is one mile. Three corridor locations were considered in the middle of the study area approximately half way between the two existing interchanges, on the west end of the study area approximately 1.6 miles from the Gallup West Interchange, and on the east end of the study area near the existing Allison St. underpass alignment.

5.2 Alternative 1 – Middle of Study Area

The first corridor location alternative is to construct a new corridor in the middle of the study area as shown in Figure 5-1. The corridor is located just to the east of the mesas that are located north of Interstate 40 in this area. Alternative 1 is located approximately 1.5 miles west of the US 491 / Munoz interchange and 2.9 miles east of the Gallup West Interchange.

On the north side of Interstate 40 there is a small neighborhood adjacent to the mesa. The new crossing could intersect the existing neighborhood street, Acoma Street. Acoma Street connects to Maloney Ave. which operates as an I-40 frontage road east of the area and serves a major commercial area of Gallup.

The Rio Puerco is located between Interstate 40 and the BNSF Railroad tracks. A river bridge crossing would be required. An overpass would be needed at the BNSF Railroad tracks.

The City of Gallup Airport is located south of NM 118. The cross street would need to tee into NM 118 in order to not impact the airport. A trumpet interchange is considered at this location but the loop ramps would severely impact the airport and 4 or 5 businesses along NM 118. A more feasible option is to construct an elevated tee intersection at NM 118 with a frontage road system to provide access to the airport and the existing businesses. The right of way is 180 feet wide in this area so there is room for the frontage roads if retaining walls are used. Figure 5-4 shows a typical section of how NM 118 could be constructed. Approximately 1600 feet of NM 118 would have to be reconstructed to build the elevated intersection.

5.2.1 Advantages and Disadvantages of Alternative 1

The advantages of Alternative 1 are:

- Connects to the Allison Neighborhood on the north side of Interstate 40 and an existing network of streets.
- If a new interchange is considered at this location, the ramps would not impact the Rio Puerco.

The disadvantages of Alternative 1 are:

- An increase in traffic in the Allison Neighborhood.
- High cost of constructing an elevated tee intersection.
- Elevated tee intersection would shadow the south frontage road in an area that gets frequent winter snows.

5.3 Alternative 2 – West End of Study Area

The second corridor location alternative is located approximately 1.6 miles east of the I-40 / Gallup West Interchange as shown in Figure 5-2. The cross street is situated to minimize impacts to the Rio Puerco in the southwest quadrant and the mesa in the northeast quadrant. The overpass is located approximately 1/4 of a mile east of the intersection of Armand Ortega St. and NM 118. The cross street would have an overpass of the railroad tracks and NM 118. South of NM 118 the cross street would intersect Armand Ortega St. with an at grade intersection so traffic would be able to access NM 118 or Mendoza Blvd.

The cross street encroaches on existing City of Gallup Airport property. The nearest point is approximately 450 feet from the end of the taxiway. Adjacent to NM 118 this alternative would require relocation of three buildings. At least one of the buildings is abandoned. Another of the buildings is a restaurant.

The Rio Puerco is located between Interstate 40 and NM 118 in this area. A river bridge crossing would be required. The river crosses under I-40 approximately 1.4 miles east of the West Gallup Interchange. If an interchange is considered at this location in the future, part of the Rio Puerco would have to be realigned in order to construct the eastbound exit ramp and the I-40 river bridges would have to be widened to accommodate the eastbound exit ramp and the westbound entrance ramp. Retaining walls would be required to minimize impacts to the Rio Puerco. The westbound exit ramp would require excavation of two fingers of the mesa north of I-40. This rock excavation would add to the project costs.

On the north side of Interstate 40 the cross street would turn to the west and end at the Gallup sewage treatment plant. Part of the sewage treatment plant would have to be relocated in order to continue the road to the west. A crossing of the Rio Puerco would be required to provide access to the sewage treatment plant. The cross street has been located to avoid one of several mesas north of I-40. Between 80 and 90 acres of potentially usable land between the mesas could be served by the cross street on the north side of I-40.

5.3.1 Advantages and disadvantages of Alternative 2

The advantages of alternative 2 are:

- Simple access is provided to NM 118 and Mendoza Blvd. using Armand Ortega St.
- Between 80 and 90 acres of land could be opened up for development north of I-40.

The disadvantages of Alternative 2 are:

- Requires relocation of three buildings.
- Encroaches on City of Gallup Airport property.
- The cross street is skewed across I-40 which requires a longer overpass bridge.
- Requires realignment of the Rio Puerco to construct eastbound exit ramp.
- I-40 river bridges would have to be widened to accommodate the ramps.
- Requires retaining walls to minimize impacts to the river.
- Requires excavation of mesa to construct westbound exit ramp.
- Cross street would dead-end at sewage treatment plant.
- Access to the sewage treatment would require an additional river crossing.

5.4 Alternative 3 – East End of Study Area

The third corridor location alternative is to construct a new corridor on the east end of the study area. The corridor is located approximately one mile west of the US 491 / Munoz Blvd Interchange as shown in Figure 5-3. This alternative is in close proximity to existing Allison Road and would replace the existing Allison Road alignment from NM 118 to the I-40 underpass.

North of I-40 the cross street turns to the east to tie into Jefferson Ave. The Allison Road alignment has many horizontal curves. Acoma Street and Maloney Ave can be tied into Allison Road. This provides additional circulation for the commercial area.

South of I-40 the existing Allison Road Bridge over the Rio Puerco is structurally and functionally obsolete. The existing bridge would be replaced by the new alignment.

Warehouse Lane could be tied into the cross street between the Rio Puerco and the BNSF. An overpass would be needed at the BNSF Railroad tracks to eliminate the existing at-grade crossing. Since the railroad is within 200 feet of NM 118 an overpass would also be needed over NM 118.

There is an existing commercial area south of NM 118 that the cross street could tie into in the area of Florence Street. There are several locations that the cross street could tie to that will be investigated in Phase B.

5.4.1 Advantages and disadvantages of Alternative 3

The advantages of Alternative 3 are:

- If an interchange is considered at this location, ramps would not impact the Rio Puerco.
- Eliminates an existing at grade railroad crossing.
- Replaces existing bridge over the Rio Puerco that is in poor condition.
- Replaces an existing substandard I-40 underpass.
- Connects to Maloney Ave and provides reliever route for commercial area on north side of Interstate 40. Can be connected to Munoz Blvd / US 491 for additional circulation.
- There are multiple locations south of NM 118 where the cross street can tie into the existing transportation network.
- Improvements to the Allison corridor would provide an additional connection to trail systems proposed north and south of the Interstate.

The disadvantages of Alternative 3 are:

- Connection to area south of NM 118 could result in steep approach grades to connecting roadway.
- Right-of-way take(s) will be required south of NM 118 in order to transition from an overpass at NM 118 to an at-grade intersection.
- Possible relocation of businesses adjacent to connecting roadway.

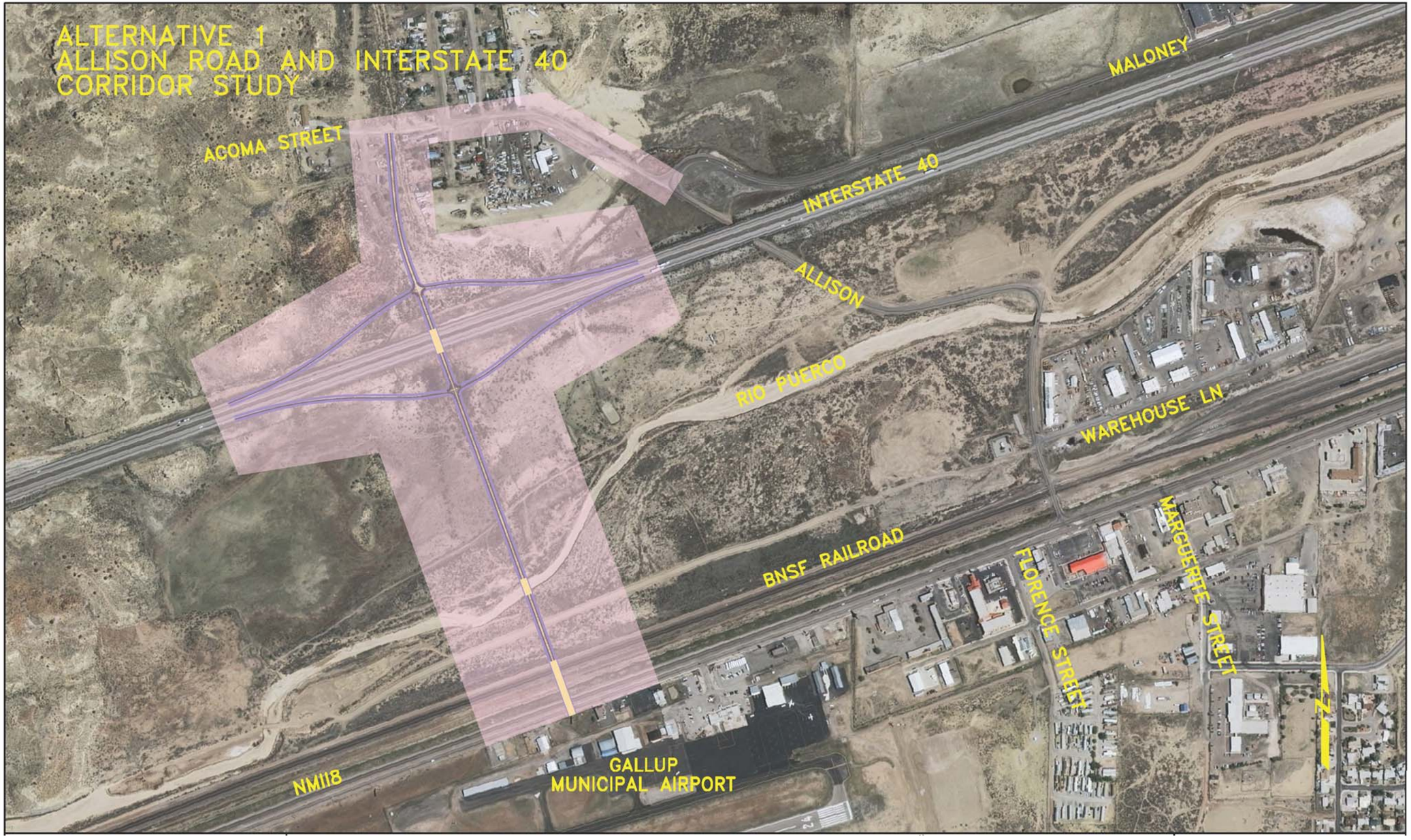


Figure 5-1: Alternative 1 Allison Road and I 40

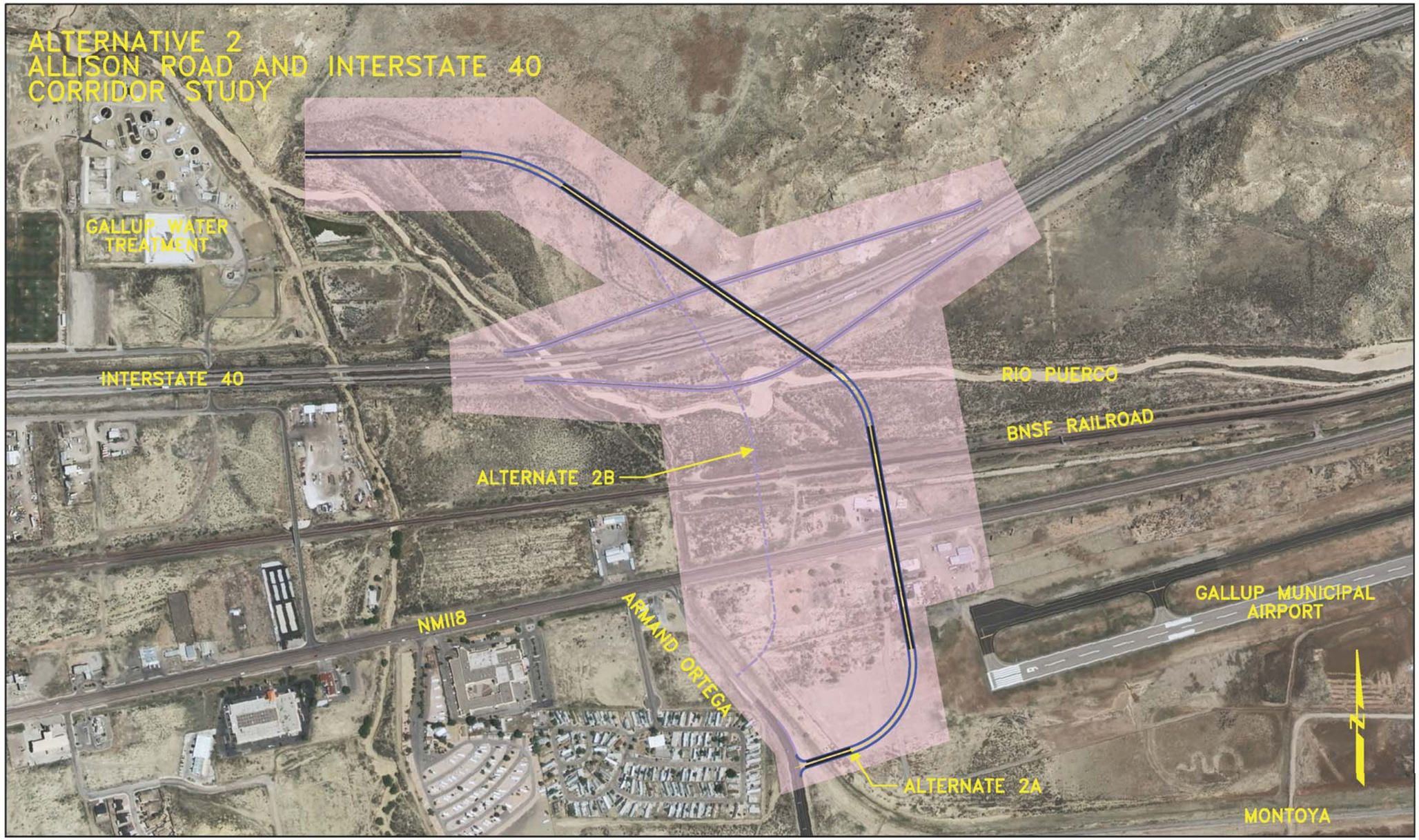


Figure 5-2: Alternative 2 Allison Road and I-40

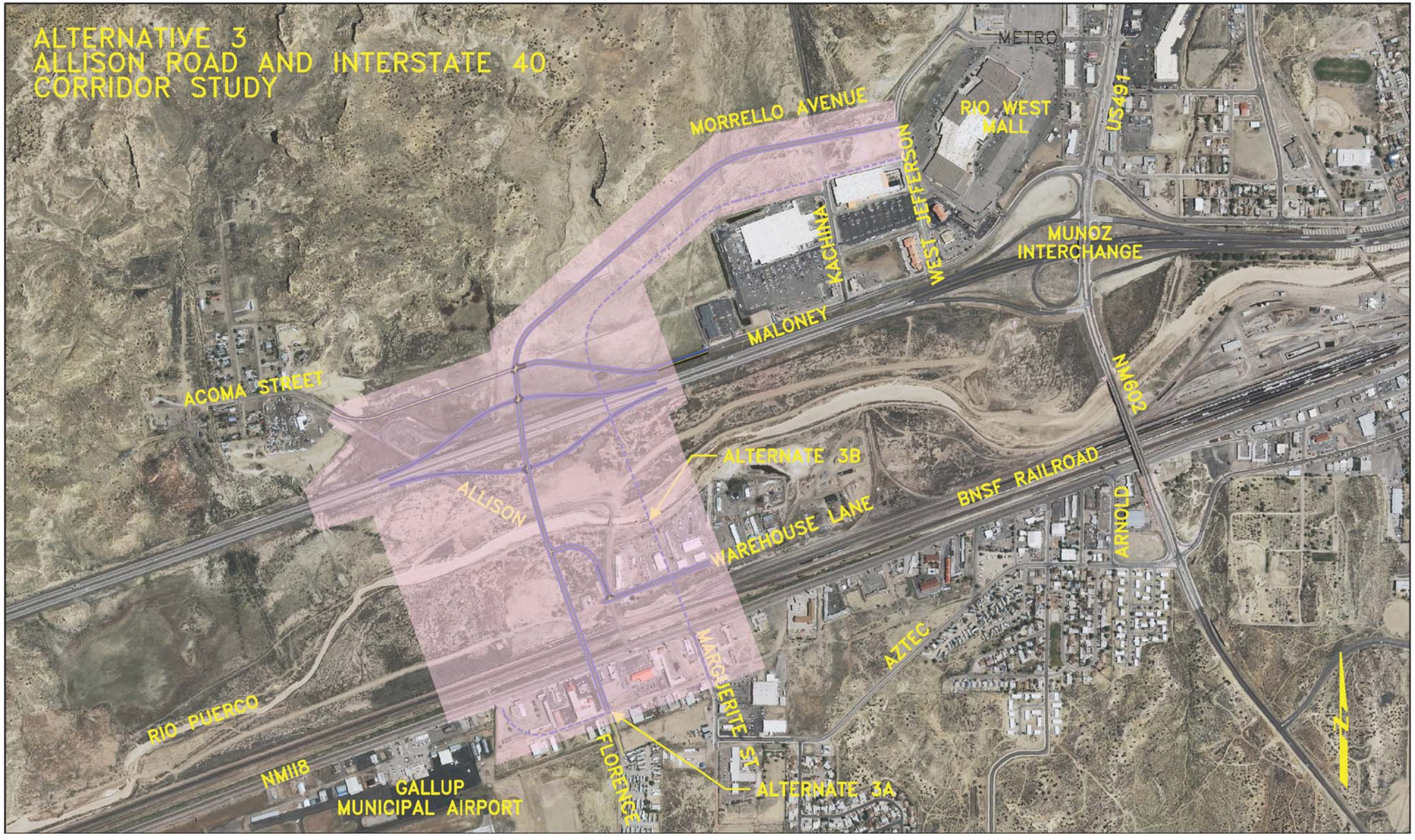
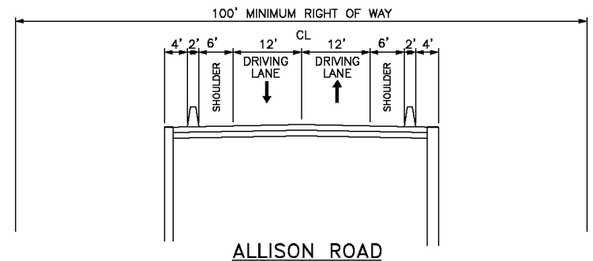
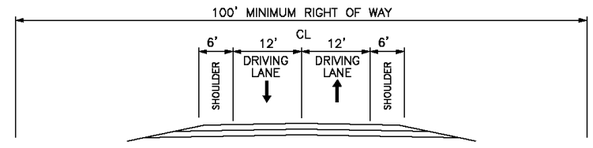


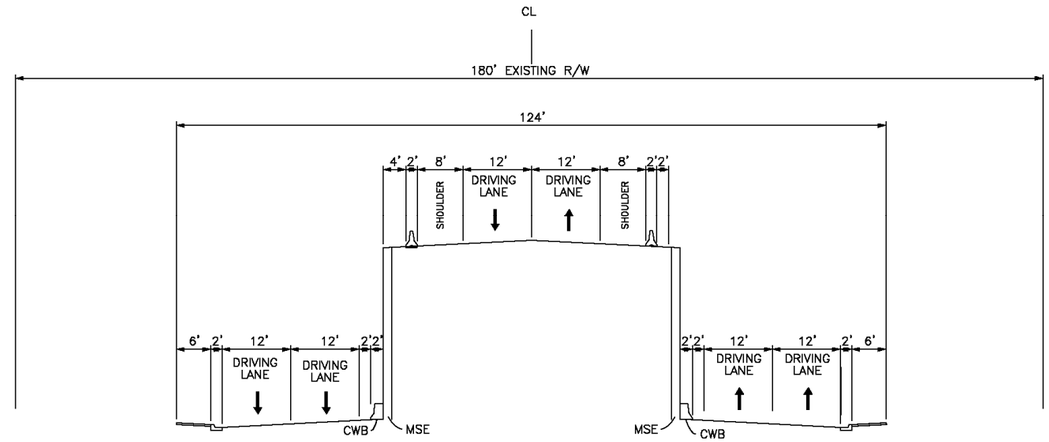
Figure 5-3: Alternative 3 Allison Road and I-40



ALLISON ROAD
ELEVATED INTERSECTION
TYPICAL A



ALLISON ROAD
TYPICAL B



NM118 ELEVATED INTERSECTION
TYPICAL A

Figure 5-4: Alternative 2 Typical Sections

6. PRELIMINARY ALTERNATIVES EVALUATION

Each of the proposed alternatives described in Section 5 of this report as well as the "no build" alternative, were evaluated by the NMDOT Project Management Team (PMT) and the Stakeholders Advisory Group (SAG). The PMT and the SAG were integral to the development of the evaluation criteria used. During review meetings it was decided that in order to ensure that all viewpoints were considered there were four distinct evaluation matrices developed. These matrices are: Purpose and Need; Stakeholders Issues, Public Issues, and Environmental Issues. Each one of these matrices lists evaluation criteria that were developed specifically for that evaluation matrix. These matrices are shown in Table 6-1 through Table 6-4. The intent of this initial review was to screen all alternatives and identify those alternatives that are not feasible and also to identify those alternatives that should be carried forward for further evaluation in Phase B of the project development process.

The evaluation criteria used for Purpose and Need are:

- Physical Deficiencies;
- System Connectivity;
- Access;
- Economic Development;
- Travel Demand;
- Safety;

The evaluation criteria used for Stakeholders Issues:

- Physical Deficiencies;
- System Connectivity;
- Access;
- Economic Development;
- Travel Demand;
- Safety;
- Improved Quality of Life for Community;
- Minimized Overall Impact to Human Environment;
- Cost;

The evaluation criteria used for Community Issues are:

- Minimized Overall Impact to Human Environment;
- Improved Mobility for Users;
- Improved Walkability and Bikeability;
- Improved Safety;
- Improved Multi-Modal Options;
- Improved Community Satisfaction;
- Improved Quality of Life for the Community;
- Improved Opportunities for Economic Development;

The evaluation criteria used for Environmental Issues are:

- Geology and Soils;
- Floodplains;
- Surface Water;
- Wetlands;
- Vegetation;
- Wildlife;
- Threatened and Endangered Species;
- Cultural Resources;
- Air Quality;
- Noise;
- Hazardous Materials;
- Visual;
- Section 4f;
- Environmental Justice;
- Farmland;
- Right-of-Way;

TABLE 6-1: PURPOSE AND NEED EVALUATION MATRIX

PURPOSE & NEED:	No Build	Alternative Corridor #1	Alternative Corridor #2	Alternative Corridor #3
Physical Deficiencies				
Geometric	• Does not improve inadequate sight distance and horizontal alignment of Allison at the Rio Puerco crossing. • Does not address inadequate horizontal curve at the Maloney/Allison intersection.			• Replaces existing Allison Road
Structural	• Does not improve functionally obsolete Allison-Rio Puerco Bridge. • Does not address existing structural deficiencies of Allison Road Bridge crossing Rio Puerco			• Allison Road is replaced with this option, existing structure is removed
Drainage	• Does not address overtopping of Maloney, and levee near Allison and the Rio Puerco bridge			• -New structure would be designed based on Rio Puerco flows.
System Connectivity				
Transit	• Does not improve the transit network	• Does not provide good opportunities for connections with existing transit system.	• Is not close to existing limits of the transit service. • Would require extending service approximately 2.5 miles down either NM 118 or Mendoza Boulevard • Connection to Sweet Water possible & would extend service to 1 subdivision	• Connection to Maloney Ave would complete transit loop west of US 491 • Improved service to commercial and shopping center in NW quadrant of Munoz interchange
Potential North Connector- vehicle and bicycle trips	• Does not provide opportunity for connection to the North due to terrain.	• Does not provide opportunity for connection to the North due to terrain.	• Does not provide opportunity for connection to the North due to terrain.	• Provides opportunity to connect to Kachina and West Jefferson.
Potential South Connector- vehicle and bicycle trips	• Limited potential. Would require some out of direction travel at NM 118/Allison Rd to either Florence St or Marguerite St which would need to be extended to the south.	• Extension to South precluded by Gallup Airport.	• South of NM 118 this alternative connects to Armand Ortega. Armand Ortega currently connects to Mendoza Boulevard which is a main east/west route south of NM 118.	• -Alternative can align with either Florence or Marguerite Streets. Both of these streets have the potential to be extended to the south and connect to Mendoza Boulevard.
Access				
Interchange spacing for future access to Interstate 40	• Does not address future access needs to Interstate 40	• Meets urban interchange spacing criteria of 1.5 mile from W Gallup Interchange	• Meets urban interchange spacing criteria of 1.5 mile from Munoz Interchange	• 1-mile from existing Munoz Interchange
Provide access to "land locked" properties in the corridor	• Does not provide access to "land locked" properties in the corridor	• Provides access to "land locked" properties in the corridor		
Establish bicycle routes/pedestrian paths that reduce out of direction travel	• Does not provide improvements to bicycle routes/pedestrian paths	• Provides improvements to bicycle routes/pedestrian paths • Airport precludes extension to south for possible connection to bikeway on Mendoza.	• Provides improvements to bicycle routes/pedestrian paths. • Good connectivity to bikeway on Mendoza. • Potential to improve bike access to high school	• Provides improvements to bicycle routes/pedestrian paths • Would require extension south to Mendoza to connect to existing bikeway • Coincides with route shown on long range trail master plan.
Economic Development				
Improved access to developable land corridor as identified in the COG Growth Management Plan	• Does not provide improved access to developable land corridor as identified in the COG Growth Management Plan	• Has potential to improve access to developable land corridor	• Has potential to improve access to developable land corridor • Existing geologic features (Rio Puerco and bluffs) may inhibit some development because of cost to mitigate.	• Has potential to improve access to developable land corridor

TABLE 6-1: PURPOSE AND NEED EVALUATION MATRIX

PURPOSE & NEED:	No Build	Alternative Corridor #1	Alternative Corridor #2	Alternative Corridor #3
Travel Demand				
Improve intersection LOS at NM 118 and Allison Rd	• Does not improve intersection with NM 118 to reduce stacking and delay on NM 118 and Allison due to train traffic			• Improves intersection operations
Reduce delays due to trains at Allison/NM 118	• Does not reduce delays due to trains at Allison/NM 118			• Reduces delays due to trains at Allison/ NM 118
Congestion relief on US 491 and at the Mendoza Interchange	• Does not provide congestion relief on US 491 and at the Mendoza Interchange			• Provides slight improvement on US491 within Munoz Interchange
Improve level of service at intersections in the corridor study	• Does not improve level of service at intersections in the corridor study	• Improves the LOS at the Munoz/Maloney and the NM 118/ Florence intersections	• Improves slightly LOS at the NM 118/ Florence intersection	• Grade separation of NM 118 and Florence eliminates the poor intersection LOS
Safety				
Safety for vehicular, bicycle and pedestrian crossing at Allison/NM 118	• Does not mitigate safety issues for vehicular, bicycle and pedestrian crossing at Allison/NM 118			• Grade separation would carry pedestrians & bicyclists over crossing
Access to City and County offices at Warehouse/Allison due to frequent train traffic	• Does not improve access to City and County offices at Warehouse Lane/Allison Road due to frequent train traffic			• Would improve access to City and County Offices at Warehouse Lane/Allison by grade separation Allison Road/BNSF • Minor out of direction travel for northbound traffic.
Mitigate conflicts with vehicular and pedestrian traffic at the BNSF and Allison crossing	• Does not mitigate conflicts with vehicular and pedestrian traffic at the BNSF and Allison crossing			• Grade separation would carry pedestrians & bicyclists over crossing
Relieve delays and queuing at the NM 118/ Allison intersection	• Does not relieve delays and queuing at the NM 118/ Allison Road intersection			• Grade separates intersection
Improve emergency response times	• Does not improve emergency response times	• Provides improved alternate route for emergency response.		

TABLE 6-2: STAKEHOLDER EVALUATION MATRIX

STAKEHOLDER ISSUES:	No Build	Alternative Corridor #1	Alternative Corridor #2	Alternative Corridor #3
Physical Deficiencies				
Mitigate overtopping of Maloney, and levee near Allison and the Rio Puerco bridge	• Does not mitigate overtopping of Maloney, and levee near Allison and the Rio Puerco bridge			• Allison Road is replaced with this option, existing structure is removed • New structure would be designed based on Rio Puerco flows.
System Connectivity				
Provide alternate routes to city and county offices	• Does not provide alternate routes to city and county offices			• Would improve access to City and County Offices at warehouse/Allison by grade separation Allison/BNSF • Minor out of direction travel for northbound traffic.
Establish bicycle routes/pedestrian paths that reduce out of direction travel	• Does not establish bicycle routes/pedestrian paths that reduce out of direction travel	• Provides improvements to bicycle routes/pedestrian paths • Airport precludes extension to south for possible connection to bikeway on Mendoza.	• Provides improvements to bicycle routes/pedestrian paths. • Good connectivity to bikeway on Mendoza. • Potential to improve bike access to high school	• Provides improvements to bicycle routes/pedestrian paths • Would require extension south to Mendoza to connect to existing bikeway • Coincides with rout shown on long range trail master plan.
Provide opportunities for Gallup area transit to expand routes	• Does not provide opportunities for Gallup area transit to expand routes	• Creates additional crossing of I-40 that would enable the creation of a bus route loop • Service to south of NM 118 precluded by airport.	• Creates additional crossing of I-40 for bus service. • Looped route not possible because no Frontage Road parallel to I-40 exists • Minimizes effectiveness of service • Extends service down NM 118 all the way through city.	• Creates additional crossing of I-40 that would enable the creation of a bus route loop • Provides direct access to existing commercial facilities
Access				
Consider ideal interchange location for Gallup area growth management as identified in COG Growth Management Plan	• Does not consider ideal interchange location for Gallup area growth management as identified in COG Growth Management Plan	• Aligns with COG Growth Management Plan	• Does not align with COG Growth Management Plan	• Aligns with COG Growth Management Plan
Economic Development				
Improve access to commercial centers by reducing congestion on US 491 and at the Mendoza interchange	• Does not improve access to commercial centers by reducing congestion on US 491 and at the Munoz Interchange	• Does not improve access to commercial centers by reducing congestion on US 491 and at the Munoz interchange		• Does not substantially improve access to commercial centers by reducing congestion on US 491 and at the Munoz interchange
Accommodate future development/improvements to utilities, utility relocations	• Does not accommodate future development/improvements to utilities, utility relocations	• Potential to provide utility corridor to across I-40. • Airport prevents utility extension to south	• Provide opportunity for utility and expansion to north and south.	• Provide opportunity for utility and expansion to north and south.
Travel Demand				
Relieve delays and queuing at the NM 118/ Allison intersection	• Does not relieve delays and queuing at the NM 118/ Allison intersection			• Grade separates intersection

TABLE 6-2: STAKEHOLDER EVALUATION MATRIX

STAKEHOLDER ISSUES:	No Build	Alternative Corridor #1	Alternative Corridor #2	Alternative Corridor #3
Relieve heavy truck traffic at the Munoz Interchange	• Does not relieve heavy truck traffic at the Munoz Interchange	• Location of new interchange (through Allison) will not relieve heavy truck traffic at the Munoz interchange	Location of new interchange (west end of town) will not relieve heavy truck traffic at the Munoz interchange	Close proximity of new interchange to adjacent development may relieve slightly the heavy truck traffic at the Munoz interchange
Safety				
Mitigate conflicts with vehicular and pedestrian traffic at the BNSF and Allison crossing	• Does not mitigate conflicts with vehicular and pedestrian traffic at the BNSF and Allison Road crossing • Does not mitigate safety issues for vehicular, bicycle and pedestrian crossing at Allison Road/NM 118			• Grade separation would carry pedestrians & bicyclist over crossing
Accommodate diversions from Interstate 40 to NM 118 during incident management	• Does not accommodate diversions from Interstate 40 to NM 118 during incident management	• Accommodates diversions from I-40 to NM 1118 during incident management		
Improved Quality of Life for Community				
Accommodate future development &improvements to utilities, utility relocations	• Does not accommodate future development &improvements to utilities, utility relocations	• Potential to provide utility corridor across I-40. • Airport prevents utility extension to south	• Provide opportunity for utility expansion to north and south.	• Provide opportunity for utility expansion to north and south.
Improve emergency response times	• Does not improve emergency response times	• Potential to improve emergency response times because alternative crossing of I-40 is provided.		
Minimized Overall Impact to Human Environment				
Acquisition of new right of way, relocation/displacement of existing residences and business	• No acquisition of new right of way, relocation/displacement of existing residences and business would be needed	• Right of Way takes may be needed	• Encroaches on City of Gallup Airport property • Right of Way takes may be needed	• Right-of-way take(s) will be required south of NM 118 in order to transition from an overpass at NM 118 to an at-grade intersection. • Possible relocation of businesses.
Costs				
Construction implementation costs	• No construction costs	• Construction costs for all alternatives are similar but will have additional structural costs. • Improvements to Allison still required at additional cost.	• Construction costs for all alternatives are similar. • Improvements to Allison still required at additional cost. • Additional Structures are required. • Possible realignment of Rio Puerco	• Construction costs for all alternatives are similar. • Improvements to Allison included in cost of this alternative.

TABLE 6-3: COMMUNITY EVALUATION MATRIX

COMMUNITY ISSUES:	No Build	Alternative Corridor #1	Alternative Corridor #2	Alternative Corridor #3
Minimized Overall Impact to Human Environment				
Relocations/displacements of businesses / residences	• No relocations/displacements of businesses / residences	• None	• Encroaches on City of Gallup Airport property	• Right-of-way take(s) will be required south of NM 118 in order to transition from an overpass at NM 118 to an at-grade intersection. • Possible relocation of businesses.
Consider the impact of "Big Box" development locating at interchanges and intersections	• Does not consider the impact of "Big Box" development locating at interchanges and intersections	• Existing neighborhood in NE quadrant could be effected by development • Other quadrant of the interchange would be available for development • Potential for increased traffic on Acoma Street through neighborhood to access development	• Existing geologic features have potential to inhibit development of "Big Box" stores at this location. • Existing neighborhoods would most likely not see increased traffic because access to stores would be provided mainly by interstate and Armand Ortega.	• Good potential for development • Morrello & Maloney are is primary routes to access developments. • Would centralize "Big Box" development opportunities near current developments •
Improved Mobility for Users				
Improved service due to new infrastructure for Gallup area transit	• Transit service not improved due to new infrastructure for Gallup area transit	• Creates additional crossing of I-40 that would enable the creation of a bus route loop this would provide alternative route to commercial development • Service to south of NM 118 precluded by airport.	• Creates additional crossing of I-40 for bus service. • Extends service down NM 118 all the way through city. • Does not provide alternative route to commercial center.	• Creates additional crossing of I-40 that would enable the creation of a bus route loop • Provides direct access to existing commercial facilities • Possible future connections to Mendoza.
Improve intersection with NM 118 to reduce stacking and delay on NM 118 and Allison due to train traffic	• Does not improve intersection with NM 118 to reduce stacking and delay on NM 118 and Allison due to train traffic			• Improves the intersection by providing a grade separation
Establish alignment for future connections to Gamerco Loop	• Does not establish alignment for future connections to Gamerco Loop	• Does have potential of construction of Gamerco Loop	• Bluffs to north of I-40 would need to be breeched. • Does have potential of construction of Gamerco Loop	• Bluffs to north of I-40 would need to be crossed. • Does have potential of construction of Gamerco Loop
Improved Walkability and Bikeability				
Establish bicycle routes/pedestrian paths that reduce out of direction travel	• Does not establish bicycle routes/pedestrian paths that reduce out of direction travel	• Provides improvements to bicycle routes/pedestrian paths • Airport precludes extension to south for possible connection to bikeway on Mendoza. • Bicyclist would have out of direction travel to get to this location because of airport	• Provides improvements to bicycle routes/pedestrian paths. • Good connectivity to bikeway on Mendoza. • Potential to improve bike access to high school	• Provides improvements to bicycle routes/pedestrian paths • Would require extension south to Mendoza to connect to existing bikeway • Coincides with rout shown on long range trail master plan.
Improved Safety				
Safety for vehicular, bicycle and pedestrian crossing at Allison/NM 118	• Does not improve safety for vehicular, bicycle and pedestrian crossing at Allison/NM 118			• Improves the intersection by providing a grade separation

TABLE 6-3: COMMUNITY EVALUATION MATRIX

COMMUNITY ISSUES:	No Build	Alternative Corridor #1	Alternative Corridor #2	Alternative Corridor #3
Improved Multi-Modal Options				
Consider Airport master plan to expand to west when selecting alternative	• Does not consider Airport master plan to expand to west when selecting alternative		• This alternative would be impacted by future expansion to the west of the airport	• Not impacted by airport expansion to the west.
Improved Community Satisfaction				
Mitigate overtopping of Maloney, and levee near Allison and the Rio Puerco bridge	• Does not mitigate overtopping of Maloney, and levee near Allison and the Rio Puerco bridge			• Allison Road is replaced with this option, existing structure is removed • New structure would be designed based on Rio Puerco flows.
Improve access to commercial centers	• Does not improve access to commercial centers			• This alternative would improve access to the commercial centers. • Morrello Ave would be connected between Allison and West Jefferson and act as an alternative route to Maloney
Improved Quality of Life for Community				
Upgrade utility infrastructure and improve service to community	• Does not upgrade utility infrastructure and improve service to community	• Potential to provide utility corridor to across I-40. • Airport prevents utility extension to south	• Provide opportunity for utility and expansion to north and south.	• Provide opportunity for utility imporvements and expansion to north and south.
Improved Opportunities for Economic Development				
Consider COG ownership of properties west of the Munoz Interchange between Interstate 40 and NM 118 are currently in a floodplain and are "land locked"	• Does not consider COG ownership of properties west of the Munoz Interchange between Interstate 40 and NM 118 are currently in a floodplain and are "land locked" • Opportunity to create access points along this alignment	• Does not consider COG ownership of properties west of the Munoz Interchange between Interstate 40 and NM 118 are currently in a floodplain and are "land locked"	• Distance between I-40, Rio Puerco and BNSF railway would be difficult to create access points along this alignment.	• Access point off of this alignment to provide access to existing COG and County offices. • Existing Allison Road could be improved to serve as an access road for future development in this area
Consider the impacts to the Munoz due to current and planned development on the east side of Gallup	• Does not consider the impacts to the Munoz due to current and planned development on the east side of Gallup			
Difficulties of development south of Interstate 40 due to diverse property ownership	• Does not address difficulties of development south of Interstate 40 due to diverse property ownership			
Lack of funding for improvements to infrastructure	• Does not resolve lack of funding for improvements to infrastructure			

TABLE 6-4: ENVIRONMENTAL ISSUES EVALUATION MATRIX

Environmental Issues	No Build	Alternative Corridor #1	Alternative Corridor #2	Alternative Corridor #3
Geology and Soils				
	• No impact	• The soil disturbance will exceed the threshold amount of 1 acre that triggers the need for National Pollutant Discharge Elimination System (NPDES) permit coverage. As required under the Clean Water Act, the construction contractor will prepare a Storm Water Prevention Plan (SWPPP) and obtain required NPDES permit coverage for construction activity. Best Management Practices (BMPs) such as the use of hay bales, silt fences, or other techniques will be used to prevent erosion and transport of sediment.		
Floodplains				
	• No impact	• According to FEMA, the area located to the south of the BNSF railway line is considered within the 1% annual chance floodplain. BMPs will be necessary, especially near where the proposed alignments cross the Rio Puerco.		
Surface Water				
	• No impact	• The USACE makes the final determination of jurisdictional determination for all potential waters of the U.S. As this project proceeds through the environmental and design process, further coordination with the USACE will be required due to the crossing of the Rio Puerco by the proposed alignment.		
Wetlands				
	• No impact	• No anticipated impact.		• There is a wetland located north of Maloney at the intersection with Allison Rd. Any proposed activity at this location will require further coordination with the USACE and NMED.
Vegetation				
	• No impact	• No anticipated impact.		
Wildlife				
	• No impact	• For all proposed build alternatives, a survey of the project corridor will be completed to map the location of nests and, if located, appropriate stipulations will be implemented to protect nesting migratory birds during construction activity.		
Threatened and Endangered Species				
	• No impact	• A field survey will be conducted during Phase C to evaluate the habitat conditions and potential for impacts to state and federally listed species in more detail.		
Cultural Resources				
	• No impact	• Has potential to impact segment of Route 66 and historic segment of BNSF Railway.		
Air Quality				
	• No impact	• No anticipated impact.		

TABLE 6-4: ENVIRONMENTAL ISSUES EVALUATION MATRIX

Environmental Issues	No Build	Alternative Corridor #1	Alternative Corridor #2	Alternative Corridor #3
Noise				
	• No impact	• There will be a minimal impact on noise at this location due to the proximity of the Gallup Airport. Western Skies Mobile Home Park is located directly to the west of the airport.	• There will be a minimal impact on noise at this location due to the industrial land use dominant within the area. The USA RV Park is located to the east of the interchange.	• A noise study would be recommended for this alternative due to the residential land use south of US 66 on Marguerite St and Stagecoach Rd. There are also two schools in the vicinity including Gallup Central Alternative School and Stagecoach Elementary School.
Hazardous Materials				
	• No impact	• No anticipated impact, however; a more detailed investigation, including field surveys, and further coordination with the NMDOT EGB will be necessary to determine impacts.	• No anticipated impact, however; a more detailed investigation, including field surveys, and further coordination with the NMDOT EGB will be necessary to determine impacts. One Leaking Underground Storage Tank (LUST) site under cleanup is located near the alternative at 3020 E Hwy 66 (Bill's Radiator Shop).	• A more detailed investigation, including field surveys, and further coordination with the NMDOT EGB will be necessary to determine impacts. There are 6 LUST sites located near the Allison alternative; only two sites are under cleanup and the other 4 sites are under investigation.
Visual				
	• No impact	• No anticipated impact.		
Section 4f				
	• No impact	• Potential historic sites will be included in the cultural resources report and will be determined through concurrence from the SHPO during Phase C. The BNSF railway line is considered a historic segment throughout the study corridor.		
Environmental Justice				
	• No impact	• No anticipated impact.		
Farmland				
	• No impact	• No anticipated impact.		
Right-of-way				
	• Beneficial impact for property owners since no acquisition of ROW.	• Once a preferred alternative is selected and a design is established in Phase C, right-of-way needs and potential impacts will be determined.	• Once a preferred alternative is selected and a design is established in Phase C, right-of-way needs and potential impacts will be determined.	• Once a preferred alternative is selected and a design is established in Phase C, right-of-way needs and potential impacts will be determined. However, there is a higher potential for ROW impacts for this alternative due to the presence of residential areas.

7. CONCLUSIONS AND RECOMMENDATIONS

The objective of the Allison Road Corridor and Interstate Study was to verify the need for improvements to the existing corridor; to develop alternative corridors that address the stated purpose and need; eliminate alternatives that are not feasible; and to recommend alternatives to be carried forward to the Phase B Study.

Evaluation of the existing condition along Allison Road concluded that many physical deficiencies exist within this corridor that should be mitigated including roadway geometrics, structural, pavement conditions and drainage facilities. Additionally, the system connectivity to roads outside the existing corridor could be improved. As stated in the purpose and need statement, the primary purpose for improving the existing Allison Corridor is to mitigate the existing geometric, physical, and operational deficiencies, improve safety, and provide system connectivity to the existing NMDOT and City of Gallup transportation network that are compatible with long range local and regional planning goals to facilitate economic growth.

As part of this study there were three alternative corridor alignments developed. Alternative 1 was located near midpoint between the west Gallup interchange and the Munoz interchange (Figure 5-1, page 5-3). Alternative 2 was located approximately 1-mile east of the West Gallup interchange (Figure 5-2 on page 5-4) and Alternative 3 (Figure 5-3 page 5-5) was located approximately 1-mile west of the Munoz Interchange. Each alternative, discussed in Chapter 4, was evaluated on engineering criteria and against the stated project purpose and need. Additionally, the alternatives were also evaluated against environmental impact criteria as well as stakeholder and community developed criteria.

The soil disturbance will exceed the threshold amount of 1 acre that triggers the need for National Pollutant Discharge Elimination System (NPDES) permit coverage. As required under the Clean Water Act, the construction contractor will prepare a Storm Water Prevention Plan (SWPPP) and obtain required NPDES permit coverage for construction activity. Best Management Practices (BMPs) such as the use of hay bales, silt fences, or other techniques will be used to prevent erosion and transport of sediment. According to the Federal Emergency Management Agency (FEMA), the area located to the south of the BNSF railway line is considered within the 1% annual chance floodplain. BMPs will be necessary, especially near where the proposed alignment crosses the Rio Puerco. As this project proceeds through the environmental and design process, further coordination with the United States Army Corps of Engineers (USACE) will be required due to the crossing of the Rio Puerco by the proposed alignments. Further biological and cultural resource investigations will also be required as the project moves into final design and Phase C. The alignments have the potential to impact Route 66 and historic segments of the BNSF railway. A more detailed investigation, including field surveys and further coordination with the NMDOT Environmental Geology Bureau (EGB) will be required to determine the potential for hazardous materials within the project corridor. An exposed clay-shale in the outcroppings further to the north of the corridor limits which may need mitigating if local arterials are planned in that area.

Alternative 1 with regard to interstate access and operations is probably the best alternative because it is located halfway between the existing interchanges. However, from a regional transportation perspective, this is probably the worst alternative because it cannot be extended to the north due to an existing geologic feature. It can also not be extended to the south due to the airport. This alternative does not address the replacement of the deficient Allison Road Bridge currently crossing the Rio Puerco.

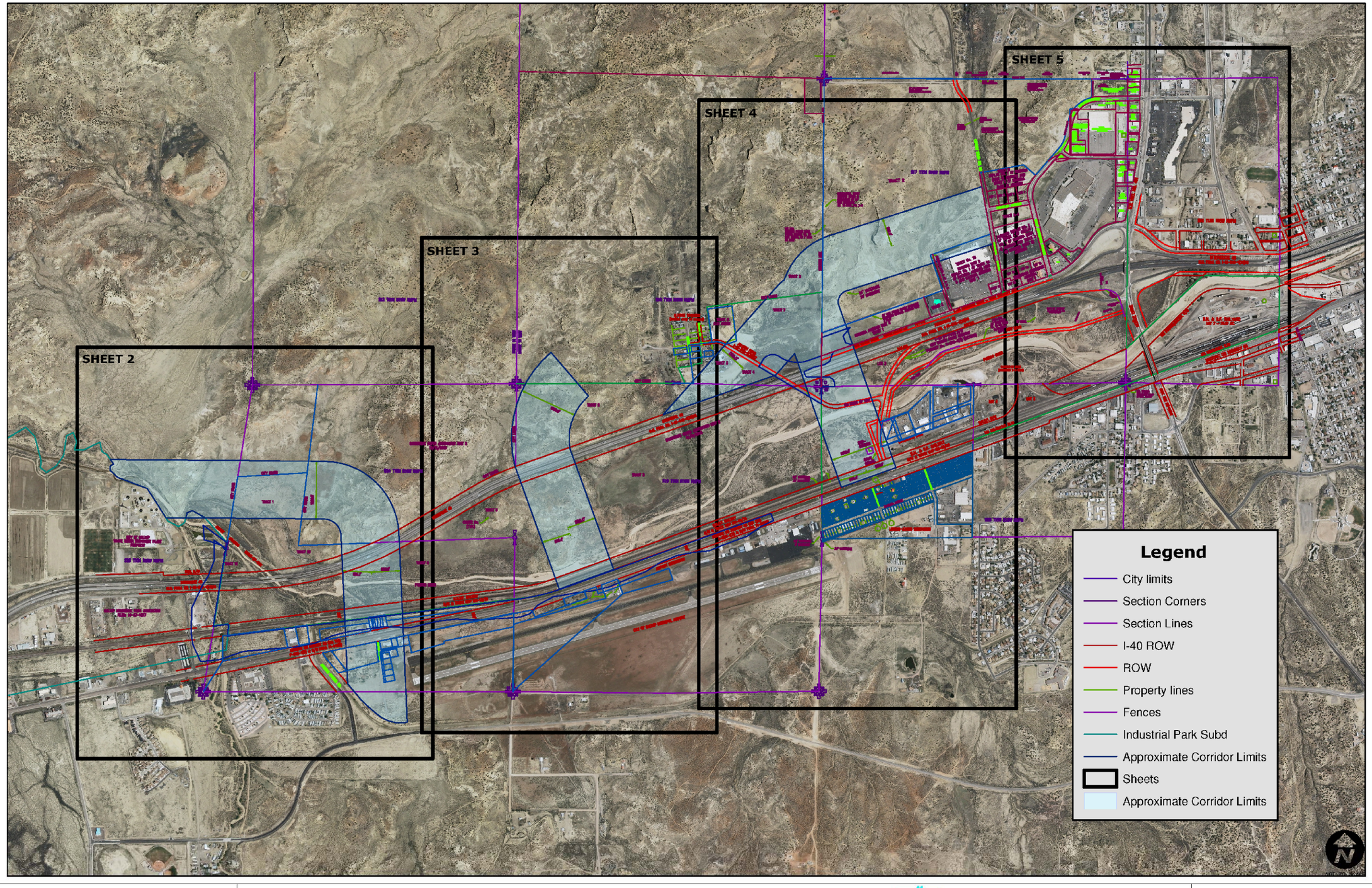
Alternative 2 is a good location for a future interchange because of the spacing to the West Gallup Interchange. This location also provides the opportunity to extend the corridor to the south and tie to Mendoza Road via Armand Ortega Drive. This would improve the regional transportation network. While this location has connectivity to the north of I-40 it does not provide any additional access to the business district that is targeted for growth, which in turn does not provide any congestion relief on US 491. This alternative does not address replacement of the deficient Allison Road Bridge currently crossing the Rio Puerco. Although this corridor location merits consideration in the future, it does not serve the purpose and need of this project and therefore was eliminated from further consideration.

Alternative 3 was unanimously selected by the Project Management Team and Stakeholders as the preferred alternative for the following reasons. This alternative is located approximately at the same location as the existing Allison Road Corridor and therefore will reconstruct and replace the existing Allison Road and the deficient Allison Road Bridge. There is adequate spacing between this location and the Munoz Interchange. This corridor alignment can easily be extended to the north to tie into existing transportation facilities such as Coal Basin Road, Gamerco and others. Equally important to the regional transportation system this corridor can be extended south beyond NM 118 to tie the existing transportation. This alternative location also will provide good access and improve mobility to existing businesses in the area as well as lands north and south of I-40 that have potential for development. Congestion relief to US491/NM602 could be provided if the regional transportation connections are made to the north and south. Input from public meetings substantiates support of this alternative. For these reasons, it is recommended that Alternative 3 be carried forward to Phase B – Detailed Evaluation of Alternatives.

During Phase B, Alternative 3 will be further refined. Even though this is a feasible corridor for advancement and presents a potential opportunity for a new access point onto the interstate system, an interchange will not be allowed at this location unless it complies with the 8 points in the FHWA Interstate Access Policy and access control and access management requirements in the NMDOT State Access Management Manual. Funding constraints may require a phased approach to full build out of this corridor and implementation options for the preferred alternative will continue to be investigated and evaluated.

A noise study would be recommended for this alternative once a preferred alternative is selected and a design is established in Phase C. As well, right-of-way needs and potential impacts will be determined in Phase C for this alternative.

APPENDIX A – RIGHT OF WAY EXHIBITS



ALLISON ROAD & INTERSTATE 40 CORRIDOR STUDY

Parametrix

WILSON & COMPANY ENGINEERS & ARCHITECTS

Bohannan ▲ Huston
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING ▲ SPATIAL DATA ▲ ADVANCED TECHNOLOGIES

NMDOT

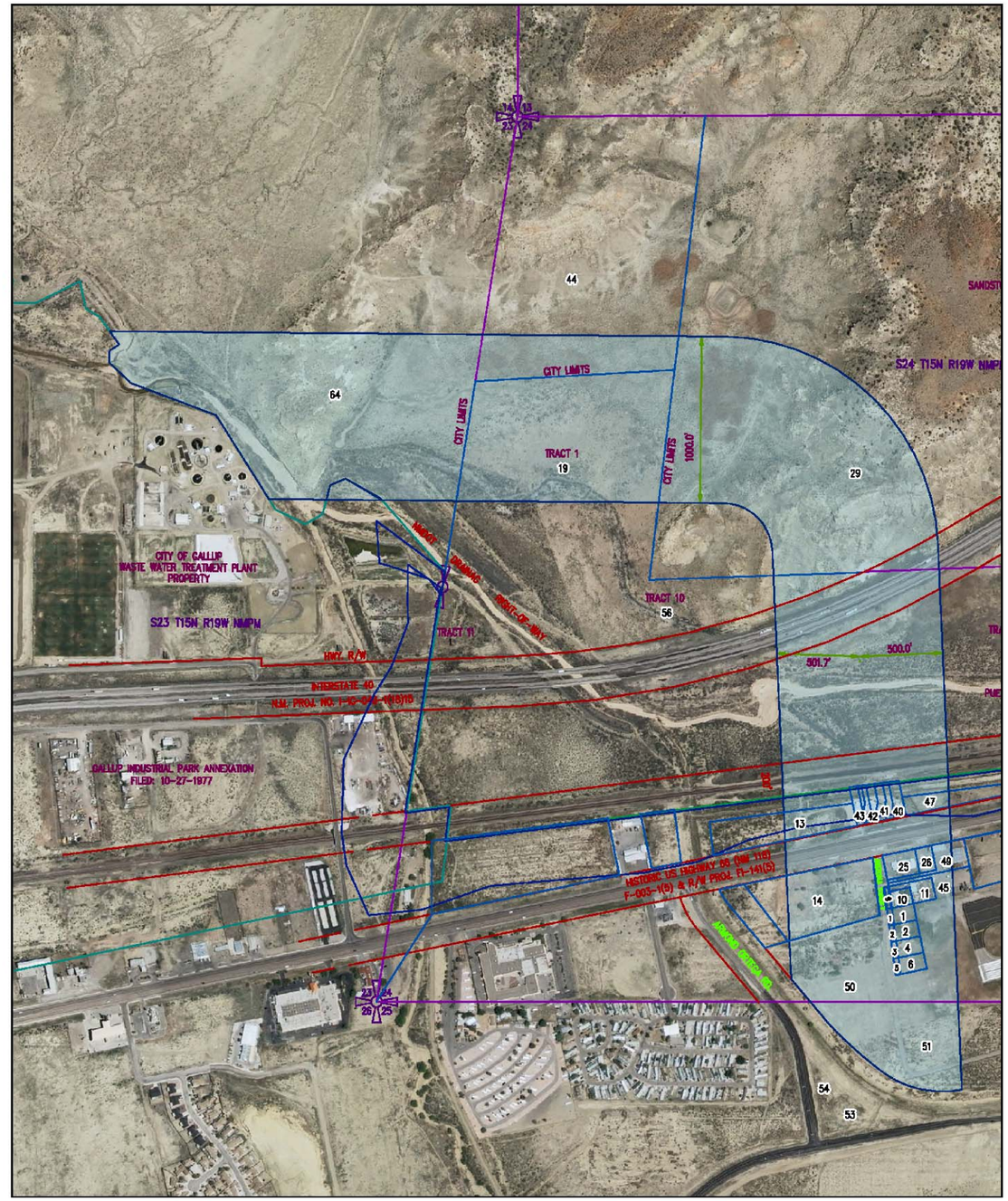
U.S. Department of Transportation Federal Highway Administration

INDEX SHEET

04302010

INDEX SHEET_11x17.dgn

NUMBER	NAME
1	City of Gallup
1	City of Gallup
2	City of Gallup
2	City of Gallup
3	City of Gallup
4	City of Gallup
5	City of Gallup
6	City of Gallup
9	Dearmond, John H. & Patricia R. Rev TR C/O Valles, Guadalupe & Santiestban
10	Dearmond, John H. & Patricia R. Rev TR C/O Valles, Guadalupe & Santiestban
11	Dearmond, John H. & Patricia R. Rev TR C/O Valles, Guadalupe & Santiestban
13	ABA Land LTD. Co.
14	ABA Land LTD. Co.
19	City of Gallup
25	Grano, James M. & Katrina A.
26	Farmer, William E. & Avis Trustees Ed & Avis Farmer Rev. Trust
29	Gamerco Associates, LTD.
40	Duckett, Tom
41	Duckett, Tom & Micehlle
42	Chavez, Charlie & Satermo, Terri, Rev. Trust
43	Duckett, Tom & Micehlle
44	White, Richard K. Jr. & Virginia M. Trustees
45	Farmer, W.E. & Avis C. Rev. Trust
47	South, David A. & Elizabeth N. Trustees
49	Farmer, W.E. & Avis C. Rev. Trust
50	City of Gallup
50	City of Gallup
51	City of Gallup
53	McKinley County
54	ABA Land LTD. Co.
55	Angeli, Catherine
56	Angeli, Catherine
64	Gamerco Associates, LTD.



Legend

- City limits
- Section Corners
- Section Lines
- I-40 ROW
- ROW
- Property lines
- Fences
- industrial park subd
- Approximate Corridor Limits
- Approximate Corridor Limits

NOT TO SCALE

ALLISON ROAD & INTERSTATE 40 CORRIDOR STUDY

Parametrix

WILSON & COMPANY ENGINEERS & ARCHITECTS

Bohannan Huston
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING • SPATIAL DATA • ADVANCED TECHNOLOGIES

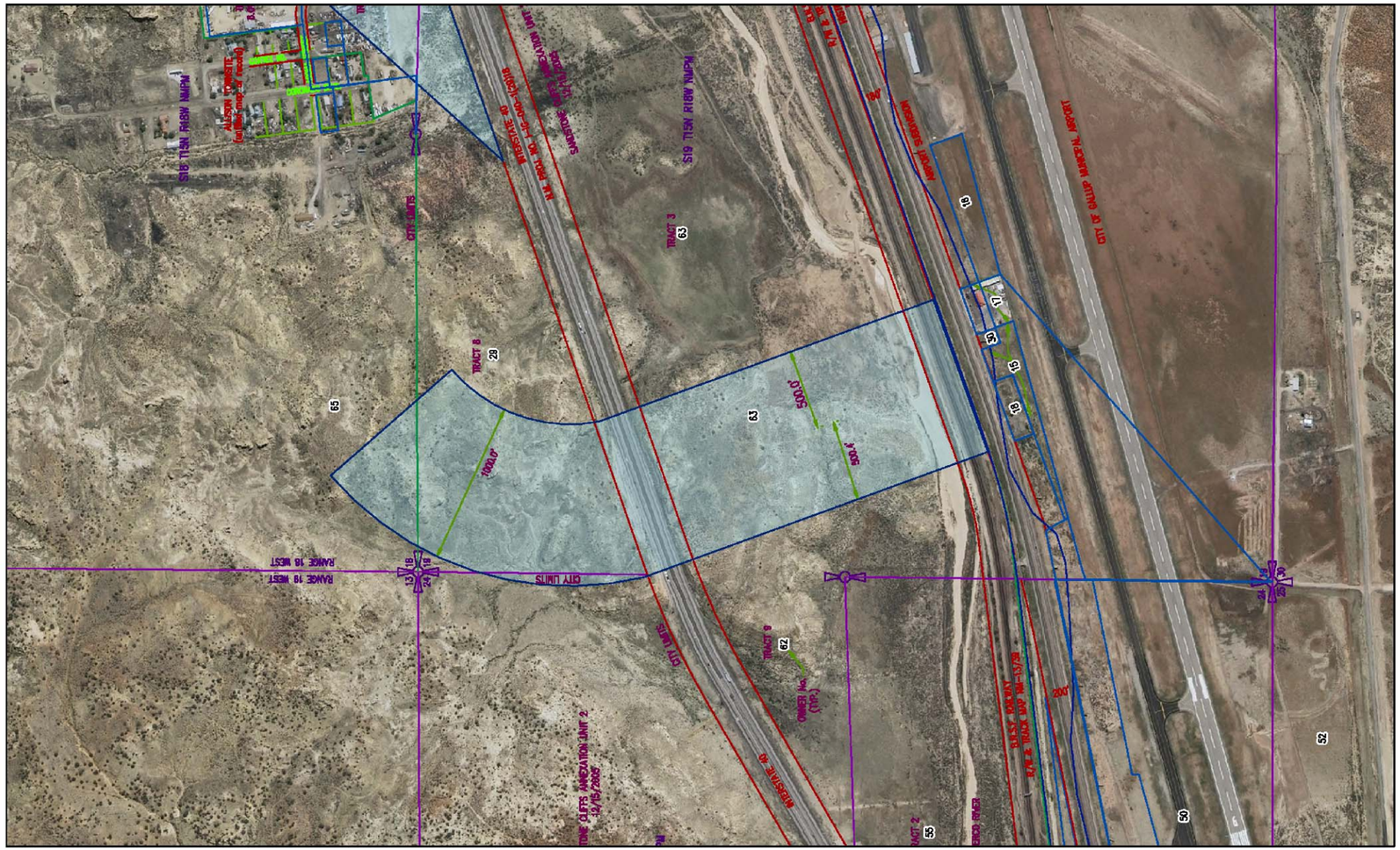
NMDOT

U.S. Department of Transportation Federal Highway Administration

SHEET 2

04302010

SHEET 2_11x17.dgn



Legend

- City limits
- Section Corners
- Section Lines
- I-40 ROW
- ROW
- Property lines
- Fences
- industrial park subd
- Approximate Corridor Limits
- Approximate Corridor Limits

NUMBER	NAME
15	ABA Land LTD. Co.
16	ABA Land LTD. Co.
17	Melsted, Kathryn R.
18	Mehta, Deepak & Meera Trustees
29	Gamerco Associates, LTD.
30	ABA Land LTD. Co.
50	City of Gallup
52	ABA Land LTD. Co.
55	Angeli, Catherine
62	Gamerco Associates, LTD.
63	Gamerco Associates, L.H. LTD. No. 3
63	Gamerco Associates, L.H. LTD. No. 3
65	Moorehead, W.C.

