



PUEBLO OF ACOMA TRANSPORTATION SAFETY PLAN

MAY 30, 2015

PREPARED BY:

WHPacific



Pueblo of Acoma - Tribal Transportation Safety Plan



Pueblo of Acoma Transportation Safety Plan

May 30, 2015

Developed for:

Pueblo of Acoma

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- Acoma Tribal Council
- Acoma Tribal Administration



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I. INTRODUCTION AND BACKGROUND

I-A. INTRODUCTION

The Pueblo of Acoma is committed to providing safer travel options for community members and visitors, including vehicular, pedestrian, and bicycle transportation. The Acoma Tribal Transportation Safety Plan was developed to identify unsafe conditions associated with the Tribe's transportation infrastructure and develop a clear plan for protecting the life and safety of community members. This plan was funded by a 2014 Tribal Transportation Program Safety Planning Grant from the Federal Highways Administration (FHWA).

I-B. BACKGROUND

The Pueblo of Acoma is located in west-central New Mexico within the northwest corner of Cibola County. The nearest metropolitan area is Albuquerque, New Mexico, approximately 60 miles east. The city of Grants, New Mexico is located approximately 15 miles west of the Pueblo boundary. The Pueblo of Acoma adjoins the Pueblo of Laguna which is located east of Acoma tribal lands. El Malpais National Monument is situated immediately west of the Pueblo.

Interstate Highway 40 (I-40) crosses the entire northern portion of the Acoma lands along a corridor of approximately 10.5 miles. This highway is the principal east-west interstate route through central New Mexico and is heavily traveled. BIA Route SP 22 (shared route by the Pueblo of Acoma and Pueblo of Laguna) provides access to Acoma Sky City from Casa Blanca northeast of the reservation. Road SP 22 connects to L 22 and on to Exit 108 at I-40.

State Highway NM 117 extends in a north-south direction along the western boundary of Acoma tribal lands, connecting on the north end with I-40. This route provides access to El Malpais National Monument and Quemado, New Mexico. State Route NM 124 runs east-west north of I-40 from reservation boundary to McCartys. It then runs south of I-40 to the western reservation boundary. Internal circulation on the Pueblo includes State, County, BIA, and Tribal roads.

The Burlington Northern Santa Fe (BNSF) Railway has a mainline two-track corridor extending in an east-west alignment across the entire northern section of the reservation. This railroad corridor experiences heavy train traffic flows of bulk, hazardous, and general commercial freight. The corridor generally follows the Rio San Jose Valley and parallels the I-40 highway at several points.

The Pueblo of Acoma occupies approximately 534,807 acres of fee, reservation and trust lands divided into areas of residential, commercial, agricultural/grazing, and institutional uses. The predominant land use at the Pueblo of Acoma is agricultural/grazing which occupies the southernmost portions of the Pueblo. Indian gaming and tourism provide additional income to the tribe. Figure 1 shows the location of Pueblo of Acoma.



Pueblo of Acoma

NEW MEXICO

FIGURE 1

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LOCATION MAP
PUEBLO OF ACOMA
LONG RANGE TRANSPORTATION PLAN
CIBOLA COUNTY, NEW MEXICO

July, 2013



Coordinate System: NAD 1983 UTM Zone 13N
Datum: North American 1983
Units: Meter

0 2.5 5 10
Miles

Sources: USGS, ESRI, TANA, AND

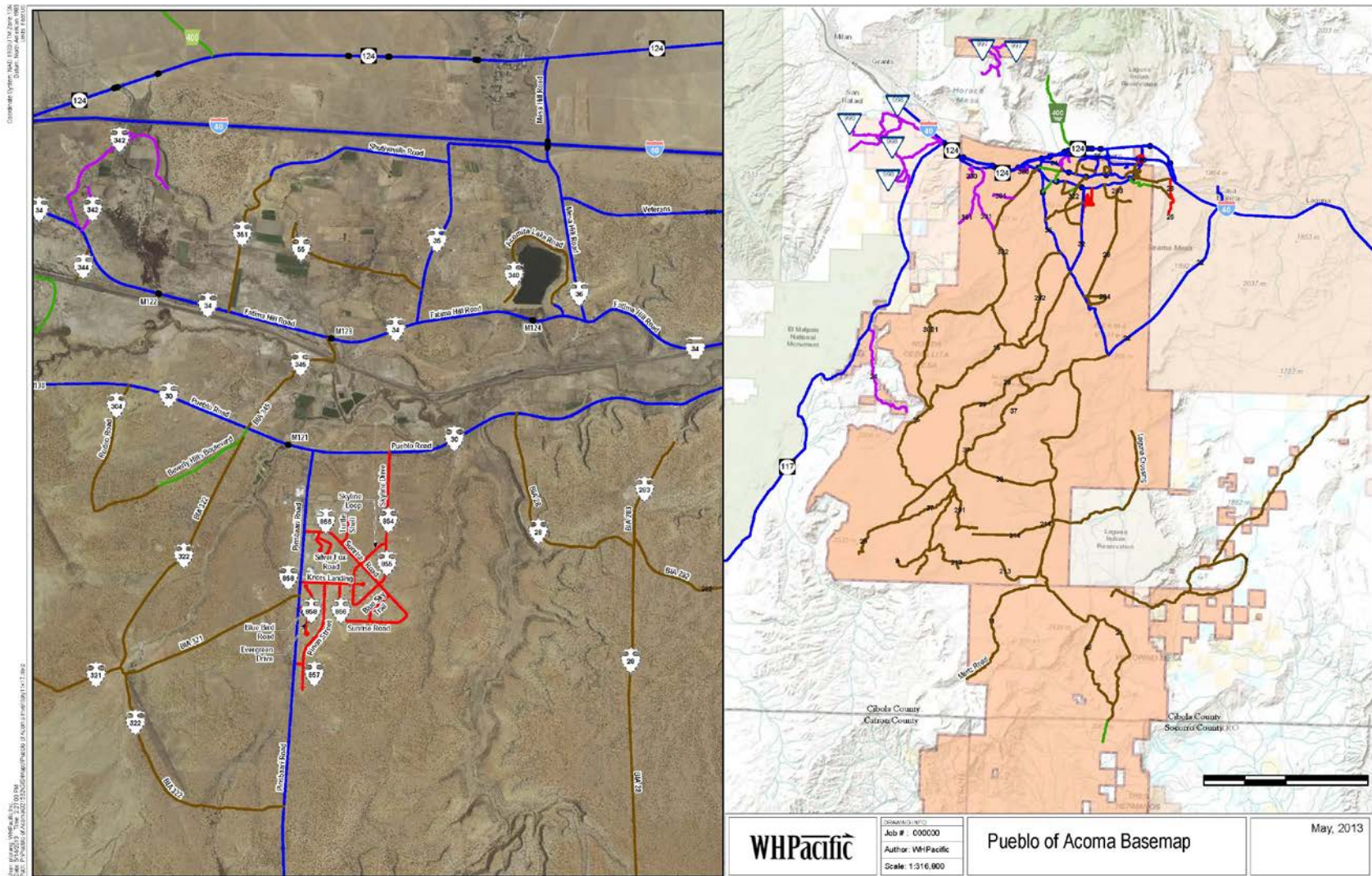
July, 2013

FIGURE 2



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FIGURE 3: PUEBLO OF ACOMA BASE ROAD MAP





Tribal Facilities Map

Pueblo of Acoma
Long Range Transportation Plan
Cibola County, New Mexico

April, 2013

FIGURE 1



I-C. MISSION

The mission of the Acoma Pueblo's Transportation Safety Plan is to provide safer conditions for motorists, bicyclists, and pedestrians traveling in the vicinity of Pueblo lands.

To achieve this mission, the plan addresses the four elements of highway safety – engineering, enforcement, education, and emergency services, or the 4 “E”s – and how they can be used to address safety issues. Table 1 provides an overview of Emphasis Areas and the strategies to address concerns using the 4 “E”s. Additional expanded information about the Emphasis Areas and the strategies is provided in Section IV.



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TABLE 1: EMPHASIS AREAS AND STRATEGIES

	Education	Engineering	Enforcement	Emergency Response
Alcohol Impaired Driving	Participate in nation-wide campaigns against driving under the influence.	Consider adding rumble strips to sides of all roads and highways to alert drivers when they are leaving their lane.	Work with local businesses that serve alcohol to educate employees about over-serving	Organize Emergency Medical Responder training programs in Pueblo of Acoma, with the goal of having at least five (5) certified EMRs living on the Pueblo.
	Install signage reminding motorists not to drive while intoxicated.	Install guardrails at areas where there is a high incidence of road departures.	Work with local law enforcement to establish periodic sobriety checkpoints in targeted areas.	Offer EMT training course in Acoma, with the goal of increasing the number of local Paramedic EMTs.
	Schedule speakers to visit schools with testimonials on the effects of drunk driving.			
Seatbelt Use	Conduct survey or focus group to determine cultural/behavioral factors behind low seatbelt compliance.	Install "Click it or Ticket" signs within each Tribal community (with fine amounts noted)	Work with Acoma Police Department to increase traffic enforcement, including seatbelt compliance.	
	Inform children of the importance of seatbelts.		Conduct seatbelt checkpoint events.	
	Conduct a "car seat drive".			
	Provide free car seat inspection and distribution programs.			
Stop Sign Running	Public Safety Announcements regarding intersection safety.	Intersection improvements, such as the addition of stop bars and improved striping to help motorists recognize the need to stop at an upcoming intersection.	Conduct a sign retro-reflectivity study to ensure night time visibility of signs.	
			Acoma Police Department will provide targeted traffic law enforcement at high-risk	



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	Education	Engineering	Enforcement	Emergency Response
Animal Collision Prevention			intersections, including stop sign laws.	
	Place sign information signs on roads to let drivers know of animal crossing areas.	Install fencing and guardrails along the road to prevent animals from entering the roadway.		
Intersection Safety		Perform a road safety audit of major Pueblo roads or targeted intersections.	Acoma Police Department will provide targeted enforcement of traffic laws at high-risk intersections.	
	Create a “safe crossing” education campaign.	Install proper lighting at intersection of US 40 and SP 30 business area.	Increase enforcement, ticketing speeders and those who fail to stop at intersections.	
	Organize targeted education campaign on safety problems at “high risk” intersections.	Install larger stop signs and roadway signs at Exit 102 at the tribal road intersection.	Purchase additional vehicles for Tribal Police.	Continue heavy/car extrication training for responders.
	Provide literature on proper place to stop for passing trains.	Ensure that all intersections of railroad tracks and roads have working railroad crossing lights and bars.		
		Diichuna Road and Pueblo Road intersection, along with other intersections, needs to be re-engineered to increase visibility of oncoming traffic on Pueblo Road.		
Speed Reduction	Work with local high schools to educate students on the dangers of speeding.	Install flashing “school zone” lights.	Increase enforcement of speed laws.	Purchase new rescue truck.
	Organize Public Service Announcements on this topic as	Add speed tables and striped crosswalks in areas where	Increase Tribal Police presence on the roads through the	Make sure emergency response and police vehicles can easily



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	Education	Engineering	Enforcement	Emergency Response
<i>Distracted Driving</i>	well as provide informational tables at Public Safety Day and health fairs.	speeding is a continual issue.	purchase of additional vehicles and personnel.	access Acoma Roads and the Pueblo.
	Organize “slow down” campaign in the community.	Install or improve speed bumps on certain local streets.		
	Distribute educational resources on the dangers of “distracted driving”.	Work with NMDOT to assess areas where rumble strips might help alert drivers when they are leaving the confines of their traffic lane	Enact Tribal law banning distracted driving.	
	Lead by example. Create a policy that employees of the Tribe are not to use handheld phones or text while driving.		Acoma Police Department will provide targeted enforcement of the new state law prohibiting texting while driving.	
<i>Pedestrian and Bicyclist Safety</i>	Support the Pueblo’s annual Bike Fair.	Continue to improve roads according to the Transportation Improvement Plan	Involve local school districts in enforcing the use of helmets by students who bike to school.	Continue EMT/EMS training programs to increase the number or certified responders on the Pueblo.
	Purchase clip-on headlights and flashing red taillights for distribution.			Mandatory first aid / CPR training program for school crossing guards.
	Organize bicycle helmet distribution programs.			Offer Bystander Care First Aid/CPR training programs for interested Tribal members.
	Develop Tribal brochures highlighting pedestrian and bicycle safety guidelines.			Develop an Emergency Services Mentor Program for 11-12th grade students.
	Organize a presentation on “Safe Practices for Mature Motorists”.			



