NM 314 and Courthouse Rd Reconstruction Project
A300191

Public Information Meeting
May 23, 2018
Los Lunas, New Mexico
Public Meeting Agenda

• Project Team Introduction
• Purpose and Need
• Project History
• Design Alternatives
  • Eliminated Alternatives
  • Current Alternatives
• Updated Safety Analysis
• Updated Capacity Analysis
• Decision Matrix
• Project Schedule
Project Team

Leslie Fortier, PDE

LEE ENGINEERING
Patrick Byrd PM

Parametrix
Jerry Parker
Jeff Fredine

CobbFendley
Sean Wolfe
Bobby Ortiz

Terracon
Mike Anderson
Project Stakeholders

- Federal Highway Administration
- New Mexico Department of Transportation (NMDOT)
  - District 3
  - Rail Bureau
- Village of Los Lunas
- Valencia County
- Rio Metro
- Railrunner
National Environmental Policy Act
NEPA

- Categorical Exclusion
- Cultural Resources Survey
- Biological Survey
- Public Involvement
- Completed before Final Design and Construction
- To be approved by NMDOT and FHWA
To improve safety for the many modes of transportation, which converge at the NM 314/Courthouse Road intersection. These include vehicular traffic, at-grade rail operations, high pedestrian traffic, multi-use trail users, and both bus and rail transit users.

Need
- There is a lack of auxiliary lanes on NM 314 at Courthouse.
- The skewed approach on Courthouse Rd limits sight-distance and increases crash risks.
- ADA deficiencies with pedestrian/multi-use crossings at the intersection.
- Prepare at-grade rail crossing for quiet zone designation
- Reduction of crash occurrences
2016 Road Safety Audit

A Road Safety Audit (RSA) is defined as "the formal safety performance examination of an existing or future road or intersection by an independent, multidisciplinary team. It qualitatively estimates and reports on potential road safety issues and identifies opportunities for improvements in safety for all road users."

RSA
Making Your Roads Safer
2016 Road Safety Audit Team

• NMDOT
  • Afshin Jian, State Traffic Engr
  • Gregory Clarke, District 3
  • Hooshang Tavanaiepour, District 3
  • Rais Rizvi, District 3
  • Bill Craven, Rail Bureau Manager
  • George Hicks, Rail Bureau
  • Robert Fine, Rail Bureau

• HERZOG
  • Scott Reif

• Los Lunas
  • Rudy Archuleta, Public Works Director
  • Michael Jaramillo, Project Coordinator

• Lee Engineering
  • Paul Barricklow
  • Patrick Byrd
Worn and hard to see
Protected-Permitted Phasing without Exclusive Turn Lane

Protected-Permitted Phasing

Shared Left-Thru Lane
Railroad Crossing Warning Beacons and Turn Restrictions

Vehicles in Intersection
Railroad Crossing Warning Beacons and Turn Restrictions
Wayward Pedestrian Crossings
Example of Pedestrian Gate Control
Railroad Crossing Arms and Intersection Skew
Pre-signal Operations

Advanced Mastarm
RSA Recommended Short Term Solutions

- Update westbound approach striping (Completed)
- Eliminate driveway to temporary lot (Completed)
- Add NB right-turn & SB left-turn LED restriction indications (Completed)
- Signal timing adjustments
- At-grade rail crossing should be brought to ADA standards
- Intersection lighting repaired
RSA Recommended Long Term Solutions

- Left-turn and right-turn lanes on NM 314
- Removal of westbound skew
- Crossing improvements
  - Quiet Zone compliant Quad Gate
  - Channelized Approaches
- Adjacent access management
- Pedestrian control at rail crossing
- Pre-signal with pre-emption plan
- At-grade rail crossing should be brought to ADA standards
- Intersection lighting
Benefits

- Avoids Utility Relocation
- Low ROW Impact
- Pedestrian/Rail Upgrades
- Adds Left/Right Turn Lanes on NM 314

Challenges

- Widening Encroaches Rail ROW
- Expensive Utility Relocation
- Does Not Address Skew
Alternative 2 (Eliminated)

Benefits
• Avoids Utility Relocation
• Lower ROW Impact
• Removes Skew
• Pedestrian/Rail Upgrades
• Adds Left/Right-Turn Lanes on NM 314

