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NM 4 – Jemez Pueblo Boundary to NM 290

Draft Environmental Assessment



Environmental Assessment

NM 4 Alignment Study – Jemez Pueblo Boundary to NM 290

FLH-TMP-004-1(9), CN 3480

Sandoval County, New Mexico

This Environmental Assessment has been developed and prepared by HDR Engineering, Inc., under the direction of Ed Potthoff, Jr., P.E. and Kelly Sims, Environmental Planner.

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U.S. Department of Transportation
Federal Highway Administration (FHWA)
New Mexico Division
and
New Mexico Department of Transportation

Date of Approval

Raiz Rizvi, P.E.
NMDOT Project Development Engineer

Date of Approval

R. Blake Roxlau
NMDOT Environmental Design Bureau

Date of Approval

FHWA Division Administrator

Comments regarding this Environmental Assessment should be sent to:
Kelly Sims, HDR Engineering, Inc.
2155 Louisiana Blvd. NE, Suite 9500, Albuquerque, NM 87110
kelly.sims@hdrinc.com
Fax: (505) 830-5454

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List of Acronyms or Abbreviations

Acronym or Abbreviation	Definition
amsl	Above mean sea level
APE	Area of potential effect
BMP	Best Management Practices
BIA	Bureau of Indian Affairs
CDP	Census Designated Place
CAA	Clean Air Act
CWA	Clean Water Act
DEIS	Draft Environmental Impact Statement
dBA	Decibels
ESA	Endangered Species Act
EIS	Environmental Impact Statement
EA	Environmental Assessment
EPA	Environmental Protection Agency
F	Fahrenheit
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
m	meters
MRCOG	Mid-Region Council of Governments
mph	miles per hour
NAAQS	National Air Quality Standards
NAC	Noise Abatement Criteria
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NRHP	National Register of Historic Places
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservations Service
NMDOT	New Mexico Department of Transportation
NMSHPO	New Mexico State Historic Preservation Office
ntu	Nephelometric turbidity units

Acronym or Abbreviation	Definition
REC	Recognized Environmental Condition
ROW	right-of-way
SWPPP	Stormwater Pollution Prevention Plan
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture

Executive Summary

In 1999, the New Mexico Department of Transportation (NMDOT) began a corridor study to develop and evaluate potential improvements to NM 4. The corridor study was placed on hold in 2002 and resumed in 2008 with a refined scope and smaller study area. This Environmental Assessment (EA) evaluates the alternatives developed during the corridor study process and potential impacts in compliance with National Environmental Policy Act (NEPA), Federal Highway Administration (FHWA), and Bureau of Indian Affairs (BIA) regulations.

NMDOT proposes to build a NM 4 bypass from the San Ysidro/Jemez Pueblo Grant Boundary line to NM 290, just north of where NM 290 intersects with existing NM 4. The purpose of the project is to provide a safer roadway that meets current roadway design guidelines, to provide the Pueblo of Jemez the ability to restrict access to sensitive areas during cultural ceremonies, to improve community cohesion, and to improve pedestrian and motor safety through Walatowa, the village within Jemez Pueblo. The project is needed because of geometric deficiencies on existing NM 4, traffic through Walatowa that creates safety concerns for pedestrians and cyclists, and to respect the privacy of the Pueblo during cultural ceremonies.

Two alternatives were identified and advanced from Phase B to be evaluated in this EA: the No-Build Alternative and the Bypass Alternative. The No-Build Alternative would continue the use of existing NM 4 roadway through Walatowa within the Pueblo of Jemez. The Bypass Alternative would construct a new roadway at the San Ysidro/Jemez Pueblo Grant Boundary line to north of NM 290. A new bridge structure would be constructed over Vallecito Creek.

The No-Build Alternative does not meet the purpose and need of the project and has an adverse impact on the Pueblo of Jemez. NM 4 would remain a barrier to community cohesion, the Pueblo would not be able to restrict access, and traffic congestion would continue within Walatowa. Safety concerns would continue with the No-Build Alternative, as no pedestrian facilities, turn lanes, or wider shoulders would be added.

The proposed Bypass Alternative meets the stated purpose and need and would provide for safe and efficient travel within the project corridor. There would be some adverse impacts to vegetation, wildlife, wetlands and cultural resources, and modifications to existing drainage patterns.

To date, no significant adverse social, economic, or environmental impacts of a level that would warrant an Environmental Impact Statement (EIS) have been identified. Alternative selection will occur following the completion of the public review period, which will include a public hearing. If no significant impacts are identified as a result of public review and the public hearing, a Finding of No Significant Impact (FONSI) will be prepared for a selected alternative.

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1.0 Project History, Purpose and Need

1.1 Location and Description of Proposed Project

NM 4 is a state highway that originates at US 550 in the Village of San Ysidro in Sandoval County and travels in a northerly direction to NM 502, near Los Alamos in Los Alamos County. Two state highways intersect NM 4: NM 290 within the Pueblo of Jemez (Pueblo) and NM 128 near Los Alamos. The roadway travels through the Town of Walatowa (Walatowa) within the Pueblo of Jemez, and the Villages of Cañon and Jemez Springs before terminating in Los Alamos.

New Mexico Department of Transportation (NMDOT), with input from Pueblo of Jemez, is proposing to build a NM 4 bypass from the San Ysidro/Jemez Pueblo Grant Boundary line to north of NM 290. The proposed bypass would be approximately 3.2 miles in length and would parallel the existing NM 4 alignment roughly one-fourth of a mile east. The required easement would be 200 feet and the roadway would consist of 8-foot shoulders, 12-foot driving lanes, and a 12-foot left turn lane at the access point to the southern end of Walatowa. The proposed project area lies entirely within Pueblo of Jemez Trust Land. The study area is illustrated on Figures I-1 and I-2.

The proposed bypass connection to existing NM 4 would require traffic control measures during construction to minimize disruption to traffic. However, traffic restrictions would not be required on NM 4 during construction. The portions of the proposed bypass that traverse undeveloped land would be uncomplicated to construct, as traffic is not present. Approximately ten drainage structures would need to be placed, replaced or extended with the implementation of the proposed alignment. The design speed would range from 35 to 65 miles per hour (mph).

1.2 Project History

NM 4 was originally constructed in 1934 and 1948, north and west of Albuquerque, New Mexico, using prescriptive right-of-way (ROW)¹. Pueblo of Jemez has requested a NM 4 bypass for more than 50 years. An initial NM 4 Corridor Study, which evaluated improvements in the NM 4 Corridor from US 550 to north of NM 290, began in 1999.

During Phase A of the initial Corridor Study (Initial Development of Alternatives), the purpose and need for the project were identified and alternatives that provided reasonable improvements were developed and assessed. The alternatives that did not meet the project's purpose and need or were not feasible

¹ The uncontested, continuous use of a state highway, open for use to the public, for a period of at least one year. (67-2-5 NMSA 1978).

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were eliminated from further evaluation. A Corridor Analysis Report documented the alternatives developed and analysis of each. The remaining alternatives, as well as the no action alternative, were advanced to Phase B, Detailed Evaluation of Alternatives.

During Phase B, Detailed Evaluation of Alternatives, each alternative was analyzed based on engineering, environmental and cost impacts. In 2001, a Phase B, Detailed Evaluation of Initial Alternatives Report (Phase B Report), prepared by Tetra Tech and Gannett Fleming, made recommendations on which alternatives should be advanced into Phase C, Environmental Documentation and Processing, for further analysis of environmental impacts of the no action alternative and recommended alternative. The recommended alternative alignment began at US 550, paralleled NM 4 to the east and bypassed the Village of San Ysidro, crossing a portion of Zia Pueblo Land. Residents of San Ysidro and Zia Pueblo objected to the original proposed alignment.

As part of Phase C, a Draft Environmental Impact Statement (DEIS) was prepared in 2002 to evaluate the alternatives and associated impacts. The DEIS was determined to be insufficient for revision and signature by the Federal Highway Administration (FHWA). The project was then placed on hold.

The current Corridor Study resumed in 2008, with a refined scope and smaller study area. The Study Team prepared a Fatal Flaw Analysis to evaluate the documents that had previously been prepared (Corridor Analysis Report and Phase B Reports) and compare the proposed alternatives against current standards. Following the Fatal Flaw Analysis, revised alternatives were developed and a revised Phase B, Detailed Evaluation of Alternatives Report was prepared (HDR Engineering, Inc. 2009). The Phase B evaluation recommended two alternatives to be carried forward into Phase C for documentation in an environmental assessment.

This project is funded through final design from funds earmarked by Congress. The Pueblo of Jemez is responsible for securing construction funding for this project and is continuing its efforts to secure federal or other funding.

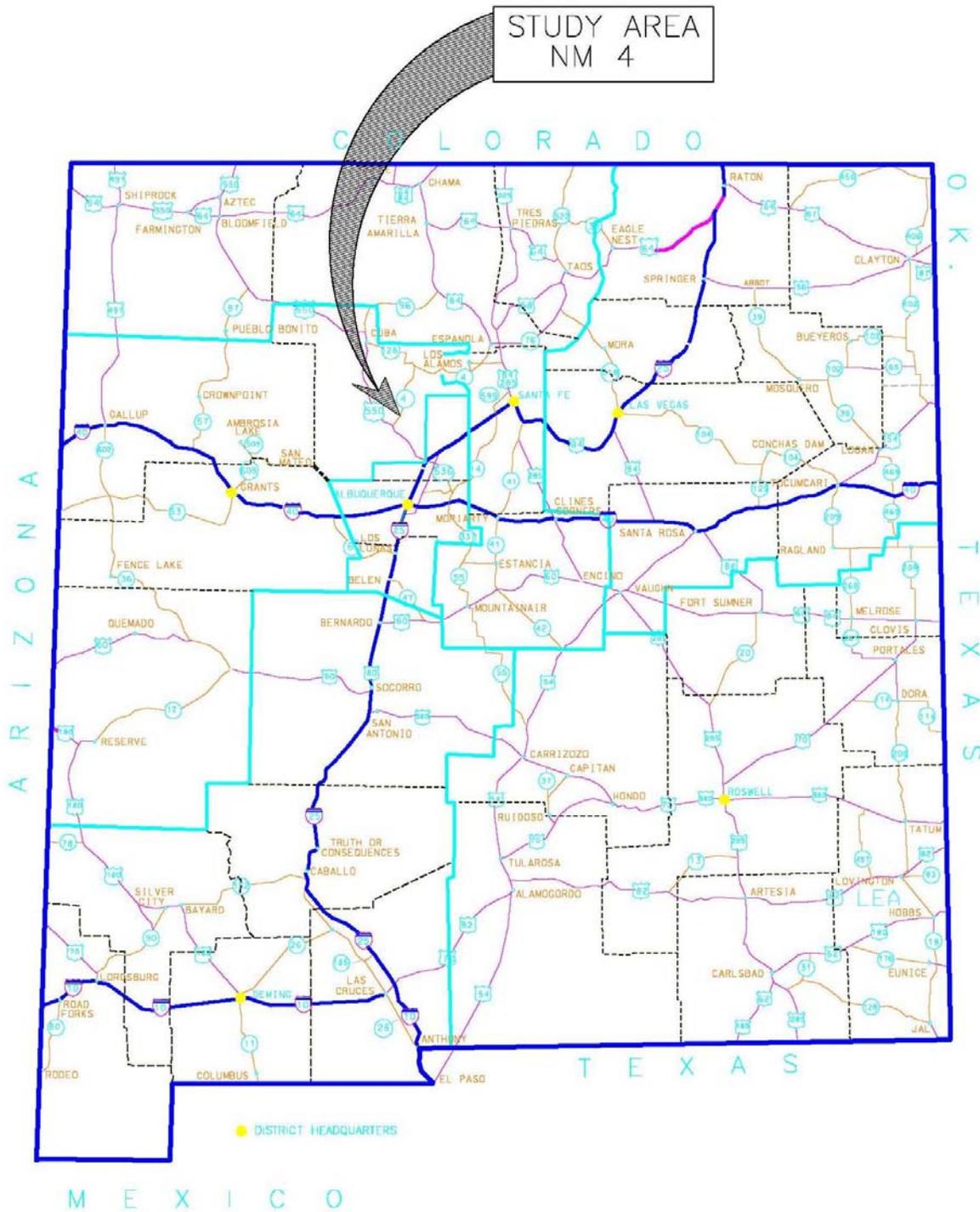


Figure I-1. Study Area Locator Map

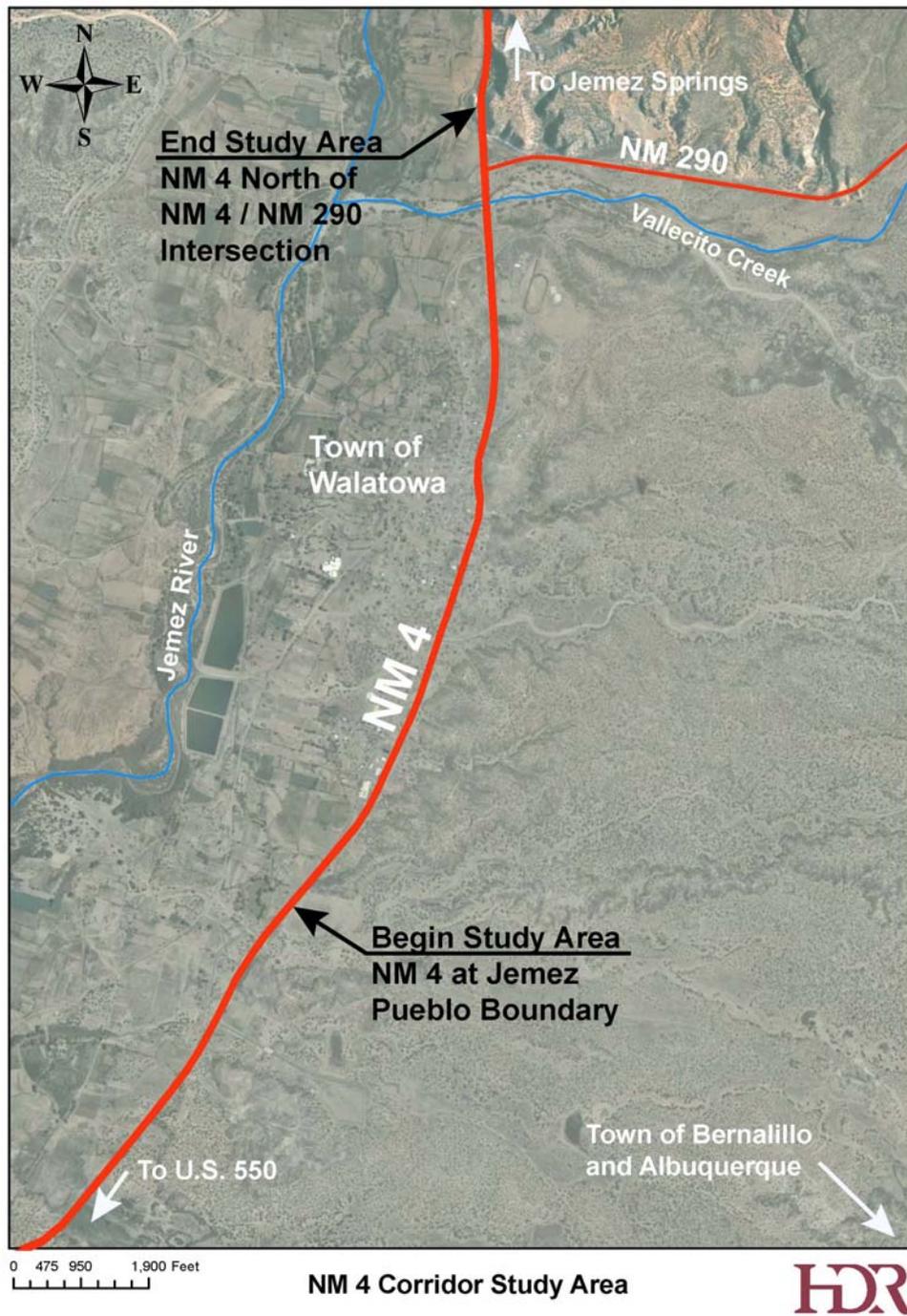


Figure I-2. Corridor Study Area

1.3 Project Purpose and Need

The original highway was built through the Pueblo of Jemez with little input from Pueblo members and administration. A bypass is needed to address the following issues within Walatowa:

Pedestrian safety. The existing roadway within Walatowa consists of two through lanes with no shoulders or amenities for pedestrians. There is a high volume of pedestrian traffic within Walatowa and along NM 4 due to the location of the Tribal Administration Complex, healthcare, school bus stops, public transportation stops, commercial enterprises along NM 4, and regular movements of tribal members within the community. Vehicular traffic in areas with no pedestrian amenities creates a safety concern for pedestrians.

Community cohesion. The alignment of NM 4 through Walatowa divides the community and weakens the ability of Pueblo members to interact. NM 4 separates residential areas, which conflicts with traditional Pueblo life. Reduced traffic volumes within Walatowa would improve the quality of the public realm and local commercial enterprises by allowing Pueblo members to reclaim the area as part of their community through increased pedestrian activity and neighborly interactions.

Livestock collisions. In an FHWA 2008 Tribal Road Safety Audit, it was noted that over half of all reported collisions along NM 4 within the Pueblo involved animals. The ROW along existing NM 4 within Walatowa is not fenced and is considered open range. Reduced traffic volumes and speed limits would decrease the likelihood of livestock collisions. A bypass, which would not require access to roadside facilities, would be fenced to avoid wildlife and livestock collisions.

Cultural privacy. Religious ceremonies are paramount to the preservation of tribal culture. Some cultural and religious ceremonies are closed to non-tribal members. Traffic along NM 4 may disrupt these ceremonies and it is necessary to restrict access to sensitive cultural areas in order to avoid a disruption to cultural and religious activities.

Roadway safety. NM 4 through Walatowa contains geometric deficiencies² that do not meet current design standards.

The proposed bypass would reduce traffic volumes within Walatowa to improve pedestrian and motor safety, improve community cohesion, provide the Pueblo with the ability to restrict access to sensitive areas during cultural ceremonies, and provide a safer, improved roadway for the traveling public.

²Geometric deficiencies are geometric characteristics of a highway (e.g., lane width, shoulder width, horizontal and vertical curvature, and grade) which do not meet current design standards.

1.3.1 Laws, Policy Directives, and Federal Actions

The NM 4 bypass is proposed by NMDOT and the FHWA, in cooperation with the Pueblo of Jemez, Bureau of Indian Affairs (BIA), and U.S. Army Corps of Engineers (USACE). This Environmental Assessment (EA) is prepared pursuant to the National Environmental Policy Act of 1969, Title 23 CFR Part 771, FHWA regulations, BIA NEPA procedures, and the NMDOT *Location Study Procedures*. To the extent that the following regulations apply, this EA also serves to comply with the Clean Air Act (CAA); the Clean Water Act (CWA); the National Historic Preservation Act (NHPA); the Safe Drinking Water Act; the Endangered Species Act (ESA); Executive Order 13007, Indian Sacred Sites; Executive Order 11988, Floodplain Management; Executive Order 11990, Protection of Wetlands; and Executive Order 12898, Environmental Justice. This EA also considers local land use plans, economic development plans, and transportation needs assessments.

Approval of the proposed project by FHWA and approval by the BIA of a right-of-way easement agreement on Pueblo of Jemez Trust Lands each constitute a federal action with the potential to cause impacts to the human and natural environment and are subject to NEPA. The purpose of this EA is to evaluate potential impacts of the federal actions and assist the FHWA and BIA in the decision-making process associated with their respective federal actions.

1.3.2 Permits Required for Project Implementation

A Clean Water Act, Section 404 Nationwide Permit from USACE and a Section 401 Water Quality Certification from the Environmental Protection Agency (EPA) would be required for this project. Additionally, because one (1) acre or more of land would be disturbed during construction, a National Pollutant Discharge Elimination System (NPDES) permit would be required and a Stormwater Pollution Prevention Plan (SWPPP) would be prepared. The contractor would be required to obtain mandatory clearances, including environmental and cultural resources approvals, for use of borrow pits and staging areas.

1.4 Existing Roadway Conditions

NM 4 is a two-lane road traveling on a generally south to north axis in the vicinity of the proposed action. The existing system within the area consists of 12-foot lanes with no or variable shoulders in a rural area. Existing pavement conditions range from fair to good, with a recent (2001) replacement of the bridge crossing Vallecito Creek, just north of Walatowa. There are no railroad crossings in the area of the proposed action.

1.5 Traffic Characteristics

Mid-Region Council of Governments (MRCOG) provided Historic Annual Average Weekday Traffic data, which were reviewed along with intersection turn counts from the MRCOG Traffic Flow Maps (2001 to 2007) and specific directional and peak hour volume data at key locations throughout the corridor. The data were then used to project turn movements for key roadway segments and

intersection locations. The data demonstrate that actual traffic volume has been declining and is projected to continue to decrease over time (HDR Engineering, Inc. 2009).

Under present conditions, a reduction of traffic by a total of about 4% is predicted through the 2030 horizon year. Although the Jemez Valley Planning Area population and employment are expected to increase by year 2025 (MRCOG 2006), rising transportation costs, the implementation of public transit (Sandoval Easy Express), and an increase in car-pooling contribute to a projected reduction in traffic volumes.

With the No-Build Alternative, there are no substantive signs of traffic capacity failure, roadway or intersection saturation or excessive delays at intersections. Crash data for NM 4, analyzed for 2005 through 2007, indicate there have been a total of 22 crashes, 7 with property damage only, and 15 with injury or fatality results. No crashes were reported for 2008, and crash data for 2009 have not yet been released.

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2.0 Alternatives

This section discusses alternatives considered for meeting project purpose and need. Several initial alternatives were developed. Based on cost estimate analysis, environmental analysis, and engineering feasibility, two recommended alternatives have been identified to be carried through the environmental analysis discussed in Section 4.0 of this document. All the alternatives considered, and those eventually selected for further analysis, are described thoroughly within the revised 2009 Phase B: Detailed Evaluation of Alternatives Report and summarized below.

2.1 No-Build Alternative

The No-Build Alternative proposes no construction for NM 4 and the roadway would be left intact. Routine maintenance would continue. In accordance with the NMDOT *Location Study Procedures* and NEPA, the No-Build Alternative must always be considered as a baseline for comparison with other alternatives. The No-Build Alternative does not meet the project need for safety improvements, nor does it satisfy the need for access control to the Pueblo of Jemez areas required at selected times for cultural events.

2.2 Preferred Alternative

The preferred alternative is the combination of the F3-G1-J-Mod alignments (Bypass Alternative), illustrated in Figure 2-1. Each alignment of the Bypass Alternative would meet American Association of State Highway and Transportation Officials (AASHTO) design compliant criteria. Alignment F3 would diverge from the existing NM 4 roadway at the southern end of the study area. The design speed for Alignment F3 would be 65 mph. A short portion of existing NM 4 would be abandoned and removed just beyond its connection with Alignment F3 to ensure that the existing NM 4 could not connect through Walatowa. The existing Landfill Road would provide a connection between existing NM 4 and the NM 4 bypass, thereby providing access to Walatowa at the southern end of the bypass (Figure 2-1). Access to the north end of Walatowa would be provided at the connection of existing NM 4 and NM 290.

Alignment F3 would connect to Alignment G1. Approximately nine drainage structures would need to be placed with the implementation of this alignment. Constructing this alignment would be uncomplicated, as Alignment G1 would traverse undeveloped land without traffic, and no traffic control measures would be required. The design speed for Alignment G1 would be 65 mph.

Alignment J-Mod would begin at the termination point of Alignment G1 and proceed to its tie-in location on NM 4, approximately 1000' north of the existing intersection of NM 4 and NM 290. Along the length of the alignment, a portion of NM 290 would be used as the proposed NM 4 Bypass. This alignment would travel along the top of the mesa but would require a bridge crossing of Vallecito Creek. Alignment J-MOD would be upstream of eleven drainage structures: six under NM 4, and five under NM 290, as shown in Figure 2-2. It would bisect existing flow from Structures 33-35 (See Figure 2-2), which would likely be diverted to the Vallecito Creek before crossing under Alignment J-MOD. The design

speed for Alignment J-Mod would be 45 mph and would decrease to 35 mph prior to the intersection with NM 290.

The proposed typical section and improvements for the Bypass Alternative are shown in Figure 2-3 and include the following:

- Access would be developed for intersecting local roadways and gated with access control maintained by the Pueblo of Jemez during cultural ceremonies.
- Access to traditional hunting trails would be gated.
- An at-grade T-intersection would be provided at Landfill Road at the south end of the proposed bypass. The Bypass Alternative would include a left turn lane for access to Walatowa. Traffic on Landfill Road would be required to stop before entering the NM 4 Bypass.
- A short portion of existing NM 4 would be abandoned and removed just beyond its connection to the south end of the proposed bypass to ensure that the existing NM 4 could not connect through Walatowa.
- A new bridge over the Vallecito Creek would be constructed. The recommended structure would be approximately 390 feet long and 43 feet wide. The structure would be supported by two pier locations and two abutment locations.
- An at-grade T-intersection would be provided at NM 290, east of the existing NM 4 and NM 290 intersection, as described in the 2009 Phase B Detailed Evaluations of Alternatives and shown in Figure 2-4. Traffic on NM 290 would be required to stop before entering NM 4.
- Near the connection of the proposed bypass and existing NM 4, access to the north end of Walatowa would be an at-grade T-intersection. A short portion of existing NM 4 would be realigned to make the connection. (See Figure 2-5). North of the T-intersection, proposed NM 4 would merge with existing NM 4; the existing roadway between the divergence point and the new connection would be removed. (See Figure 2-5). The existing Vallecito Creek Bridge would remain in place. A portion of NM 290 between each T-intersection described previously would be abandoned and removed. (See Figure 2-4).
- New signing, striping and object markers would be installed with the new roadway.

Final design of the project would be completed in two phases, with the northern section of the project and the new bridge being designed first. While construction funding has not yet been identified, it is anticipated that construction would be completed as one project.