NOT TO SCALE

ALLISON ROAD &
INTERSTATE 40
CORRIDOR STUDY

Parametrix

WILSON & COMPANY
ENGINEERS & ARCHITECTS

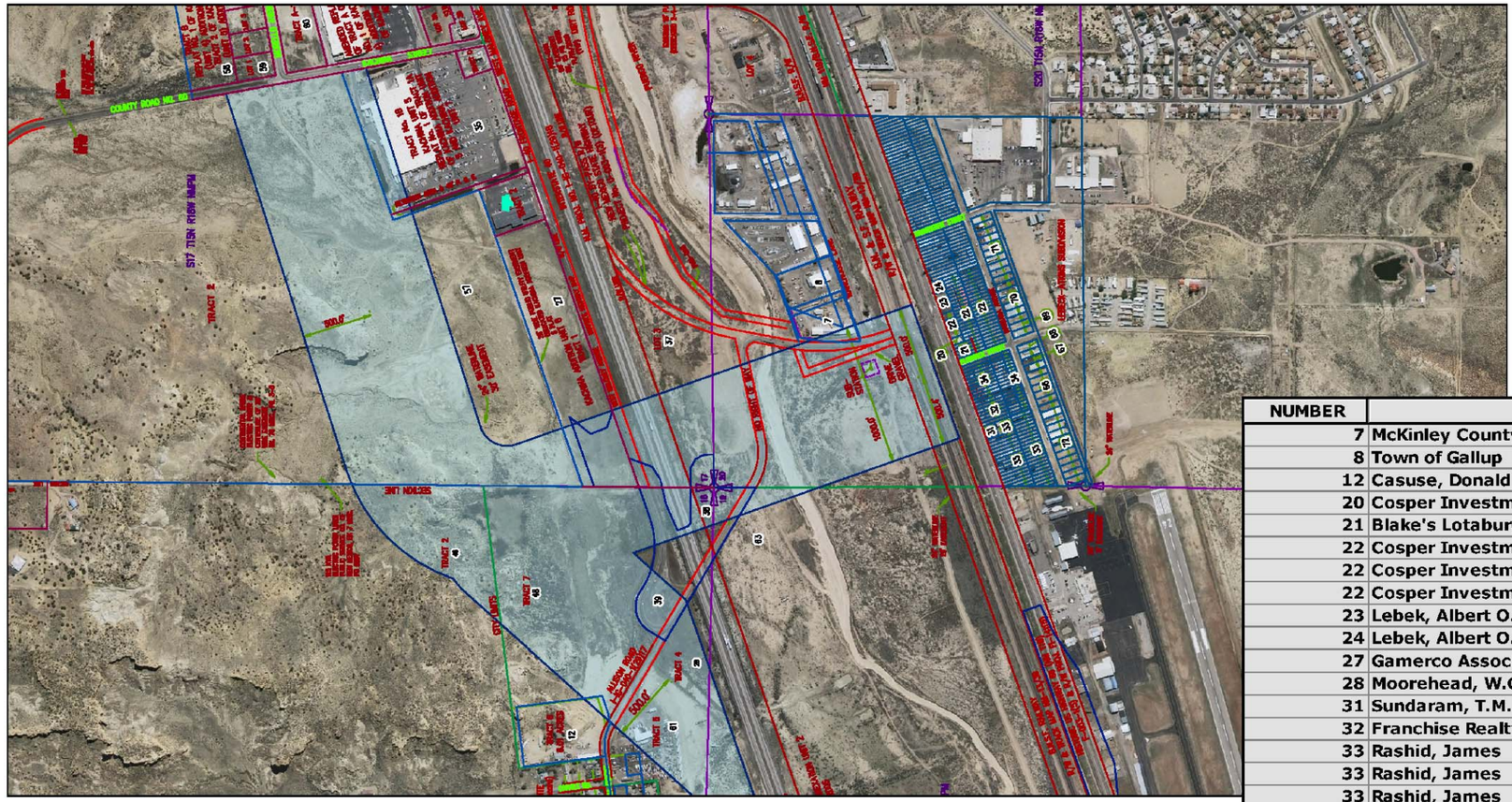
Bohannan ▲ Huston
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING ▲ SPATIAL DATA ▲ ADVANCED TECHNOLOGIES

NMDOT

U.S. Department of Transportation
Federal Highway Administration

SHEET 3

04302010
SHEET 3_11x17.dgn



NUMBER	NAME
7	McKinley County Commissioners
8	Town of Gallup
12	Casuse, Donald L. & Phyllis A.
20	Cosper Investment s Partnership
21	Blake's Lotaburger LLC #38
22	Cosper Investment s Partnership
22	Cosper Investment s Partnership
22	Cosper Investment s Partnership
23	Lebek, Albert O. Jr., Etal
24	Lebek, Albert O. Jr., Etal
27	Gamerco Associates, LTD.
28	Moorehead, W.C.
31	Sundaram, T.M. & Radha Co-Trustees
32	Franchise Realty Inst. McDonald's Corporation 30-0010
33	Rashid, James
33	Rashid, James
33	Rashid, James
34	Lebeck, Albert O. Jr., Etal
34	Lebeck, Albert O. Jr., Etal
35	Wal-Mart Stores East, LP C/O Retail Trust III
36	HD Development of Maryland, Inc. C/O Home Depot USA, Inc.
37	City of Gallup
38	Moorehead, W.C.
39	New Mexico State Hwy Dept
46	Moorehead, W.C.
48	Moorehead, W.C.
57	Gamerco Associates, LTD.
58	Gamerco Associates, LTD.
59	Gamerco Associates, LTD.
60	Gamerco Associates, LTD.
61	Moorehead, W.C. C/O Roy, Willie Jr. Trustee
63	Gamerco Associates, L.H. LTD. No. 3
66	Lebeck, Albert O. Jr., Etal
67	Lebeck, Albert O. Jr., Etal
68	DAB, Inc.
69	Six D., Inc.
70	Charles & Linda Byrd. Revocable Trust
71	Qwest Corporation
72	Fuhs Industrial Park, Ltd. PTNS.

Legend

- City limits
- Section Corners
- Section Lines
- I-40 ROW
- ROW
- Property lines
- Fences
- industrial park subd
- Approximate Corridor Limits
- Approximate Corridor Limits

NOT TO SCALE

ALLISON ROAD &
INTERSTATE 40
CORRIDOR STUDY

Parametrix

WILSON & COMPANY
ENGINEERS & ARCHITECTS

Bohannan ▲ Huston
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING ▲ SPATIAL DATA ▲ ADVANCED TECHNOLOGIES

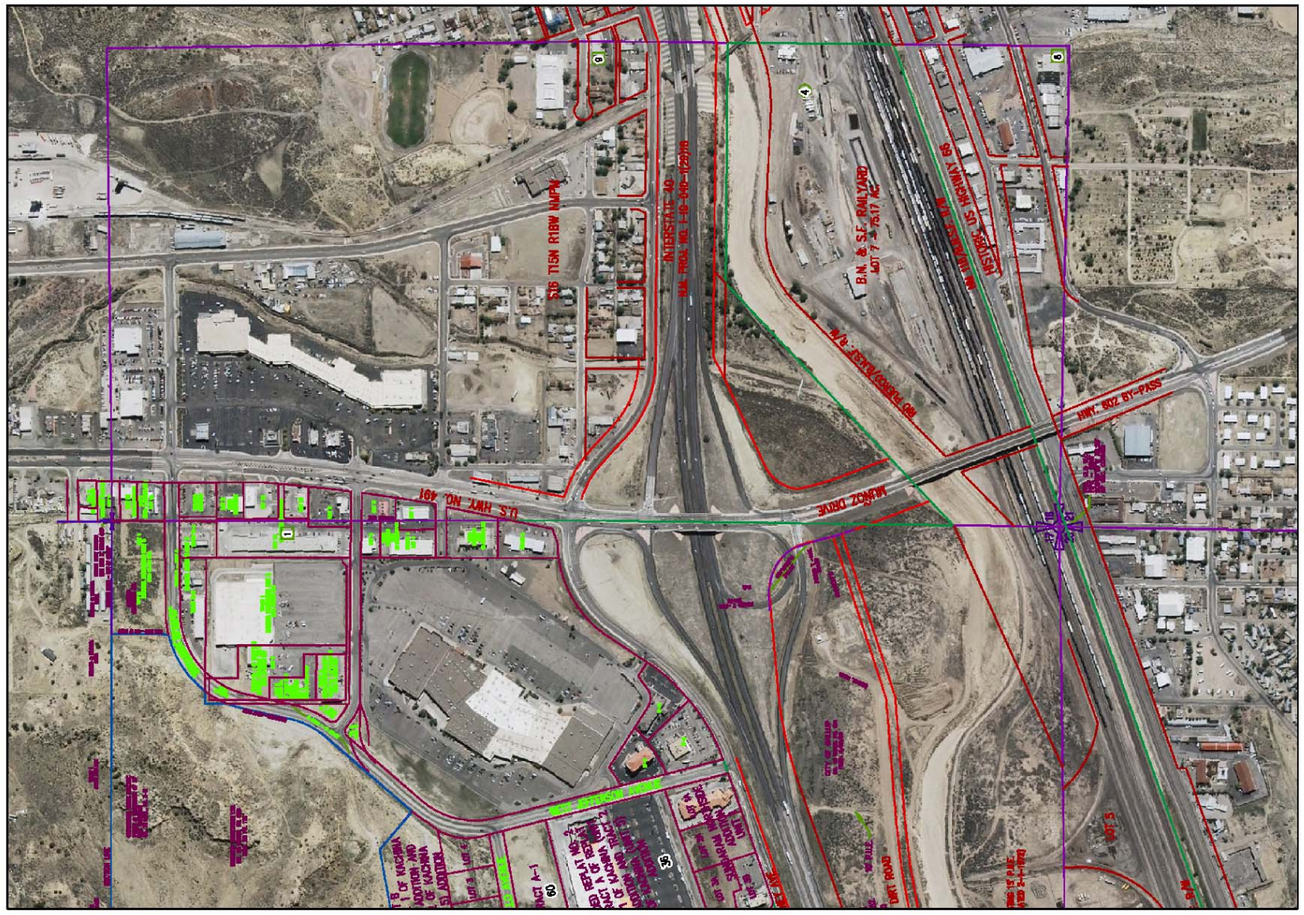
NMDOT

U.S. Department of Transportation
Federal Highway Administration

SHEET 4

04302010

SHEET 4_11x17.dgn



NUMBER	NAME
1	City of Gallup
4	City of Gallup
8	Town of Gallup
9	Dearmond, John H. & Patricia R. Rev TR C/O Valles, Guadalupe & Santiestban
36	HD Development of Maryland, Inc. C/O Home Depot USA, Inc.
60	Gamerco Associates, LTD.

Legend

- City limits
- Section Corners
- Section Lines
- I-40 ROW
- ROW
- Property lines
- Fences
- industrial park subd

NOT TO SCALE

ALLISON ROAD & INTERSTATE 40 CORRIDOR STUDY

Parametrix

WILSON & COMPANY ENGINEERS & ARCHITECTS

Bohannan ▲ Huston
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING • SPATIAL DATA • ADVANCED TECHNOLOGIES

NMDOT

U.S. Department of Transportation Federal Highway Administration

SHEET 5

04302010

SHEET 5_11x17.dgn

APPENDIX B – BRIDGE INSPECTION REPORTS

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Bridge Number: 000000000004231 **Inspection Date (90): 1/20/2009**

NMDOT District No. = District 6	(3) County = 31 McKINLEY	Sufficiency Rating = 43.8
(4)Town/City = Gallup	(91) Frequency = 24 months	Next Inspection = 01/20/2011
(7) Facility Carried 31-003A (11) Mile Post = 0.300 mi	Patrol No. 46-58	Deficiency Status Structurally Deficient
(49) Structure Length = 96.0 ft	(19) Detour Length = 9.9 mi	(112) NBIS Length = Long Enough
(102) Direction of Traffic = 2 2-way traffic	(28A) Lanes on = 2	(28B) Lanes Under = 0
(41) Posting Status = A Open, no restriction	(34) Skew = 10.00 °	(104) Highway System =0 Not on NHS
(9) Location = 0.2 MI N OF NM-118/GALLUP		
(6) Feature Intersected = RIO PUERCO		

DESCRIPTION:

Patrol 46-58, McKinley County: 5 simple spans of 19', treated timber girders, treated timber abutments, treated timber piling & pier caps, treated timber deck with 4" asphalt overlay.
Since the last inspection of 1/20/09, the bridge crew reinforced the damaged pile with a concrete sleeve & reinforced the broken diagonal brace at pier #4.
Deficiency Status: Structurally Deficient due to Superstructure rating & narrow deck geometry.
Scheduled for replacement: 2012 STIP, BR-TPO 5459(2), CN 1840 pending realignment study.

CONDITION

Deck (58) = 5 Fair **Super (59) =** 4 Poor **Sub (60) =** 5 Fair
Channel/Channel Protection (61) = 7 Minor Damage **Culvert (62) =** N N/A (NBI)

APPRAISAL

Str. Evaluation (67) = 4 **Deck Geometry (68) =**2 Intolerable - Repla
Waterway Adequacy (71) =8 Equal Desirable **Approach Alignment (72)=** 6 Equal Min Criteria
Underclearance, Vertical and Horizontal (69) =N **Scour Critical (113)=**U Unknown Scour

LOAD RATING AND POSTING

Inventory Rating (66) = HS16.8 **Operating Rating (64) = HS22.8**

Posting status (41) = A Open, no restriction Posting (70) = 5 At/Above Legal Loads
Inventory Rating Method (65) = 5 No rating Operating Rating Method (63) = 5 No rating
Design Load (31) = 0 Other or Unknown

(29) ADT = 3,083	(114) Future ADT=4,175	(109) Truck ADT= 2 %
(30) Year of ADT =2007	(115) Year of Future ADT= 2027	Route Posted Speed Limit =15

Team Leader *Date* *Reviewed By* *Date*

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

(16) Latitude = 35d 31' 17"	(17) Longitude = 108d 46' 24"	(27) Year Built =1940
(22) Owner = County Hwy Agency	(21) Custodian = County Hwy Agency	(106) Year Reconstruct=Unknown
(42A) Type of Service on = 1 Highway	(42B)Type Service under= 5 Waterway	(35) Structure Flared = 0 No flare

(26) Functional Class = 19 Urban Local	(100) Defense Highway = 0 Not a STRAHNET hwy
(37) Historical Significance =5 Not eligible for NRHP	(45) No. Of Spans In Main Unit = 5
(43A) Main Span Material/Design = 7 Wood or Timber	(43B) Main Span Material/Design = 02 Stringer/Girder
(48) Length Max Span = 19.0 ft	(46) Number of Approach Spans = 0
(44A) Approach Span Material =	(44B) Approach Span Material =
(107) Deck Type = 8 Wood or Timber	(108C) Deck Protection = None
(108A) Wearing Surface = 6 Bituminous	(108B) Membrane = 0 None
Min. Vertical Clearance Minus= 0	Min. Vertical 10' Selected Minus= 0
Min. Vertical Clearance Plus= 0	Min. Vertical 10' Selected Plus= 9999
(55) Minimum Lateral Undrclearance R = 0.0 ft	(56) Minimum Lateral Undrclearance L = 0.0 ft

Project No. = UNKNOWN-COUNTY	Old Bridge No. =	(47) Total Horiz. Clearance =23.6 ft
(51) Width Curb to Curb =23.0 ft	(52) Width Out to Out = 24.3 ft	(33) Median = 0 No median
(32) Approach Roadway Width (w/ shoulders) = 24.0 ft		Known Utilities = N

Special Inspections:

(92A) FC Frequency =NA	(93A) FC Inspection Date = NA	Next UW Inspection = NA
(92B) UW Frequency = NA	(93B) UW Inspection Date = NA	Next FC Inspection = NA
(92C) SI Frequency =NA	(93C) SI Date = NA	Next SI = NA

TRAFFIC SAFETY FEATURES

Bridge Rail (36A) =	0 Substandard	Approach Rail (36C) =	1 Meets Standards
Transition (36B) =	1 Meets Standards	Approach Rail Ends (36D) =	1 Meets Standards

Stay In Place Forms =	Stay In Place Form Type =	Overlay Thickness =
Culver Fill = 0		

SIP Notes:

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Approach Roadway Condition:

Channel and Channel Protection:

Recommendations and Inspection Notes:

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
0	32/2	Timber Deck/AC Ovly	(SF)	2,336	0 %	0	0 %	0	100 %	2,336	0 %	0	0 %	0
0	111/2	Timber Open Girder	(LF)	2,441	0 %	1	97 %	2,365	1 %	23	2 %	52	0 %	0
0	206/2	Timber Column	(EA)	37	0 %	0	97 %	36	0 %	0	3 %	1	0 %	0
0	216/2	Timber Abutment	(LF)	138	1 %	0	85 %	118	14 %	20	0 %	0	0 %	0
0	235/2	Timber Cap	(LF)	112	0 %	0	100 %	112	0 %	0	0 %	0	0 %	0
0	329/2	GUARDRAIL (standard)	(LF)	135	98 %	130	4 %	5	0 %	0	0 %	0	0 %	0
0	331/2	Conc Bridge Railing	(LF)	249	0 %	0	96 %	239	4 %	10	0 %	0	0 %	0
0	333/2	Other Bridge Railing	(LF)	194	100 %	194	0 %	0	0 %	0	0 %	0	0 %	0

Str Unit	Elem/Env	Description	Element Notes
0	32/2	Timber Deck - w/ AC Overlay	4" Asphalt overlay: Large transverse, longitudinal & alligator cracks, 5% patches in asphalt overlay with minor potholes. Deck: heavy debris, ends dry cracked & split with areas of dry rot. Felloe rail is dry, checked & warped, some loose bolts. Felloe rail is broke at Span 4 eastside, and Westside.
0	111/2	Timber Open Girder/Beam	2 girders (15 and 17) are split in span 2 - double timber, adjacent girder ok, one in span 4 is warped 20 deg out of plumb. Beam is loose at P3 & making noise under traffic. Girder 6 over pier 3 has diagonal crack. Girders are very dry, checked, waterstained, several have heavy checking in span 3, dry rot & decay at ends.
0	206/2	Timber Column or Pile Extension	Minor to heavy checking, small areas of surface rot. Loose bolts on bracing. No settlement noted. Tops of several are split from movement. Pile tiebacks are not in place. Some large checks at P2. Cross brace split at P3 and broken at pier 4. Moderate to heavy debris on Piers 1, 2 & 3. Pile 4 pier 4 is rotted; repaired with concrete collar.
0	216/2	Timber Abutment	Caps are very dry especially on ends, moderate checking, breast wall is dry, & checked with some turned timbers, wingwalls are same with some bowed & broken timbers @ A1. Pile tie backs are not in place at A2. Some piles are split at the top.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Str Unit	Elem/Env	Description	Element Notes
0	235/2	Timber Cap	Caps are dry & weathered, especially at ends. Minor checking, waterstains, & small splinters, bracing is dry with minor checking.
0	329/2	GUARDRAIL (STANDARD)	W Beam on square wood posts & blocks, traffic damage, Type C Anchors. Traffic damage and broken post @ anchor Southwest corner.
0	331/2	Reinforced Conc Bridge Railing	Used CWB used for guardrail on the north end. Minor cracks & spalls. Some traffic damage. Several with large damaged areas & broken corners.
0	333/2	Other Bridge Railing	Good alignment except for minor traffic damage, W Beam on wood posts & blocks which are dry & checked.

PAST INSPECTION

Inspection Date: 01/20/2009 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000004231 -
Date 2009-01-20-
Present: D. Gregory, D.Trujillo; Clear, light breeze, 45 deg. Bridge is over medium intermittent stream with man made banks & wide flood plane. Good alignment. Minor scour holes near piling, heavy debris on piling. Minor silt. Top of felloe rail to channel: A1=9.0', P1=16.3', P2=14.9', P3=14.9', P4=7.7', A2=5.9'. Bank has sloughed off at P1. Approach pavement is PMBP & stayfill with large transverse, longitudinal, random & alligator cracks, patches, & potholes. Shoulders are dirt & gravel, narrow, steep & soft, piping hole at SW corner of deck. The embankment is in good condition. 2- 15 Ton Weight Limit Sign, 4 Type III Paddles for bridge signing.
RECOMMENDATIONS: Short Term: repair broken Felloe rail, Replace damaged guard rail, Reinforce pile 4 @ pier 4.
Bridge is on priority list to be replaced. 2011 STIP, BR-TPO-5459(2) CN 1849 (Pending realignment study)
Structure 000000000004231 -
Date 2003-01-21 -

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 01/08/2007 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000004231 -
Date 2007-01-08 -
Present: D. Gregory; Clear, light breeze, 45 deg. Bridge is over medium intermittent stream with man made banks & wide flood plane. Good alignment. Minor scour holes near piling, heavy debris on piling. Minor silt. Top of felloe rail to channel: A1=9.7', P1=14.8', P2=15.5', P3=13.5', P4=7.2', A2=6.0'. Bank has sloughed off at P1. Approach pavement is PMBP & stayfill with large transverse, longitudinal, random & alligator cracks, patches, & potholes. Shoulders are dirt & gravel, narrow, steep & soft, piping hole at SW corner of deck. The embankment is in good condition. 2- 15 Ton Weight Limit Sign, 4 Type III Paddles for bridge signing. RECOMMENDATIONS: Bridge is on priority list to be replaced. 2011 STIP, BR-TPO-5459(2) CN 1849
Structure 000000000004231 -
Date 2003-01-21 -

PAST INSPECTION

Inspection Date: 01/24/2005 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000004231 -
Date 2005-01-24 -
Present: D. Gregory; Overcast, scattered showers, windy, 40 deg. Bridge is over medium intermittent stream with man made banks & wide flood plane. Good alignment. Minor scour holes near piling, heavy debris on piling. Minor silt. Top of felloe rail to channel: A1=9.0', P1=10.2', P2=15.5', P3=12.0', P4=8.0', A2=7.0'. Approach pavement is PMBP & stayfill with large transverse, longitudinal, random & alligator cracks, patches, & potholes. Shoulders are dirt & gravel, narrow, steep & soft, piping hole at SW corner of deck. The embankment is in good condition. 1- 15 Ton Weight Limit Sign, 4 2V delineators with missing reflectors for bridge signing.
RECOMMENDATIONS: Bridge is on priority list to be replaced. Short Term: Patrol 46-58, install 15 Ton Weight Limit Sign, replace reflectors on 2V Delineators, fill piping hole at SW corner of bridge deck.
Structure 000000000004231 -
Date 2003-01-21 -

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 01/21/2003 Type: 1 Regular NBI

Inspector: PMEYE06 Pontis User Key: PMEYE06 - PAUL MEYER

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

PMEYE06 inspection comments - Present: P. Meyer Partly cloudy, windy, 45 deg. Bridge is over medium intermittent stream with man made banks & wide flood plane. Good alignment. Minor scour holes near piling, heavy debris on piling. Minor silt. Top of felloe rail to channel: A1=9.5', P1=15.1', P2=15.8', P3=14.1', P4=10.3', A2=8.9' Approach pavement is PMBP & stayfill. large transverse, longitudinal, random & alligator cracks, patches, & potholes. Shoulders are dirt & gravel, narrow, steep & soft, piping hole at SW. The embankment is in good condition. 1- 15 ton weight limit sign, for bridge signing. RECOMMENDATIONS: None, Bridge is on priority list to be replaced.
Structure 000000000004231 -
Date 2003-01-21 -

PAST INSPECTION

Inspection Date: 02/12/2001 Type: 1 Regular NBI

Inspector: PMEYE01 Pontis User Key: PMEYE06 - PAUL MEYER

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

PMEYE01 inspection comments - Present: P. Meyer Sunny, calm, 45 deg. Bridge is over medium intermittent stream with man made banks & wide flood plane. Good alignment. Minor scour holes near piling, heavy debris on piling. Minor silt. Top of felloe rail to channel: A1=9.5', P1=14.5', P2=15.8', P3=14.1', P4=10.3', A2=8.9' Approach pavement is PMBP & stayfill. large transverse, longitudinal, random & alligator cracks, patches, & numerous potholes. Shoulders are dirt & gravel, narrow, steep & soft. The embankment is in good condition. 1- 15 ton weight limit sign, & 4 2V delineators with missing reflectors for bridge signing. RECOMMENDATIONS: Patrol 46-58 patch potholes & large cracks in deck & approachs. Bridge is on priority list to be replaced.
Structure 000000000004231 -
Date 2/12/01 -
Previous comments > GSPAR01 inspection comments -
Structure 000000000004231 -
Date 2/18/99 -
Previous comments > (none)

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Bridge Number: 000000000006553 **Inspection Date (90): 9/29/2009**

NMDOT District No. = District 6	(3) County = 31 McKINLEY	Sufficiency Rating = 96
(4)Town/City = Gallup	(91) Frequency = 24 months	Next Inspection = 09/29/2011
(7) Facility Carried = I-40 EB (11) Mile Post = 16.668 mi	Patrol No. 46-58, Gallup	Deficiency Status Not Deficient
(49) Structure Length = 194.0 ft	(19) Detour Length = 0.0 mi	(112) NBIS Length = Long Enough
(102) Direction of Traffic = 1 1-way traffic	(28A) Lanes on = 3	(28B) Lanes Under = 0
(41) Posting Status = A Open, no restriction	(34) Skew = 45.00 °	(104) Highway System = 1 On the NHS
(9) Location = 0.2 Mi E Jct I-40/NM-118		
(6) Feature Intersected = BNSF Railroad		

DESCRIPTION:
3 continuous spans of 58', 74', 58'. 6 Welded steel plate girders per span, CIP concrete deck, concrete stub abutments, concrete pier caps on concrete columns with concrete pier walls.

CONDITION

Deck (58) = 7 Good **Super (59) =** 7 Good **Sub (60) =** 7 Good
Channel/Channel Protection (61) = N N/A (NBI) **Culvert (62) =** N N/A (NBI)

APPRAISAL

Str. Evaluation (67) = 7 **Deck Geometry (68) =** 5 Above Tolerable
Waterway Adequacy (71) = N Not applicable **Approach Alignment (72) =** Equal Desirable Crit
Underclearance, Vertical and Horizontal (69) = 5 **Scour Critical (113)=** N Not Over Waterway

LOAD RATING AND POSTING

Inventory Rating (66) = HS20.8 **Operating Rating (64) = HS37.7**
Posting status (41) = A Open, no restriction Posting (70) = 5 At/Above Legal Loads
Inventory Rating Method (65) = 1 LF Load Factor Operating Rating Method (63) = 1 LF Load Factor
Design Load (31) = 5 MS 18 (HS 20)

(29) ADT = 10,059	(114) Future ADT= 14,555	(109) Truck ADT= 40 %
(30) Year of ADT = 2008	(115) Year of Future ADT= 2028	Route Posted Speed Limit =

Team Leader *Date* *Reviewed By* *Date*

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

(16) Latitude = 35d 30' 32"	(17) Longitude = 108d 49' 37"	(27) Year Built = 1966
(22) Owner = State Highway Agency	(21) Custodian = State Highway Agency	(106) Year Reconstruct= 1993
(42A) Type of Service on = 1 Highway	(42B)Type Service under= 2 Railroad	(5C) Level of Service = 1 Mainline

(26) Functional Class = 11 Urban Interstate	(100) Defense Highway = 1 Interstate STRAHNET
(37) Historical Significance = 5 Not eligible for NRHP	(35) Structure Flared = 0 No flare
(43A) Main Span Material/Design = 4 Steel Continuous	(43B) Main Span Material/Design = 02 Stringer/Girder
(48) Length Max Span = 74.0 ft	(46) Number of Approach Spans = 0
(44A) Approach Span Material =	(44B) Approach Span Material =
(107) Deck Type = 1 Concrete-Cast-in-Place	(108C) Deck Protection = 1 Epoxy Coated Reinforci
(108A) Wearing Surface = 1 Monolithic Concrete	(108B) Membrane = 0 None
Min. Vertical Clearance Minus= 0	Min. Vertical 10' Selected Minus= 0
Min. Vertical Clearance Plus= 2200	Min. Vertical 10' Selected Plus= 9999
(55) Minimum Lateral Undrclearance R = 11.0 ft	(56) Minimum Lateral Undrclearance L = 0.0 ft

Project No. = I-IG-040-1(18)15	Old Bridge No. =	Known Utilities = N
(51) Width Curb to Curb = 52.1 ft	(52) Width Out to Out = 55.1 ft	(33) Median = 1 Open median

Special Inspections :

(92A) FC Frequency = NA	(93A) FC Inspection Date = NA	Next UW Inspection = NA
(92B) UW Frequency = NA	(93B) UW Inspection Date = NA	Next FC Inspection = NA
(92C) SI Frequency = NA	(93C) SI Date = NA	Next SI = NA

TRAFFIC SAFETY FEATURES

Bridge Rail (36A) = 1 Meets Standards Approach Rail (36C) = 1 Meets Standards
Transition (36B) = 1 Meets Standards Approach Rail Ends (36D) = 1 Meets Standards

Stay In Place Forms = No	Stay In Place Form Type = N\A	Overlay Thickness =
Culver Fill = 0	(32) Approach Roadway Width (w/ shoulders) = 53.8 ft	

SIP Notes:
No SIP forms.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Bridge Number: 000000000006553 **Inspection Date (90): 9/29/2009**

NMDOT District No. = District 6	(3) County = 31 McKINLEY	Sufficiency Rating = 96
(4)Town/City = Gallup	(91) Frequency = 24 months	Next Inspection = 09/29/2011
(7) Facility Carried = I-40 EB (11) Mile Post = 16.668 mi	Patrol No. 46-58, Gallup	Deficiency Status Not Deficient
(49) Structure Length = 194.0 ft	(19) Detour Length = 0.0 mi	(112) NBIS Length = Long Enough
(102) Direction of Traffic = 1 1-way traffic	(28A) Lanes on = 3	(28B) Lanes Under = 0
(41) Posting Status = A Open, no restriction	(34) Skew = 45.00 °	(104) Highway System = 1 On the NHS
(9) Location = 0.2 Mi E Jct I-40/NM-118		
(6) Feature Intersected = BNSF Railroad		

DESCRIPTION:
3 continuous spans of 58', 74', 58'. 6 Welded steel plate girders per span, CIP concrete deck, concrete stub abutments, concrete pier caps on concrete columns with concrete pier walls.

CONDITION

Deck (58) = 7 Good **Super (59) =** 7 Good **Sub (60) =** 7 Good
Channel/Channel Protection (61) = N N/A (NBI) **Culvert (62) =** N N/A (NBI)

APPRAISAL

Str. Evaluation (67) = 7 **Deck Geometry (68) =** 5 Above Tolerable
Waterway Adequacy (71) = N Not applicable **Approach Alignment (72) =** Equal Desirable Crit
Underclearance, Vertical and Horizontal (69) = 5 **Scour Critical (113)=** N Not Over Waterway

LOAD RATING AND POSTING

Inventory Rating (66) = HS20.8 **Operating Rating (64) = HS37.7**
Posting status (41) = A Open, no restriction Posting (70) = 5 At/Above Legal Loads
Inventory Rating Method (65) = 1 LF Load Factor Operating Rating Method (63) = 1 LF Load Factor
Design Load (31) = 5 MS 18 (HS 20)

(29) ADT = 10,059	(114) Future ADT= 14,555	(109) Truck ADT= 40 %
(30) Year of ADT = 2008	(115) Year of Future ADT= 2028	Route Posted Speed Limit =

Team Leader *Date* *Reviewed By* *Date*

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

(16) Latitude = 35d 30' 32"	(17) Longitude = 108d 49' 37"	(27) Year Built = 1966
(22) Owner = State Highway Agency	(21) Custodian = State Highway Agency	(106) Year Reconstruct= 1993
(42A) Type of Service on = 1 Highway	(42B)Type Service under= 2 Railroad	(5C) Level of Service = 1 Mainline

(26) Functional Class = 11 Urban Interstate	(100) Defense Highway = 1 Interstate STRAHNET
(37) Historical Significance = 5 Not eligible for NRHP	(35) Structure Flared = 0 No flare
(43A) Main Span Material/Design = 4 Steel Continuous	(43B) Main Span Material/Design = 02 Stringer/Girder
(48) Length Max Span = 74.0 ft	(46) Number of Approach Spans = 0
(44A) Approach Span Material =	(44B) Approach Span Material =
(107) Deck Type = 1 Concrete-Cast-in-Place	(108C) Deck Protection = 1 Epoxy Coated Reinforci
(108A) Wearing Surface = 1 Monolithic Concrete	(108B) Membrane = 0 None
Min. Vertical Clearance Minus= 0	Min. Vertical 10' Selected Minus= 0
Min. Vertical Clearance Plus= 2200	Min. Vertical 10' Selected Plus= 9999
(55) Minimum Lateral Undrclearance R = 11.0 ft	(56) Minimum Lateral Undrclearance L = 0.0 ft

Project No. = I-IG-040-1(18)15	Old Bridge No. =	Known Utilities = N
(51) Width Curb to Curb = 52.1 ft	(52) Width Out to Out = 55.1 ft	(33) Median = 1 Open median

Special Inspections :

(92A) FC Frequency = NA	(93A) FC Inspection Date = NA	Next UW Inspection = NA
(92B) UW Frequency = NA	(93B) UW Inspection Date = NA	Next FC Inspection = NA
(92C) SI Frequency = NA	(93C) SI Date = NA	Next SI = NA

TRAFFIC SAFETY FEATURES

Bridge Rail (36A) = 1 Meets Standards Approach Rail (36C) = 1 Meets Standards
Transition (36B) = 1 Meets Standards Approach Rail Ends (36D) = 1 Meets Standards

Stay In Place Forms = No	Stay In Place Form Type = N\A	Overlay Thickness =
Culver Fill = 0	(32) Approach Roadway Width (w/ shoulders) = 53.8 ft	

SIP Notes:
No SIP forms.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Approach Roadway Condition:
Asphalt pavement has transverse cracks up to 1/8" with minor wheel rutting. Concrete approach slabs are in good condition. Transition has heavy impact loading due uneven approach. Asphalt shoulders have transverse, longitudinal, and map cracks up to 1/4". Embankments have steep slopes with minor vegetation with an area of heavy undermining between the bridge CBR and the roadway CBR. Slope paving at the SE corner exposing 5' of the bottom of the CBR. Bridge signing: Paddleboards.

Channel and Channel Protection:
N/A.

Recommendations and Inspection Notes:
1. Repair undermining at the SE corner of CBR and slope paving. 2. Repair broken joint armor at joint 1.

Str Unit	Elem/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
0	26/2	Conc Deck/Coatd Bars	(SF)	10,689	100 %	10,689	0 %	0	0 %	0	0 %	0	0 %	0
0	107/2	Paint Stl Opn Girder	(LF)	1,358	100 %	1,358	0 %	0	0 %	0	0 %	0	0 %	0
0	108/2	Diaphragm attch jnts	(EA)	96	100 %	96	0 %	0	0 %	0	0 %	0	0 %	0
0	205/2	R/Conc Column	(EA)	8	100 %	8	0 %	0	0 %	0	0 %	0	0 %	0
0	210/2	R/Conc Pier Wall	(LF)	60	100 %	60	0 %	0	0 %	0	0 %	0	0 %	0
0	215/2	R/Conc Abutment	(LF)	155	52 %	80	48 %	75	0 %	0	0 %	0	0 %	0
0	219/2	CONC WINGWALL	(LF)	92	100 %	92	0 %	0	0 %	0	0 %	0	0 %	0
0	234/2	R/Conc Cap	(LF)	147	100 %	147	0 %	0	0 %	0	0 %	0	0 %	0
0	300/2	Strip Seal Exp Joint	(LF)	155	92 %	143	0 %	0	8 %	12	0 %	0	0 %	0
0	306/2	COMPRESSION JOINT	(LF)	155	92 %	143	0 %	0	8 %	12	0 %	0	0 %	0
0	310/2	Elastomeric Bearing	(EA)	28	100 %	28	0 %	0	0 %	0	0 %	0	0 %	0
0	321/2	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
0	329/2	GUARDRAIL (standard)	(LF)	381	100 %	381	0 %	0	0 %	0	0 %	0	0 %	0
0	331/2	Conc Bridge Railing	(LF)	1,001	97 %	966	3 %	30	0 %	5	0 %	0	0 %	0
0	338/2	CONC SLOPE PAVING	(SF)	13,743	95 %	13,024	5 %	700	0 %	20	0 %	0	0 %	0
0	358/2	Deck Cracking SmFlag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0

Str Unit	Elem/Env	Description	Element Notes
0	26/2	Concrete Deck - Protected w / Coat	Top of deck has transverse, longitudinal and map cracks up to 1/16" with isolated areas of heavy scaling with minor debris build-up. Deck edges have isolated vertical cracks up to 1/32" with light leaching. Underside of deck has transverse cracks up to 1/16", some isolated small spall along the construction joint with isolated moderate leaching.
0	107/2	Painted Steel Open Girder/Beam	Steel plate girders have heavy soot build-up and are in good condition.
0	108/2	Diaphragm Attachment Joints for St	Steel diaphragms have isolated minor damage probably caused during construction in good condition, the remainder are in good condition.
0	205/2	Reinforced Conc Column or Pile Ext	Columns are in good condition.
0	210/2	Reinforced Conc Pier Wall	Pier walls have isolated vertical cracks up to 1/16".

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Str Unit	Elem/Env	Description	Element Notes
0	215/2	Reinforced Conc Abutment	Abutments have vertical, horizontal, transverse, longitudinal and map cracks up to 1/16" with an area of delamination 2 1/2' x 1', light leaching and an areas of heavy water stains.
0	219/2	REINFORCED CONC WINGWALL/PA	Wingwalls are in good condition.
0	234/2	Reinforced Conc Cap	Pier caps have isolated horizontal, vertical and map cracks up to 1/32".
0	300/2	Strip Seal Expansion Joint	Strip seal joints measured from W>E: 1 1/2" and 1 3/4". Joints are filled with dirt and debris build-up. Joints with loss of adhesion up to 2'. Joint armor at joint 1 is broken. Joints leak due to loss of adhesion and broken joint armor.
0	306/2	COMPRESSION JOINT SEAL-ENDS	Compression seals at the end of the approach slab has loss of adhesion up to 20'.
0	310/2	Elastomeric Bearing	Some elastomeric bearing pads are protruding up to 1/2", some nuts are not flush with the sole plates and some bolts are bent.
0	321/2	Reinforced Conc Approach Slab w	Concrete approach slabs are in good condition.
0	329/2	GUARDRAIL (STANDARD)	12" W rail on timber posts with breakaway anchors to Thrie rail. Timber posts on the north side has a sink hole at the NW corner.
0	331/2	Reinforced Conc Bridge Railing	3'-3" CBR has horizontal, vertical and map cracks up to 1/32" with delamination up to 1' x 1' at the SW corner, minor scaling on the south side with a spall at the NE corner 19" x 19" with exposed rebar up to 7", isolate traffic scratches on the south side up to 20' with undermining up to 6' x 5" at the SW corner and moderate paint loss.
0	338/2	CONCRETE SLOPE PAVING	Concrete slope protection has horizontal, vertical and map cracks up to 1/4", some have been sealed, some buckling near the bottoms, with 7" of settlement with minor undermining and a sink hole 6' x 4' x 3' and a wooden patch at the SE corner and 4" of separation near the abutments.
0	358/2	Deck Cracking	Top of deck has transverse, longitudinal and map cracks up to 1/16". Deck edges have isolated vertical cracks up to 1/32". Underside of deck has transverse cracks up to 1/16".

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 09/29/2009 Type: 1 Regular NBI

Inspector: GBACA00 Pontis User Key: GBACA00 - GEORGE BACA

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

1. Weather Conditions: Cloudy, 75 degrees F. 2. NMSU Bridge Inspection team members: George P. Baca, Pietre Hamblin-Hatchell and Armando De La Cruz. 3. Work Done Since Last Inspection: None evident. 4. Traffic Safety Features: 12" W rail on timber posts with breakaway anchors to Thrie rail that is bolted to CBR.

PAST INSPECTION

Inspection Date: 09/18/2007 Type: 1 Regular NBI

Inspector: GBACA00 Pontis User Key: GBACA00 - GEORGE BACA

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

1. Weather Conditions: Clear, 70 degrees F. 2. NMSU Bridge Inspection team members: George P. Baca, Charles Carrasco and Ryan Fairbank. 3. Work Done Since Last Inspection: None evident. 4. Channel and Channel Protection: N/A. 5. Approach Roadway Condition: Asphalt pavement has longitudinal cracks up to 1/8". Concrete approach slabs are in good condition. Transition has heavy impact loading due uneven approach. Asphalt shoulders have transverse cracks up to 1/4". Embankments have steep slopes with minor vegetation. There is an area of heavy undermining between the bridge CBR and the roadway CBR. Slope paving at the SE corner exposing 5' of the bottom of the CBR. Bridge signing: Paddleboards. 6. Traffic Safety Features: 12" W rail on timber posts with breakaway anchors to Thrie rail that is bolted to CBR. 7. Work Recommended: 1. Repair undermining at the SE corner of CBR and slope paving. 2. Repair broken joint armor at joint 1.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 09/21/2005 Type: 1 Regular NBI

Inspector: STEVEQ Pontis User Key: STEVEQ - STEPHEN QUINTANA

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000006553 -
Date 09/22/2005 -
Present: S.Quintana, D. Gregory; Sunny, windy, 75 deg. The approach pavement is new in good condition with minor bleeding. The shoulders are PMBP in fair condition with medium longitudinal cracks, some large cracks near the bridge. Minor erosion of well vegetated embankment. Large subsidence cracks on the SW embankment at the drain. No bridge signing.

At the South end of bridge (5-100 ft) the approach embankment to bridge is settling. Apparent slip planes are evident. The CBR, located at the top of the embankment shows definite signs of rotation, craks, and breaks at the joints. Additiona weight placed on top of roadway or embankment may result in movement of the roadway. Added moisture (weight and lubrication of slip planes) may cause movement as well.

RECOMMENDATIONS: Long Term; Bridge Crew, repair spalls and joints. Immediate Repairs needed: backfill piping under slope paving with flowable fill, seal joints to minimize intrusion of water.

RECOMMENDATION: Survey Crew: Need to set control points to evaluate settlement at approach slabs, abutments and bridge deck. Control points on outside lane at guardrail (CBR), and approach slab/sleeper are requested at a minimum of 4 ft centers. Approaches need control points at 10 ft centers along outside of EBL all other control points at 10 ft centers along joints, outside gurdrail (CBR), etc.

RECOMMENDATIONS: By Contract, stabilize the embankment by construction of terraced fill, reinforced earth (soil nails) or alternate method as recommended by the Geotechnical Section at the GO or consultant.

Structure 000000000006553 -
Date 2005-09-23 -

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 09/15/2003 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000006553 -
Date 2003-09-15 -
Present: P. Meyer, D. Gregory; Sunny, windy, 75 deg. The approach pavement is new in good condition with minor bleeding. The shoulders are PMBP in fair condition with medium longitudinal cracks, some large cracks near the bridge. Minor erosion of well vegetated embankment. Large subsidence cracks on the SW embankment at the drain. No bridge signing. RECOMMENDATIONS: Long Term; Bridge Crew, repair spalls and joints, backfill piping under slope paving with flowable fill.
Structure 000000000006553 -
Date 09/06/2001 -

PAST INSPECTION

Inspection Date: 09/06/2001 Type: 1 Regular NBI

Inspector: GSPAR01 Pontis User Key: 13

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

GSPAR01 inspection comments - Present: G. Sparkman, P. Meyer Sunny, windy, 75 deg. The approach pavement is large patches in good condition. The shoulders are PMBP in fair condition with medium longitudinal cracks, some large cracks near the bridge. Minor erosion of well vegetated embankment. Large subsidence cracks on the SW embankment at the drain. No bridge signing. RECOMMENDATIONS: None
Structure 000000000006553 -
Date 09/06/2001 -

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 09/07/1999 Type: 1 Regular NBI

Inspector: PMEYE01 Pontis User Key: PMEYE06 - PAUL MEYER

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

PMEYE01 inspection comments -
Structure 000000000006553 -
Date 9/7/99 -
Previous comments > (none)

PAST INSPECTION

Inspection Date: 09/01/1997 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 10/01/1995 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☐

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

INSPECTOR WORK CANDIDATES

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Bridge Number: 000000000006554 **Inspection Date (90): 9/29/2009**

NMDOT District No. = District 6	(3) County = 31 McKINLEY	Sufficiency Rating = 96
(4)Town/City = Gallup	(91) Frequency = 24 months	Next Inspection = 09/29/2011
(7) Facility Carried = I-40 WB (11) Mile Post = 16.658 mi	Patrol No. 46-58, Gallup	Deficiency Status Not Deficient
(49) Structure Length = 194.0 ft	(19) Detour Length = 0.0 mi	(112) NBIS Length = Long Enough
(102) Direction of Traffic = 1 1-way traffic	(28A) Lanes on = 3	(28B) Lanes Under = 0
(41) Posting Status = A Open, no restriction	(34) Skew = 45.00 °	(104) Highway System = 1 On the NHS
(9) Location = 0.2 Mi E Jct I-40/NM-118		
(6) Feature Intersected = BNSF Railroad		

DESCRIPTION:

3 continuous spans of 58', 74' and 58'. 6 Welded steel plate girders, CIP concrete deck, concrete stub abutments and concrete pier caps on concrete columns with concrete pier walls.

CONDITION

Deck (58) = 7 Good **Super (59) =** 7 Good **Sub (60) =** 6 Satisfactory

Channel/Channel Protection (61) = N N/A (NBI) **Culvert (62) =** N N/A (NBI)

APPRAISAL

Str. Evaluation (67) = 6 **Deck Geometry (68) =** 5 Above Tolerable

Waterway Adequacy (71) = N Not applicable **Approach Alignment (72) =** Equal Desirable Crit

Underclearance, Vertical and Horizontal (69) = 5 Scour Critical (113)= N Not Over Waterway

LOAD RATING AND POSTING

Inventory Rating (66) = HS20.8 **Operating Rating (64) = HS37.7**

Posting status (41) = A Open, no restriction Posting (70) = 5 At/Above Legal Loads

Inventory Rating Method (65) = 1 LF Load Factor Operating Rating Method (63) = 1 LF Load Factor

Design Load (31) = 5 MS 18 (HS 20)

(29) ADT = 9,363	(114) Future ADT= 13,549	(109) Truck ADT= 40 %
(30) Year of ADT = 2008	(115) Year of Future ADT= 2028	Route Posted Speed Limit =

Team Leader *Date* *Reviewed By* *Date*

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

(16) Latitude = 35d 30' 32"	(17) Longitude = 108d 49' 39"	(27) Year Built = 1966
(22) Owner = State Highway Agency	(21) Custodian = State Highway Agency	(106) Year Reconstruct= 1993
(42A) Type of Service on = 1 Highway	(42B)Type Service under= 2 Railroad	(5C) Level of Service = 1 Mainline

(26) Functional Class = 11 Urban Interstate	(100) Defense Highway = 1 Interstate STRAHNET
(37) Historical Significance = 5 Not eligible for NRHP	(35) Structure Flared = 0 No flare
(43A) Main Span Material/Design = 4 Steel Continuous	(43B) Main Span Material/Design = 02 Stringer/Girder
(48) Length Max Span = 74.0 ft	(46) Number of Approach Spans = 0
(44A) Approach Span Material =	(44B) Approach Span Material =
(107) Deck Type = 1 Concrete-Cast-in-Place	(108C) Deck Protection = 1 Epoxy Coated Reinforci
(108A) Wearing Surface = 1 Monolithic Concrete	(108B) Membrane = 0 None
Min. Vertical Clearance Minus= 2208	Min. Vertical 10' Selected Minus= 9999
Min. Vertical Clearance Plus= 0	Min. Vertical 10' Selected Plus= 0
(55) Minimum Lateral Undrclearance R = 13.5 ft	(56) Minimum Lateral Undrclearance L = 0.0 ft

Project No. = I-IG-040-1(18)15	Old Bridge No. =	Known Utilities = N
(51) Width Curb to Curb = 51.6 ft	(52) Width Out to Out = 55.1 ft	(33) Median = 1 Open median

Special Inspections :

(92A) FC Frequency = NA	(93A) FC Inspection Date = NA	Next UW Inspection = NA
(92B) UW Frequency = NA	(93B) UW Inspection Date = NA	Next FC Inspection = NA
(92C) SI Frequency = NA	(93C) SI Date = NA	Next SI = NA

TRAFFIC SAFETY FEATURES

Bridge Rail (36A) = 1 Meets Standards	Approach Rail (36C) = 1 Meets Standards
Transition (36B) = 1 Meets Standards	Approach Rail Ends (36D) = 1 Meets Standards

Stay In Place Forms = No	Stay In Place Form Type = N\A	Overlay Thickness =
Culver Fill = 0	(32) Approach Roadway Width (w/ shoulders) = 51.7 ft	

SIP Notes:

No SIP forms.

Since the last inspection of 9/18/07, the bridge crew installed flowable fill in voids under the concrete slope paving.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Approach Roadway Condition:
Asphalt pavement has map cracks up to 1/4" with minor raveling. Concrete approach slab is partially covered with asphalt, concrete has longitudinal, diagonal and map cracks up to 1/16" and with isolated spalls up to 8" x 4". Exit approach has spalls up to 8" x 7". Transition has minor impact loading due to uneven approach. Asphalt shoulders have longitudinal cracks up to 1/8" with moderate dirt and debris build-up. Embankments have steep slopes with heavy vegetation. No bridge signing.

Channel and Channel Protection:
N/A.

Recommendations and Inspection Notes:
Long Term: 1. Repair joints. 2. Monitor settlement of slope protection. 3. Clean dirt and debris from joints. 4. Monitor vertical crack on abutment backwall.

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
0	26/2	Conc Deck/Coatd Bars	(SF)	10,689	100 %	10,689	0 %	0	0 %	0	0 %	0	0 %	0
0	107/2	Paint Stl Opn Girder	(LF)	1,358	100 %	1,358	0 %	0	0 %	0	0 %	0	0 %	0
0	108/2	Diaphragm attch jnts	(EA)	96	100 %	96	0 %	0	0 %	0	0 %	0	0 %	0
0	205/2	R/Conc Column	(EA)	8	100 %	8	0 %	0	0 %	0	0 %	0	0 %	0
0	215/2	R/Conc Abutment	(LF)	154	49 %	75	51 %	79	0 %	0	0 %	0	0 %	0
0	219/2	CONC WINGWALL	(LF)	59	100 %	59	0 %	0	0 %	0	0 %	0	0 %	0
0	234/2	R/Conc Cap	(LF)	148	100 %	148	0 %	0	0 %	0	0 %	0	0 %	0
0	300/2	Strip Seal Exp Joint	(LF)	155	68 %	105	32 %	50	0 %	0	0 %	0	0 %	0
0	310/2	Elastomeric Bearing	(EA)	28	100 %	28	0 %	0	0 %	0	0 %	0	0 %	0
0	321/2	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
0	329/2	GUARDRAIL (standard)	(LF)	381	100 %	381	0 %	0	0 %	0	0 %	0	0 %	0
0	331/2	Conc Bridge Railing	(LF)	1,001	98 %	981	2 %	20	0 %	0	0 %	0	0 %	0
0	338/2	CONC SLOPE PAVING	(SF)	13,743	90 %	12,343	10 %	1,400	0 %	0	0 %	0	0 %	0
0	358/2	Deck Cracking SmFlag	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0

Str Unit	Elem/Env	Description	Element Notes
0	26/2	Concrete Deck - Protected w / Coat	Top of concrete deck has transverse, longitudinal and map cracks up to 1/32" with isolated pop-outs and areas of heavy scaling. Deck edges have vertical cracks up to 1/32". Underside of deck has transverse, longitudinal and map cracks up to 1/16" with light leaching.
0	107/2	Painted Steel Open Girder/Beam	Girders have a bent bearing stiffener at abutment 2 with moderate soot build-up at span 2.
0	108/2	Diaphragm Attachment Joints for St	Diaphragms are bent between girders 5 and 6 at span 1 and between girders 6 and 7 at span 3.
0	205/2	Reinforced Conc Column or Pile Ext	Columns are in good condition.
0	215/2	Reinforced Conc Abutment	Abutments have horizontal, vertical and map cracks up to 1/16" with light water stains. Backwall has a 1/2" vertical crack that is full depth and is apparent on top backwall.
0	219/2	REINFORCED CONC WINGWALL/PA	Wingwalls have vertical cracks up to 1/16".

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Str Unit	Elem/Env	Description	Element Notes
0	234/2	Reinforced Conc Cap	Concrete pier caps have isolated vertical and transverse cracks up to 1/32".
0	300/2	Strip Seal Expansion Joint	Joints measured from W>E: 1" and 1 1/2". Joints have loss of adhesion up to 1' and are full of dirt and debris. Joints appear to leak due to loss of adhesion.
0	310/2	Elastomeric Bearing	Elastomeric bearing have some bent and missing bolts with some pads protruding from bearings approximately 1".
0	321/2	Reinforced Conc Approach Slab w	Concrete approach slab is partially covered with asphalt. Concrete has longitudinal, diagonal and map cracks up to 1/16" with isolated spalls up to 8" x 4". Exit approach has spalls up to 8" x 7".
0	329/2	GUARDRAIL (STANDARD)	Thrie rail on timber posts with breakaway anchors on south side and continuous CBR on north side.
0	331/2	Reinforced Conc Bridge Railing	3'-6" CBR has vertical, horizontal, transverse and map cracks up to 1/32", spalls up to 5' x 6" with exposed rebar up to 10" at NW corner with moderate paint loss and minor traffic scratches.
0	338/2	CONCRETE SLOPE PAVING	Concrete slope paving has transverse, longitudinal and map cracks up to 1/8", some have been epoxy sealed with minor vegetation in joints with settlement up to 4 1/2" at all four corners and a open joint up to 3" at NW corner and separation between slope paving and wingwall up to 3" at abutment 1 with undermining up to 8' x 5' x 2' at NE corner.
0	358/2	Deck Cracking	Top of deck has transverse, longitudinal and map cracks up to 1/32". Deck edges have vertical cracks up to 1/32". Underside of deck has transverse and longitudinal cracks up 1/16".

PAST INSPECTION

Inspection Date: 09/29/2009 Type: 1 Regular NBI

Inspector: GBACA00 Pontis User Key: GBACA00 - GEORGE BACA

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

1. Weather Conditions: Cloudy, 75 degrees F. 2. NMSU Bridge Inspection team members: George P. Baca, Armando De La Cruz and Pietre Hamblin-Hatchell. 3. Work Done Since Last Inspection: None evident. 4. Channel and Channel Protection: N/A. 5. Traffic Safety Features: Thrie rail on timber posts with breakaway anchors on south side is bolted to CBR and continuous CBR on north side.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 09/18/2007 Type: 1 Regular NBI

Inspector: GBACA00 Pontis User Key: GBACA00 - GEORGE BACA

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

1. Weather Conditions: Clear, 70 degrees F. 2. NMSU Bridge Inspection team members: George P. Baca, Ryan Fairbank and Charles Carrasco. 3. Work Done Since Last Inspection: None evident. 4. Channel and Channel Protection: N/A. 5. Approach Roadway Condition: Asphalt pavement has map cracks up to 1/16" with minor raveling. Transition has minor impact loading due to uneven approach. Asphalt shoulders are in good condition. Embankments have moderate slopes with minor vegetation. No bridge signing. 6. Traffic Safety Features: 12" W rail on timber posts with breakaway anchors to Thrie rail that is bolted to CBR. 7. Work Recommended: 1. Repair pourable seal in compression joint. 2. Monitor settlement of slope protection. 3. Clean dirt and debris from joints.

PAST INSPECTION

Inspection Date: 09/23/2005 Type: 1 Regular NBI

Inspector: STEVEQ Pontis User Key: STEVEQ - STEPHEN QUINTANA

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGregory -- inspection comments -
Structure 000000000006554 -
Date 2005-9-23 -
Present: S.Quintana, D. Gregory; Sunny, windy, 75 deg. Approach pavement is new surfacing. Concrete paving is in fair condition with cracks & spalls at joints, joint seals are leaking. Shoulders are PMBP & concrete in fair condition with longitudinal cracks in PMBP & large cracks in concrete. Erosion of well vegetated embankment. No bridge signing.

Recommendation: Bridge Crew to fill erosion and piping areas with flowable fill, and seal all joints and cracks.
Survey Crew: Need to set control points to evaluate settlement at approach slabs, abutments and bridge deck. Control points on interior lane at guardrail (CBR) and approach slab/sleeper are requested at a minimum of 4 ft centers, all other control points at 10 ft centers along joints, outside gurdrail (CBR), etc.

Structure 000000000006554 -
Date 9/23/2005 -

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 09/15/2003 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000006554 -
Date 2003-09-15 -
Present: P. Meyer, D. Gregory; Sunny, windy, 75 deg. Approach pavement is new surfacing. Concrete paving is in fair condition with cracks & spalls at joints, joint seals are leaking. Shoulders are PMBP & concrete in fair condition with longitudinal cracks in PMBP & large cracks in concrete. Minor erosion of well vegetated embankment. No bridge signing. RECOMMENDATIONS: Bridge crew, replace pourable seal at A1.
Structure 000000000006554 -
Date 9/6/01 -

PAST INSPECTION

Inspection Date: 09/06/2001 Type: 1 Regular NBI

Inspector: GSPAR01 Pontis User Key: 13

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

GSPAR01 inspection comments - Present: P. Meyer. G. Sparkman Sunny, windy, 80 deg. Approach pavement is large blade patch with pushing, transverse cracks, rough. Concrete paving is in fair condition with cracks & spalls at joints, joint seals are leaking. Shoulders are PMBP & concrete in fair condition with longitudinal cracks in PMBP & large cracks in concrete. Minor erosion of well vegetated embankment. No bridge signing. RECOMMENDATIONS: patrol, 46-58, Immediate, repair damaged guardrail. Short term, regrade east approach. Bridge crew, replace pourable seal at A1.
Structure 000000000006554 -
Date 9/6/01 -

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 09/07/1999 Type: 1 Regular NBI

Inspector: PMEYE01 Pontis User Key: PMEYE06 - PAUL MEYER

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

PMEYE01 inspection comments -
Structure 000000000006554 -
Date 9/7/99 -
Previous comments > (none)

PAST INSPECTION

Inspection Date: 09/01/1997 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 10/01/1995 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☐

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

INSPECTOR WORK CANDIDATES

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Bridge Number: 000000000006730 **Inspection Date (90): 1/14/2008**

NMDOT District No. = District 6	(3) County = 31 McKINLEY	Sufficiency Rating = 55
(4)Town/City = Gallup	(91) Frequency = 24 months	Next Inspection = 01/14/2010
(7) Facility Carried = [40 EBL/WBL (11) Mile Post = 19.630 mi	Patrol No. 46-58	Deficiency Status Functionally Obsolete
(49) Structure Length = 33.1 ft	(19) Detour Length = 9.9 mi	(112) NBIS Length = Long Enough
(102) Direction of Traffic = 2 2-way traffic	(28A) Lanes on = 4	(28B) Lanes Under = 2
(41) Posting Status = A Open, no restriction	(34) Skew = 40.00 °	(104) Highway System = 1 On the NHS
(9) Location = 19.9 MI E OF ARIZ ST LINE		
(6) Feature Intersected = ALLISON RD		

DESCRIPTION:

Patrol 46-58, McKinley Co.: 1 - 25'3" x 14' x 157'4" Wall to Wall) and 22' 2" face of curb to face of curb within the CBC. Design I Roadway over was resurfaced since the last inspection. 3' of fill cover

Note: Functional Obsolescence is due to the limited width and height restriction on Allison Rd. The

CONDITION

Deck (58) = N N/A (NBI **Super (59) =** N N/A (NBI) **Sub (60) =** N N/A (NBI)

Channel/Channel Protection (61) = N N/A (NBI) **Culvert (62) =** 5 Moderate Dama

APPRAISAL

Str. Evaluation (67) = 5 **Deck Geometry (68) =** N Not applicable (NI

Waterway Adequacy (71) = N Not applicable **Approach Alignment (72) =** Equal Desirable Crit

Underclearance, Vertical and Horizontal (69) = 3 **Scour Critical (113)=** N Not Over Waterway

LOAD RATING AND POSTING

Inventory Rating (66) = HS19.8 **Operating Rating (64) = HS40.7**

Posting status (41) = A Open, no restriction Posting (70) = 5 At/Above Legal Loads

Inventory Rating Method (65) = 2 AS Allowable St Operating Rating Method (63) = 2 AS Allowable St

Design Load (31) = 5 MS 18 (HS 20)

(29) ADT = 18,770	(114) Future ADT= 32,034	(109) Truck ADT= 40 %
(30) Year of ADT = 2006	(115) Year of Future ADT= 2026	Route Posted Speed Limit =

Team Leader *Date* *Reviewed By* *Date*

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

(16) Latitude = 35d 31' 22"	(17) Longitude = 108d 45' 44"	(27) Year Built = 1966
(22) Owner = State Highway Agency	(21) Custodian = State Highway Agency	(106) Year Reconstruct= Unknown
(42A) Type of Service on = 1 Highway	(42B)Type Service under= 1 Highway	(5C) Level of Service = 1 Mainline

(26) Functional Class = 11 Urban Interstate	(100) Defense Highway = 1 Interstate STRAHNET
(37) Historical Significance = 5 Not eligible for NRHP	(35) Structure Flared = 0 No flare
(43A) Main Span Material/Design = 1 Concrete	(43B) Main Span Material/Design = 19 Culvert
(48) Length Max Span = 25.0 ft	(46) Number of Approach Spans = 0
(44A) Approach Span Material =	(44B) Approach Span Material =
(107) Deck Type = N N/A (NBI)	(108C) Deck Protection = N N/A (no deck (NBI))
(108A) Wearing Surface = N N/A (no deck (NBI))	(108B) Membrane = N N/A (no deck (NBI))
Min. Vertical Clearance Minus= 0	Min. Vertical 10' Selected Minus= 0
Min. Vertical Clearance Plus= 1306	Min. Vertical 10' Selected Plus= 1306
(55) Minimum Lateral Undrclearance R = 1.6 ft	(56) Minimum Lateral Undrclearance L = 0.0 ft

Project No. = I-040-1(19)18	Old Bridge No. =	Known Utilities = T
(51) Width Curb to Curb = 0.0 ft	(52) Width Out to Out = 0.0 ft	(33) Median = 1 Open median

Special Inspections :

(92A) FC Frequency = NA	(93A) FC Inspection Date = NA	Next UW Inspection = NA
(92B) UW Frequency = NA	(93B) UW Inspection Date = NA	Next FC Inspection = NA
(92C) SI Frequency = NA	(93C) SI Date = NA	Next SI = NA

TRAFFIC SAFETY FEATURES

Bridge Rail (36A) =	1 Meets Standards	Approach Rail (36C) =	1 Meets Standards
Transition (36B) =	1 Meets Standards	Approach Rail Ends (36D) =	1 Meets Standards

Stay In Place Forms =	Stay In Place Form Type =	Overlay Thickness =
Culver Fill = 3	(32) Approach Roadway Width (w/ shoulders) = 78.1 ft	

SIP Notes:

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Approach Roadway Condition:

Channel and Channel Protection:

Recommendations and Inspection Notes:

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
0	241/2	Concrete Culvert	(LF)	157	0 %	0	0 %	0	100 %	157	0 %	0	0 %	0
0	244/2	CULVERT PARAPET	(LF)	79	0 %	0	100 %	79	0 %	0	0 %	0	0 %	0
0	245/2	CULVERT WINGWALL	(EA)	4	0 %	0	50 %	2	50 %	2	0 %	0	0 %	0
0	329/2	GUARDRAIL (standard)	(LF)	1,877	100 %	1,877	0 %	0	0 %	0	0 %	0	0 %	0
0	362/2	Traf Impact SmFlag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0

Str Unit	Elem/Env	Description	Element Notes
0	241/2	Reinforced Concrete Culvert	Top-Minor transverse cracks with moderate to heavy leaching & ruststains, small impact spalls. Walls-Minor to medium cracks with leaching & delam, small spalls. Bottom-numerous patches, potholes & cracks. Curbs-delam, spalls & scale with exposed rebar.
0	244/2	CULVERT PARAPET	Numerous minor cracks, some light scale, medium to large impact spalls with exposed rebar under sign on both north and south side.
0	245/2	CULVERT WINGWALLS	Minor to large cracks, some leaching, large spall and 1/2" vertical crack at NW with exposed rebar, minor equipment gouges. Separation crack, diagonal cracks with leaching. Medium to large vertical crack - 1 1/4"-1 1/2" vertical crack at SE wing with delamination at the top of wingwall.
0	329/2	GUARDRAIL (STANDARD)	Thrie & W beam on square wood posts and blocks with breaks and minor scrapes; Type C anchors & continuous from previous structure. None under.
0	362/2	Traffic Impact	Small impact spalls at each end.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 01/14/2008 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000006730 -
Date 2008-01-14 -
Present: D. Gregory, D. Trujillo; Clear, Breezy, 35 Deg. No waterway. Approach roadway is OGFC in good condition. Shoulders are PMBP in good condition, with longitudinal and transverse cracks. Embankment is well vegetated in good condition. Bridge signing is 4 Type III paddles on route under 1 is down, and 2-2V delineators on route over. Telephone riser near SW wing wall.
RECOMMENDATIONS: Bridge Crew, Short Term, Patch potholes with concrete on route under. Patch spalls. Have patrol reset Type III paddle.