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	Education	Engineering	Enforcement	Emergency Response
Highway Diversions through Reservation	Work with Indian Health Services (IHS) to develop an Injury Prevention Program.			
		Design and reconstruct NM 124 to meet design standards for commercial trucks.	Acoma Police Department will create a special enforcement plan for times when adjacent highway closures lead to traffic diversions through the Reservation.	
		Include bicycle lanes beside roadways.	Acoma Police Department will use speed trailers to discourage speeding behaviors by motorists cutting through the Reservation.	
Road Access during Flooding Events		Extend NM 124 from the S-Curve to NM 117 south of I-40.		
		Enlarge retention ponds to increase capacity for holding flood water: north of Sky City Casino, along SP 30, NM 124, and I-40.		
Emergency Vehicle Access at Railroad Crossings		Enlarge or add drainage ditches/culverts in the area to move the water away.		
		Build a grade separator at SP 36 over the railroad tracks connecting to SP 30.		
		Install railroad crossing warning markings in each direction from the tracks.		
		Ensure that railroad crossing lights are in working order.		



II. EXISTING RESOURCES

II-A. POTENTIAL SAFETY PARTNERS

New Mexico Department of Transportation (NMDOT)

The mission of the New Mexico Department of Transportation (NMDOT) is to provide a safe and efficient transportation system for the traveling public, while promoting economic development and preserving the environment of New Mexico.

The agency may be a resource for developing, researching, and/or implementing transportation safety strategies along state-owned highways.

Local Schools

Local schools may serve as a valuable partner in implementing educational strategies to promote safer conditions for motorists, bicyclists, and pedestrians. School-aged children (K-8) attend the Bureau of Indian Education (BIE) Sky City Community School on the Pueblo, local public schools in Laguna, Grants, Cubero, or St. Joseph parochial school in San Fidel. High school students attend Laguna-Acoma High school or Grants High School. The Pueblo recently constructed the Haaku Learning Center, an early-childhood development facility.

Regional Healthcare Providers

The Indian Health Service in Albuquerque provides an injury prevention program. The IHS Injury Prevention Program promotes building the capacity of Tribes and communities by increasing understanding about the injury problem, sharing effective solutions, and assisting communities in implementing programs. The mission is to raise the health status of American Indians and Alaska Natives to the highest possible level by decreasing the incidence of severe injuries and death to the lowest possible level and increasing the ability of tribes to address their injury problems.



II-B. EMERGENCY RESPONSE RESOURCES

Acoma Public Safety Department

A new public safety facility is located south of SP 30, on the east side of SP 32. This building houses the tribal courts, police, emergency medical sources, fire department, tribal courts and the vocational education training program. Local law enforcement is provided by the Acoma Police Department. The Pueblo of Acoma Police Department is committed to protecting life, property and natural resources while maintaining its cultural values and beliefs.



FIGURE 5: ACOMA PUBLIC SAFETY BUILDING

Program Services

- Respond to Motor Vehicle Crashes
- Respond to calls for service (domestic violence, burglaries, family issues, thefts, suicide (attempted or completed), etc.
- Give safety presentations (Every 15 Minute Program & seatbelt clinics)
- Conduct traffic enforcement patrols
- Search & Rescue missions
- Any and all emergencies (natural & manmade)
- Conservation protection

The **Tribal Police Department** is funded through Tribal appropriations, BIA P.L. 93-638, and other grants (COPS, TRGP, Indian Highway Safety).

Alcohol use is still the major contributing factor to crimes committed on the Pueblo of Acoma. Programs are being developed to slow this trend (Every 15 Minute Program, Adult Drug Court, Detention Review Board TIPS, and the Acoma Behavioral Health Services).



FIGURE 6: ACOMA POLICE STATION



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Acoma Fire Department

The Acoma Pueblo has a Fire/EMS Department that employs 11 firefighters and one (1) fire chief. Orlando Garcia, Fire Chief for the Acoma Fire Department, noted the following priorities for roadway emergency access, via a memorandum dated February 11, 2013:

1. Ensure unrestricted travel to and from roadway construction from a property.
2. Provide adequate, safe and legal access to residences.
3. Provide advance notice of road closures.
4. Provide a roadway shoulder for emergencies.
5. Provide adequate drainage to gain access.
6. Provide rumble strips as needed.



FIGURE 7: ACOMA FIRE STATION

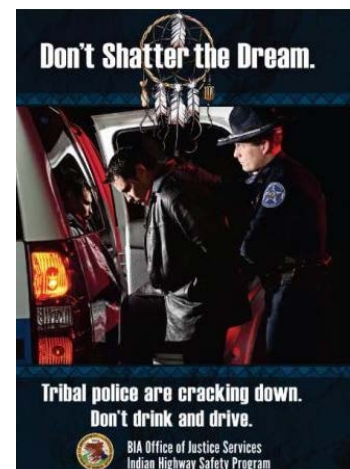
Cibola County Sheriff's Department

The Sheriff's Department mission is: "Working with you, the citizens of Cibola County, to make your home a safer place to live." "We improve the quality of life in the communities of Cibola County. As responsible role models, we are dedicated to developing and maintaining partnerships, upholding the law, protecting life and property, providing a safe environment and ensuring the Constitutional rights of all. We are dedicated to our rich heritage of more than 30 years of quality service through our core beliefs of: *Integrity, Professionalism and Fairness.*"

II-C. CURRENT SAFETY OUTREACH EFFORTS

The Acoma Pueblo currently leads or participates in safety-related campaigns:

- **Seatbelt / Car Seat Use:** Acoma Police Department operates and supports the *Click it or Ticket* campaign. This national campaign is designed to save lives through seatbelt safety awareness and enforcement.
- **DWI Prevention:** Acoma Public Safety Department has an Indian Highway Safety Grant *Don't Shatter the Dream* that is operated during the Thanksgiving/Christmas/New Year holiday season. The "Don't Shatter the Dream" impaired driving campaign unites the Bureau of Indian Affairs and tribal law enforcement agencies to send the message that driving while impaired will not be tolerated. The initiative includes DUI Saturation Patrols, DUI Checkpoints and a public awareness campaign on the dangers of drunk driving.





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Drive Sober or Get Pulled Over is another campaign that Acoma Public Safety Department participates in on the Pueblo. The National Highway Traffic Safety Administration is leading the effort to stop drunk driving. On Acoma Pueblo, this campaign is generally held from April through September during the months of prom, graduation, and summer holidays.

The Acoma Police Department holds at least one road block per month at various locations. At those road blocks, officers check vehicles for proper seat belt and car seat use, current driver's license and any indication of alcohol use.





III. DOCUMENTATION OF NEEDS AND PRIORITIES

III-A. COMMUNITY PRIORITIES

Community input on transportation safety priorities were obtained via written surveys. A transportation questionnaire was distributed to all Pueblo members in December of 2014. Approximately 90 responses were received.

The transportation safety questionnaire asked Tribal members to prioritize the importance of various safety issues – high priority, medium priority, low priority, or not an issue. Additionally, Tribal members were asked to rate their concern over several roads and intersections with known safety issues. The specific roads and intersections are pictured, below in section III-C. Safety Hazards on Pueblo Roads, and the concerns are described by each picture.

Transportation safety issues from the questionnaire gave the following results (not all surveyed responded to each category):

Areas of Concern:	High Priority	Medium Priority	Low Priority	Not an Issue	Don't Know
Intersection Safety	56	11	4	1	1
Lack of paths, sidewalks, or designated areas for pedestrians and/or bicyclists	56	24	4	2	
Children Playing on Roads	64	18	3		2
Motorists Driving While Intoxicated (DWI)	75	4	3		2
Animal collisions (wildlife, elk, grazing animals)	47	28	9	1	
Motorists Running Stop Signs	68	12	7		1
Speeding Motorists	64	17	5	1	
Alternative routes in the event of natural disasters	56	23	6	1	1
Emergency Vehicle Access at Railroad Crossings	74	9	2		
Distracted Driving	68	3	5		2
Non-use of seatbelts/Child car seats	69	9	6		1
Encroaching vegetation impacting drivers' visibility	55	24	6	3	



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Sky City Community School bus drivers reported safety concerns from their bus routes. The main concern appears to be a lack of warning signs for upcoming school bus stops. Areas where there are no signs are Shutivaville, Acomita Lake area roads, ACL Housing area, and Pueblo Road, south of Sky City Casino.





III-B. SAFETY / ACCIDENT DATA OVERVIEW

In the State of New Mexico, fatalities due to motor vehicle crashes have steadily decreased from 2006 – 2009. In 2006, there were 424 fatalities due to vehicle crashes; in 2009, only 319 fatalities occurred. Notably, alcohol-related vehicle crash fatalities decreased during this time (from 176 in 2006 to 132 in 2009). Rural fatalities are more common than urban fatalities, possibly due to the higher speeds and more sporadic law enforcement along rural roads.

Traffic violations/crashes in and around Acoma Pueblo are handled by Acoma Police, New Mexico State Troopers, and the Cibola County Sheriff's office, depending on location of the violation/crash and whether or not persons involved are tribal members.

In 2009, the Acoma Pueblo experienced 41 vehicle collisions, including: one (1) fatality; 10 injuries; and 30 incidents of property damage. Figure 8 presents a snapshot of vehicle collision data for New Mexico Pueblos in 2009.