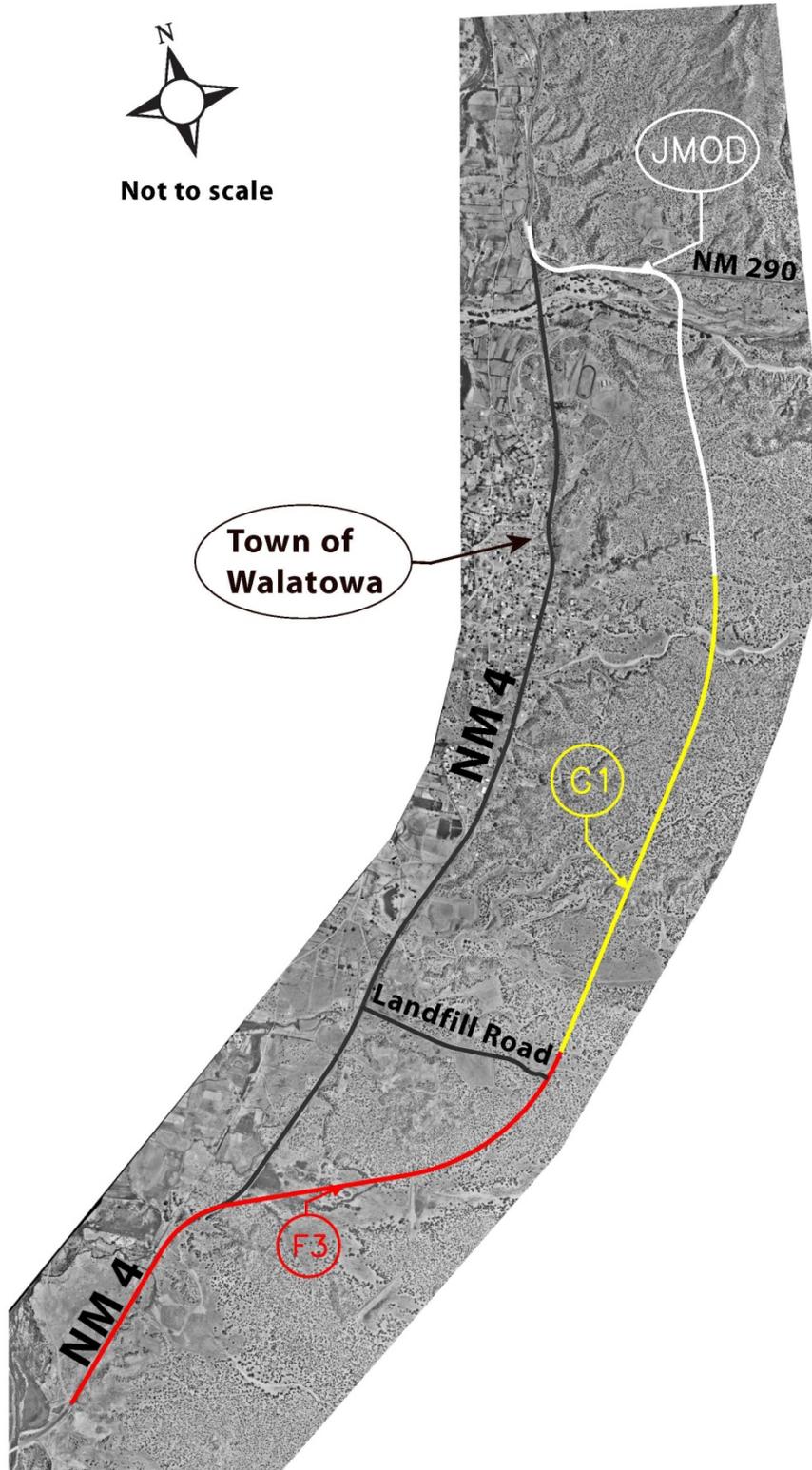


Figure 2-1. Preferred Alternative Alignment F3-GI-J-Mod

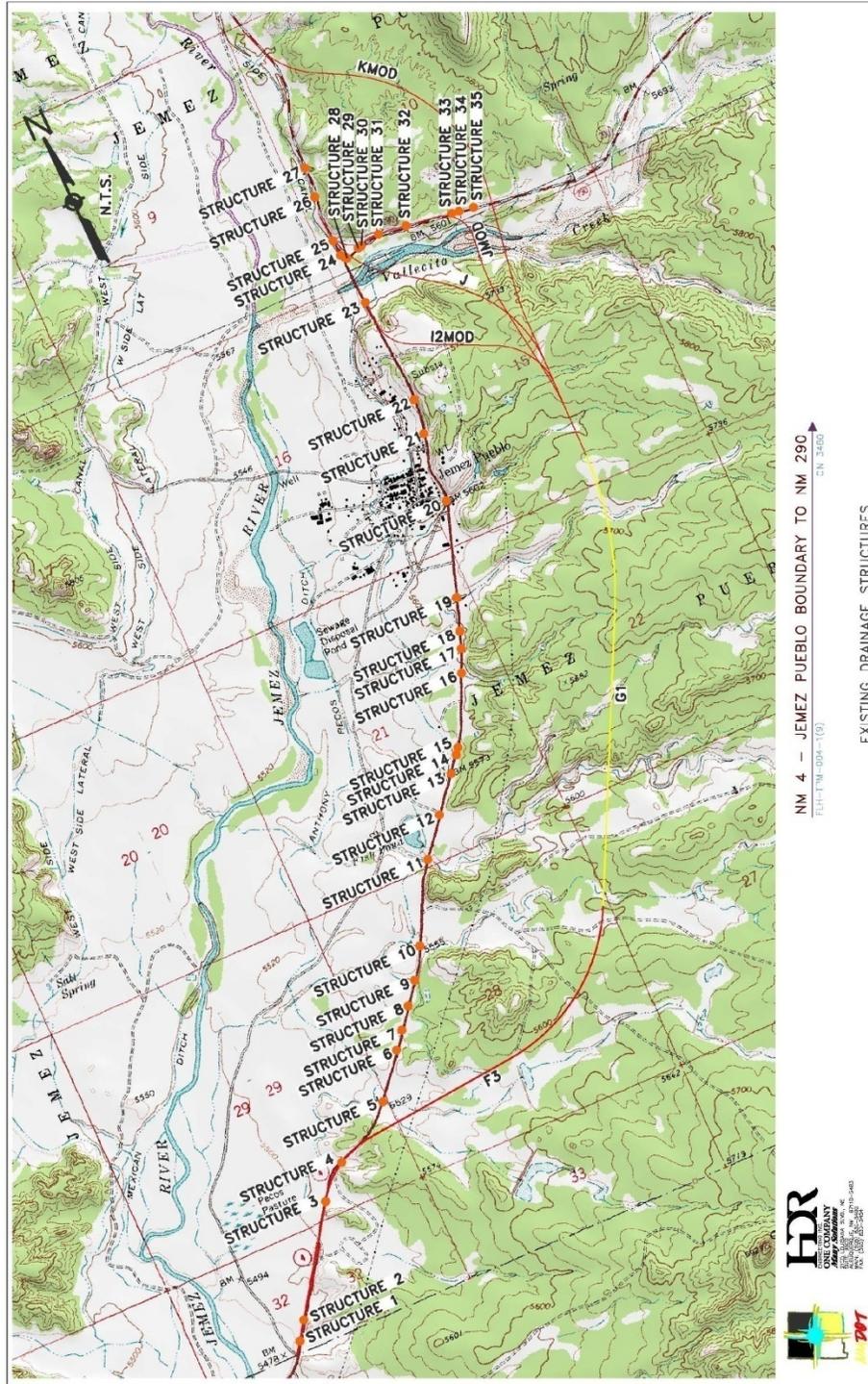


Figure 2-2. Existing Drainage Structures

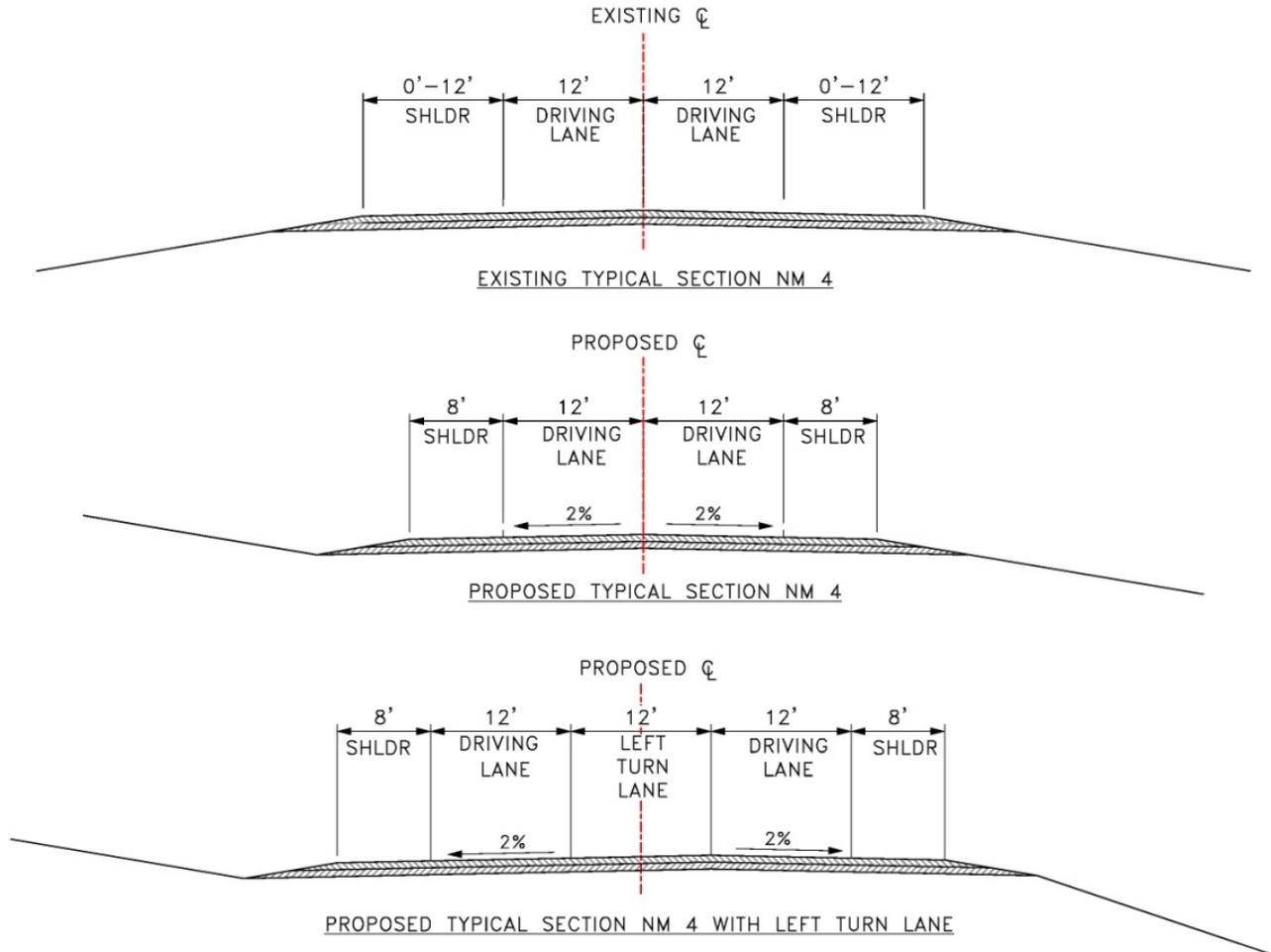


Figure 2-3. Typical Sections

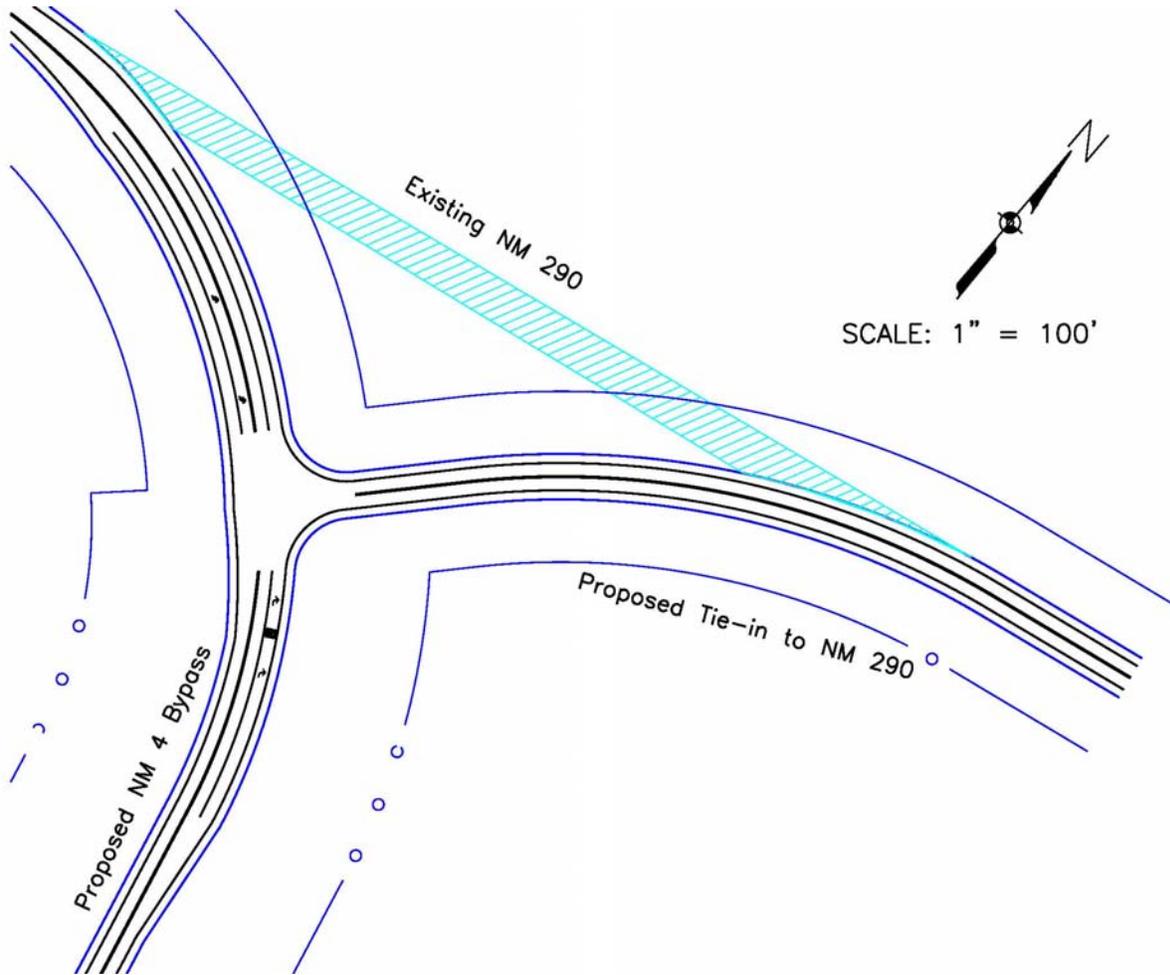


Figure 2-4. NM 290 Tie-In

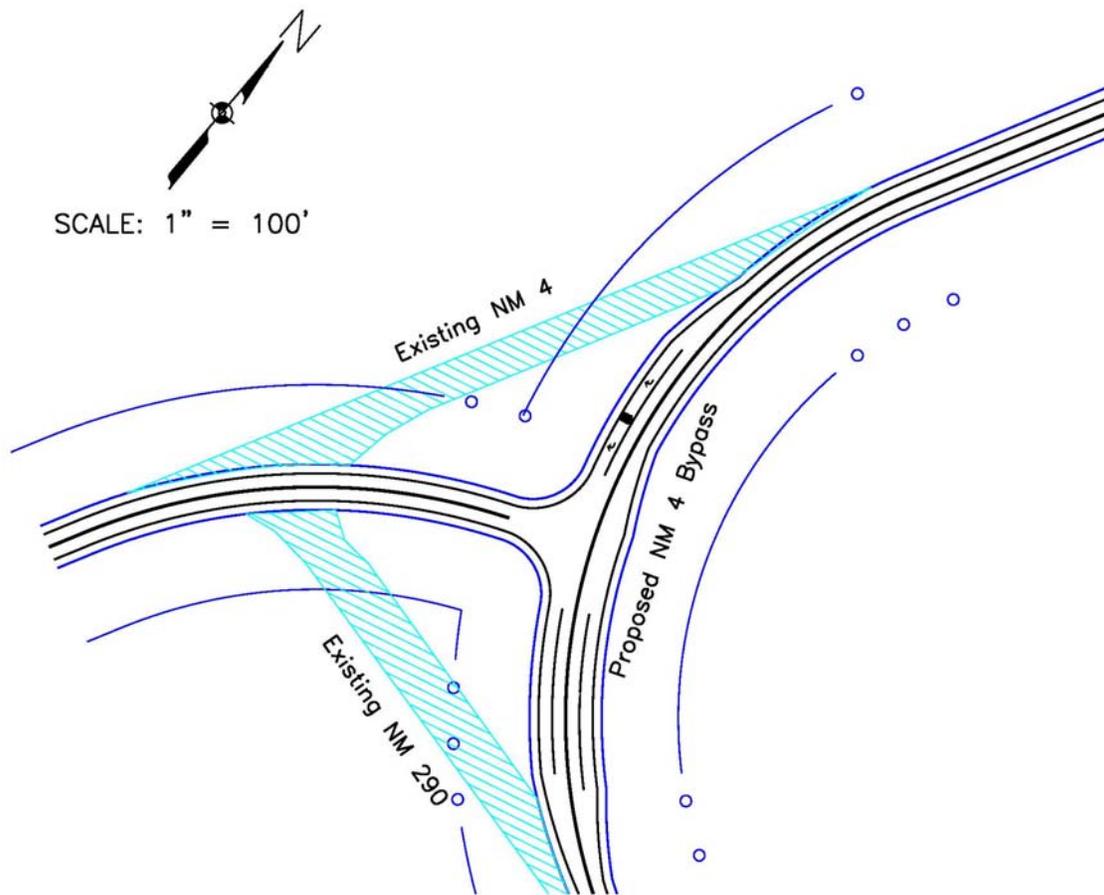


Figure 2-5. Town of Walatowa Access Tie In

2.3 Alternatives Considered but Eliminated from Further Evaluation

2.3.1 Enhanced Highway Alternative – Existing Alignment B

The first Build Alternative considered but eliminated from further evaluation was the Enhanced Highway Alternative – Existing Alignment B. This alternative consisted of improvements to the existing roadway, including correcting two vertical curves within the existing alignment, providing acceleration and deceleration lanes at NM 4 and NM 290, curb and gutter, sidewalks, and ADA ramps on the west side of the roadway, where appropriate. The Pueblo of Jemez did not support this alternative. Enhanced Highway Alternative – Existing Alignment B was eliminated from further analysis, as it did not meet the purpose and need of providing the Pueblo with the ability to restrict access during cultural ceremonies and reducing traffic volumes through the Pueblo.