Traffic: Vertical clearance posted at 13' 2". Recalculation indicates a posting of 13' 2" does not reflect the restriction needed for oversized loads. Recalculation of vertical clearance indicates an 11' 10" posting should be provided (See attached drawings -- dimensions are estimated and survey is needed).

PAST INSPECTION

Inspection Date: 09/22/2005 Type: 1 Regular NBI

Inspector: STEVEQ Pontis User Key: STEVEQ - STEPHEN QUINTANA

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000006730 -
Date 2005-09-22 -
Present: S.Quintana, D. Gregory; Cloudy, Windy, 75 Deg. No waterway. Approach roadway is OGFC in good condition. Shoulders are PMBP in good condition, with longitudinal and transverse cracks. Embankment is well vegetated in good condition. Bridge signing is 4 Type III paddles on route under, and 2-2V delineators on route over. RECOMMENDATIONS: Bridge Crew, Short Term, Patch potholes with concrete on route under. Patch spalls.

Traffic: Vertical clearance posted at 13' 2". Recalculation indicates a posting of 13' 2" does not reflect the restriction needed for oversized loads. Recalculation of vertical clearance indicates an 11' 10" posting should be provided (See attached drawings -- dimensions are estimated and survey is needed).

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 09/11/2003 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000006730 -
Date 2003-09-11 -
Present: P. Meyer, D. Gregory; Sunny, Windy, 75 Deg. No waterway. Approach roadway is OGFC in good condition. Shoulders are PMBP in good condition, with longitudinal and transverse cracks. Embankment is well vegetated in good condition. Bridge signing is 4 Type III paddles on route under, and 2-2V delineators on route over. RECOMMENDATIONS: Bridge Crew, Short Term, Patch potholes with concrete on route under.

PAST INSPECTION

Inspection Date: 09/06/2001 Type: 1 Regular NBI

Inspector: GSPAR01 Pontis User Key: 13

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

GSPAR01 inspection comments -
Structure 000000000006730 -
Date 09/06/2001 - Present: P. Meyer, G. Sparkman; Sunny, Windy, 85 Deg. No waterway. Approach roadway is OGFC in fair condition, with light raveling, longitudinal cracks, bleeding, light ruts, small pothole. Shoulders are PMBP in good condition, with longitudinal cracks. Embankment is well vegetated in good condition. Bridge signing is 4 Type III paddles on route under, and 2-2V delineators on route over. RECOMMENDATIONS: Bridge Crew, Short Term, Patch potholes with concrete on route under.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 09/07/1999 Type: 1 Regular NBI

Inspector: PMEYE01 Pontis User Key: PMEYE06 - PAUL MEYER

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

PMEYE01 inspection comments -
Structure 000000000006730 -
Date 9/7/99 -
Previous comments > (none)

PAST INSPECTION

Inspection Date: 09/01/1997 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 09/01/1995 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☐

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

INSPECTOR WORK CANDIDATES

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Bridge Number: 000000000007384 **Inspection Date (90): 2/27/2008**

NMDOT District No. = District 6	(3) County = 31 McKINLEY	Sufficiency Rating = 85
(4)Town/City = Gallup	(91) Frequency = 24 months	Next Inspection = 02/27/2010
(7) Facility Carried = US-491 (11) Mile Post = 20.837 mi	Patrol No. 46-58, Gallup	Deficiency Status Not Deficient
(49) Structure Length = 955.1 ft	(19) Detour Length = 8.1 mi	(112) NBIS Length = Long Enough
(102) Direction of Traffic = 2 2-way traffic	(28A) Lanes on = 4	(28B) Lanes Under = 4
(41) Posting Status = A Open, no restriction	(34) Skew = 24.00 °	(104) Highway System = 1 On the NHS
(9) Location = JCT US-602/NM-118/GALLUP		
(6) Feature Intersected = NM-118/SF RR/RIO PUERCO		

DESCRIPTION:

Structure Description: 9 Simple and continuous spans of steel girders and rolled steel beams, CIP concrete deck sealed with HMWM, concrete stub abutments and concrete pier caps on concrete columns and walls.
Structure pinned connected. Next inspection, April 2010.

CONDITION

Deck (58) = 7 Good **Super (59) =** 7 Good **Sub (60) =** 7 Good
Channel/Channel Protection (61) = 7 Minor Damage **Culvert (62) =** N N/A (NBI)

APPRAISAL

Str. Evaluation (67) = 7 **Deck Geometry (68) =** 9 Above Desirable C
Waterway Adequacy (71) = 8 Equal Desirable **Approach Alignment (72) =** Equal Desirable Crit
Underclearance, Vertical and Horizontal (69) = 6 **Scour Critical (113)=** 5 Stable w/in footing

LOAD RATING AND POSTING

Inventory Rating (66) = HS19.8 **Operating Rating (64) = HS34.7**

Posting status (41) = A Open, no restriction Posting (70) = 5 At/Above Legal Loads
Inventory Rating Method (65) = 2 AS Allowable St Operating Rating Method (63) = 2 AS Allowable St
Design Load (31) = 5 MS 18 (HS 20)

(29) ADT = 22,409	(114) Future ADT= 29,209	(109) Truck ADT= 7 %
(30) Year of ADT = 2007	(115) Year of Future ADT= 2027	Route Posted Speed Limit =

Team Leader *Date* *Reviewed By* *Date*

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

(16) Latitude = 35d 31' 26"	(17) Longitude = 108d 45' 28"	(27) Year Built = 1974
(22) Owner = State Highway Agency	(21) Custodian = State Highway Agency	(106) Year Reconstruct= 2007
(42A) Type of Service on= 1 Highway	(42B)Type Service under= 8 Hwy-waterv	(5C) Level of Service = 1 Mainline

(26) Functional Class = 14 Urban Other Princ	(100) Defense Highway = 2 Non-Interstate STRA
(37) Historical Significance = 5 Not eligible for NRHP	(35) Structure Flared = 0 No flare
(43A) Main Span Material/Design = 4 Steel Continuous	(43B) Main Span Material/Design = 02 Stringer/Girder
(48) Length Max Span = 159.1 ft	(46) Number of Approach Spans = 0
(44A) Approach Span Material =	(44B) Approach Span Material =
(107) Deck Type = 1 Concrete-Cast-in-Place	(108C) Deck Protection = 1 Epoxy Coated Reinforci
(108A) Wearing Surface = 1 Monolithic Concrete	(108B) Membrane = 0 None
Min. Vertical Clearance Minus= 2105	Min. Vertical 10' Selected Minus= 2105
Min. Vertical Clearance Plus= 2008	Min. Vertical 10' Selected Plus= 2008
(55) Minimum Lateral Undrclearance R = 14.1 ft	(56) Minimum Lateral Undrclearance L = 327.8 ft

Project No. = BR-602-1(31)30	Old Bridge No. =	Known Utilities = C
(51) Width Curb to Curb = 72.8 ft	(52) Width Out to Out = 109.9 ft	(33) Median = 2 Closed Med w/o Barrier

Special Inspections :

(92A) FC Frequency = NA	(93A) FC Inspection Date = NA	Next UW Inspection = NA
(92B) UW Frequency = NA	(93B) UW Inspection Date = NA	Next FC Inspection = NA
(92C) SI Frequency = 24 months	(93C) SI Date = 2/27/2008	Next SI = 4/12/2010

TRAFFIC SAFETY FEATURES

Bridge Rail (36A) =	1 Meets Standards	Approach Rail (36C) =	1 Meets Standards
Transition (36B) =	1 Meets Standards	Approach Rail Ends (36D) =	1 Meets Standards

Stay In Place Forms = No	Stay In Place Form Type = N\A	Overlay Thickness =
Culver Fill = 0	(32) Approach Roadway Width (w/ shoulders) = 65.9 ft	

SIP Notes:

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Approach Roadway Condition:

Channel and Channel Protection:

Recommendations and Inspection Notes:

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
0	12/2	Bare Concrete Deck	(SF)	104,970	100 %	104,970	0 %	0	0 %	0	0 %	0	0 %	0
0	107/2	Paint Stl Opn Girder	(LF)	7,641	100 %	7,641	0 %	0	0 %	0	0 %	0	0 %	0
0	108/2	Diaphragm attch jnts	(EA)	8	100 %	8	0 %	0	0 %	0	0 %	0	0 %	0
0	161/2	Paint Stl Pin/Hanger	(EA)	16	100 %	16	0 %	0	0 %	0	0 %	0	0 %	0
0	162/2	PAINTED STEEL PIN	(EA)	8	100 %	8	0 %	0	0 %	0	0 %	0	0 %	0
0	205/2	R/Conc Column	(EA)	28	100 %	28	0 %	0	0 %	0	0 %	0	0 %	0
0	210/2	R/Conc Pier Wall	(LF)	52	100 %	52	0 %	0	0 %	0	0 %	0	0 %	0
0	215/2	R/Conc Abutment	(LF)	157	100 %	157	0 %	0	0 %	0	0 %	0	0 %	0
0	219/2	CONC WINGWALL	(LF)	56	100 %	56	0 %	0	0 %	0	0 %	0	0 %	0
0	234/1	R/Conc Cap	(LF)	614	100 %	614	0 %	0	0 %	0	0 %	0	0 %	0
0	310/2	Elastomeric Bearing	(EA)	80	100 %	80	0 %	0	0 %	0	0 %	0	0 %	0
0	321/2	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
0	329/2	GUARDRAIL (standard)	(LF)	600	100 %	600	0 %	0	0 %	0	0 %	0	0 %	0
0	331/2	Conc Bridge Railing	(LF)	1,962	100 %	1,962	0 %	0	0 %	0	0 %	0	0 %	0
0	336/2	RIP RAP AND GABIONS	(SF)	2,142	100 %	2,142	0 %	0	0 %	0	0 %	0	0 %	0
0	338/2	CONC SLOPE PAVING	(SF)	13,864	100 %	13,864	0 %	0	0 %	0	0 %	0	0 %	0

Str Unit	Elem/Env	Description	Element Notes
0	12/2	Concrete Deck - Bare	Top of deck has been sealed with HMWM, in good condition with minor dirt and debris build-up. Deck edges have light leaching and honeycombing. Underside of deck in good condition.
0	107/2	Painted Steel Open Girder/Beam	Steel plate girders in good condition.
0	108/2	Diaphragm Attachment Joints for St	Steel diaphragms are in good condition.
0	161/2	Painted Steel Pin and/or Pin and Ha	Pin and hangers are in good condition. 04/12/05 - No defects found.
0	162/2	PAINTED STEEL PIN	Hinge pins in good condition. 04/12/05 - No defects found.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Str Unit	Elem/Env	Description	Element Notes
0	205/2	Reinforced Conc Column or Pile Ext	Pier columns have vertical cracks up to 1/32" with isolated spalls up to 1' x 6".
0	210/2	Reinforced Conc Pier Wall	Pier walls are in good condition.
0	215/2	Reinforced Conc Abutment	Abutments have vertical, horizontal and map cracks up to 1/32" with very light leaching.
0	219/2	REINFORCED CONC WINGWALL/PA	Wingwalls are in good condition.
0	234/1	Reinforced Conc Cap	Pier caps have isolated spalls up to 1 1/2' x 1'.
0	310/2	Elastomeric Bearing	Elastomeric bearings have loose nuts. Bearing pad at girder 2 is protruding up to 2". Some nuts are missing on bearing bolts and some are bent. Bearing 3 is creeping out and is slightly distorted.
0	321/2	Reinforced Conc Approach Slab w	Concrete approach slabs in good condition.
0	329/2	GUARDRAIL (STANDARD)	12" W rail on steel posts with breakaway anchors to Thrie rail. Blockout is missing.
0	331/2	Reinforced Conc Bridge Railing	CBR has isolated vertical and transverse cracks up to 1/16".
0	336/2	WIRE ENCLOSED RIPRAF, RIPRAP,	Wire rip-rap at abutment 2 is in good condition.
0	338/2	CONCRETE SLOPE PAVING	Concrete slope protection has horizontal cracks up to 1/4" with separation up to 1/2" and undermining at SE corner.

PAST INSPECTION

Inspection Date: 02/27/2008 Type: 1 Regular NBI

Inspector: GBACA00 Pontis User Key: GBACA00 - GEORGE BACA

Scope:

NBI: ☑ Other: ☑ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

1. Weather Conditions: Cloudy, 40 degrees F. 2. NMSU Bridge Inspection team members: George P. Baca, Crystal Trujillo, Josh Alonzo, Chris Gomez and Eric Swartz. 3. Work Done Since Last Inspection: Bridge rehabilitation. 4. Channel and Channel Protection: Flat sandy channel with flowing water perpendicular to bridge. 5. Approach Roadway Condition: Asphalt pavement is in good condition. Transition has moderate impact loading due to uneven approach. Asphalt shoulders are in good condition. Embankments have steep slopes. No bridge signing. 6. Traffic Safety Features: Over - 12" W rail on steel posts with breakaway anchors to Thrie rail that is bolted to CBR. Under - None. 7. Work Recommended: None.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 04/05/2006 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000007384 -
Date 2006-04-05 -
Present: D. Gregory; Overcast, windy, 45 deg. Small intermittent stream with man made banks & wide flat sandy channel. Good alignment. No scour, minor debris, some silting. Top of deck to channel: P7=25.8', midspan=28.2', P8=23.0'. Approach pavement is concrete with minor map cracks, large transverse & longitudinal cracks, open joints, potholes & small spalls. PMBP shoulders are raveling & rough, with small spalls & patches. 2-2V Delineators with broken & missing reflectors. RECOMMENDATIONS: None: Currently under rehab FY 2006, CN 3369, TPA-602-1(31)30
Structure 000000000007384 -
Date 4/23/2002 -

PAST INSPECTION

Inspection Date: 04/19/2004 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☑ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000007384 -
Date 2004-04-19 -
Present: P. Meyer, D. Gregory; Sunny, breezy, 50 deg. Small intermittent stream with man made banks & wide flat sandy channel. Good alignment. No scour, minor debris, some silting. Top of deck to channel: P7=25.8', midspan=28.2', P8=23.0'. Approach pavement is concrete with minor map cracks, large transverse & longitudinal cracks, open joints, potholes & small spalls. PMBP shoulders are raveling & rough, with small spalls & patches. 2-2V Delineators with broken & missing reflectors. RECOMMENDATIONS: Bridge Crew, short term, repair joint seals, & patch deck & approach slabs.
Structure 000000000007384 -
Date 4/23/2002 -

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 04/23/2002 Type: 1 Regular NBI

Inspector: GSPAR01 Pontis User Key: 13

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

GSPAR01 inspection comments - Present: G. Sparkman, P. Meyer, Sunny, breezy, 60 deg. Small intermittent stream with man made banks & wide flat sandy channel. Good alignment. No scour, minor debris, some silting. Top of deck to channel: P7=26.0', midspan=28.8', P8=24.3' Approach pavement is concrete with minor map cracks, large transverse & longitudinal cracks, open joints, potholes & small spalls. PMBP shoulders are raveling & rough, with small spalls & patches. 2-2V delineators with broken & missing reflectors. RECOMMENDATIONS: Bridge Crew, short term, repair joint seals, & patch deck & approach slabs.
Structure 000000000007384 -
Date 4/23/2002 -

PAST INSPECTION

Inspection Date: 04/13/2000 Type: 1 Regular NBI

Inspector: GSPAR01 Pontis User Key: 13

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

GSPAR01 inspection comments - Present: G. Sparkman, P. Meyer, Sunny, breezy, 65 deg. Small intermittent stream with man made banks & wide flat sandy channel. Good alignment. No scour, minor debris, some silting. Top of deck to channel: P7=27', midspan=27.5', P8=22.4' Wire enclosed riprap has minor to moderate settlement with a couple of areas that have been washed away. pavement is concrete with minor map cracks, large transverse & longitudinal cracks, open joints, potholes & small spalls. PMBP shoulders show up to 4' settlement of the approach slab, & slab is tipped, raveling & rough, small spalls & patches. Slope paving is in good condition with some hollow areas. 2-2V delineators with boken reflectors. RECOMMENDATIONS: Bridge Crew, short term, repair joint seals, & patch deck.
Structure 000000000007384 -
Date 04/13/2000 -
Previous comments > (none)

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 04/01/1998 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☑ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

PAST INSPECTION

Inspection Date: 03/01/1996 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

INSPECTOR WORK CANDIDATES

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Bridge Number: 000000000007870 **Inspection Date (90): 9/10/2008**

NMDOT District No. = District 6	(3) County = 31 McKINLEY	Sufficiency Rating = 87
(4)Town/City = Gallup	(91) Frequency = 24 months	Next Inspection = 09/10/2010
(7) Facility Carried = I-40 EBL (11) Mile Post = 25.759 mi	Patrol No. 46-58, Gallup	Deficiency Status Not Deficient
(49) Structure Length = 827.0 ft	(19) Detour Length = 0.0 mi	(112) NBIS Length = Long Enough
(102) Direction of Traffic = 1 1-way traffic	(28A) Lanes on = 2	(28B) Lanes Under = 6
(41) Posting Status = A Open, no restriction	(34) Skew = 45.00 °	(104) Highway System = 1 On the NHS
(9) Location = 5.0 MI E OF US-491/GALLUP		
(6) Feature Intersected = NM-118, R/R, RIO PUERCO		

DESCRIPTION:

Structure Description: 10 Simple spans of 5 at 84', 69', 65', 93', 93' and 65'. 6 PS AASHTO girders in spans 1 thru 4 and span 10, 5 PS AASHTO girders in spans 5 and 6, 7 PS AASHTO girders in spans 7 thru 9, CIP concrete deck with epoxy sand seal, concrete stub abutments and concrete pier caps on concrete columns with concrete pier walls at piers 1, 2 and 3. BNSF 153.7

CONDITION

Deck (58) = 6 Satisfactory **Super (59) =** 5 Fair **Sub (60) =** 6 Satisfactory

Channel/Channel Protection (61) = 7 Minor Damage **Culvert (62) =** N N/A (NBI)

APPRAISAL

Str. Evaluation (67) = 5 **Deck Geometry (68) =** 8 Desirable Criteria

Waterway Adequacy (71) = 9 Above Desirable **Approach Alignment (72) =** Equal Desirable Crit

Underclearance, Vertical and Horizontal (69) = 6 Scour Critical (113)= 5 Stable w/in footing

LOAD RATING AND POSTING

Inventory Rating (66) = HS24.8 **Operating Rating (64) = HS41.6**

Posting status (41) = A Open, no restriction Posting (70) = 5 At/Above Legal Loads

Inventory Rating Method (65) = 1 LF Load Factor Operating Rating Method (63) = 1 LF Load Factor

Design Load (31) = 5 MS 18 (HS 20)

(29) ADT = 8,736	(114) Future ADT= 14,717	(109) Truck ADT= 40 %
(30) Year of ADT = 2007	(115) Year of Future ADT= 2027	Route Posted Speed Limit =

Team Leader ***Date*** ***Reviewed By*** ***Date***

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

(16) Latitude = 35d 31' 52"	(17) Longitude = 108d 40' 22"	(27) Year Built = 1980
(22) Owner = State Highway Agency	(21) Custodian = State Highway Agency	(106) Year Reconstruct= Unknown
(42A) Type of Service on= 1 Highway	(42B)Type Service under= 8 Hwy-waterv	(5C) Level of Service = 1 Mainline

(26) Functional Class = 11 Urban Interstate	(100) Defense Highway = 1 Interstate STRAHNET
(37) Historical Significance = 5 Not eligible for NRHP	(35) Structure Flared = 1 Yes, flared
(43A) Main Span Material/Design = 5 Prestressed Concrete	(43B) Main Span Material/Design = 02 Stringer/Girder
(48) Length Max Span = 93.0 ft	(46) Number of Approach Spans = 0
(44A) Approach Span Material =	(44B) Approach Span Material =
(107) Deck Type = 1 Concrete-Cast-in-Place	(108C) Deck Protection = 1 Epoxy Coated Reinforci
(108A) Wearing Surface = 5 Epoxy Overlay	(108B) Membrane = 3 Epoxy
Min. Vertical Clearance Minus= 2700	Min. Vertical 10' Selected Minus= 2700
Min. Vertical Clearance Plus= 2700	Min. Vertical 10' Selected Plus= 2700
(55) Minimum Lateral Undrclearance R = 17.7 ft	(56) Minimum Lateral Undrclearance L = 7.2 ft

Project No. = I-IG-040-1(55)26	Old Bridge No. =	Known Utilities = T
(51) Width Curb to Curb = 42.0 ft	(52) Width Out to Out = 48.6 ft	(33) Median = 1 Open median

Special Inspections :

(92A) FC Frequency = NA	(93A) FC Inspection Date = NA	Next UW Inspection = NA
(92B) UW Frequency = NA	(93B) UW Inspection Date = NA	Next FC Inspection = NA
(92C) SI Frequency = NA	(93C) SI Date = NA	Next SI = NA

TRAFFIC SAFETY FEATURES

Bridge Rail (36A) =	1 Meets Standards	Approach Rail (36C) =	1 Meets Standards
Transition (36B) =	1 Meets Standards	Approach Rail Ends (36D) =	1 Meets Standards

Stay In Place Forms = No	Stay In Place Form Type = N\A	Overlay Thickness =
Culver Fill = 0	(32) Approach Roadway Width (w/ shoulders) = 41.0 ft	

SIP Notes:

No stay in place forms .

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Approach Roadway Condition:
Asphalt pavement is in good condition. Transition has heavy impact loading due to uneven approach. Asphalt shoulders have heavy debris build-up. Bridge signing: Delineators.

Channel and Channel Protection:
Flat, sandy channel skewed approximately 30 degrees to the bridge. Minor debris build-up at pier 3. Loose rock rip-rap is in good condition.

Recommendations and Inspection Notes:
1. Repair joints. 2. Repair spalls and delamination on girders, pier walls, columns and pier caps.

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
0	18/2	P Conc Deck/Thin Ovl	(SF)	40,108	0 %	0	100 %	40,108	0 %	0	0 %	0	0 %	0
0	109/2	P/S Conc Open Girder	(LF)	4,941	99 %	4,879	1 %	33	1 %	30	0 %	0	0 %	0
0	205/2	R/Conc Column	(EA)	36	92 %	33	8 %	3	0 %	0	0 %	0	0 %	0
0	210/2	R/Conc Pier Wall	(LF)	203	88 %	175	14 %	28	0 %	0	0 %	0	0 %	0
0	215/2	R/Conc Abutment	(LF)	138	45 %	63	50 %	69	5 %	7	0 %	0	0 %	0
0	219/2	CONC WINGWALL	(LF)	60	50 %	30	50 %	30	0 %	0	0 %	0	0 %	0
0	234/2	R/Conc Cap	(LF)	696	43 %	301	42 %	290	15 %	105	0 %	0	0 %	0
0	301/2	Pourable Joint Seal	(LF)	641	98 %	631	0 %	0	2 %	10	0 %	0	0 %	0
0	311/2	Moveable Bearing	(EA)	58	86 %	50	14 %	8	0 %	0	0 %	0	0 %	0
0	313/2	Fixed Bearing	(EA)	58	100 %	58	0 %	0	0 %	0	0 %	0	0 %	0
0	329/2	GUARDRAIL (standard)	(LF)	600	100 %	600	0 %	0	0 %	0	0 %	0	0 %	0
0	331/2	Conc Bridge Railing	(LF)	128	1 %	1	76 %	97	23 %	29	0 %	0	0 %	0
0	334/2	Metal Rail Coated	(LF)	1,690	100 %	1,690	0 %	0	0 %	0	0 %	0	0 %	0
0	336/2	RIP RAP AND GABIONS	(SF)	6,000	100 %	6,000	0 %	0	0 %	0	0 %	0	0 %	0
0	338/2	CONC SLOPE PAVING	(SF)	9,375	0 %	0	98 %	9,206	2 %	169	0 %	0	0 %	0
0	358/2	Deck Cracking SmFlag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0

Str Unit	Elem/Env	Description	Element Notes
0	18/2	Concrete Deck - Protected w/ Thin	Top of deck has longitudinal, transverse and map cracks up to 1/16" with an epoxy sand seal with a spall 1' x 1' in span 2 and with isolated delamination. Deck edges have transverse, vertical, horizontal and map cracks up to 1/8". Haunches have horizontal and vertical cracks up to 1/4". Underside of deck has transverse and diagonal cracks up to 1/16" with moderate leaching and heavy deterioration in span 10.
0	109/2	P/S Conc Open Girder/Beam	Girder 1, span 2 at pier 2 has horizontal and vertical cracks up to 1/8" at ends near pier 8 with heavy rust and exposed rebar up to 4". Girder ends have full depth patches. Girder 1 at pier 4 has a diagonal crack up to 1/8" due to rusting of prestressing strands.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Str Unit	Elem/Env	Description	Element Notes
0	205/2	Reinforced Conc Column or Pile Ext	Columns have vertical and map cracks up to 1/8". Isolated full height delamination on outer columns and heavy debris build-up at east end of pier 7.
0	210/2	Reinforced Conc Pier Wall	Pier walls have isolated spalls up to 3' x 1' with exposed rebar up to 1'.
0	215/2	Reinforced Conc Abutment	Abutments have horizontal, vertical and map cracks up to 1/16" with patches up to 8' x 1' and areas of heavy deterioration and minor water stains.
0	219/2	REINFORCED CONC WINGWALL/PA	Wingwalls have horizontal, vertical and map cracks up to 1/8".
0	234/2	Reinforced Conc Cap	Pier caps have horizontal, vertical, transverse and map cracks up to 1/8" with areas of delamination up to 1' x 18" and concrete patches up to 4' x 4' with areas of heavy deterioration and isolated moderate rust stains.
0	301/2	Pourable Joint Seal	Pourable joints measured from W>E: 2", 2", 1 3/4", 3/4", 2", 1 3/4", 7/8", 2", 5/8", 1", 3/4" and 3 1/2". Joints have loss of adhesion up to 3', concrete headers have isolated spalls up to 1' x 1' with exposed rebar up to 8" and with numerous patches up to 5' x 1'. Joints leak due to loss of adhesion.
0	311/2	Moveable Bearing (roller, sliding, etc	Moveable bearings have heavy rust with minor section loss and heavy debris build-up at piers.
0	313/2	Fixed Bearing	Steel fixed bearings have heavy rust with minor section loss and heavy debris build-up at piers.
0	329/2	GUARDRAIL (STANDARD)	12" W rail on timber posts with breakaway anchors to Thrie rail.
0	331/2	Reinforced Conc Bridge Railing	CWB on route under. Moderate damage.
0	334/2	Metal Bridge Railing - Coated	Metal bridge rail has isolated areas of moderate rust.
0	336/2	WIRE ENCLOSED RIPRAF, RIPRAP,	Loose rock rip-rap is in good condition.
0	338/2	CONCRETE SLOPE PAVING	Concrete slope paving has transverse, longitudinal and vertical cracks up to 1/8", areas of undermining, minor scaling with minor vegetation in the joints.
0	358/2	Deck Cracking	Top of deck has longitudinal, transverse and map cracks up to 1/16". Deck edges have transverse, vertical, horizontal and map cracks up to 1/8". Haunches have horizontal and vertical cracks up to 1/4". Underside of deck has transverse and diagonal cracks up to 1/16".

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 09/10/2008 Type: 1 Regular NBI

Inspector: GBACA00 Pontis User Key: GBACA00 - GEORGE BACA

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

1. Weather Conditions: Clear, 75 degrees F. 2. NMSU Bridge Inspection team members: George P. Baca, Adela M. Tapia and Lance M. Aspaas. 3. Work Done Since Last Inspection: None evident. 4. Traffic Safety Features: Over - 12" W rail on timber posts with breakaway anchors to Thrie rail that is bolted to Type A bridge railing. Under - CWB with attenuators.
Scheduled for rehab, 2009 CN 6100090

PAST INSPECTION

Inspection Date: 11/20/2006 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000007870 -
Date 2006-11-20 -
Present: D. Gregory; Sunny, calm, 50 deg. Medium intermittent stream with wide flat bottom & steep to vertical banks. Good alignment at high flow. Minor scour, minor silt & debris. See Bridge No. 7871 for scour measurements. Derrick stone riprap in satisfactory condition. Approach pavement is PMBP in good condition. PMBP shoulders have patches, 3" settlement at A2, rough, with transverse cracks. Moderate erosion of embankment at A1. 2-2V delineators, left one is set low, for bridge signing. RECOMMENDATIONS: Patrol, replace broken post at abutment 1. Bridge Crew, repair spalls in deck & pourable joint seals.
Long Term by Contract; replace pourable seals with Type A Joints, repair delamination & seal deck with Urethane Overlay, seal cracks in abutment, girders, caps, etc. with epoxy injection.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 11/18/2004 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000007870 -
Date 2004-11-18 -
Present: E. Gonzales; Sunny, calm, 40 deg. Medium intermittent stream with wide flat bottom & steep to vertical banks. Good alignment at high flow. Minor scour, minor silt & debris. See Bridge No. 7871 for scour measurements. Derrick stone riprap in satisfactory condition. Approach pavement is PMBP in good condition. PMBP shoulders have patches, 3' settlement at A2, rough, & transverse cracks. Moderate erosion of embankment at A1. 2-2V delineators, left one is set low for bridge signing. RECOMMENDATIONS: None: Contractor still on site. Monitor corrective measures.

PAST INSPECTION

Inspection Date: 11/21/2002 Type: 1 Regular NBI

Inspector: PMEYE06 Pontis User Key: PMEYE06 - PAUL MEYER

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

PMEYE06 inspection comments -
Structure 000000000007870 -
Date 2002-11-21 - Present: P. Meyer Sunny, calm, 50 deg. Medium intermittent stream with wide flat bottom & steep to vertical banks. Good alignment at high flow. Minor scour, minor silt & debris. See Bridge No. 7871 for scour measurements. Derrick stone riprap in satisfactory condition. Approach pavement is PMBP in good condition. PMBP shoulders have patches, 3" settlement at A2, rough, & transverse cracks. Moderate erosion of embankment at A1. 2-2V delineators, left one is set low, for bridge signing. RECOMMENDATIONS: Long term, by maintenance agreement, replace compression seals with polymer seals, repair beam ends & pier caps.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 11/29/2000 Type: 1 Regular NBI

Inspector: GSPAR01 Pontis User Key: 13

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

Sufficiency Rating Calculation Accepted by pmeye01 at 11/29/00 16:52:18
GSPAR01 inspection comments - Present: G. Sparkman, P. Meyer Sunny, calm, 45 deg. Small intermittent stream with wide flat bottom & steep to vertical banks. Good alignment at high flow. Minor scour, minor silt & debris. See Bridge No. 7871 for scour measurements. Derrick stone riprap in satisfactory condition. Approach pavement is SMA in good condition. PMBP shoulders have patches, 3' settlement at A2, rough, & transverse cracks. Moderate erosion of embankment at A1 & some erosion at A1. 2-2V delineators, left one is set low, for bridge signing. RECOMMENDATIONS: Short term, Bridge Crew patch spalls in deck & backwall. Long term, by maintenance agreement, replace compression seals with polymer seals, repair beam ends & pier caps.
Structure 000000000007870 -
Date 11/29/00 -
Previous comments > AJOHN01 inspection comments -
Structure 000000000007870 -
Date 11/17/98 -
Previo

PAST INSPECTION

Inspection Date: 11/17/1998 Type: 1 Regular NBI

Inspector: AJOHN01 Pontis User Key: AJOHN07 - ANSON JOHNSON

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

AJOHN01 inspection comments -
Structure 000000000007870 -
Date 11/17/98 -
Previous comments > (none)

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 11/01/1996 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☐

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

INSPECTOR WORK CANDIDATES

Work Candidate ID	Action	Object	Agency Status	Agency Priority	Assigned to a Project	Rec. Date
A-DOT001-05709928-0000001E	Ovly Deck	P Conc Deck/Thin Ovl	Under review	Medium	No	11/21/2002
A-DOT001-05709928-00000020	Rehab Elem	P/S Conc Open Girder	Under review	Medium	No	11/21/2002
A-DOT001-05709928-00000022	Rehab Elem	R/Conc Column	Under review	High	No	11/21/2002
A-DOT001-05709928-00000024	Min Repair	R/Conc Abutment	Under review	Medium	No	11/21/2002
A-DOT001-05709928-00000026	Rehab Elem	R/Conc Cap	Under review	Medium	No	11/21/2002
A-DOT001-05709928-00000028	Min Repair	Pourable Joint Seal	Under review	Medium	No	11/21/2002

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Bridge Number: 000000000007871 **Inspection Date (90): 9/9/2008**

NMDOT District No. = District 6	(3) County = 31 McKINLEY	Sufficiency Rating = 98
(4)Town/City = Gallup	(91) Frequency = 24 months	Next Inspection = 09/09/2010
(7) Facility Carried = I-40 WBL (11) Mile Post = 25.769 mi	Patrol No. 46-58, Gallup	Deficiency Status Not Deficient
(49) Structure Length = 827.0 ft	(19) Detour Length = 0.0 mi	(112) NBIS Length = Long Enough

(102) Direction of Traffic = 1 1-way traffic	(28A) Lanes on = 2	(28B) Lanes Under = 6
(41) Posting Status = A Open, no restriction	(34) Skew = 45.00 °	(104) Highway System = 1 On the NHS
(9) Location = 5.0 MI E OF US-491		
(6) Feature Intersected = NM-118,R/R,RIO PUERCO		

DESCRIPTION:

Structure Description: 10 Simple spans at 5 of 84' , 69', 65', 93', 93' and 65'. 6 PS AASHTO girders in spans 1 thru 4 and 10, 5 PS AASHTO girders in spans 5 and 6, 7 PS AASHTO girders in spans 7 thru 9 and 6 PS AASHTO girders in span 10, CIP concrete deck, concrete stub abutments and concrete pier caps on concrete columns with pier walls. BNSF 153.7

CONDITION

Deck (58) = 7 Good **Super (59) =** 7 Good **Sub (60) =** 7 Good

Channel/Channel Protection (61) = 7 Minor Damage **Culvert (62) =** N N/A (NBI)

APPRAISAL

Str. Evaluation (67) = 7 **Deck Geometry (68) =** 6 Equal Min Criteria

Waterway Adequacy (71) = 8 Equal Desirable **Approach Alignment (72) =** Equal Desirable Crit

Underclearance, Vertical and Horizontal (69) = 6 **Scour Critical (113)=** 5 Stable w/in footing

LOAD RATING AND POSTING

Inventory Rating (66) = HS24.8 **Operating Rating (64) = HS41.6**

Posting status (41) = A Open, no restriction Posting (70) = 5 At/Above Legal Loads

Inventory Rating Method (65) = 1 LF Load Factor Operating Rating Method (63) = 1 LF Load Factor

Design Load (31) = 5 MS 18 (HS 20)

(29) ADT = 10,232	(114) Future ADT= 17,236	(109) Truck ADT= 40 %
(30) Year of ADT = 2007	(115) Year of Future ADT= 2027	Route Posted Speed Limit =

Team Leader *Date* *Reviewed By* *Date*

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

(16) Latitude = 35d 31' 53"	(17) Longitude = 108d 40' 19"	(27) Year Built = 1980
(22) Owner = State Highway Agency	(21) Custodian = State Highway Agency	(106) Year Reconstruct= Unknown
(42A) Type of Service on= 1 Highway	(42B)Type Service under= 8 Hwy-waterv	(5C) Level of Service = 1 Mainline

(26) Functional Class = 11 Urban Interstate	(100) Defense Highway = 1 Interstate STRAHNET
(37) Historical Significance = 5 Not eligible for NRHP	(35) Structure Flared = 1 Yes, flared
(43A) Main Span Material/Design = 5 Prestressed Concrete	(43B) Main Span Material/Design = 02 Stringer/Girder
(48) Length Max Span = 93.0 ft	(46) Number of Approach Spans = 0
(44A) Approach Span Material =	(44B) Approach Span Material =
(107) Deck Type = 1 Concrete-Cast-in-Place	(108C) Deck Protection = 1 Epoxy Coated Reinforci
(108A) Wearing Surface = 5 Epoxy Overlay	(108B) Membrane = 3 Epoxy
Min. Vertical Clearance Minus= 2700	Min. Vertical 10' Selected Minus= 2700
Min. Vertical Clearance Plus= 2600	Min. Vertical 10' Selected Plus= 2600
(55) Minimum Lateral Undrclearance R = 18.7 ft	(56) Minimum Lateral Undrclearance L = 327.8 ft

Project No. = I-IG-040-1(55)26	Old Bridge No. =	Known Utilities = T
(51) Width Curb to Curb = 38.1 ft	(52) Width Out to Out = 52.2 ft	(33) Median = 1 Open median

Special Inspections :

(92A) FC Frequency = NA	(93A) FC Inspection Date = NA	Next UW Inspection = NA
(92B) UW Frequency = NA	(93B) UW Inspection Date = NA	Next FC Inspection = NA
(92C) SI Frequency = NA	(93C) SI Date = NA	Next SI = NA

TRAFFIC SAFETY FEATURES

Bridge Rail (36A) =	1 Meets Standards	Approach Rail (36C) =	1 Meets Standards
Transition (36B) =	1 Meets Standards	Approach Rail Ends (36D) =	1 Meets Standards

Stay In Place Forms = No	Stay In Place Form Type = N\A	Overlay Thickness =
Culver Fill = 0	(32) Approach Roadway Width (w/ shoulders) = 38.1 ft	

SIP Notes:

No stay in place forms .

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Approach Roadway Condition:
Asphalt pavement is in good condition. Transition has heavy impact loading due to uneven approach. Asphalt shoulders are in good condition. Embankments have steep slopes with a sink hole developing at the NW corner. Bridge signing: Delineators.

Channel and Channel Protection:
Flat, sandy channel skewed approximately 30 degrees to bridge. Minor scour at pier 3 up to 2'. Loose rip-rap in good condition.

Recommendations and Inspection Notes:
1. Repair sinkhole at the NW corner. 2. Clean and paint bearings. 3. Repair joints. 4. Repair and seal deck. 5. Monitor scour at pier 3.

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
0	18/2	P Conc Deck/Thin Ovl	(SF)	43,002	0 %	0	100 %	43,002	0 %	0	0 %	0	0 %	0
0	109/2	P/S Conc Open Girder	(LF)	4,941	99 %	4,908	1 %	33	0 %	0	0 %	0	0 %	0
0	205/2	R/Conc Column	(EA)	36	89 %	32	11 %	4	0 %	0	0 %	0	0 %	0
0	210/2	R/Conc Pier Wall	(LF)	203	90 %	184	10 %	20	0 %	0	0 %	0	0 %	0
0	215/2	R/Conc Abutment	(LF)	131	85 %	111	15 %	20	0 %	0	0 %	0	0 %	0
0	219/2	CONC WINGWALL	(LF)	59	66 %	39	34 %	20	0 %	0	0 %	0	0 %	0
0	234/2	R/Conc Cap	(LF)	561	58 %	325	42 %	236	0 %	0	0 %	0	0 %	0
0	301/2	Pourable Joint Seal	(LF)	729	86 %	629	14 %	100	0 %	0	0 %	0	0 %	0
0	311/2	Moveable Bearing	(EA)	58	0 %	0	100 %	58	0 %	0	0 %	0	0 %	0
0	313/2	Fixed Bearing	(EA)	58	0 %	0	100 %	58	0 %	0	0 %	0	0 %	0
0	329/2	GUARDRAIL (standard)	(LF)	600	100 %	600	0 %	0	0 %	0	0 %	0	0 %	0
0	331/2	Conc Bridge Railing	(LF)	131	1 %	3	76 %	98	23 %	30	0 %	0	0 %	0
0	334/2	Metal Rail Coated	(LF)	1,690	0 %	0	65 %	1,089	36 %	600	0 %	0	0 %	0
0	336/2	RIP RAP AND GABIONS	(SF)	5,996	100 %	5,996	0 %	0	0 %	0	0 %	0	0 %	0
0	338/2	CONC SLOPE PAVING	(SF)	9,375	0 %	0	85 %	7,998	15 %	1,378	0 %	0	0 %	0
0	359/2	Soffit Smart Flag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0

Str Unit	Elem/Env	Description	Element Notes
0	18/2	Concrete Deck - Protected w/ Thin	Top of deck has transverse, map and longitudinal cracks up to 1/16", sealed with an epoxy sand seal with heavy abrasion and isolated spalls up to 1' x 1' near joints with patches up to 3' x 3'. Deck edges have transverse and vertical cracks up to 1/16". Haunches have moderate deterioration. Underside of deck has isolated transverse cracks up to 1/8", minor leaching with heavy deterioration in span 6 near pier cap 5 and heavy soot build-up in span 5 due to BNSF railroad.
0	109/2	P/S Conc Open Girder/Beam	Girders are in good condition with heavy soot build-up to all girders in span 5. Vertical and horizontal cracks up to 1/16" on girder ends. Girder at abutment 1 has an area of delamination 1' x 1'.
0	205/2	Reinforced Conc Column or Pile Ext	Columns have vertical and map cracks up to 1/32" and isolated spalls up to 7" x 7".

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Str Unit	Elem/Env	Description	Element Notes
0	210/2	Reinforced Conc Pier Wall	Minor horizontal, vertical, random cracks, peeling surface finish and light scaling.
0	215/2	Reinforced Conc Abutment	Abutments and backwalls have vertical cracks up to 1/32" with numerous patches throughout up to 1' x 3'.
0	219/2	REINFORCED CONC WINGWALL/PA	Wingwalls have moderate deterioration.
0	234/2	Reinforced Conc Cap	Pier caps have vertical and map cracks up to 1/16" with patches throughout and moderate deterioration at previous patch work.
0	301/2	Pourable Joint Seal	Pourable joints measured from W>E: 1/2", 3", 1", 1", 1", 2 1/2", 1", 2", 1/2", 3", and 1". Joints have tears and loss of adhesion up to 2'. Joints leak due to loss adhesion.
0	311/2	Moveable Bearing (roller, sliding, etc	Steel moveable bearings have heavy rust with minor section loss and a few missing bolts.
0	313/2	Fixed Bearing	Steel fixed bearings have heavy rust with minor section loss and few missing bolts.
0	329/2	GUARDRAIL (STANDARD)	12" W rail on timber posts with breakaway anchors to Thrie rail.
0	331/2	Reinforced Conc Bridge Railing	Minor vertical cracks and spalls. CBR on route under.
0	334/2	Metal Bridge Railing - Coated	Metal bridge rail has minor paint flaking and rust with minor traffic damage.
0	336/2	WIRE ENCLOSED RIPRAF, RIPRAP,	Loose rock rip-rap is in good condition.
0	338/2	CONCRETE SLOPE PAVING	Concrete slope protection at east side only has vertical and longitudinal cracks up to 1/8", minor vegetation between cracks and areas of undermining and the slope paving is separated up to 2".
0	359/2	Soffit of Concrete Deck or Slab	Underside of deck has isolated transverse cracks up to 1/8" with minor leaching. and heavy deterioration in span 6 near pier cap 5.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 09/09/2008 Type: 1 Regular NBI

Inspector: GBACA00 Pontis User Key: GBACA00 - GEORGE BACA

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

1. Weather Conditions: Clear, 75 degrees F. 2. NMSU Bridge Inspection team members: George P. Baca, Lance M. Aspaas and Addela M. Tapia. 3. Work Done Since Last Inspection: None evident. 4. Traffic Safety Features: Over - 12" W rail on timber posts with breakaway anchors to Thrie rail that bolted to Type A bridge railing. Under - CWB with attenuators.
Scheduled for rehab 2009 CN 6100090

PAST INSPECTION

Inspection Date: 11/20/2006 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000007871 -
Date 2006-11-20 -
Present: D. Gregory; sunny, calm, 50 deg. Medium perennial stream with sloping to vertical banks & flat sandy channel. Stream is cutting toward the north. Minor silt, scour & debris. Deck to channel: P4=36.6', P3=48.1', midspan =48.5', P2=44.7'. The approach payment is PMBP with mudballs in fair condition. The PMBP shoulders have settlement of 2" at SE corner & 3" at NE corner. Heavy erosion of embankment. 2-2V delineators with missing reflectors for bridge signing. RECOMMENDATIONS: Long term, patrol 46-58 repair GREAT on route under. Bridge Crew, repair deck spalls, headers & pourable joints.
Long Term by Contract: Repair delamination, replace joints with Type A Joints, seal deck with Epoxy Urethane Overlay, repair cracks in abutments, edge of deck, girder & columns with epoxy injection.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 11/18/2004 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000007871 -
Date 2004-11-18 -
Present: E. Gonzales; sunny, calm, 40 deg. Medium perinnial stream with sloping to vertical banks & flat sandy channel. Stream is cutting toward the north. Minor silt, scour, or debris. Deck to channel: P4=36.6', P3=48.1', midspan =48.5', P2=44.7'. The approach pavment is PMBP with mudballs in fair condition. The PMBP shoulders have settlement of 2" at SE corner & 3" at NE corner. Heavy erosion of embankment. 2-2V delineators with missing reflectors for bridge signing. RECOMMENDATIONS: Long term, patrol 46-58 repair GREAT on route under.

PAST INSPECTION

Inspection Date: 11/21/2002 Type: 1 Regular NBI

Inspector: PMEYE06 Pontis User Key: PMEYE06 - PAUL MEYER

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

PMEYE06 inspection comments -
Structure 000000000007871 -
Date 2002-11-21 - Present: P. Meyer sunny, calm, 55 deg. Medium perinnial stream with sloping to vertical banks & flat sandy channel. Stream is cutting toward the north. Minor silt, scour, or debris. Deck to channel: P4=36.6', P3=48.1', midspan =48.5', P2=44.7' The approach pavment is PMBP with mudballs in fair condition. The PMBP shoulders have settlement of 2' at SE corner & 3' at NE corner. Heavy erosion of embankment. 2-2V delineators with missing reflectors for bridge signing. RECOMMENDATIONS: Long term, patrol 46-58 repair GREAT on route under. By maintenance agreement, replace compression seals with pourable seals, Rehab beam ends & substructure.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 11/28/2000 Type: 1 Regular NBI

Inspector: GSPAR01 Pontis User Key: 13

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

11/28/ 2000 Inspection notes: Present: G. Sparkman, P. Meyer Mostly sunny, calm, 45 deg. The approach pavment is SMA in good condition. The PMBP shoulders have settlement of 2' at SE corner & 3' at NE corner. Heavy erosion of embankment. 2-2V delineators with missing reflectors for bridge signing. RECOMMENDATIONS: Short term, patrol 46-58, backfill erosion of embankment & berm/ backslope at NE abutment. Bridge crew, repair top of backwall. Long term, patrol 46-58 repair GREAT on route under. By maintenance agreement, replace compression seals with pourable seals.

PAST INSPECTION

Inspection Date: 11/01/1998 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 12/01/1996 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

INSPECTOR WORK CANDIDATES

Work Candidate ID	Action	Object	Agency Status	Agency Priority	Assigned to a Project	Rec. Date
A-DOT001-05709928-00000000	Rehab Elem	P/S Conc Open Girder	Under review	Medium	No	11/21/2002
A-DOT001-05709928-00000002	Ovly Deck	P Conc Deck/Thin Ovl	Under review	Medium	No	11/21/2002
A-DOT001-05709928-00000004	Rehab Elem	R/Conc Column	Under review	Medium	No	11/21/2002
A-DOT001-05709928-00000006	Rehab Elem	R/Conc Abutment	Under review	Medium	No	11/21/2002
A-DOT001-05709928-00000008	Rehab Elem	R/Conc Cap	Under review	Medium	No	11/21/2002

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Bridge Number: 000000000008835 **Inspection Date (90): 9/19/2007**

NMDOT District No. = District 6	(3) County = 31 McKINLEY	Sufficiency Rating = 79
(4)Town/City = Gallup	(91) Frequency = 24 months	Next Inspection = 09/19/2009
(7) Facility Carried = I-40 WB (11) Mile Post = 16.445 mi	Patrol No. 46-58	Deficiency Status Functionally Obsolete
(49) Structure Length = 165.0 ft	(19) Detour Length = 0.0 mi	(112) NBIS Length = Long Enough
(102) Direction of Traffic = 1 1-way traffic	(28A) Lanes on = 3	(28B) Lanes Under = 5
(41) Posting Status = A Open, no restriction	(34) Skew = 49.00 °	(104) Highway System = 1 On the NHS
(9) Location = West Gallup Interchange		
(6) Feature Intersected = NM-118		

DESCRIPTION:

Structure Description: One simple span of 160'. 6 Welded steel plate girders per span, CIP concrete deck, concrete stub abutments and concrete pier caps on concrete columns with concrete pier walls.

CONDITION

Deck (58) = 7 Good **Super (59) =** 7 Good **Sub (60) =** 7 Good

Channel/Channel Protection (61) = N N/A (NBI) **Culvert (62) =** N N/A (NBI)

APPRAISAL

Str. Evaluation (67) = 7 **Deck Geometry (68) =** 2 Intolerable - Replac

Waterway Adequacy (71) = N Not applicable **Approach Alignment (72) =** Equal Desirable Crit

Underclearance, Vertical and Horizontal (69) = 6 **Scour Critical (113)=** N Not Over Waterway

LOAD RATING AND POSTING

Inventory Rating (66) = HS34.7 **Operating Rating (64) = HS54.6**

Posting status (41) = A Open, no restriction Posting (70) = 5 At/Above Legal Loads

Inventory Rating Method (65) = 1 LF Load Factor Operating Rating Method (63) = 1 LF Load Factor

Design Load (31) = 5 MS 18 (HS 20)

(29) ADT = 9,341	(114) Future ADT= 15,942	(109) Truck ADT= 40 %
(30) Year of ADT = 2006	(115) Year of Future ADT= 2026	Route Posted Speed Limit =

Team Leader *Date* *Reviewed By* *Date*

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

(16) Latitude = 35d 30' 20"	(17) Longitude = 108d 49' 49"	(27) Year Built = 1993
(22) Owner = State Highway Agency	(21) Custodian = State Highway Agency	(106) Year Reconstruct= 1995
(42A) Type of Service on = 1 Highway	(42B)Type Service under= 1 Highway	(5C) Level of Service = 1 Mainline

(26) Functional Class = 11 Urban Interstate	(100) Defense Highway = 1 Interstate STRAHNET
(37) Historical Significance = 5 Not eligible for NRHP	(35) Structure Flared = 0 No flare
(43A) Main Span Material/Design = 3 Steel	(43B) Main Span Material/Design = 02 Stringer/Girder
(48) Length Max Span = 160.0 ft	(46) Number of Approach Spans = 0
(44A) Approach Span Material =	(44B) Approach Span Material =
(107) Deck Type = 1 Concrete-Cast-in-Place	(108C) Deck Protection = 1 Epoxy Coated Reinforci
(108A) Wearing Surface = 1 Monolithic Concrete	(108B) Membrane = 0 None
Min. Vertical Clearance Minus= 1603	Min. Vertical 10' Selected Minus= 1604
Min. Vertical Clearance Plus= 1602	Min. Vertical 10' Selected Plus= 1610
(55) Minimum Lateral Undrclearance R = 18.4 ft	(56) Minimum Lateral Undrclearance L = 327.8 ft

Project No. = IR-040-1(96)17	Old Bridge No. = 06552	Known Utilities = N
(51) Width Curb to Curb = 40.4 ft	(52) Width Out to Out = 43.0 ft	(33) Median = 1 Open median

Special Inspections :

(92A) FC Frequency = NA	(93A) FC Inspection Date = NA	Next UW Inspection = NA
(92B) UW Frequency = NA	(93B) UW Inspection Date = NA	Next FC Inspection = NA
(92C) SI Frequency = NA	(93C) SI Date = NA	Next SI = NA

TRAFFIC SAFETY FEATURES

Bridge Rail (36A) = 1 Meets Standards	Approach Rail (36C) = 1 Meets Standards
Transition (36B) = 1 Meets Standards	Approach Rail Ends (36D) = 1 Meets Standards

Stay In Place Forms =	Stay In Place Form Type =	Overlay Thickness =
Culver Fill = 0	(32) Approach Roadway Width (w/ shoulders) = 40.0 ft	

SIP Notes:

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Approach Roadway Condition:

Channel and Channel Protection:

Recommendations and Inspection Notes:

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
0	26/2	Conc Deck/Coatd Bars	(SF)	7,093	100 %	7,093	0 %	0	0 %	0	0 %	0	0 %	0
0	107/2	Paint Stl Opn Girder	(LF)	1,155	100 %	1,155	0 %	0	0 %	0	0 %	0	0 %	0
0	215/2	R/Conc Abutment	(LF)	135	100 %	135	0 %	0	0 %	0	0 %	0	0 %	0
0	219/2	CONC WINGWALL	(LF)	59	100 %	59	0 %	0	0 %	0	0 %	0	0 %	0
0	300/2	Strip Seal Exp Joint	(LF)	131	100 %	131	0 %	0	0 %	0	0 %	0	0 %	0
0	310/2	Elastomeric Bearing	(EA)	14	100 %	14	0 %	0	0 %	0	0 %	0	0 %	0
0	321/2	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
0	329/2	GUARDRAIL (standard)	(LF)	374	100 %	374	0 %	0	0 %	0	0 %	0	0 %	0
0	331/2	Conc Bridge Railing	(LF)	1,001	100 %	1,001	0 %	0	0 %	0	0 %	0	0 %	0
0	335/2	EARTH RETAINING WALL	(LF)	59	100 %	59	0 %	0	0 %	0	0 %	0	0 %	0
0	338/2	CONC SLOPE PAVING	(SF)	4,316	100 %	4,316	0 %	0	0 %	0	0 %	0	0 %	0
0	358/2	Deck Cracking SmFlag	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0

Str Unit	Elem/Env	Description	Element Notes
0	26/2	Concrete Deck - Protected w / Coat	Top of deck has transverse, longitudinal and map cracks up to 1/16" with minor debris build-up. Deck edges have isolated vertical cracks up to 1/32" with light leaching. Underside of deck has transverse and longitudinal cracks up to 1/16" with isolated moderate leaching.
0	107/2	Painted Steel Open Girder/Beam	Steel plate girders are in good condition.
0	215/2	Reinforced Conc Abutment	Abutments have vertical, horizontal, transverse, longitudinal and map cracks up to 1/16" with an area of delamination 2' x 6", light leaching and with an area of heavy water stains.
0	219/2	REINFORCED CONC WINGWALL/PA	Wingwalls are in good condition.
0	300/2	Strip Seal Expansion Joint	Strip seal joints measured from W>E: 1 1/2" and 3". Joints have dirt and debris build-up. Joints do not appear to leak.
0	310/2	Elastomeric Bearing	Elastomeric bearing pads are in good condition.
0	321/2	Reinforced Conc Approach Slab w	Concrete approach slab has transverse and longitudinal cracks up to 1/16" with a spall 1" x 5".

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Str Unit	Elem/Env	Description	Element Notes
0	329/2	GUARDRAIL (STANDARD)	12" W rail on timber posts with breakaway anchors to Thrie rail.
0	331/2	Reinforced Conc Bridge Railing	CBR has horizontal, vertical and map cracks up to 1/16", some appear to be full depth, with small spalls at the bottom of CBR and SE corner has an area of delamination 3' x 1'.
0	335/2	EARTH RETAINING WALLS	The earth retaining system is in good condition, the coping wall at the SW corner has a spall 1 1/2' x 6".
0	338/2	CONCRETE SLOPE PAVING	Concrete slope paving has horizontal and vertical cracks up to 1/8", some have been sealed with separation up to 3".
0	358/2	Deck Cracking	Top of deck has transverse, longitudinal and map cracks up to 1/16". Deck edges have vertical cracks up to 1/32". Underside of deck has transverse and longitudinal cracks up to 1/16".

PAST INSPECTION

Inspection Date: 09/19/2007 Type: 1 Regular NBI

Inspector: GBACA00 Pontis User Key: GBACA00 - GEORGE BACA

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

1. Weather Conditions: Clear, 85 degrees F. 2. NMSU Bridge Inspection team members: George P. Baca, Charles Carrasco and Ryan Fairbank. 3. Work Done Since Last Inspection: None evident. 4. Channel and Channel Protection: N/A. 5. Approach Roadway Condition: Asphalt pavement has longitudinal cracks up to 1/8". Concrete approach slab has transverse and longitudinal cracks up to 1/16" with a spall 1" x 5". Transition has heavy impact loading due uneven approach. Asphalt shoulders have transverse cracks up to 1/4". Embankments have steep slopes with minor vegetation. Bridge signing: Paddleboards. 6. Traffic Safety Features: Over - 12" W rail on timber posts with breakaway anchors to Thrie that is bolted to CBR. Under - None. 7. Work Recommended: Vertical clearance should be posted less than 16'-2".

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 11/30/2005 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000008835 -
Date 2005-11-30-
Present: S. Quintana, D. Gregory; Cloudy, light breeze, 45 deg. Structure is overpass, no stream. Pavement is PMBP in good condition on the east side, west side is under construction. PMBP on the shoulders is rough with settlement, longitudinal & transverse cracks. Minor erosion of well vegetated embankment, no bridge signing. Traffic safety features are CWB & CBR, Thrie beam & W beam on square wood posts with Type C Anchors. RECOMMENDATIONS: Patrol 46-58, Short Term, Water is bypassing the catchment east of abutment 2. Need to taper asphalt to direct the flow into the drop inlet.
Structure 000000000008835 -
Date 11/8/01 -

PAST INSPECTION

Inspection Date: 11/04/2003 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000008835 -
Date 2003-11-04 -
Present: P. Meyer, D. Gregory; Cloudy, light breeze, 35 deg. Structure is overpass, no stream. Pavement is PMBP in good condition. PMBP on the shoulders is rough with settlement, longitudinal & transverse cracks. Minor erosion of well vegetated embankment, No bridge signing. Traffic safety features are CWB, Thrie beam & W beam on square wood posts with type C anchors.
RECOMMENDATIONS: None
Structure 000000000008835 -
Date 11/8/01 -

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 11/08/2001 Type: 1 Regular NBI

Inspector: GSPAR01 Pontis User Key: 13

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

GSPAR01 inspection comments - Present: G. Sparkman, P. Meyer. Cloudy, light breeze, 60 deg. Structure is overpass, no stream. Pavement is PMBP in good condition at west end. East end has minor longitudinal, random & large transverse cracks. Some settlement. PMBP on the shoulders is rough with settlement, longitudinal & transverse cracks. Minor erosion of well vegetated embankment, No bridge signing. Traffic safety features are CWB, Thrie beam & W beam on square wood posts with type C anchors. RECOMMENDATIONS: None
Structure 000000000008835 -
Date 11/8/01 -

PAST INSPECTION

Inspection Date: 11/03/1999 Type: 1 Regular NBI

Inspector: GSPAR01 Pontis User Key: 13

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

GSPAR01 inspection comments -
Structure 000000000008835 -
Date 11/3/99 -
Previous comments > (none)Present: G. Sparkman, P. Meyer. Partly cloudy, light breeze, 60 deg. Structure is overpass, no stream. Pavement is in good condition except at end of bridge where it is rough with minor longitudinal & large transverse cracks. Some settlement. PMBP on the shoulders is rough with settlement & longitudinal & transverse cracks. No bridge signing. Traffic safety features are CWB, Thrie beam & W beam on square wood posts with type C anchors.
RECOMMENDATIONS: Change Minimum Vertical Clearance sign to 16'-2'.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 11/01/1997 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

Present: G. Sparkman, P. Meyer. Partly cloudy, light breeze, 60 deg. No stream. Pavement is OGFC in good condition with some bleeding, minor longitudinal & large transverse cracks & settlement at ends of bridge. Shoulders are PMBP in fair condition with longitudinal & transverse cracks, rough & minor settlement at A1.

PAST INSPECTION

Inspection Date: 12/01/1995 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☐

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

INSPECTOR WORK CANDIDATES

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Bridge Number: 000000000008836 **Inspection Date (90): 9/19/2007**

NMDOT District No. = District 6	(3) County = 31 McKINLEY	Sufficiency Rating = 97
(4)Town/City = Gallup	(91) Frequency = 24 months	Next Inspection = 09/19/2009
(7) Facility Carried = I-40 EB (11) Mile Post = 16.460 mi	Patrol No. 46-58	Deficiency Status Not Deficient
(49) Structure Length = 165.1 ft	(19) Detour Length = 0.0 mi	(112) NBIS Length = Long Enough

(102) Direction of Traffic = 1 1-way traffic	(28A) Lanes on = 3	(28B) Lanes Under = 4
(41) Posting Status = A Open, no restriction	(34) Skew = 49.00 °	(104) Highway System = 1 On the NHS
(9) Location = West Gallup Interchange		
(6) Feature Intersected = NM-118		

DESCRIPTION:

Structure Description: One simple span of 160'. 8 welded steel plate girders, CIP concrete deck with epoxy coated bars, full height concrete abutments and precast double tee breastwall and wingwalls.