FIGURE 8: CRASH DATA FOR NEW MEXICO PUEBLOS, 2009

Crashes on New Mexico Pueblos and Reservations¹, 2009

Pueblo or Reservation	Crashes				People	
	Total	Fatal	Injury	Property Damage	Killed	Injured
Acoma	41	1	10	30	1	15
Isleta	130	3	47	80	3	87
Jemez	16	0	4	12	0	4
Jicarilla Apache	29	1	5	23	1	10
Kewa ²	26	2	11	13	2	17
Laguna	52	1	21	30	2	34
Mescalero Apache	15	0	2	13	0	3
Nambe	3	0	0	3	0	0
Navajo	192	8	63	121	8	126
Picuris	12	1	4	7	1	13
Pojoaque	29	2	10	17	2	16
Ramah Navajo	17	0	4	13	0	7
Sandia	16	2	5	9	2	6
San Felipe	50	0	19	31	0	36
San Ildefonso	21	0	6	15	0	7
Ohkay Owingeh ²	30	1	9	20	1	18
Santa Ana	10	0	4	6	0	5
Santa Clara	13	1	1	11	1	3
Taos Pueblo	4	0	2	2	0	2
Tesuque	9	0	3	6	0	3
Zuni	74	1	23	50	1	38

¹ Crashes for several of the pueblos and reservations might be underreported.

² In 2009 Santo Domingo changed their name to Kewa. In 2005 San Juan changed their name to Ohkay Owingeh.



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Accident data obtained from the Acoma Police Department, as well as the New Mexico Department of Transportation (NMDOT).

From 2007 – 2012, the following Reservation locations experienced a high number of accidents (according to Acoma Police Department data):

- Interstate 40, including Exit 102 and the Rest Area (68 accidents)
- Route 0030, Pueblo Road (8 accidents)
- Route 0027, Santa Maria Road (1 accidents)
- Sky City Casino / Hotel
- Route 9124, NM 124 (10 accidents)
- Route 0038, Haaku Road (5 accidents)
- Route 0032, Pinsbaari Drive (2 accidents)

According to the Acoma Public Safety Department, from September 2014 until April 2015, there have been 40 crashes in and around Acoma, the majority of which occurred on Interstate 40. 2015 year-to-date, there have been 3 fatal car crashes. Citations given from January through April 2015 included 1,309 for speeding.

Table 9, below, taken from <http://www.unm.edu/~dgrint/reports/fatalities/web-fatallog-2014.pdf>, provides more recent crash fatality data for the state of New Mexico by county. While each county has data here, the entirety of crash data may not be available if tribes did not submit their own crash data to the State Department of Transportation.



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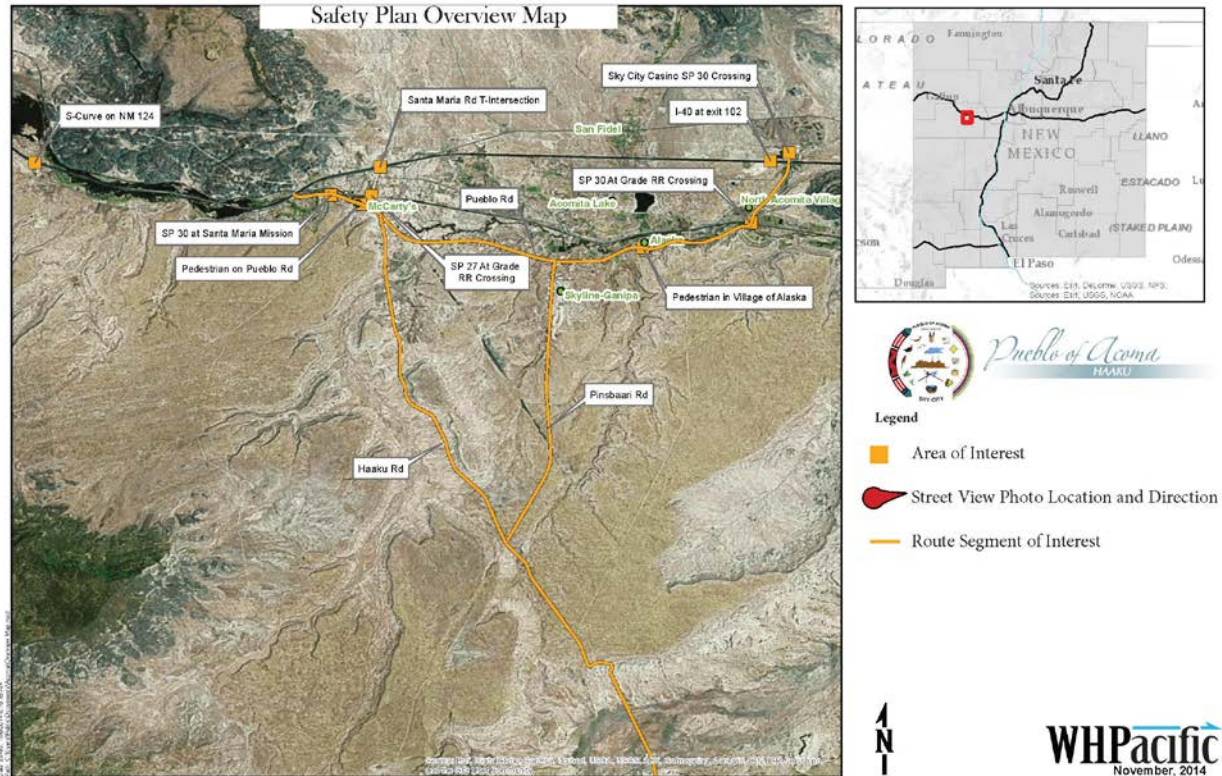
FIGURE 9: NEW MEXICO DOT AND UNIVERSITY OF NEW MEXICO 2014/2015 FATALITIES REPORT

Fatalities by County Relating to Alcohol, Belt Use, and Under 21 BAC, 2014 to Date							
County	Alcohol-involved Fatalities ¹		Unbelted Fatalities		Under 21 (15-20) with a BAC ²		Total Fatalities
	Count	Percent ³	Count	Percent ³	Count	Percent ³	
Bernalillo	35	50.0%	20	28.6%	3	4.3%	70
Catron	1	100.0%	-	-	-	-	1
Chaves	3	42.9%	5	71.4%	-	-	7
Cibola	1	14.3%	2	28.6%	-	-	7
Colfax	3	42.9%	5	71.4%	-	-	7
Curry	1	25.0%	2	50.0%	-	-	4
De Baca	-	-	-	-	-	-	-
Dofia Ana	11	57.9%	6	31.6%	1	5.3%	19
Eddy	2	12.5%	6	37.5%	-	-	16
Grant	-	-	1	100.0%	-	-	1
Guadalupe	1	14.3%	2	28.6%	-	-	7
Harding	-	-	1	50.0%	-	-	2
Hidalgo	-	-	8	80.0%	-	-	10
Lea	9	29.0%	6	19.4%	-	-	31
Lincoln	3	60.0%	2	40.0%	-	-	5
Los Alamos	-	-	-	-	-	-	1
Luna	-	-	-	-	-	-	1
McKinley	23	54.8%	17	40.5%	1	2.4%	42
Mora	2	50.0%	3	75.0%	1	25.0%	4
Otero	8	61.5%	4	30.8%	2	15.4%	13
Quay	2	18.2%	5	45.5%	-	-	11
Rio Arriba	4	44.4%	6	66.7%	-	-	9
Roosevelt	1	50.0%	2	100.0%	-	-	2
San Juan	16	44.4%	13	36.1%	1	2.8%	36
San Miguel	2	66.7%	3	100.0%	-	-	3
Sandoval	3	25.0%	8	66.7%	-	-	12
Santa Fe	6	33.3%	4	22.2%	-	-	18
Sierra	2	100.0%	1	50.0%	-	-	2
Socorro	1	12.5%	6	75.0%	-	-	8
Taos	6	60.0%	4	40.0%	1	10.0%	10
Torrance	2	50.0%	1	25.0%	-	-	4
Union	1	100.0%	1	100.0%	-	-	1
Valencia	7	77.8%	4	44.4%	-	-	9
Total	156	41.8%	148	39.7%	10	2.7%	373

1. All fatalities in alcohol-involved crashes.
2. Fatalities under 21 with a reported BAC (Blood Alcohol Content) above zero.
3. Percentage based on total fatalities in the district.



III-C. SAFETY HAZARDS ON PUEBLO ROADS



Comments and observations were gathered from Acoma Pueblo Public Works Department, Road Maintenance Department, and Planning and Engineering Office, along with comments written by private citizens on their Transportation Safety Questionnaire. An overview map of the area indicating locations of high crash numbers and road hazards that need to be remedied, is located above, and is followed by a breakout of the selected sites that either experience a high number of accidents or are hazardous and need to be reconstructed in order to prevent transportation issues that lead to hazardous outcomes.



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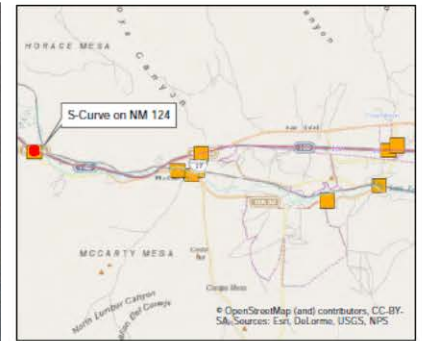
Over half of the respondents stated that this problem area is of high priority to them. Nearly one-third of respondents stated that this area is of medium priority. The issue here is that SP 30 is curving and due to a retaining wall within the line of sight for the road, visibility is low, impacting those traveling to and from the Santa Maria Church. Leaving the church parking lot is difficult and dangerous due to the limited line of sight. Trying to enter the church parking lot is also difficult because the drive way is narrow and drivers have to watch for oncoming traffic while trying to maneuver into this narrow space. Comments and observations received from community surveys and interviews regarding this location are as follow:

- Existing dilapidated house needs to be removed.
- Widen parking lot east of church.
- Completely uproot the elm trees growing near the retaining wall. They block the view on the curve.
- Hill just west of the church is in the shade during winter months and gets a lot of snow on the southernmost lane. This needs regular maintenance with salt treatment during winter.
- Have police on site during events or activities at the Mission so that traffic can be safely directed in and out.
- Need turnout relocated at Santa Maria Church (McCartys) entrance. Drivers have to slow down when entering church grounds to avoid “bump.” People coming from opposite direction are often not courteous in slowing down.



Pueblo of Acoma - Tribal Transportation Safety Plan

S-Curves on NM 124



Pueblo of Acoma
HAAKU

S-Curves Street View



WHPacific
November, 2014

Nearly three-fourths of respondents stated that this area is a high priority problem area. When Interstate 40 is closed, traffic is redirected to NM 124. At the S-curve site, there is concrete box tunnel under Interstate 40. The height of the tunnel is 13' 6". When I-40 is closed, NM 124 is an alternate route; however, commercial trucks are unable to use the alternate route due to the low height of the concrete box tunnel. Second, driving through the S-curve is dangerous due to the limited line of site of on-coming traffic in both directions. Currently, there is a discussion to relocate NM 124 south of Interstate 40 to alleviate the need to use the S curve underpass on NM 124.

Comments/Observations:

- The underpass on the S-Curve of NM 124 is 13' 6" in height. It is too low for tractor trailers to travel under it. The underpass is narrow on the south side entrance, with a square curb that is frequently hit by motorists.
- The underpass is not wide enough for two cars to pass safely without slowing considerably.
- It has been recommended that NM 124 be continued on to the frontage road (NM 117) on the south side of the highway. This would include design, preliminary engineering, and construction for new roadway.
- There is an icing problem in the underpass during winter months.
- Need to work on this area and the other side. (Referring to the actual tight curves on the road).
- Better caution signs needed (indicating the tight curve and low ceiling).
- Need a total new reconstruction and a better design.