2.3.2 Bypass Alternative – Alignment K-MOD

During the completion of the Fatal Flaw Analysis, the design team determined that alignment K-MOD contained fatal flaws. A natural resource present would likely fall under the protection of the FHWA Section 4(f). In an effort to find a reasonable alternative alignment, the study team eliminated K-Mod from further evaluation and developed J-MOD.

2.3.3 Bypass Alternative – Alignment I2-Mod

This alignment began at the termination point of Alignment G1 and connected to the tie-in on NM 4, south of the intersection of NM 4 and NM 290. Alignment I2-MOD was approximately 1.1 miles in length, traveling along the top of the mesa, obviating the need for a bridge crossing of Vallecito Creek. It traversed very near potential future development, an existing school, and required the relocation of a track at the Jemez Pueblo Athletic Center. The Pueblo of Jemez also opposed Alignment I2-Mod; therefore, Alignment I2-Mod was eliminated from further consideration.

2.4 Right-of-Way

The proposed Bypass Alternative would be built entirely within Pueblo of Jemez Trust Land and would require a right-of-way (ROW) easement agreement approved by the BIA. NMDOT is currently in discussions with the Pueblo of Jemez and BIA about the easement agreement. ROW for the portions of NM 4 and NM 290 that would be removed would be abandoned. The preferred alternative (Bypass Alternative) would not require any displacement of homes or businesses.

3.0 Affected Environment

This discussion is generally limited to the preferred Bypass Alternative described in Section 2.0. The No-Build Alternative would not meet the need for the project and may affect some components of the existing human environment, including continuing safety concerns with traffic through Walatowa, interruption of community cohesion, and disruptions of Pueblo cultural events.

3.1 General Project Setting

The project area crosses rolling terrain composed of ridges, draws and shallow canyons ranging from 5,525-5,735 feet in elevation above mean sea level (AMSL). The project area also contains the town of Walatowa within the Pueblo of Jemez, through which the existing NM 4 passes. This area is urban with commercial, residential and Pueblo of Jemez government facilities. The proposed action would occur entirely on Pueblo of Jemez Trust Lands, and within Sandoval County. Vallecito Creek, a tributary to the Jemez River, travels through the northern edge of the project area, and flows into the Jemez River west of Walatowa.

3.2 Climate, Landforms, and Geology

Climate in the project area is semi-arid. The summer season is the rainy season, with most precipitation occurring in short, locally heavy thunderstorms. July is typically the warmest month, with average temperatures around 70° Fahrenheit (F) and January is the coldest month with average temperatures around 30° F. Annual precipitation in the area varies from approximately 10 inches per year at lower elevations to about 20 inches per year at higher elevations (Craig 1992).

The topography in the project area is characterized by generally flat to gently rolling terrain along the existing NM 4 roadway. The terrain to the east, where a number of arroyos are present, is more undulating in nature. The area to the west of NM 4 parallels the floodplain of the Jemez River. Vallecito Creek and its floodplain run perpendicular to the existing NM 4 and create a well-defined valley near the junction of NM 4 and NM 290. Rock outcrops are found north of the junction of NM 4 and NM 290.

The geology of the project area is characteristic of the centrally located Calabacillas sub-basin of the Albuquerque Basin of central New Mexico, one of the largest sedimentary basins of the Rio Grande rift (Hawley 1978; Chapin and Cather 1994). Much of the southern half of the proposed bypass route is also located atop the Piedra Parada member of the Zia Formation. The Zia formation ranges from 350 meters (m) to at least 853 m in thickness and represents a predominately eolian phase of lower Santa Fe Group deposition in the Calabacillas sub-basin. It is exposed along the eastern margin of the Rio Puerco Valley and along the southwestern margin of the Rio Jemez Valley (Galusha 1966; Telford 1982). The Zia formation is characterized by massive to cross-stratified, weakly to moderately cemented, well to moderately sorted arkose to feldspathic arenite with scattered thin to medium bedded muddy sandstone and mudstone interbeds, early to middle Miocene in age (Connell 2001).

3.3 Soils

3.3.1 Existing Conditions

According to the United States Department of Agriculture (USDA) Natural Resource Conservations Service's (NRCS) soil survey for Sandoval County Area (USDA 2008), the soils of the proposed project area are composed of eight different soil series.

Soils ranging from riverwash at the north end of the project area along Vallecito Creek, to fine sands in one of the complexes, and sandy loams exist in the project area. The Cascajo series consists of deep, excessively drained soils that formed in very gravelly and sandy alluvium over shale or sandstone at depths of 4 to 20 feet and comprise approximately 48 percent of the project area. Cascajo soils are on terraces, terrace edges, hills, knolls and ridges. Slopes range from 2 to 40 percent.

The Fragua-Waumac-Royosa complex consists of deep, well-drained, moderately rapidly permeable soils. These soils formed in alluvium derived from sandstone and igneous sources (Waumac series) and in stream alluvium, fan alluvium, colluvium and eolian deposits derived from sandstone parent material (Royosa and Fragua series). Slopes range from 1 to 20 percent. The Waumac soils are on valley floors and footslopes. The Fragua series soils are on summits of mesas, dipslopes of cuestras, fan remnants of valley sides, hills, breaks and footslopes. The Royosa soils are on characteristic dune-like relief.

The Pinavetes series consists of very deep, excessively drained, rapidly permeable soils that formed in eolian deposits derived from mixed material on dunes. Pinavetes soils formed in eolian material. Pinavetes soils are on valley sides and dunes. Slopes are 0 to 35 percent (NRCS, 2009).

All of these soils lie atop poorly hardened rocks of the Tertiary aged Santa Fe group. These basin fill deposits are associated with materials moving from surrounding mountains and highlands and filling the down-dropped basins that formed the ancestral Rio Grande corridor.

3.3.2 Potential Effects and Mitigation Measures

There are no effects to soils resultant from the No-Build Alternative.

With the Bypass Alternative, any exposed soils from construction activity would be vulnerable during construction. The amount of soils actually eroded would be mitigated by erosion control measures identified in a SWPPP. Disturbed areas would be revegetated with native vegetation after construction.

3.4 Water

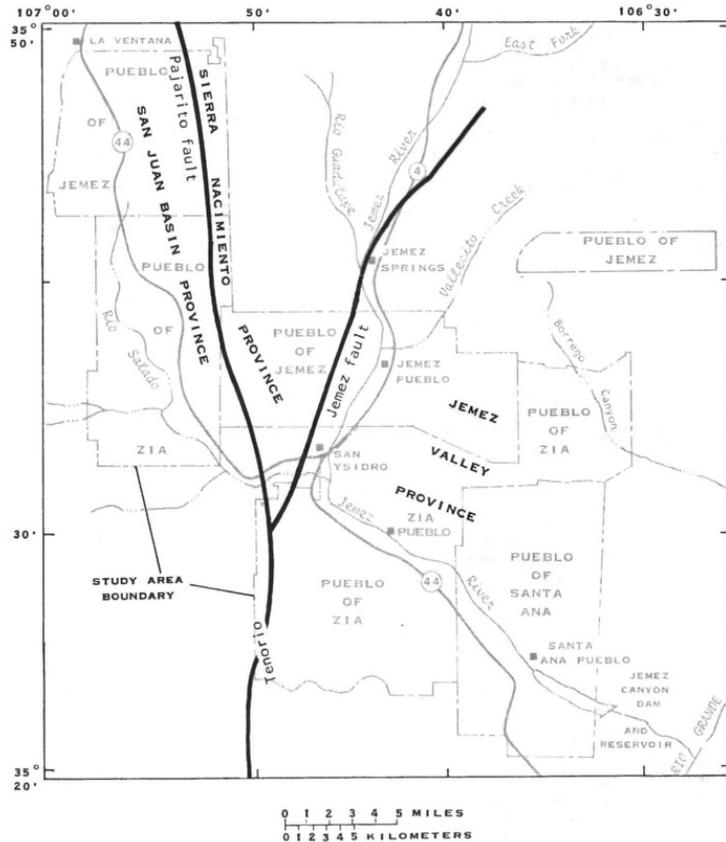
3.4.1 Existing Conditions

3.4.1.1 Surface Water

Proposed construction activities would involve the discharge of dredged or fill material into Jurisdictional Waters of the U.S. and would be subject to regulation under the provisions of Section 404 of the CWA and Water Quality Certification under Section 401 of the CWA.

The Jemez River, located to the west of existing NM 4, generally parallels the proposed action. It is the major perennial stream in the project area, and drains an approximately 1,050 square mile drainage basin. Approximately 63 percent of the average annual streamflow occurs from March through May, primarily from snowmelt in the upper basin (Craig 1992). The major tributary in the project area is Vallecito Creek, an ephemeral stream that enters the Jemez River just north of Walatowa. The Bypass Alternative would cross Vallecito Creek with a new bridge structure.

There are seventeen ephemeral drainages within the project area that appear to be subject to high velocity flows, flowing from uplands located east of the proposed alignment westward to the Jemez River. Most of these drainages cross both the proposed and existing NM 4 alignments. There is also a large spring which occurs north of the project area.



**Figure 3-1. Groundwater Provinces
(Craig 1992)**

3.4.1.2 Groundwater

Groundwater occurs in the project area within the Jemez Valley Groundwater Province, composed of parts of the Santa Fe Group and associated alluvium material (Craig 1992). The Jemez Valley Groundwater Province is shown in Figure 3-1. Depth to water within the Jemez Valley Groundwater Province varies from 0 – 160 feet (USGS 1999). Artesian water was discovered approximately 65 feet below the Vallecito Creek level during geotechnical investigations. Two water wells installed just west of Walatowa in the Jemez River floodplain provide drinking water to the Pueblo.

3.4.2 Potential Effects and Mitigation Measures

The No-Build Alternative would not affect existing water resources within the project area, as no changes to land use would occur and there would be no risk from construction activities.

With the Bypass Alternative, potential effects to water resources are minimal and would be of a direct nature (contaminant introduction or erosion), if they did occur during construction. While some hydrocarbon contamination can occur from precipitation runoff across or over a road, the small length and size of the proposed project would prevent a substantive amount of contamination from occurring. The bridge structure would not affect the flow of the artesian water, as the bridge foundation will be constructed above the artesian flow. Drainage structures have been designed for each of the ephemeral waterways, except for one that does not cross the proposed alignment.

Effects to water resources would be minimized by implementing appropriate measures to maintain existing drainage features and water quality. With the Bypass Alternative, construction measures including Best Management Practices (BMP) would be implemented. These would include fueling of equipment outside the floodplain of Vallecito Creek, regular inspections of all equipment, and any other BMPs deemed appropriate and/or necessary by the contractor and permitting agencies. A National Menu of Best Management Practices for Stormwater, including construction, post-construction and good housekeeping BMPs, is available at: <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm>. A NPDES permit and SWPPP would be required. The CWA activities discussed above would also be required, as would compliance with EPA Final Rule for the CWA concerning effluent limitations and new source performance standards. The contractor would comply with non-numeric effluent limitations and design, install, and maintain effective erosion and sedimentation controls, including the following:

- Control stormwater volume and velocity to minimize erosion
- Control stormwater discharges including both peak flow rates and total stormwater volume
- Minimize the amount of soil exposed during construction activities
- Minimize the disturbance of steep slopes
- Minimize sediment discharges from the site using controls that address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site
- Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration where feasible
- Minimize erosion at outlets and downstream channel and streambank erosion
- Minimize soil compaction and preserve topsoil where feasible

Construction activities disturbing a total of 20 or more acres must comply with the numeric effluent limitation for turbidity in addition to the non-numeric effluent limitations. The maximum daily turbidity limitation is 280 nephelometric turbidity units (ntu). On February 2, 2014, construction site owners and operators would be required to monitor discharges to ensure compliance with effluent limitations as

specified by the permitting authority. The contractor would select management practices or technologies that are best suited for site-specific conditions (74 FR 62996-63058).

3.5 Wetlands

3.5.1 Existing Conditions

Wetlands are present wherever topography and climate favor the accumulation or retention of water on the landscape. Wetlands occur in widely diverse settings, from coastal margins to floodplains to mountain valleys. Wetlands are defined as lowlands that are covered with shallow and sometimes intermittent waters and have three essential characteristics: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. Hydrophytic vegetation consists of species that require the presence of permanent or semi-permanent water for their existence. Hydric soils flood long enough during the growing season to develop anaerobic conditions. "Wetland hydrology" refers to the availability of water that creates the wetland environment. Wetlands require permanent or periodic inundation by river flows or periodic flooding. Jurisdictional wetlands are defined as those that fall under the authority of the USACE under Section 404 of the CWA (See, 40 CFR 230.3[s]; 33 CFR 328.3[a] for a regulatory definition of waters of the U.S.).