CONDITION

Deck (58) = 7 Good **Super (59) =** 7 Good **Sub (60) =** 7 Good

Channel/Channel Protection (61) = N N/A (NBI) **Culvert (62) =** N N/A (NBI)

APPRAISAL

Str. Evaluation (67) = 7 **Deck Geometry (68) =** 5 Above Tolerable

Waterway Adequacy (71) = N Not applicable **Approach Alignment (72) =** Equal Desirable Crit

Underclearance, Vertical and Horizontal (69) = 6 Scour Critical (113)= N Not Over Waterway

LOAD RATING AND POSTING

Inventory Rating (66) = HS30.7 **Operating Rating (64) = HS51.6**

Posting status (41) = A Open, no restriction Posting (70) = 5 At/Above Legal Loads

Inventory Rating Method (65) = 1 LF Load Factor Operating Rating Method (63) = 1 LF Load Factor

Design Load (31) = 5 MS 18 (HS 20)

(29) ADT = 10,035	(114) Future ADT= 17,127	(109) Truck ADT= 40 %
(30) Year of ADT = 2006	(115) Year of Future ADT= 2026	Route Posted Speed Limit =

Team Leader *Date* *Reviewed By* *Date*

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

(16) Latitude = 35d 30' 20"	(17) Longitude = 108d 49' 47"	(27) Year Built = 1993
(22) Owner = State Highway Agency	(21) Custodian = State Highway Agency	(106) Year Reconstruct= 1995
(42A) Type of Service on = 1 Highway	(42B)Type Service under= 1 Highway	(5C) Level of Service = 1 Mainline

(26) Functional Class = 11 Urban Interstate	(100) Defense Highway = 1 Interstate STRAHNET
(37) Historical Significance = 5 Not eligible for NRHP	(35) Structure Flared = 0 No flare
(43A) Main Span Material/Design = 3 Steel	(43B) Main Span Material/Design = 02 Stringer/Girder
(48) Length Max Span = 160.0 ft	(46) Number of Approach Spans = 0
(44A) Approach Span Material =	(44B) Approach Span Material =
(107) Deck Type = 1 Concrete-Cast-in-Place	(108C) Deck Protection = 1 Epoxy Coated Reinforci
(108A) Wearing Surface = 1 Monolithic Concrete	(108B) Membrane = 0 None
Min. Vertical Clearance Minus= 1602	Min. Vertical 10' Selected Minus= 1602
Min. Vertical Clearance Plus= 1605	Min. Vertical 10' Selected Plus= 1608
(55) Minimum Lateral Undrclearance R = 18.4 ft	(56) Minimum Lateral Undrclearance L = 327.8 ft

Project No. = IR-040-1(96)17	Old Bridge No. = 06551	Known Utilities = N
(51) Width Curb to Curb = 51.5 ft	(52) Width Out to Out = 52.2 ft	(33) Median = 1 Open median

Special Inspections :

(92A) FC Frequency = NA	(93A) FC Inspection Date = NA	Next UW Inspection = NA
(92B) UW Frequency = NA	(93B) UW Inspection Date = NA	Next FC Inspection = NA
(92C) SI Frequency = NA	(93C) SI Date = NA	Next SI = NA

TRAFFIC SAFETY FEATURES

Bridge Rail (36A) = 1 Meets Standards	Approach Rail (36C) = 1 Meets Standards
Transition (36B) = 1 Meets Standards	Approach Rail Ends (36D) = 1 Meets Standards

Stay In Place Forms =	Stay In Place Form Type =	Overlay Thickness =
Culver Fill = 0	(32) Approach Roadway Width (w/ shoulders) = 52.2 ft	

SIP Notes:

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Approach Roadway Condition:

Channel and Channel Protection:

Recommendations and Inspection Notes:

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
0	26/2	Conc Deck/Coatd Bars	(SF)	8,611	100 %	8,611	0 %	0	0 %	0	0 %	0	0 %	0
0	107/2	Paint Stl Opn Girder	(LF)	1,247	100 %	1,247	0 %	0	0 %	0	0 %	0	0 %	0
0	215/2	R/Conc Abutment	(LF)	171	100 %	171	0 %	0	0 %	0	0 %	0	0 %	0
0	219/2	CONC WINGWALL	(LF)	59	66 %	39	34 %	20	0 %	0	0 %	0	0 %	0
0	300/2	Strip Seal Exp Joint	(LF)	171	100 %	171	0 %	0	0 %	0	0 %	0	0 %	0
0	310/2	Elastomeric Bearing	(EA)	16	100 %	16	0 %	0	0 %	0	0 %	0	0 %	0
0	321/2	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
0	329/2	GUARDRAIL (standard)	(LF)	374	100 %	374	0 %	0	0 %	0	0 %	0	0 %	0
0	331/2	Conc Bridge Railing	(LF)	1,001	100 %	1,001	0 %	0	0 %	0	0 %	0	0 %	0
0	338/2	CONC SLOPE PAVING	(SF)	4,133	90 %	3,724	5 %	205	5 %	205	0 %	0	0 %	0

Str Unit	Elem/Env	Description	Element Notes
0	26/2	Concrete Deck - Protected w / Coat	Top of deck has transverse and longitudinal cracks up to 1/8" with isolated pop-outs up to 3" x 2". Deck edges have transverse cracks up to 1/16" with minor leaching. Underside of deck has transverse and longitudinal cracks up to 1/16".
0	107/2	Painted Steel Open Girder/Beam	Girders have minor water stains.
0	215/2	Reinforced Conc Abutment	Concrete stub abutments have transverse and horizontal cracks up to 1/16" with light leaching.
0	219/2	REINFORCED CONC WINGWALL/PA	Wingwalls have spalls up to 5" x 1" with slight bulging up to 2".
0	300/2	Strip Seal Expansion Joint	Joints measured from W>E: 2" and 1 1/2". Joints have loss of adhesion. Joints are full of dirt and debris. Joints appear to leak due to loss of adhesion.
0	310/2	Elastomeric Bearing	Elastomeric bearing pads are protruding up to 1 1/2".
0	321/2	Reinforced Conc Approach Slab w	Transverse cracks, sleeper beam is down at the right end. Cracked and broken at the construction joint. Joint 1 with small spalls in the header.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Str Unit	Elem/Env	Description	Element Notes
0	329/2	GUARDRAIL (STANDARD)	12" W rail on timber posts with breakaway anchors to Thrie rail.
0	331/2	Reinforced Conc Bridge Railing	CBR has vertical and horizontal cracks up to 1/16", isolated minor cementitious coating loss, 4" of exposed rebar on SE corner and delamination 2' x 1'.
0	338/2	CONCRETE SLOPE PAVING	Concrete slope paving has longitudinal and transverse cracks up to 1/4", some have been epoxy sealed with minor settlement up to 2" at SE corner.

PAST INSPECTION

Inspection Date: 09/19/2007 Type: 1 Regular NBI

Inspector: GBACA00 Pontis User Key: GBACA00 - GEORGE BACA

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

1. Weather Conditions: Clear 70, degrees F. 2. NMSU Bridge Inspection team members: George P. Baca, Ryan Fairbank and Charles Carrasco. 3. Work Done Since Last Inspection: None evident. 4. Channel and Channel Protection: N/A. 5. Approach Roadway Condition: Asphalt pavement has map cracks up to 1/6" with minor raveling. Transition has minor impact loading due to uneven approach. Asphalt shoulders are in good condition. Embankments have moderate slopes with minor vegetation. Bridge signing: Delineators. 6. Traffic Safety Features: Over - 12" W rail on timber posts with breakaway anchors to Thrie rail that is bolted to CBR. Under - None. 7. Work Recommended: 1. Sign bridge less than 16'-5" for NBL. 2. Repair pourable seal in compression joint. 3. Monitor settlement of slope protection. 4. Clean dirt and debris from joints.

PAST INSPECTION

Inspection Date: 11/30/2005 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000008836 -
Date 2005-11-30 -
Present: S. Quintana, D. Gregory; Partly cloudy, calm, 45 deg. No waterway. Pavement on east end is OGFC in good condition. On the west end is PCC with joint seals out, loose, & leaking, hairline to minor longitudinal & random cracks, large transverse cracks, mudballs, small spalls & open joint at the end. Traffic safety features are CWB, Thrie beam & W beam on square wood posts with type C anchors for route over. None needed on route under. RECOMMENDATIONS: Patrol 46-58, move material on east side between bridges to divert the water flow away from the wingwalls/abutments into the MDI. Fill piping holes on NE abutment.
Structure 000000000008836 -
Date 11/8/01 -

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 11/04/2003 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000008836 -
Date 2003-11-04 -
Present: P. Meyer, D. Gregory; Partly cloudy, calm, 35 deg. No waterway. Pavement on east end is OGFC in good condition. On the west end is PCC with joint seals out, loose, & leaking, hairline to minor longitudinal & random cracks, large transverse cracks, mudballs, small spalls & open joint at the end. Traffic safety features are CWB, Thrie beam & W beam on square wood posts with type C anchors for route over. None needed on route under. RECOMMENDATIONS: Bridge Crew, patch and seal potholes and cracks in PCC under bridge (Old 66).
Structure 000000000008836 -
Date 11/8/01 -

PAST INSPECTION

Inspection Date: 11/08/2001 Type: 1 Regular NBI

Inspector: GSPAR01 Pontis User Key: 13

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

GSPAR01 inspection comments - Present: G. Sparkman, P. Meyer. Partly cloudy, calm, 60 deg. No waterway. Pavement on east end is OGFC in good condition. On the west end is PCC with joint seals out, loose, & leaking, hairline to minor longitudinal & random cracks, large transverse cracks, mudballs, small spalls & open joint at the end. Traffic safety features are CWB, Thrie beam & W beam on square wood posts with type C anchors for route over. None needed on route under. RECOMMENDATIONS: None
Structure 000000000008836 -
Date 11/8/01 -

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 11/03/1999 Type: 1 Regular NBI

Inspector: GSPAR01 Pontis User Key: 13

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

GSPAR01 inspection comments -
Structure 000000000008836 -
Date 11/3/99 -
Previous comments > (none)Present: G. Sparkman, P. Meyer. No waterway. Pavement on east end is OGFC in fair condition with patches potholes , longitudinal & random cracks. On the west end is PCC with joints at end of bridge, some need sealing. Traffic safety features are CWB, Thrie beam & W beam on square wood posts with type C anchors for route over. None needed on route under. RECOMMENDATIONS: Change minimum vertical clearance signs to read 16'-2'.

PAST INSPECTION

Inspection Date: 11/01/1997 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 12/01/1995 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☐

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

INSPECTOR WORK CANDIDATES

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Bridge Number: 000000000008845 **Inspection Date (90): 9/3/2008**

NMDOT District No. = District 6	(3) County = 31 McKINLEY	Sufficiency Rating = 98
(4)Town/City = Gallup	(91) Frequency = 24 months	Next Inspection = 09/03/2010
(7) Facility Carried = I-40 WBL (11) Mile Post = 17.761 mi	Patrol No. 46-58, Gallup	Deficiency Status Not Deficient
(49) Structure Length = 392.7 ft	(19) Detour Length = 0.0 mi	(112) NBIS Length = Long Enough
(102) Direction of Traffic = 1 1-way traffic	(28A) Lanes on = 2	(28B) Lanes Under = 0
(41) Posting Status = A Open, no restriction	(34) Skew = 43.00 °	(104) Highway System = 1 On the NHS
(9) Location = 1.3 MI E JCT I-40 & NM118		
(6) Feature Intersected = RIO PUERCO		

DESCRIPTION:

Structure Description: 5 Simple spans at 73', 78', 78', 78', 73'. 5 Prestressed AASHTO girders per span, CIP concrete deck continuous for live load, concrete stub abutments on concrete drilled shafts and concrete pier caps on concrete columns.

CONDITION

Deck (58) = 7 Good **Super (59) =** 7 Good **Sub (60) =** 7 Good

Channel/Channel Protection (61) = 7 Minor Damage **Culvert (62) =** N N/A (NBI)

APPRAISAL

Str. Evaluation (67) = 7 **Deck Geometry (68) =** 6 Equal Min Criteria

Waterway Adequacy (71) = 8 Equal Desirable **Approach Alignment (72) =** Equal Desirable Crit

Underclearance, Vertical and Horizontal (69) = N **Scour Critical (113)=** 5 Stable w/in footing

LOAD RATING AND POSTING

Inventory Rating (66) = HS19.8 **Operating Rating (64) = HS50.6**

Posting status (41) = A Open, no restriction Posting (70) = 5 At/Above Legal Loads

Inventory Rating Method (65) = 1 LF Load Factor Operating Rating Method (63) = 1 LF Load Factor

Design Load (31) = 5 MS 18 (HS 20)

(29) ADT = 9,023	(114) Future ADT= 15,200	(109) Truck ADT= 40 %
(30) Year of ADT = 2007	(115) Year of Future ADT= 2027	Route Posted Speed Limit = -1

Team Leader *Date* *Reviewed By* *Date*

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

(16) Latitude = 35d 30' 48"	(17) Longitude = 108d 48' 32"	(27) Year Built = 1994
(22) Owner = State Highway Agency	(21) Custodian = State Highway Agency	(106) Year Reconstruct= Unknown
(42A) Type of Service on = 1 Highway	(42B)Type Service under= 5 Waterway	(5C) Level of Service = 1 Mainline

(26) Functional Class = 11 Urban Interstate	(100) Defense Highway = 1 Interstate STRAHNET
(37) Historical Significance = 5 Not eligible for NRHP	(35) Structure Flared = 0 No flare
(43A) Main Span Material/Design = 5 Prestressed Concrete	(43B) Main Span Material/Design = 02 Stringer/Girder
(48) Length Max Span = 78.0 ft	(46) Number of Approach Spans = 0
(44A) Approach Span Material =	(44B) Approach Span Material =
(107) Deck Type = 1 Concrete-Cast-in-Place	(108C) Deck Protection = 1 Epoxy Coated Reinforci
(108A) Wearing Surface = 1 Monolithic Concrete	(108B) Membrane = 0 None
Min. Vertical Clearance Minus= 9999	Min. Vertical 10' Selected Minus= 9999
Min. Vertical Clearance Plus= 0	Min. Vertical 10' Selected Plus= 0
(55) Minimum Lateral Undrclearance R = 0.0 ft	(56) Minimum Lateral Undrclearance L = 0.0 ft

Project No. = IM-040-1(93)17	Old Bridge No. = 06558	Known Utilities = N
(51) Width Curb to Curb = 38.4 ft	(52) Width Out to Out = 41.0 ft	(33) Median = 1 Open median

Special Inspections :

(92A) FC Frequency = NA	(93A) FC Inspection Date = NA	Next UW Inspection = NA
(92B) UW Frequency = NA	(93B) UW Inspection Date = NA	Next FC Inspection = NA
(92C) SI Frequency = NA	(93C) SI Date = NA	Next SI = NA

TRAFFIC SAFETY FEATURES

Bridge Rail (36A) =	1 Meets Standards	Approach Rail (36C) =	1 Meets Standards
Transition (36B) =	1 Meets Standards	Approach Rail Ends (36D) =	1 Meets Standards

Stay In Place Forms = No	Stay In Place Form Type = N\A	Overlay Thickness = -1
Culver Fill = 0	(32) Approach Roadway Width (w/ shoulders) = 38.1 ft	

SIP Notes:

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Approach Roadway Condition:
Asphalt pavement has moderate wheel rutting. Concrete approach slabs are partially covered with asphalt. Transition has moderate impact loading due to uneven approach. Asphalt shoulders are in good condition with moderate to heavy debris build-up. Embankments have moderate slopes with moderate to heavy vegetation. Bridge signing: Delineators.

Channel and Channel Protection:
Flat, sandy channel skewed approximately 30 degrees to bridge. Wire enclosed rip-rap, some is covered with silt.

Recommendations and Inspection Notes:

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
0	26/2	Conc Deck/Coatd Bars	(SF)	16,114	100 %	16,114	0 %	0	0 %	0	0 %	0	0 %	0
0	109/2	P/S Conc Open Girder	(LF)	1,962	100 %	1,962	0 %	0	0 %	0	0 %	0	0 %	0
0	205/2	R/Conc Column	(EA)	12	100 %	12	0 %	0	0 %	0	0 %	0	0 %	0
0	215/2	R/Conc Abutment	(LF)	112	100 %	112	0 %	0	0 %	0	0 %	0	0 %	0
0	219/2	CONC WINGWALL	(LF)	59	100 %	59	0 %	0	0 %	0	0 %	0	0 %	0
0	234/2	R/Conc Cap	(LF)	223	100 %	223	0 %	0	0 %	0	0 %	0	0 %	0
0	306/2	COMPRESSION JOINT	(LF)	105	100 %	105	0 %	0	0 %	0	0 %	0	0 %	0
0	310/2	Elastomeric Bearing	(EA)	50	100 %	50	0 %	0	0 %	0	0 %	0	0 %	0
0	321/2	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
0	329/2	GUARDRAIL (standard)	(LF)	1,201	100 %	1,201	0 %	0	0 %	0	0 %	0	0 %	0
0	331/2	Conc Bridge Railing	(LF)	846	100 %	846	0 %	0	0 %	0	0 %	0	0 %	0
0	336/2	RIP RAP AND GABIONS	(SF)	9,601	100 %	9,601	0 %	0	0 %	0	0 %	0	0 %	0
0	337/2	FLOW CONTROL	(LF)	1,001	100 %	1,001	0 %	0	0 %	0	0 %	0	0 %	0

Str Unit	Elem/Env	Description	Element Notes
0	26/2	Concrete Deck - Protected w / Coat	Top of deck has transverse, map and longitudinal cracks up to 1/16". Deck edges have transverse and vertical cracks up to 1/16" with light leaching. Underside of deck has isolated transverse and longitudinal cracks up to 1/32" with light leaching.
0	109/2	P/S Conc Open Girder/Beam	Type 45 beams. Girders are in good condition with isolated areas of minor water stains.
0	205/2	Reinforced Conc Column or Pile Ext	Concrete columns have map cracks up to 1/32".
0	215/2	Reinforced Conc Abutment	Abutments are in good condition.
0	219/2	REINFORCED CONC WINGWALL/PA	Wingwalls are in good condition.
0	234/2	Reinforced Conc Cap	Pier caps are in good condition.
0	306/2	COMPRESSION JOINT SEAL-ENDS	Compression joint seals measured from W>E: 3" and 3". Joints have loss of adhesion up to 1' and are partially filled with debris. Joints do not appear to leak.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Str Unit	Elem/Env	Description	Element Notes
0	310/2	Elastomeric Bearing	Elastomeric bearings are enclosed and unobservable, no excessive movement is evident.
0	321/2	Reinforced Conc Approach Slab w	Concrete approach slabs are partially covered with asphalt.
0	329/2	GUARDRAIL (STANDARD)	12" W rail on timer posts with Type C anchors to Thrie rail. Minor traffic damage throughout.
0	331/2	Reinforced Conc Bridge Railing	CBR has transverse, vertical and map cracks up to 1/16" with minor traffic scratches throughout and isolated spalls up to 4" x 4".
0	336/2	WIRE ENCLOSED RIPRAF, RIPRAP,	Wire enclosed rip-rap has areas that are covered with silt.
0	337/2	FLOW CONTROL DEVICES	Good condition

PAST INSPECTION

Inspection Date: 09/03/2008 Type: 1 Regular NBI

Inspector: GBACA00 Pontis User Key: GBACA00 - GEORGE BACA

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

1. Weather Conditions: Clear, 85 degrees F. 2. NMSU Bridge Inspection team members: George P. Baca, Lance Aspaas and Adela Tapia. 3. Work Done Since Last Inspection: None evident. 4. Traffic Safety Features: 12" W rail on timber posts with Type C anchors to Thrie rail that bolted to CBR. 5. Work Recommended: None.

PAST INSPECTION

Inspection Date: 08/10/2006 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000008845 -
Date 2006-08-10 -
Present: D. Gregory; Cloudy, moderate breeze, 75 Deg. Bridge is over a medium intermittent stream with wide flood plain & small incised channel between Piers 3 & 4. Good alignment. minor debris, heavy silt adjacent to channel, no scour. Approach roadway is OGFC in fair condition, patches & bleeding, pothole forming, 1" setlement at sleeper beam. Shoulders are PMBP, longitudinal & transverse cracks, finished low at NW corner of bridge. Embankment is in good condition with moderate vegetation. Bridge signing is 2-2V delineators. RECOMMENDATIONS: None.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 08/23/2004 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000008845 -
Date 2004-08-23 -
Present: D. Gregory, E. Gonzales; Cloudy, moderate breeze, 75 Deg. Bridge is over a medium intermittent stream with wide flood plain & small incised channelbetween Piers 3 & 4. Good alignment. minor debris, heavy silt adjacent to channel, no scour. Approach roadway is OGFC in fair condition, patches & bleeding, patch, pothole forming, 1' setlement at sleeper beam. Shoulders are PMBP, longitudinal & transverse cracks, finished low at NW corner of bridge. Embankment is in good condition with moderate vegetation. Bridge signing is 2-2V delineators.
RECOMMENDATIONS: None.

PAST INSPECTION

Inspection Date: 10/21/2002 Type: 1 Regular NBI

Inspector: PMEYE06 Pontis User Key: PMEYE06 - PAUL MEYER

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

PMEYE06 inspection comments -
Structure 000000000008845 -
Date 2002-10-21 - -Present: P. Meyer, Partly cloudy, light breeze, 65 Deg. Bridge is over a medium intermittent stream with wide flood plain & small incised channel. Good alignment. Minor debris, heavy silt adjacent to channel, no scour. Approach roadway is OGFC in fair condition, patches & bleeding, patch, pothole forming, 1" setlement at sleeper beam. Shoulders are PMBP, longitudinal & transverse cracks, finished low at NW corner of bridge. Embankment is in good condition with moderate vegetation. Bridge signing is 2-2V delineators. RECOMMENDATIONS: None.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 10/05/2000 Type: 1 Regular NBI

Inspector: GSPAR01 Pontis User Key: 13

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

GSPAR01 inspection comments -Present: P. Meyer, G. Sparkman: Sunny, Light Breeze 70 Deg. Bridge is over a medium intermittent stream with wide flood plain & small incised channel. Good alignment. Minor debris, heavy silt, no scour. Approach roadway is OGFC in fair condition, patches & light bleeding, 1' setlement at sleeper beam. Shoulders are PMBP, longitudinal & transverse cracks, finished low at NW corner of bridge. Embankment is in good condition with moderate vegetation. Bridge signing is 2-2V delineators. RECOMMENDATIONS: None.
Structure 000000000008845 -
Date 10/5/00 -
Previous comments > (none)

PAST INSPECTION

Inspection Date: 10/01/1998 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 10/01/1996 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☐

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

INSPECTOR WORK CANDIDATES

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Bridge Number: 000000000008846 **Inspection Date (90): 9/4/2008**

NMDOT District No. = District 6	(3) County = 31 McKINLEY	Sufficiency Rating = 97
(4)Town/City = Gallup	(91) Frequency = 24 months	Next Inspection = 09/04/2010
(7) Facility Carried = I-40 EBL (11) Mile Post = 17.810 mi	Patrol No. 46-58	Deficiency Status Not Deficient
(49) Structure Length = 392.7 ft	(19) Detour Length = 0.0 mi	(112) NBIS Length = Long Enough
(102) Direction of Traffic = 1 1-way traffic	(28A) Lanes on = 2	(28B) Lanes Under = 0
(41) Posting Status = A Open, no restriction	(34) Skew = 43.00 °	(104) Highway System = 1 On the NHS
(9) Location = 1.3 MI E JCT I-40/NM118		
(6) Feature Intersected = RIO PUERCO		

DESCRIPTION:

Structure Discription: 5 Simple spans at 73', 78', 78',78' an 73'. 5 Prestressed AASHTO girders per span, CIP concrete deck continuous for live load, concrete stub abutments with intergral backwall and concrete pier caps on concrete columns.

CONDITION

Deck (58) = 7 Good **Super (59) =** 7 Good **Sub (60) =** 7 Good

Channel/Channel Protection (61) = 7 Minor Damage **Culvert (62) =** N N/A (NBI)

APPRAISAL

Str. Evaluation (67) = 7 **Deck Geometry (68) =** 6 Equal Min Criteria

Waterway Adequacy (71) = 5 Above Tolerable **Approach Alignment (72) =** Equal Desirable Crit

Underclearance, Vertical and Horizontal (69) = N **Scour Critical (113)=** 5 Stable w/in footing

LOAD RATING AND POSTING

Inventory Rating (66) = HS20.0 **Operating Rating (64) = HS50.6**

Posting status (41) = A Open, no restriction Posting (70) = 5 At/Above Legal Loads

Inventory Rating Method (65) = 1 LF Load Factor Operating Rating Method (63) = 1 LF Load Factor

Design Load (31) = 5 MS 18 (HS 20)

(29) ADT = 9,470	(114) Future ADT= 15,953	(109) Truck ADT= 40 %
(30) Year of ADT = 2007	(115) Year of Future ADT= 2027	Route Posted Speed Limit = -1

Team Leader *Date* *Reviewed By* *Date*

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

(16) Latitude = 35d 30' 47"	(17) Longitude = 108d 48' 31"	(27) Year Built = 1993
(22) Owner = State Highway Agency	(21) Custodian = State Highway Agency	(106) Year Reconstruct= Unknown
(42A) Type of Service on = 1 Highway	(42B)Type Service under= 5 Waterway	(5C) Level of Service = 1 Mainline

(26) Functional Class = 11 Urban Interstate	(100) Defense Highway = 1 Interstate STRAHNET
(37) Historical Significance = 5 Not eligible for NRHP	(35) Structure Flared = 0 No flare
(43A) Main Span Material/Design = 5 Prestressed Concrete	(43B) Main Span Material/Design = 02 Stringer/Girder
(48) Length Max Span = 78.1 ft	(46) Number of Approach Spans = 0
(44A) Approach Span Material =	(44B) Approach Span Material =
(107) Deck Type = 1 Concrete-Cast-in-Place	(108C) Deck Protection = 1 Epoxy Coated Reinforci
(108A) Wearing Surface = 1 Monolithic Concrete	(108B) Membrane = 0 None
Min. Vertical Clearance Minus= 0	Min. Vertical 10' Selected Minus= 0
Min. Vertical Clearance Plus= 9999	Min. Vertical 10' Selected Plus= 9999
(55) Minimum Lateral Undrclearance R = 0.0 ft	(56) Minimum Lateral Undrclearance L = 0.0 ft

Project No. = IM-040-1(93)17	Old Bridge No. = 06557	Known Utilities = N
(51) Width Curb to Curb = 38.1 ft	(52) Width Out to Out = 41.0 ft	(33) Median = 1 Open median

Special Inspections :

(92A) FC Frequency = NA	(93A) FC Inspection Date = NA	Next UW Inspection = NA
(92B) UW Frequency = NA	(93B) UW Inspection Date = NA	Next FC Inspection = NA
(92C) SI Frequency = NA	(93C) SI Date = NA	Next SI = NA

TRAFFIC SAFETY FEATURES

Bridge Rail (36A) =	1 Meets Standards	Approach Rail (36C) =	1 Meets Standards
Transition (36B) =	1 Meets Standards	Approach Rail Ends (36D) =	1 Meets Standards

Stay In Place Forms = No	Stay In Place Form Type = N\A	Overlay Thickness = -1
Culver Fill = 0	(32) Approach Roadway Width (w/ shoulders) = 39.0 ft	

SIP Notes:

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Approach Roadway Condition:
Asphalt pavement has moderate wheel rutting. Transition has moderate impact loading due to uneven approach. Asphalt shoulders are in good condition with heavy debris build-up. Embankments have moderate slopes with heavy vegetation. Bridge signing: Delineators, many are missing.

Channel and Channel Protection:
Flat, sandy channel skewed approximately 30 degrees to the bridge with light vegetation. Wire enclosed rip-rap is partially covered with silt.

Recommendations and Inspection Notes:

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
0	26/2	Conc Deck/Coatd Bars	(SF)	108,802	100 %	108,802	0 %	0	0 %	0	0 %	0	0 %	0
0	109/2	P/S Conc Open Girder	(LF)	1,962	100 %	1,962	0 %	0	0 %	0	0 %	0	0 %	0
0	205/2	R/Conc Column	(EA)	12	100 %	12	0 %	0	0 %	0	0 %	0	0 %	0
0	215/2	R/Conc Abutment	(LF)	112	100 %	112	0 %	0	0 %	0	0 %	0	0 %	0
0	219/2	CONC WINGWALL	(LF)	59	100 %	59	0 %	0	0 %	0	0 %	0	0 %	0
0	234/2	R/Conc Cap	(LF)	223	100 %	223	0 %	0	0 %	0	0 %	0	0 %	0
0	306/2	COMPRESSION JOINT	(LF)	105	100 %	105	0 %	0	0 %	0	0 %	0	0 %	0
0	310/2	Elastomeric Bearing	(EA)	50	100 %	50	0 %	0	0 %	0	0 %	0	0 %	0
0	321/2	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
0	329/2	GUARDRAIL (standard)	(LF)	1,201	98 %	1,176	2 %	25	0 %	0	0 %	0	0 %	0
0	331/2	Conc Bridge Railing	(LF)	846	100 %	846	0 %	0	0 %	0	0 %	0	0 %	0
0	336/2	RIP RAP AND GABIONS	(SF)	10,882	100 %	10,882	0 %	0	0 %	0	0 %	0	0 %	0
0	337/2	FLOW CONTROL	(LF)	1,001	100 %	1,001	0 %	0	0 %	0	0 %	0	0 %	0

Str Unit	Elem/Env	Description	Element Notes
0	26/2	Concrete Deck - Protected w / Coat	Top of deck has transverse and longitudinal cracks up 1/8". Deck edges are in good condition. Underside of deck has transverse and longitudinal cracks with light leaching.
0	109/2	P/S Conc Open Girder/Beam	Girder ends have isolated small spalls up to 4" x 4".
0	205/2	Reinforced Conc Column or Pile Ext	Concrete columns are in good condition.
0	215/2	Reinforced Conc Abutment	Abutments have isolated spalls at abutment 2 and minor leaching.
0	219/2	REINFORCED CONC WINGWALL/PA	Wingwalls have vertical and horizontal cracks up to 1/16".
0	234/2	Reinforced Conc Cap	Pier caps are in good condition.
0	306/2	COMPRESSION JOINT SEAL-ENDS	Compression joint seals measured from W>E: 3" and 2 3/4". Joints have loss of adhesion up to 1'. Joints leak due to lack of adhesion.
0	310/2	Elastomeric Bearing	Elastomeric bearings are enclosed, no excessive movement is evident.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Str Unit	Elem/Env	Description	Element Notes
0	321/2	Reinforced Conc Approach Slab w	Concrete approach slabs in good condition.
0	329/2	GUARDRAIL (STANDARD)	12" W rail on timber posts with Type C anchors to Thrie rail. Minor traffic scratches and some missing blockouts.
0	331/2	Reinforced Conc Bridge Railing	CBR has transverse, vertical and map cracks up to 1/16".
0	336/2	WIRE ENCLOSED RIPRAF, RIPRAP,	Wire enclosed rip-rap is in good condition with moderate silt build-up.
0	337/2	FLOW CONTROL DEVICES	Earth dikes in good condition.

PAST INSPECTION

Inspection Date: 09/04/2008 Type: 1 Regular NBI

Inspector: GBACA00 Pontis User Key: GBACA00 - GEORGE BACA

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

1. Weather Conditions: Clear, 85 degrees F. 2. NMSU Bridge Inspection team members: George P. Baca, Adela M. Tapia and Lance M. Aspaas. 3. Work Done Since Last Inspection: None evident. 4. Traffic Safety Features: 12" W rail on timber posts with Type C anchors to Thrie rail that is bolted to CBR. 5. None.

PAST INSPECTION

Inspection Date: 08/10/2006 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000008846 -
Date 2006-08-10 -
Present: D. Gregory; Cloudy, moderate breeze, 75 deg. Medium intermittent stream with small incised channel between Pier 3 & 4, with wide flat flood plain. Good alignment, minor vegetation at bridge. No scour, moderate silt, minor debris. Top of rail to channel A1=9.8', P1=20.0', P2-15'=20.6', P2=27.0', P2+10'=29.5', P2+40'=29.3', P2+45'=23.3', P3=22.2', P4=21.6', A2=9.6'. Wire enclosed riprap in good condition, mostly buried. Approach pavement is OGFC in fair condition with minor bleeding, & patched sleeper beam. PMBP shoulders are in fair condition with minor debris, longitudinal & transverse cracks. The embankment has moderate vegetation, good condition. No bridge signing. RECOMMENDATIONS: Patrol 46-58, replace damaged guardrail posts & Thrie Beam.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 08/23/2004 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000008846 -
Date 2004-08-23 -
Present: D. Gregory, E. Gonzales; Cloudy, moderate breeze, 75 deg. Medium intermittent stream with small incised channel between Pier 3 & 3, with wide flat flood plain. Good alignment, minor vegetation at bridge. No scour, moderate silt, minor debris. Top of rail to channel A1=9.8', P1=20.0', P2-15'=20.6', P2=27.0', P2+10'=29.5', P2+40'=29.3', P2+45'=23.3', P3=22.2', P4=21.6', A2=9.6'. Wire enclosed riprap in good condition, mostly buried. Approach pavement is OGFC in fair condition with minor bleeding, & patched sleeper beam. PMBP shoulders are in fair condition with minor debris, longitudinal & transverse cracks. The embankment has moderate vegetation, good condition. No bridge signing. RECOMMENDATIONS: None.

PAST INSPECTION

Inspection Date: 10/21/2002 Type: 1 Regular NBI

Inspector: PMEYE06 Pontis User Key: PMEYE06 - PAUL MEYER

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

PMEYE06 inspection comments -
Structure 000000000008846 -
Date 2002-10-21 - Present: P. Meyer, Partly cloudy, light breeze, 65 deg. Medium intermittent stream with small incised channel & wide flat flood plain. Good alignment, minor vegetation at bridge. No scour, moderate silt, minor debris. Top of rail to channel A1=9.8', P1=20.0', P2-15'=20.6', P2=27.0', P2+10'=29.5', P2+40'=29.3', P2+45'=23.3', P3=22.2', P4=21.6', A2=9.6' Wire enclosed riprap in good condition, mostly buried. Approach pavement is OGFC in fair condition with minor bleeding, & patched sleeper beam. PMBP shoulders are in fair condition with minor debris, longitudinal & transverse cracks. The embankment has moderate vegetation, good condition. No bridge signing. RECOMMENDATIONS: None.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 10/05/2000 Type: 1 Regular NBI

Inspector: GSPAR01 Pontis User Key: 13

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

GSPAR01 inspection comments - Present: G. Sparkman, P. Meyer, Sunny, clam, 70 deg. Medium intermittent stream with small incised channel & wide flat flood plain. Good alignment, minor vegetation at bridge. No scour, moderate silt, minor debris. Top of rail to channel A1=9.8', P1=20.0', P2-15'=20.6', P2=27.0', P2+10'=29.3', P2+40'=28.9', P2+45'=23.3', P3=22.2', P4=21.6', A2=9.6' Wire enclosed riprap in good condition, mostly buried. Approach pavement is OGFC in fair condition with minor bleeding, & patched sleeper beam. PMBP shoulders are in fair condition with minor debris, longitudinal & transverse cracks. The embankment has moderate vegetation, good condition. No bridge signing. RECOMMENDATIONS: None.
Structure 000000000008846 -
Date 10/5/00 -
Previous comments > (none)

PAST INSPECTION

Inspection Date: 10/01/1998 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

Top of rail to channel: A1=9.8', P1=20.5', P2=20.4', midspan=30.0', P3=23.5', P4=21.6', A2=9.6'.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

PAST INSPECTION

Inspection Date: 10/01/1996 Type: 1 Regular NBI

Inspector: PONTIS Pontis User Key: SYS

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

INSPECTOR WORK CANDIDATES

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Bridge Number: 000000000009330 **Inspection Date (90): 6/4/2008**

NMDOT District No. = District 6	(3) County = 31 McKINLEY	Sufficiency Rating = 93.9
(4)Town/City = Gallup	(91) Frequency = 24 months	Next Inspection = 06/04/2010
(7) Facility Carried = I-491 NB and (11) Mile Post = 0.560 mi	Patrol No. 46-58, Gallup	Deficiency Status Not Deficient
(49) Structure Length = 252.0 ft	(19) Detour Length = 1.2 mi	(112) NBIS Length = Long Enough

(102) Direction of Traffic = 2 2-way traffic	(28A) Lanes on = 4	(28B) Lanes Under = 4
(41) Posting Status = A Open, no restriction	(34) Skew = 9.00 °	(104) Highway System = 1 On the NHS

(9) Location = Junction of I-40/US-491

(6) Feature Intersected = I-40 EB and WB

DESCRIPTION:

2007 - Project number - BR-IM-666-1(55)00

Structure Description: 4 Simple spans at 36', 95', 90' and 36'. 11 PS AASHTO girders per span, CIP concrete deck sealed with HMWM, concrete stub abutments and concrete pier caps on concrete

CONDITION

Deck (58) = 7 Good **Super (59) =** 7 Good **Sub (60) =** 7 Good

Channel/Channel Protection (61) = N N/A (NBI) **Culvert (62) =** N N/A (NBI)

APPRAISAL

Str. Evaluation (67) = 7 **Deck Geometry (68) =** 9 Above Desirable C

Waterway Adequacy (71) = N Not applicable **Approach Alignment (72) =** Equal Desirable Crit

Underclearance, Vertical and Horizontal (69) = 9 **Scour Critical (113)=** N Not Over Waterway

LOAD RATING AND POSTING

Inventory Rating (66) = HS19.8 **Operating Rating (64) = HS38.7**

Posting status (41) = A Open, no restriction Posting (70) = 5 At/Above Legal Loads

Inventory Rating Method (65) = 1 LF Load Factor Operating Rating Method (63) = 1 LF Load Factor

Design Load (31) = 5 MS 18 (HS 20)

(29) ADT = 22,755	(114) Future ADT= 29,660	(109) Truck ADT= 7 %
(30) Year of ADT = 2007	(115) Year of Future ADT= 2027	Route Posted Speed Limit = -1

Team Leader *Date* *Reviewed By* *Date*

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

(16) Latitude = 35d 31' 40"	(17) Longitude = 108d 45' 36"	(27) Year Built = 2007
(22) Owner = State Highway Agency	(21) Custodian = State Highway Agency	(106) Year Reconstruct= 0
(42A) Type of Service on = 1 Highway	(42B)Type Service under= 1 Highway	(5C) Level of Service = 1 Mainline

(26) Functional Class = 14 Urban Other Princ	(100) Defense Highway = 2 Non-Interstate STRA
(37) Historical Significance = 5 Not eligible for NRHP	(35) Structure Flared = 0 No flare
(43A) Main Span Material/Design = 5 Prestressed Concrete	(43B) Main Span Material/Design = 02 Stringer/Girder
(48) Length Max Span = 95.1 ft	(46) Number of Approach Spans = 0
(44A) Approach Span Material =	(44B) Approach Span Material =
(107) Deck Type = 1 Concrete-Cast-in-Place	(108C) Deck Protection = 1 Epoxy Coated Reinforci
(108A) Wearing Surface = 1 Monolithic Concrete	(108B) Membrane = 8 Unknown
Min. Vertical Clearance Minus= 2000	Min. Vertical 10' Selected Minus= 2005
Min. Vertical Clearance Plus= 1707	Min. Vertical 10' Selected Plus= 1709
(55) Minimum Lateral Undrclearance R = 44.9 ft	(56) Minimum Lateral Undrclearance L = 16.1 ft

Project No. = BR-IM-666-1(55)00	Old Bridge No. = -1	Known Utilities = -1
(51) Width Curb to Curb = 89.9 ft	(52) Width Out to Out = 99.1 ft	(33) Median = 2 Closed Med w/o Barrier

Special Inspections :

(92A) FC Frequency = NA	(93A) FC Inspection Date = NA	Next UW Inspection = NA
(92B) UW Frequency = NA	(93B) UW Inspection Date = NA	Next FC Inspection = NA
(92C) SI Frequency = NA	(93C) SI Date = NA	Next SI = NA

TRAFFIC SAFETY FEATURES

Bridge Rail (36A) =	1 Meets Standards	Approach Rail (36C) =	0 Substandard
Transition (36B) =	0 Substandard	Approach Rail Ends (36D) =	0 Substandard

Stay In Place Forms =	Stay In Place Form Type =	Overlay Thickness =
Culver Fill =	(32) Approach Roadway Width (w/ shoulders) = 43.0 ft	

SIP Notes:

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Bridge Number: 000000000008852 **Inspection Date (90):** 9/4/2008

NMDOT District No. = District 6	(3) County = 31 McKINLEY	Sufficiency Rating = 98
(4)Town/City = Gallup	(91) Frequency = 24 months	Next Inspection = 09/04/2010
(7) Facility Carried I-40 WB (11) Mile Post = 17.570 mi	Patrol No. 46-58	Deficiency Status Not Deficient
(49) Structure Length = 100.1 ft	(19) Detour Length = 0.0 mi	(112) NBIS Length = Long Enough
(102) Direction of Traffic = 1 1-way traffic	(28A) Lanes on = 2	(28B) Lanes Under = 0
(41) Posting Status = A Open, no restriction	(34) Skew = 19.00 °	(104) Highway System =1 On the NHS
(9) Location = 1.1 MI E JCT I-40 & NM118		
(6) Feature Intersected = WEST YARD DRAW		

DESCRIPTION:
Structure Description: One simple span at 97'. 6 Prestressed AASHTO girders, CIP concrete deck, concrete stub abutment with integral backwall on concrete filled steel pipe piles.

CONDITION

Deck (58) = 7 Good **Super (59) =** 7 Good **Sub (60) =** 7 Good
Channel/Channel Protection (61) = 7 Minor Damage **Culvert (62) =** N N/A (NBI)

APPRAISAL

Str. Evaluation (67) = 7 **Deck Geometry (68) =**6 Equal Min Criteria
Waterway Adequacy (71) =8 Equal Desirable **Approach Alignment (72)=** 8 Equal Desirable Crit
Underclearance, Vertical and Horizontal (69) =N **Scour Critical (113)=**5 Stable w/in footing

LOAD RATING AND POSTING

Inventory Rating (66) = HS29.0 **Operating Rating (64) = HS52.2**

Posting status (41) = A Open, no restriction Posting (70) = 5 At/Above Legal Loads
Inventory Rating Method (65) = 1 LF Load Factor Operating Rating Method (63) = 1 LF Load Factor
Design Load (31) = 5 MS 18 (HS 20)

(29) ADT = 18,814 (114) Future ADT=27,225 (109) Truck ADT= %
(30) Year of ADT =2008 (115) Year of Future ADT= 2028 Route Posted Speed Limit =

Team Leader *Date* *Reviewed By* *Date*

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

(16) Latitude = 35d 30' 47"	(17) Longitude = 108d 48' 46"	(27) Year Built =1994
(22) Owner = State Highway Agency	(21) Custodian = State Highway Agency	(106) Year Reconstruct=Unknown
(42A) Type of Service on = 1 Highway	(42B)Type Service under= 5 Waterway	(35) Structure Flared = 0 No flare
(26) Functional Class = 11 Urban Interstate	(100) Defense Highway = 1 Interstate STRAHNET	
(37) Historical Significance =5 Not eligible for NRHP	(45) No. Of Spans In Main Unit = 1	
(43A) Main Span Material/Design = 5 Prestressed Concrete	(43B) Main Span Material/Design = 02 Stringer/Girder	
(48) Length Max Span = 97.1 ft	(46) Number of Approach Spans = 0	
(44A) Approach Span Material =	(44B) Approach Span Material =	
(107) Deck Type = 1 Concrete-Cast-in-Place	(108C) Deck Protection = 1 Epoxy Coated Reinforci	
(108A) Wearing Surface = 1 Monolithic Concrete	(108B) Membrane = 0 None	
Min. Vertical Clearance Minus= 9999	Min. Vertical 10' Selected Minus= 9999	
Min. Vertical Clearance Plus= 0	Min. Vertical 10' Selected Plus= 0	
(55) Minimum Lateral Undrclearance R = 0.0 ft	(56) Minimum Lateral Undrclearance L = 0.0 ft	
Project No. = NMP-IM-040-1(93)	Old Bridge No. = 06556	(47) Total Horiz. Clearance =38.4 ft
(51) Width Curb to Curb =38.4 ft	(52) Width Out to Out = 41.0 ft	(33) Median = 1 Open median
(32) Approach Roadway Width (w/ shoulders) = 38.1 ft		Known Utilities = N

Special Inspections:

(92A) FC Frequency =NA	(93A) FC Inspection Date = NA	Next UW Inspection = NA
(92B) UW Frequency = NA	(93B) UW Inspection Date = NA	Next FC Inspection = NA
(92C) SI Frequency =NA	(93C) SI Date = NA	Next SI = NA

TRAFFIC SAFETY FEATURES

Bridge Rail (36A) = 1 Meets Standards Approach Rail (36C) = 1 Meets Standards
Transition (36B) = 1 Meets Standards Approach Rail Ends (36D) = 1 Meets Standards

Stay In Place Forms =No	Stay In Place Form Type =N\A	Overlay Thickness =
Culver Fill = 0		

SIP Notes:

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Approach Roadway Condition:
Asphalt pavement has moderate wheel rutting. Transitions has heavy impact loading due to uneven approach. Asphalt shoulders are in good condition. with moderate to heavy debris build-up. Embankments have moderate slopes with moderate to heavy vegetation. Bridge signing: Delineators.

Channel and Channel Protection:
Flat, sandy channel with steep banks, skewed slightly to bridge. Some silt build-up on banks. Wire enclosed rip-rap is covered with silt.

Recommendations and Inspection Notes:

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
0	26/2	Conc Deck/Coatd Bars	(SF)	4,101	100 %	4,101	0 %	0	0 %	0	0 %	0	0 %	0
0	109/2	P/S Conc Open Girder	(LF)	587	100 %	587	0 %	0	0 %	0	0 %	0	0 %	0
0	215/2	R/Conc Abutment	(LF)	89	100 %	89	0 %	0	0 %	0	0 %	0	0 %	0
0	219/2	CONC WINGWALL	(LF)	43	100 %	43	0 %	0	0 %	0	0 %	0	0 %	0
0	306/2	COMPRESSION JOINT	(LF)	82	0 %	0	100 %	82	0 %	0	0 %	0	0 %	0
0	310/2	Elastomeric Bearing	(EA)	12	100 %	12	0 %	0	0 %	0	0 %	0	0 %	0
0	321/2	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
0	329/2	GUARDRAIL (standard)	(LF)	1,201	96 %	1,152	4 %	49	0 %	0	0 %	0	0 %	0
0	331/2	Conc Bridge Railing	(LF)	259	100 %	259	0 %	0	0 %	0	0 %	0	0 %	0
0	336/2	RIP RAP AND GABIONS	(SF)	1,033	100 %	1,033	0 %	0	0 %	0	0 %	0	0 %	0

Str Unit	Elem/Env	Description	Element Notes
0	26/2	Concrete Deck - Protected w/ Coate	Top of deck has transverse, map and longitudinal cracks up to 1/16". Deck edges have transverse and vertical cracks up to 1/16" with light leaching. Underside of deck has isolated transverse and longitudinal cracks up to 1/32" with light leaching.
0	109/2	P/S Conc Open Girder/Beam	AASHTO Type 54. Girders are in good condition.
0	215/2	Reinforced Conc Abutment	Abutments are in good condition.
0	219/2	REINFORCED CONC WINGWALL/	Wingwall has undermining up to 9' x 1' with map and vertical cracks up to 1/32".
0	306/2	COMPRESSION JOINT SEAL-END	Compression joint seals measured from W>E: 1 3/4" and 1 3/4". Joints are partially covered with asphalt, what is visible has loss of adhesion up to 1'. Joints leak due to loss of adhesion.
0	310/2	Elastomeric Bearing	Elastomeric bearings are enclosed and unobservable, no excessive movement is evident.
0	321/2	Reinforced Conc Approach Slab w/	Approach slabs have been paved over.
0	329/2	GUARDRAIL (STANDARD)	12" W rail on timber posts with Type C Anchor to Thrie rail that is continuous from adjacent bridge.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Str Unit	Elem/Env	Description	Element Notes
0	331/2	Reinforced Conc Bridge Railing	CBR has transverse, vertical and map cracks up to 1/16" with minor traffic scratches throughout and isolated spalls up to 4" x 4".
0	336/2	WIRE ENCLOSED RIPRAP, RIPRA	Wire enclosed rip-rap is in good condition.

PAST INSPECTION

Inspection Date: 09/04/2008 Type: 1 Regular NBI

Inspector: GBACA00 Pontis User Key: GBACA00 - GEORGE BACA

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

1. Weather Conditions: Clear, 80 degrees F. 2. NMSU Bridge Inspection team members: George P. Baca, Lance M. Aspaas and Adela M. Tapia. 3. Work Done Since Last Inspection: None evident. 4. Traffics Safety Features: 12" W rail on timber posts with Type C anchors to Thrie rail that bolted to CBR. 5. Work Recommended: None.

PAST INSPECTION

Inspection Date: 08/10/2006 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000008852 -
Date 2006-08-10 -
Present: D. Gregory; Cloudy, light breeze, 75 deg. Small intermittent stream with steep banks. Good alignment. No scour, minor silt & debris. Wire enclosed riprap: partly buried at bottom, in good condition. Approach pavement is OGFC in good condition. The PMBP shoulders have longitudinal & transverse cracks, rough, piping at NW wingwall, moderate debris at guardrail. The embankment is in good condition with moderate vegetation. 2-2V delineators with missing reflectors, for bridge signing. RECOMMENDATIONS: Patrol 46-58, Short Term: backfill erosion and piping at wingwalls.
Structure 000000000008852 -

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Bridge Number: 000000000008853 **Inspection Date (90):** 9/4/2008

NMDOT District No. = District 6	(3) County = 31 McKINLEY	Sufficiency Rating = 98
(4)Town/City = Gallup	(91) Frequency = 24 months	Next Inspection = 09/04/2010
(7) Facility Carried I-40 EBL (11) Mile Post = 17.569 mi	Patrol No. 46-58, Gallup	Deficiency Status Not Deficient
(49) Structure Length = 100.1 ft	(19) Detour Length = 0.0 mi	(112) NBIS Length = Long Enough
(102) Direction of Traffic = 1 1-way traffic	(28A) Lanes on = 2	(28B) Lanes Under = 0
(41) Posting Status = A Open, no restriction	(34) Skew = 19.00 °	(104) Highway System =1 On the NHS
(9) Location = 1.1 MI E JCT I-40/NM118		
(6) Feature Intersected = WEST YARD DRAW		

DESCRIPTION:
Structure Description: One simple span at 97'. 6 PS AASHTO girders, CIP concrete deck, concrete stub abutments on concrete filled steel pipe piling.

CONDITION

Deck (58) = 7 Good **Super (59) =** 7 Good **Sub (60) =** 7 Good
Channel/Channel Protection (61) = 7 Minor Damage **Culvert (62) =** N N/A (NBI)

APPRAISAL

Str. Evaluation (67) = 7 **Deck Geometry (68) =**6 Equal Min Criteria
Waterway Adequacy (71) =8 Equal Desirable **Approach Alignment (72)=** 8 Equal Desirable Crit
Underclearance, Vertical and Horizontal (69) =N **Scour Critical (113)=**5 Stable w/in footing

LOAD RATING AND POSTING

Inventory Rating (66) = HS29.0 **Operating Rating (64) = HS52.2**
Posting status (41) = A Open, no restriction Posting (70) = 5 At/Above Legal Loads
Inventory Rating Method (65) = 1 LF Load Factor Operating Rating Method (63) = 1 LF Load Factor
Design Load (31) = 5 MS 18 (HS 20)

(29) ADT = 18,814	(114) Future ADT=27,225	(109) Truck ADT= 40 %
(30) Year of ADT =2008	(115) Year of Future ADT= 2028	Route Posted Speed Limit =-1

Team Leader *Date* *Reviewed By* *Date*

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

(16) Latitude = 35d 30' 46"	(17) Longitude = 108d 48' 46"	(27) Year Built =1993
(22) Owner = State Highway Agency	(21) Custodian = State Highway Agency	(106) Year Reconstruct=1995
(42A) Type of Service on = 1 Highway	(42B)Type Service under= 5 Waterway	(35) Structure Flared = 0 No flare

(26) Functional Class = 11 Urban Interstate	(100) Defense Highway = 1 Interstate STRAHNET
(37) Historical Significance =5 Not eligible for NRHP	(45) No. Of Spans In Main Unit = 1
(43A) Main Span Material/Design = 5 Prestressed Concrete	(43B) Main Span Material/Design = 02 Stringer/Girder
(48) Length Max Span = 97.1 ft	(46) Number of Approach Spans = 0
(44A) Approach Span Material =	(44B) Approach Span Material =
(107) Deck Type = 1 Concrete-Cast-in-Place	(108C) Deck Protection = 1 Epoxy Coated Reinforci
(108A) Wearing Surface = 1 Monolithic Concrete	(108B) Membrane = 0 None
Min. Vertical Clearance Minus= 0	Min. Vertical 10' Selected Minus= 0
Min. Vertical Clearance Plus= 9999	Min. Vertical 10' Selected Plus= 9999
(55) Minimum Lateral Undrclearance R = 0.0 ft	(56) Minimum Lateral Undrclearance L = 0.0 ft

Project No. = IM-040-1(93)17	Old Bridge No. = 06555	(47) Total Horiz. Clearance =38.1 ft
(51) Width Curb to Curb =38.1 ft	(52) Width Out to Out = 41.0 ft	(33) Median = 1 Open median
(32) Approach Roadway Width (w/ shoulders) = 38.1 ft		Known Utilities = O

Special Inspections:

(92A) FC Frequency =NA	(93A) FC Inspection Date = NA	Next UW Inspection = NA
(92B) UW Frequency = NA	(93B) UW Inspection Date = NA	Next FC Inspection = NA
(92C) SI Frequency =NA	(93C) SI Date = NA	Next SI = NA

TRAFFIC SAFETY FEATURES

Bridge Rail (36A) =	1 Meets Standards	Approach Rail (36C) =	1 Meets Standards
Transition (36B) =	1 Meets Standards	Approach Rail Ends (36D) =	1 Meets Standards

Stay In Place Forms =No	Stay In Place Form Type =N\A	Overlay Thickness = -1
Culver Fill = 0		

SIP Notes:
Replaced Structure Number 6555.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Approach Roadway Condition:
Approach pavement has moderate wheel rutting. Transition has heavy impact loading due to unevent approach. Asphalt shoulders are in good with heavy debris build-up. Embankments have moderate slopes with heavy vegetation. Bridge signing: Delineators.

Channel and Channel Protection:
Flat sandy channel with steep banks, skewed slightly to the bridge. Some silt build-up. Wire enclosed rip-rap, some covered with silt.

Recommendations and Inspection Notes:

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
0	26/2	Conc Deck/Coatd Bars	(SF)	4,101	100 %	4,101	0 %	0	0 %	0	0 %	0	0 %	0
0	109/2	P/S Conc Open Girder	(LF)	600	100 %	600	0 %	0	0 %	0	0 %	0	0 %	0
0	215/2	R/Conc Abutment	(LF)	89	100 %	89	0 %	0	0 %	0	0 %	0	0 %	0
0	219/2	CONC WINGWALL	(LF)	43	100 %	43	0 %	0	0 %	0	0 %	0	0 %	0
0	306/2	COMPRESSION JOINT	(LF)	82	100 %	82	0 %	0	0 %	0	0 %	0	0 %	0
0	310/2	Elastomeric Bearing	(EA)	12	100 %	12	0 %	0	0 %	0	0 %	0	0 %	0
0	321/2	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
0	329/2	GUARDRAIL (standard)	(LF)	1,201	100 %	1,201	0 %	0	0 %	0	0 %	0	0 %	0
0	331/2	Conc Bridge Railing	(LF)	259	100 %	259	0 %	0	0 %	0	0 %	0	0 %	0
0	336/2	RIP RAP AND GABIONS	(SF)	13,541	100 %	13,541	0 %	0	0 %	0	0 %	0	0 %	0

Str Unit	Elem/Env	Description	Element Notes
0	26/2	Concrete Deck - Protected w/ Coate	Top of concrete deck has longitudinal and transverse cracks up to 1/8" with concrete patches up to 3' x 4' at the east end. Deck edges have transverse cracks up to 1/32" with light leaching. Underside of deck has transverse cracks up to 1/32" with light leaching.
0	109/2	P/S Conc Open Girder/Beam	Girders are in good condition with moderate leaching.
0	215/2	Reinforced Conc Abutment	Backwalls and seats are enclosed and unobservable. Breastwalls are in good condition.
0	219/2	REINFORCED CONC WINGWALL/	Wingwalls have vertical and map cracks up to 1/16".
0	306/2	COMPRESSION JOINT SEAL-END	Compression seals joints measured from W>E: 2" and 2 1/2". Joints are partially covered with asphalt. Joints do not appear to leak.
0	310/2	Elastomeric Bearing	Elastomeric bearings are enclosed and unobservable, no excessive movement evident.
0	321/2	Reinforced Conc Approach Slab w/	Minor transverse and random cracks with small spalls. Spalls at compression seals.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Str Unit	Elem/Env	Description	Element Notes
0	329/2	GUARDRAIL (STANDARD)	12" W rail on timber posts with Type C anchors to Thrie rail, continuous from next structure. Moderate traffic damage up to 10'.
0	331/2	Reinforced Conc Bridge Railing	CBR has transverse, longitudinal, horizontal and map cracks up to 1/16" with a spall 2' x 10".
0	336/2	WIRE ENCLOSED RIPRAP, RIPRA	Wire enclosed rip-rap with some covered with silt.

PAST INSPECTION

Inspection Date: 09/04/2008 Type: 1 Regular NBI

Inspector: GBACA00 Pontis User Key: GBACA00 - GEORGE BACA

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

1. Weather Conditions: Clear, 80 degrees F. 2. NMSU Bridge Inspection team members: George P. Baca, Adela M. Tapia and Lance M. Aspaas. 3. Work Done Since Last Inspection: Spalls on deck have been patched. 4. Traffic Safety Features: 12" W rail on timber posts with Type C anchors to Thrie rail that is bolted to CBR. 5. Work Recommended: None.

PAST INSPECTION

Inspection Date: 08/10/2006 Type: 1 Regular NBI

Inspector: DGREGO06 Pontis User Key: DGREGO06 - DENNIS GREGORY

Scope:
NBI: ☑ Other: ☐ Element: ☑
Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

DGREGO06 inspection comments -
Structure 000000000008853 -
Date 2006-08-10 -
Present: D. Gregory; Cloudy, light breeze 75 deg. Small intermittent stream with man made banks & moderate vegetation. Good alignment. No scour, minor silt & debris. Top of CWB to channel: A1= 9.0', midspan= 27.6', A2=8.6'. Wire enclosed riprap in good condition, covered with silt at bottom. The approach pavement is OGFC & patch onto the approach slab. Fair condition, bleeding. PMBP shouldera are in good condition with transverse, random & longitudinal cracks & rough, heavy debris. The embankment has moderate vegetation & in good condition. 2-2V delineators with missing reflectors for bridge signing. RECOMMENDATIONS: Bridge Crew, Long term, repair spalls and joints. Patrol 46-58 repair potholes at approach with QPR.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Approach Roadway Condition:

Channel and Channel Protection:

Recommendations and Inspection Notes:

Str Unit	Elm/Env	Description	Units	Total Qty	% in 1	Qty. St. 1	% in 2	Qty. St. 2	% in 3	Qty. St. 3	% in 4	Qty. St. 4	% in 5	Qty. St. 5
ucture Ur	12/2	Bare Concrete Deck	(SF)	24,962	100 %	24,962	0 %	0	0 %	0	0 %	0	0 %	0
ucture Ur	109/2	P/S Conc Open Girder	(LF)	2,772	100 %	2,772	0 %	0	0 %	0	0 %	0	0 %	0
ucture Ur	204/2	P/S Conc Column	(EA)	12	100 %	12	0 %	0	0 %	0	0 %	0	0 %	0
ucture Ur	215/2	R/Conc Abutment	(LF)	200	100 %	200	0 %	0	0 %	0	0 %	0	0 %	0
ucture Ur	219/2	CONC WINGWALL	(LF)	59	100 %	59	0 %	0	0 %	0	0 %	0	0 %	0
ucture Ur	234/2	R/Conc Cap	(LF)	299	100 %	299	0 %	0	0 %	0	0 %	0	0 %	0
ucture Ur	306/2	COMPRESSION JOINT	(LF)	200	100 %	200	0 %	0	0 %	0	0 %	0	0 %	0
ucture Ur	310/2	Elastomeric Bearing	(EA)	88	100 %	88	0 %	0	0 %	0	0 %	0	0 %	0
ucture Ur	321/2	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
ucture Ur	329/2	GUARDRAIL (standard)	(LF)	1,152	100 %	1,152	0 %	0	0 %	0	0 %	0	0 %	0
ucture Ur	331/2	Conc Bridge Railing	(LF)	505	100 %	505	0 %	0	0 %	0	0 %	0	0 %	0
ucture Ur	338/2	CONC SLOPE PAVING	(SF)	14,402	100 %	14,402	0 %	0	0 %	0	0 %	0	0 %	0
ucture Ur	358/2	Deck Cracking SmFlag	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0

Str Unit	Elem/Env	Description	Element Notes
ructure Uni	12/2	Concrete Deck - Bare	8 1/2" Thick deck. Top of CIP deck has been sealed with HMWM and is in good condition. Deck edges have isolated minor honeycombing with exposed tie wire. Underside of deck is unobservable due to SIP forms.
ructure Uni	109/2	P/S Conc Open Girder/Beam	11 BT54 PS AASHTO girders spaced at 9'. Girders have moderate water stains and are in good condition.
ructure Uni	204/2	P/S Conc Column or Pile Extension	20 Piles per pier. Pier columns have scrapes and gouges up to 10".
ructure Uni	215/2	Reinforced Conc Abutment	Abutments are in good condition.
ructure Uni	219/2	REINFORCED CONC WINGWALL/PA	SW wingwall has isolated cracks up to 1/8".
ructure Uni	234/2	Reinforced Conc Cap	Pier caps have isolated spalls up to 1' x 6".
ructure Uni	306/2	COMPRESSION JOINT SEAL-ENDS	Compression joints measured from S>N: 1 3/4" and 1 3/4". Joints are filled with dirt and debris. Joints do not appear to leak.

New Mexico Department Of Transportation
Bridge Management Section — Bridge Inspection Report

Str Unit	Elem/Env	Description	Element Notes
ructure Uni	310/2	Elastomeric Bearing	Elastomeric bearings are in good condition.
ructure Uni	321/2	Reinforced Conc Approach Slab w	Concrete approach slabs in good condition.
ructure Uni	329/2	GUARDRAIL (STANDARD)	CBR tapered to curb.
ructure Uni	331/2	Reinforced Conc Bridge Railing	CBR is in good condition.
ructure Uni	338/2	CONCRETE SLOPE PAVING	Concrete slope protection has cracks up to 1/8".
ructure Uni	358/2	Deck Cracking	Top of deck sealed with HMWM.

PAST INSPECTION

Inspection Date: 06/04/2008 Type: 1 Regular NBI

Inspector: ajohn07 Pontis User Key: GBACA00 - GEORGE BACA

Scope:

NBI: ☑ Other: ☐ Element: ☑

Underwater: ☐ Fracture Critical: ☐

INSPECTION NOTES

1. Weather Conditions: Cloudy, 65 degrees F. 2. NMSU Bridge Inspection team members: George P. Baca, Chris Gomez, Josh Alonzo, Crystal Trujillo and Eric Swartz. 3. Work Done Since Last Inspection: New bridge. 4. Channel and Channel Protection: N/A. 5. Approach Roadway Condition: Concrete pavement is in good condition. Concrete shoulders are in good condition. Embankments have steep slopes with light vegetation. No bridge signing. 6. Traffic Safety Features: Over - CBR tapered to curb. Under - 12" W rail on steel posts with breakaway anchors and Thrie rail. 7. Work Recommended: None.

INSPECTOR WORK CANDIDATES

APPENDIX C – PUBLIC INVOLVEMENT DOCUMENTS

Parametrix ENGINEERING • PLANNING • ENVIRONMENTAL SCIENCES

8901 Adams Street NE, Suite D
Albuquerque, NM 87113
T. 505.821.4700 F 505.821.7131
www.parametrix.com

November 30, 2009

Allison Road (Rd) Corridor and I-40 Interchange Study
NMDOT Project Numbers: SP-GA-5459(201), SP-GA-5459(202)
NMDOT Control Numbers: C7G801, C7G802
Public Meeting Minutes, City of Gallup City Hall Council Chambers,
110 West Aztec Ave, Gallup NM 87305
November 18 2009, 6:00 Open House, 6:30 Presentation

Prepared by: Sarah Gilstrap, Parametrix

SUMMARY

Display boards were provided for the public to view during the open house period from 6:00-6:30pm that encompassed the project corridor location, New Mexico Department of Transportation (NMDOT) *Location Study Procedures*, and the National Environmental Policy Act (NEPA) process. Study team members were available to answer questions about the display boards and the corridor study during the open house. Handouts of the meeting agenda and comment sheets were available to meeting attendees.