Pueblo of Acoma - Tribal Transportation Safety Plan



Approximately 50% of respondents indicated that this area is a high priority concern and 25% indicated that it is of medium priority concern to them. Direction, information and destination signage is needed around each round about. Several historic, government and tourist destinations are located in this area, but lack of signage and lighting seem to be a problem. Other comments that came from the community are listed below.

Comments/Observations:

- “Road Ends” sign needed next to the road going to ACL.
- Lights are out. Need street lighting.
- Need guard rail extended east of roundabout on SP 130, Veterans Boulevard.
- Lighting issues at intersection of US 40 and SP 130, Veterans Boulevard
- Need proper and adequate signage on all three roundabouts, specifically, how to get to historic Acoma pueblo or the hospital, hotel, gas station, Governors’ office or tribal headquarters.
- There is a large drain pipe on west side. A lot of flood water comes through there and heads straight for the gas station, gets on the SP30 road and goes through the bridge toward Casino area. It causes accidents. Drainage comes off of the south side of the mountain area. A comprehensive drainage plan is needed for Exit 102 business area.
- Need caution lights.
- Larger stop sign at Exit 102/tribal road intersection. People coming off of I-40 do not stop at tribal road. They say they didn’t see the stop sign.
- SP 30 road needs to be reconstructed between I-40 and NM 124.



Pueblo of Acoma - Tribal Transportation Safety Plan



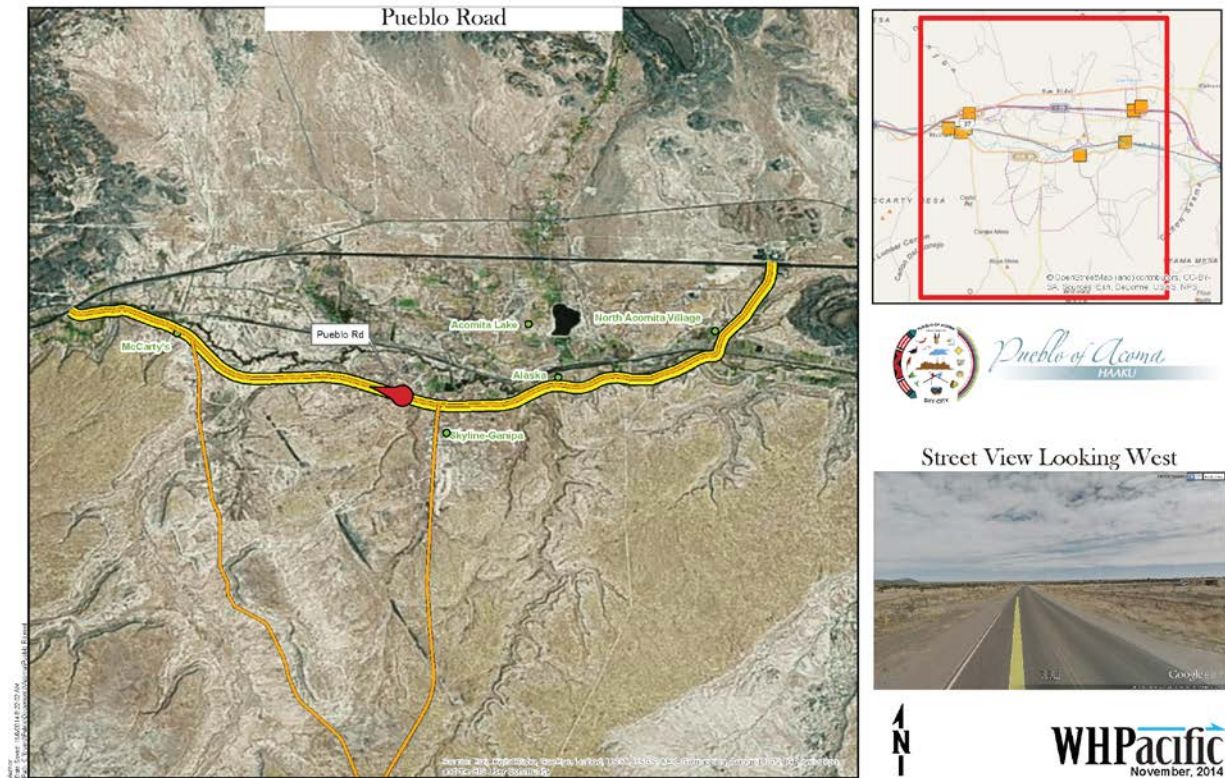
Fifty-five percent of respondents indicated this area to be of high priority to them. Pueblo Road is the main east/west route through Acoma Pueblo. Located on this road is a park area. The school bus stops frequently on Pueblo Road to pick up and drop off students. Warning signs for these school bus stops are inadequate in number and should be increased in order to abate the problem of drivers passing school buses that are stopped to pick up or drop off students.

Comments/Observations:

- No sidewalks. No pedestrian crossings.
- All roads need crossing locations.
- Widen shoulders on all the tribal roads.
- Need signs.
- Pedestrian crossings are needed on Pueblo Road for the children where the buses stop.



Pueblo of Acoma - Tribal Transportation Safety Plan



Over half of respondents indicated this area as high priority to them. Twenty-five percent indicated it to be medium priority. There are many pavement repairs needed along this route. Community comments are listed below.

- Acoma Pueblo needs mile markers on all of the roads.
- Pavement needs to be repaired at two sites on SP 30.
- Dip at the Small Largo Canyon Bridge where a culvert is settling.
- Need signs posted for all school bus stops.
- Would like to see a bike path for Tour de Acoma, bike rallies and for people walking to Acoma on Good Friday, or just for the people who have vehicles break down.



Pueblo of Acoma - Tribal Transportation Safety Plan



Over half of the respondents indicated that this area is of high priority to them. Another 25% indicated that it is medium priority. At the T-intersection, visibility to eastbound traffic is not clear. A guardrail blocks the view of oncoming traffic. Under the guardrail is a stream that flows through a concrete box culvert. There have been reported and unreported accidents at this location and some “near misses.” Studies have shown that the guardrail cannot be relocated unless the culvert and shoulder is extended by 6 to 8 feet south.

Comments/Observations:

- Box culverts need to be cleaned out. This was not completed by the State Highway Department.
- Bushes along fence need to be removed. The line of sight is inadequate for east bound traffic.
- Santa Maria Road is old and needs repaired.
- Keep both ways clear of bushes.
- Guard rail, lining, and road identifiers needed.
- Provide signs.



Pueblo of Acoma - Tribal Transportation Safety Plan



Eighty-three percent of respondents indicated this area is of high priority to them. There appear to be many transportation safety issues surrounding the business area of the Sky City Casino. Pedestrian safety is especially considered as a high level of pedestrians and vehicles interact on a daily basis. Community comments about the issues at this location are as follows:

- Cross walk at Exit 102 needs to be painted.
- Lights needed.
- There is a bad dip at the cattle guard south of Exit 102. The cattle guard needs to be lifted and leveled.
- Need pedestrian crossing signs.
- Need speed limit signs.
- Larger drain pipes are needed to prevent flooding.
- Caution lights are needed.
- Flashing lights and bright street lighting needed
- Location of a pedestrian crosswalk is not evident.
- Speed zone for pedestrian area is needed. A pedestrian bridge over the road would provide safe passage across the road.
- Provide signs and mark for crosswalk.



Pueblo of Acoma - Tribal Transportation Safety Plan

- Need pedestrian painted cross walk between casino and the store.
- Road SP 30 needs to be reconstructed between I-40 and NM 124.
- Pueblo Road should be widened in order to make improvements for pedestrians, truck drivers, and other traffic on this busy section of roadway.



Pueblo of Acoma - Tribal Transportation Safety Plan



Sixty-eight percent of respondents indicated that this area is of high priority importance to them. SP 30 leads to access to the hospital. However, SP 30 crosses the railroad tracks and is frequently blocked by passing trains. Trains can contain up to 100 cars and can run back to back. A large number of residents want to see an overpass built over the tracks so that emergency vehicles will have ready access to and from the Pueblo. Other comments from community members are listed below.

Comments/Observations:

- Need railroad crossing warning markings in each direction from the tracks.
- Need an overpass.
- Need lights for RR crossing to work.
- Need signage and speed signs.
- Needs a lot of work at the area.
- Needs to be clearer on where to stop. What is the emergency route to ACL?
- Need construction funds for the Mesa Hill Bridge Construction project.