Most of the NM 4 project area is located in arid upland populated by coniferous woodland. However, there are several sources of water within the project area that provide sufficient hydrology to support wetland vegetation and warrant wetland determinations (Figure 3-2). Marron & Associates prepared a Wetland Determination and Delineation Report in September 2009.

The most pronounced water source is Vallecito Creek, located near the northern terminus of the project area just south of NM 290. Vallecito Creek is a near-perennial waterway capable of conveying large surges of water after storm events and a trickle flow of surface water during dryer periods. Perennial reaches occur two miles upstream of the proposed NM 4 Bypass. Shallow subsurface water is likely present year-round where the NM 4 Bypass would cross Vallecito Creek. Flowing surface water is present in the winter and early spring. There is also shallow groundwater present along the banks of the creek during the growing season.

In addition to Vallecito Creek, there are several large arroyos that flow from uplands located east of the project, westward through the project area to the Jemez River. The extremely porous sandy soils in the channels prevent the accumulation of surface water except in locations where dams have been constructed across channel bottoms. The dammed areas within the proposed project area do not support vegetation or soils consistent with wetland habitats.

Although arroyos are the dominant waterway features in the project area, there are also man-made ditch systems that divert water from the Jemez River north of the project area. The most pronounced of these man-made waterways is the East Side Canal, shown on Figure 3-2. This man-made irrigation structure conveys surface water during the growing season. It collects water from the Jemez River north of the project area and returns flow to the river near the southern end of the project area, where the flows within this canal create pronounced wetlands.

Finally, there are groundwater features in the project area that are unrelated to surface water flows. At least one large spring occurs just north of the northern terminus of the project, and areas of potential shallow groundwater were noted near the southern terminus of the project.

3.5.2 Potential Effects and Mitigation Measures

The No-Build Alternative would not affect existing wetlands within the project area.

The construction of the proposed Bypass Alternative would potentially impact three wetlands. At the south end of the project, the alignment crosses a cienega wetland (Meadow Wetland), created by the East Side Canal. The proposed alignment crosses the wetland area at its narrowest point; however, the roadway would remove an estimated 0.053 acres of jurisdictional wetland. Impacts would be minimized by keeping the footprint as narrow as possible through the F-3 alignment.

The second wetland, East Side Canal wetland, occurs on the banks of the East Side Canal. Within the limits of the proposed Bypass Alternative, it has many of the features of a natural waterway and sustains a narrow riparian forest zone with herbaceous wetland vegetation along its banks. The proposed Bypass Alternative crosses perpendicular to the East Side Canal, which would result in a small removal of jurisdictional wetland (0.018 acres). This removal could be lessened by attenuating the toe slopes of the roadway with retaining walls or minimizing the grade separation between the surface of the proposed roadway and the bed of the canal.

Vallecito Creek contains the necessary hydrologic parameters and vegetation to suggest wetland characteristics. Both the north and south bank of the creek within the Bypass Alternative area support jurisdictional wetlands. The Bypass Alternative alignment would require a new bridge and culvert at Vallecito Creek. Approximately 0.268 acres of wetland occurs within the project limits at this location; however, under the current proposed alignment, the abutments and piers of the bridge will be constructed outside of the OHWM and would not take wetland.

This proposed alternative would impact a total of approximately 0.071 acres of wetlands and mitigation may be required. The design team would seek to minimize impacts to wetlands during preliminary and final design. Types and locations of potential mitigation measures would be determined during Section 404 permitting, in cooperation with USACE. It is anticipated that a nationwide permit would be required. All work within stream channels and wetlands would be subject to USACE and EPA inspections and oversight during construction.

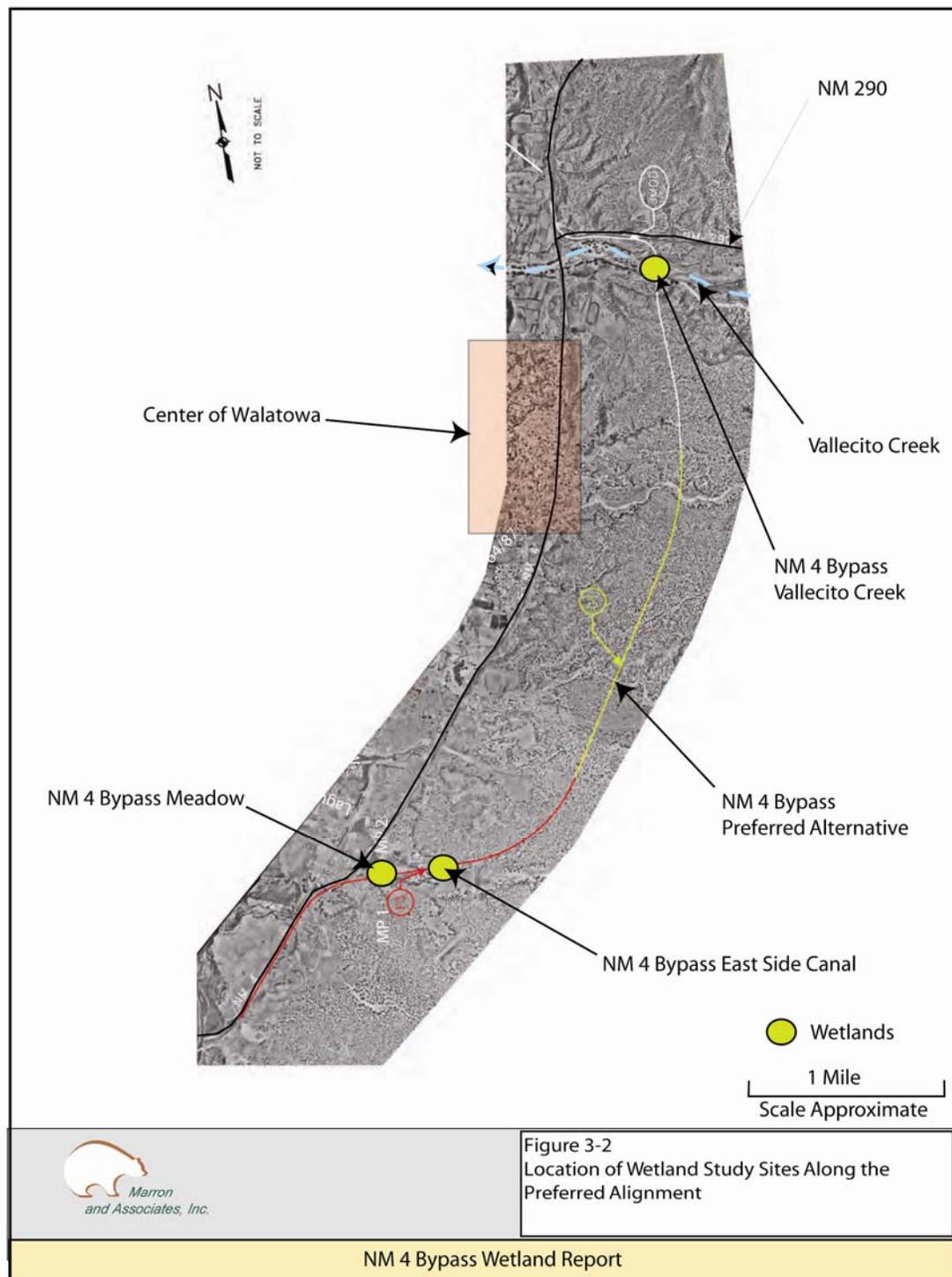


Figure 3-2. Wetland Areas

3.6 Vegetation

3.6.1 Existing Conditions

Vegetation impacts from a transportation improvement project have ecological and aesthetic implications. Several vegetation-related issues are the focus of specific federal and state legislation, including noxious weeds, wetlands, and wildlife habitat. There is also a federal program to monitor inventories of prime and unique farmlands (7 CFR 658).

The dominant vegetation across most of the project area is what Dick-Peddie's (1993) book classifies as lower Coniferous Woodland (Pinyon-Juniper Woodland). In addition to Coniferous Woodland, the canyon bottoms throughout the project area support Arroyo Riparian vegetation and the channel and floodplains of Vallecito Creek supports riparian vegetation that occurs at the transition of Floodplain Riparian and Montane Riparian vegetation types.

The Coniferous Woodland vegetation type is dominated by one-seed juniper (*Juniperus monosperma*). Although pinyon pine (*Pinus edulis*) is present, it appears only sporadically at the higher elevation ridge tops, principally in the northern half of the project area. Other common species noted within the Coniferous Woodland vegetation type included blue gramma (*Bouteloua gracilis*), purple three-awn (*Aristida purpurea*), galleta (*Pleuraphis jamesii*), rubber rabbitbush (*Ericameria nauseous*), broom snakeweed (*Gutierrezia sarothrae*), dagger thorn cholla (*Grusonia clavata*), and prickly pear (*Opuntia phaeacantha*).

The Arroyo Riparian vegetation is confined to the edges and channels of the numerous ephemeral drainages that intersect the proposed Bypass Alternative alignment and the existing NM 4 alignment. The dominant vegetation within the community type include rabbitbush, alkali sacaton (*Sporobolus airoides*), four-wing saltbush (*Atriplex canescens*), and Apache plume (*Fallugia paradoxa*). Facultative upland plants such as purple aster (*Machaeranthera canescens*), Indian rice grass (*Achnatherum hymenoides*), spectacle pod (*Dimorphocarpa wislizeni*), and snakeweed were also observed near the ephemeral drainages.

Along Vallecito Creek and East Side Canal, both canopy and sub-canopy vegetation occurs. The taller trees within these riparian habitats include the Rio Grande cottonwood (*Populus deltoids ssp. wislizenii*), Russian olive (*Elaeagnus angustifolia*), salt cedar (*Tamarix cinensis*), as well as non-riparian species, Siberian elm (*Ulmus pumila*). The edges of the waterways are dominated by herbaceous vegetation such as Baltic rush (*Juncus balticus*), annual rabbitfoot grass (*Polypogon monospermiensis*), common spikerush (*Eleocharis palustris*), and salt grass (*Distichlis spicata*). The riparian forest along Vallecito Creek is very open, consisting of scattered trees. Although narrow, the riparian forest fringe along the East Side Canal is dense and in some places, forms thickets that are difficult to cross through.

Nearly 100 species of vascular plants were found within the project area. No rare or protected plants were present during biological resources surveys. The most unusual of them were wetland plants, such as arrowweed (*Sagittaria spp.*).

3.6.2 Potential Effects and Mitigation Measures

With the No-Build Alternative, there would be no effect upon the existing vegetation. Over time, continued use of vegetation for grazing, irrigation areas, and the encroachment of commercial and other activities would likely alter the existing vegetation.

The Bypass Alternative would remove habitat for individual plant species and would result in loss and/or conversion of habitat for the vascular plant communities in the project area. Although most of the vegetation within the study area is not unique, it does provide habitat for wildlife. The proposed project would have both temporary and long-term effect on portions of the vegetation types.

The anticipated temporary habitat disturbances associated with the Bypass Alternative would occur during construction and include clearing, grubbing, and potential re-grading of the ground adjacent to the new roadway. Eighty-seven acres of vegetation would be temporarily disturbed. The creation of a new roadbed would permanently cover existing areas of natural habitat. These areas would be unusable by vegetation and would comprise the permanent loss of 18.9 acres of vegetation habitat in the project area. The dominant trees within the project area are one-seed juniper, with pinyon pine appearing sporadically. The construction of the Bypass Alternative would result in the loss of junipers, which is considered permanent. If cottonwood trees are removed during construction, there is suitable habitat for their replacement along Vallecito Creek.

Upon completion of construction, the areas disturbed, but not physically occupied by the roadbed, would be seeded with native plant species representative of species currently found in the project area. With proper seeding after construction, most of the herbaceous species currently found along the proposed alignment for the Bypass Alternative are likely to reoccupy the portions of the new roadway ROW. In addition, revegetation of disturbed surfaces is an important erosion control measure for water quality purposes.

3.7 Noxious Weeds

3.7.1 Existing Conditions

Noxious weeds are undesirable, non-native plant species that have negative impacts upon crops, native plants communities, livestock, and the management of natural or agricultural systems. The New Mexico Department of Agriculture has targeted numerous noxious weeds for control or eradication pursuant to the Noxious Weed Management Act of 1998. New Mexico's noxious weed list is classified into the following three divisions, all of which are non-native to New Mexico:

- Class A weeds are species that currently are not present in New Mexico or have limited distribution. Preventing new infestations of these species and eradicating existing infestations is the highest priority.
- Class B weeds are species that are limited to portions of the state. In areas that are not infested, these species should be treated as Class A weeds. In areas with severe

infestations, management plans should be designed to contain the infestation and stop any further spread.

- Class C weeds are species that are wide-spread in the state. Management decisions for these species should be determined at the local level based on feasibility of control and level of infestation.

Scattered patches of weedy species such as Siberian elm, salt cedar, bindweed (*Convolvulus arvensis*), Russian thistle (*Salsola tragus*), and summer Cyprus (*Kochia scoparia*) occur in the project area. Although three Class C noxious weeds species – salt cedar (*Tamarix chinensis*), Russian olive (*Eleagnus angustifolia*), and field bindweed (*Convolvulus arvensis*) – are present, there are no Class A or B noxious weeds, nor are there any infestations of Class C weeds that warrant treatment.

3.7.2 Potential Effects and Mitigation Measures

The No-Build Alternative would not increase the potential for the occurrence of noxious weeds beyond what may occur with present land uses. With the Bypass Alternative, there is a potential to spread noxious weeds because of construction activity and construction equipment movement. Measures to prevent the spread of Class B noxious weeds within and outside of the project area, such as cleaning construction equipment before entering the project area, would be implemented and coordinated with the NMDOT Human and Natural Resources Bureau. Class C weeds may be controlled at local agency discretion.

3.8 Wildlife

3.8.1 Existing Conditions

Forty-six species of vertebrate animals were observed or indicated within the project corridor, including 29 species of birds, 12 species of mammals and five species of reptiles. No evidence of bat roosting sites was observed in the area. The greatest diversity of wildlife in the project area was noted within the riparian habitats along the East Side Canal and along Vallecito Creek. The woodland habitats throughout the project area were less diverse and fairly homogeneous in wildlife species composition across the length of the proposed roadway.