Challenges
• Widening Encroaches Rail ROW
• Expensive Utility Relocation
Benefits
- Avoids Utility Relocation
- Removes Skew
- Pedestrian/Rail Upgrades
- Adds Left/Right Turn Lanes on NM 314
- Less Rail Encroachment

Challenges
- Some ROW/Property Impacts
- Curvature on Juan Perea Road
- Changes Functionality of Roads
- Poor Operations of One Movement
Alternative 3B (In Consideration)

Benefits
- Avoids Utility Relocation
- Removes Skew
- Pedestrian/Rail Upgrades
- Adds Left/Right Turn Lanes on NM 314
- Less Rail Encroachment
- Roundabout Safety Benefits

Challenges
- Some ROW/Property Impacts
- Curvature on Juan Perea Road
- Changes Functionality of Roads
- Accommodation of Adjacent Access
Benefits
• Avoids Utility Relocation
• Removes Skew
• Pedestrian/Rail Upgrades
• Adds Left/Right Turn Lanes on NM 314
• Less Rail Encroachment
• Maintains Courthouse Function & Orientation
• Better Approach Visibility

Challenges
• Greater ROW/Property Impacts
• Residence Impact
Alternative 3D (In Consideration)

Benefits
- Avoids Utility Relocation
- Removes Skew
- Pedestrian/Rail Upgrades
- Adds Left/Right Turn Lanes on NM 314
- Less Rail Encroachment
- Maintains Courthouse Function & Orientation
- Better Approach Visibility
- Roundabout Safety Benefits

Challenges
- Greater ROW/Property Impacts
- Residence Impact
- Accommodation of Adjacent Access
Alternative 4 (Eliminated)

Benefits
- Avoids Utility Relocate
- Pedestrian & Rail Upgrades
- Removes Skew
- Safety Benefits of Roundabout

Challenges
- Greatest ROW Impacts
- Rail runner Platform Impacts
- Transit Drop-off Impacts
- Access Impacts
Road Safety Audit (Update)

- Update Crash Review
- Traffic Capacity Analysis
  - 2040 Traffic demands
  - Added School of Dreams Academy Traffic
  - Updated to Latest Analysis Procedures
- Design Alternative Comparison
- Final Design Alternative to be Recommended
### Updated Crash Review (2013 to 2016)

- **Total Crashes**: 17
- **By Year**:
  - 2013: 6
  - 2014: 4
  - 2015: 4
  - 2016: 3
- **By Crash Type**:
  - Angle: 3
  - Rear End: 1
  - Sideswipe: 1
  - Opposite Direction/One Left: 5
  - Fixed Object: 1
  - Same Direction/Both Going Stria: 1
  - Same Direction/One Right: 2
  - Same Direction/Both Left: 1
  - Vehicle Backing: 1
  - Other: 1
  - % Opposite Direction/One Left: 29%
- **By Time of Day**:
  - Daylight: 15
  - Night: 1
  - Dawn/Dusk: 1
  - % DayLight: 88%
- **By Severity**:
  - PDO: 12
  - Injury: 5
  - Fatality: 0
  - % PDO: 71%
- **By Cause**:
  - Improper Backing: 1
  - Other Improper Turn: 1
  - Driver Inattention: 2
  - Failure to Yield the Right of Way: 8
  - Following Too Close: 4
  - Improper Driving/Turn: 1
  - Failure to Yield the Right of Way: 47%

- **3 to 6 Crashes Yearly (2013 to 2016)**
- **Angle Related Crashes the Most Frequent Type**
- **Crashes Occur During Daytime**
- **No Fatal Crashes**
- **Failure to Yield Most Common Cause**
Crash Reduction Strategies

• Removing Intersection Skew
  10% Reduction in Overall Crashes
• Added Left-turn Lanes of Two Approaches
  17% to 48% Reduction in Overall Crashes
• Added Right-Turn Lane
  5% to 13% Reduction of Injury Crashes and
  2% to 6% Reduction of High Severity Crashes
• Roundabout versus Traditional
  12% to 39% Crash Reduction and
  Up to a 76% Reduction in Severe Crashes
Updated Traffic Capacity Analysis

- Both 2014 and 2040 Traffic Demands Were Analyzed

- Level of Service for Most Alternatives Range From A to D

- Juan Perea Road and Courthouse Road Intersection Operates at LOS F During AM Peak for Alternative 3A