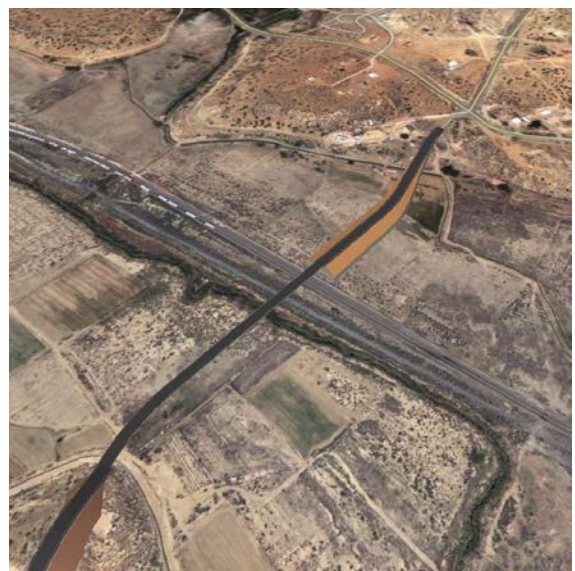


FIGURE 10: MODEL OF PROPOSED MESA HILL BRIDGE



Pueblo of Acoma - Tribal Transportation Safety Plan

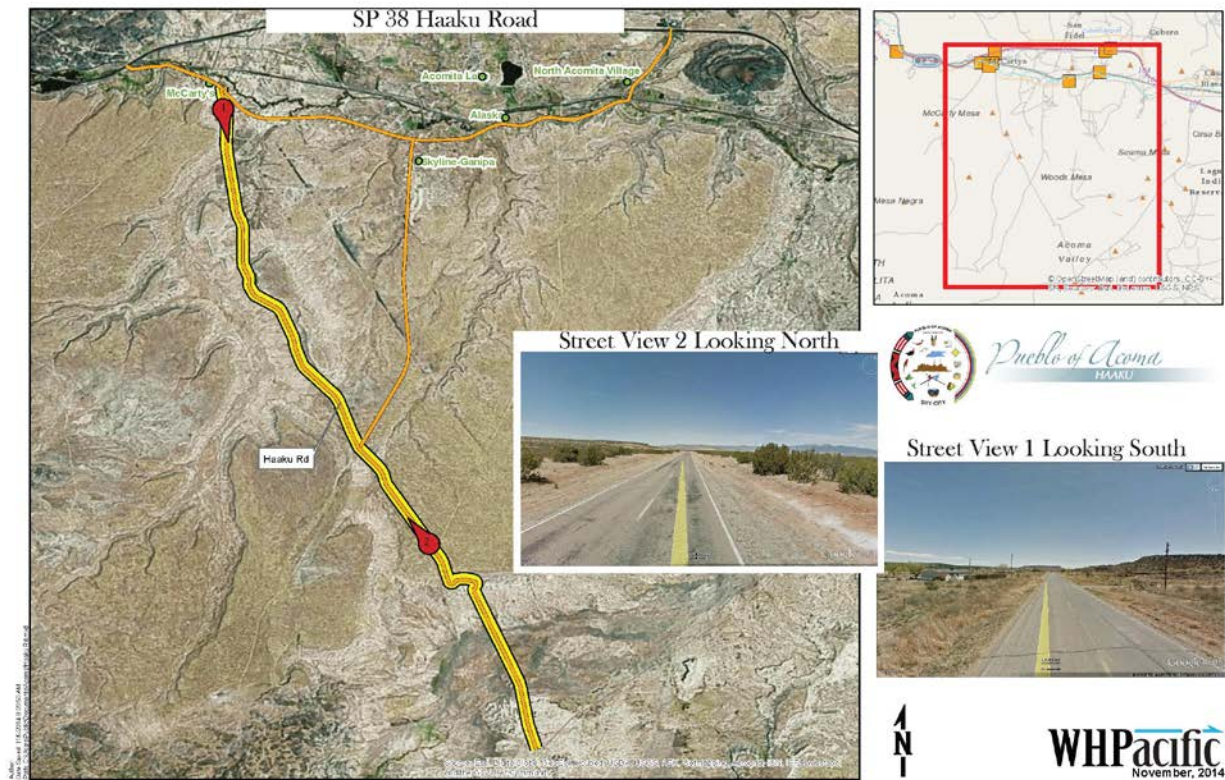


Sixty percent of respondents indicated that this location is considered a high priority issue for them. This road has had some reconstruction and this particular section was damaged. Funds have been acquired through FEMA to make repairs at nearby bridge. Along with repairing the pedestrian bridge walkway on SP 27, other comments were observed:

- Pedestrian bridge walkway on SP27 needs to be fixed.
- Speed signs and guard rails are needed.
- Need for Rail Road crossing lights to work.
- Need an overpass.
- Need funding for the Mesa Hill Bridge construction project.



Pueblo of Acoma - Tribal Transportation Safety Plan



Sixty-four percent of respondents said this road is a high priority issue with them. Haaku Road is an aging road and needs attention in several areas. The problems along Haaku Road include the fact that it runs through open range. Often, elk and cattle wander onto the roadway, putting drivers and themselves at risk. The current signage indicating open range and wild animals on the roadway are inadequate.

Part of the road runs down a mesa. Improved drainage structures and guardrails are needed for this section. Guardrails are needed on several sections of the road. Fallen rocks and boulders pose a hazard in sections of this road, as well.

Comments/Observations:

- Guardrails needed on this road south of cattle guard, around curves.
- Guardrails at bottom of hill.
- Dip at Antonio residence needs to be repaired.
- No shoulders on the road. Make road wide and pave it.
- Need fencing. Too many animals on the road.
- Signal open space: there is elk in that area.
- Possibly install retention fencing for falling rocks/boulders.
- More mowing and needs shoulder work for emergency

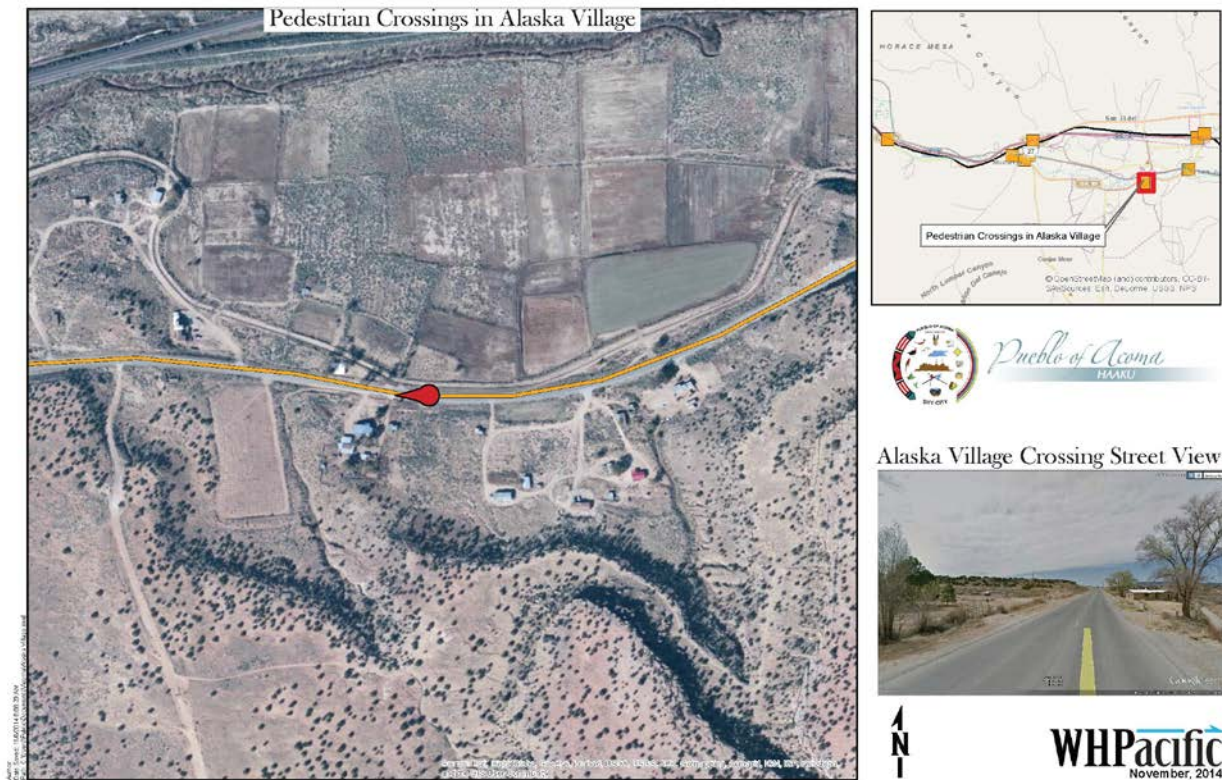


Pueblo of Acoma - Tribal Transportation Safety Plan

- This road is dangerous for school buses and other traffic. Haaku Road is old and breaking up, rough, no reflective signs. It's narrow, no fence to keep animals off the road. Almost no signage.
- Road SP 38 needs to be reconstructed.



Pueblo of Acoma - Tribal Transportation Safety Plan



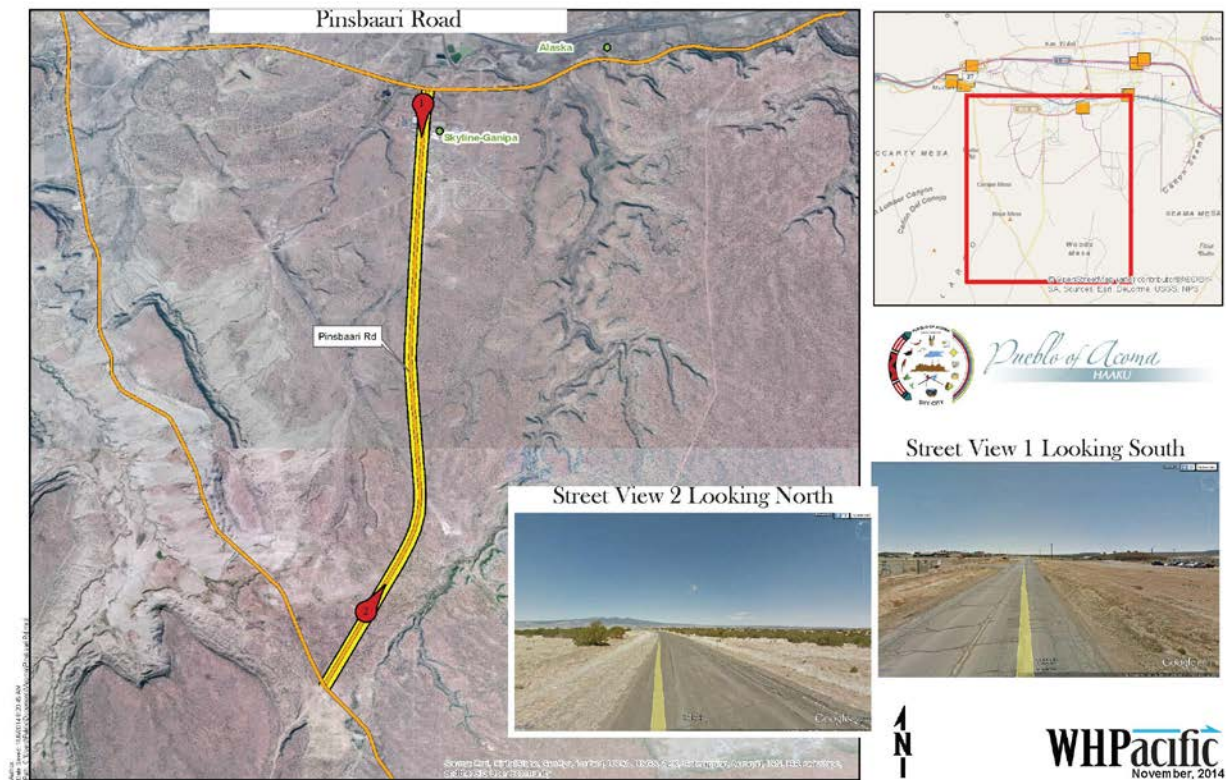
Nearly 50% of respondents indicated that this is a high priority for them. Twenty-six percent of respondents indicated that the area was of low priority to them. The community comments regarding this area of the road seemed to reflect very little about the pedestrian crossings in Alaska Village. Parking is inadequate at the local cemetery. When vehicles are parked on the dirt shoulders, pedestrians are forced to walk in the roadway to the cemetery.

Comments/Observations:

- Drainage needs to be realigned.
- Elm trees need to be removed along the road.
- Pavement breaking up in several places.
- "What does it need is the question."
- Consistent residential speed limits.
- Signs needed.



Pueblo of Acoma - Tribal Transportation Safety Plan



A high percentage (76%) of respondents felt that this road has some high priority issues. One prevalent feeling was that there is no space on this road for pedestrians. A walking and bicycle path are needed so that people don't have to walk in the roadway. Because the school and the post office are located on Pinsbaari Road, this is a cause for concern when pedestrians congregate outside these locations. Several varied comments from the community suggest that this road needs attention.

Comments/Observations:

- Entire roadway needs design and reconstruction.
- Need crossing painted at Sky City School.
- Need "Stop Ahead" painted on SP 32 before getting to cross road at Crow Point.
- Need emergency lights at the safety building to warn people that a fire truck or ambulance is coming into the road.
- Pot holes on Pinsbaari drive need to be fixed, or entire road.