Stephen Lopez, Project Development Engineer (PDE), NMDOT Central Region Design, and Albert Thomas, BHI Project Manager, began the meeting at 6:30 pm with presentations of the study team and other agency members present, and gave an outline of what would be presented. The PowerPoint presentation included an overview and scope of the Phase A process. Residents provided input regarding their transportation needs and concerns within the corridor. Approximately 25 members of the public, city, and state officials and project study team representatives were present. The meeting concluded at 8:00pm.

MEETING ATTENDEES:

Study Team Members present:
Albert Thomas, BHI
Jim Poorbaugh, BHI
Lee Emery, BHI
Stephen Lopez, NMDOT Central Region Design
Tyler Ashton, Wilson and Company
Robert Fierro, Wilson and Company
Sarah Gilstrap, Parametrix

Members of the public and public officials:
Scott H.
Stanley Henderson, City of Gallup Public Works
John McBreen, Millenium Media
Willie Roy
Allan Landavazo, City of Gallup Councilor
John Azua, City of Gallup Councilor

Harry Mendoza, City of Gallup Mayor
Christopher Cretella
Bruce MacDonald
Joe DeHerrera, NMDOT D6
Nancy Wade, USDA NRCS
Gerry Herrera, City of Gallup Manager
WC Moorhead
Tom Hagaman
Bob Kuipers, Northwest New Mexico Council of Governments
Bill Donovan, Gallup Independent
Bryan Peters, NMDOT D6
Patti Herrera, CNET

MEETING NOTES:

Stephen Lopez, Central Region Design PDE introduced members of the Study team and local dignitaries present and gave a brief background of the corridor study.

[Refer to the PowerPoint for clarification]

Bert Thomas, BHI Project Manager, gave a comprehensive project description that included how the existing system operates, how the project was identified, the project limits, and potential issues within the Allison Rd. corridor. Existing transportation concerns for the Allison Rd. corridor include the grade separation, the old bridge, and geometric deficiencies. Improvements on Allison Rd. will change traffic patterns on surrounding interchanges. Because of the anticipated increase in traffic volumes from commercial developments on Maloney Blvd, and the current function of Allison Rd as an alternative route to NM 118 (Old US 66) instead of US 491/NM 602, Allison Rd is anticipated to be reclassified as a minor arterial as a result of the Study. Bert also described the NMDOT Location *Study Procedures* and how Phase A evaluates the existing conditions of the corridor, identifies the purpose and need, and identifies alternatives that will be carried into Phase B. Bert stressed the importance of having a planning document that will identify projects for Allison Rd. and I-40 that can be utilized in the future. Phase A also address increases in traffic congestion, how to enhance mobility and system connectivity, and the prioritization of potential future projects within the Study area. The outcome of Phase A and B will be reports for each phase available for public review.

Jim Poorbaugh, BHI Assistant Project Manager, gave a presentation about the project engineering factors. The paramount factor is safety, which will be addressed by looking at crash data and traffic counts that Wilson and Company will conduct next month. The primary focus will be on connectivity, looking at the existing traffic system, and the spacing of existing interchanges relative to proposed alternatives developed during the Study. Based on the City of Gallup's future growth, as identified in their Master Plan, there may be a need for more interchanges within the project corridor. The Study Team will also make recommendations on how to improve the deficient bridge structures within the corridor. Vehicle performance will also be taken into consideration. The purpose of Phase A is to develop alternatives that may meet the identified purpose and need, evaluate the alternatives using established criteria and determine which alternatives don't meet the project purpose and need. The alternatives that do meet the purpose and need will be advanced to Phase B for further evaluation.

Sarah Gilstrap, Parametrix Project Manager, gave an overview of the National Environmental Policy Act (NEPA) process, the NMDOT *Location Study Procedures*, and Context Sensitive Solutions/Context Sensitive Design. Environmental factors that are evaluated during the NEPA

process and the environmental laws that are followed during NEPA were presented. Potential environmental issues for the Allison Rd. Corridor and I-40 Interchange Study include Waters of the U.S., cultural resources including BNSF and Route 66, vegetation and wildlife, socioeconomics, hazardous materials, noise, and cumulative impacts. The level of effort for public involvement includes the formation of a study team, a project management team, Technical Advisory Stakeholder Committee, agency coordination, and public meetings. Please fill out a comment form tonight or take one home with you and send it to me at the following address. We really appreciate your input.

Questions

1) If connectivity is the key component to this study, how will incorporate the City of Gallup Master Plan?
Answer: This will be part of the study. We will also look at public transportation and multi-modal factors such as bicycles and pedestrians. We will look at a 20 year horizon by coordinating with the City of Gallup Master Plan.

2) When will you do the traffic count?
Answer: We will do a 7 day count on existing arterials within the Study area. We will be careful in looking at both week and weekend counts to make sure the traffic system can support the existing traffic demand. We will include factors to adjust for the higher volumes of traffic on the weekends in and out of Gallup.

3) Will you be looking at the frontage road at Maloney?
Answer: Yes, this is critical because a new interchange alternative may tie into Maloney. We will evaluate frontage roads for EB and WB I-40 within the Study area.

4) Will previous plans and studies be taken into consideration?
Answer: Yes, this is a key component of the corridor study process and the NEPA process; we will be looking at past transportation studies provided for City, County, and State agencies to enhance the current Study.

5) What can be done to improve Maloney?
Answer: We will take a look at that by looking at new typicals, how to carry today's traffic and future traffic. Four lanes on Maloney may be the best option and the Study Team will evaluate the need for a median in this area.

6) In regard to the federal spacing for interchanges, what kind of population base is needed to meet the 1 to 1.5 mi spacing?
Answer: I-40 in this area is classified as urban so it meets the 1 to 1.5 mi interchange spacing.

7) How will this project affect traffic during construction?
Answer: Construction traffic control will be necessary. Construction impacts will be specific to project segments.

8) In regard to connectivity, how will you address sprawl?
Answer: Sprawl is in competition with economic development. A lot of the proposed development will be infill in vacant areas within the City of Gallup. This project won't be inducing sprawl, and the Gallup Master Plan will guide us in regard to land uses to predict future growth. We will look at tying Allison to Maloney to US 491.

9) The road to Wal-Mart needs to be widened, and/or we need another access.

Answer: The Study Team will take this into consideration.

10) In regard to population growth, will you also look at regional growth?
Answer: Yes, we will look at land uses and external growth. For example, US 491 has been growing 3-5% per year and we expect continued growth in that area.

11) Will you look at the at-grade railroad crossing (Allison & BNSF railroad)?
Answer: Yes, we will definitely be looking at this crossing in regard to operational safety. Previous studies show that there are 100 trains a day at this crossing, which is a significant safety concern. As well we will look at pedestrian traffic and how to provide alternative access.

12) At Allison and Maloney, there are problems with bicycle crossings. How will you deal with this?
Answer: The design for cars is easy; the design for pedestrians and bicycles is more challenging. The facilities we will build will have to be American with Disabilities Act (ADA) compliant. We will be looking at possibly a pedestrian bridge and improved facilities. The multi-modal component will be factored into our plan.

Stephen Lopez gave the closing remarks and thanked everyone for coming to the meeting and asked attendees to please send in their comments. The meeting concluded at 8:00pm.

Parametrix ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES
8801 JEFFERSON NE, BLDG B
ALBUQUERQUE, NM 87113
T. 505.821.4700 F.505.821.7131
www.parametrix.com

August 5, 2010

Allison Road (Rd) Corridor and I-40 Interchange Study
NMDOT Project Numbers: SP-GA-5459(201), SP-GA-5459(202)
NMDOT Control Numbers: C7G801, C7G802
Public Meeting Minutes, City of Gallup City Hall Council Chambers,
110 West Aztec Ave, Gallup NM 87305
July 22, 2010, 6:00 Open House, 6:30 Presentation

Prepared by: Sarah Gilstrap, Parametrix

SUMMARY

Display boards were provided for the public to view during the open house period from 6:00-6:30pm that displayed the project corridor location, described the New Mexico Department of Transportation (NMDOT) *Location Study Procedures*, and described the National Environmental Policy Act (NEPA) process. Study team members were available to answer questions about the display boards and the Allison Rd corridor and I-40 interchange study during the open house. Handouts of the meeting agenda and comment sheets were made available to meeting attendees.

Stephen Lopez, Project Development Engineer (PDE), NMDOT Central Region Design began the meeting at 6:30 pm with introductions of the Study team, agency members, and public dignitaries present, and provided an overview of the corridor study information to be presented. Study team members – Albert Thomas, Jim Poorbaugh, and Sarah Gilstrap gave portions of the presentation on the technical components. The PowerPoint presentation included an overview of the project, scope of the Phase A study process, description of the alternatives investigated by the Study team during Phase A, a summary of the evaluation conducted on the alternatives, and the resulting findings and conclusions. The public provided input regarding their transportation needs and concerns within the corridor. Approximately 21 members of the public, city, and state officials and project Study team representatives attended the meeting. The meeting concluded at 8:00pm.

MEETING ATTENDEES:

Study Team Members present:
Albert Thomas, BHI
Jim Poorbaugh, BHI
Stephen Lopez, NMDOT Central Region Design
Sarah Gilstrap, Parametrix

Members of the public and public officials:
Marlene Custer, City of Gallup
Gary Custer
Peter Kelly, City of Gallup Economic Development Director
Louie Leyba, City of Gallup
Stanley Henderson, City of Gallup Public Works
G.J. Garcia Jr., Speedway Towing
Frank Mraz, Gamerco Associates TIC

John McBreen, Millenium Media
Don Casuse, Casuse Rentals
Frank H. Kozeliski, Kozeliski Consulting
Mary Jean Christensen
Jay Azua, City of Gallup Councilor, District 4
E. Bryan Wall, City of Gallup Councilor, District 3
WC Moorhead
Bob Kuipers, Northwest New Mexico Council of Governments
Bill Donovan, Gallup Independent
Bernie Dotson, Gallup Independent

MEETING NOTES:

Steve Lopez, Central Region Design PDE introduced members of the Study team and local dignitaries present. He also explained how this particular study was initiated by the City of Gallup, in cooperation with the NMDOT, with legislative funding. The presentation will include the findings from the Phase A project development process.

[Refer to the PowerPoint for clarification]

Albert Thomas, BHI Project Manager, gave a comprehensive overview of what will be discussed during the meeting including the project development process, the project purpose and need, alternatives that were explored, the evaluation of these alternatives, the environmental progress, and an opportunity for the public to ask questions and provide input. He also emphasized that the Study team wants to hear back from the community in order to determine what issues need a closer look in Phase B of the project development process. In regard to project scope, the Study team was charged by the NMDOT to identify issues with the existing corridor conditions, what will this area may look like in the future, and also evaluate a future interchange location based on the findings from the Phase A project development process.

In regard to purpose and need, the Study team evaluated seven factors that may establish the need for transportation improvements including: safety, physical deficiencies, travel demand and congestion, system connectivity, access, economic development, and legislative mandate. During Phase A, the Study team evaluated system connectivity and how the Allison Rd corridor currently connects to the rest of the existing transportation system and future connections that will enhance system connectivity in western Gallup. Another factor that the Study team reviewed was how this project would impact economic development. The City of Gallup growth management plan identified areas of potential growth within western Gallup and the Allison Rd corridor is one of these areas. In regard to access, there is a need for emergency vehicle access in the corridor as well as access to the industrial areas adjacent to Allison Rd.

Albert Thomas also provided an overview of the NMDOT Location Study Procedures (LSP) and the National Environmental Policy Act (NEPA). The NMDOT LSP includes three distinct phases as follows: Phase A consists of the initial evaluation of alternatives, Phase B is the detailed evaluation of alternatives, and Phase C consists of environmental documentation and processing. After the preparation of an Environmental Assessment (EA) or an Environmental Impact Statement (EIS) is complete and then reviewed and approved by the NMDOT, a Finding of no Significant Impact (FONSI) is signed by the Federal Highway Administration (FHWA). At this point the project moves into the preliminary and the final design phase. The Study team will also evaluate project phasing relative to available construction funding for this project (NMDOT and City of Gallup). During the design phases potential right-of-way acquisitions will be identified for the appraisal process. Public involvement will continue throughout the project development process and the Study team anticipates that through public outreach the potential problems and issues within the existing Allison Rd corridor may be resolved. Regarding the project

schedule, it is anticipated that after including the input from tonight's meeting into the Phase A report the Study team will place a copy on the internet for review and comment and provide copies at local libraries and at the City of Gallup.

Jim Poorbaugh, BHI Assistant Project Manager, gave a presentation about the analysis and evaluation of alternatives during the Phase A process. Four factors that have the most impact on the Allison Rd corridor include physical deficiencies, improving safety, system connectivity, and economic development. The physical deficiencies within the Allison Rd corridor that were analyzed include the S curve north of the Rio Puerco bridge, the Rio Puerco bridge that is obsolete by current design standards, and the Allison Rd/I-40 underpass that is also deficient by current design standards. Regarding safety, there are three categories to analyze existing roadway conditions including normative, operative, and perceived safety. The Allison Rd corridor is a main north/south route that connects to east/west streets in western Gallup. Improvements to this corridor could provide key connectivity opportunities as the City of Gallup continues to grow. There is prime real estate potential between I-40 and the BNSF crossing within the corridor for which improved access will be necessary.

The alternative evaluation process includes the development and evaluation of the alternatives and then the elimination of alternatives that do not meet the project purpose and need. There were three alternative corridor locations including Alternate 1 located halfway between the Munoz interchange and the West Gallup interchange, Alternate 2 located 1.5 miles from the West Gallup interchange, and Alternate 3 located 1.5 miles from the Munoz interchange. There are positive and negative factors to consider for each of these alternatives. As part of the alternative evaluation, it is necessary to evaluate whether the alternative satisfies the purpose and need and whether it addresses stakeholder/community and environmental issues. During Phase B the Study team will conduct the detailed evaluation of these alternatives carried forward and do an assessment of benefits and impacts for each alternative, and move forward with the selection of the preferred alternative to be further evaluated and designed in Phase C. This additional evaluation is contingent on continued community involvement. The Phase A conclusions and recommendations were to eliminate Alternative 1 and Alternative 2 from further consideration and advance Alternative 3 into Phase B for the Detailed Evaluation of Alternatives. During Phase B the Study team will conduct a detailed evaluation of Alternative 3 and assess the benefits and impacts of this alternative. If construction funding is identified for a phase of the corridor, the selection of the preferred alternative would be further evaluated in Phase C and then in the preliminary design phase.

Sarah Gilstrap, Parametrix Project Manager, provided an overview of the National Environmental Policy Act (NEPA) process, the NMDOT *Location Study Procedures*, and Context Sensitive Solutions/Context Sensitive Design. Environmental factors that are evaluated during the NEPA process were presented. Potential environmental issues for the Allison Rd. Corridor and I-40 Interchange Study include Waters of the U.S., wetlands, cultural resources including BNSF, Route 66 (NM 118), and historic buildings, hazardous materials, and noise. These environmental criteria will be further evaluated during Phase B for potential impacts from the proposed alternatives. Areas identified during Phase A of little or no concern include wildlife and vegetation, soils, and visual consistency.

Please fill out a comment form tonight or take one home with you and send it to me at the following address. We really appreciate your input. We will now open up the meeting to questions and comments.

Question and Answer period

1) The Army Corps of Engineers stopped up the Rio Puerco and moved it for the construction of I-40, which is causing those wetlands to form. Can we straighten out the ditch? Or put up soil cement and then put in the bridge?

Answer: The Study team will look at drainage improvements as part of Phase B. There are also private livestock ponds and other items that are also contributing to the drainage issues in that area. We will look at alleviating existing conditions during the drainage analysis.

2) At which point will we get to see the final product? As well, there are traffic problems from US 491 to WalMart. If you end up on Aztec, you are going to eventually have to redo Aztec. Are you asking WalMart to contribute and or match any funds for this project since they are going to be benefitting from the improvements?

Answer: The Study team will do a cost analysis once we have identified priorities. We will look at private funding, TIDs, federal and State funding, and bonding programs as options to fund this project.

In regard to the traffic problems at US 491 and Maloney, if the study determines that a new interchange at Allison is warranted, that will hopefully take off pressure from US 491 and West Maloney. We will also look at a frontage road system, connectivity to Route 66 and Aztec, and look at traffic movements and mobility to address concerns. The traffic counts and traffic model conducted as part of Phase A do show congestion points. The Study team will use the traffic model to predict how to improve the situation or how to improve the design.

3) What about the additional traffic these improvements will produce?
Answer: As this area grows with further industrial and commercial interests, the proposed design must be able to accommodate the projected growth.

4) If you design the connection onto US 491 further north, that would be better.
Answer: The Study team will look at how this project will fit into regional connectivity and how we could connect to Kachina St, Gamerco Rd, or Coal Basin Rd.

5) There are currently school buses that go over the railroad, have you considered this?
Answer: The Study team is looking at a potential structure that would go over the tracks with a bridge and then would tie back to NM 118. We are looking at safety concerns for buses, pedestrians, and bikes. We are very aware of the school bus route and this project will try to increase the mobility for buses in the regional system.

6) What is the time period for construction?
Answer: Priorities for this project will likely be the replacement of the bridge over the Rio Puerco and the realignment of Allison. We will look at phasing for this project, because an estimate for the entire project is possibly $40-60 million so it will probably need to be implemented in phases. It is possible that a portion of this corridor could be constructed in 2012/2013 if funding became available.

7) Should we go directly to our congress members to get money for this?
Answer: You should ask your State representatives to support this project.

8) Would the new bridge be located at the same location?
Answer: The new bridge will probably be shifted to the east.

9) The overpass needs to be a priority because there are big trucks that can't get through.
Answer: Comment noted.

10) When going north all the way to Gamerco, there is a lot of traffic at Munoz going north.
Answer: Comment noted.

11) Are the TIDs tax increment districts or regional transportation districts being looked at for funding this project?
Answer: Both are likely for consideration, also public improvement districts may be a possibility. TIDs have not been used in NM before but there are good examples in other states.

12) What about federal involvement for this project?
Answer: We will be working on getting this project into the local TIP and then the STIP. There will be some level of federal assistance but the State will have to contribute matching funding.

13) If you got started now when would you be done?
Answer: If we had 5 million dollars per year and did this project in phases it could take up to 25 years to complete. If we had the entire funding available at once it could be completed in less than 5 years.

14) Will City of Gallup residents have any input during the planning process for funding?
Answer: This is up to the local, State, and federal agencies and is done in a regional planning process.

15) Are you considering this to be a civil defense route?
Answer: Not at this time but this could become part of a potential future loop system.

16) Have you seen a tax mechanism used before?
Answer: Rio Metro in the central Rio Grande corridor has been considering using a local tax to fund projects but has not used it on specific projects yet.

17) How many miles apart are Munoz and Allison?
Answer: Approximately 1.5 miles apart.

Albert Thomas gave the closing remarks and Steve Lopez thanked everyone for coming to the meeting and asked attendees to please send in their comments. The Study team will conduct a series of meetings during Phase B and would appreciate all attendees to spread the word to neighbors, friends, family, anyone who would have an interest in this project. We hope to have the final Phase A report available to the public within the next month.

The meeting concluded at 8:00pm.

APPENDIX D – INTERSECTION TURNING MOVEMENTS

	I-40/ALLISON CORRIDOR - Traffic Count Locations						
NO.	**MANUAL TURNING MOVEMENT COUNTS**			**MECHANICAL COUNT**			
1	**Main Street**	**Cross Street**	**S / U**	**Main Street**	**From**	**To**	**REMARKS**
2	I-40	West Gallup I\C - West Ramp	U	NM 118	West Ramp	East Ramp	
3	I-40	West Gallup I\C - East Ramp	U				
4	NM 118	Rico Street	S	NM 118	Rico Street	Armand Ortega Road	
5	NM 118	Armand Ortega Road	S				
6	NM 118	Florence Street	U				
7	NM 118	Allison Road	U	NM 118	Allison Road	Arnold Street	
8	NM 118	Marguerite Street	S				
9	NM 118	Arnold Street	S				
10	Aztec Avenue	Arnold Street	U	Aztec Avenue	Arnold Street	Munoz Drive (NM 602)	
11	Munoz Drive (NM 602)	Mendoza Blvd. / Nizhoni Blvd.	S				
12	Munoz Drive (NM 602)	Aztec Avenue	S	Munoz Drive (NM 602)	Mendoza Boulevard	Aztec Avenue	
13	Munoz Drive (US 491)	I-40 South Ramp	S	Munoz Drive (NM 602)	Aztec Avenue	I-40 South Ramp	
14	Munoz Drive (US 491)	i-40 North Ramp	S				
15	Munoz Drive (US 491)	Maloney Avenue (I-40 Frontage)	S	Munoz Drive (NM 602)	Maloney Avenue	Metro Avenue	
16	Munoz Drive (US 491)	Metro Avenue	S				
17	Munoz Drive (US 491)	Jefferson Avenue	S	Munoz Drive (NM 602)	Metro Avenue	Jefferson Avenue	
18	Munoz Drive (US 491)	Coal Basin Road	U	Munoz Drive (NM 602)	Jefferson Avenue	Coal Basin Road	
19	Maloney Avenue (I-40 N. Frontage)	Kachina Street (Walmart)	S	Maloney Avenue (I-40 N.)	Allison Road	Kachina Street	
20	Maloney Avenue (I-40 N. Frontage)	Allison Road	U				

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 1) NM 118@I-40 West Ramps
Site Code : 00000000
Start Date : 12/9/2009
Page No : 1

Groups Printed- Cars - Trucks

	NM 118 Eastbound				NM 118 Westbound				Northbound				I-40 WB Off Ramp Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	0	44	11	55	7	33	0	40	0	0	0	0	13	0	24	37	132
07:15	0	49	10	59	7	31	0	38	0	0	0	0	13	0	31	44	141
07:30	0	85	12	97	7	39	0	46	0	0	0	0	25	0	22	47	190
07:45	0	98	14	112	4	75	0	79	0	0	0	0	38	0	25	63	254
Total	0	276	47	323	25	178	0	203	0	0	0	0	89	0	102	191	717
08:00	0	63	14	77	5	73	0	78	0	0	0	0	34	0	27	61	216
08:15	0	68	11	79	6	42	0	48	0	0	0	0	18	0	22	40	167
08:30	0	75	10	85	8	39	0	47	0	0	0	0	4	0	23	27	159
08:45	0	80	8	88	8	28	0	36	0	0	0	0	10	0	29	39	163
Total	0	286	43	329	27	182	0	209	0	0	0	0	66	0	101	167	705
09:00	0	71	10	81	9	40	0	49	0	0	0	0	11	0	26	37	167
09:15	0	109	11	120	4	37	0	41	0	0	0	0	14	0	42	56	217
09:30	0	133	22	155	6	50	0	56	0	0	0	0	27	0	29	56	267
09:45	0	129	16	145	1	62	0	63	0	0	0	0	57	0	37	94	302
Total	0	442	59	501	20	189	0	209	0	0	0	0	109	0	134	243	953
*** BREAK ***																	
11:00	0	62	21	83	10	65	0	75	0	0	0	0	9	0	29	38	196
11:15	0	70	12	82	9	56	0	65	0	0	0	0	6	0	31	37	184
11:30	0	71	15	86	6	53	0	59	0	0	0	0	7	0	37	44	189
11:45	0	77	20	97	2	42	0	44	0	0	0	0	3	0	47	50	191
Total	0	280	68	348	27	216	0	243	0	0	0	0	25	0	144	169	760
12:00	0	78	15	93	7	71	0	78	0	0	0	0	9	0	36	45	216
12:15	0	117	21	138	10	72	0	82	0	0	0	0	9	0	30	39	259
12:30	0	73	28	101	5	79	0	84	0	0	0	0	18	0	32	50	235
12:45	0	85	18	103	9	70	0	79	0	0	0	0	12	0	25	37	219
Total	0	353	82	435	31	292	0	323	0	0	0	0	48	0	123	171	929
13:00	0	82	15	97	9	67	0	76	0	0	0	0	7	0	37	44	217
13:15	0	101	16	117	13	78	0	91	0	0	0	0	14	0	24	38	246
13:30	0	88	17	105	11	53	0	64	0	0	0	0	9	0	38	47	216
13:45	0	97	18	115	8	71	0	79	0	0	0	0	23	0	29	52	246
Total	0	368	66	434	41	269	0	310	0	0	0	0	53	0	128	181	925
*** BREAK ***																	
15:00	0	92	15	107	8	72	0	80	0	0	0	0	16	0	36	52	239
15:15	0	117	13	130	13	63	0	76	0	0	0	0	26	0	38	64	270
15:30	0	99	17	116	8	75	0	83	0	0	0	0	31	0	29	60	259
15:45	0	117	7	124	13	111	1	125	0	0	0	0	19	0	37	56	305
Total	0	425	52	477	42	321	1	364	0	0	0	0	92	0	140	232	1073
16:00	0	109	13	122	9	89	0	98	0	0	0	0	23	0	40	63	283
16:15	0	97	18	115	16	97	0	113	0	0	0	0	16	0	52	68	296
16:30	0	95	15	110	10	81	0	91	0	0	0	0	11	0	33	44	245
16:45	0	97	16	113	16	93	0	109	0	0	0	0	27	0	58	85	307
Total	0	398	62	460	51	360	0	411	0	0	0	0	77	0	183	260	1131
17:00	0	103	11	114	17	95	0	112	0	0	0	0	18	0	56	74	300
17:15	0	101	23	124	15	112	0	127	0	0	0	0	24	0	51	75	326
17:30	0	84	19	103	16	105	0	121	0	0	0	0	31	0	47	78	302
17:45	0	82	20	102	12	59	0	71	0	0	0	0	21	0	51	72	245
Total	0	370	73	443	60	371	0	431	0	0	0	0	94	0	205	299	1173
Grand Total	0	3198	552	3750	324	2378	1	2703	0	0	0	0	653	0	1260	1913	8366
Apprch %	0	85.3	14.7		12	88	0		0	0	0		34.1	0	65.9		
Total %	0	38.2	6.6	44.8	3.9	28.4	0	32.3	0	0	0	0	7.8	0	15.1	22.9	

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 1) NM 118@I-40 West Ramps
Site Code : 00000000
Start Date : 12/9/2009
Page No : 2

Groups Printed- Cars - Trucks

	NM 118 Eastbound				NM 118 Westbound				Northbound				I-40 WB Off Ramp Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Cars	0	2834	284	3118	300	2106	1	2407	0	0	0	0	595	0	941	1536	7061
% Cars	0	88.6	51.4	83.1	92.6	88.6	100	89	0	0	0	0	91.1	0	74.7	80.3	84.4
Trucks	0	364	268	632	24	272	0	296	0	0	0	0	58	0	319	377	1305
% Trucks	0	11.4	48.6	16.9	7.4	11.4	0	11	0	0	0	0	8.9	0	25.3	19.7	15.6

	NM 118 Eastbound				NM 118 Westbound				Northbound				I-40 WB Off Ramp Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 09:00																	
09:00	0	71	10	81	9	40	0	49	0	0	0	0	11	0	26	37	167
09:15	0	109	11	120	4	37	0	41	0	0	0	0	14	0	42	56	217
09:30	0	133	22	155	6	50	0	56	0	0	0	0	27	0	29	56	267
09:45	0	129	16	145	1	62	0	63	0	0	0	0	57	0	37	94	302
Total Volume	0	442	59	501	20	189	0	209	0	0	0	0	109	0	134	243	953
% App. Total	0	88.2	11.8		9.6	90.4	0		0	0	0		44.9	0	55.1		
PHF	.000	.831	.670	.808	.556	.762	.000	.829	.000	.000	.000	.000	.478	.000	.798	.646	.789
Cars	0	403	27	430	18	160	0	178	0	0	0	0	100	0	99	199	807
% Cars	0	91.2	45.8	85.8	90.0	84.7	0	85.2	0	0	0	0	91.7	0	73.9	81.9	84.7
Trucks	0	39	32	71	2	29	0	31	0	0	0	0	9	0	35	44	146
% Trucks	0	8.8	54.2	14.2	10.0	15.3	0	14.8	0	0	0	0	8.3	0	26.1	18.1	15.3
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:15																	
12:15	0	117	21	138	10	72	0	82	0	0	0	0	9	0	30	39	259
12:30	0	73	28	101	5	79	0	84	0	0	0	0	18	0	32	50	235
12:45	0	85	18	103	9	70	0	79	0	0	0	0	12	0	25	37	219
13:00	0	82	15	97	9	67	0	76	0	0	0	0	7	0	37	44	217
Total Volume	0	357	82	439	33	288	0	321	0	0	0	0	46	0	124	170	930
% App. Total	0	81.3	18.7		10.3	89.7	0		0	0	0		27.1	0	72.9		
PHF	.000	.763	.732	.795	.825	.911	.000	.955	.000	.000	.000	.000	.639	.000	.838	.850	.898
Cars	0	319	36	355	31	256	0	287	0	0	0	0	44	0	85	129	771
% Cars	0	89.4	43.9	80.9	93.9	88.9	0	89.4	0	0	0	0	95.7	0	68.5	75.9	82.9
Trucks	0	38	46	84	2	32	0	34	0	0	0	0	2	0	39	41	159
% Trucks	0	10.6	56.1	19.1	6.1	11.1	0	10.6	0	0	0	0	4.3	0	31.5	24.1	17.1
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	0	97	16	113	16	93	0	109	0	0	0	0	27	0	58	85	307
17:00	0	103	11	114	17	95	0	112	0	0	0	0	18	0	56	74	300
17:15	0	101	23	124	15	112	0	127	0	0	0	0	24	0	51	75	326
17:30	0	84	19	103	16	105	0	121	0	0	0	0	31	0	47	78	302
Total Volume	0	385	69	454	64	405	0	469	0	0	0	0	100	0	212	312	1235
% App. Total	0	84.8	15.2		13.6	86.4	0		0	0	0		32.1	0	67.9		
PHF	.000	.934	.750	.915	.941	.904	.000	.923	.000	.000	.000	.000	.806	.000	.914	.918	.947
Cars	0	357	43	400	62	372	0	434	0	0	0	0	96	0	167	263	1097
% Cars	0	92.7	62.3	88.1	96.9	91.9	0	92.5	0	0	0	0	96.0	0	78.8	84.3	88.8
Trucks	0	28	26	54	2	33	0	35	0	0	0	0	4	0	45	49	138
% Trucks	0	7.3	37.7	11.9	3.1	8.1	0	7.5	0	0	0	0	4.0	0	21.2	15.7	11.2

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 2) NM 118@I-40 East Ramps
Site Code :
Start Date : 12/9/2009
Page No : 1

Groups Printed- Cars - Trucks

	NM 118 Eastbound				NM 118 Westbound				I-40 EB Off Ramp Northbound				Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	0	29	15	44	10	28	0	38	3	0	3	6	0	0	0	0	88
07:15	0	29	31	60	7	31	0	38	4	0	12	16	0	0	0	0	114
07:30	0	68	38	106	6	24	0	30	4	0	16	20	0	0	0	0	156
07:45	0	73	34	107	11	48	0	59	9	0	12	21	0	0	0	0	187
Total	0	199	118	317	34	131	0	165	20	0	43	63	0	0	0	0	545
08:00	0	43	32	75	12	28	0	40	10	0	13	23	0	0	0	0	138
08:15	0	62	33	95	10	41	0	51	3	0	12	15	0	0	0	0	161
08:30	0	48	33	81	6	40	0	46	5	0	12	17	0	0	0	0	144
08:45	0	60	28	88	7	31	0	38	7	0	15	22	0	0	0	0	148
Total	0	213	126	339	35	140	0	175	25	0	52	77	0	0	0	0	591
09:00	0	51	35	86	12	40	0	52	11	0	6	17	0	0	0	0	155
09:15	0	84	40	124	13	34	0	47	9	0	9	18	0	0	0	0	189
09:30	0	117	49	166	15	47	0	62	9	0	12	21	0	0	0	0	249
09:45	0	129	46	175	15	65	0	80	8	0	10	18	0	0	0	0	273
Total	0	381	170	551	55	186	0	241	37	0	37	74	0	0	0	0	866
*** BREAK ***																	
11:00	0	57	25	82	12	63	0	75	14	0	4	18	0	0	0	0	175
11:15	0	47	27	74	5	54	0	59	8	0	6	14	0	0	0	0	147
11:30	0	56	28	84	4	51	0	55	8	0	10	18	0	0	0	0	157
11:45	0	56	30	86	5	35	0	40	15	0	13	28	0	0	0	0	154
Total	0	216	110	326	26	203	0	229	45	0	33	78	0	0	0	0	633
12:00	0	59	26	85	5	71	0	76	10	0	8	18	0	0	0	0	179
12:15	0	81	46	127	8	75	0	83	16	0	17	33	0	0	0	0	243
12:30	0	61	33	94	12	70	0	82	8	0	10	18	0	0	0	0	194
12:45	0	65	33	98	9	61	0	70	20	0	8	28	0	0	0	0	196
Total	0	266	138	404	34	277	0	311	54	0	43	97	0	0	0	0	812
13:00	0	60	30	90	8	65	0	73	13	0	11	24	0	0	0	0	187
13:15	0	88	31	119	4	71	0	75	22	0	9	31	0	0	0	0	225
13:30	0	53	39	92	6	58	0	64	14	0	8	22	0	0	0	0	178
13:45	0	80	41	121	3	66	0	69	15	0	7	22	0	0	0	0	212
Total	0	281	141	422	21	260	0	281	64	0	35	99	0	0	0	0	802
*** BREAK ***																	
15:00	0	72	41	113	6	63	0	69	17	0	11	28	0	0	0	0	210
15:15	0	98	45	143	5	62	0	67	17	0	8	25	0	0	0	0	235
15:30	0	89	38	127	18	76	0	94	10	0	15	25	0	0	0	0	246
15:45	0	100	39	139	54	110	0	164	17	0	13	30	0	0	0	0	333
Total	0	359	163	522	83	311	0	394	61	0	47	108	0	0	0	0	1024
16:00	0	94	37	131	17	90	0	107	9	0	10	19	0	0	0	0	257
16:15	0	83	31	114	7	96	0	103	12	0	4	16	0	0	0	0	233
16:30	0	71	36	107	4	84	0	88	6	0	5	11	0	0	0	0	206
16:45	0	99	30	129	9	105	0	114	9	0	11	20	0	0	0	0	263
Total	0	347	134	481	37	375	0	412	36	0	30	66	0	0	0	0	959
17:00	0	89	32	121	10	103	0	113	9	0	12	21	0	0	0	0	255
17:15	0	90	34	124	10	106	0	116	22	0	12	34	0	0	0	0	274
17:30	0	80	44	124	14	107	0	121	18	0	18	36	0	0	0	0	281
17:45	0	70	41	111	11	60	0	71	17	0	12	29	0	0	0	0	211
Total	0	329	151	480	45	376	0	421	66	0	54	120	0	0	0	0	1021
Grand Total	0	2591	1251	3842	370	2259	0	2629	408	0	374	782	0	0	0	0	7253
Apprch %	0	67.4	32.6		14.1	85.9	0		52.2	0	47.8		0	0	0		
Total %	0	35.7	17.2	53	5.1	31.1	0	36.2	5.6	0	5.2	10.8	0	0	0	0	

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 2) NM 118@I-40 East Ramps
Site Code :
Start Date : 12/9/2009
Page No : 2

Groups Printed- Cars - Trucks

	NM 118 Eastbound				NM 118 Westbound				I-40 EB Off Ramp Northbound				Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Cars	0	2489	986	3475	341	2179	0	2520	209	0	354	563	0	0	0	0	6558
% Cars	0	96.1	78.8	90.4	92.2	96.5	0	95.9	51.2	0	94.7	72	0	0	0	0	90.4
Trucks	0	102	265	367	29	80	0	109	199	0	20	219	0	0	0	0	695
% Trucks	0	3.9	21.2	9.6	7.8	3.5	0	4.1	48.8	0	5.3	28	0	0	0	0	9.6

	NM 118 Eastbound				NM 118 Westbound				I-40 EB Off Ramp Northbound				Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 09:00																	
09:00	0	51	35	86	12	40	0	52	11	0	6	17	0	0	0	0	155
09:15	0	84	40	124	13	34	0	47	9	0	9	18	0	0	0	0	189
09:30	0	117	49	166	15	47	0	62	9	0	12	21	0	0	0	0	249
09:45	0	129	46	175	15	65	0	80	8	0	10	18	0	0	0	0	273
Total Volume	0	381	170	551	55	186	0	241	37	0	37	74	0	0	0	0	866
% App. Total	0	69.1	30.9		22.8	77.2	0		50	0	50		0	0	0		
PHF	.000	.738	.867	.787	.917	.715	.000	.753	.841	.000	.771	.881	.000	.000	.000	.000	.793
Cars	0	364	146	510	52	175	0	227	19	0	35	54	0	0	0	0	791
% Cars	0	95.5	85.9	92.6	94.5	94.1	0	94.2	51.4	0	94.6	73.0	0	0	0	0	91.3
Trucks	0	17	24	41	3	11	0	14	18	0	2	20	0	0	0	0	75
% Trucks	0	4.5	14.1	7.4	5.5	5.9	0	5.8	48.6	0	5.4	27.0	0	0	0	0	8.7
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:15																	
12:15	0	81	46	127	8	75	0	83	16	0	17	33	0	0	0	0	243
12:30	0	61	33	94	12	70	0	82	8	0	10	18	0	0	0	0	194
12:45	0	65	33	98	9	61	0	70	20	0	8	28	0	0	0	0	196
13:00	0	60	30	90	8	65	0	73	13	0	11	24	0	0	0	0	187
Total Volume	0	267	142	409	37	271	0	308	57	0	46	103	0	0	0	0	820
% App. Total	0	65.3	34.7		12	88	0		55.3	0	44.7		0	0	0		
PHF	.000	.824	.772	.805	.771	.903	.000	.928	.713	.000	.676	.780	.000	.000	.000	.000	.844
Cars	0	261	109	370	36	261	0	297	34	0	41	75	0	0	0	0	742
% Cars	0	97.8	76.8	90.5	97.3	96.3	0	96.4	59.6	0	89.1	72.8	0	0	0	0	90.5
Trucks	0	6	33	39	1	10	0	11	23	0	5	28	0	0	0	0	78
% Trucks	0	2.2	23.2	9.5	2.7	3.7	0	3.6	40.4	0	10.9	27.2	0	0	0	0	9.5
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	0	99	30	129	9	105	0	114	9	0	11	20	0	0	0	0	263
17:00	0	89	32	121	10	103	0	113	9	0	12	21	0	0	0	0	255
17:15	0	90	34	124	10	106	0	116	22	0	12	34	0	0	0	0	274
17:30	0	80	44	124	14	107	0	121	18	0	18	36	0	0	0	0	281
Total Volume	0	358	140	498	43	421	0	464	58	0	53	111	0	0	0	0	1073
% App. Total	0	71.9	28.1		9.3	90.7	0		52.3	0	47.7		0	0	0		
PHF	.000	.904	.795	.965	.768	.984	.000	.959	.659	.000	.736	.771	.000	.000	.000	.000	.955
Cars	0	350	114	464	41	418	0	459	24	0	50	74	0	0	0	0	997
% Cars	0	97.8	81.4	93.2	95.3	99.3	0	98.9	41.4	0	94.3	66.7	0	0	0	0	92.9
Trucks	0	8	26	34	2	3	0	5	34	0	3	37	0	0	0	0	76
% Trucks	0	2.2	18.6	6.8	4.7	0.7	0	1.1	58.6	0	5.7	33.3	0	0	0	0	7.1

Mike Henderson Consulting, LLC

5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 3) NM 118@Rico
Site Code :
Start Date : 12/2/2009
Page No : 1

Groups Printed- Car - Truck

	NM 118 Eastbound				NM 118 Westbound				Rico St Northbound				Parking Lot Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	0	39	6	45	5	30	0	35	1	0	5	6	0	0	1	1	87
07:15	0	60	38	98	8	32	0	40	8	0	8	16	0	0	0	0	154
07:30	0	65	77	142	35	29	1	65	24	0	27	51	0	1	0	1	259
07:45	0	90	124	214	53	51	1	105	34	0	56	90	0	0	1	1	410
Total	0	254	245	499	101	142	2	245	67	0	96	163	0	1	2	3	910
08:00	1	67	90	158	50	36	1	87	47	0	71	118	0	1	0	1	364
08:15	0	86	67	153	37	54	0	91	24	0	51	75	1	0	0	1	320
08:30	1	80	11	92	7	49	2	58	17	0	11	28	0	0	0	0	178
08:45	2	79	5	86	8	45	2	55	0	1	4	5	2	1	2	5	151
Total	4	312	173	489	102	184	5	291	88	1	137	226	3	2	2	7	1013
09:00	0	72	6	78	3	44	3	50	2	0	7	9	0	0	2	2	139
09:15	2	70	8	80	9	43	1	53	1	0	5	6	2	0	3	5	144
09:30	1	57	7	65	1	56	0	57	1	0	10	11	0	0	0	0	133
09:45	2	62	3	67	5	41	1	47	8	0	4	12	0	1	3	4	130
Total	5	261	24	290	18	184	5	207	12	0	26	38	2	1	8	11	546
*** BLANK ***																	
11:00	0	94	3	97	4	77	1	82	11	1	3	15	1	0	1	2	196
11:15	0	77	2	79	3	55	0	58	5	0	1	6	0	0	1	1	144
11:30	0	81	5	86	5	68	0	73	5	0	9	14	0	0	0	0	173
11:45	0	93	6	99	5	62	1	68	2	0	6	8	1	0	0	1	176
Total	0	345	16	361	17	262	2	281	23	1	19	43	2	0	2	4	689
12:00	2	87	8	97	5	77	3	85	7	1	16	24	1	1	0	2	208
12:15	0	86	7	93	12	76	2	90	7	0	5	12	1	0	0	1	196
12:30	1	83	4	88	6	77	1	84	8	0	3	11	3	0	0	3	186
12:45	0	82	9	91	10	77	2	89	6	0	10	16	1	0	0	1	197
Total	3	338	28	369	33	307	8	348	28	1	34	63	6	1	0	7	787
13:00	0	64	7	71	11	60	1	72	5	0	8	13	1	0	3	4	160
13:15	1	86	7	94	12	82	2	96	9	1	11	21	4	0	1	5	216
13:30	0	76	7	83	4	65	0	69	3	0	13	16	0	0	1	1	169
13:45	1	66	5	72	4	49	1	54	1	0	9	10	1	0	0	1	137
Total	2	292	26	320	31	256	4	291	18	1	41	60	6	0	5	11	682
*** BLANK ***																	
15:00	2	74	17	93	8	80	0	88	7	0	7	14	3	0	1	4	199
15:15	4	72	30	106	37	83	1	121	2	0	2	4	1	0	0	1	232
15:30	1	85	36	122	33	74	2	109	26	0	40	66	2	0	1	3	300
15:45	1	73	28	102	21	78	3	102	77	0	102	179	1	0	1	2	385
Total	8	304	111	423	99	315	6	420	112	0	151	263	7	0	3	10	1116
16:00	0	79	14	93	14	88	1	103	26	0	35	61	0	1	0	1	258
16:15	0	82	11	93	5	101	3	109	17	0	18	35	2	0	2	4	241
16:30	0	78	11	89	8	91	3	102	7	0	12	19	1	0	0	1	211
16:45	1	92	9	102	11	89	0	100	9	0	11	20	0	0	0	0	222
Total	1	331	45	377	38	369	7	414	59	0	76	135	3	1	2	6	932
17:00	2	88	10	100	13	128	1	142	13	0	19	32	2	0	0	2	276
17:15	1	87	10	98	14	120	1	135	6	0	11	17	1	0	0	1	251
17:30	1	86	11	98	8	112	4	124	13	1	16	30	0	0	0	0	252
17:45	3	84	16	103	15	88	0	103	9	0	9	18	0	0	3	3	227
Total	7	345	47	399	50	448	6	504	41	1	55	97	3	0	3	6	1006

Mike Henderson Consulting, LLC

5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 3) NM 118@Rico
Site Code :
Start Date : 12/2/2009
Page No : 2

Groups Printed- Car - Truck

	NM 118 Eastbound				NM 118 Westbound				Rico St Northbound				Parking Lot Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Grand Total	30	2782	715	3527	489	2467	45	3001	448	5	635	1088	32	6	27	65	7681
Apprch %	0.9	78.9	20.3		16.3	82.2	1.5		41.2	0.5	58.4		49.2	9.2	41.5		
Total %	0.4	36.2	9.3	45.9	6.4	32.1	0.6	39.1	5.8	0.1	8.3	14.2	0.4	0.1	0.4	0.8	
Car	29	2702	670	3401	483	2415	45	2943	430	5	613	1048	31	5	26	62	7454
% Car	96.7	97.1	93.7	96.4	98.8	97.9	100	98.1	96	100	96.5	96.3	96.9	83.3	96.3	95.4	97
Truck	1	80	45	126	6	52	0	58	18	0	22	40	1	1	1	3	227
% Truck	3.3	2.9	6.3	3.6	1.2	2.1	0	1.9	4	0	3.5	3.7	3.1	16.7	3.7	4.6	3

	NM 118 Eastbound				NM 118 Westbound				Rico St Northbound				Parking Lot Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	0	65	77	142	35	29	1	65	24	0	27	51	0	1	0	1	259
07:45	0	90	124	214	53	51	1	105	34	0	56	90	0	0	1	1	410
08:00	1	67	90	158	50	36	1	87	47	0	71	118	0	1	0	1	364
08:15	0	86	67	153	37	54	0	91	24	0	51	75	1	0	0	1	320
Total Volume	1	308	358	667	175	170	3	348	129	0	205	334	1	2	1	4	1353
% App. Total	0.1	46.2	53.7		50.3	48.9	0.9		38.6	0	61.4		25	50	25		
PHF	.250	.856	.722	.779	.825	.787	.750	.829	.686	.000	.722	.708	.250	.500	.250	1.000	.825
Car	1	298	336	635	175	165	3	343	129	0	194	323	1	2	1	4	1305
% Car	100	96.8	93.9	95.2	100	97.1	100	98.6	100	0	94.6	96.7	100	100	100	100	96.5
Truck	0	10	22	32	0	5	0	5	0	0	11	11	0	0	0	0	48
% Truck	0	3.2	6.1	4.8	0	2.9	0	1.4	0	0	5.4	3.3	0	0	0	0	3.5
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00																	
12:00	2	87	8	97	5	77	3	85	7	1	16	24	1	1	0	2	208
12:15	0	86	7	93	12	76	2	90	7	0	5	12	1	0	0	1	196
12:30	1	83	4	88	6	77	1	84	8	0	3	11	3	0	0	3	186
12:45	0	82	9	91	10	77	2	89	6	0	10	16	1	0	0	1	197
Total Volume	3	338	28	369	33	307	8	348	28	1	34	63	6	1	0	7	787
% App. Total	0.8	91.6	7.6		9.5	88.2	2.3		44.4	1.6	54		85.7	14.3	0		
PHF	.375	.971	.778	.951	.688	.997	.667	.967	.875	.250	.531	.656	.500	.250	.000	.583	.946
Car	3	334	26	363	32	304	8	344	28	1	33	62	6	1	0	7	776
% Car	100	98.8	92.9	98.4	97.0	99.0	100	98.9	100	100	97.1	98.4	100	100	0	100	98.6
Truck	0	4	2	6	1	3	0	4	0	0	1	1	0	0	0	0	11
% Truck	0	1.2	7.1	1.6	3.0	1.0	0	1.1	0	0	2.9	1.6	0	0	0	0	1.4
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 15:30																	
15:30	1	85	36	122	33	74	2	109	26	0	40	66	2	0	1	3	300
15:45	1	73	28	102	21	78	3	102	77	0	102	179	1	0	1	2	385
16:00	0	79	14	93	14	88	1	103	26	0	35	61	0	1	0	1	258
16:15	0	82	11	93	5	101	3	109	17	0	18	35	2	0	2	4	241
Total Volume	2	319	89	410	73	341	9	423	146	0	195	341	5	1	4	10	1184
% App. Total	0.5	77.8	21.7		17.3	80.6	2.1		42.8	0	57.2		50	10	40		
PHF	.500	.938	.618	.840	.553	.844	.750	.970	.474	.000	.478	.476	.625	.250	.500	.625	.769
Car	2	296	86	384	72	335	9	416	132	0	186	318	5	1	4	10	1128
% Car	100	92.8	96.6	93.7	98.6	98.2	100	98.3	90.4	0	95.4	93.3	100	100	100	100	95.3
Truck	0	23	3	26	1	6	0	7	14	0	9	23	0	0	0	0	56
% Truck	0	7.2	3.4	6.3	1.4	1.8	0	1.7	9.6	0	4.6	6.7	0	0	0	0	4.7

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 4) NM 118@Mendoza
Site Code :
Start Date : 12/2/2009
Page No : 1

Groups Printed- Car - Truck

	NM 118 Eastbound			NM 118 Westbound			Mendoza Rd Northbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00	54	14	68	0	25	25	8	2	10	103
07:15	77	23	100	1	30	31	10	1	11	142
07:30	122	29	151	2	73	75	11	3	14	240
07:45	132	52	184	10	89	99	19	8	27	310
Total	385	118	503	13	217	230	48	14	62	795
08:00	142	38	180	14	77	91	14	8	22	293
08:15	125	25	150	8	67	75	18	4	22	247
08:30	92	16	108	2	58	60	18	4	22	190
08:45	84	17	101	1	56	57	7	1	8	166
Total	443	96	539	25	258	283	57	17	74	896
09:00	61	21	82	1	49	50	8	2	10	142
09:15	69	17	86	1	48	49	9	3	12	147
09:30	71	18	89	6	54	60	15	3	18	167
09:45	72	14	86	1	46	47	8	2	10	143
Total	273	70	343	9	197	206	40	10	50	599

*** BLANK ***

11:00	96	23	119	0	79	79	10	0	10	208
11:15	87	20	107	8	54	62	9	2	11	180
11:30	90	14	104	1	72	73	20	3	23	200
11:45	87	17	104	1	82	83	7	1	8	195
Total	360	74	434	10	287	297	46	6	52	783
12:00	100	23	123	1	83	84	10	0	10	217
12:15	83	11	94	2	97	99	21	0	21	214
12:30	113	23	136	3	89	92	12	0	12	240
12:45	86	14	100	3	92	95	15	3	18	213
Total	382	71	453	9	361	370	58	3	61	884
13:00	90	17	107	4	86	90	15	7	22	219
13:15	72	24	96	5	78	83	6	2	8	187
13:30	79	19	98	3	78	81	10	1	11	190
13:45	81	18	99	1	60	61	11	1	12	172
Total	322	78	400	13	302	315	42	11	53	768

*** BLANK ***

15:00	87	21	108	7	99	106	16	4	20	234
15:15	72	17	89	4	134	138	15	2	17	244
15:30	119	18	137	6	113	119	22	6	28	284
15:45	155	16	171	6	105	111	8	13	21	303
Total	433	72	505	23	451	474	61	25	86	1065
16:00	117	18	135	0	104	104	17	5	22	261
16:15	86	15	101	2	99	101	17	5	22	224
16:30	80	17	97	5	107	112	19	7	26	235
16:45	99	17	116	1	117	118	16	3	19	253
Total	382	67	449	8	427	435	69	20	89	973
17:00	94	21	115	5	143	148	30	5	35	298
17:15	90	27	117	5	128	133	28	4	32	282
17:30	88	18	106	7	135	142	25	2	27	275
17:45	86	15	101	0	104	104	17	5	22	227
Total	358	81	439	17	510	527	100	16	116	1082

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 4) NM 118@Mendoza
Site Code :
Start Date : 12/2/2009
Page No : 2

Groups Printed- Car - Truck

	NM 118 Eastbound			NM 118 Westbound			Mendoza Rd Northbound			
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Grand Total	3338	727	4065	127	3010	3137	521	122	643	7845
Apprch %	82.1	17.9		4	96		81	19		
Total %	42.5	9.3	51.8	1.6	38.4	40	6.6	1.6	8.2	
Car	3271	707	3978	125	2954	3079	517	118	635	7692
% Car	98	97.2	97.9	98.4	98.1	98.2	99.2	96.7	98.8	98
Truck	67	20	87	2	56	58	4	4	8	153
% Truck	2	2.8	2.1	1.6	1.9	1.8	0.8	3.3	1.2	2

	NM 118 Eastbound			NM 118 Westbound			Mendoza Rd Northbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30										
07:30	122	29	151	2	73	75	11	3	14	240
07:45	132	52	184	10	89	99	19	8	27	310
08:00	142	38	180	14	77	91	14	8	22	293
08:15	125	25	150	8	67	75	18	4	22	247
Total Volume	521	144	665	34	306	340	62	23	85	1090
% App. Total	78.3	21.7		10	90		72.9	27.1		
PHF	.917	.692	.904	.607	.860	.859	.816	.719	.787	.879
Car	503	142	645	33	302	335	62	21	83	1063
% Car	96.5	98.6	97.0	97.1	98.7	98.5	100	91.3	97.6	97.5
Truck	18	2	20	1	4	5	0	2	2	27
% Truck	3.5	1.4	3.0	2.9	1.3	1.5	0	8.7	2.4	2.5
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:15										
12:15	83	11	94	2	97	99	21	0	21	214
12:30	113	23	136	3	89	92	12	0	12	240
12:45	86	14	100	3	92	95	15	3	18	213
13:00	90	17	107	4	86	90	15	7	22	219
Total Volume	372	65	437	12	364	376	63	10	73	886
% App. Total	85.1	14.9		3.2	96.8		86.3	13.7		
PHF	.823	.707	.803	.750	.938	.949	.750	.357	.830	.923
Car	368	63	431	12	358	370	63	10	73	874
% Car	98.9	96.9	98.6	100	98.4	98.4	100	100	100	98.6
Truck	4	2	6	0	6	6	0	0	0	12
% Truck	1.1	3.1	1.4	0	1.6	1.6	0	0	0	1.4
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 16:45										
16:45	99	17	116	1	117	118	16	3	19	253
17:00	94	21	115	5	143	148	30	5	35	298
17:15	90	27	117	5	128	133	28	4	32	282
17:30	88	18	106	7	135	142	25	2	27	275
Total Volume	371	83	454	18	523	541	99	14	113	1108
% App. Total	81.7	18.3		3.3	96.7		87.6	12.4		
PHF	.937	.769	.970	.643	.914	.914	.825	.700	.807	.930
Car	369	83	452	18	518	536	98	14	112	1100
% Car	99.5	100	99.6	100	99.0	99.1	99.0	100	99.1	99.3
Truck	2	0	2	0	5	5	1	0	1	8
% Truck	0.5	0	0.4	0	1.0	0.9	1.0	0	0.9	0.7

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 5) NM 118@Florence
Site Code :
Start Date : 12/3/2009
Page No : 1

Groups Printed- Car

	NM 118 Eastbound			NM 118 Westbound			Florence St Northbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00	70	2	72	2	40	42	2	4	6	120
07:15	68	1	69	5	45	50	5	5	10	129
07:30	137	2	139	2	92	94	0	7	7	240
07:45	124	6	130	4	132	136	4	8	12	278
Total	399	11	410	13	309	322	11	24	35	767
08:00	141	2	143	9	115	124	4	8	12	279
08:15	129	5	134	6	98	104	3	9	12	250
08:30	107	6	113	6	69	75	3	8	11	199
08:45	98	3	101	8	60	68	0	5	5	174
Total	475	16	491	29	342	371	10	30	40	902
09:00	90	2	92	10	63	73	5	7	12	177
09:15	92	1	93	6	63	69	4	2	6	168
09:30	82	4	86	5	70	75	4	9	13	174
09:45	104	1	105	10	62	72	3	2	5	182
Total	368	8	376	31	258	289	16	20	36	701

*** BLANK ***

11:00	102	0	102	8	66	74	3	8	11	187
11:15	86	2	88	9	74	83	2	4	6	177
11:30	109	4	113	6	116	122	7	6	13	248
11:45	108	6	114	8	107	115	5	9	14	243
Total	405	12	417	31	363	394	17	27	44	855
12:00	113	4	117	12	104	116	6	8	14	247
12:15	127	5	132	8	112	120	1	6	7	259
12:30	104	3	107	12	97	109	5	13	18	234
12:45	107	5	112	13	94	107	3	4	7	226
Total	451	17	468	45	407	452	15	31	46	966
13:00	110	4	114	10	94	104	6	10	16	234
13:15	114	1	115	11	114	125	4	15	19	259
13:30	111	4	115	11	100	111	3	4	7	233
13:45	118	1	119	8	116	124	4	5	9	252
Total	453	10	463	40	424	464	17	34	51	978

*** BLANK ***

15:00	136	2	138	18	120	138	4	7	11	287
15:15	107	1	108	9	129	138	4	13	17	263
15:30	115	3	118	9	103	112	7	6	13	243
15:45	172	2	174	12	131	143	3	6	9	326
Total	530	8	538	48	483	531	18	32	50	1119
16:00	138	2	140	8	127	135	2	7	9	284
16:15	105	3	108	8	135	143	5	8	13	264
16:30	102	4	106	9	143	152	1	4	5	263
16:45	118	4	122	7	165	172	8	8	16	310
Total	463	13	476	32	570	602	16	27	43	1121
17:00	126	4	130	10	190	200	3	7	10	340
17:15	99	9	108	16	166	182	11	6	17	307
17:30	115	4	119	13	165	178	5	3	8	305
17:45	65	3	68	8	109	117	5	6	11	196
Total	405	20	425	47	630	677	24	22	46	1148

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 5) NM 118@Florence
Site Code :
Start Date : 12/3/2009
Page No : 2

Groups Printed- Car

	NM 118 Eastbound			NM 118 Westbound			Florence St Northbound			
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Grand Total	3949	115	4064	316	3786	4102	144	247	391	8557
Apprch %	97.2	2.8		7.7	92.3		36.8	63.2		
Total %	46.1	1.3	47.5	3.7	44.2	47.9	1.7	2.9	4.6	

	NM 118 Eastbound			NM 118 Westbound			Florence St Northbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30										
07:30	137	2	139	2	92	94	0	7	7	240
07:45	124	6	130	4	132	136	4	8	12	278
08:00	141	2	143	9	115	124	4	8	12	279
08:15	129	5	134	6	98	104	3	9	12	250
Total Volume	531	15	546	21	437	458	11	32	43	1047
% App. Total	97.3	2.7		4.6	95.4		25.6	74.4		
PHF	.941	.625	.955	.583	.828	.842	.688	.889	.896	.938
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 11:30										
11:30	109	4	113	6	116	122	7	6	13	248
11:45	108	6	114	8	107	115	5	9	14	243
12:00	113	4	117	12	104	116	6	8	14	247
12:15	127	5	132	8	112	120	1	6	7	259
Total Volume	457	19	476	34	439	473	19	29	48	997
% App. Total	96	4		7.2	92.8		39.6	60.4		
PHF	.900	.792	.902	.708	.946	.969	.679	.806	.857	.962
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 16:45										
16:45	118	4	122	7	165	172	8	8	16	310
17:00	126	4	130	10	190	200	3	7	10	340
17:15	99	9	108	16	166	182	11	6	17	307
17:30	115	4	119	13	165	178	5	3	8	305
Total Volume	458	21	479	46	686	732	27	24	51	1262
% App. Total	95.6	4.4		6.3	93.7		52.9	47.1		
PHF	.909	.583	.921	.719	.903	.915	.614	.750	.750	.928

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 6) NM 118@Allison
Site Code : 00000000
Start Date : 12/9/2009
Page No : 1

Groups Printed- Cars - Trucks

	NM 118 Eastbound				NM 118 Westbound				Northbound				Allison Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	28	118	0	146	0	76	24	100	0	0	0	0	8	0	10	18	264
07:15	34	112	0	146	0	90	22	112	0	0	0	0	4	0	8	12	270
07:30	36	244	0	280	0	166	16	182	0	0	0	0	24	0	16	40	502
07:45	40	230	0	270	0	250	60	310	0	0	0	0	8	0	28	36	616
Total	138	704	0	842	0	582	122	704	0	0	0	0	44	0	62	106	1652
08:00	46	258	0	304	0	226	32	258	0	0	0	0	22	0	24	46	608
08:15	48	222	0	270	0	186	16	202	0	0	0	0	28	0	28	56	528
08:30	22	208	0	230	0	136	30	166	0	0	0	0	18	0	18	36	432
08:45	26	186	0	212	0	122	32	154	0	0	0	0	20	0	16	36	402
Total	142	874	0	1016	0	670	110	780	0	0	0	0	88	0	86	174	1970
09:00	22	182	0	204	0	134	28	162	0	0	0	0	10	0	10	20	386
09:15	26	158	0	184	0	122	24	146	0	0	0	0	30	0	22	52	382
09:30	40	162	0	202	0	140	28	168	0	0	0	0	10	0	14	24	394
09:45	44	164	0	208	0	124	24	148	0	0	0	0	24	0	28	52	408
Total	132	666	0	798	0	520	104	624	0	0	0	0	74	0	74	148	1570
*** BREAK ***																	
11:00	48	178	0	226	0	130	56	186	0	0	0	0	24	0	24	48	460
11:15	18	174	0	192	0	126	52	178	0	0	0	0	46	0	44	90	460
11:30	32	214	0	246	0	204	60	264	0	0	0	0	32	0	38	70	580
11:45	42	214	0	256	0	186	38	224	0	0	0	0	40	0	48	88	568
Total	140	780	0	920	0	646	206	852	0	0	0	0	142	0	154	296	2068
12:00	50	196	0	246	0	186	36	222	0	0	0	0	26	0	46	72	540
12:15	40	230	0	270	0	198	54	252	0	0	0	0	16	0	42	58	580
12:30	50	200	0	250	0	166	52	218	0	0	0	0	42	0	54	96	564
12:45	56	156	0	212	0	166	44	210	0	0	0	0	42	0	50	92	514
Total	196	782	0	978	0	716	186	902	0	0	0	0	126	0	192	318	2198
13:00	44	200	0	244	0	156	60	216	0	0	0	0	32	0	44	76	536
13:15	72	194	0	266	0	198	60	258	0	0	0	0	48	0	56	104	628
13:30	64	174	0	238	0	174	46	220	0	0	0	0	48	0	46	94	552
13:45	56	200	0	256	0	206	34	240	0	0	0	0	34	0	44	78	574
Total	236	768	0	1004	0	734	200	934	0	0	0	0	162	0	190	352	2290
*** BREAK ***																	
15:00	56	248	0	304	0	240	32	272	0	0	0	0	52	0	46	98	674
15:15	18	216	0	234	0	248	52	300	0	0	0	0	40	0	36	76	610
15:30	14	232	0	246	0	186	42	228	0	0	0	0	32	0	44	76	550
15:45	70	288	0	358	0	224	66	290	0	0	0	0	32	0	54	86	734
Total	158	984	0	1142	0	898	192	1090	0	0	0	0	156	0	180	336	2568
16:00	76	248	0	324	0	230	54	284	0	0	0	0	44	0	44	88	696
16:15	58	202	0	260	0	216	42	258	0	0	0	0	50	0	68	118	636
16:30	50	142	0	192	0	228	60	288	0	0	0	0	84	0	74	158	638
16:45	66	176	0	242	0	314	50	364	0	0	0	0	28	0	42	70	676
Total	250	768	0	1018	0	988	206	1194	0	0	0	0	206	0	228	434	2646
17:00	60	212	0	272	0	330	58	388	0	0	0	0	30	0	74	104	764
17:15	58	156	0	214	0	274	46	320	0	0	0	0	44	0	94	138	672
17:30	44	194	0	238	0	270	30	300	0	0	0	0	40	0	80	120	658
17:45	32	124	0	156	0	212	40	252	0	0	0	0	16	0	46	62	470
Total	194	686	0	880	0	1086	174	1260	0	0	0	0	130	0	294	424	2564
Grand Total	1586	7012	0	8598	0	6840	1500	8340	0	0	0	0	1128	0	1460	2588	19526
Apprch %	18.4	81.6	0		0	82	18		0	0	0		43.6	0	56.4		
Total %	8.1	35.9	0	44	0	35	7.7	42.7	0	0	0	0	5.8	0	7.5	13.3	