The riparian and aquatic habitats along the East Side Canal and portions of Vallecito Creek and the associated wetlands are important habitats for wildlife. These riparian zones provide nesting opportunities for a wide range of birds, as well as bird use during migration. Habitat for amphibians and small mammals as well as aquatic invertebrates is also provided. Vallecito Creek also appears to be a wildlife corridor, with numerous tracks of small and medium sizes animals noted in the creek bed and along the banks.

Vallecito Creek is not a perennial waterway and does not provide permanent aquatic habitat for fishes. Although suitable habitat for amphibians was present along Vallecito Creek and the East Side Canal, none were observed in the project limits during the times of the completed biological surveys (spring

and summer, 2008). Table 3-1 provides a full list of the vertebrate species observed or indicated in the project area.

Table 3-1. Vertebrate Animal Species Observed or Indicated in the NM Project Area

Common Name	Scientific Name
Birds	
American robin	<i>Turdus migratorius</i>
American crow	<i>Corvus brachyrhynchus</i>
American kestrel	<i>Falco sparverius</i>
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>
Black-chinned hummingbird	<i>Archilochus alexandri</i>
Brewers blackbird	<i>Euphagus cyanocephalus</i>
Brown-headed cowbird	<i>Malothrus ater</i>
Canyon towhee	<i>Pipilo fuscus</i>
Cliff swallow	<i>Petrochelidon pyrrhonata</i>
Common raven	<i>Corvus corax</i>
Cooper’s hawk	<i>Accipiter cooperii</i>
Dark-eyed junco	<i>Junco hyemalis</i>
Eurasian collared dove	<i>Streptopelia decaocto</i>
European starling	<i>Sturnus vulgaris</i>
Gray vireo	<i>Vireo vicinior</i>
House finch	<i>Carpodacus mexicanus</i>
Indigo bunting	<i>Passerina cyanea</i>
Lark sparrow	<i>Chondestes grammacus</i>
Mourning dove	<i>Zenaida macroura</i>
Northern flicker	<i>Coaptes auratus</i>
Northern mockingbird	<i>Mimus polyglottos</i>
Plumbeous vireo	<i>Vireo plumbens</i>
Scrub jay	<i>Aphelocoma californica</i>
Spotted towhee	<i>Pipilo maculatus</i>
Townsend’s solitary	<i>Myadestes townsendii</i>
Turkey vulture	<i>Chathartes aura</i>

Common Name	Scientific Name
Western kingbird	<i>Tyrannus verticalis</i>
Western tanager	<i>Piranga ludoviciana</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>
Mammals	
Banner-tailed kangaroo rat	<i>Dipodomys spectabilis</i>
Black-tailed jackrabbit	<i>Lepus californicus</i>
Botta's pocket gopher	<i>Thomomys bottae</i>
Coyote	<i>Canis latrans</i>
Desert cottontail	<i>Sylvilagus auduboni</i>
Mule deer – tracks	<i>Odocoileus hemionus</i>
Ord's kangaroo rat	<i>Dipodomys ordii</i>
Raccoon	<i>Procyon lotor</i>
Rock squirrel	<i>Spermophilus variegatus</i>
Striped skunk	<i>Mephitis mephitis</i>
White-tailed antelope squirrel	<i>Ammospermophilus leucurus</i>
White-throated woodrat	<i>Neotoma albigula</i>
Reptiles	
Bullsnake	<i>Pituophis melanoleucus</i>
Prairie lizard	<i>Sceloporus undulatus</i>
Short horned lizard	<i>Phrynosoma douglasii</i>
Western rattlesnake	<i>Crotalus viridid</i>
Western terrestrial garter snake	<i>Thamnophis elegans</i>

Nearly all of the birds observed in the project area are migratory and fall under the protection of the Migratory Bird Treaty Act (16 USC 703-7111). Individual birds, their nests and eggs are protected under the Act. No migratory bird nests were found within the proposed Bypass Alternative alignment nor were any raptor nests visible in or adjacent to the alignment corridor. However, all the juniper and pinyon trees (as well as shrubs along the arroyos) within the proposed bypass alignment are suitable nesting habitat for birds. Additionally, the larger trees along the East Side Canal and Vallecito Creek are suitable nesting habitat for raptors.

The most common mammal noted in the project area was the desert cottontail (*Sylvilagus auduboni*). Notable was the near absence of mule deer (*Odocoileus hemionus*) at the time of the survey. Only a few

tracks were noticed along Vallecito Creek and some of the ridges in the project area. The most common reptile observed in the project area was the prairie lizard (*Sceloporus undulates*).

3.8.2 Potential Effects and Mitigation Measures

With the No-Build Alternative, present habitat conditions and collision dangers to wildlife would continue.

A variety of wildlife concerns occur with any project creating a new roadway through natural habitat. Aside from the direct loss of habitat associated with the construction of the road surface, the development of roadways can lead to vehicle-wildlife collisions, impede animal movement and create habitat fragmentation. The proposed NM 4 bypass roadway would likely result in the localized loss of some habitat and may impede the movement of small animals that live in habitats adjacent to the new roadway. Wildlife (particularly birds) can be indirectly impacted by the noise and activity associated with construction. The passage through roadway corridors can be difficult for wildlife.

Completing the Bypass Alternative would result in effects of both a short-term and long-term nature. Short term effects would include temporary habitat loss during construction and disruption of habitat use from the noise and activity associated with construction. During construction, larger mammals and birds may choose to leave the area and individual small mammals and reptiles may be displaced or killed during the construction activities. Permanent effects would include the loss of habitat by the road surface and subtending road prism.

The effect of loss of upland habitat would most likely affect resident populations of small mammal, reptiles, and invertebrates whose populations within the project area would experience some permanent habitat loss and habitat fragmentation. The roadway is likely to act as a barrier to these groups of animals. In the vicinity of Vallecito Creek, bridge installation would not act as a deterrent to migration or use of that area as a corridor. Loss of trees within the ROW may also result in the loss of potential bird nesting habitat.

Potential mitigation measures include reducing the effects of the roadway acting as a barrier by creating permeability points along the roadway corridor, allowing for the movement of wildlife under the roadway. Permeability points would reduce the potential for wildlife-vehicle collisions and decrease wildlife habitat fragmentation. For larger mammals, such as deer, the permeability points would have an openness factor of greater than one and preferably, greater than five. The proposed bridge across Vallecito Creek would have an openness factor of greater than five and would provide a serviceable crossing location for wildlife. Large culverts, especially box culverts larger than four feet in width and six feet in height could provide permeability points for most animals. Placement of permeability points would be determined during preliminary design in coordination with the Pueblo of Jemez and tribal members.

A survey for active bird nests would be conducted two weeks prior to construction. If nests are found, they would be removed in coordination with the USFWS. Preventative measures such as netting to prevent nesting would be installed prior to nesting season.

The loss of habitat for wildlife would be most pronounced in the wetlands and riparian zones of the project area along the East Side Canal and Vallecito Creek. For this reason, it is recommended that impacts to riparian habitats be minimized and any riparian habitat lost to construction be replaced with equal or better habitat within the general project area. Upon completion of construction, all portions of habitat that were temporarily affected by construction would be seeded and restored. Whenever possible, trees within the ROW would be preserved.

3.9 Threatened and Endangered Species

3.9.1 Existing Conditions

Fifteen species of animals or plants with agency status could potentially occur in the general project area. This includes two invertebrates, one fish species, eight bird species, three mammal species, and one plant species. Table 3-2 lists the species of plants and animals with agency status that could potentially occur in the project area.

A biological survey of the project area extending from Fall 2007 through August 2008 found that there was potential habitat for several of the rare, threatened or endangered species presented in Table 3-2. However, only one of these species, gray vireo, was found in the project area. The following is a discussion of each of the species listed in Table 3-2 and the survey findings within the project area.

Table 3-2. Sensitive, Threatened and Endangered Species Potentially Occurring within the NM 4 Project Area

Animal Species	Federal Status	State Status	Present/Absent
Invertebrates			
Wrinkled marshsnail (<i>Stagnicola caperatus</i>)	---	E	A
New Mexico silverspot butterfly (<i>Speyera Nokomis nitocris</i>)	SOC	---	A
Fish			
Rio Grande sucker (<i>Catostomus plebeius</i>)	SOC	---	A
Birds			
Common black-hawk (<i>Buteogallus anthracinus anthracinus</i>)	---	T	A
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	C	---	A

Animal Species	Federal Status	State Status	Present/ Absent
Broad-billed hummingbird (<i>Cyanthus latirostris magicus</i>)	---	T	A
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	E	E	A
American and Arctic peregrine falcon (<i>Falco peregrines anatum and tundrius</i>)	SOC	T	A
Bald eagle (<i>Haliaeetus leucocephalus</i>)	T	T	A
Gray vireo (<i>Vireo vicinior</i>)	---	T	P
Western burrowing owl (<i>Athene cunicularia hypugea</i>)	SOC	---	A
Mammals			
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	SOC	---	A
Spotted bat (<i>Euderma maculatum</i>)	---	T	A
New Mexican meadow jumping mouse (<i>Zapus hudsonius luteus</i>)	SOC	T	A
Plants			
Parish's alkali grass (<i>Puccinellia parishii</i>)	SOC	E	A
A – absent	PT – proposed threatened		
C – candidate	SOC – species of concern		
E – endangered	T - Threatened		

3.9.1.1 Invertebrates

New Mexico silverspot butterfly (*Speyera Nokomis nitocris*)

This is a species of federal concern. Suitable structural habitat for the New Mexico silverspot butterfly occurs within the palustrine meadow habitat at the south end of the project area and along portions of the south end of the East Side Canal; however, the key food species (*Viola nephrophylla*) was not present.

There were no New Mexico silverspot butterflies present and the project should have no effect upon this species.

Wrinkled marshsnail (*Stagnicola caperatus*)

This species is protected as endangered by the State of New Mexico. It occurs in seasonally dry, vegetated ditches, marshes, streams, and ponds. In the Jemez Mountains, this species is known only to occur at Cerro La Jara. Potential habitat for this species occurred along the East Side Canal in the project area, but was not present. Based on the current alignment, there should be no effect upon this species.

3.9.1.2 Fish

Rio Grande sucker (*Catostomus plebius*)

This is a federal species of concern. The Rio Grande sucker historically occurred within the Jemez River and was documented as late as 1980. Although the Jemez River does not pass through the project area, indirect effects due to surface water quality reduction are possible. Such impacts include sedimentation or the discharge of petrochemical compounds used for fuel or lubrication of construction equipment. Measures outlined below in section 3.9.2 would be taken to ensure the construction activity does not affect water quality within the river.

3.9.1.3 Birds

Protected birds that may pass through the project area but are not evaluated are Baird's sparrow (*Ammodramus bairdii*), and Mountain plover (*Charadrius montanus*). These species would occur within the project area only temporarily, as it supports little suitable habitat for nesting or roosting.

Common black hawk (*Buteogallus anthracinus anthracinus*)

Black hawks are protected as a threatened species by the State of New Mexico. Black hawks are generally found in southern New Mexico but have been documented nesting in the Central Rio Grande Valley and could potentially occur in Jemez Canyon. There were no raptor stick nests within or near the project area in 2008, although species such as black hawk could potentially nest in Jemez Canyon in the future. It is recommended preconstruction surveys for birds include this species.

Yellow-billed cuckoo (*Coccyzus americanus*)

This cuckoo is a federal candidate species within Sandoval County. Several of the areas along the East Side Canal have sufficient vegetation to provide suitable habitat for the yellow-billed cuckoo. A protocol for this species was conducted in the summer of 2008 and it was not present. The proposed project activities would not affect any occupied habitat for this species; however, it is recommended that surveys for this species be included in preconstruction nesting surveys of the project area.

Broad-billed hummingbird (*Cynathus latirostris magicus*)

The broad-billed hummingbird is protected as a State of New Mexico threatened species. The broad-billed hummingbird generally occurs along riparian habitats and could potentially occur in the lower

Jemez River. It could also potentially occur in the lower Jemez Canyon along the Jemez River, below Walatowa, and could potentially have occurred along portions of the East Side Canal. It was not present during surveys conducted in the spring and summer of 2008. The proposed project activities would not affect any occupied habitat for this species.

American and Arctic peregrine falcon (*Falco peregrines anatum* and *tundris*)

These falcons are federal species of concern and protected as migratory birds. No suitable cliff habitat for falcons occurs within the project area. Though cliffs large enough to provide nesting habitat occur north of the project area, there was no indication of peregrine falcons at the time of the survey in summer 2008. It is not anticipated that the proposed project activities would have an effect upon this species.

Southwestern willow flycatcher (*Empidonax traillii extimus*)

This bird is protected as a federal endangered species. It nests in riparian forests with a complex understory structure. The only waterways within the project area with seasonal or near perennial water present are the East Side Canal and Vallecito Creek. Vallecito Creek had a few scattered cottonwood trees present but no understory within the project area. The East Side Canal was lined with a narrow band of riparian trees but also lacked any understory. Neither of these sites were considered suitable habitat for the southwestern willow flycatcher and the proposed project activities should have no effect upon this species.

Bald eagle (*Haliaeetus leucocephalus*)

This species is protected as a State of New Mexico threatened species. It may pass through the project area temporarily, but there was no suitable habitat for the bald eagle within the project area nor were bald eagles seen in the fall of 2007 or the spring and summer of 2008. Bald eagle may forage along the nearby Jemez River in winter months; however, at that time, there would be no water in the East Side Canal riparian habitat. Additionally, there are few tree structures along Vallecito Creek. The proposed project activities would have no effect upon this species.

Western burrowing owl (*Athene cunicularia hypugea*)

The Western burrowing owl is a federal species of concern and is protected under the Migratory Bird Treaty Act. Suitable habitat for the western burrowing owl was scattered throughout the project area, particularly in the sidewalls of some of the arroyos and within abandoned banner-tailed kangaroo rat mounds along some of the ridgetops. A survey for western burrowing owls was completed throughout the project area in the spring and summer of 2008 and western burrowing owls were not present. However, this species could occur in the future and prior to any construction, the area should be re-surveyed to ensure the western burrowing owls have not established nest sites in the project area.

Gray vireo (*Vireo vicinior*)

Gray vireo is a State of New Mexico threatened species and listed by the U.S. Forest Service as a sensitive species. Suitable habitat for the gray vireo occurred throughout the length of the project area and a protocol survey for this species was implemented along the length of the bypass alignment. A closely related species, the plumbeous vireo (*Vireo plumbeus*), was found widespread in the northern half

of the project area. Gray vireo was identified at only one location in the project area. At this site, a gray vireo responded to a taped call within open juniper woodland on a northwest-facing slope. This bird was located a few hundred feet east of the proposed alignment outside of the project limits. If construction occurred during the nesting season, it could have an indirect affect upon this gray vireo territory.