Pueblo of Acoma - Tribal Transportation Safety Plan



At the T-intersection of Diichuna Road and Pueblo Road, visibility is a problem. A rock building ruins are located on the southwest corner of this intersection. Because of the curve in the road, it is difficult for drivers on Diichuna Road to see eastbound traffic coming on Pueblo Road (SP 30). This presents a hazardous situation. Engineering for this intersection is needed. Public comment was not taken on this site as the location was added after community surveys had been completed.



Pueblo of Acoma - Tribal Transportation Safety Plan



New Mexico Route 124 intersects with New Mexico Route 117 at Exit 89. At the current T-intersection of NM 124 and NM 117, when leaving the Sky City Travel Center on to NM 117 and crossing over to NM 124, the line of sight of south-bound traffic on NM 117 is very limited. At this same entrance to the Sky City Travel Center, there are two 30-foot gates; there is no signage or striping to control traffic. This entrance/exit needs to be reconstructed.

Currently, there is a discussion to relocate NM 124 south of Interstate 40 to alleviate the need to use the S curve underpass on NM 124.



IV. EMPHASIS AREAS

The Pueblo of Acoma has identified the following Emphasis Areas, in accordance with the plan's mission to provide safer transportation conditions for motorists, bicyclists, and pedestrians traveling in the vicinity of Tribal lands. The emphasis areas were selected based on feedback from multiple sources, including the community questionnaire, Acoma Police Department observations, information from the Tribe's recent Long Range Transportation Plan, and input from the project team. The transportation safety emphasis areas for the Acoma Pueblo include:

- Motorists Driving While Intoxicated (DWI)
- Emergency Vehicle Access at Railroad Crossings
- Non-use of Seatbelts/Non-use of Child car seats
- Motorists Running Stop Signs
- Distracted Driving (texting, applying makeup, etc.)
- Speeding Motorists
- Children playing on roads
- Passing school buses when picking up and dropping off school children

IV-A. EMPHASIS AREAS, GOALS AND STRATEGIES

The following section provides background on each emphasis area, outlines the Pueblo's goals and strategies for improving conditions.

REDUCTION OF DRIVING WHILE UNDER THE INFLUENCE OF INTOXICANTS (DWI)

Background

In New Mexico, it is illegal to drive with a breath or blood alcohol concentration of .08 or more if you're 21 or over, or .02 if you're under 21, or .04 if you drive a commercial vehicle. Alcohol is involved in about 40% of the traffic crashes in which someone is killed.¹

Alcohol-impaired driving continues to be a significant issue for the Pueblo. The highest survey response from Pueblo of Acoma was this topic area. Out of 84 responses, 75 indicated that driving while intoxicated is an issue of "high priority." From 2004 – 2008, there were 22 fatalities due to driving while intoxicated in Cibola County. From 2009 – 2011, State, City and Tribal Police report six DWI crashes. When impaired drivers are in minor or single-vehicle accidents, the incidents frequently go unreported due to the lack of local law enforcement. It is likely that the actual percentage of alcohol-related accidents is even greater than the official number reported by the State of New Mexico.

Goal

The goal of this emphasis area is to reduce the number of intoxicated drivers on Pueblo lands.

¹ Retrieved 2/16/2015 from <http://mvd.newmexico.gov/dwi-information.aspx>



Pueblo of Acoma - Tribal Transportation Safety Plan

Strategies

Education

- Schedule speakers to visit schools with testimonials on the effects of drunk driving. Develop educational programs targeting specific age groups – children, teen drivers, adults, and elders.
- The Pueblo will work with area pueblo schools to have a “No Driving While Intoxicated” campaign. The idea behind this is to start at an early age to warn students of the dangers of DWI.
- The Pueblo will continue to hold regular DWI prevention campaigns, such as Drive Sober or Get Pulled Over. Special events will target middle and high school students. Public Service Announcements and information booths at Pueblo events will be utilized to build awareness.
- The Pueblo will organize an informational presentation on alcohol serving guidelines, working closely with Acoma Police Department.

Engineering

- Consider adding rumble strips to sides of all roads and highways to alert drivers when they are leaving their lane.
- Install guardrail at areas where there is a high incidence of road departures

Enforcement

- Install signage reminding motorists not to drive while intoxicated
- Work with local law enforcement to establish periodic sobriety checkpoints in targeted areas.

Emergency Response

- Organize Emergency Medical Responder (EMR) training programs in Pueblo of Acoma, with the goal of having at least five (5) certified EMRs living on the Pueblo.²
- Offer EMT training course in Acoma, with the goal of increasing the number of local Paramedic EMTs.

EMERGENCY VEHICLE ACCESS

Background

Acoma Pueblo completed the design of a new grade-separation structure over the Burlington North Santa Fe Railroad. The goal of this project was to provide a safe crossing over the railroad while minimizing right-of-way and impact to nearby residences. This project would include new road and bridge construction. The project will significantly



FIGURE 11: ACOMA HOSPITAL

² An EMR is essentially a certified “First Responder” who is able to provide pre-hospitalization services until an ambulance arrives (similar to a police officer or firefighter arriving on the scene). EMR training programs are typically around 40 hours.



Pueblo of Acoma - Tribal Transportation Safety Plan

impact north-south access for the Pueblo and improve emergency capabilities.

Goal

Construction of a railroad overpass and access road between the Pueblo of Acoma and the Acoma Indian Health Service Hospital.

Strategies

Education

- Meet with community stakeholders and Burlington Northern Santa Fe Railroad to partner on this project.
- Conduct meetings to educate stakeholders on the urgency of emergency vehicles having access to the Pueblo.

Engineering

- Locate funds to pay for construction costs of the overpass.
- Construct new access road and overpass.

SEATBELT USE

Background

Effective and consistent use of safety restraints can greatly reduce driver and passenger injuries in the event of a vehicle collision. Although the safety benefits of seat belts are widely known, Tribal communities typically have a lower rate of seat belt use than the general public. Native American use of seatbelts is 62% (2006), as compared to the national average of 82% (2007). Acoma Police Department reports low seatbelt use among Pueblo members. The *NMDOT Comprehensive Transportation Safety Plan* (CTSP) 2010 Update also includes the emphasis area of "Occupant Protection."

Goal

Increase the use of proper vehicle restraints, including seatbelts and car seats, among Acoma Pueblo members.

Strategies

Education

- Conduct survey or focus group to determine cultural / behavioral factors behind low seatbelt compliance. Develop strategies specific to the identified factors.
- Work with area elementary schools and Head Start to inform children of the importance of seatbelts.



FIGURE 12: MODEL OF PROPOSED MESA HILL BRIDGE



Pueblo of Acoma - Tribal Transportation Safety Plan

- Conduct a “car seat drive” to provide free car seats and booster seats, perform car seat inspections, and educate community members about car seat laws.
- Acoma Police Department and family service providers will conduct a seatbelt/car seat awareness educational campaign targeted at Pueblo members. The campaign will include information tables at Pueblo events.
- Acoma Police Department and family service providers will provide free car seat inspection and distribution programs.

Engineering

- Install “Click it or Ticket” signs within each Tribal community (with fine amounts noted).

Enforcement

- Work with Acoma Police Department and Sherriff Department to increase traffic enforcement (including seatbelt compliance). Even intermittent enforcement (e.g. once a month or so) will likely have a positive effect, as drivers will soon learn that there is a possibility of being ticketed.
- Conduct seatbelt checkpoint events.

STOP SIGN RUNNING

Background

The emphasis area of stop sign running is closely aligned to that of intersection safety. Stop sign running presents a significant risk to motorists, bicyclists and pedestrians. A national study revealed that approximately one in three people report that they personally know someone who was injured or killed due to an accident where red-light running was a factor.³

Goal

The goal of this emphasis area is to reduce the incidence of motorists running stop signs on Pueblo lands.

Strategies

Education

- Education outreach for this emphasis area will be combined with the intersection safety efforts. The PSAs and information tables discussed under intersection safety will also encompass stop sign running.

Engineering

- The Pueblo will conduct a sign retro-reflectivity study, assessing the nighttime visibility of signs on Tribal lands. New federal requirements mandate that public agencies (including tribal governments) comply with retro-reflectivity requirements for most traffic signs. Retro-reflectivity is important to ensuring nighttime visibility for drivers, thereby reducing the chance of collisions.

³ Source: *A Nationwide Survey of Red-Light Running: Measuring Driver Behaviors for the “Stop Red-Light Running” Program*, Old Dominion University, June-August 1999.



Pueblo of Acoma - Tribal Transportation Safety Plan

- Intersection improvements, such as the addition of stop bars and improved striping, will help motorists recognize the need to stop at rural intersections.

Enforcement

- As discussed under intersection safety, Acoma Police Department will provide targeted traffic law enforcement at high-risk intersections, including stop sign laws.

ANIMAL COLLISION PREVENTION

Background

Roaming dogs, grazing animals and wild animals, such as elk, deer and coyote, present a continued risk to motorists and cyclists.

Goal

The goal of this emphasis area is to reduce the number of animal collisions on Pueblo lands.

Strategies

Education

- Install better signage on the road to let drivers know that animals are in the open range area and can cross the road.

Engineering

- Install fencing and guardrails along the road to prevent animals from entering the roadway

INTERSECTION SAFETY

Background

Intersections always involve a heightened level of safety awareness, as they are designed as a “planned point of conflict.”⁴ The risks associated with unsignalized rural highway intersections are well documented. Approximately 56% of road fatalities occur in rural areas.⁵ Motorists often travel at high speeds on rural highways, not expecting to have to suddenly yield to a slowing vehicle, a crossing pedestrian or bicyclist. While rural intersection collisions occur less frequently than urban intersection collisions due to lower traffic volume, the risk of injury and/or fatality tends to be higher in rural collisions due to the average vehicle speed. Over 80% of rural intersection fatalities occur at unsignalized intersections.⁶ Rural unsignalized intersections experience twice as many fatal crashes as urban unsignalized intersections.⁷

⁴ FHWA Website – Intersection Safety. <http://safety.fhwa.dot.gov/intersection>.

⁵ National Highway Traffic Safety Administration (NHTSA) (2008)

⁶ FHWA, Volume 5, NCHRP Report 500: A Guide for Addressing Unsignalized Intersection Collisions (2011)

⁷ National Cooperative Highway Research Program (2003), Report 500, Volume 5: A Guide for Addressing Unsignalized Intersection Collisions.



Pueblo of Acoma - Tribal Transportation Safety Plan

On a national level, approximately 21% of vehicle accident fatalities and 50% of serious injuries have occurred at intersections in recent years.⁸ The accident data collected by Acoma Police Department shows that certain intersections are experiencing a high level of vehicle collisions.

Goal

The goal of this emphasis area is to reduce the number of pedestrian/vehicle and vehicle/vehicle conflicts by improving intersections and incorporating complete street concepts to encourage safer crossings.

Strategies

Education

- Educational campaigns will highlight safety problems at “high risk” intersections. The Pueblo will issue PSAs to urge drivers to be particularly wary when accessing these intersections. Acoma Police Department will display the accident map developed for this document at key Pueblo meetings to build awareness of the risks associated with these areas.

Enforcement

- Acoma Police Department will provide targeted enforcement of traffic laws at high-risk intersections.

Engineering

- Conduct safety audit.
- Redesign and reconstruct unsafe intersections.