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 6) NM 118@Allison
Site Code : 00000000
Start Date : 12/9/2009
Page No : 2

Groups Printed- Cars - Trucks

	NM 118 Eastbound				NM 118 Westbound				Northbound				Allison Rd Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Cars	793	3506	0	4299	0	3420	750	4170	0	0	0	0	564	0	730	1294	9763
% Cars	50	50	0	50	0	50	50	50	0	0	0	0	50	0	50	50	50
Trucks	793	3506	0	4299	0	3420	750	4170	0	0	0	0	564	0	730	1294	9763
% Trucks	50	50	0	50	0	50	50	50	0	0	0	0	50	0	50	50	50

	NM 118 Eastbound				NM 118 Westbound				Northbound				Allison Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	36	244	0	280	0	166	16	182	0	0	0	0	24	0	16	40	502
07:45	40	230	0	270	0	250	60	310	0	0	0	0	8	0	28	36	616
08:00	46	258	0	304	0	226	32	258	0	0	0	0	22	0	24	46	608
08:15	48	222	0	270	0	186	16	202	0	0	0	0	28	0	28	56	528
Total Volume	170	954	0	1124	0	828	124	952	0	0	0	0	82	0	96	178	2254
% App. Total	15.1	84.9	0		0	87	13		0	0	0		46.1	0	53.9		
PHF	.885	.924	.000	.924	.000	.828	.517	.768	.000	.000	.000	.000	.732	.000	.857	.795	.915
Cars	85	477	0	562	0	414	62	476	0	0	0	0	41	0	48	89	1127
% Cars	50.0	50.0	0	50.0	0	50.0	50.0	50.0	0	0	0	0	50.0	0	50.0	50.0	50.0
Trucks	85	477	0	562	0	414	62	476	0	0	0	0	41	0	48	89	1127
% Trucks	50.0	50.0	0	50.0	0	50.0	50.0	50.0	0	0	0	0	50.0	0	50.0	50.0	50.0
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 13:00																	
13:00	44	200	0	244	0	156	60	216	0	0	0	0	32	0	44	76	536
13:15	72	194	0	266	0	198	60	258	0	0	0	0	48	0	56	104	628
13:30	64	174	0	238	0	174	46	220	0	0	0	0	48	0	46	94	552
13:45	56	200	0	256	0	206	34	240	0	0	0	0	34	0	44	78	574
Total Volume	236	768	0	1004	0	734	200	934	0	0	0	0	162	0	190	352	2290
% App. Total	23.5	76.5	0		0	78.6	21.4		0	0	0		46	0	54		
PHF	.819	.960	.000	.944	.000	.891	.833	.905	.000	.000	.000	.000	.844	.000	.848	.846	.912
Cars	118	384	0	502	0	367	100	467	0	0	0	0	81	0	95	176	1145
% Cars	50.0	50.0	0	50.0	0	50.0	50.0	50.0	0	0	0	0	50.0	0	50.0	50.0	50.0
Trucks	118	384	0	502	0	367	100	467	0	0	0	0	81	0	95	176	1145
% Trucks	50.0	50.0	0	50.0	0	50.0	50.0	50.0	0	0	0	0	50.0	0	50.0	50.0	50.0
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	66	176	0	242	0	314	50	364	0	0	0	0	28	0	42	70	676
17:00	60	212	0	272	0	330	58	388	0	0	0	0	30	0	74	104	764
17:15	58	156	0	214	0	274	46	320	0	0	0	0	44	0	94	138	672
17:30	44	194	0	238	0	270	30	300	0	0	0	0	40	0	80	120	658
Total Volume	228	738	0	966	0	1188	184	1372	0	0	0	0	142	0	290	432	2770
% App. Total	23.6	76.4	0		0	86.6	13.4		0	0	0		32.9	0	67.1		
PHF	.864	.870	.000	.888	.000	.900	.793	.884	.000	.000	.000	.000	.807	.000	.771	.783	.906
Cars	114	369	0	483	0	594	92	686	0	0	0	0	71	0	145	216	1385
% Cars	50.0	50.0	0	50.0	0	50.0	50.0	50.0	0	0	0	0	50.0	0	50.0	50.0	50.0
Trucks	114	369	0	483	0	594	92	686	0	0	0	0	71	0	145	216	1385
% Trucks	50.0	50.0	0	50.0	0	50.0	50.0	50.0	0	0	0	0	50.0	0	50.0	50.0	50.0

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 7) NM 118@Marguerite
Site Code : 00000000
Start Date : 12/3/2009
Page No : 1

Groups Printed- Cars - Trucks

	NM 118 Eastbound				NM 118 Westbound				Marguerite St Northbound				Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	0	59	9	68	10	44	0	54	5	0	6	11	0	0	0	0	133
07:15	0	58	11	69	12	41	0	53	12	0	9	21	0	0	0	0	143
07:30	0	100	35	135	25	84	0	109	18	0	9	27	0	0	0	0	271
07:45	0	101	25	126	25	122	0	147	37	0	8	45	0	0	0	0	318
Total	0	318	80	398	72	291	0	363	72	0	32	104	0	0	0	0	865
08:00	0	110	30	140	38	111	0	149	22	0	17	39	0	0	0	0	328
08:15	0	112	24	136	25	76	0	101	26	0	25	51	0	0	0	0	288
08:30	0	101	15	116	25	75	0	100	17	0	23	40	0	0	0	0	256
08:45	0	100	8	108	17	63	0	80	13	0	18	31	0	0	0	0	219
Total	0	423	77	500	105	325	0	430	78	0	83	161	0	0	0	0	1091
09:00	0	88	18	106	18	75	0	93	10	0	19	29	0	0	0	0	228
09:15	0	80	13	93	23	71	0	94	11	0	14	25	0	0	0	0	212
09:30	0	77	10	87	37	68	0	105	23	0	13	36	0	0	0	0	228
09:45	0	79	20	99	30	70	0	100	14	0	11	25	0	0	0	0	224
Total	0	324	61	385	108	284	0	392	58	0	57	115	0	0	0	0	892
*** BLANK ***																	
11:00	0	89	20	109	40	77	0	117	25	0	25	50	0	0	0	0	276
11:15	0	83	19	102	35	73	0	108	20	0	27	47	0	0	0	0	257
11:30	0	96	26	122	37	75	0	112	59	0	30	89	0	0	0	0	323
11:45	0	101	18	119	28	100	0	128	34	0	28	62	0	0	0	0	309
Total	0	369	83	452	140	325	0	465	138	0	110	248	0	0	0	0	1165
12:00	0	99	21	120	44	93	0	137	22	0	14	36	0	0	0	0	293
12:15	0	94	25	119	38	104	0	142	25	0	28	53	0	0	0	0	314
12:30	0	99	24	123	38	93	0	131	20	0	29	49	0	0	0	0	303
12:45	0	86	27	113	38	84	0	122	27	0	26	53	0	0	0	0	288
Total	0	378	97	475	158	374	0	532	94	0	97	191	0	0	0	0	1198
13:00	0	98	18	116	48	85	0	133	31	0	33	64	0	0	0	0	313
13:15	0	97	25	122	44	102	0	146	32	0	42	74	0	0	0	0	342
13:30	0	81	33	114	29	92	0	121	20	0	23	43	0	0	0	0	278
13:45	0	88	27	115	51	93	0	144	27	0	21	48	0	0	0	0	307
Total	0	364	103	467	172	372	0	544	110	0	119	229	0	0	0	0	1240
*** BLANK ***																	
15:00	1	114	34	149	49	99	0	148	30	0	30	60	0	0	0	0	357
15:15	0	99	28	127	46	120	0	166	37	0	37	74	0	0	0	0	367
15:30	0	119	24	143	53	86	0	139	43	0	29	72	0	0	0	0	354
15:45	0	125	29	154	45	104	0	149	44	0	33	77	0	0	0	0	380
Total	1	457	115	573	193	409	0	602	154	0	129	283	0	0	0	0	1458
16:00	0	114	32	146	41	99	0	140	37	0	34	71	0	0	0	0	357
16:15	0	91	33	124	38	93	0	131	31	0	30	61	0	0	0	0	316
16:30	0	89	24	113	51	84	0	135	48	0	20	68	0	0	0	0	316
16:45	0	86	25	111	33	118	0	151	59	0	29	88	0	0	0	0	350
Total	0	380	114	494	163	394	0	557	175	0	113	288	0	0	0	0	1339
17:00	0	100	25	125	46	146	0	192	49	0	33	82	0	0	0	0	399
17:15	0	81	21	102	45	118	0	163	35	0	23	58	0	0	0	0	323
17:30	0	96	24	120	29	107	0	136	44	0	20	64	0	0	0	0	320
17:45	0	54	21	75	36	88	0	124	27	0	24	51	0	0	0	0	250
Total	0	331	91	422	156	459	0	615	155	0	100	255	0	0	0	0	1292
Grand Total	1	3344	821	4166	1267	3233	0	4500	1034	0	840	1874	0	0	0	0	10540
Apprch %	0	80.3	19.7		28.2	71.8	0		55.2	0	44.8		0	0	0		
Total %	0	31.7	7.8	39.5	12	30.7	0	42.7	9.8	0	8	17.8	0	0	0	0	

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 7) NM 118@Marguerite
Site Code : 00000000
Start Date : 12/3/2009
Page No : 2

Groups Printed- Cars - Trucks

	NM 118 Eastbound				NM 118 Westbound				Marguerite St Northbound				Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Cars	1	3254	801	4056	1234	3146	0	4380	1014	0	809	1823	0	0	0	0	10259
% Cars	100	97.3	97.6	97.4	97.4	97.3	0	97.3	98.1	0	96.3	97.3	0	0	0	0	97.3
Trucks	0	90	20	110	33	87	0	120	20	0	31	51	0	0	0	0	281
% Trucks	0	2.7	2.4	2.6	2.6	2.7	0	2.7	1.9	0	3.7	2.7	0	0	0	0	2.7

	NM 118 Eastbound				NM 118 Westbound				Marguerite St Northbound				Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	0	100	35	135	25	84	0	109	18	0	9	27	0	0	0	0	271
07:45	0	101	25	126	25	122	0	147	37	0	8	45	0	0	0	0	318
08:00	0	110	30	140	38	111	0	149	22	0	17	39	0	0	0	0	328
08:15	0	112	24	136	25	76	0	101	26	0	25	51	0	0	0	0	288
Total Volume	0	423	114	537	113	393	0	506	103	0	59	162	0	0	0	0	1205
% App. Total	0	78.8	21.2		22.3	77.7	0		63.6	0	36.4		0	0	0		
PHF	.000	.944	.814	.959	.743	.805	.000	.849	.696	.000	.590	.794	.000	.000	.000	.000	.918
Cars	0	410	102	512	111	386	0	497	99	0	52	151	0	0	0	0	1160
% Cars	0	96.9	89.5	95.3	98.2	98.2	0	98.2	96.1	0	88.1	93.2	0	0	0	0	96.3
Trucks	0	13	12	25	2	7	0	9	4	0	7	11	0	0	0	0	45
% Trucks	0	3.1	10.5	4.7	1.8	1.8	0	1.8	3.9	0	11.9	6.8	0	0	0	0	3.7
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30																	
12:30	0	99	24	123	38	93	0	131	20	0	29	49	0	0	0	0	303
12:45	0	86	27	113	38	84	0	122	27	0	26	53	0	0	0	0	288
13:00	0	98	18	116	48	85	0	133	31	0	33	64	0	0	0	0	313
13:15	0	97	25	122	44	102	0	146	32	0	42	74	0	0	0	0	342
Total Volume	0	380	94	474	168	364	0	532	110	0	130	240	0	0	0	0	1246
% App. Total	0	80.2	19.8		31.6	68.4	0		45.8	0	54.2		0	0	0		
PHF	.000	.960	.870	.963	.875	.892	.000	.911	.859	.000	.774	.811	.000	.000	.000	.000	.911
Cars	0	372	94	466	162	351	0	513	110	0	126	236	0	0	0	0	1215
% Cars	0	97.9	100	98.3	96.4	96.4	0	96.4	100	0	96.9	98.3	0	0	0	0	97.5
Trucks	0	8	0	8	6	13	0	19	0	0	4	4	0	0	0	0	31
% Trucks	0	2.1	0	1.7	3.6	3.6	0	3.6	0	0	3.1	1.7	0	0	0	0	2.5
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 15:00																	
15:00	1	114	34	149	49	99	0	148	30	0	30	60	0	0	0	0	357
15:15	0	99	28	127	46	120	0	166	37	0	37	74	0	0	0	0	367
15:30	0	119	24	143	53	86	0	139	43	0	29	72	0	0	0	0	354
15:45	0	125	29	154	45	104	0	149	44	0	33	77	0	0	0	0	380
Total Volume	1	457	115	573	193	409	0	602	154	0	129	283	0	0	0	0	1458
% App. Total	0.2	79.8	20.1		32.1	67.9	0		54.4	0	45.6		0	0	0		
PHF	.250	.914	.846	.930	.910	.852	.000	.907	.875	.000	.872	.919	.000	.000	.000	.000	.959
Cars	1	449	113	563	188	397	0	585	148	0	124	272	0	0	0	0	1420
% Cars	100	98.2	98.3	98.3	97.4	97.1	0	97.2	96.1	0	96.1	96.1	0	0	0	0	97.4
Trucks	0	8	2	10	5	12	0	17	6	0	5	11	0	0	0	0	38
% Trucks	0	1.8	1.7	1.7	2.6	2.9	0	2.8	3.9	0	3.9	3.9	0	0	0	0	2.6

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 8) NM 118@Arnold
Site Code : 00000000
Start Date : 12/10/2009
Page No : 1

Groups Printed- Cars - Trucks

	NM 118 Eastbound				NM 118 Westbound				Arnold St Northbound				Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	0	34	25	59	3	28	0	31	9	0	4	13	0	0	0	0	103
07:15	0	52	19	71	4	34	0	38	11	0	7	18	0	0	0	0	127
07:30	0	85	19	104	4	53	0	57	35	0	8	43	0	0	0	0	204
07:45	0	98	39	137	6	94	0	100	34	0	14	48	0	0	0	0	285
Total	0	269	102	371	17	209	0	226	89	0	33	122	0	0	0	0	719
08:00	0	93	29	122	6	87	0	93	35	0	23	58	0	0	0	0	273
08:15	0	102	32	134	13	78	0	91	40	0	13	53	0	0	0	0	278
08:30	0	92	28	120	3	43	0	46	27	0	14	41	0	0	0	0	207
08:45	0	77	33	110	4	48	0	52	15	0	19	34	0	0	0	0	196
Total	0	364	122	486	26	256	0	282	117	0	69	186	0	0	0	0	954
09:00	0	70	33	103	4	66	0	70	22	0	13	35	0	0	0	0	208
09:15	0	91	28	119	11	48	0	59	29	0	17	46	0	0	0	0	224
09:30	0	75	27	102	8	59	0	67	23	1	15	39	0	0	0	0	208
09:45	0	65	28	93	7	66	0	73	21	0	18	39	0	0	0	0	205
Total	0	301	116	417	30	239	0	269	95	1	63	159	0	0	0	0	845
*** BLANK ***																	
11:00	0	69	39	108	9	65	0	74	34	0	17	51	0	0	0	0	233
11:15	0	69	31	100	14	82	0	96	22	0	24	46	0	0	0	0	242
11:30	0	78	36	114	13	61	0	74	42	0	27	69	0	0	0	0	257
11:45	0	95	29	124	17	52	0	69	36	0	18	54	0	0	0	0	247
Total	0	311	135	446	53	260	0	313	134	0	86	220	0	0	0	0	979
12:00	0	81	35	116	19	92	0	111	29	0	20	49	0	0	0	0	276
12:15	0	75	31	106	16	76	0	92	34	0	23	57	0	0	0	0	255
12:30	0	83	50	133	13	79	0	92	43	0	21	64	0	0	0	0	289
12:45	0	100	35	135	18	78	0	96	32	0	32	64	0	0	0	0	295
Total	0	339	151	490	66	325	0	391	138	0	96	234	0	0	0	0	1115
13:00	0	100	34	134	16	77	0	93	37	0	25	62	0	0	0	0	289
13:15	0	76	42	118	18	78	0	96	24	0	20	44	0	0	0	0	258
13:30	0	79	24	103	7	63	0	70	29	0	23	52	0	0	0	0	225
13:45	0	91	32	123	6	90	0	96	24	0	22	46	0	0	0	0	265
Total	0	346	132	478	47	308	0	355	114	0	90	204	0	0	0	0	1037
*** BLANK ***																	
15:00	0	82	43	125	21	98	0	119	45	0	22	67	0	0	0	0	311
15:15	0	86	52	138	19	85	0	104	51	0	20	71	0	0	0	0	313
15:30	0	110	30	140	15	85	0	100	34	0	18	52	0	0	0	0	292
15:45	0	122	46	168	12	95	0	107	47	0	21	68	0	0	0	0	343
Total	0	400	171	571	67	363	0	430	177	0	81	258	0	0	0	0	1259
16:00	0	105	43	148	14	97	0	111	42	0	19	61	0	0	0	0	320
16:15	0	103	32	135	13	96	0	109	38	0	22	60	0	0	0	0	304
16:30	0	109	44	153	12	86	0	98	36	0	21	57	0	0	0	0	308
16:45	0	89	27	116	15	95	0	110	41	0	19	60	0	0	0	0	286
Total	0	406	146	552	54	374	0	428	157	0	81	238	0	0	0	0	1218
17:00	0	97	29	126	18	125	0	143	65	0	15	80	0	0	0	0	349
17:15	0	88	37	125	19	108	0	127	69	0	13	82	0	0	0	0	334
17:30	0	85	38	123	14	74	0	88	63	0	14	77	0	0	0	0	288
17:45	0	76	34	110	11	61	0	72	55	0	19	74	0	0	0	0	256
Total	0	346	138	484	62	368	0	430	252	0	61	313	0	0	0	0	1227
Grand Total	0	3082	1213	4295	422	2702	0	3124	1273	1	660	1934	0	0	0	0	9353
Apprch %	0	71.8	28.2		13.5	86.5	0		65.8	0.1	34.1		0	0	0		
Total %	0	33	13	45.9	4.5	28.9	0	33.4	13.6	0	7.1	20.7	0	0	0	0	

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 8) NM 118@Arnold
Site Code : 00000000
Start Date : 12/10/2009
Page No : 2

Groups Printed- Cars - Trucks

	NM 118 Eastbound				NM 118 Westbound				Arnold St Northbound				Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Cars	0	3019	1163	4182	412	2647	0	3059	1231	1	644	1876	0	0	0	0	9117
% Cars	0	98	95.9	97.4	97.6	98	0	97.9	96.7	100	97.6	97	0	0	0	0	97.5
Trucks	0	63	50	113	10	55	0	65	42	0	16	58	0	0	0	0	236
% Trucks	0	2	4.1	2.6	2.4	2	0	2.1	3.3	0	2.4	3	0	0	0	0	2.5

	NM 118 Eastbound				NM 118 Westbound				Arnold St Northbound				Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45																	
07:45	0	98	39	137	6	94	0	100	34	0	14	48	0	0	0	0	285
08:00	0	93	29	122	6	87	0	93	35	0	23	58	0	0	0	0	273
08:15	0	102	32	134	13	78	0	91	40	0	13	53	0	0	0	0	278
08:30	0	92	28	120	3	43	0	46	27	0	14	41	0	0	0	0	207
Total Volume	0	385	128	513	28	302	0	330	136	0	64	200	0	0	0	0	1043
% App. Total	0	75	25		8.5	91.5	0		68	0	32		0	0	0		
PHF	.000	.944	.821	.936	.538	.803	.000	.825	.850	.000	.696	.862	.000	.000	.000	.000	.915
Cars	0	373	124	497	26	295	0	321	133	0	63	196	0	0	0	0	1014
% Cars	0	96.9	96.9	96.9	92.9	97.7	0	97.3	97.8	0	98.4	98.0	0	0	0	0	97.2
Trucks	0	12	4	16	2	7	0	9	3	0	1	4	0	0	0	0	29
% Trucks	0	3.1	3.1	3.1	7.1	2.3	0	2.7	2.2	0	1.6	2.0	0	0	0	0	2.8
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30																	
12:30	0	83	50	133	13	79	0	92	43	0	21	64	0	0	0	0	289
12:45	0	100	35	135	18	78	0	96	32	0	32	64	0	0	0	0	295
13:00	0	100	34	134	16	77	0	93	37	0	25	62	0	0	0	0	289
13:15	0	76	42	118	18	78	0	96	24	0	20	44	0	0	0	0	258
Total Volume	0	359	161	520	65	312	0	377	136	0	98	234	0	0	0	0	1131
% App. Total	0	69	31		17.2	82.8	0		58.1	0	41.9		0	0	0		
PHF	.000	.898	.805	.963	.903	.987	.000	.982	.791	.000	.766	.914	.000	.000	.000	.000	.958
Cars	0	353	155	508	64	305	0	369	130	0	95	225	0	0	0	0	1102
% Cars	0	98.3	96.3	97.7	98.5	97.8	0	97.9	95.6	0	96.9	96.2	0	0	0	0	97.4
Trucks	0	6	6	12	1	7	0	8	6	0	3	9	0	0	0	0	29
% Trucks	0	1.7	3.7	2.3	1.5	2.2	0	2.1	4.4	0	3.1	3.8	0	0	0	0	2.6
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	0	109	44	153	12	86	0	98	36	0	21	57	0	0	0	0	308
16:45	0	89	27	116	15	95	0	110	41	0	19	60	0	0	0	0	286
17:00	0	97	29	126	18	125	0	143	65	0	15	80	0	0	0	0	349
17:15	0	88	37	125	19	108	0	127	69	0	13	82	0	0	0	0	334
Total Volume	0	383	137	520	64	414	0	478	211	0	68	279	0	0	0	0	1277
% App. Total	0	73.7	26.3		13.4	86.6	0		75.6	0	24.4		0	0	0		
PHF	.000	.878	.778	.850	.842	.828	.000	.836	.764	.000	.810	.851	.000	.000	.000	.000	.915
Cars	0	379	136	515	64	409	0	473	203	0	65	268	0	0	0	0	1256
% Cars	0	99.0	99.3	99.0	100	98.8	0	99.0	96.2	0	95.6	96.1	0	0	0	0	98.4
Trucks	0	4	1	5	0	5	0	5	8	0	3	11	0	0	0	0	21
% Trucks	0	1.0	0.7	1.0	0	1.2	0	1.0	3.8	0	4.4	3.9	0	0	0	0	1.6

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 9) Aztec Ave@Arnold
Site Code : 00000777
Start Date : 12/10/2009
Page No : 1

Groups Printed- Cars - Trucks

	Aztec Ave Eastbound				Aztec Ave Westbound				Northbound				Arnold St Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	1	19	0	20	0	25	18	43	0	0	0	0	28	0	2	30	93
07:15	7	37	0	44	0	30	19	49	0	0	0	0	29	0	2	31	124
07:30	6	74	0	80	0	47	39	86	0	0	0	0	27	0	2	29	195
07:45	11	61	0	72	0	64	51	115	0	0	0	0	44	0	3	47	234
Total	25	191	0	216	0	166	127	293	0	0	0	0	128	0	9	137	646
08:00	7	54	0	61	0	56	54	110	0	0	0	0	38	0	1	39	210
08:15	6	47	0	53	0	59	53	112	0	0	0	0	37	0	5	42	207
08:30	6	36	0	42	0	37	39	76	0	0	0	0	33	0	5	38	156
08:45	9	37	0	46	0	36	32	68	0	0	0	0	35	0	3	38	152
Total	28	174	0	202	0	188	178	366	0	0	0	0	143	0	14	157	725
09:00	7	25	0	32	0	28	34	62	0	0	0	0	42	0	1	43	137
09:15	9	40	0	49	0	42	43	85	0	0	0	0	41	0	3	44	178
09:30	3	28	0	31	0	35	40	75	0	0	0	0	33	0	0	33	139
09:45	8	27	0	35	0	40	43	83	0	0	0	0	45	0	1	46	164
Total	27	120	0	147	0	145	160	305	0	0	0	0	161	0	5	166	618
*** BLANK ***																	
11:00	7	31	0	38	0	46	49	95	0	0	0	0	47	0	8	55	188
11:15	10	40	0	50	0	47	50	97	0	0	0	0	44	0	3	47	194
11:30	9	42	0	51	0	65	70	135	0	0	0	0	52	0	4	56	242
11:45	7	45	0	52	0	54	58	112	0	0	0	0	46	0	2	48	212
Total	33	158	0	191	0	212	227	439	0	0	0	0	189	0	17	206	836
12:00	5	38	0	43	0	78	55	133	0	0	0	0	49	0	4	53	229
12:15	13	35	0	48	0	79	68	147	0	0	0	0	56	0	9	65	260
12:30	13	38	0	51	0	53	59	112	0	0	0	0	54	0	4	58	221
12:45	12	58	0	70	0	66	58	124	0	0	0	0	55	0	9	64	258
Total	43	169	0	212	0	276	240	516	0	0	0	0	214	0	26	240	968
13:00	10	62	0	72	0	56	69	125	0	0	0	0	62	0	10	72	269
13:15	9	44	0	53	0	62	48	110	0	0	0	0	64	0	11	75	238
13:30	7	45	0	52	0	63	56	119	0	0	0	0	45	0	0	45	216
13:45	14	45	0	59	0	56	47	103	0	0	0	0	50	0	3	53	215
Total	40	196	0	236	0	237	220	457	0	0	0	0	221	0	24	245	938
*** BLANK ***																	
15:00	14	55	0	69	0	82	82	164	0	0	0	0	70	0	8	78	311
15:15	10	58	0	68	0	82	67	149	0	0	0	0	77	0	10	87	304
15:30	14	69	0	83	0	91	59	150	0	0	0	0	56	0	4	60	293
15:45	9	64	0	73	0	74	62	136	0	0	0	0	58	0	6	64	273
Total	47	246	0	293	0	329	270	599	0	0	0	0	261	0	28	289	1181
16:00	8	58	0	66	0	75	67	142	0	0	0	0	65	0	4	69	277
16:15	7	51	0	58	0	61	70	131	0	0	0	0	43	0	7	50	239
16:30	7	62	0	69	0	81	56	137	0	0	0	0	67	0	3	70	276
16:45	6	64	0	70	0	84	68	152	0	0	0	0	53	0	6	59	281
Total	28	235	0	263	0	301	261	562	0	0	0	0	228	0	20	248	1073
17:00	6	64	0	70	0	100	89	189	0	0	0	0	53	0	8	61	320
17:15	7	53	0	60	0	87	71	158	0	0	0	0	62	0	7	69	287
17:30	13	55	0	68	0	67	89	156	0	0	0	0	60	0	7	67	291
17:45	10	58	0	68	0	67	77	144	0	0	0	0	52	0	8	60	272
Total	36	230	0	266	0	321	326	647	0	0	0	0	227	0	30	257	1170
Grand Total	307	1719	0	2026	0	2175	2009	4184	0	0	0	0	1772	0	173	1945	8155
Apprch %	15.2	84.8	0		0	52	48		0	0	0		91.1	0	8.9		
Total %	3.8	21.1	0	24.8	0	26.7	24.6	51.3	0	0	0	0	21.7	0	2.1	23.9	

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 9) Aztec Ave@Arnold
Site Code : 00000777
Start Date : 12/10/2009
Page No : 2

Groups Printed- Cars - Trucks

	Aztec Ave Eastbound				Aztec Ave Westbound				Northbound				Arnold St Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Cars	304	1667	0	1971	0	2121	1950	4071	0	0	0	0	1714	0	170	1884	7926
% Cars	99	97	0	97.3	0	97.5	97.1	97.3	0	0	0	0	96.7	0	98.3	96.9	97.2
Trucks	3	52	0	55	0	54	59	113	0	0	0	0	58	0	3	61	229
% Trucks	1	3	0	2.7	0	2.5	2.9	2.7	0	0	0	0	3.3	0	1.7	3.1	2.8

	Aztec Ave Eastbound				Aztec Ave Westbound				Northbound				Arnold St Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	6	74	0	80	0	47	39	86	0	0	0	0	27	0	2	29	195
07:45	11	61	0	72	0	64	51	115	0	0	0	0	44	0	3	47	234
08:00	7	54	0	61	0	56	54	110	0	0	0	0	38	0	1	39	210
08:15	6	47	0	53	0	59	53	112	0	0	0	0	37	0	5	42	207
Total Volume	30	236	0	266	0	226	197	423	0	0	0	0	146	0	11	157	846
% App. Total	11.3	88.7	0		0	53.4	46.6		0	0	0		93	0	7		
PHF	.682	.797	.000	.831	.000	.883	.912	.920	.000	.000	.000	.000	.830	.000	.550	.835	.904
Cars	30	219	0	249	0	222	193	415	0	0	0	0	140	0	11	151	815
% Cars	100	92.8	0	93.6	0	98.2	98.0	98.1	0	0	0	0	95.9	0	100	96.2	96.3
Trucks	0	17	0	17	0	4	4	8	0	0	0	0	6	0	0	6	31
% Trucks	0	7.2	0	6.4	0	1.8	2.0	1.9	0	0	0	0	4.1	0	0	3.8	3.7
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:15																	
12:15	13	35	0	48	0	79	68	147	0	0	0	0	56	0	9	65	260
12:30	13	38	0	51	0	53	59	112	0	0	0	0	54	0	4	58	221
12:45	12	58	0	70	0	66	58	124	0	0	0	0	55	0	9	64	258
13:00	10	62	0	72	0	56	69	125	0	0	0	0	62	0	10	72	269
Total Volume	48	193	0	241	0	254	254	508	0	0	0	0	227	0	32	259	1008
% App. Total	19.9	80.1	0		0	50	50		0	0	0		87.6	0	12.4		
PHF	.923	.778	.000	.837	.000	.804	.920	.864	.000	.000	.000	.000	.915	.000	.800	.899	.937
Cars	48	188	0	236	0	250	245	495	0	0	0	0	220	0	32	252	983
% Cars	100	97.4	0	97.9	0	98.4	96.5	97.4	0	0	0	0	96.9	0	100	97.3	97.5
Trucks	0	5	0	5	0	4	9	13	0	0	0	0	7	0	0	7	25
% Trucks	0	2.6	0	2.1	0	1.6	3.5	2.6	0	0	0	0	3.1	0	0	2.7	2.5
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 15:00																	
15:00	14	55	0	69	0	82	82	164	0	0	0	0	70	0	8	78	311
15:15	10	58	0	68	0	82	67	149	0	0	0	0	77	0	10	87	304
15:30	14	69	0	83	0	91	59	150	0	0	0	0	56	0	4	60	293
15:45	9	64	0	73	0	74	62	136	0	0	0	0	58	0	6	64	273
Total Volume	47	246	0	293	0	329	270	599	0	0	0	0	261	0	28	289	1181
% App. Total	16	84	0		0	54.9	45.1		0	0	0		90.3	0	9.7		
PHF	.839	.891	.000	.883	.000	.904	.823	.913	.000	.000	.000	.000	.847	.000	.700	.830	.949
Cars	47	242	0	289	0	315	263	578	0	0	0	0	256	0	27	283	1150
% Cars	100	98.4	0	98.6	0	95.7	97.4	96.5	0	0	0	0	98.1	0	96.4	97.9	97.4
Trucks	0	4	0	4	0	14	7	21	0	0	0	0	5	0	1	6	31
% Trucks	0	1.6	0	1.4	0	4.3	2.6	3.5	0	0	0	0	1.9	0	3.6	2.1	2.6

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 10) Munoz@Nizhoni
Site Code :
Start Date : 12/15/2009
Page No : 1

Groups Printed- Car - Truck

	Mendoza Rd Eastbound				Nizhoni Blvd Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	0	8	6	14	0	5	24	29	4	32	2	38	25	23	0	48	129
07:15	1	14	5	20	4	9	24	37	12	49	4	65	29	30	2	61	183
07:30	3	26	17	46	1	26	26	53	14	73	1	88	52	48	3	103	290
07:45	3	42	33	78	4	38	35	77	32	79	2	113	85	74	5	164	432
Total	7	90	61	158	9	78	109	196	62	233	9	304	191	175	10	376	1034
08:00	2	19	36	57	2	30	37	69	33	58	5	96	72	80	9	161	383
08:15	1	18	31	50	2	19	39	60	17	55	0	72	41	73	3	117	299
08:30	1	22	29	52	0	5	26	31	11	58	2	71	52	51	0	103	257
08:45	0	10	15	25	4	3	34	41	6	58	5	69	74	70	0	144	279
Total	4	69	111	184	8	57	136	201	67	229	12	308	239	274	12	525	1218
09:00	1	16	19	36	3	9	41	53	6	51	3	60	56	58	0	114	263
09:15	1	5	15	21	4	6	48	58	10	69	2	81	58	89	1	148	308
09:30	1	3	9	13	3	13	47	63	3	67	7	77	54	55	1	110	263
09:45	2	5	13	20	4	10	51	65	4	65	6	75	47	60	1	108	268
Total	5	29	56	90	14	38	187	239	23	252	18	293	215	262	3	480	1102
*** BLANK ***																	
11:00	3	12	9	24	5	12	56	73	9	76	7	92	62	64	1	127	316
11:15	0	9	8	17	9	10	75	94	10	83	4	97	57	56	1	114	322
11:30	0	12	10	22	8	4	67	79	12	99	10	121	49	60	1	110	332
11:45	2	8	10	20	3	11	55	69	7	87	3	97	77	78	0	155	341
Total	5	41	37	83	25	37	253	315	38	345	24	407	245	258	3	506	1311
12:00	1	4	13	18	5	6	80	91	13	118	10	141	48	73	1	122	372
12:15	1	12	14	27	6	8	68	82	8	79	7	94	58	68	4	130	333
12:30	1	11	7	19	2	9	51	62	11	77	3	91	88	78	0	166	338
12:45	1	14	11	26	7	6	59	72	8	66	6	80	82	91	0	173	351
Total	4	41	45	90	20	29	258	307	40	340	26	406	276	310	5	591	1394
13:00	2	9	8	19	4	8	79	91	12	69	13	94	73	86	2	161	365
13:15	3	15	6	24	6	6	75	87	5	69	4	78	68	89	2	159	348
13:30	1	6	5	12	7	9	71	87	8	84	5	97	62	83	1	146	342
13:45	3	7	15	25	3	5	66	74	4	102	7	113	77	76	1	154	366
Total	9	37	34	80	20	28	291	339	29	324	29	382	280	334	6	620	1421
*** BLANK ***																	
15:00	3	13	9	25	7	18	78	103	15	81	9	105	49	95	1	145	378
15:15	4	16	16	36	3	7	59	69	19	68	8	95	56	90	2	148	348
15:30	2	11	18	31	7	12	66	85	19	73	10	102	70	92	1	163	381
15:45	2	13	19	34	7	13	62	82	15	109	8	132	62	97	2	161	409
Total	11	53	62	126	24	50	265	339	68	331	35	434	237	374	6	617	1516
16:00	6	21	22	49	8	14	78	100	18	102	8	128	56	90	3	149	426
16:15	1	13	12	26	2	16	61	79	13	73	5	91	58	78	1	137	333
16:30	1	18	7	26	7	18	120	145	12	96	8	116	63	83	1	147	434
16:45	3	5	17	25	8	13	109	130	16	105	16	137	61	87	2	150	442
Total	11	57	58	126	25	61	368	454	59	376	37	472	238	338	7	583	1635
17:00	2	8	12	22	6	21	96	123	25	111	8	144	58	91	0	149	438
17:15	4	13	10	27	6	23	97	126	23	95	13	131	42	102	8	152	436
17:30	4	11	10	25	3	14	75	92	10	103	7	120	48	89	3	140	377
17:45	1	6	7	14	3	19	42	64	22	73	5	100	52	64	6	122	300
Total	11	38	39	88	18	77	310	405	80	382	33	495	200	346	17	563	1551

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 10) Munoz@Nizhoni
Site Code :
Start Date : 12/15/2009
Page No : 2

Groups Printed- Car - Truck

	Mendoza Rd Eastbound				Nizhoni Blvd Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Grand Total	67	455	503	1025	163	455	2177	2795	466	2812	223	3501	2121	2671	69	4861	12182
Apprch %	6.5	44.4	49.1		5.8	16.3	77.9		13.3	80.3	6.4		43.6	54.9	1.4		
Total %	0.5	3.7	4.1	8.4	1.3	3.7	17.9	22.9	3.8	23.1	1.8	28.7	17.4	21.9	0.6	39.9	
Car	67	452	463	982	159	450	2147	2756	443	2775	220	3438	2089	2609	67	4765	11941
% Car	100	99.3	92	95.8	97.5	98.9	98.6	98.6	95.1	98.7	98.7	98.2	98.5	97.7	97.1	98	98
Truck	0	3	40	43	4	5	30	39	23	37	3	63	32	62	2	96	241
% Truck	0	0.7	8	4.2	2.5	1.1	1.4	1.4	4.9	1.3	1.3	1.8	1.5	2.3	2.9	2	2

	Mendoza Rd Eastbound				Nizhoni Blvd Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	3	26	17	46	1	26	26	53	14	73	1	88	52	48	3	103	290
07:45	3	42	33	78	4	38	35	77	32	79	2	113	85	74	5	164	432
08:00	2	19	36	57	2	30	37	69	33	58	5	96	72	80	9	161	383
08:15	1	18	31	50	2	19	39	60	17	55	0	72	41	73	3	117	299
Total Volume	9	105	117	231	9	113	137	259	96	265	8	369	250	275	20	545	1404
% App. Total	3.9	45.5	50.6		3.5	43.6	52.9		26	71.8	2.2		45.9	50.5	3.7		
PHF	.750	.625	.813	.740	.563	.743	.878	.841	.727	.839	.400	.816	.735	.859	.556	.831	.813
Car	9	105	98	212	8	113	134	255	93	264	8	365	245	262	18	525	1357
% Car	100	100	83.8	91.8	88.9	100	97.8	98.5	96.9	99.6	100	98.9	98.0	95.3	90.0	96.3	96.7
Truck	0	0	19	19	1	0	3	4	3	1	0	4	5	13	2	20	47
% Truck	0	0	16.2	8.2	11.1	0	2.2	1.5	3.1	0.4	0	1.1	2.0	4.7	10.0	3.7	3.3
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 13:00																	
13:00	2	9	8	19	4	8	79	91	12	69	13	94	73	86	2	161	365
13:15	3	15	6	24	6	6	75	87	5	69	4	78	68	89	2	159	348
13:30	1	6	5	12	7	9	71	87	8	84	5	97	62	83	1	146	342
13:45	3	7	15	25	3	5	66	74	4	102	7	113	77	76	1	154	366
Total Volume	9	37	34	80	20	28	291	339	29	324	29	382	280	334	6	620	1421
% App. Total	11.2	46.2	42.5		5.9	8.3	85.8		7.6	84.8	7.6		45.2	53.9	1		
PHF	.750	.617	.567	.800	.714	.778	.921	.931	.604	.794	.558	.845	.909	.938	.750	.963	.971
Car	9	37	31	77	20	26	281	327	29	318	27	374	273	330	6	609	1387
% Car	100	100	91.2	96.3	100	92.9	96.6	96.5	100	98.1	93.1	97.9	97.5	98.8	100	98.2	97.6
Truck	0	0	3	3	0	2	10	12	0	6	2	8	7	4	0	11	34
% Truck	0	0	8.8	3.8	0	7.1	3.4	3.5	0	1.9	6.9	2.1	2.5	1.2	0	1.8	2.4
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	1	18	7	26	7	18	120	145	12	96	8	116	63	83	1	147	434
16:45	3	5	17	25	8	13	109	130	16	105	16	137	61	87	2	150	442
17:00	2	8	12	22	6	21	96	123	25	111	8	144	58	91	0	149	438
17:15	4	13	10	27	6	23	97	126	23	95	13	131	42	102	8	152	436
Total Volume	10	44	46	100	27	75	422	524	76	407	45	528	224	363	11	598	1750
% App. Total	10	44	46		5.2	14.3	80.5		14.4	77.1	8.5		37.5	60.7	1.8		
PHF	.625	.611	.676	.926	.844	.815	.879	.903	.760	.917	.703	.917	.889	.890	.344	.984	.990
Car	10	44	44	98	27	75	420	522	76	405	45	526	224	361	11	596	1742
% Car	100	100	95.7	98.0	100	100	99.5	99.6	100	99.5	100	99.6	100	99.4	100	99.7	99.5
Truck	0	0	2	2	0	0	2	2	0	2	0	2	0	2	0	2	8
% Truck	0	0	4.3	2.0	0	0	0.5	0.4	0	0.5	0	0.4	0	0.6	0	0.3	0.5

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 11) Munoz@Aztec
Site Code : 00000000
Start Date : 12/15/2009
Page No : 1

Groups Printed- Cars - Trucks

	Aztec Ave Eastbound				Aztec Ave Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	32	1	12	45	2	7	22	31	12	51	9	72	13	34	28	75	223
07:15	37	14	29	80	4	10	29	43	24	49	3	76	20	54	30	104	303
07:30	52	14	39	105	3	16	22	41	36	75	11	122	47	87	44	178	446
07:45	46	12	62	120	8	16	31	55	52	95	6	153	56	156	84	296	624
Total	167	41	142	350	17	49	104	170	124	270	29	423	136	331	186	653	1596
08:00	29	13	41	83	4	11	22	37	46	69	11	126	47	91	57	195	441
08:15	41	5	48	94	3	10	24	37	31	61	13	105	39	91	49	179	415
08:30	31	13	38	82	9	9	24	42	23	47	16	86	42	79	33	154	364
08:45	39	11	42	92	10	18	26	54	28	68	13	109	53	113	49	215	470
Total	140	42	169	351	26	48	96	170	128	245	53	426	181	374	188	743	1690
09:00	29	11	30	70	11	10	24	45	22	76	12	110	47	93	41	181	406
09:15	36	17	41	94	4	22	53	79	31	79	14	124	50	108	29	187	484
09:30	33	11	23	67	12	24	41	77	18	82	19	119	53	75	40	168	431
09:45	42	12	23	77	10	17	43	70	32	87	15	134	45	90	45	180	461
Total	140	51	117	308	37	73	161	271	103	324	60	487	195	366	155	716	1782
*** BLANK ***																	
11:00	33	11	34	78	19	30	54	103	32	84	22	138	75	82	42	199	518
11:15	45	9	23	77	12	28	69	109	36	100	23	159	46	78	46	170	515
11:30	53	20	36	109	13	16	74	103	45	109	36	190	53	90	51	194	596
11:45	56	16	40	112	13	24	65	102	28	109	22	159	65	97	47	209	582
Total	187	56	133	376	57	98	262	417	141	402	103	646	239	347	186	772	2211
12:00	45	15	26	86	21	32	83	136	47	118	40	205	75	118	60	253	680
12:15	40	9	30	79	13	20	89	122	45	105	26	176	62	92	61	215	592
12:30	46	15	54	115	14	25	84	123	36	97	20	153	69	113	55	237	628
12:45	21	12	57	90	17	33	67	117	29	77	16	122	98	134	61	293	622
Total	152	51	167	370	65	110	323	498	157	397	102	656	304	457	237	998	2522
13:00	48	15	50	113	12	25	84	121	36	110	20	166	86	136	57	279	679
13:15	49	18	36	103	16	15	71	102	33	108	23	164	81	100	62	243	612
13:30	50	22	37	109	12	29	55	96	32	110	23	165	81	129	50	260	630
13:45	46	15	34	95	21	25	64	110	46	93	30	169	73	136	58	267	641
Total	193	70	157	420	61	94	274	429	147	421	96	664	321	501	227	1049	2562
*** BLANK ***																	
15:00	45	14	40	99	15	29	86	130	50	126	15	191	77	120	80	277	697
15:15	45	19	56	120	18	37	82	137	27	104	18	149	67	103	82	252	658
15:30	63	17	59	139	10	33	70	113	47	100	23	170	56	109	73	238	660
15:45	63	14	57	134	12	27	80	119	58	109	22	189	59	101	51	211	653
Total	216	64	212	492	55	126	318	499	182	439	78	699	259	433	286	978	2668
16:00	59	29	53	141	10	24	76	110	54	133	27	214	63	105	75	243	708
16:15	40	11	40	91	19	38	81	138	28	85	23	136	67	106	57	230	595
16:30	61	21	56	138	14	23	82	119	67	131	34	232	69	109	72	250	739
16:45	54	10	50	114	18	27	77	122	52	138	35	225	77	108	73	258	719
Total	214	71	199	484	61	112	316	489	201	487	119	807	276	428	277	981	2761
17:00	71	13	33	117	20	34	78	132	61	161	10	232	51	121	97	269	750
17:15	62	12	41	115	21	29	80	130	52	136	9	197	57	109	71	237	679
17:30	47	15	43	105	6	37	49	92	45	136	12	193	46	129	67	242	632
17:45	50	14	33	97	7	28	37	72	32	108	5	145	35	97	67	199	513
Total	230	54	150	434	54	128	244	426	190	541	36	767	189	456	302	947	2574
Grand Total	1639	500	1446	3585	433	838	2098	3369	1373	3526	676	5575	2100	3693	2044	7837	20366
Apprch %	45.7	13.9	40.3		12.9	24.9	62.3		24.6	63.2	12.1		26.8	47.1	26.1		
Total %	8	2.5	7.1	17.6	2.1	4.1	10.3	16.5	6.7	17.3	3.3	27.4	10.3	18.1	10	38.5	

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 11) Munoz@Aztec
Site Code : 00000000
Start Date : 12/15/2009
Page No : 2

Groups Printed- Cars - Trucks

	Aztec Ave Eastbound				Aztec Ave Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Cars	1585	484	1390	3459	430	826	2083	3339	1337	3477	670	5484	2083	3631	1991	7705	19987
% Cars	96.7	96.8	96.1	96.5	99.3	98.6	99.3	99.1	97.4	98.6	99.1	98.4	99.2	98.3	97.4	98.3	98.1
Trucks	54	16	56	126	3	12	15	30	36	49	6	91	17	62	53	132	379
% Trucks	3.3	3.2	3.9	3.5	0.7	1.4	0.7	0.9	2.6	1.4	0.9	1.6	0.8	1.7	2.6	1.7	1.9

	Aztec Ave Eastbound				Aztec Ave Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	52	14	39	105	3	16	22	41	36	75	11	122	47	87	44	178	446
07:45	46	12	62	120	8	16	31	55	52	95	6	153	56	156	84	296	624
08:00	29	13	41	83	4	11	22	37	46	69	11	126	47	91	57	195	441
08:15	41	5	48	94	3	10	24	37	31	61	13	105	39	91	49	179	415
Total Volume	168	44	190	402	18	53	99	170	165	300	41	506	189	425	234	848	1926
% App. Total	41.8	10.9	47.3		10.6	31.2	58.2		32.6	59.3	8.1		22.3	50.1	27.6		
PHF	.808	.786	.766	.838	.563	.828	.798	.773	.793	.789	.788	.827	.844	.681	.696	.716	.772
Cars	161	43	171	375	18	52	99	169	162	296	41	499	187	420	228	835	1878
% Cars	95.8	97.7	90.0	93.3	100	98.1	100	99.4	98.2	98.7	100	98.6	98.9	98.8	97.4	98.5	97.5
Trucks	7	1	19	27	0	1	0	1	3	4	0	7	2	5	6	13	48
% Trucks	4.2	2.3	10.0	6.7	0	1.9	0	0.6	1.8	1.3	0	1.4	1.1	1.2	2.6	1.5	2.5
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 13:00																	
13:00	48	15	50	113	12	25	84	121	36	110	20	166	86	136	57	279	679
13:15	49	18	36	103	16	15	71	102	33	108	23	164	81	100	62	243	612
13:30	50	22	37	109	12	29	55	96	32	110	23	165	81	129	50	260	630
13:45	46	15	34	95	21	25	64	110	46	93	30	169	73	136	58	267	641
Total Volume	193	70	157	420	61	94	274	429	147	421	96	664	321	501	227	1049	2562
% App. Total	46	16.7	37.4		14.2	21.9	63.9		22.1	63.4	14.5		30.6	47.8	21.6		
PHF	.965	.795	.785	.929	.726	.810	.815	.886	.799	.957	.800	.982	.933	.921	.915	.940	.943
Cars	183	68	154	405	60	94	273	427	140	414	95	649	320	491	220	1031	2512
% Cars	94.8	97.1	98.1	96.4	98.4	100	99.6	99.5	95.2	98.3	99.0	97.7	99.7	98.0	96.9	98.3	98.0
Trucks	10	2	3	15	1	0	1	2	7	7	1	15	1	10	7	18	50
% Trucks	5.2	2.9	1.9	3.6	1.6	0	0.4	0.5	4.8	1.7	1.0	2.3	0.3	2.0	3.1	1.7	2.0
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	61	21	56	138	14	23	82	119	67	131	34	232	69	109	72	250	739
16:45	54	10	50	114	18	27	77	122	52	138	35	225	77	108	73	258	719
17:00	71	13	33	117	20	34	78	132	61	161	10	232	51	121	97	269	750
17:15	62	12	41	115	21	29	80	130	52	136	9	197	57	109	71	237	679
Total Volume	248	56	180	484	73	113	317	503	232	566	88	886	254	447	313	1014	2887
% App. Total	51.2	11.6	37.2		14.5	22.5	63		26.2	63.9	9.9		25	44.1	30.9		
PHF	.873	.667	.804	.877	.869	.831	.966	.953	.866	.879	.629	.955	.825	.924	.807	.942	.962
Cars	245	55	179	479	73	112	316	501	231	563	88	882	250	444	305	999	2861
% Cars	98.8	98.2	99.4	99.0	100	99.1	99.7	99.6	99.6	99.5	100	99.5	98.4	99.3	97.4	98.5	99.1
Trucks	3	1	1	5	0	1	1	2	1	3	0	4	4	3	8	15	26
% Trucks	1.2	1.8	0.6	1.0	0	0.9	0.3	0.4	0.4	0.5	0	0.5	1.6	0.7	2.6	1.5	0.9

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 12) Munoz@I-40 South Ramps
Site Code :
Start Date : 12/15/2009

Groups Printed- Car - Truck

	EB I-40 Off Ramp Eastbound				Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	13	0	0	13	0	0	0	0	0	38	9	47	0	42	18	60	120
07:15	9	0	4	13	0	0	0	0	0	63	2	65	0	66	33	99	177
07:30	23	0	9	32	0	0	0	0	0	88	14	102	0	129	51	180	314
07:45	17	0	9	26	0	0	0	0	0	91	15	106	0	144	63	207	339
Total	62	0	22	84	0	0	0	0	0	280	40	320	0	381	165	546	950
08:00	19	0	10	29	0	0	0	0	0	113	13	126	0	146	42	188	343
08:15	16	0	6	22	0	0	0	0	0	86	5	91	0	92	31	123	236
08:30	18	0	7	25	0	0	0	0	0	102	13	115	0	113	30	143	283
08:45	35	0	6	41	0	0	0	0	0	114	8	122	0	157	45	202	365
Total	88	0	29	117	0	0	0	0	0	415	39	454	0	508	148	656	1227
09:00	28	0	6	34	0	0	0	0	0	120	12	132	0	170	35	205	371
09:15	28	0	5	33	0	0	0	0	0	123	18	141	0	159	58	217	391
09:30	39	0	6	45	0	0	0	0	0	126	15	141	0	192	54	246	432
09:45	34	0	12	46	0	0	0	0	0	164	21	185	0	226	73	299	530
Total	129	0	29	158	0	0	0	0	0	533	66	599	0	747	220	967	1724
*** BLANK ***																	
11:00	19	0	4	23	0	0	0	0	0	147	7	154	0	177	50	227	404
11:15	21	0	7	28	0	0	0	0	0	184	5	189	0	165	52	217	434
11:30	26	0	3	29	0	0	0	0	0	210	12	222	0	177	65	242	493
11:45	31	0	5	36	0	0	0	0	0	179	17	196	0	197	60	257	489
Total	97	0	19	116	0	0	0	0	0	720	41	761	0	716	227	943	1820
12:00	29	0	7	36	0	0	0	0	0	239	5	244	0	205	67	272	552
12:15	32	0	7	39	0	0	0	0	0	207	16	223	0	223	47	270	532
12:30	29	0	5	34	0	0	0	0	0	227	15	242	0	252	68	320	596
12:45	25	0	6	31	0	0	0	0	0	172	16	188	0	265	74	339	558
Total	115	0	25	140	0	0	0	0	0	845	52	897	0	945	256	1201	2238
13:00	24	0	8	32	0	0	0	0	0	193	17	210	0	269	63	332	574
13:15	23	0	3	26	0	0	0	0	0	236	9	245	0	256	41	297	568
13:30	37	0	4	41	0	0	0	0	0	230	5	235	0	253	64	317	593
13:45	24	0	8	32	0	0	0	0	0	211	5	216	0	215	80	295	543
Total	108	0	23	131	0	0	0	0	0	870	36	906	0	993	248	1241	2278
*** BLANK ***																	
15:00	23	0	7	30	0	0	0	0	0	221	13	234	0	217	66	283	547
15:15	25	0	11	36	0	0	0	0	0	225	21	246	0	213	94	307	589
15:30	39	0	3	42	0	0	0	0	0	217	10	227	0	184	80	264	533
15:45	58	0	8	66	0	0	0	0	0	224	21	245	0	197	63	260	571
Total	145	0	29	174	0	0	0	0	0	887	65	952	0	811	303	1114	2240
16:00	41	0	9	50	0	0	0	0	0	246	11	257	0	198	65	263	570
16:15	25	0	4	29	0	0	0	0	0	251	19	270	0	209	70	279	578
16:30	27	0	7	34	0	0	0	0	0	247	24	271	0	233	103	336	641
16:45	33	0	8	41	0	0	0	0	0	258	13	271	0	237	80	317	629
Total	126	0	28	154	0	0	0	0	0	1002	67	1069	0	877	318	1195	2418
17:00	23	0	2	25	0	0	0	0	0	307	10	317	0	239	88	327	669
17:15	35	0	4	39	0	0	0	0	0	253	10	263	0	200	111	311	613
17:30	35	0	2	37	0	0	0	0	0	223	5	228	0	206	85	291	556
17:45	31	0	2	33	0	0	0	0	0	207	32	239	0	239	99	338	610
Total	124	0	10	134	0	0	0	0	0	990	57	1047	0	884	383	1267	2448

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 12) Munoz@I-40 South Ramps
Site Code :
Start Date : 12/15/2009

Groups Printed- Car - Truck

	EB I-40 Off Ramp Eastbound				Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Grand Total	994	0	214	1208	0	0	0	0	0	6542	463	7005	0	6862	2268	9130	17343
Apprch %	82.3	0	17.7		0	0	0		0	93.4	6.6		0	75.2	24.8		
Total %	5.7	0	1.2	7	0	0	0	0	0	37.7	2.7	40.4	0	39.6	13.1	52.6	
Car	889	0	209	1098	0	0	0	0	0	6451	415	6866	0	6756	2081	8837	16801
% Car	89.4	0	97.7	90.9	0	0	0	0	0	98.6	89.6	98	0	98.5	91.8	96.8	96.9
Truck	105	0	5	110	0	0	0	0	0	91	48	139	0	106	187	293	542
% Truck	10.6	0	2.3	9.1	0	0	0	0	0	1.4	10.4	2	0	1.5	8.2	3.2	3.1

	EB I-40 Off Ramp Eastbound				Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 09:00																	
09:00	28	0	6	34	0	0	0	0	0	120	12	132	0	170	35	205	371
09:15	28	0	5	33	0	0	0	0	0	123	18	141	0	159	58	217	391
09:30	39	0	6	45	0	0	0	0	0	126	15	141	0	192	54	246	432
09:45	34	0	12	46	0	0	0	0	0	164	21	185	0	226	73	299	530
Total Volume	129	0	29	158	0	0	0	0	0	533	66	599	0	747	220	967	1724
% App. Total	81.6	0	18.4		0	0	0		0	89	11		0	77.2	22.8		
PHF	.827	.000	.604	.859	.000	.000	.000	.000	.000	.813	.786	.809	.000	.826	.753	.809	.813
Car	115	0	28	143	0	0	0	0	0	515	59	574	0	735	209	944	1661
% Car	89.1	0	96.6	90.5	0	0	0	0	0	96.6	89.4	95.8	0	98.4	95.0	97.6	96.3
Truck	14	0	1	15	0	0	0	0	0	18	7	25	0	12	11	23	63
% Truck	10.9	0	3.4	9.5	0	0	0	0	0	3.4	10.6	4.2	0	1.6	5.0	2.4	3.7
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30																	
12:30	29	0	5	34	0	0	0	0	0	227	15	242	0	252	68	320	596
12:45	25	0	6	31	0	0	0	0	0	172	16	188	0	265	74	339	558
13:00	24	0	8	32	0	0	0	0	0	193	17	210	0	269	63	332	574
13:15	23	0	3	26	0	0	0	0	0	236	9	245	0	256	41	297	568
Total Volume	101	0	22	123	0	0	0	0	0	828	57	885	0	1042	246	1288	2296
% App. Total	82.1	0	17.9		0	0	0		0	93.6	6.4		0	80.9	19.1		
PHF	.871	.000	.688	.904	.000	.000	.000	.000	.000	.877	.838	.903	.000	.968	.831	.950	.963
Car	90	0	22	112	0	0	0	0	0	816	47	863	0	1031	227	1258	2233
% Car	89.1	0	100	91.1	0	0	0	0	0	98.6	82.5	97.5	0	98.9	92.3	97.7	97.3
Truck	11	0	0	11	0	0	0	0	0	12	10	22	0	11	19	30	63
% Truck	10.9	0	0	8.9	0	0	0	0	0	1.4	17.5	2.5	0	1.1	7.7	2.3	2.7
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	27	0	7	34	0	0	0	0	0	247	24	271	0	233	103	336	641
16:45	33	0	8	41	0	0	0	0	0	258	13	271	0	237	80	317	629
17:00	23	0	2	25	0	0	0	0	0	307	10	317	0	239	88	327	669
17:15	35	0	4	39	0	0	0	0	0	253	10	263	0	200	111	311	613
Total Volume	118	0	21	139	0	0	0	0	0	1065	57	1122	0	909	382	1291	2552
% App. Total	84.9	0	15.1		0	0	0		0	94.9	5.1		0	70.4	29.6		
PHF	.843	.000	.656	.848	.000	.000	.000	.000	.000	.867	.594	.885	.000	.951	.860	.961	.954
Car	104	0	21	125	0	0	0	0	0	1054	49	1103	0	896	360	1256	2484
% Car	88.1	0	100	89.9	0	0	0	0	0	99.0	86.0	98.3	0	98.6	94.2	97.3	97.3
Truck	14	0	0	14	0	0	0	0	0	11	8	19	0	13	22	35	68
% Truck	11.9	0	0	10.1	0	0	0	0	0	1.0	14.0	1.7	0	1.4	5.8	2.7	2.7

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 13) Munoz@I-40 North Ramps
Site Code :
Start Date : 12/15/2009
Page No : 1

Groups Printed- Car - Truck

	Eastbound				WB I-40 Off Ramp Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	0	0	0	0	5	0	48	53	0	42	0	42	0	55	8	63	158
07:15	0	0	0	0	5	0	59	64	3	69	0	72	0	94	29	123	259
07:30	0	0	0	0	11	0	56	67	1	97	0	98	0	169	36	205	370
07:45	0	0	0	0	15	0	54	69	1	92	0	93	0	192	49	241	403
Total	0	0	0	0	36	0	217	253	5	300	0	305	0	510	122	632	1190
08:00	0	0	0	0	13	0	49	62	5	116	0	121	0	175	55	230	413
08:15	0	0	0	0	8	0	59	67	3	99	0	102	0	115	32	147	316
08:30	0	0	0	0	12	0	55	67	3	109	0	112	0	131	22	153	332
08:45	0	0	0	0	14	0	61	75	6	137	0	143	0	188	9	197	415
Total	0	0	0	0	47	0	224	271	17	461	0	478	0	609	118	727	1476
09:00	0	0	0	0	7	0	46	53	4	132	0	136	0	198	25	223	412
09:15	0	0	0	0	8	0	66	74	1	132	0	133	0	209	26	235	442
09:30	0	0	0	0	13	0	52	65	6	151	0	157	0	233	13	246	468
09:45	0	0	0	0	20	0	70	90	8	174	0	182	0	279	21	300	572
Total	0	0	0	0	48	0	234	282	19	589	0	608	0	919	85	1004	1894
*** BLANK ***																	
11:00	0	0	0	0	11	0	70	81	0	164	0	164	0	216	32	248	493
11:15	0	0	0	0	13	0	76	89	6	201	0	207	0	204	43	247	543
11:30	0	0	0	0	13	1	72	86	5	219	0	224	0	229	21	250	560
11:45	0	0	0	0	9	0	72	81	4	189	0	193	0	248	28	276	550
Total	0	0	0	0	46	1	290	337	15	773	0	788	0	897	124	1021	2146
12:00	0	0	0	0	11	0	80	91	3	261	0	264	0	261	26	287	642
12:15	0	0	0	0	10	0	102	112	4	219	0	223	0	260	28	288	623
12:30	0	0	0	0	13	0	54	67	4	237	0	241	0	307	44	351	659
12:45	0	0	0	0	10	0	70	80	4	177	0	181	0	329	40	369	630
Total	0	0	0	0	44	0	306	350	15	894	0	909	0	1157	138	1295	2554
13:00	0	0	0	0	17	0	68	85	3	197	0	200	0	315	35	350	635
13:15	0	0	0	0	9	0	65	74	6	252	0	258	0	288	24	312	644
13:30	0	0	0	0	6	0	73	79	3	262	0	265	0	311	33	344	688
13:45	0	0	0	0	8	0	55	63	4	229	0	233	0	287	33	320	616
Total	0	0	0	0	40	0	261	301	16	940	0	956	0	1201	125	1326	2583
*** BLANK ***																	
15:00	0	0	0	0	10	0	80	90	3	231	0	234	0	273	37	310	634
15:15	0	0	0	0	16	0	81	97	6	212	0	218	0	291	50	341	656
15:30	0	0	0	0	11	0	92	103	4	251	0	255	0	253	54	307	665
15:45	0	0	0	0	22	0	68	90	3	257	0	260	0	238	29	267	617
Total	0	0	0	0	59	0	321	380	16	951	0	967	0	1055	170	1225	2572
16:00	0	0	0	0	8	1	81	90	4	279	0	283	0	255	29	284	657
16:15	0	0	0	0	5	0	98	103	6	253	0	259	0	274	32	306	668
16:30	0	0	0	0	24	0	68	92	3	247	0	250	0	312	25	337	679
16:45	0	0	0	0	15	0	104	119	8	280	0	288	0	302	35	337	744
Total	0	0	0	0	52	1	351	404	21	1059	0	1080	0	1143	121	1264	2748
17:00	0	0	0	0	19	0	111	130	4	308	0	312	0	308	31	339	781
17:15	0	0	0	0	9	2	97	108	4	304	0	308	0	302	39	341	757
17:30	0	0	0	0	7	0	91	98	4	249	0	253	0	284	38	322	673
17:45	0	0	0	0	24	0	113	137	1	205	0	206	0	314	38	352	695
Total	0	0	0	0	59	2	412	473	13	1066	0	1079	0	1208	146	1354	2906