Gray vireos are migratory species and would only be present in the project area during the breeding season. The gray vireos found in the project area should complete their nesting activity by the end of August and will then migrate south for the winter. Fledglings are reported through August 15. Gray vireos that were nesting in areas farther north may use this habitat, but no nesting should occur after September 1 and would not likely begin again until April or May. Gray vireos are known as short distance migrants and leave the breeding grounds by early autumn.

It is recommended that tree removal within the project limits occur outside of the breeding season. If tree removal cannot occur between September and March, then the entire project area should be re-surveyed for this species prior to construction. If nest sites occur within or adjacent to the project alignment then consultation with the New Mexico Department of Game and Fish would be implemented.

Although direct impacts to gray vireo can be avoided through implementation of temporal avoidance measures, the construction of the bypass alternative would result in some long-term loss of gray vireo habitat in the area.

3.9.1.4 Mammals

Townsend's big-eared bat (*Corynorhinus townsendii*) and Spotted bat (*Euderma maculatum*)

The Townsend's big-eared bat is a federal species of concern and the Spotted bat is a State of New Mexico threatened species. Both Townsend's big-eared bat and spotted bat could occur in the general project area and could hunt within the project area, especially along Vallecito Creek and the East Side Canal. Although there are large bluffs, cliff, rock shelters, and abandoned buildings further up the canyon that could be used as roost sites for these species, there was no suitable habitat in the project area. The proposed project activities would not affect any roost site for either of these species and neither should substantially alter the potential hunting conditions for these species in the project area.

New Mexico meadow jumping mouse (*Zapus hudsonius luteus*)

This is a federal candidate species. Some patches of potential habitat for the New Mexico meadow jumping mouse occurred along the drainage of the East Side Canal in the southern portion of the project area. All of those patches were outside the proposed bypass alignment. However, vegetation cover in riparian areas can change rapidly. Prior to construction, the areas where the alignment crosses the East Side Canal should be re-evaluated to determine if suitable vegetative cover for the New Mexico meadow jumping mouse had developed. If suitable habitat is present, then a trapping program should be implemented to verify the presence or absence of this species.

3.9.1.5 Plants

Parish's alkali grass (*Puccinellia parishii*)

This is a federal species of concern. Potential habitat for Parish's alkali occurred along the edges of the marsh area in the southern portion of the project area. However, Parish's alkali grass was not present and the proposed project should have no effect upon this species.

3.9.2 Potential Effects and Mitigation Measures

Although fifteen species with agency status could potentially occur in the project area, only the gray vireo was found. However, it is possible that some of these species not found could occur in the general area outside of the project limits or could occur appear within the project area in the future. For example, there are no fish within the project area, but a variety of drainages (both ephemeral and seasonal) discharge into the nearby Jemez River, where fish populations do occur. To avoid potential impacts to rare fish such as the Rio Grande sucker, the following measures are recommended to avoid the movement of contaminants into the Jemez River:

- Avoiding equipment refueling, maintenance, or storage within floodplains or within 200 feet of a watercourse
- Avoiding storage of fuel or other chemicals within floodplains or within 200 feet of a watercourse
- Cleaning heavy equipment prior to the onset of construction and daily equipment inspections
- Avoiding discharging chemical substances arising from construction or activity into surface waters or soils
- Following all reporting requirements for any discharge of fuel, hydraulic fluid, or other potentially toxic substance to USACE, Pueblo of Jemez, EPA, and NMDOT.

At least four species of birds with agency status had potential or suitable habitat within or near the project area. These include the western burrowing owl, yellow-billed cuckoo, broad-billed hummingbird, and common black hawk. Pre-construction surveys would be conducted.

Both Townsend's big-eared bat and spotted bat could occur in Jemez Canyon but neither had suitable roosting habitat in the project area and should not be affected by the project activities. There was suitable habitat for the New Mexico meadow jumping mouse along portions of the East Side Canal, but the area within the proposed alignment lacked sufficient cover in the summer of 2008 to be suitable habitat. This could change in the future and the potential for New Mexico meadow jumping mouse would be re-evaluated prior to construction.

Gray vireo was found within the project area. If construction occurs during the breeding season then a protocol survey for this species should be conducted along the length of the new alignment. If nest sites occur within or adjacent to the project alignment during the protocol survey, then consultation with the

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New Mexico Department of Game and Fish (NMDGF) would be implemented. Removal of trees outside of the breeding season would avoid direct impacts upon nesting season. The project would remove habitat for this species.

Additional mitigation measures would be implemented, including replanting open disturbed areas with native vegetation, utilizing NMDGF trenching guidelines, and replacing any native riparian trees that would be removed from wetland or riparian habitats in the project area, and, whenever possible, preserving trees within the ROW.

The Biological Evaluation would be reviewed by the USFWS and reevaluated every six months, should a FONSI be signed. Additionally, should construction begin more than five years after a FONSI is signed, the Biological Evaluation for this project would be updated.

3.10 Cultural Resources

3.10.1 Existing Conditions

In June and July of 2008 and October of 2009, Marron & Associates conducted a cultural resource survey of the proposed NM 4 Bypass Alternative. The locality was part of a previous survey conducted by TRC in August and September 2000 (which also included areas for Alternatives A and B, subsequently eliminated from further evaluation). (Loebig et al 2001; McEnany et al 2010). The Area of Potential Effect (APE) surveyed by Marron included only a portion of the previous TRC project area, comprising the F3, G1, and J-Mod alignments of the Bypass Alternative and a segment of the existing NM 290. The proposed easement along the Bypass Alternative alignment is 61 m (200 ft) wide and a 122 m (400 ft) corridor was surveyed. A total of 97.99 ha (242.15 acres) was surveyed by Marron & Associates in 2008 and 2009.

Documented resources within the APE or buffers include 29 archaeological sites, including one historic road segment, two in-use irrigation ditches, and an in-use highway (NM 4, a National Scenic Byway)(Loebig et al 2001; Wells and Justus 2000). Seventeen (17) archeological sites within the surveyed NM 4 Bypass Alternative area are artifact scatters of Anasazi (Pueblo) cultural affiliation, with relatively small features (hearths, ash middens, and rock concentrations). At least four sites appear to have Archaic Period components.

The NM 4 sites are important in the context of early Jemez Pueblo occupation of the area. Archaeological evidence suggests the Jemez arrived in the vicinity of present-day Jemez Pueblo by AD 1300 or earlier. After the period of the Pueblo revolts, and a return to the present area after fleeing to Navajo country, the Jemez founded the present pueblo of Walatowa (Marron & Associates 2009, citing Forest 1979).

Segments of an active irrigation facility (the East Side Canal or Acequia Pueblo Ditch) are within the proposed Bypass Alternative APE. Of the 29 archaeological sites within the APE, twenty-one (21) are recommended National Register of Historic Places (NRHP) eligible under Criterion D, for information potential. Five are recommended to be of indeterminate eligibility based on existing data. The list of

surveyed sites, eligibility requirements, impact of the proposed project, and recommendations are presented in Table 3-3 below.

Written comments received in 2000 from hunting societies indicate that Traditional Cultural Properties (TCPs) are present within the project area. Specifically mentioned are traditional cultural hunting areas, which are important to the initiation of males into various societies. (See Appendix A). NMDOT has initiated consultation with the Pueblo of Jemez Tribal Council—which serves as the voice of the Pueblo—as well as hunting society leaders; however, the consultation has not resulted in the identification of TCP areas or limits. The hunting society leaders were unable to delineate the hunting areas, as the areas change yearly, but the hunting society leaders did state opposition to the proposed bypass. The Pueblo of Jemez Tribal Council passed Resolution No. 2010-01 on January 29, 2010 reaffirming support for the NM 4 Bypass project and deeming the project to be in the best interest of the Peoples of the Pueblo of Jemez to insure the safety, welfare, and cultural respect of the community.

Table 3-3. Cultural Resource Sites

Resource no.	NRHP Eligibility	Criterion	Potential Project Effects (400-ft surveyed area)	Recommendation
Marron-24	Eligible	D	Segment will be affected	Avoid, or include in historical documentation plan
Marron-25	Eligible	D	Center portion of site will be affected	Avoid, or include in testing/data recovery plan
Marron-4	Undetermined	Undetermined	Most of site will be affected	Avoid, or include in testing/data recovery plan
Marron-3	Eligible	D	Most of site will be affected	Avoid, or include in testing/data recovery plan
Marron-8	Undetermined	Undetermined	Most of site will be affected	Avoid, or include in testing/data recovery plan
Marron-19	Eligible	D	Most of site will be affected	Avoid, or include in testing/data recovery plan
Marron-22	Eligible	D	W ½ of site, F1-4, 10-16, 18, 19	Avoid, or include in testing/data recovery plan
Marron-23	Eligible	D	Most of site will be affected	Avoid, or include in testing/data recovery plan
Marron-17	Eligible	D	All of site will be affected	Avoid, or include in testing/data recovery plan
Marron-16	Undetermined	Undetermined	All of site will be affected	Avoid, or include in testing/data recovery plan
Marron-15	Undetermined	Undetermined	All of site will be affected	Avoid, or include in testing/data recovery plan

Resource no.	NRHP Eligibility	Criterion	Potential Project Effects (400-ft surveyed area)	Recommendation
Marron-13	Eligible	D	Most of site will be affected	Avoid, or include in testing/data recovery plan
Marron-21	Eligible	D	Most of site will be affected	Avoid, or include in testing/data recovery plan
Marron-12	Eligible	D	Most of site will be affected	Avoid, or include in testing/data recovery plan
Marron-10	Eligible	D	All of site will be affected	Avoid, or include in testing/data recovery plan
Marron-10A	Eligible	D	All of site will be affected	Avoid, or include in testing/data recovery plan
Marron-5	Eligible	D	Most of site will be affected	Avoid, or include in testing/data recovery plan
Marron-1	Eligible	D	S ½ of site will be affected, most of features	Avoid, or include in testing/data recovery plan
Marron-20	Eligible	D	Most of site will be affected	Avoid, or include in testing/data recovery plan
Marron-7			See Marron-20	
Marron-11	Eligible	D	Most of site will be affected	Avoid, or include in testing/data recovery plan
Marron-11A	Eligible	D	Adjacent to current NM 4 right-of-way	Avoid, or include in testing/data recovery plan
Marron-6	Undetermined	Undetermined	All of site will be affected	Avoid, or include in testing/data recovery plan
Marron-9	Eligible	D	All of site will be affected	Avoid, or include in testing/data recovery plan
Marron-2	Not eligible	n/a	No further treatment	Avoid, or include in testing/data recovery plan
Marron-21	Eligible	D	Most of site will be affected	Avoid, or include in testing/data recovery plan
Marron-18	Eligible	D	All of site will be affected	Avoid, or include in testing/data recovery plan
Marron-14	Eligible	D	All of site will be affected	Avoid, or include in testing/data recovery plan
Marron-09-1	Not eligible	n/a	No further treatment	No further treatment

Resource no.	NRHP Eligibility	Criterion	Potential Effects	Project (400-ft surveyed area)	Recommendation
East Side Canal/ Anthony Pecos Ditch	Eligible	A		Crossed several times	Avoid or include in historical documentation plan
NM 4	Eligible	A		Would be affected at the beginning and ending points of the proposed bypass	No further treatment

3.10.2 Potential Effects and Mitigation Measures

With the No-Build Alternative, impacts to the traditional cultural practices and religious ceremonies within Walatowa will continue.

The proposed Bypass Alternative would impact the TCPs generally identified by hunting societies; however, the Pueblo of Jemez Tribal Council has determined that despite impacts to TCPs, the project would be in the best interest of the Peoples of the Pueblo of Jemez to insure the safety, welfare, and cultural respect of the community.

NM 4, which was designated a National Scenic Byway in 1997, is recommended eligible for the NRHP under Criterion A. The proposed Bypass Alternative might affect NM 4 at the beginning and ending points of the proposed bypass; however, the undertaking only involves minor alterations to the existing corridor, and does not alter the nature, use, and rural setting and feeling of NM 4; therefore, it would not have an adverse effect.

For sites that have undetermined NRHP eligibility, further testing is recommended to reach a determination. Sites that have been determined as eligible for the NRHP will be documented through data recovery efforts that will be developed through consultation with the BIA, FHWA, Pueblo of Jemez, and the New Mexico State Historic Preservation Office (NM SHPO).

In the event that bones, prehistoric, or historic archaeological materials are uncovered during construction activities, NMDOT would cease work immediately, protect the remains or artifacts from further disturbance, and contact appropriate Tribal authority, SHPO and other authorities. Additionally, Pueblo of Jemez religious leaders have asked that archeological sites be cleared as outlined by the Native American Graves Protection and Repatriation Act (NAGPRA) and that the Pueblo Tribal Council would be involved with the clearances.

3.11 Air Quality

3.11.1 Existing Conditions

Transportation has been recognized as a major contributor to air pollution. Under the transportation air quality conformity regulations developed during the 1990s, transportation plans, programs, and

federal transportation projects cannot be approved unless the projections of future air quality are within state-adopted and federally approved limits.

The Clean Air Act Amendments of 1990 established National Air Quality Standards (NAAQS). The NAAQS criteria pollutants are carbon monoxide, nitrogen dioxide, ozone, particulate matter containing particles with diameters of 10 micron or less (PM₁₀), particulate matter containing particles with diameters of 2.5 micron or less (PM_{2.5}), sulfur dioxide and lead. Under the Transportation Conformity Rule, transportation projects must provide for attainment of the NAAQS (23 CFR 771.40). This project is located within an attainment area for all NAAQS. There are no Class I Federal Air Quality airsheds near the corridor area. Air quality in the proposed project area is generally good unless there are forest fires, prescribed burns or wind blown dust conditions occurring. Table 3-4 provides the number of exceedances of EPA standards as reported by the Air Quality Monitors located in Walatowa.

Table 3-4. Monitor Trends Report – Criteria Air Pollutants

No. of Exceedances of EPA Standards							
2003	2004	2005	2006	2007	2008	Pollutant	Monitor ID
0	0	0	0	0	-	PM2.5	350439004-1
-	0	0	0	0	-	Carbon Monoxide	350439004-1
-	4	2	8	1	-	PM10	350439004-1
-	0	1	0	0	0	Ozone	350439004-1
0	0	1	0	0	-	PM2.5	350439004-2

Source: AirData US EPA, January 2009

3.11.2 Potential Effects and Mitigation Measures

With implementation of the No-Build Alternative, existing air quality conditions would remain.