SPEED MANAGEMENT

Background

FHWA reports that speeding is a contributing factor in nearly one-third of vehicle collisions.⁹

Goal

The goal under this emphasis area is to reduce the incidence of speeding motorists on Pueblo lands.

Strategies

Education

- As with other emphasis areas, the Pueblo will organize Public Service Announcements on this topic area, as well as hold informational tables at Public Safety Day and health fairs.



⁸ FHWA Website – Intersection Safety. <http://safety.fhwa.dot.gov/intersection>.

⁹ FHWA website: <http://safety.fhwa.dot.gov/speedmgt/>



Pueblo of Acoma - Tribal Transportation Safety Plan

Engineering

- The Pueblo will add features such as speed tables and striped crosswalks in areas where speeding is a continual issue.

Enforcement

- Acoma Police Department will rent one or more portable speed trailers that can be moved to different locations. Additionally, a police car will be occasionally parked in strategic areas, prompting motorists to slow down.
- Tribal police, NM State Police, and/or county sheriffs should work together to increase enforcement of speed laws. Even intermittent enforcement (e.g. once a month or so) will likely have a positive effect, as drivers will soon learn that there is a possibility of being ticketed.
- Increase Tribal Police presence on the roads through the purchase of additional vehicles and personnel.

CHILDREN PLAYING ON ROADS

Background

Survey respondents have voiced concern in regard to children playing on and near roads in Acoma. Children are vulnerable road users. Anywhere there is a potential for moving vehicles is a potentially dangerous traffic situation for children. This includes residential areas, parking lots, at traffic lights, along footpaths, pedestrian and other crossings, driveways, quiet streets, and busy streets.



Parents and caregivers have a key role in educating their children about road safety. Children learn about road safety largely by experience. Parents and adult caregivers have opportunities in day-to-day routines to discuss road safety with children on the way to the post office, local shop or going to school. Whenever crossing roads, it is a good idea to talk about when and why it is safe to cross the road with your children so they can gain a good understanding of road safety issues.¹⁰

¹⁰. <http://www.kidsafensw.org/road-safety/pedestrian-safety/> April 10, 2015



Pueblo of Acoma - Tribal Transportation Safety Plan

Goal

Reduce the risk of pedestrian/vehicle collision when children are at play in or near the roadway.

Strategies

Education

- Introduce road safety education as a community and school campaign.

Engineering

- Install “Children at Play” signs in areas where children are frequently near or in the road.
- Work with other programs to construct community parks in large residential areas.

Enforcement

- Post reduced speed limit in residential areas and in places where children frequent, such as school zones and playground or recreational/community centers.

PASSING SCHOOL BUSES WHEN STOPPED

Background: New Mexico law states that, if a stopped school bus is displaying a flashing, alternating red lamp, a driver of a vehicle meeting or overtaking the stopped bus from either direction (front or back) must stop and wait until the bus moves again or the red light is off. Police officers, school crossing guards, and even school bus drivers themselves may have the power to wave traffic on, even when a red light is flashing.



School bus drivers from Acoma community schools are experiencing a transportation hazard when driving their daily routes. Bus drivers are seeing other drivers pass their buses while they are stopped to load or unload children along the route. This unlawful and unsafe behavior increases the risk of injury or death to students as they approach or exit the school bus. A map (Figure 13) documenting area school bus routes extending on to Acoma Reservation lands appears on the following page.

Goal: Stop drivers from passing school buses stopped for loading and unloading students.

Strategies

Education:

- Develop a school bus safety campaign on the Pueblo. Post signs in the community warning drivers that passing stopped school buses is illegal and dangerous.



Pueblo of Acoma - Tribal Transportation Safety Plan

Enforcement:

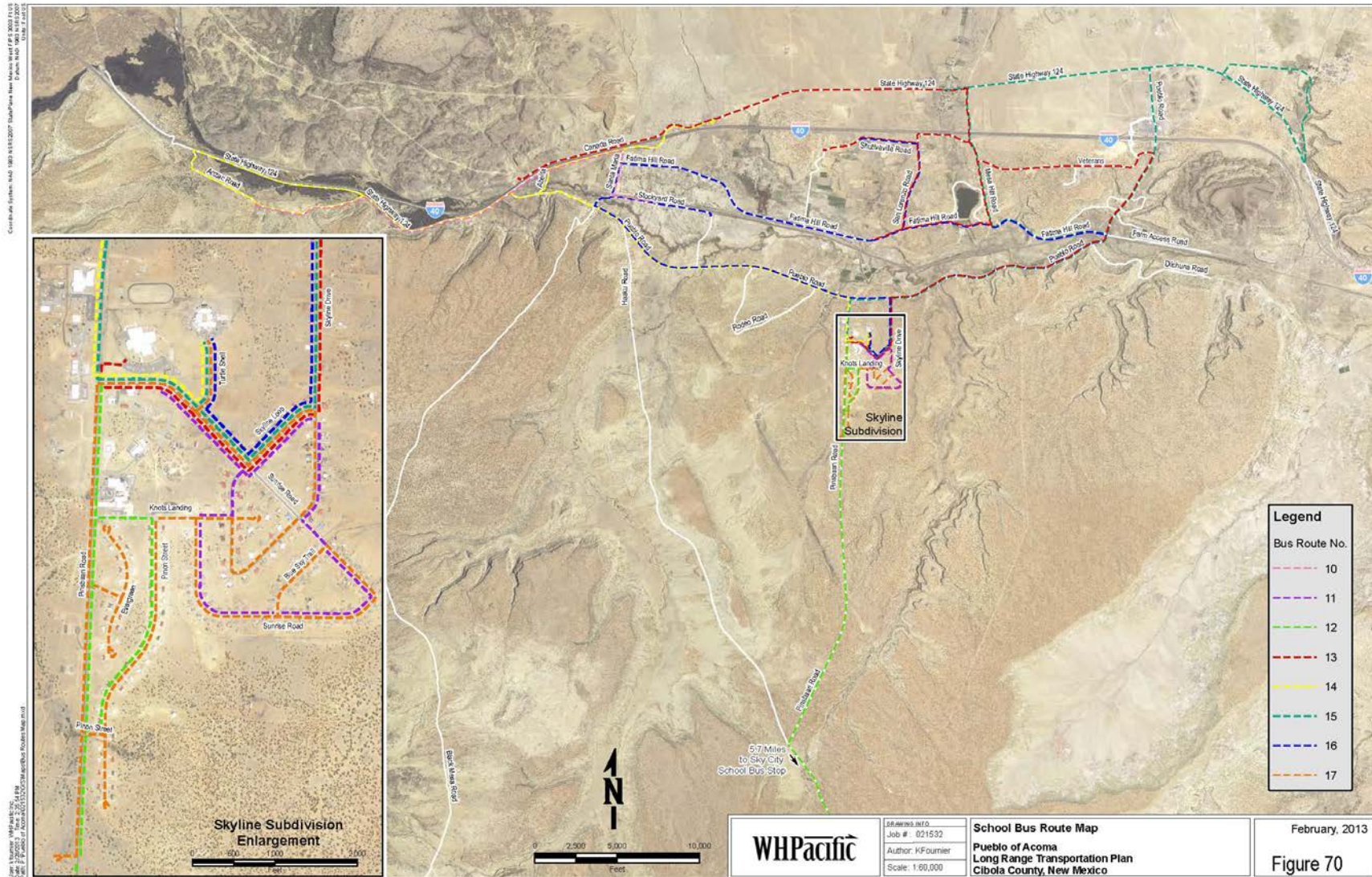
- Install video cameras on the buses to capture images of traffic passing illegally.
- Post police officers at locations where drivers are often passing stopped buses. This may curtail illegal passing in that area.





Pueblo of Acoma - Tribal Transportation Safety Plan

FIGURE 13: ACOMA AREA SCHOOL BUS ROUTES





PEDESTRIAN AND BICYCLIST SAFETY

Background

Acoma Pueblo is dedicated to promoting physical fitness among community members through recreational bicycling. Indeed, the Pueblo hosts an annual Tour de Acoma bicycling event in the fall of each year. Three courses are provided to meet the needs of cyclists of different skill levels. The Tour de Acoma attracts cyclists from throughout the region and beyond. The current race courses use local Pueblo roads; however, if a network of dedicated bike paths was created, this would create safer conditions for cyclists and motorists.

Pedestrian and bicyclist safety encompasses several documented areas of concern for the Pueblo:

- There are concerns over children playing or walking in streets, particularly in residential areas.
- There are groups of cyclists that regularly cross the Reservation, often along roads or highways with narrow or no shoulders.



Goal

The goal of this emphasis area is to reduce the number of pedestrian/vehicle conflicts by improving pedestrian / bicycling infrastructure and encouraging safe crossing practices.

Strategies

Education

- The Pueblo will hold annual “Bike Rodeos” – a bicycle safety clinic featuring instruction in safe bicycling practices, related traffic laws, bike safety inspections, minor repairs, helmet fit test, a safety lecture, drawings, and prizes.
- The Pueblo will organize a bicycle helmet distribution program. Approximately 70-80% of bicycle fatalities involve head injuries.
- Tribal brochures highlighting pedestrian and bicycle safety guidelines will be developed and distributed (e.g. walk opposing traffic, wear reflective gear at night, use crosswalks, don’t walk along the railroad tracks, etc.).
- Work with Indian Health Services (IHS) to develop an Injury Prevention Program.
- Create and support an annual Bike Fair on the Pueblo.
- Organize a presentation on “Safe Practices for Mature Motorists.”
- Purchase clip-on headlights and flashing red taillights for distribution



Engineering

- Installation of “children at play” signs and streetlights near residential areas will improve drivers’ awareness and visibility of children playing in or near roads. Acoma Police Department will also provide intermittent targeted enforcement of speed laws in residential areas.
- Wider shoulders are required along highways to accommodate the group of cyclists that pass through Pueblo lands. The Pueblo will work with NMDOT and FHWA to plan for shoulder improvements along state, BIA, and Tribal roads. “Share the Road” signs will be installed as a reminder to motorists to accommodate cyclists.



DISTRACTED DRIVING

Background

Today, cell phones, tablets, stereos, and other electronic devices proliferate the car environment and serve as an endless form of distraction. Some drivers try to “multitask” by eating while driving, or even applying make-up. An increasing number of accidents are due to drivers momentarily taking their eyes off the road due to distracting influences. New Mexico’s ban on text messaging while driving is in full effect. Fines are \$25 for a first offense, then \$50. The distracted driving law, which became effective July 1, 2014, outlaws typing on handheld mobile devices and use of web sites. Cell phone calls remain legal.

Goal

The goal of this emphasis area is to reduce distracted driving behaviors on Pueblo lands.

Strategies

Education

- The Pueblo will organize educational resources on the dangers of “distracted driving” (e.g. texting, etc.). Slightly different PSAs will be organized for different age groups (e.g. youth, parents, elders). Teenaged drivers will be asked to sign a pledge stating they will not text while driving.

Engineering

- The Pueblo will work with NMDOT to assess areas where rumble strips might help alert drivers when they are leaving the confines of their traffic lane.

Enforcement

- Acoma Police Department will provide targeted enforcement of the new state law prohibiting texting while driving.