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 13) Munoz@I-40 North Ramps
Site Code :
Start Date : 12/15/2009
Page No : 2

Groups Printed- Car - Truck

	Eastbound				WB I-40 Off Ramp Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Grand Total	0	0	0	0	431	4	2616	3051	137	7033	0	7170	0	8699	1149	9848	20069
Apprch %	0	0	0		14.1	0.1	85.7		1.9	98.1	0		0	88.3	11.7		
Total %	0	0	0	0	2.1	0	13	15.2	0.7	35	0	35.7	0	43.3	5.7	49.1	
Car	0	0	0	0	402	4	2426	2832	126	6873	0	6999	0	8435	1149	9584	19415
% Car	0	0	0	0	93.3	100	92.7	92.8	92	97.7	0	97.6	0	97	100	97.3	96.7
Truck	0	0	0	0	29	0	190	219	11	160	0	171	0	264	0	264	654
% Truck	0	0	0	0	6.7	0	7.3	7.2	8	2.3	0	2.4	0	3	0	2.7	3.3

	Eastbound				WB I-40 Off Ramp Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 09:00																	
09:00	0	0	0	0	7	0	46	53	4	132	0	136	0	198	25	223	412
09:15	0	0	0	0	8	0	66	74	1	132	0	133	0	209	26	235	442
09:30	0	0	0	0	13	0	52	65	6	151	0	157	0	233	13	246	468
09:45	0	0	0	0	20	0	70	90	8	174	0	182	0	279	21	300	572
Total Volume	0	0	0	0	48	0	234	282	19	589	0	608	0	919	85	1004	1894
% App. Total	0	0	0		17	0	83		3.1	96.9	0		0	91.5	8.5		
PHF	.000	.000	.000	.000	.600	.000	.836	.783	.594	.846	.000	.835	.000	.823	.817	.837	.828
Car	0	0	0	0	46	0	215	261	15	568	0	583	0	898	85	983	1827
% Car	0	0	0	0	95.8	0	91.9	92.6	78.9	96.4	0	95.9	0	97.7	100	97.9	96.5
Truck	0	0	0	0	2	0	19	21	4	21	0	25	0	21	0	21	67
% Truck	0	0	0	0	4.2	0	8.1	7.4	21.1	3.6	0	4.1	0	2.3	0	2.1	3.5
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:45																	
12:45	0	0	0	0	10	0	70	80	4	177	0	181	0	329	40	369	630
13:00	0	0	0	0	17	0	68	85	3	197	0	200	0	315	35	350	635
13:15	0	0	0	0	9	0	65	74	6	252	0	258	0	288	24	312	644
13:30	0	0	0	0	6	0	73	79	3	262	0	265	0	311	33	344	688
Total Volume	0	0	0	0	42	0	276	318	16	888	0	904	0	1243	132	1375	2597
% App. Total	0	0	0		13.2	0	86.8		1.8	98.2	0		0	90.4	9.6		
PHF	.000	.000	.000	.000	.618	.000	.945	.935	.667	.847	.000	.853	.000	.945	.825	.932	.944
Car	0	0	0	0	37	0	259	296	15	877	0	892	0	1215	132	1347	2535
% Car	0	0	0	0	88.1	0	93.8	93.1	93.8	98.8	0	98.7	0	97.7	100	98.0	97.6
Truck	0	0	0	0	5	0	17	22	1	11	0	12	0	28	0	28	62
% Truck	0	0	0	0	11.9	0	6.2	6.9	6.3	1.2	0	1.3	0	2.3	0	2.0	2.4
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	0	0	0	0	24	0	68	92	3	247	0	250	0	312	25	337	679
16:45	0	0	0	0	15	0	104	119	8	280	0	288	0	302	35	337	744
17:00	0	0	0	0	19	0	111	130	4	308	0	312	0	308	31	339	781
17:15	0	0	0	0	9	2	97	108	4	304	0	308	0	302	39	341	757
Total Volume	0	0	0	0	67	2	380	449	19	1139	0	1158	0	1224	130	1354	2961
% App. Total	0	0	0		14.9	0.4	84.6		1.6	98.4	0		0	90.4	9.6		
PHF	.000	.000	.000	.000	.698	.250	.856	.863	.594	.925	.000	.928	.000	.981	.833	.993	.948
Car	0	0	0	0	65	2	361	428	16	1124	0	1140	0	1191	130	1321	2889
% Car	0	0	0	0	97.0	100	95.0	95.3	84.2	98.7	0	98.4	0	97.3	100	97.6	97.6
Truck	0	0	0	0	2	0	19	21	3	15	0	18	0	33	0	33	72
% Truck	0	0	0	0	3.0	0	5.0	4.7	15.8	1.3	0	1.6	0	2.7	0	2.4	2.4

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 14) Munoz@Maloney
Site Code :
Start Date : 12/10/2009
Page No : 1

Groups Printed- Car - Truck

	Maloney Ave Eastbound				Maloney Ave Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	9	7	16	32	3	7	8	18	22	109	6	137	3	78	6	87	274
07:15	13	9	27	49	12	13	3	28	25	120	30	175	16	138	1	155	407
07:30	9	15	23	47	23	15	6	44	29	148	32	209	14	212	9	235	535
07:45	3	11	31	45	39	20	16	75	39	162	39	240	22	265	8	295	655
Total	34	42	97	173	77	55	33	165	115	539	107	761	55	693	24	772	1871
08:00	12	8	23	43	25	11	7	43	53	131	24	208	15	223	5	243	537
08:15	5	16	30	51	33	11	6	50	32	162	16	210	12	157	8	177	488
08:30	5	14	31	50	13	16	15	44	40	136	13	189	11	172	7	190	473
08:45	7	8	28	43	11	19	17	47	47	146	18	211	16	184	14	214	515
Total	29	46	112	187	82	57	45	184	172	575	71	818	54	736	34	824	2013
09:00	9	16	41	66	14	25	25	64	56	148	12	216	21	220	7	248	594
09:15	7	7	44	58	9	17	15	41	55	134	19	208	15	180	6	201	508
09:30	10	15	23	48	20	26	20	66	65	141	11	217	17	162	11	190	521
09:45	12	19	35	66	20	22	21	63	82	153	15	250	25	172	18	215	594
Total	38	57	143	238	63	90	81	234	258	576	57	891	78	734	42	854	2217
*** BLANK ***																	
11:00	23	35	67	125	22	24	24	70	90	167	22	279	34	157	19	210	684
11:15	22	28	60	110	21	49	34	104	78	175	21	274	35	164	19	218	706
11:30	10	19	47	76	26	33	28	87	92	174	28	294	41	193	13	247	704
11:45	23	30	74	127	19	45	38	102	108	205	14	327	40	212	10	262	818
Total	78	112	248	438	88	151	124	363	368	721	85	1174	150	726	61	937	2912
12:00	20	32	79	131	31	46	37	114	111	213	18	342	30	236	27	293	880
12:15	19	36	72	127	42	42	28	112	115	188	13	316	31	187	15	233	788
12:30	17	35	76	128	25	40	22	87	89	194	23	306	27	222	21	270	791
12:45	18	36	84	138	37	53	29	119	108	187	17	312	32	260	20	312	881
Total	74	139	311	524	135	181	116	432	423	782	71	1276	120	905	83	1108	3340
13:00	20	38	75	133	28	45	26	99	84	206	21	311	25	224	17	266	809
13:15	23	26	85	134	21	49	31	101	106	207	18	331	42	231	13	286	852
13:30	17	46	76	139	32	44	21	97	91	175	18	284	33	212	13	258	778
13:45	28	32	58	118	20	29	27	76	97	210	23	330	38	231	16	285	809
Total	88	142	294	524	101	167	105	373	378	798	80	1256	138	898	59	1095	3248
*** BLANK ***																	
15:00	19	28	70	117	29	59	23	111	116	198	28	342	36	220	14	270	840
15:15	24	24	71	119	37	41	28	106	100	243	27	370	37	230	19	286	881
15:30	27	30	64	121	29	36	24	89	118	231	28	377	40	240	20	300	887
15:45	27	36	90	153	29	34	31	94	112	210	25	347	29	215	16	260	854
Total	97	118	295	510	124	170	106	400	446	882	108	1436	142	905	69	1116	3462
16:00	31	29	78	138	28	60	52	140	130	256	35	421	29	225	19	273	972
16:15	22	37	76	135	21	53	38	112	111	215	26	352	28	241	15	284	883
16:30	23	38	91	152	27	44	37	108	104	262	40	406	33	260	18	311	977
16:45	20	33	78	131	23	53	49	125	146	250	34	430	39	288	9	336	1022
Total	96	137	323	556	99	210	176	485	491	983	135	1609	129	1014	61	1204	3854
17:00	24	39	93	156	44	69	46	159	118	270	28	416	41	240	14	295	1026
17:15	27	38	75	140	30	50	39	119	130	297	22	449	36	291	19	346	1054
17:30	23	38	79	140	36	53	40	129	114	219	12	345	44	262	15	321	935
17:45	23	26	82	131	26	49	25	100	104	201	30	335	34	285	18	337	903
Total	97	141	329	567	136	221	150	507	466	987	92	1545	155	1078	66	1299	3918

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 14) Munoz@Maloney
Site Code :
Start Date : 12/10/2009
Page No : 2

Groups Printed- Car - Truck

	Maloney Ave Eastbound				Maloney Ave Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Grand Total	631	934	2152	3717	905	1302	936	3143	3117	6843	806	10766	1021	7689	499	9209	26835
Apprch %	17	25.1	57.9		28.8	41.4	29.8		29	63.6	7.5		11.1	83.5	5.4		
Total %	2.4	3.5	8	13.9	3.4	4.9	3.5	11.7	11.6	25.5	3	40.1	3.8	28.7	1.9	34.3	
Car	623	918	2110	3651	879	1290	923	3092	3039	6570	793	10402	1015	7361	488	8864	26009
% Car	98.7	98.3	98	98.2	97.1	99.1	98.6	98.4	97.5	96	98.4	96.6	99.4	95.7	97.8	96.3	96.9
Truck	8	16	42	66	26	12	13	51	78	273	13	364	6	328	11	345	826
% Truck	1.3	1.7	2	1.8	2.9	0.9	1.4	1.6	2.5	4	1.6	3.4	0.6	4.3	2.2	3.7	3.1

	Maloney Ave Eastbound				Maloney Ave Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 09:00																	
09:00	9	16	41	66	14	25	25	64	56	148	12	216	21	220	7	248	594
09:15	7	7	44	58	9	17	15	41	55	134	19	208	15	180	6	201	508
09:30	10	15	23	48	20	26	20	66	65	141	11	217	17	162	11	190	521
09:45	12	19	35	66	20	22	21	63	82	153	15	250	25	172	18	215	594
Total Volume	38	57	143	238	63	90	81	234	258	576	57	891	78	734	42	854	2217
% App. Total	16	23.9	60.1		26.9	38.5	34.6		29	64.6	6.4		9.1	85.9	4.9		
PHF	.792	.750	.813	.902	.788	.865	.810	.886	.787	.941	.750	.891	.780	.834	.583	.861	.933
Car	36	56	140	232	63	90	77	230	249	536	56	841	78	713	42	833	2136
% Car	94.7	98.2	97.9	97.5	100	100	95.1	98.3	96.5	93.1	98.2	94.4	100	97.1	100	97.5	96.3
Truck	2	1	3	6	0	0	4	4	9	40	1	50	0	21	0	21	81
% Truck	5.3	1.8	2.1	2.5	0	0	4.9	1.7	3.5	6.9	1.8	5.6	0	2.9	0	2.5	3.7
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00																	
12:00	20	32	79	131	31	46	37	114	111	213	18	342	30	236	27	293	880
12:15	19	36	72	127	42	42	28	112	115	188	13	316	31	187	15	233	788
12:30	17	35	76	128	25	40	22	87	89	194	23	306	27	222	21	270	791
12:45	18	36	84	138	37	53	29	119	108	187	17	312	32	260	20	312	881
Total Volume	74	139	311	524	135	181	116	432	423	782	71	1276	120	905	83	1108	3340
% App. Total	14.1	26.5	59.4		31.2	41.9	26.9		33.2	61.3	5.6		10.8	81.7	7.5		
PHF	.925	.965	.926	.949	.804	.854	.784	.908	.920	.918	.772	.933	.938	.870	.769	.888	.948
Car	74	138	303	515	130	179	114	423	413	751	69	1233	120	869	82	1071	3242
% Car	100	99.3	97.4	98.3	96.3	98.9	98.3	97.9	97.6	96.0	97.2	96.6	100	96.0	98.8	96.7	97.1
Truck	0	1	8	9	5	2	2	9	10	31	2	43	0	36	1	37	98
% Truck	0	0.7	2.6	1.7	3.7	1.1	1.7	2.1	2.4	4.0	2.8	3.4	0	4.0	1.2	3.3	2.9
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	23	38	91	152	27	44	37	108	104	262	40	406	33	260	18	311	977
16:45	20	33	78	131	23	53	49	125	146	250	34	430	39	288	9	336	1022
17:00	24	39	93	156	44	69	46	159	118	270	28	416	41	240	14	295	1026
17:15	27	38	75	140	30	50	39	119	130	297	22	449	36	291	19	346	1054
Total Volume	94	148	337	579	124	216	171	511	498	1079	124	1701	149	1079	60	1288	4079
% App. Total	16.2	25.6	58.2		24.3	42.3	33.5		29.3	63.4	7.3		11.6	83.8	4.7		
PHF	.870	.949	.906	.928	.705	.783	.872	.803	.853	.908	.775	.947	.909	.927	.789	.931	.968
Car	93	147	332	572	121	215	171	507	486	1044	123	1653	149	1041	57	1247	3979
% Car	98.9	99.3	98.5	98.8	97.6	99.5	100	99.2	97.6	96.8	99.2	97.2	100	96.5	95.0	96.8	97.5
Truck	1	1	5	7	3	1	0	4	12	35	1	48	0	38	3	41	100
% Truck	1.1	0.7	1.5	1.2	2.4	0.5	0	0.8	2.4	3.2	0.8	2.8	0	3.5	5.0	3.2	2.5

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 15) Munoz@Metro
Site Code :
Start Date : 12/16/2009

Groups Printed- Car - Truck

	Metro Ave Eastbound				Parkng Lot Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	4	1	3	8	9	1	3	13	4	108	11	123	11	97	1	109	253
07:15	2	1	3	6	16	3	3	22	0	107	16	123	7	145	1	153	304
07:30	2	2	3	7	20	2	5	27	1	162	12	175	11	236	5	252	461
07:45	3	2	6	11	33	4	5	42	7	142	20	169	12	279	2	293	515
Total	11	6	15	32	78	10	16	104	12	519	59	590	41	757	9	807	1533
08:00	8	2	3	13	21	5	8	34	4	128	16	148	5	215	5	225	420
08:15	11	3	2	16	16	2	9	27	15	110	16	141	4	160	7	171	355
08:30	7	1	6	14	20	2	5	27	1	128	11	140	10	163	7	180	361
08:45	6	4	10	20	19	6	14	39	11	100	16	127	8	185	9	202	388
Total	32	10	21	63	76	15	36	127	31	466	59	556	27	723	28	778	1524
09:00	12	6	9	27	22	5	5	32	10	111	15	136	12	170	5	187	382
09:15	4	10	5	19	14	6	8	28	15	109	21	145	17	156	3	176	368
09:30	7	4	13	24	26	8	13	47	13	107	25	145	8	174	11	193	409
09:45	13	10	14	37	25	10	8	43	13	99	15	127	10	172	11	193	400
Total	36	30	41	107	87	29	34	150	51	426	76	553	47	672	30	749	1559
*** BLANK ***																	
11:00	18	14	17	49	37	14	10	61	26	105	17	148	15	179	11	205	463
11:15	19	14	23	56	33	10	7	50	21	100	24	145	13	157	13	183	434
11:30	31	20	14	65	39	22	8	69	17	110	21	148	11	224	19	254	536
11:45	5	9	13	27	44	17	10	71	15	117	34	166	16	225	20	261	525
Total	73	57	67	197	153	63	35	251	79	432	96	607	55	785	63	903	1958
12:00	19	21	32	72	31	8	9	48	25	155	42	222	19	190	19	228	570
12:15	32	13	26	71	40	12	11	63	27	146	30	203	11	194	16	221	558
12:30	27	22	17	66	42	20	8	70	23	124	30	177	17	194	11	222	535
12:45	30	18	27	75	44	22	9	75	23	129	39	191	23	209	27	259	600
Total	108	74	102	284	157	62	37	256	98	554	141	793	70	787	73	930	2263
13:00	27	21	24	72	43	13	12	68	25	149	25	199	26	187	24	237	576
13:15	25	20	38	83	51	16	9	76	28	146	26	200	12	156	20	188	547
13:30	23	25	24	72	27	23	15	65	39	161	35	235	23	189	13	225	597
13:45	32	23	31	86	45	14	10	69	32	158	28	218	12	173	15	200	573
Total	107	89	117	313	166	66	46	278	124	614	114	852	73	705	72	850	2293
*** BLANK ***																	
15:00	35	21	32	88	36	18	6	60	28	170	30	228	13	176	19	208	584
15:15	26	19	15	60	37	17	5	59	24	183	37	244	9	219	19	247	610
15:30	35	27	26	88	50	15	11	76	30	146	42	218	13	214	20	247	629
15:45	26	19	25	70	44	14	16	74	33	218	25	276	15	226	21	262	682
Total	122	86	98	306	167	64	38	269	115	717	134	966	50	835	79	964	2505
16:00	39	29	29	97	47	18	10	75	32	176	39	247	9	200	12	221	640
16:15	32	24	30	86	37	21	14	72	26	173	31	230	16	200	17	233	621
16:30	29	23	24	76	42	21	18	81	36	200	40	276	10	238	21	269	702
16:45	53	24	33	110	48	21	19	88	28	192	40	260	19	213	24	256	714
Total	153	100	116	369	174	81	61	316	122	741	150	1013	54	851	74	979	2677
17:00	36	22	30	88	39	19	7	65	24	220	53	297	17	246	14	277	727
17:15	44	22	22	88	47	26	20	93	37	202	43	282	18	228	15	261	724
17:30	35	24	24	83	49	24	10	83	20	196	35	251	22	218	20	260	677
17:45	31	15	27	73	67	22	17	106	35	189	31	255	27	236	21	284	718
Total	146	83	103	332	202	91	54	347	116	807	162	1085	84	928	70	1082	2846

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 15) Munoz@Metro
Site Code :
Start Date : 12/16/2009

Groups Printed- Car - Truck

	Metro Ave Eastbound				Parkng Lot Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Grand Total	788	535	680	2003	1260	481	357	2098	748	5276	991	7015	501	7043	498	8042	19158
Apprch %	39.3	26.7	33.9		60.1	22.9	17		10.7	75.2	14.1		6.2	87.6	6.2		
Total %	4.1	2.8	3.5	10.5	6.6	2.5	1.9	11	3.9	27.5	5.2	36.6	2.6	36.8	2.6	42	
Car	780	532	668	1980	1254	479	355	2088	742	5013	983	6738	496	6732	489	7717	18523
% Car	99	99.4	98.2	98.9	99.5	99.6	99.4	99.5	99.2	95	99.2	96.1	99	95.6	98.2	96	96.7
Truck	8	3	12	23	6	2	2	10	6	263	8	277	5	311	9	325	635
% Truck	1	0.6	1.8	1.1	0.5	0.4	0.6	0.5	0.8	5	0.8	3.9	1	4.4	1.8	4	3.3

	Metro Ave Eastbound				Parkng Lot Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	2	2	3	7	20	2	5	27	1	162	12	175	11	236	5	252	461
07:45	3	2	6	11	33	4	5	42	7	142	20	169	12	279	2	293	515
08:00	8	2	3	13	21	5	8	34	4	128	16	148	5	215	5	225	420
08:15	11	3	2	16	16	2	9	27	15	110	16	141	4	160	7	171	355
Total Volume	24	9	14	47	90	13	27	130	27	542	64	633	32	890	19	941	1751
% App. Total	51.1	19.1	29.8		69.2	10	20.8		4.3	85.6	10.1		3.4	94.6	2		
PHF	.545	.750	.583	.734	.682	.650	.750	.774	.450	.836	.800	.904	.667	.797	.679	.803	.850
Car	24	9	14	47	89	13	27	129	25	506	64	595	31	857	17	905	1676
% Car	100	100	100	100	98.9	100	100	99.2	92.6	93.4	100	94.0	96.9	96.3	89.5	96.2	95.7
Truck	0	0	0	0	1	0	0	1	2	36	0	38	1	33	2	36	75
% Truck	0	0	0	0	1.1	0	0	0.8	7.4	6.6	0	6.0	3.1	3.7	10.5	3.8	4.3
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:45																	
12:45	30	18	27	75	44	22	9	75	23	129	39	191	23	209	27	259	600
13:00	27	21	24	72	43	13	12	68	25	149	25	199	26	187	24	237	576
13:15	25	20	38	83	51	16	9	76	28	146	26	200	12	156	20	188	547
13:30	23	25	24	72	27	23	15	65	39	161	35	235	23	189	13	225	597
Total Volume	105	84	113	302	165	74	45	284	115	585	125	825	84	741	84	909	2320
% App. Total	34.8	27.8	37.4		58.1	26.1	15.8		13.9	70.9	15.2		9.2	81.5	9.2		
PHF	.875	.840	.743	.910	.809	.804	.750	.934	.737	.908	.801	.878	.808	.886	.778	.877	.967
Car	102	84	110	296	165	73	44	282	114	555	124	793	83	709	83	875	2246
% Car	97.1	100	97.3	98.0	100	98.6	97.8	99.3	99.1	94.9	99.2	96.1	98.8	95.7	98.8	96.3	96.8
Truck	3	0	3	6	0	1	1	2	1	30	1	32	1	32	1	34	74
% Truck	2.9	0	2.7	2.0	0	1.4	2.2	0.7	0.9	5.1	0.8	3.9	1.2	4.3	1.2	3.7	3.2
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	29	23	24	76	42	21	18	81	36	200	40	276	10	238	21	269	702
16:45	53	24	33	110	48	21	19	88	28	192	40	260	19	213	24	256	714
17:00	36	22	30	88	39	19	7	65	24	220	53	297	17	246	14	277	727
17:15	44	22	22	88	47	26	20	93	37	202	43	282	18	228	15	261	724
Total Volume	162	91	109	362	176	87	64	327	125	814	176	1115	64	925	74	1063	2867
% App. Total	44.8	25.1	30.1		53.8	26.6	19.6		11.2	73	15.8		6	87	7		
PHF	.764	.948	.826	.823	.917	.837	.800	.879	.845	.925	.830	.939	.842	.940	.771	.959	.986
Car	161	91	108	360	176	87	64	327	123	784	175	1082	64	884	73	1021	2790
% Car	99.4	100	99.1	99.4	100	100	100	100	98.4	96.3	99.4	97.0	100	95.6	98.6	96.0	97.3
Truck	1	0	1	2	0	0	0	0	2	30	1	33	0	41	1	42	77
% Truck	0.6	0	0.9	0.6	0	0	0	0	1.6	3.7	0.6	3.0	0	4.4	1.4	4.0	2.7

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 16) Munoz@Jefferson
Site Code :
Start Date : 12/17/2009
Page No : 1

Groups Printed- Car - Truck

	Jefferson Ave Eastbound				Jefferson Ave Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	9	2	1	12	2	0	9	11	3	90	1	94	4	94	8	106	223
07:15	9	2	1	12	2	0	14	16	1	101	0	102	7	159	12	178	308
07:30	17	2	2	21	6	5	11	22	2	129	1	132	18	235	8	261	436
07:45	11	6	3	20	7	2	14	23	4	149	6	159	7	310	23	340	542
Total	46	12	7	65	17	7	48	72	10	469	8	487	36	798	51	885	1509
08:00	12	5	5	22	5	2	15	22	7	148	5	160	11	219	15	245	449
08:15	22	0	2	24	3	6	14	23	7	121	6	134	7	159	17	183	364
08:30	12	7	7	26	10	4	18	32	3	102	2	107	14	186	34	234	399
08:45	15	4	8	27	11	4	21	36	3	113	1	117	25	187	27	239	419
Total	61	16	22	99	29	16	68	113	20	484	14	518	57	751	93	901	1631
09:00	25	5	8	38	8	11	14	33	7	110	3	120	32	173	29	234	425
09:15	18	8	5	31	6	11	11	28	4	103	3	110	19	157	24	200	369
09:30	18	2	6	26	8	3	23	34	11	85	6	102	21	192	23	236	398
09:45	21	5	18	44	12	5	19	36	12	97	4	113	40	177	32	249	442
Total	82	20	37	139	34	30	67	131	34	395	16	445	112	699	108	919	1634
*** BLANK ****																	
11:00	29	7	13	49	12	14	25	51	19	120	7	146	30	164	42	236	482
11:15	39	10	6	55	15	12	29	56	9	108	7	124	39	172	26	237	472
11:30	32	15	17	64	13	14	24	51	21	123	9	153	35	181	44	260	528
11:45	44	10	16	70	20	12	30	62	27	131	8	166	36	196	30	262	560
Total	144	42	52	238	60	52	108	220	76	482	31	589	140	713	142	995	2042
12:00	38	12	14	64	20	25	44	89	21	148	4	173	42	175	49	266	592
12:15	36	16	15	67	19	21	39	79	24	143	3	170	37	192	51	280	596
12:30	44	16	18	78	27	23	29	79	26	153	4	183	37	171	49	257	597
12:45	37	15	16	68	15	15	35	65	22	127	3	152	38	216	33	287	572
Total	155	59	63	277	81	84	147	312	93	571	14	678	154	754	182	1090	2357
13:00	47	15	14	76	23	24	31	78	25	148	8	181	34	167	37	238	573
13:15	34	13	17	64	23	20	41	84	23	149	6	178	27	184	36	247	573
13:30	41	12	17	70	14	16	36	66	24	147	3	174	32	169	35	236	546
13:45	46	14	12	72	21	19	42	82	25	154	7	186	37	184	42	263	603
Total	168	54	60	282	81	79	150	310	97	598	24	719	130	704	150	984	2295
*** BLANK ****																	
15:00	52	10	19	81	21	19	32	72	32	198	6	236	30	185	44	259	648
15:15	56	17	17	90	18	19	54	91	17	163	3	183	31	193	46	270	634
15:30	49	16	23	88	16	16	43	75	19	193	2	214	28	192	43	263	640
15:45	59	21	21	101	9	25	48	82	22	180	6	208	39	181	40	260	651
Total	216	64	80	360	64	79	177	320	90	734	17	841	128	751	173	1052	2573
16:00	55	16	17	88	18	13	44	75	12	207	6	225	30	197	31	258	646
16:15	46	12	21	79	19	15	46	80	16	182	3	201	39	214	41	294	654
16:30	68	16	16	100	22	18	55	95	23	188	4	215	29	206	34	269	679
16:45	47	16	15	78	16	22	55	93	25	209	11	245	44	203	41	288	704
Total	216	60	69	345	75	68	200	343	76	786	24	886	142	820	147	1109	2683
17:00	63	16	20	99	30	15	61	106	34	201	6	241	48	211	57	316	762
17:15	54	20	15	89	27	10	50	87	26	249	4	279	50	244	42	336	791
17:30	56	13	14	83	25	24	62	111	22	212	3	237	48	254	49	351	782
17:45	54	14	10	78	28	19	44	91	14	191	4	209	31	238	41	310	688
Total	227	63	59	349	110	68	217	395	96	853	17	966	177	947	189	1313	3023

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 16) Munoz@Jefferson
Site Code :
Start Date : 12/17/2009
Page No : 2

Groups Printed- Car - Truck

	Jefferson Ave Eastbound				Jefferson Ave Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Grand Total	1315	390	449	2154	551	483	1182	2216	592	5372	165	6129	1076	6937	1235	9248	19747
Apprch %	61	18.1	20.8		24.9	21.8	53.3		9.7	87.6	2.7		11.6	75	13.4		
Total %	6.7	2	2.3	10.9	2.8	2.4	6	11.2	3	27.2	0.8	31	5.4	35.1	6.3	46.8	
Car	1308	382	445	2135	526	481	1174	2181	587	5150	157	5894	1070	6632	1226	8928	19138
% Car	99.5	97.9	99.1	99.1	95.5	99.6	99.3	98.4	99.2	95.9	95.2	96.2	99.4	95.6	99.3	96.5	96.9
Truck	7	8	4	19	25	2	8	35	5	222	8	235	6	305	9	320	609
% Truck	0.5	2.1	0.9	0.9	4.5	0.4	0.7	1.6	0.8	4.1	4.8	3.8	0.6	4.4	0.7	3.5	3.1

	Jefferson Ave Eastbound				Jefferson Ave Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	17	2	2	21	6	5	11	22	2	129	1	132	18	235	8	261	436
07:45	11	6	3	20	7	2	14	23	4	149	6	159	7	310	23	340	542
08:00	12	5	5	22	5	2	15	22	7	148	5	160	11	219	15	245	449
08:15	22	0	2	24	3	6	14	23	7	121	6	134	7	159	17	183	364
Total Volume	62	13	12	87	21	15	54	90	20	547	18	585	43	923	63	1029	1791
% App. Total	71.3	14.9	13.8		23.3	16.7	60		3.4	93.5	3.1		4.2	89.7	6.1		
PHF	.705	.542	.600	.906	.750	.625	.900	.978	.714	.918	.750	.914	.597	.744	.685	.757	.826
Car	62	13	11	86	19	14	52	85	20	525	16	561	43	895	63	1001	1733
% Car	100	100	91.7	98.9	90.5	93.3	96.3	94.4	100	96.0	88.9	95.9	100	97.0	100	97.3	96.8
Truck	0	0	1	1	2	1	2	5	0	22	2	24	0	28	0	28	58
% Truck	0	0	8.3	1.1	9.5	6.7	3.7	5.6	0	4.0	11.1	4.1	0	3.0	0	2.7	3.2
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00																	
12:00	38	12	14	64	20	25	44	89	21	148	4	173	42	175	49	266	592
12:15	36	16	15	67	19	21	39	79	24	143	3	170	37	192	51	280	596
12:30	44	16	18	78	27	23	29	79	26	153	4	183	37	171	49	257	597
12:45	37	15	16	68	15	15	35	65	22	127	3	152	38	216	33	287	572
Total Volume	155	59	63	277	81	84	147	312	93	571	14	678	154	754	182	1090	2357
% App. Total	56	21.3	22.7		26	26.9	47.1		13.7	84.2	2.1		14.1	69.2	16.7		
PHF	.881	.922	.875	.888	.750	.840	.835	.876	.894	.933	.875	.926	.917	.873	.892	.949	.987
Car	155	59	62	276	78	84	145	307	90	546	14	650	151	720	181	1052	2285
% Car	100	100	98.4	99.6	96.3	100	98.6	98.4	96.8	95.6	100	95.9	98.1	95.5	99.5	96.5	96.9
Truck	0	0	1	1	3	0	2	5	3	25	0	28	3	34	1	38	72
% Truck	0	0	1.6	0.4	3.7	0	1.4	1.6	3.2	4.4	0	4.1	1.9	4.5	0.5	3.5	3.1
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	47	16	15	78	16	22	55	93	25	209	11	245	44	203	41	288	704
17:00	63	16	20	99	30	15	61	106	34	201	6	241	48	211	57	316	762
17:15	54	20	15	89	27	10	50	87	26	249	4	279	50	244	42	336	791
17:30	56	13	14	83	25	24	62	111	22	212	3	237	48	254	49	351	782
Total Volume	220	65	64	349	98	71	228	397	107	871	24	1002	190	912	189	1291	3039
% App. Total	63	18.6	18.3		24.7	17.9	57.4		10.7	86.9	2.4		14.7	70.6	14.6		
PHF	.873	.813	.800	.881	.817	.740	.919	.894	.787	.874	.545	.898	.950	.898	.829	.920	.960
Car	220	65	64	349	95	71	228	394	107	848	24	979	189	881	187	1257	2979
% Car	100	100	100	100	96.9	100	100	99.2	100	97.4	100	97.7	99.5	96.6	98.9	97.4	98.0
Truck	0	0	0	0	3	0	0	3	0	23	0	23	1	31	2	34	60
% Truck	0	0	0	0	3.1	0	0	0.8	0	2.6	0	2.3	0.5	3.4	1.1	2.6	2.0

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 17) Munoz@Coal Basin
Site Code : 00000000
Start Date : 12/16/2009

Groups Printed- Cars - Trucks

	Coal Basin Rd Eastbound				Coal Basin Rd Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	1	0	3	4	0	0	1	1	3	111	0	114	4	120	0	124	243
07:15	0	0	4	4	0	0	0	0	2	129	0	131	7	186	3	196	331
07:30	0	0	7	7	0	0	5	5	3	161	0	164	18	278	4	300	476
07:45	2	0	5	7	0	0	5	5	11	159	0	170	13	294	2	309	491
Total	3	0	19	22	0	0	11	11	19	560	0	579	42	878	9	929	1541
08:00	1	1	4	6	0	1	5	6	6	139	3	148	6	218	3	227	387
08:15	0	0	7	7	2	0	1	3	4	134	5	143	6	184	1	191	344
08:30	1	0	2	3	0	0	2	2	4	126	4	134	4	180	1	185	324
08:45	0	0	6	6	0	1	2	3	8	121	0	129	5	207	4	216	354
Total	2	1	19	22	2	2	10	14	22	520	12	554	21	789	9	819	1409
09:00	1	0	4	5	0	0	9	9	10	130	2	142	6	227	2	235	391
09:15	1	0	3	4	0	0	4	4	7	129	1	137	9	186	0	195	340
09:30	4	0	0	4	1	1	5	7	9	139	2	150	7	209	1	217	378
09:45	3	0	3	6	2	0	3	5	7	109	3	119	14	228	0	242	372
Total	9	0	10	19	3	1	21	25	33	507	8	548	36	850	3	889	1481
*** BLANK ***																	
11:00	1	2	2	5	1	0	12	13	5	141	7	153	9	231	1	241	412
11:15	1	0	3	4	2	0	8	10	11	135	13	159	7	248	1	256	429
11:30	2	0	3	5	3	1	3	7	8	150	6	164	14	257	5	276	452
11:45	1	1	4	6	3	0	6	9	7	154	8	169	9	274	9	292	476
Total	5	3	12	20	9	1	29	39	31	580	34	645	39	1010	16	1065	1769
12:00	4	2	5	11	1	1	12	14	5	168	4	177	9	209	7	225	427
12:15	4	0	9	13	1	0	5	6	13	195	13	221	12	245	7	264	504
12:30	0	0	3	3	9	0	8	17	11	182	10	203	15	294	0	309	532
12:45	1	2	5	8	2	1	4	7	14	176	10	200	17	249	3	269	484
Total	9	4	22	35	13	2	29	44	43	721	37	801	53	997	17	1067	1947
13:00	4	0	6	10	1	1	4	6	13	207	11	231	13	207	0	220	467
13:15	5	1	7	13	8	0	6	14	13	190	14	217	7	226	7	240	484
13:30	3	0	1	4	2	0	7	9	9	225	10	244	14	207	3	224	481
13:45	0	0	2	2	4	0	7	11	10	211	13	234	9	229	0	238	485
Total	12	1	16	29	15	1	24	40	45	833	48	926	43	869	10	922	1917
*** BLANK ***																	
15:00	1	1	6	8	6	0	4	10	11	240	9	260	10	247	3	260	538
15:15	6	0	8	14	0	0	6	6	12	221	7	240	11	233	2	246	506
15:30	4	0	5	9	9	0	6	15	8	221	6	235	7	245	2	254	513
15:45	3	0	6	9	3	0	4	7	6	264	7	277	12	264	0	276	569
Total	14	1	25	40	18	0	20	38	37	946	29	1012	40	989	7	1036	2126
16:00	1	0	5	6	3	1	9	13	11	270	9	290	15	232	5	252	561
16:15	2	0	7	9	6	1	7	14	18	248	4	270	8	253	3	264	557
16:30	1	0	8	9	1	0	9	10	17	287	12	316	11	319	7	337	672
16:45	4	1	3	8	1	1	6	8	14	279	9	302	9	286	5	300	618
Total	8	1	23	32	11	3	31	45	60	1084	34	1178	43	1090	20	1153	2408
17:00	1	0	11	12	0	2	13	15	16	294	10	320	13	308	1	322	669
17:15	3	0	5	8	6	0	7	13	17	285	19	321	15	273	1	289	631
17:30	1	0	12	13	2	2	7	11	15	269	9	293	17	310	3	330	647
17:45	1	3	14	18	2	0	4	6	15	255	15	285	10	297	3	310	619
Total	6	3	42	51	10	4	31	45	63	1103	53	1219	55	1188	8	1251	2566
Grand Total	68	14	188	270	81	14	206	301	353	6854	255	7462	372	8660	99	9131	17164
Apprch %	25.2	5.2	69.6		26.9	4.7	68.4		4.7	91.9	3.4		4.1	94.8	1.1		
Total %	0.4	0.1	1.1	1.6	0.5	0.1	1.2	1.8	2.1	39.9	1.5	43.5	2.2	50.5	0.6	53.2	

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 17) Munoz@Coal Basin
Site Code : 00000000
Start Date : 12/16/2009

Groups Printed- Cars - Trucks

	Coal Basin Rd Eastbound				Coal Basin Rd Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Cars	66	14	179	259	80	14	201	295	348	6570	252	7170	358	8317	95	8770	16494
% Cars	97.1	100	95.2	95.9	98.8	100	97.6	98	98.6	95.9	98.8	96.1	96.2	96	96	96	96.1
Trucks	2	0	9	11	1	0	5	6	5	284	3	292	14	343	4	361	670
% Trucks	2.9	0	4.8	4.1	1.2	0	2.4	2	1.4	4.1	1.2	3.9	3.8	4	4	4	3.9

	Coal Basin Rd Eastbound				Coal Basin Rd Westbound				Munoz Dr Northbound				Munoz Dr Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	0	0	7	7	0	0	5	5	3	161	0	164	18	278	4	300	476
07:45	2	0	5	7	0	0	5	5	11	159	0	170	13	294	2	309	491
08:00	1	1	4	6	0	1	5	6	6	139	3	148	6	218	3	227	387
08:15	0	0	7	7	2	0	1	3	4	134	5	143	6	184	1	191	344
Total Volume	3	1	23	27	2	1	16	19	24	593	8	625	43	974	10	1027	1698
% App. Total	11.1	3.7	85.2		10.5	5.3	84.2		3.8	94.9	1.3		4.2	94.8	1		
PHF	.375	.250	.821	.964	.250	.250	.800	.792	.545	.921	.400	.919	.597	.828	.625	.831	.865
Cars	3	1	21	25	2	1	16	19	23	561	7	591	42	943	8	993	1628
% Cars	100	100	91.3	92.6	100	100	100	100	95.8	94.6	87.5	94.6	97.7	96.8	80.0	96.7	95.9
Trucks	0	0	2	2	0	0	0	0	1	32	1	34	1	31	2	34	70
% Trucks	0	0	8.7	7.4	0	0	0	0	4.2	5.4	12.5	5.4	2.3	3.2	20.0	3.3	4.1
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:15																	
12:15	4	0	9	13	1	0	5	6	13	195	13	221	12	245	7	264	504
12:30	0	0	3	3	9	0	8	17	11	182	10	203	15	294	0	309	532
12:45	1	2	5	8	2	1	4	7	14	176	10	200	17	249	3	269	484
13:00	4	0	6	10	1	1	4	6	13	207	11	231	13	207	0	220	467
Total Volume	9	2	23	34	13	2	21	36	51	760	44	855	57	995	10	1062	1987
% App. Total	26.5	5.9	67.6		36.1	5.6	58.3		6	88.9	5.1		5.4	93.7	0.9		
PHF	.563	.250	.639	.654	.361	.500	.656	.529	.911	.918	.846	.925	.838	.846	.357	.859	.934
Cars	9	2	20	31	13	2	21	36	50	728	44	822	55	965	10	1030	1919
% Cars	100	100	87.0	91.2	100	100	100	100	98.0	95.8	100	96.1	96.5	97.0	100	97.0	96.6
Trucks	0	0	3	3	0	0	0	0	1	32	0	33	2	30	0	32	68
% Trucks	0	0	13.0	8.8	0	0	0	0	2.0	4.2	0	3.9	3.5	3.0	0	3.0	3.4
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	1	0	8	9	1	0	9	10	17	287	12	316	11	319	7	337	672
16:45	4	1	3	8	1	1	6	8	14	279	9	302	9	286	5	300	618
17:00	1	0	11	12	0	2	13	15	16	294	10	320	13	308	1	322	669
17:15	3	0	5	8	6	0	7	13	17	285	19	321	15	273	1	289	631
Total Volume	9	1	27	37	8	3	35	46	64	1145	50	1259	48	1186	14	1248	2590
% App. Total	24.3	2.7	73		17.4	6.5	76.1		5.1	90.9	4		3.8	95	1.1		
PHF	.563	.250	.614	.771	.333	.375	.673	.767	.941	.974	.658	.981	.800	.929	.500	.926	.964
Cars	9	1	27	37	8	3	35	46	63	1115	50	1228	46	1140	14	1200	2511
% Cars	100	100	100	100	100	100	100	100	98.4	97.4	100	97.5	95.8	96.1	100	96.2	96.9
Trucks	0	0	0	0	0	0	0	0	1	30	0	31	2	46	0	48	79
% Trucks	0	0	0	0	0	0	0	0	1.6	2.6	0	2.5	4.2	3.9	0	3.8	3.1

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 18) Maloney@Kachina
Site Code : 00000000
Start Date : 12/17/2009
Page No : 1

Groups Printed- Cars - Trucks

	Maloney Ave Eastbound				Maloney Ave Westbound				Northbound				Kachina St Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	0	14	0	14	0	13	15	28	0	0	0	0	17	0	2	19	61
07:15	1	25	0	26	0	21	24	45	0	0	0	0	14	0	0	14	85
07:30	2	32	0	34	0	31	27	58	0	0	0	0	10	0	3	13	105
07:45	3	26	0	29	0	34	29	63	0	0	0	0	29	0	1	30	122
Total	6	97	0	103	0	99	95	194	0	0	0	0	70	0	6	76	373
08:00	2	36	0	38	0	29	42	71	0	0	0	0	27	0	2	29	138
08:15	2	43	0	45	0	19	31	50	0	0	0	0	26	0	5	31	126
08:30	3	23	0	26	0	31	42	73	0	0	0	0	34	0	1	35	134
08:45	6	42	0	48	0	33	39	72	0	0	0	0	31	0	3	34	154
Total	13	144	0	157	0	112	154	266	0	0	0	0	118	0	11	129	552
09:00	0	33	0	33	0	42	44	86	0	0	0	0	23	0	4	27	146
09:15	3	24	0	27	0	42	39	81	0	0	0	0	29	0	6	35	143
09:30	9	26	0	35	0	44	48	92	0	0	0	0	33	0	4	37	164
09:45	7	48	0	55	0	48	36	84	0	0	0	0	33	0	9	42	181
Total	19	131	0	150	0	176	167	343	0	0	0	0	118	0	23	141	634
*** BLANK ***																	
11:00	7	49	0	56	0	59	50	109	0	0	0	0	46	0	3	49	214
11:15	7	48	0	55	0	49	55	104	0	0	0	0	35	0	5	40	199
11:30	11	47	0	58	0	53	55	108	0	0	0	0	56	0	7	63	229
11:45	3	56	0	59	0	67	71	138	0	0	0	0	53	0	7	60	257
Total	28	200	0	228	0	228	231	459	0	0	0	0	190	0	22	212	899
12:00	11	48	0	59	0	55	60	115	0	0	0	0	46	0	12	58	232
12:15	6	53	0	59	0	86	73	159	0	0	0	0	51	0	3	54	272
12:30	8	68	0	76	0	69	62	131	0	0	0	0	58	0	10	68	275
12:45	9	65	0	74	0	48	62	110	0	0	0	0	62	0	12	74	258
Total	34	234	0	268	0	258	257	515	0	0	0	0	217	0	37	254	1037
13:00	15	74	0	89	0	61	69	130	0	0	0	0	51	0	2	53	272
13:15	5	64	0	69	0	65	69	134	0	0	0	0	59	0	8	67	270
13:30	8	60	0	68	0	60	61	121	0	0	0	0	49	0	6	55	244
13:45	7	61	0	68	0	65	60	125	0	0	0	0	60	0	7	67	260
Total	35	259	0	294	0	251	259	510	0	0	0	0	219	0	23	242	1046
*** BLANK ***																	
15:00	14	77	0	91	0	50	62	112	0	0	0	0	67	0	10	77	280
15:15	13	67	0	80	0	65	82	147	0	0	0	0	66	0	19	85	312
15:30	10	77	0	87	0	78	72	150	0	0	0	0	51	0	8	59	296
15:45	7	67	0	74	0	72	73	145	0	0	0	0	66	0	9	75	294
Total	44	288	0	332	0	265	289	554	0	0	0	0	250	0	46	296	1182
16:00	12	70	0	82	0	55	84	139	0	0	0	0	70	0	9	79	300
16:15	10	86	0	96	0	59	57	116	0	0	0	0	42	0	6	48	260
16:30	9	74	0	83	0	62	71	133	0	0	0	0	58	0	11	69	285
16:45	7	85	0	92	0	64	82	146	0	0	0	0	74	0	11	85	323
Total	38	315	0	353	0	240	294	534	0	0	0	0	244	0	37	281	1168
17:00	14	70	0	84	0	65	62	127	0	0	0	0	65	0	4	69	280
17:15	11	73	0	84	0	79	81	160	0	0	0	0	56	0	4	60	304
17:30	7	71	0	78	0	66	70	136	0	0	0	0	73	0	7	80	294
17:45	7	65	0	72	0	67	95	162	0	0	0	0	61	0	5	66	300
Total	39	279	0	318	0	277	308	585	0	0	0	0	255	0	20	275	1178
Grand Total	256	1947	0	2203	0	1906	2054	3960	0	0	0	0	1681	0	225	1906	8069
Apprch %	11.6	88.4	0		0	48.1	51.9		0	0	0		88.2	0	11.8		
Total %	3.2	24.1	0	27.3	0	23.6	25.5	49.1	0	0	0	0	20.8	0	2.8	23.6	

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 18) Maloney@Kachina
Site Code : 00000000
Start Date : 12/17/2009
Page No : 2

Groups Printed- Cars - Trucks

	Maloney Ave Eastbound				Maloney Ave Westbound				Northbound				Kachina St Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Cars	250	1863	0	2113	0	1834	2017	3851	0	0	0	0	1658	0	221	1879	7843
% Cars	97.7	95.7	0	95.9	0	96.2	98.2	97.2	0	0	0	0	98.6	0	98.2	98.6	97.2
Trucks	6	84	0	90	0	72	37	109	0	0	0	0	23	0	4	27	226
% Trucks	2.3	4.3	0	4.1	0	3.8	1.8	2.8	0	0	0	0	1.4	0	1.8	1.4	2.8

	Maloney Ave Eastbound				Maloney Ave Westbound				Northbound				Kachina St Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 09:00																	
09:00	0	33	0	33	0	42	44	86	0	0	0	0	23	0	4	27	146
09:15	3	24	0	27	0	42	39	81	0	0	0	0	29	0	6	35	143
09:30	9	26	0	35	0	44	48	92	0	0	0	0	33	0	4	37	164
09:45	7	48	0	55	0	48	36	84	0	0	0	0	33	0	9	42	181
Total Volume	19	131	0	150	0	176	167	343	0	0	0	0	118	0	23	141	634
% App. Total	12.7	87.3	0		0	51.3	48.7		0	0	0		83.7	0	16.3		
PHF	.528	.682	.000	.682	.000	.917	.870	.932	.000	.000	.000	.000	.894	.000	.639	.839	.876
Cars	19	118	0	137	0	161	164	325	0	0	0	0	116	0	23	139	601
% Cars	100	90.1	0	91.3	0	91.5	98.2	94.8	0	0	0	0	98.3	0	100	98.6	94.8
Trucks	0	13	0	13	0	15	3	18	0	0	0	0	2	0	0	2	33
% Trucks	0	9.9	0	8.7	0	8.5	1.8	5.2	0	0	0	0	1.7	0	0	1.4	5.2
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:15																	
12:15	6	53	0	59	0	86	73	159	0	0	0	0	51	0	3	54	272
12:30	8	68	0	76	0	69	62	131	0	0	0	0	58	0	10	68	275
12:45	9	65	0	74	0	48	62	110	0	0	0	0	62	0	12	74	258
13:00	15	74	0	89	0	61	69	130	0	0	0	0	51	0	2	53	272
Total Volume	38	260	0	298	0	264	266	530	0	0	0	0	222	0	27	249	1077
% App. Total	12.8	87.2	0		0	49.8	50.2		0	0	0		89.2	0	10.8		
PHF	.633	.878	.000	.837	.000	.767	.911	.833	.000	.000	.000	.000	.895	.000	.563	.841	.979
Cars	38	249	0	287	0	257	264	521	0	0	0	0	217	0	26	243	1051
% Cars	100	95.8	0	96.3	0	97.3	99.2	98.3	0	0	0	0	97.7	0	96.3	97.6	97.6
Trucks	0	11	0	11	0	7	2	9	0	0	0	0	5	0	1	6	26
% Trucks	0	4.2	0	3.7	0	2.7	0.8	1.7	0	0	0	0	2.3	0	3.7	2.4	2.4
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 15:15																	
15:15	13	67	0	80	0	65	82	147	0	0	0	0	66	0	19	85	312
15:30	10	77	0	87	0	78	72	150	0	0	0	0	51	0	8	59	296
15:45	7	67	0	74	0	72	73	145	0	0	0	0	66	0	9	75	294
16:00	12	70	0	82	0	55	84	139	0	0	0	0	70	0	9	79	300
Total Volume	42	281	0	323	0	270	311	581	0	0	0	0	253	0	45	298	1202
% App. Total	13	87	0		0	46.5	53.5		0	0	0		84.9	0	15.1		
PHF	.808	.912	.000	.928	.000	.865	.926	.968	.000	.000	.000	.000	.904	.000	.592	.876	.963
Cars	40	275	0	315	0	264	311	575	0	0	0	0	248	0	45	293	1183
% Cars	95.2	97.9	0	97.5	0	97.8	100	99.0	0	0	0	0	98.0	0	100	98.3	98.4
Trucks	2	6	0	8	0	6	0	6	0	0	0	0	5	0	0	5	19
% Trucks	4.8	2.1	0	2.5	0	2.2	0	1.0	0	0	0	0	2.0	0	0	1.7	1.6

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

File Name : 19) Maloney@Allison
Site Code : 00000000
Start Date : 12/17/2009
Page No : 1

Groups Printed- Cars - Trucks

	Eastbound				Maloney Ave Westbound				Allison Rd Northbound				Allison Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	0	0	0	0	10	0	0	10	0	0	13	13	1	1	0	2	25
07:15	0	0	0	0	9	0	2	11	0	0	12	12	3	1	0	4	27
07:30	0	0	0	0	26	0	3	29	0	0	21	21	5	1	0	6	56
07:45	0	0	0	0	27	0	4	31	0	2	25	27	2	1	0	3	61
Total	0	0	0	0	72	0	9	81	0	2	71	73	11	4	0	15	169
08:00	0	0	0	0	22	0	2	24	0	1	27	28	4	2	0	6	58
08:15	0	0	0	0	12	0	1	13	0	0	37	37	5	2	0	7	57
08:30	0	0	0	0	19	0	2	21	0	1	25	26	2	0	0	2	49
08:45	0	0	0	0	18	0	2	20	0	0	25	25	3	2	0	5	50
Total	0	0	0	0	71	0	7	78	0	2	114	116	14	6	0	20	214
09:00	0	0	0	0	19	0	1	20	0	2	16	18	1	4	0	5	43
09:15	0	0	0	0	25	0	0	25	0	1	15	16	0	1	0	1	42
09:30	0	0	0	0	19	0	2	21	0	1	35	36	0	2	0	2	59
09:45	0	0	0	0	26	0	5	31	0	1	28	29	4	0	0	4	64
Total	0	0	0	0	89	0	8	97	0	5	94	99	5	7	0	12	208
*** BLANK ***																	
11:00	0	0	0	0	27	0	6	33	0	2	29	31	2	1	0	3	67
11:15	0	0	0	0	13	0	1	14	0	1	34	35	1	2	0	3	52
11:30	0	0	0	0	27	0	1	28	0	0	33	33	1	2	0	3	64
11:45	0	0	0	0	23	0	1	24	0	2	36	38	3	1	0	4	66
Total	0	0	0	0	90	0	9	99	0	5	132	137	7	6	0	13	249
12:00	0	0	0	0	31	0	4	35	0	0	21	21	3	2	0	5	61
12:15	0	0	0	0	33	0	6	39	0	2	29	31	3	3	0	6	76
12:30	0	0	0	0	29	0	4	33	0	1	29	30	4	1	0	5	68
12:45	0	0	0	0	22	0	4	26	0	1	23	24	4	0	0	4	54
Total	0	0	0	0	115	0	18	133	0	4	102	106	14	6	0	20	259
13:00	0	0	0	0	26	0	3	29	0	3	44	47	3	3	0	6	82
13:15	0	0	0	0	27	0	7	34	0	3	49	52	2	4	0	6	92
13:30	0	0	0	0	30	0	2	32	0	5	41	46	4	4	0	8	86
13:45	0	0	0	0	34	0	2	36	0	1	36	37	4	3	0	7	80
Total	0	0	0	0	117	0	14	131	0	12	170	182	13	14	0	27	340
*** BLANK ***																	
15:00	0	0	0	0	31	0	4	35	0	3	70	73	3	2	0	5	113
15:15	0	0	0	0	47	0	4	51	0	2	54	56	2	5	0	7	114
15:30	0	0	0	0	47	0	2	49	0	0	51	51	1	1	0	2	102
15:45	0	0	0	0	39	0	2	41	0	3	50	53	4	0	0	4	98
Total	0	0	0	0	164	0	12	176	0	8	225	233	10	8	0	18	427
16:00	0	0	0	0	29	0	5	34	0	4	63	67	2	2	0	4	105
16:15	0	0	0	0	23	0	2	25	0	2	56	58	3	3	0	6	89
16:30	0	0	0	0	38	0	1	39	0	0	55	55	4	2	0	6	100
16:45	0	0	0	0	42	0	3	45	0	1	35	36	1	2	0	3	84
Total	0	0	0	0	132	0	11	143	0	7	209	216	10	9	0	19	378
17:00	0	0	0	0	36	0	6	42	0	3	51	54	4	1	0	5	101
17:15	0	0	0	0	32	0	7	39	0	1	40	41	3	3	0	6	86
17:30	0	0	0	0	35	0	6	41	0	2	40	42	3	3	0	6	89
17:45	0	0	0	0	43	0	5	48	0	0	41	41	0	1	0	1	90
Total	0	0	0	0	146	0	24	170	0	6	172	178	10	8	0	18	366
Grand Total	0	0	0	0	996	0	112	1108	0	51	1289	1340	94	68	0	162	2610
Apprch %	0	0	0		89.9	0	10.1		0	3.8	96.2		58	42	0		
Total %	0	0	0	0	38.2	0	4.3	42.5	0	2	49.4	51.3	3.6	2.6	0	6.2	

Mike Henderson Consulting, LLC
5301 Camino Sandia NE
Albuquerque, NM 87111
(505) 275-5706

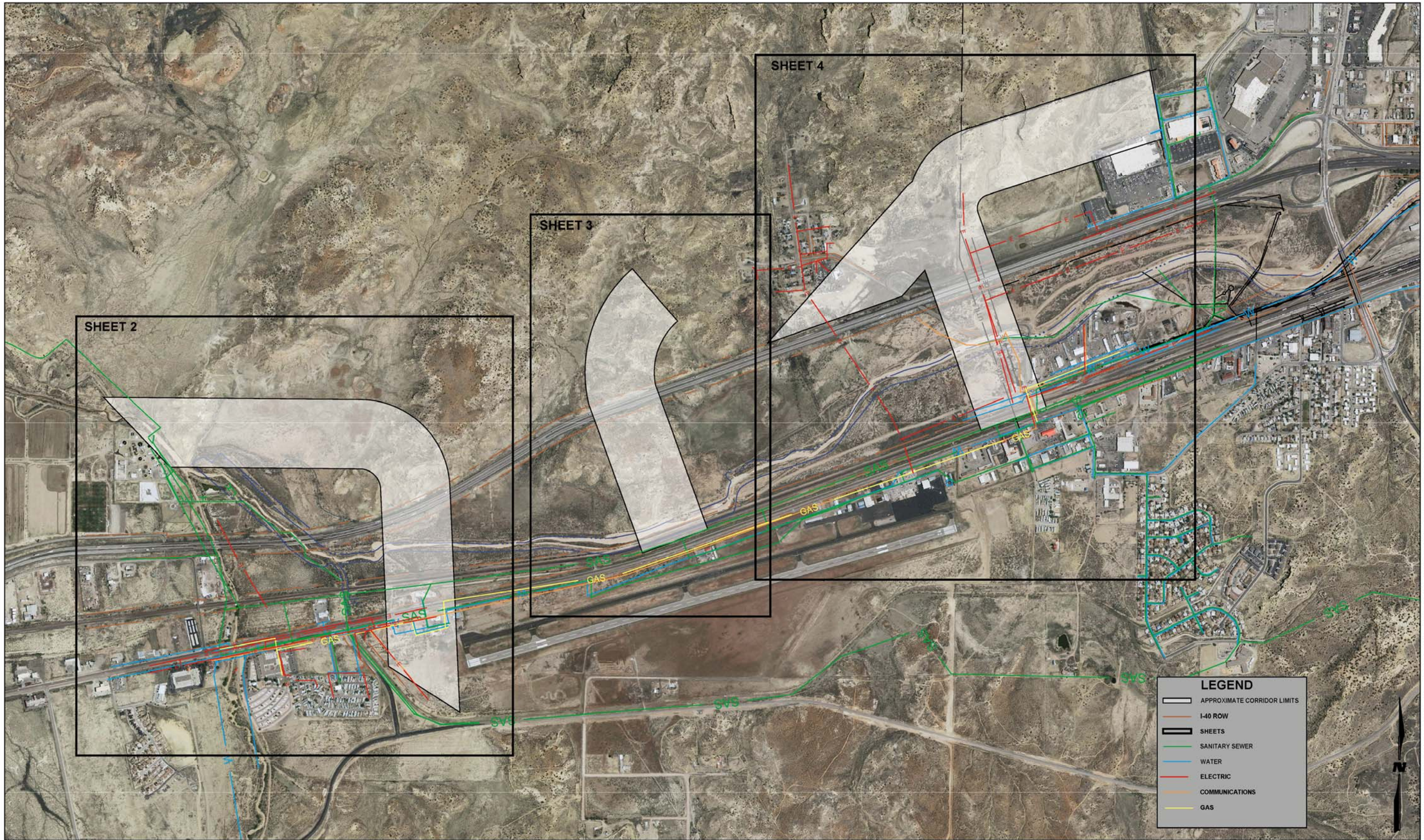
File Name : 19) Maloney@Allison
Site Code : 00000000
Start Date : 12/17/2009
Page No : 2

Groups Printed- Cars - Trucks

	Eastbound				Maloney Ave Westbound				Allison Rd Northbound				Allison Rd Southbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Cars	0	0	0	0	980	0	103	1083	0	49	1265	1314	82	67	0	149	2546
% Cars	0	0	0	0	98.4	0	92	97.7	0	96.1	98.1	98.1	87.2	98.5	0	92	97.5
Trucks	0	0	0	0	16	0	9	25	0	2	24	26	12	1	0	13	64
% Trucks	0	0	0	0	1.6	0	8	2.3	0	3.9	1.9	1.9	12.8	1.5	0	8	2.5

	Eastbound				Maloney Ave Westbound				Allison Rd Northbound				Allison Rd Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	0	0	0	0	26	0	3	29	0	0	21	21	5	1	0	6	56
07:45	0	0	0	0	27	0	4	31	0	2	25	27	2	1	0	3	61
08:00	0	0	0	0	22	0	2	24	0	1	27	28	4	2	0	6	58
08:15	0	0	0	0	12	0	1	13	0	0	37	37	5	2	0	7	57
Total Volume	0	0	0	0	87	0	10	97	0	3	110	113	16	6	0	22	232
% App. Total	0	0	0		89.7	0	10.3		0	2.7	97.3		72.7	27.3	0		
PHF	.000	.000	.000	.000	.806	.000	.625	.782	.000	.375	.743	.764	.800	.750	.000	.786	.951
Cars	0	0	0	0	84	0	9	93	0	3	104	107	15	6	0	21	221
% Cars	0	0	0	0	96.6	0	90.0	95.9	0	100	94.5	94.7	93.8	100	0	95.5	95.3
Trucks	0	0	0	0	3	0	1	4	0	0	6	6	1	0	0	1	11
% Trucks	0	0	0	0	3.4	0	10.0	4.1	0	0	5.5	5.3	6.3	0	0	4.5	4.7
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 13:00																	
13:00	0	0	0	0	26	0	3	29	0	3	44	47	3	3	0	6	82
13:15	0	0	0	0	27	0	7	34	0	3	49	52	2	4	0	6	92
13:30	0	0	0	0	30	0	2	32	0	5	41	46	4	4	0	8	86
13:45	0	0	0	0	34	0	2	36	0	1	36	37	4	3	0	7	80
Total Volume	0	0	0	0	117	0	14	131	0	12	170	182	13	14	0	27	340
% App. Total	0	0	0		89.3	0	10.7		0	6.6	93.4		48.1	51.9	0		
PHF	.000	.000	.000	.000	.860	.000	.500	.910	.000	.600	.867	.875	.813	.875	.000	.844	.924
Cars	0	0	0	0	115	0	14	129	0	12	168	180	12	13	0	25	334
% Cars	0	0	0	0	98.3	0	100	98.5	0	100	98.8	98.9	92.3	92.9	0	92.6	98.2
Trucks	0	0	0	0	2	0	0	2	0	0	2	2	1	1	0	2	6
% Trucks	0	0	0	0	1.7	0	0	1.5	0	0	1.2	1.1	7.7	7.1	0	7.4	1.8
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 15:00																	
15:00	0	0	0	0	31	0	4	35	0	3	70	73	3	2	0	5	113
15:15	0	0	0	0	47	0	4	51	0	2	54	56	2	5	0	7	114
15:30	0	0	0	0	47	0	2	49	0	0	51	51	1	1	0	2	102
15:45	0	0	0	0	39	0	2	41	0	3	50	53	4	0	0	4	98
Total Volume	0	0	0	0	164	0	12	176	0	8	225	233	10	8	0	18	427
% App. Total	0	0	0		93.2	0	6.8		0	3.4	96.6		55.6	44.4	0		
PHF	.000	.000	.000	.000	.872	.000	.750	.863	.000	.667	.804	.798	.625	.400	.000	.643	.936
Cars	0	0	0	0	163	0	11	174	0	8	224	232	9	8	0	17	423
% Cars	0	0	0	0	99.4	0	91.7	98.9	0	100	99.6	99.6	90.0	100	0	94.4	99.1
Trucks	0	0	0	0	1	0	1	2	0	0	1	1	1	0	0	1	4
% Trucks	0	0	0	0	0.6	0	8.3	1.1	0	0	0.4	0.4	10.0	0	0	5.6	0.9