Graphic Source: Florida Department of Transportation
Evaluation Criteria

- ROW Impacts
- Traffic Operations
- Safety
- Utility Impacts
- Constructability
- Environmental Impacts
- Access Impacts
- Public Support
- Cost
## Decision Matrix

<table>
<thead>
<tr>
<th>ALTERNATIVES</th>
<th>ROW</th>
<th>TRAFFIC OPERATIONS</th>
<th>SAFETY</th>
<th>UTILITIES</th>
<th>CONSTRUCTABILITY</th>
<th>ENVIRONMENTAL</th>
<th>ACCESS CHANGES</th>
<th>Public Support</th>
<th>CONSTRUCTION COST</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO-BUILD ALTERNATIVE</td>
<td>None required</td>
<td>Acceptable LOS</td>
<td>No safety improvements</td>
<td>No changes</td>
<td>N/A</td>
<td>No impacts</td>
<td>No changes</td>
<td></td>
<td>$0</td>
</tr>
<tr>
<td>3A</td>
<td>0.40 ROW Required</td>
<td>Mostly Acceptable LOS Except for One Movement</td>
<td>- Removes Intersection Skew - Adds NM 314 auxiliary lanes - Upgrades pedestrian and rail - Approach visibility to new intersection limited due to curvature</td>
<td>Some Utility Impact</td>
<td>Courthouse can remain open during construction</td>
<td>Some property impacts and change in Courthouse Road function and orientation</td>
<td>Some access impacts</td>
<td></td>
<td>$2.48 Million</td>
</tr>
<tr>
<td>3B</td>
<td>0.45 ROW Required</td>
<td>Acceptable LOS</td>
<td>- Removes intersection skew - Adds NM 314 auxiliary lanes - Upgrades pedestrian and rail - Approach visibility to new intersection limited due to curvature - Roundabout Safety Benefits</td>
<td>Some Utility Impact</td>
<td>May require closure of Courthouse</td>
<td>Some property impacts and change in Courthouse Road function and orientation</td>
<td>With larger intersection footprint access impacts more challenging</td>
<td>Pending Public Meeting</td>
<td>$2.70 Million</td>
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<tr>
<td>3C</td>
<td>0.75 ROW Required Including Residence</td>
<td>Acceptable LOS</td>
<td>- Removes intersection skew - Adds NM 314 auxiliary lanes - Upgrades pedestrian and rail - Approach visibility better to new intersection with no curvature</td>
<td>Some Utility Impact</td>
<td>Courthouse can remain open during construction</td>
<td>Greater property impacts including residence acquisition; Courthouse function and orientation maintained</td>
<td>Some access impacts</td>
<td></td>
<td>$2.52 Million</td>
</tr>
<tr>
<td>3D</td>
<td>0.80 ROW Required Including Residence</td>
<td>Acceptable LOS</td>
<td>- Removes intersection skew - Adds NM 314 auxiliary lanes - Upgrades pedestrian and rail - Approach visibility better to new intersection with no curvature - Roundabout Safety Benefits</td>
<td>Some Utility Impact</td>
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<td>$2.83 Million</td>
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Benefits
- Removes Skew
- Pedestrian/Rail Upgrades
- Adds Left/Right Turn Lanes on NM 314
- Less Rail Encroachment
- Maintains Courthouse Function & Orientation
- Better Approach Visibility

Challenges
- Greater ROW/Property Impacts
- Residence Impact
Project Timeline

Original RSA Complete

2015 – 2016

RSA Update and Alternative Selection

June 2018

Preliminary and Final Design

Mid 2018 / Late 2019

Construction

Spring/Summer 2020
Send Comments to:
NM 314/Courthouse Road Intersection
Parametrix
9600 San Mateo Blvd. NE
Albuquerque, NM 87113

jfredine@parametrix.com
505-998-5552
Follow Up and Additional Outreach

- NMDOT Website: [http://dot.state.nm.us/content/nmdot/en/ProjectsD3.html#nm314courthouse](http://dot.state.nm.us/content/nmdot/en/ProjectsD3.html#nm314courthouse)

- E-mail Notification (E-mail List from Public Meeting Sign-In)

- On-going Coordination with Stakeholders

- One-on-One Property Owner Meetings
Questions?