HIGHWAY DIVERSIONS THROUGH RESERVATION

Background

Motorists sometimes use Reservation roads to avoid highway traffic. Frustrated by traffic delays, they often speed across the rural roads to make up for lost time. This creates a number of hazards, as these speeding motorists are often unfamiliar with the road network and not looking for pedestrians. Furthermore, when accidents along area highways result in closures, traffic will be diverted through the Reservation. When this occurs, in addition to the typical traffic and safety concerns, there is the added possibility of hazardous spills.

Goal

The goal associated with this emphasis area is to reduce hazards associated with motorists cutting through the Reservation.

Strategies

Education

- Create Public Service Announcement specifically for disseminating information about road closures and available alternative routes. These announcements would serve both the traffic passing through the reservation and the pedestrian residents who may need to avoid or use extra caution in high traffic areas.

Engineering

- Design and reconstruct NM 124 to meet design standards for commercial trucks.
- Include bicycle lanes on NM 124 and other roadways.
- Extend NM 124 from the S-Curve to NM 117 south of I-40.

Enforcement

- Acoma Police Department will create a special enforcement plan for times when adjacent highway closures lead to traffic diversions through Reservation. This plan will be shared with NMDOT and New Mexico State Police, to ensure that they are aware of the enforcement requirements.
- Acoma Police Department will use speed trailers to discourage speeding behaviors by motorists cutting through the Reservation. This strategy is shared with the “speeding reduction” emphasis area.



ROAD ACCESS DURING FLOODING EVENTS

Background: In times of heavy rain and flooding, water gathers in the borrow pit north of the Sky City Casino. Flood waters follow Pueblo Road south to the Casino and often enters the Casino building. Acoma Pueblo tribe is in discussions with the Army Corps of Engineers and FEMA regarding possible solutions to this problem.

Goal: To mitigate the damage from seasonal flooding during times of heavy rain.

Strategies

Engineering

- Enlarge current retention ponds north of Sky City Casino near Pueblo Road to allow maximum retention of flood waters. There are two ponds east of Pueblo Road and one borrow pit/retention pond west of Pueblo Road and north of the Casino. Capacity for holding more water would help mitigate flood damage to facilities south of the ponds.
- Drainage ditches near the Casino and truck stop should be analyzed for capacity. A watershed management and flood plain management study should be conducted to find other answers to this problem and other roadway sites along I-40 and NM 124.

FIGURE 14: SKY CITY CASINO FLOOD AREA



ROAD SAFETY HAZARDS:

General road safety hazards were noted in community survey responses and warrant mention in this safety plan. Safety hazards on Acoma Pueblo range from wildlife in the roadways, disregard for railroad crossing gates, narrow roadways with no shoulders to easily flooded roads and past due bridge inspections. Each of these hazard items have been named by the Acoma community as issues that need attention and correction. Road safety hazards are generally eliminated by implementing effective planning and maintenance measures. However, some of the issues will need road design and construction funds to correct.

The BIA is obligated by CFR 25, Part 170, to maintain the BIA road system to a safe and satisfactory standard based on the availability of funds and the road's as-built condition. Road maintenance funds are appropriated by Congress and allocated to the BIA separately from the Federal Highway Trust Funds (HTF) used for initial construction. Road maintenance funds are used to provide an optimal level of road



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maintenance based on the road condition and the availability of funds. Road maintenance activities include: the preservation and repair of the road surface, blading roadway shoulders and ditches, clearing drainage structures, snow removal and the installation/replacement of traffic control, directional and street signs.

Typically the agency road engineers/managers work with the tribes in establishing a road maintenance program to determine the type and level of maintenance to be performed on BIA roads within each Reservation based on agency's road maintenance budget. Maintenance priorities are frequently determined by weather and/or road conditions which inhibit access to and from communities to employment centers, community services and health facilities. Emergency road conditions have highest priority. Other priorities are determined based on surface type and use.

If roadways funded and constructed with HTF are not properly maintained, then future HTF road construction funds can be withheld. This situation might occur if maintenance funding is limited such that adequate repairs and upkeep of the roadway are not possible.

Examples of maintenance tasks may include the following:

- **Guardrail installation:** The parking area at the top of Gummi Hill is in need of guardrail. Indian Service Route 38, leading away from the parking area has aging guardrail that needs to be replaced. Other issues in this area are: undersize drainage, falling boulders and deteriorating asphalt on the roadway.

FIGURE 15: INDIAN SERVICE RTE 38 GUUMI HILL PARKING AREA AND DROP OFF



FIGURE 16: GUUMI HILL GUARD RAIL REPLACEMENT NEEDED



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- **Brush removal:** Brush removal will be performed to prevent the encroachment of vegetation on roadways. Brush will be regularly cleared from the “road clear zone” to provide an extra margin of safety for travelers.
- **Dust control:** Measures will be taken to control dust generated by traffic or road construction. Dust control may be implemented through use of calcium chloride, magnesium chloride, or other forms. Frequency of application may be determined based on need and funding availability.
- **Snow removal:** Any significant accumulation of snow will be removed as soon as practical, generally within 24 to 48 hours, prioritizing roads within the TPP inventory.
- **Grade, fill potholes and reshape roads:** Grading will be done by routine blading and adding gravel as needed either by “spot graveling” or re-graveling entire sections. Potholes will be filled and additional maintenance may be performed to maintain a drivable surface. Grading and reshaping will be accomplished as needed during the summer months.
- **Unsafe parking areas:** Parking areas and parking lots can be dangerous places for pedestrians as well as drivers. On Acoma Pueblo, there are several parking areas and lots that are or have become dangerous due to ill repair, poor design, or lack of signage. Figure 15 shows the Santa Maria Mission and parking area. New Mexico has laws in place regulating accessibility of parking for disabled individuals. At the Santa Maria Mission, the west parking area has no curbs, no marked handicapped accessible parking, no lighting, and no striped parking spaces. Other issues with this site are the state of disrepair on the dirt road leading to the parking area and a twenty foot drop off that has no guardrail.

Similar issues occur in the parking lot of Acoma Behavioral Health Services Building, the Acomita Church parking lot and the McCartys Church parking lot. Parking lots on Acoma Pueblo are not currently listed in the BIA road inventory; however, Acoma Pueblo plans to enter the parking lots into their inventory in 2016.

FIGURE 17: UNSAFE PARKING AREA AT SANTA MARIA MISSION





FIGURE 18: SANTA MARIA MISSION



FIGURE 19: PARKING LOT AT POST OFFICE AND TRIBAL GOVERNMENT BUILDING, IN NEED OF RESURFACING AND STRIPING



FIGURE 20: PARKING LOT IN NEED OF RESURFACING





NEEDED DESIGN AND CONSTRUCTION PROJECTS

Rock Slides: Two rock slide areas are noted. One is located on Pueblo Road (see Figure 15) and the other is located on Fatima Hill Road. Both situations require space for a pedestrian walkway and widening of the road to prevent rocks on the roadway and to protect pedestrians/bicyclists.

FIGURE 21: ROCK SLIDE AREA 1. FATIMA HILL ROAD, SP 34; AREA 2. PUEBLO ROAD, SP 30



FIGURE 22: ROCK SLIDE AT ROMERO PASS ON PUEBLO ROAD, SP 30



FIGURE 23: ROCK SLIDE AT GUMMI HILL ON HAAKU ROAD, SP 38



IV-B. EMERGENCY RESPONSE IMPROVEMENT STRATEGIES

Background

The fourth “E” - Emergency Response – is discussed as its own category, as the strategies apply uniformly to each of the emphasis areas discussed previously. Emergency response times and procedures are generally very effective on the Reservation. The Acoma Police Department and Fire Department work closely with other public safety agencies to quickly respond to accidents and transport injured parties to area medical facilities.

One obstacle to emergency response is that non-Pueblo responders sometimes have difficulty locating addresses or locations on Pueblo lands. The Pueblo recently completed a rural addressing project – all streets on Pueblo lands now have official street names. Additionally, the Pueblo completed an E911 Emergency Management System, enhancing communications across rural areas in the event of a natural disaster or emergency situation. Effective coordination between Pueblo and outside agencies is always high-priority goal for the Acoma Police Department and Fire Department.

Train traffic creates safety issues for the Pueblo. Approximately 96 trains pass through the Pueblo each day. Emergency responders are often delayed by train crossings.

Goal

Reduce average emergency response times on Pueblo lands, resulting in improved outcomes for injured parties following vehicle collisions.

Strategies

The strategies identified under the area of emergency response include:

- Assure and install adequate street signs.
- Improve and install residential physical addresses to assist emergency responders with finding locations on Pueblo lands.
- Organize annual training event for various public safety / EMS agencies (e.g. police, fire, EMTs) to help coordinate response procedures.

IV-C. IMPLEMENTATION

The Acoma Pueblo Tribal Transportation Safety Plan is now ready for implementation. The plan should be disseminated in the community to potential safety partners and made available to residents. The first step for the Acoma tribe is to appoint a local transportation safety champion. That champion will contact each potential safety partner to meet in regard to the appropriate emphasis area. The champion will ensure that there is necessary buy-in and can map steps to effectively implement the transportation safety strategies.

Most projects will require outside funding to accomplish, so it will be necessary to monitor funding cycles from the Federal Highways Administration, New Mexico Department of Transportation, and Bureau of Indian Affairs Tribal Transportation Program. As needed, the Transportation Safety Champion can help safety partners identify appropriate funding sources.



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As work continues on Safety Plan action items, it will be necessary to evaluate success of the efforts. The plan should be reviewed on an annual basis and, after five years, updated to reflect current conditions.

Evaluation

Ongoing evaluation is important to the success of any plan. The purpose of ongoing evaluation is to determine if safety plan goals are being met, if action items for emphasis areas are being pursued, and if new issues have developed since the plan was created. To provide accountability on the action items identified in this transportation safety plan, a safety planning committee should be established. The Standing Committee – led by the Transportation Safety Champion – should include representatives of the significant transportation safety entities in the community, including the Tribe, the City, the Public Safety Department and the Public Works Department. Meeting frequency can be determined by the Committee, but the group should meet annually, at a minimum.

The Safety Planning Committee will be responsible for monitoring progress on action items through interviews with agencies or staff responsible for each emphasis area. For instance, an interview with local police will provide data what actions recommended in the Safety Plan have been pursued, and whether citations for DUI or speeding have decreased. Findings from interviews will be reported to the committee. If the results suggest that sufficient progress is not being made, the committee will take steps to accelerate work on the action item. The Transportation Safety Planning Committee can assist safety partners with identifying potential funding sources or assign this responsibility to someone at the tribal level.

Results of the evaluation of the safety plan should be shared with the community as a “progress report” on transportation safety.

Updates

The Transportation Safety Plan should be reviewed annually and updated at least every five years to reflect completed projects, new safety data collected, and any additional safety issues that need to be addressed. Past efforts to address safety issue should be described in the plan in order to streamline future approaches.

This Transportation Safety Plan is the first step in a series of steps needed to improve transportation safety in Acoma Pueblo. With diligent advocacy, evaluation and updates, the Plan can be a strong foundation for improved transportation safety.