APPENDIX E – EXISTING UTILITY EXHIBITS



ALLISON ROAD & INTERSTATE 40 CORRIDOR STUDY

Parametrix

WILSON & COMPANY ENGINEERS & ARCHITECTS

Bohannan ▲ Huston
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING ▲ SPATIAL DATA ▲ ADVANCED TECHNOLOGIES

NMDOT

U.S. Department of Transportation Federal Highway Administration

INDEX SHEET

M:\IDS\09-600-055-00\CADD\EXHIBITS\ALLISON_INDEX.dwg 5/4/2010 9:00:20 AM MDT

ALLISON ROAD & INTERSTATE 40 CORRIDOR STUDY

Parametrix

WILSON & COMPANY ENGINEERS & ARCHITECTS

Bohannan ▲ Huston

NMDOT

U.S. Department of Transportation Federal Highway Administration

SHEET 2

M:\IDS\09-600-055-00\CADD\EXHIBITS\ALLISON_SHEET2.dwg 5/4/2010 9:48:50 AM MDT

ALLISON ROAD & INTERSTATE 40 CORRIDOR STUDY

Parametrix

WILSON & COMPANY ENGINEERS & ARCHITECTS

Bohannan ▲ Huston
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING ▲ SPATIAL DATA ▲ ADVANCED TECHNOLOGIES

NMDOT

U.S. Department of Transportation
Federal Highway Administration

SHEET 3

M:\IDS\09-600-055-00\CADD\EXHIBITS\ALLISON_SHEET3.dwg 5/4/2010 9:56:22 AM MDT

ALLISON ROAD & INTERSTATE 40 CORRIDOR STUDY

Parametrix

WILSON & COMPANY ENGINEERS & ARCHITECTS

Bohannan ▲ Huston
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING ▲ SPATIAL DATA ▲ ADVANCED TECHNOLOGIES

NMDOT

U.S. Department of Transportation Federal Highway Administration

SHEET 4

M:\IDS\09-600-055-00\CADD\EXHIBITS\ALLISON_SHEET4.dwg 5/4/2010 10:05:30 AM MDT

APPENDIX F – CRASH DATA

NEW MEXICO DEPARTMENT OF TRANSPORTATION
HIGHWAY CRASH RATE CALCULATION 01/20/10
FOR 2004 - 2008 ROUTE I00040 FROM MILEPOST 16 to 22
(MILEPOINT 16.028 to 22.018)

Total accidents reported		47
Fatal accidents		1
Accidents with injury		6
Accidents with property damage		40
Total killed		1
Total injured		7
AADT	2004	20,703
AADT	2005	20,773
AADT	2006	20,385
AADT	2007	20,088
AADT	2008	20,425
Average AADT		20,620 (for 2004-2006)
Accident Rate per mvm		0.3475
Accident Rate - fatal per 100mvm		0.7394
Accident Rate - Sys per mvm		0.0 (For 2008, Interstate System)
		0.488 (For 2007, Interstate System)
		0.414 (For 2006, Interstate System)
Rolling terrain		

Section Length: 5.99

Accident rate Calculation: (47 * 1000000) / ((365 *3) * 5.99 * 20620)

Fatal rate Calculation: (1 * 100000000) /((365 * 3) * 5.99 * 20620)

CRASH SUMMARY SHEET
INTERSECTION/SEGMENT: Interstate 40

ROUTE : I-40	YEAR 2004		YEAR 2005		YEAR 2006		YEAR 2007		YEAR 2008		TOTAL	
MP 16.1 TO MP 22.0	No. 9	23%	No. 16	40%	No. 8	20%	No. 4	10%	No. 3	8%	No. 40	% 100
CRASH TYPE												
Fixed Object	5		6		3		1		0		15	38
Right Angle	0		0		0		0		0		0	0
Rear End	2		1		1		0		2		6	15
Backing	0		0		0		0		0		0	0
Sideswipe: Same Direction	1		4		4		1		0		10	25
Sideswipe: Opposite Direction	0		1		0		0		0		1	3
Head On	0		0		0		0		0		0	0
Left Turn	0		0		0		0		0		0	0
Parked Vehicle/Parking Maneuver	0		0		0		0		0		0	0
Overturn	0		1		0		0		0		1	3
Driveway/Driveway Maneuver	0		0		0		0		0		0	0
Pedestrian/Bicyclist	1		0		0		0		0		1	3
Other	0		3		0		2		1		6	15
CRASH SEVERITY												
Property Damage Only (PDO)	7		13		8		4		3		35	88
Injury/Non-Fatal	1		3		0		0		0		4	10
Fatal	1		0		0		0		0		1	3
ROAD CONDITIONS											0	
Dry/Clear	6		6		7		4		2		25	63
Wet	0		5		0		0		0		5	13
Snowy/Icy	3		5		1		0		1		10	25
Other	0		0		0		0		0		0	0
LIGHTING												
Daylight	5		8		7		2		3		25	63
Darkness	3		7		1		2		0		13	33
Dawn or Dusk	1		1		0		0		0		2	5
PROBABLE CAUSE												
Following Too Close	0		1		1		0		0		2	5
Driver Inattention	2		4		4		1				11	28
Excess Speed/Too Fast For Conditions	4		8		2		0				14	35
Avoid Other Vehicle	0		0		0		0				0	0
Improper Driving	1		0		0		0				1	3
Failure to use Turn Signal	0		1		0		0				1	3
Failure to Yield R.O.W.	1		0		1		0		1		3	8
Disregard Traffic Control Device	0		0		0		0				0	0
Under Influence Alcohol	1		0		0		0				1	3
Mechanical Defect	0		0		0		1				1	3
Pedestrian Error	0		0		0		0				0	0
Road Defect/Construction Activity	0		0		0		0				0	0
Other	0		2		0		3		1		6	15
ALCOHOL INVOLVEMENT												
Sobriety Unknown	0		3		1		0		0		4	10
Had Been Drinking	1		1		0		0		0		2	5
Had Not Been Drinking	8		12		7		4		3		34	85

NEW MEXICO DEPARTMENT OF TRANSPORTATION
HIGHWAY CRASH RATE CALCULATION 01/20/10
FOR 2004 - 2008 ROUTE NM0602 FROM MILEPOST 29.7 to 30.7
(MILEPOINT 29.7 to 30.7)

Total accidents reported		41
Fatal accidents		1
Accidents with injury		16
Accidents with property damage		24
Total killed		1
Total injured		33
AADT	2004	13,877
AADT	2005	13,441
AADT	2006	13,276
AADT	2007	13,064
AADT	2008	14,864
Average AADT		13,531 (for 2004-2006)
Accident Rate per mvm		2.7672
Accident Rate - fatal per 100mvm		6.7493
Accident Rate - Sys per mvm		0.0 (For 2008, Minor Arterials)
		0.533 (For 2007, Minor Arterials)
		0.54 (For 2006, Minor Arterials)

Rolling terrain

Section Length: 1

Accident rate Calculation: (41 * 1000000} / ((365 *3} * 1 * 13531}

Fatal rate Calculation: (1 * 100000000} /((365 * 3} * 1 * 13531}

CRASH SUMMARY SHEET
INTERSECTION/SEGMENT: NM 602

ROUTE : NM 602 at Aztec	YEAR 2004		YEAR 2005		YEAR 2006		YEAR 2007		YEAR 2008		TOTAL	
MP TO MP	No. 16	39%	No. 8	20%	No. 5	12%	No. 11	27%	No. 1	2%	No. 41	% 100
CRASH TYPE												
Fixed Object	2						2		1		5	12
Right Angle	1						1				2	5
Rear End	9		5		2		3				19	46
Backing											0	0
Sideswipe: Same Direction	1										1	2
Sideswipe: Opposite Direction											0	0
Head On					1						1	2
Left Turn	1		1		2		5				9	22
Parked Vehicle/Parking Maneuver			1								1	2
Overturn											0	0
Driveway/Driveway Maneuver											0	0
Pedestrian/Bicyclist			1								1	2
Other	2										2	5
CRASH SEVERITY												
Property Damage Only (PDO)	7		5		3		9				24	59
Injury/Non-Fatal	9		3		1		2		1		16	39
Fatal					1						1	2
ROAD CONDITIONS												
Dry/Clear	14		7		5		10		1		37	90
Wet	2		1								3	7
Snowy/Icy							1				1	2
Other											0	0
LIGHTING												
Daylight	15		8		4		8				35	85
Darkness	1				1		3		1		6	15
Dawn or Dusk											0	0
PROBABLE CAUSE												
Following Too Close	9		3				2				14	34
Driver Inattention	2		1		2						5	12
Excess Speed/Too Fast For Conditions	1		3		1		2				7	17
Avoid Other Vehicle											0	0
Improper Driving	1						1				2	5
Failure to use Turn Signal											0	0
Failure to Yield R.O.W.	2		1		1		4				8	20
Disregard Traffic Control Device							1				1	2
Under Influence Alcohol	1				1				1		3	7
Mechanical Defect											0	0
Pedestrian Error											0	0
Road Defect/Construction Activity							1				1	2
Other											0	0
ALCOHOL INVOLVEMENT												
Sobriety Unknown	2				1						3	7
Had Been Drinking	2		1		1				1		5	12
Had Not Been Drinking	12		7		3		11				33	80

NEW MEXICO DEPARTMENT OF TRANSPORTATION
HIGHWAY CRASH RATE CALCULATION 01/20/10
FOR 2004 - 2008 ROUTE NM0118 FROM MILEPOST 16.1 to 22
(MILEPOINT 16.1 to 22)

Total accidents reported		2
Fatal accidents		0
Accidents with injury		0
Accidents with property damage		2
Total killed		0
Total injured		0
AADT	2004	10,313
AADT	2005	10,455
AADT	2006	10,384
AADT	2007	10,527
AADT	2008	10,230

Average AADT	10,384	(for 2004-2006)
Accident Rate per mvm	0.0298	
Accident Rate - fatal per 100mvm	0.0	
Accident Rate - Sys per mvm	0.0	(For 2008, Collector)
	0.0	(For 2007, Collector)
	0.0	(For 2006, Collector)
Rolling terrain		

Section Length: 5.9

Accident rate Calculation: (2 * 1000000) / ((365 *3) * 5.9 * 10384)

Fatal rate Calculation: (0 * 100000000) /((365 * 3) * 5.9 * 10384)

CRASH SUMMARY SHEET
INTERSECTION/SEGMENT: NM 118

ROUTE : NM 118 and Florence	YEAR 2004		YEAR 2005		YEAR 2006*		YEAR 2007		YEAR 2008		TOTAL	
	No. 0	0%	No. 0	0%	No. 5	100%	No. 0	0%	No. 0	0%	No. 5	% 100
CRASH TYPE												
Fixed Object											0	0
Right Angle											0	0
Rear End											0	0
Backing											0	0
Sideswipe : Same Direction											0	0
Sideswipe : Opposite Direction											0	0
Head On											0	0
Left Turn											0	0
Parked Vehicle/Parking Maneuver											0	0
Overturn											0	0
Driveway/Driveway Maneuver											0	0
Pedestrian/Bicyclist											0	0
Other											0	0
CRASH SEVERITY												
Property Damage Only (PDO)					1						1	100
Injury/Non-Fatal											0	0
Fatal											0	0
ROAD CONDITIONS												
Dry/Clear											0	0
Wet											0	0
Snowy/Icy											0	0
Other											0	0
LIGHTING												
Daylight											0	0
Darkness											0	0
Dawn or Dusk											0	0
PROBABLE CAUSE												
Following Too Close					1						1	20
Driver Inattention											0	0
Excess Speed/Too Fast For Conditions					1						1	20
Avoid Other Vehicle											0	0
Improper Driving					1						1	20
Failure to use Turn Signal											0	0
Failure to Yield R.O.W.					2						2	40
Disregard Traffic Control Device											0	0
Under Influence Alcohol											0	0
Mechanical Defect											0	0
Pedestrian Error											0	0
Road Defect/Construction Activity											0	0
Other											0	0
ALCOHOL INVOLVEMENT												
Sobriety Unknown											0	0
Had Been Drinking											0	0
Had Not Been Drinking											0	0

* Inadequate information was supplied for these crashes

CRASH SUMMARY SHEET
INTERSECTION/SEGMENT: NM 118

ROUTE : NM 118 and Allison	YEAR 2004		YEAR 2005*		YEAR 2006		YEAR 2007*		YEAR 2008		TOTAL	
	No. 0	0%	No. 1	25%	No. 0	0%	No. 3	75%	No. 0	0%	No. 4	% 100
CRASH TYPE												
Fixed Object											0	0
Right Angle											0	0
Rear End											0	0
Backing											0	0
Sideswipe: Same Direction	1		1								2	0
Sideswipe: Opposite Direction											0	0
Head On											0	0
Left Turn											0	0
Parked Vehicle/Parking Maneuver											0	0
Overturn											0	0
Driveway/Driveway Maneuver											0	0
Pedestrian/Bicyclist											0	0
Other											0	0
CRASH SEVERITY												
Property Damage Only (PDO)	1		1								2	100
Injury/Non-Fatal											0	0
Fatal											0	0
ROAD CONDITIONS												
Dry/Clear			1								1	50
Wet											0	0
Snowy/Icy	1										1	50
Other											0	0
LIGHTING												
Daylight			1								1	50
Darkness	1										1	50
Dawn or Dusk											0	0
PROBABLE CAUSE												
Following Too Close											0	0
Driver Inattention			1				1				2	33
Excess Speed/Too Fast For Conditions	1										1	17
Avoid Other Vehicle											0	0
Improper Driving											0	0
Failure to use Turn Signal											0	0
Failure to Yield R.O.W.			1				1				2	33
Disregard Traffic Control Device											0	0
Under Influence Alcohol											0	0
Mechanical Defect											0	0
Pedestrian Error											0	0
Road Defect/Construction Activity											0	0
Other							1				1	17
ALCOHOL INVOLVEMENT												
Sobriety Unknown											0	0
Had Been Drinking	1										1	50
Had Not Been Drinking			1								1	50

* Inadequate information was supplied for these crashes

CRASH SUMMARY SHEET
INTERSECTION/SEGMENT: NM 118

ROUTE : NM 118 and Marguerite	YEAR 2004*		YEAR 2005*		YEAR 2006*		YEAR 2007*		YEAR 2008*		TOTAL	
	No. 1	8%	No. 2	15%	No. 6	46%	No. 3	23%	No. 1	8%	No. 13	% 100
CRASH TYPE												
Fixed Object											0	0
Right Angle											0	0
Rear End											0	0
Backing											0	0
Sideswipe: Same Direction											0	0
Sideswipe: Opposite Direction											0	0
Head On											0	0
Left Turn											0	0
Parked Vehicle/Parking Maneuver											0	0
Overturn											0	0
Driveway/Driveway Maneuver											0	0
Pedestrian/Bicyclist											0	0
Other											0	0
CRASH SEVERITY												
Property Damage Only (PDO)											0	0
Injury/Non-Fatal											0	0
Fatal											0	0
ROAD CONDITIONS												
Dry/Clear											0	0
Wet											0	0
Snowy/Icy											0	0
Other											0	0
LIGHTING												
Daylight											0	0
Darkness											0	0
Dawn or Dusk											0	0
PROBABLE CAUSE												
Following Too Close			1						1		2	15
Driver Inattention											0	0
Excess Speed/Too Fast For Conditions											0	0
Avoid Other Vehicle											0	0
Improper Driving											0	0
Failure to use Turn Signal											0	0
Failure to Yield R.O.W.			1								1	8
Disregard Traffic Control Device	1				3		3				7	54
Under Influence Alcohol					1						1	8
Mechanical Defect											0	0
Pedestrian Error											0	0
Road Defect/Construction Activity											0	0
Other					2						2	15
ALCOHOL INVOLVEMENT												
Sobriety Unknown											0	0
Had Been Drinking					1						1	100
Had Not Been Drinking											0	0

* Inadequate information was supplied for these crashes

NEW MEXICO DEPARTMENT OF TRANSPORTATION
HIGHWAY CRASH RATE CALCULATION 01/20/10
FOR 2004 - 2008 ROUTE US0491 FROM MILEPOST 0 to 2
(MILEPOINT 0 to 2.008)

Total accidents reported		276
Fatal accidents		4
Accidents with injury		94
Accidents with property damage		178
Total killed		4
Total injured		149
AADT	2004	21,191
AADT	2005	21,687
AADT	2006	18,828
AADT	2007	19,099
AADT	2008	18,640
Average AADT		20,569 (for 2004-2006)
Accident Rate per mvm		6.1026
Accident Rate - fatal per 100mvm		8.8444
Accident Rate - Sys per mvm		0.0 (For 2008, Principal Arterials)
		3.302 (For 2007, Principal Arterials)
		2.482 (For 2006, Principal Arterials)
Rolling terrain		

Section Length: 2.008

Accident rate Calculation: (276 * 1000000) / ((365 *3) * 2.008 * 20569)

Fatal rate Calculation: (4 * 100000000) /((365 * 3) * 2.008 * 20569)

CRASH SUMMARY SHEET
INTERSECTION/SEGMENT: US 491

ROUTE : US 491 at I40	YEAR 2004		YEAR 2005		YEAR 2006		YEAR 2007		YEAR 2008		TOTAL	
MP TO MP	No. 19	83%	No. 3	13%	No. 0	0%	No. 0	0%	No. 1	4%	No. 23	% 100
CRASH TYPE												
Fixed Object											0	0
Right Angle	1										1	4
Rear End	13		3						1		17	74
Backing	1										1	4
Sideswipe: Same Direction	1										1	4
Sideswipe: Opposite Direction											0	0
Head On											0	0
Left Turn	2										2	9
Parked Vehicle/Parking Maneuver											0	0
Overturn											0	0
Driveway/Driveway Maneuver	1										1	4
Pedestrian/Bicyclist											0	0
Other											0	0
CRASH SEVERITY											0	
Property Damage Only (PDO)	11		3						1		15	65
Injury/Non-Fatal	8										8	35
Fatal											0	0
ROAD CONDITIONS											0	
Dry/Clear	15		3						1		19	83
Wet	4										4	17
Snowy/Icy											0	0
Other											0	0
LIGHTING											0	
Daylight	17		2						1		20	87
Darkness	2		1								3	13
Dawn or Dusk											0	0
PROBABLE CAUSE											0	
Following Too Close	9		3								12	52
Driver Inattention	6										6	26
Excess Speed/Too Fast For Conditions	3										3	13
Avoid Other Vehicle											0	0
Improper Driving											0	0
Failure to use Turn Signal											0	0
Failure to Yield R.O.W.											0	0
Disregard Traffic Control Device	1										1	4
Under Influence Alcohol											0	0
Mechanical Defect											0	0
Pedestrian Error											0	0
Road Defect/Construction Activity											0	0
Other											0	0
ALCOHOL INVOLVEMENT											0	
Sobriety Unknown	1										1	4
Had Been Drinking	1										1	4
Had Not Been Drinking	17		3						1		21	91

CRASH SUMMARY SHEET
INTERSECTION/SEGMENT: US 491

ROUTE : US 491 at Maloney	YEAR 2004		YEAR 2005		YEAR 2006		YEAR 2007		YEAR 2008		TOTAL	
MP TO MP	No. 2	50%	No. 1	25%	No. 0	0%	No. 1	25%	No. 0	0%	No. 4	% 100
CRASH TYPE												
Fixed Object											0	0
Right Angle											0	0
Rear End											0	0
Backing											0	0
Sideswipe: Same Direction	2		1				1				4	100
Sideswipe: Opposite Direction											0	0
Head On											0	0
Left Turn											0	0
Parked Vehicle/Parking Maneuver											0	0
Overturn											0	0
Driveway/Driveway Maneuver											0	0
Pedestrian/Bicyclist											0	0
Other											0	0
CRASH SEVERITY												
Property Damage Only (PDO)	2		1				1				4	100
Injury/Non-Fatal											0	0
Fatal											0	0
ROAD CONDITIONS												
Dry/Clear	2		1				1				4	100
Wet											0	0
Snowy/Icy											0	0
Other											0	0
LIGHTING												
Daylight	2		1								3	75
Darkness											0	0
Dawn or Dusk											0	0
PROBABLE CAUSE												
Following Too Close											0	0
Driver Inattention											0	0
Excess Speed/Too Fast For Conditions	1		1								2	50
Avoid Other Vehicle											0	0
Improper Driving							1				1	25
Failure to use Turn Signal											0	0
Failure to Yield R.O.W.	1										1	25
Disregard Traffic Control Device											0	0
Under Influence Alcohol											0	0
Mechanical Defect											0	0
Pedestrian Error											0	0
Road Defect/Construction Activity											0	0
Other											0	0
ALCOHOL INVOLVEMENT												
Sobriety Unknown							1				1	25
Had Been Drinking											0	0
Had Not Been Drinking	2		1								3	75

CRASH SUMMARY SHEET
INTERSECTION/SEGMENT: US 491

ROUTE : US 491 at Lincoln	YEAR 2004		YEAR 2005		YEAR 2006		YEAR 2007		YEAR 2008		TOTAL	
MP TO MP	No. 26	100%	No. 0	0%	No. 0	0%	No. 0	0%	No. 0	0%	No. 26	% 100
CRASH TYPE												
Fixed Object	1										1	4
Right Angle	1										1	4
Rear End	7										7	27
Backing											0	0
Sideswipe: Same Direction	5										5	19
Sideswipe: Opposite Direction	2										2	8
Head On											0	0
Left Turn	8										8	31
Parked Vehicle/Parking Maneuver											0	0
Overturn											0	0
Driveway/Driveway Maneuver	2										2	8
Pedestrian/Bicyclist											0	0
Other											0	0
CRASH SEVERITY												
Property Damage Only (PDO)	20										20	77
Injury/Non-Fatal	6										6	23
Fatal											0	0
ROAD CONDITIONS												
Dry/Clear	22										22	85
Wet	3										3	12
Snowy/Icy	1										1	4
Other											0	0
LIGHTING												
Daylight	22										22	85
Darkness	4										4	15
Dawn or Dusk											0	0
PROBABLE CAUSE												
Following Too Close	6										6	23
Driver Inattention	2										2	8
Excess Speed/Too Fast For Conditions	4										4	15
Avoid Other Vehicle											0	0
Improper Driving	1										1	4
Failure to use Turn Signal											0	0
Failure to Yield R.O.W.	12										12	46
Disregard Traffic Control Device											0	0
Under Influence Alcohol											0	0
Mechanical Defect	1										1	4
Pedestrian Error											0	0
Road Defect/Construction Activity											0	0
Other											0	0
ALCOHOL INVOLVEMENT												
Sobriety Unknown	3										3	12
Had Been Drinking	1										1	4
Had Not Been Drinking	22										22	85

CRASH SUMMARY SHEET
INTERSECTION/SEGMENT: US 491

ROUTE : US 491 at Metro	YEAR 2004		YEAR 2005		YEAR 2006		YEAR 2007		YEAR 2008		TOTAL	
MP TO MP	No. 14	44%	No. 14	44%	No. 0	0%	No. 2	6%	No. 2	6%	No. 32	% 100
CRASH TYPE												
Fixed Object			1								1	3
Right Angle	1										1	3
Rear End	7		8				2		1		18	56
Backing			1								1	3
Sideswipe: Same Direction	2										2	6
Sideswipe: Opposite Direction											0	0
Head On											0	0
Left Turn	3		3								6	19
Parked Vehicle/Parking Maneuver											0	0
Overturn											0	0
Driveway/Driveway Maneuver	1		1						1		3	9
Pedestrian/Bicyclist											0	0
Other											0	0
CRASH SEVERITY												
Property Damage Only (PDO)	12		8				1				21	66
Injury/Non-Fatal	2		6				1		2		11	34
Fatal											0	0
ROAD CONDITIONS												
Dry/Clear	13		12				2		2		29	91
Wet	1		2								3	9
Snowy/Icy											0	0
Other											0	0
LIGHTING												
Daylight	10		11				2		2		25	78
Darkness	3		2								5	16
Dawn or Dusk	1		1								2	6
PROBABLE CAUSE												
Following Too Close	6		5				1		1		13	41
Driver Inattention	4		3						1		8	25
Excess Speed/Too Fast For Conditions			2				1				3	9
Avoid Other Vehicle											0	0
Improper Driving											0	0
Failure to use Turn Signal											0	0
Failure to Yield R.O.W.	3		3								6	19
Disregard Traffic Control Device	1		1								2	6
Under Influence Alcohol											0	0
Mechanical Defect											0	0
Pedestrian Error											0	0
Road Defect/Construction Activity											0	0
Other											0	0
ALCOHOL INVOLVEMENT												
Sobriety Unknown	2										2	6
Had Been Drinking	1		3								4	13
Had Not Been Drinking	11		11				2		2		26	81

CRASH SUMMARY SHEET
INTERSECTION/SEGMENT: US 491

ROUTE : US 491 at Jefferson	YEAR 2004		YEAR 2005		YEAR 2006		YEAR 2007		YEAR 2008		TOTAL	
MP TO MP	No. 9	82%	No. 0	0%	No. 0	0%	No. 0	0%	No. 2	18%	No. 11	% 100
CRASH TYPE												
Fixed Object									1		1	9
Right Angle	2										2	18
Rear End	4								1		5	45
Backing	1										1	9
Sideswipe: Same Direction	1										1	9
Sideswipe: Opposite Direction											0	0
Head On											0	0
Left Turn											0	0
Parked Vehicle/Parking Maneuver											0	0
Overturn											0	0
Driveway/Driveway Maneuver											0	0
Pedestrian/Bicyclist	1										1	9
Other											0	0
CRASH SEVERITY												
Property Damage Only (PDO)	7										7	64
Injury/Non-Fatal	1								2		3	27
Fatal	1										1	9
ROAD CONDITIONS												
Dry/Clear	7								1		8	73
Wet											0	0
Snowy/Icy	2								1		3	27
Other											0	0
LIGHTING												
Daylight	6								2		8	73
Darkness	2										2	18
Dawn or Dusk	1										1	9
PROBABLE CAUSE												
Following Too Close	1								1		2	18
Driver Inattention	4										4	36
Excess Speed/Too Fast For Conditions	1								1		2	18
Avoid Other Vehicle											0	0
Improper Driving											0	0
Failure to use Turn Signal											0	0
Failure to Yield R.O.W.											0	0
Disregard Traffic Control Device											0	0
Under Influence Alcohol	2										2	18
Mechanical Defect											0	0
Pedestrian Error	1										1	9
Road Defect/Construction Activity											0	0
Other											0	0
ALCOHOL INVOLVEMENT												
Sobriety Unknown	2										2	18
Had Been Drinking	2										2	18
Had Not Been Drinking	5								2		7	64

CRASH SUMMARY SHEET
INTERSECTION/SEGMENT: US 491

ROUTE : US 491 at Coal Basin Rd	YEAR 2004		YEAR 2005		YEAR 2006		YEAR 2007		YEAR 2008		TOTAL	
MP TO MP	No. 2	50%	No. 0	0%	No. 0	0%	No. 0	0%	No. 2	50%	No. 4	% 100
CRASH TYPE												
Fixed Object											0	0
Right Angle											0	0
Rear End											0	0
Backing									2		2	50
Sideswipe: Same Direction	2										2	50
Sideswipe: Opposite Direction											0	0
Head On											0	0
Left Turn											0	0
Parked Vehicle/Parking Maneuver											0	0
Overturn											0	0
Driveway/Driveway Maneuver											0	0
Pedestrian/Bicyclist											0	0
Other											0	0
CRASH SEVERITY												
Property Damage Only (PDO)	2								2		4	100
Injury/Non-Fatal											0	0
Fatal											0	0
ROAD CONDITIONS												
Dry/Clear	2								2		4	100
Wet											0	0
Snowy/Icy											0	0
Other											0	0
LIGHTING												
Daylight	1								1		2	50
Darkness	1								1		2	50
Dawn or Dusk											0	0
PROBABLE CAUSE												
Following Too Close											0	0
Driver Inattention											0	0
Excess Speed/Too Fast For Conditions									1		1	25
Avoid Other Vehicle											0	0
Improper Driving											0	0
Failure to use Turn Signal											0	0
Failure to Yield R.O.W.	2								1		3	75
Disregard Traffic Control Device											0	0
Under Influence Alcohol											0	0
Mechanical Defect											0	0
Pedestrian Error											0	0
Road Defect/Construction Activity											0	0
Other											0	0
ALCOHOL INVOLVEMENT												
Sobriety Unknown											0	0
Had Been Drinking									1		1	25
Had Not Been Drinking	2								1		3	75

APPENDIX G – 2030 ALTERNATIVE OPERATIONAL ANALYSIS

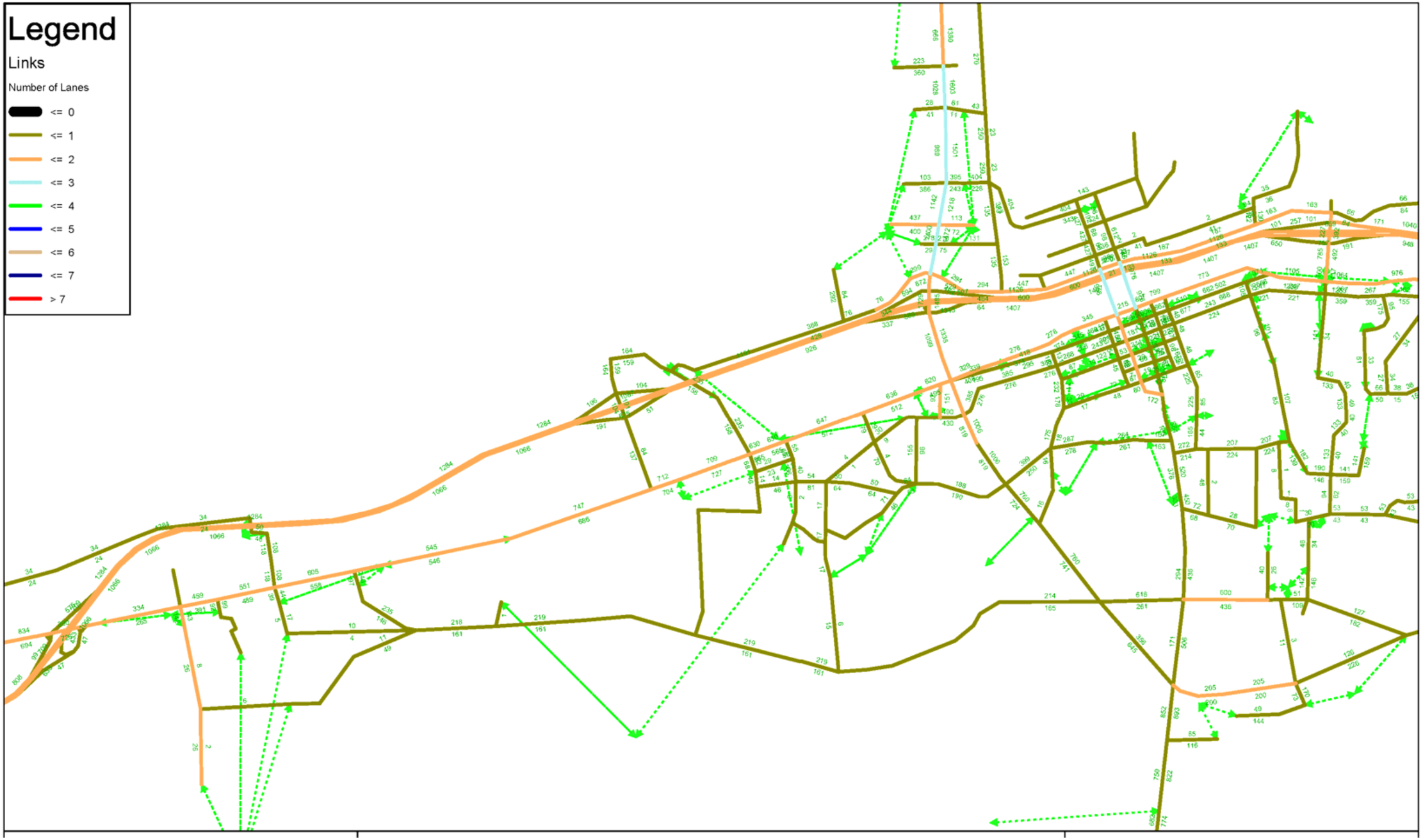


Figure G–1: Option 1 PM Peak Volumes (2030 Master Plan Network)

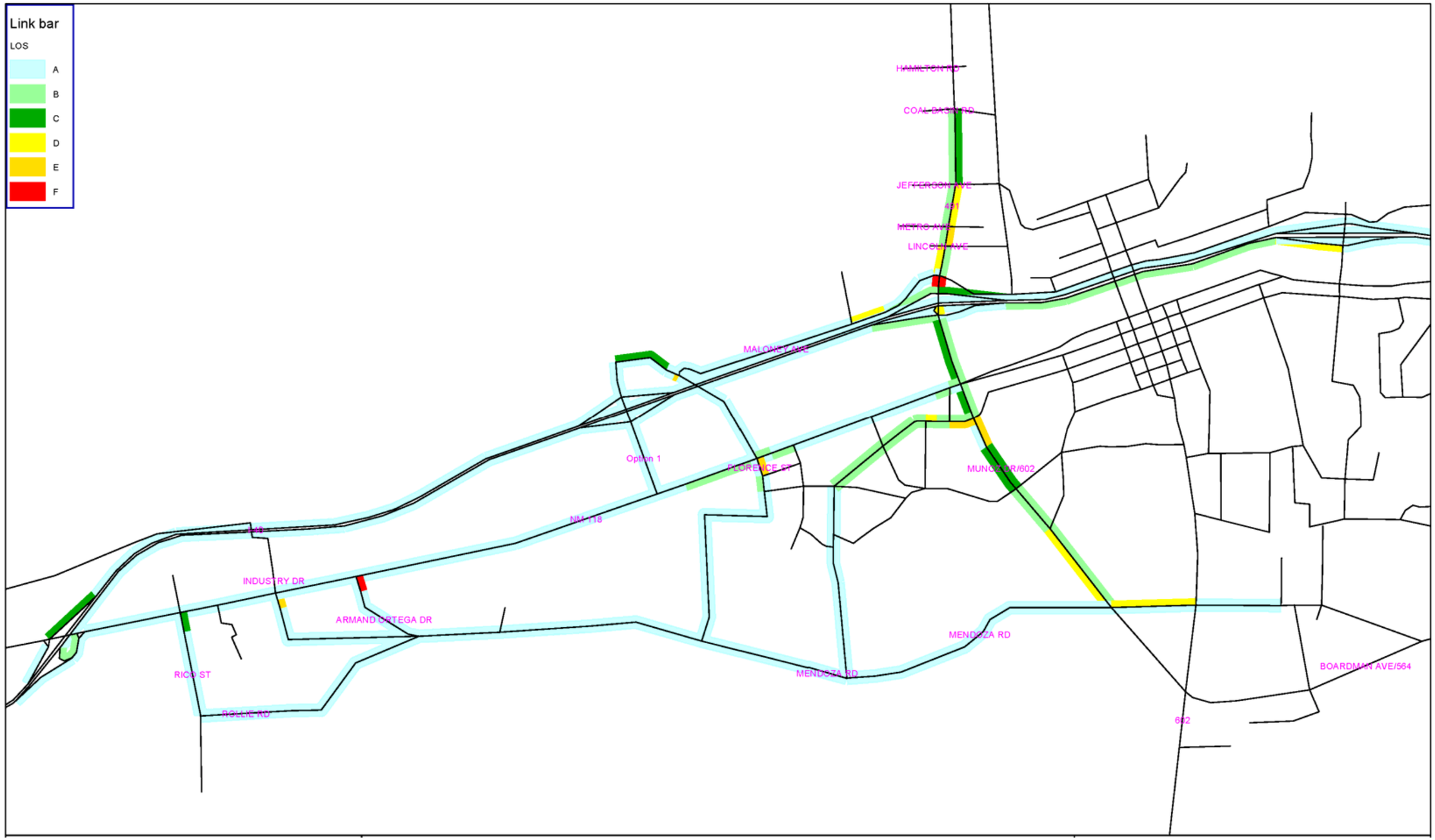


Figure G–2: Option 1 Link LOS (2030 Master Plan Network)

Figure G–3: Option 1 Node LOS (2030 Master Plan Network)

Figure G 4 : Node LOS (2030 Master Plan Network)

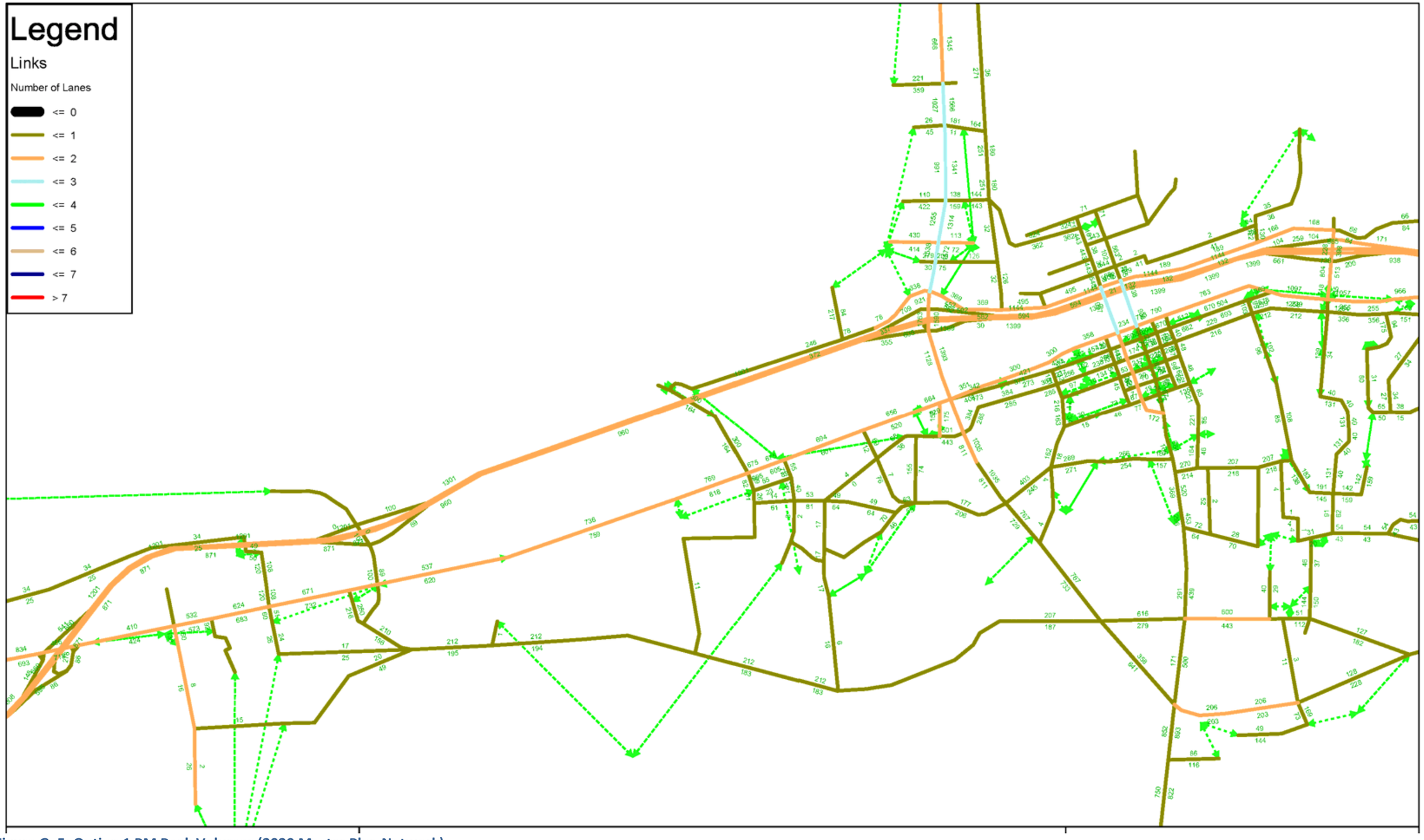


Figure G–5: Option 1 PM Peak Volumes (2030 Master Plan Network)

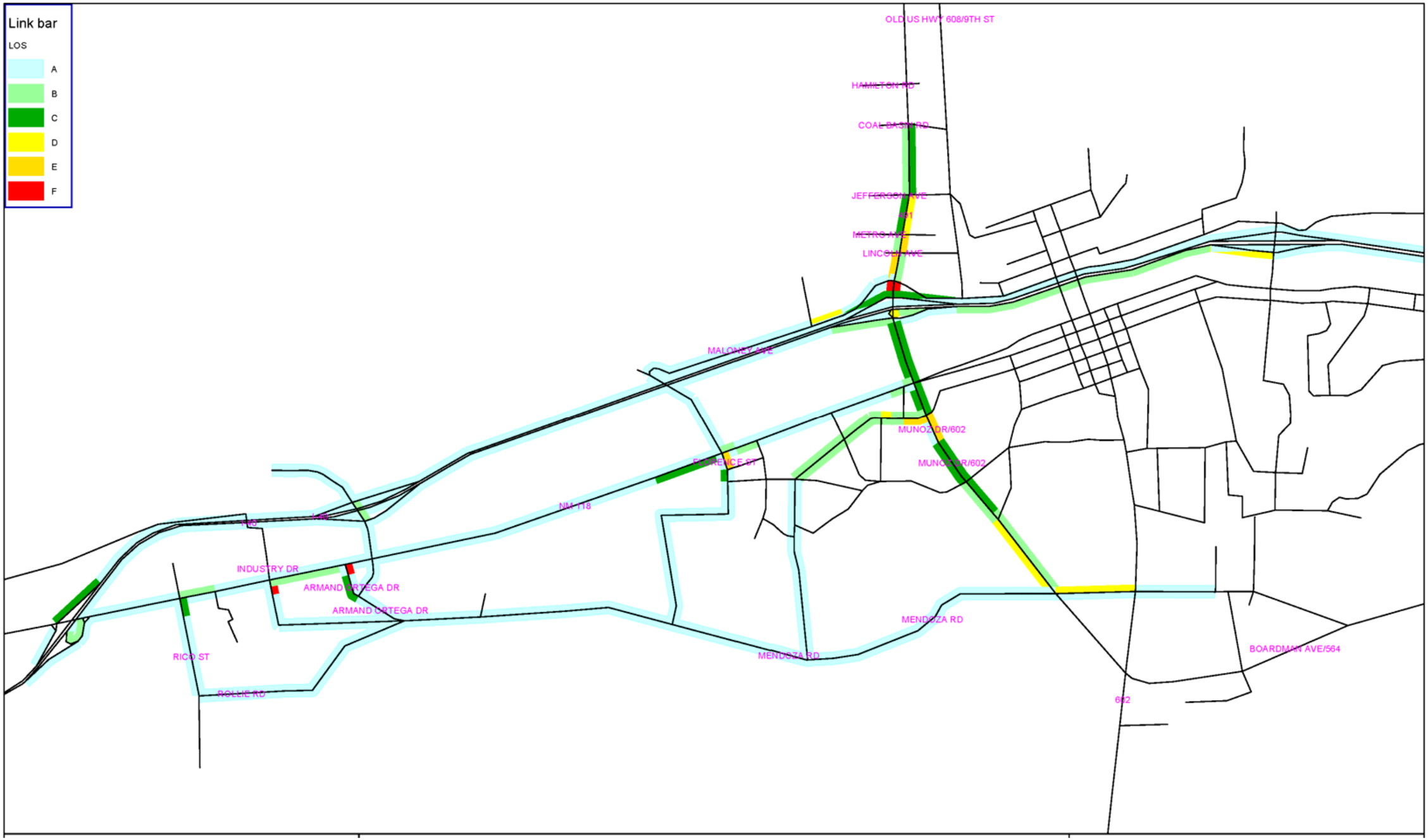


Figure G-6: Option 2 Link LOS (2030 Master Plan Network)

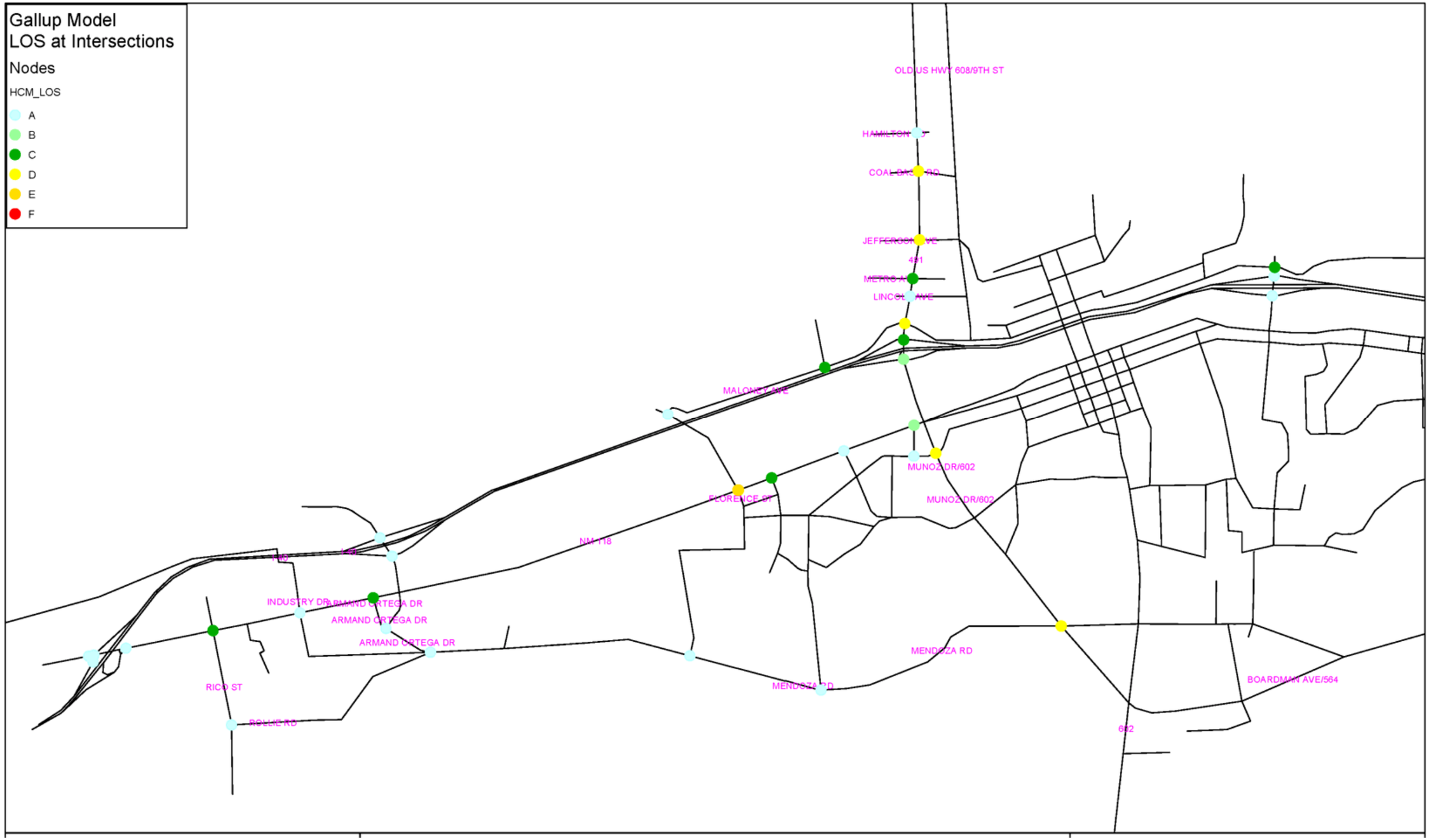


Figure G–7: Option 2 Node LOS (2030 Master Plan Network)

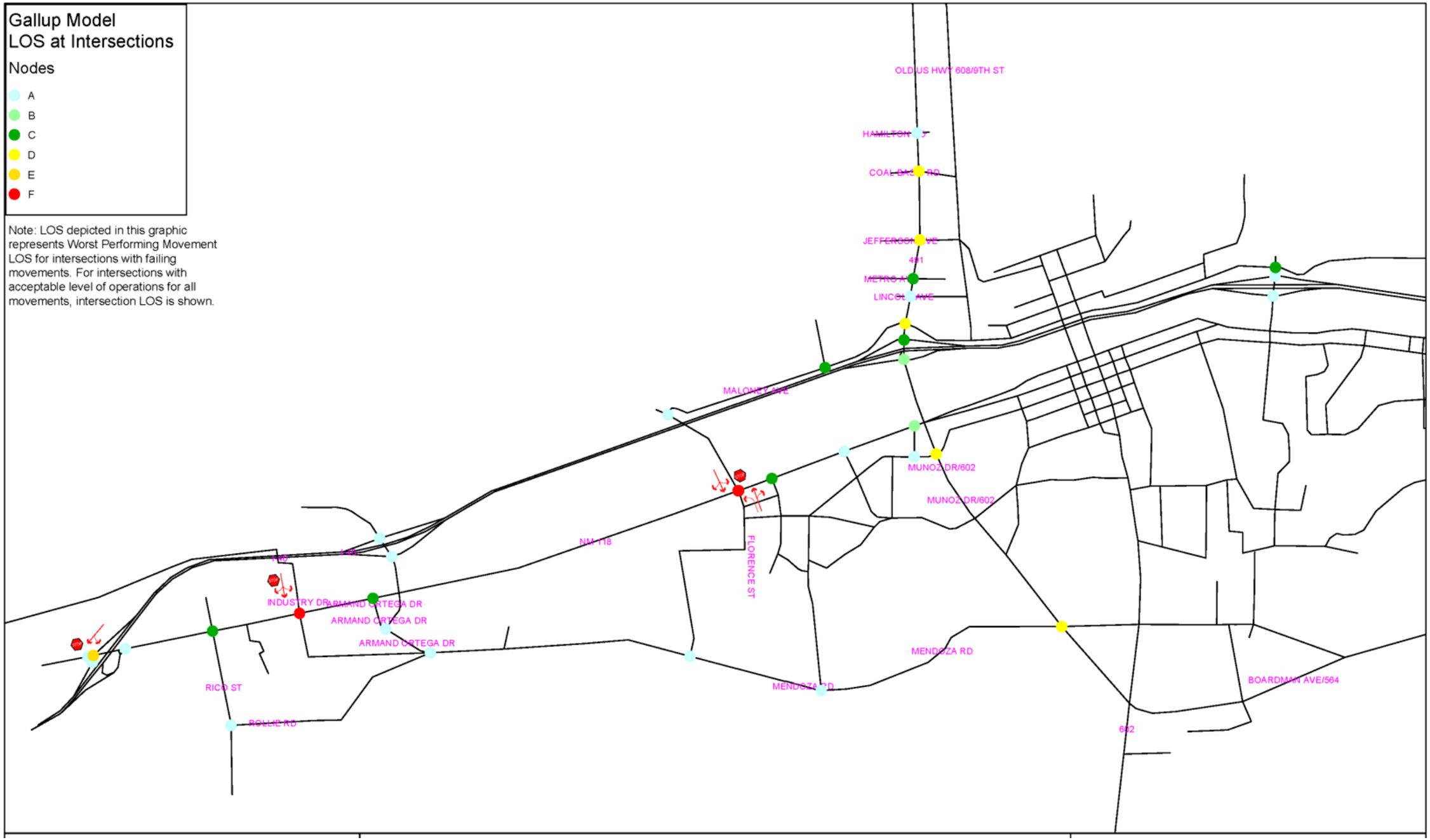


Figure G–8: Option 2 Worst Movement

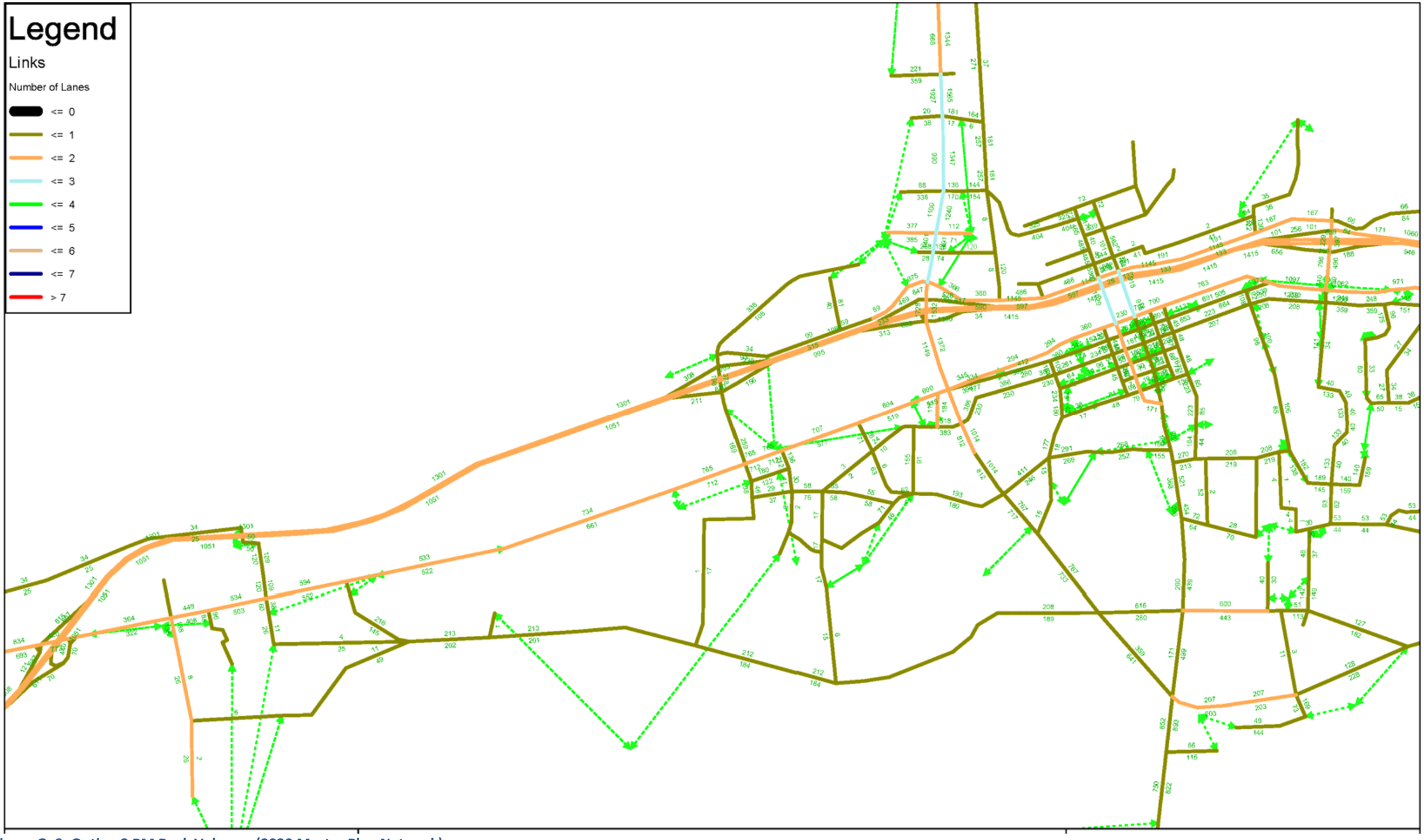


Figure G–9: Option 3 PM Peak Volumes (2030 Master Plan Network)

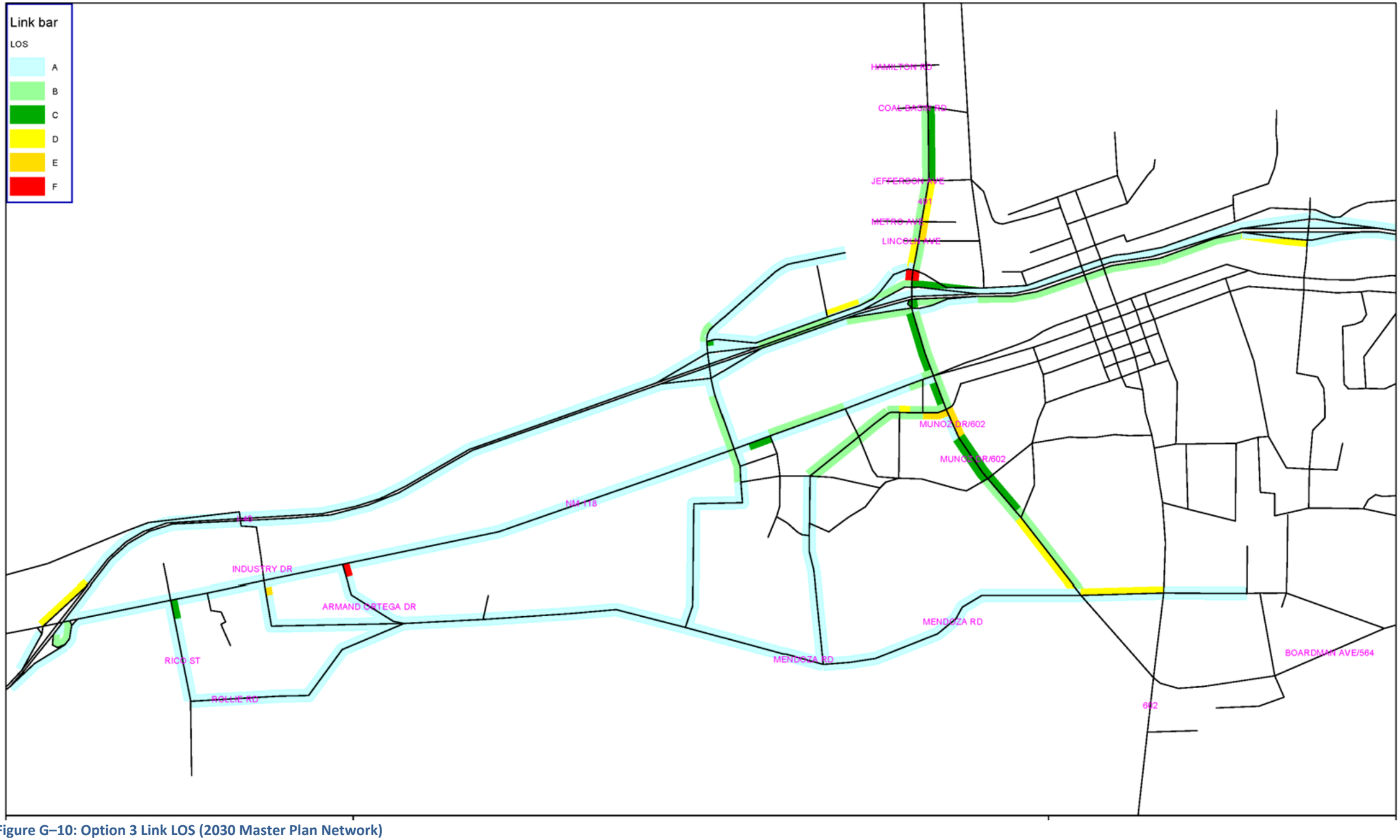


Figure G–10: Option 3 Link LOS (2030 Master Plan Network)

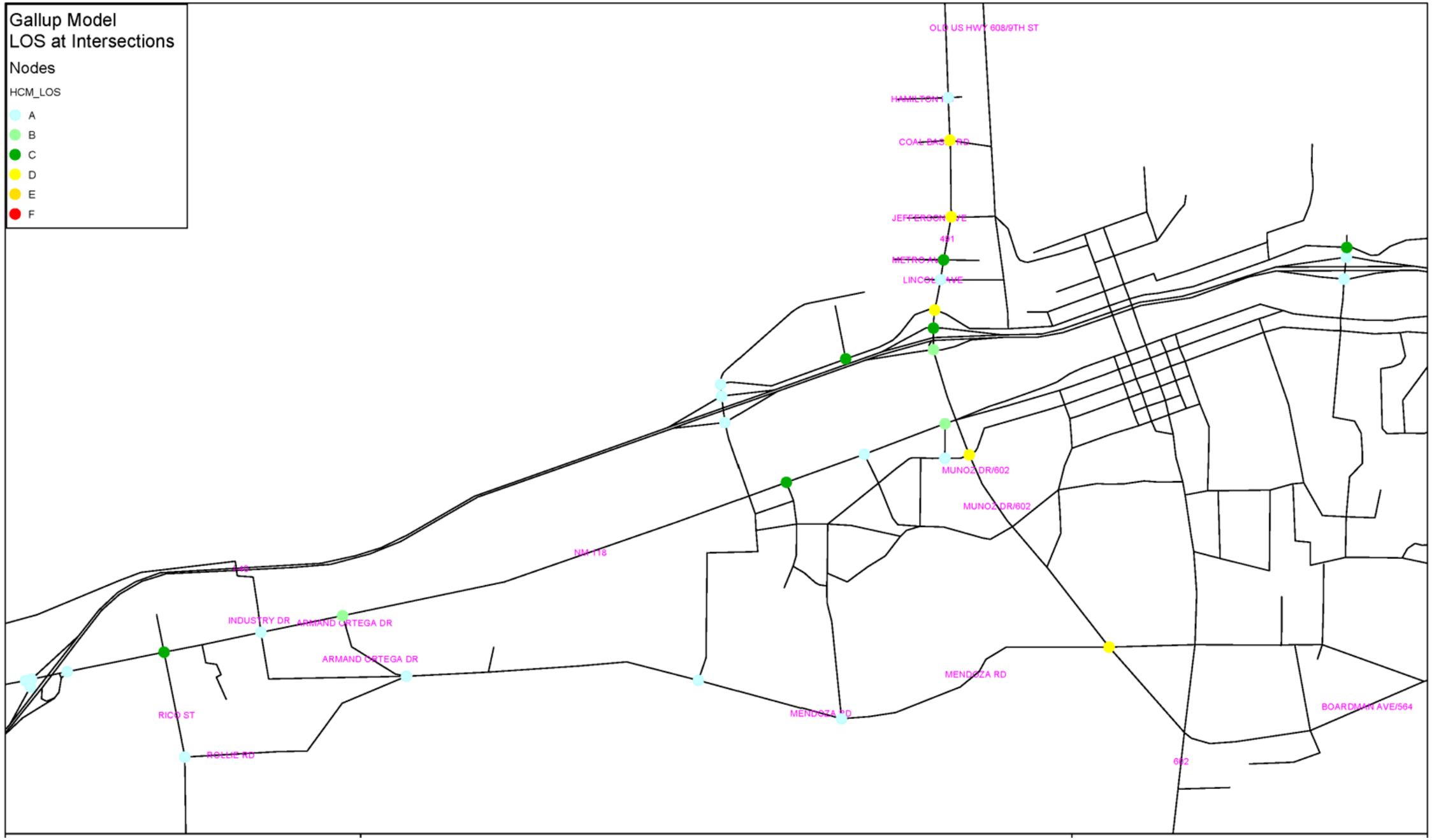


Figure G–11: Option 3 Node LOS (2030 Master Plan Network)

Figure G–12: Option 3 Worst Movement / Intersection LOS (2030 Master Plan Network)