There would be no changes to air quality with the Bypass Alignment. The proposed Bypass would not result in an increase in traffic. Vehicle emissions would be removed from the immediate vicinity of sensitive receptors adjacent to the existing road. Dust suppression methods and properly maintained equipment would reduce any potential temporary effects during construction.

3.12 Noise

3.12.1 Existing Conditions

Traffic on existing NM 4 is the main contributor to background noise in the corridor area, with sensitive receptors located adjacent to the existing highway alignment in the residential areas and schools within Walatowa.

The FHWA and the NMDOT have adopted specific policies and procedures for evaluating traffic noise impacts and the need for noise abatement. According to FHWA and NMDOT procedures, noise abatement must be considered when predicted traffic noise levels “approach” or exceed Noise Abatement Criteria (NAC) established for various land use categories. NMDOT’s noise policy defines “approach” as being within 1 decibel of the appropriate NAC. Table 3-5 summarizes the NAC thresholds defined by FHWA’s and NMDOT’s noise policies. Federal and state procedures also require that noise abatement be considered when the implementation of a roadway project results in a substantial increase over existing noise levels. According to NMDOT’s noise policy, an increase of 10 decibels or more is considered a substantial increase over existing noise levels.

**Table 3-5. Noise Abatement Criteria
(Hourly A-Weighted Noise Level in Decibels [dBA])**

Activity Category	Leq(h)	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
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 included in Category A or B above.
D	--	Undeveloped Lands
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Sources: 23 CFR 772; NM Transportation Commission Noise Abatement Policy (AD 236 and CP 86, 7/18/02)

The FHWA and NMDOT noise policies distinguish between highway projects that are likely to affect conditions and those that are not. Highway projects likely to affect noise conditions are classified as “Type I Projects.” NMDOT’s noise policy defines Type I Projects as “a proposed... highway project for the construction of a highway on new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment or increases the number of through traffic lanes or modifies the existing typical section” (NMDOT AD 236). Traffic noise studies are typically conducted for Type I projects; however, a traffic noise study was not conducted since the area of the Bypass Alternative is undeveloped land without sensitive receptors.

3.12.2 Potential Effects and Mitigation Measures

Based on traffic volume forecasts developed for the project, there would be no difference in traffic volumes between the Bypass Alternative and the No-Build Alternative. The proposed project by itself, with any of the alternatives, would not appreciably change traffic noise levels in the project area. The Bypass Alternative would reduce noise effects from traffic within Walatowa, as traffic noise would be removed from the center of the Town and away from receptors.

3.13 Visual Resources

3.13.1 Existing Conditions

The project corridor is located in the Jemez River Valley and is generally flat to rolling terrain, with several vegetation zones encountered in the corridor. Concentrated areas of residential and administrative development are encountered in Walatowa on the existing NM 4 roadway. Views along the corridor are of Walatowa, rangeland and some riparian areas, with mesa and mountains visible in the distance. The middleground view of cottonwood foliage near the Jemez River in the fall season is scenic. Views in the foreground are not as impressive as one travels the existing highway in the project corridor.

The existing visual resources and conditions associated with the existing NM 4 would be considered good, when taking into account the excellent air quality conditions, rolling topography, and water features in the project area. Development in the project area is not extensive and a variety of mountain, mesa and valley views can be observed by travelers on NM 4.

3.13.2 Potential Effects and Mitigation Measures

With the No-Build Alternative, existing visual resources would remain the same. With the Bypass Alternative, the Pueblo areas in and near Walatowa would differ visually during construction of the bypass and after completion, as the majority of traffic would then occur on the bypass. Views of the project corridor would be different, as 18.9 acres of vegetation habitat would be removed for the new roadway. The view would be different for travelers on the bypass, allowing a more unrestricted view of topography to the east of the roadway. A new bridge structure over Vallecito Creek would present a different visual character but would likely not distract traffic on the Bypass Alternative. Areas temporarily disturbed around the new roadway would be seeded with native vegetation. Measures to help the new roadway blend with the existing landscape would be identified and considered during final design, including but not limited to, the use of natural colored concrete, rounding the tops and blending the ends of slopes, and selecting unobtrusive guardrails, walls, fences, and culvert end section designs.

3.14 Communities and Land Use

3.14.1 Existing Conditions

The project area lies entirely within Pueblo of Jemez Trust Land in Sandoval County. The Pueblo of Jemez is made up of approximately 89,000 acres of land with land uses that include rangeland, single family residential, mixed/minor commercial, agricultural, and tribal administration facilities (Figure 3-3). Residential land uses are primarily to the west of existing NM 4. The Pueblo has approximately 2,000 acres of irrigable agricultural land, mostly to the west of NM 4, and a small commercial center made up of a gas station and convenience store (Jemez Valley Area Plan 2007). The tribal administration facilities are concentrated in the southern portion of Walatowa. Current land use in the area of the Bypass Alternative is rangeland and tribal administration has indicated that no development is anticipated in the vicinity.

The Pueblo of Jemez is the largest community in the Sandoval County Jemez Valley Planning Area (Jemez Valley Area Plan 2007), which also includes the neighboring communities of San Ysidro, Cañon, Ponderosa, and Jemez Springs. The Pueblo is a Census Designated Place (CDP) with an estimated population of 1,953 (U.S. Census Bureau 2000). The Pueblo of Jemez is projected to have a 41% increase in population by year 2025 and appears to have adequate land capacity to develop and accommodate the population growth. The entire Jemez Valley Planning Area is projected to have a 29.1% increase in population, 32.1% increase in housing, and 69.7% increase in employment by year 2025 (MRCOG 2006).

Schools within the study area include Jemez Pueblo Head Start (Preschool), Jemez Pueblo Day School (Kindergarten through 6th grade), San Diego Riverside Charter (Pre-kindergarten through 8th grade), and Walatowa Charter High (9th through 12th grade). The Jemez Valley School District includes Jemez Valley Elementary, Middle and High Schools, all located north of the study area along NM 4.

The Pueblo of Jemez opposed the alignment of NM 4 through Walatowa when it was originally constructed. The preservation of traditional culture, values, and ancestral sites is of extreme importance to the Pueblo of Jemez. The current alignment divides Walatowa and adversely impacts community cohesion. There are no pedestrian facilities and current roadway shoulders are either non-existent or too narrow for safe pedestrian/bicycle use. The lack of pedestrian facilities and turn lanes within Walatowa, increased traffic volumes from local and thru-traffic, and a 35 mph speed limit create safety concerns for the Pueblo of Jemez and interrupt community cohesion.

Area planning documents indicate the following:

- The Jemez Valley Corridor Assessment (MRCOG 2006) recommends a bypass road designed to fit the physical setting and preserve the character of the area in order to improve safety and access control to the Pueblo. MRCOG also recommended that all future improvements to NM 4, including a bypass, include wide shoulders and signage for bicyclists.
- The Sandoval County Jemez Valley Area Plan (2007) identified a NM 4 realignment in the area of the Jemez Pueblo, improved pedestrian facilities, and improved safety and drainage as transportation improvement goals.

3.14.2 Potential Effects and Mitigation Measures

With the No-Build Alternative, NM 4 would remain a barrier to community cohesion, the Pueblo would not be able to further restrict access to the traveling public during cultural ceremonies, and increased traffic volumes would continue within Walatowa. Safety concerns would continue with the No-Build Alternative, as no pedestrian facilities or turn lanes would be added.

The Bypass Alternative would convert some dry rangeland to highway ROW. The entire project area is contained within one grazing unit and grazing currently occurs southeast of the proposed bypass alignment. Should grazing extend to the project area in the future, there are sufficient water sources (stock tanks) on both sides of the alignment to accommodate animal grazing and there would be several permeability points to allow for free movement under the roadway.

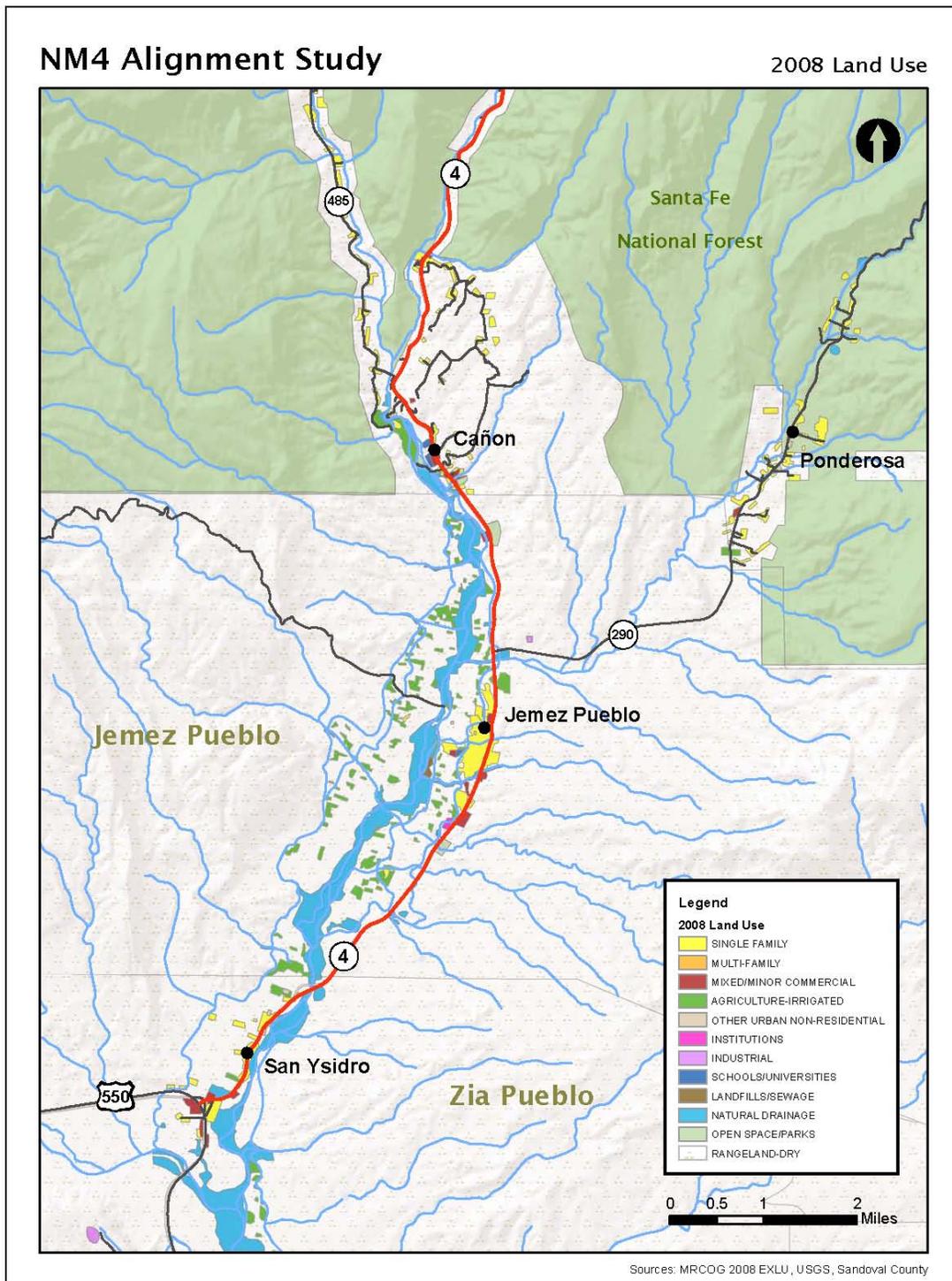


Figure 3-3. 2008 Land Use

Despite projected development along the current NM 4 alignment, traffic would be limited to local traffic and thru-traffic would utilize the bypass. The Pueblo would be provided the ability to restrict access to its facilities, maintain privacy during cultural ceremonies, and increase community cohesion and pedestrian safety.

3.15 Socioeconomics and Environmental Justice

Executive Order 12898, Environmental Justice, and Title VI of the Civil Rights Act seek to avoid, minimize, or mitigate disproportionately high and adverse effects, including social and economic effects, on minority populations and low-income populations. Information concerning race, color or national origin and income levels of populations served or affected by proposed alternatives must be taken into consideration in order to avoid or mitigate disproportionately high adverse effects on these populations.

3.15.1 Existing Conditions

For the purposes of assessing potential environmental justice issues within the study area, 2000 U.S. Census data for census tract 101.2 were examined and compared to data for all of Sandoval County. Data show that 27.2% of individuals were below the poverty level threshold in 1999, compared to 9.0% of individuals in Sandoval County. One hundred and ninety-three of the 457 households in the census tract have an income of less than \$24,999 (Table 3-6).

Table 3-6. Family Income and Poverty

	Jemez Pueblo CDP	Sandoval County
Total Population	1,953	89,908
Family Median Income	30,880	48,984
Family Income Below Poverty Level (1999)	27.2%	9.0%

Source: U.S. Census 2000

The breakdown of population for the census tracts within the study area by race shows that 99.6% of the study area population (Jemez Pueblo CDP) is made up of minorities, compared with 35% of the population of Sandoval County (Table 3-7). Ninety-one percent of the Jemez Pueblo CDP population speaks a language other than English at home, with 44.9% reporting speaking English “less than very well” (U.S. Census 2000).

Table 3-7. Race

	Jemez Pueblo CDP	Sandoval County
White	0.4	65.1
Black or African American	0.0	1.7
American Indian and Alaska Native	99.1	16.3
Asian	0.0	1.0
Native Hawaiian and Other Pacific Islander	0.0	0.1
Some other race	0.3	12.4
Two or more races	0.2	3.5

Source: U.S. Census 2000

The existing NM 4 alignment is currently the only available access road to not only the Pueblo of Jemez, but also some communities north of the Pueblo. Emergency services such as the fire department, emergency medical services, and police are currently slowed by traffic on NM 4, as drivers are unable to yield to the emergency service vehicles due to non-existent shoulders and the need to reduce speed around curves.

3.15.2 Potential Effects and Mitigation Measures

The proposed Bypass Alternative would be associated with minor and mostly positive social and economic impacts. Existing local population and demographic characteristics are not likely to be affected by the proposed bypass. There may be some minor and temporary increases in employment, materials supply and income in Sandoval County and the immediate project area due to construction activities. Highway improvements may reduce daily commuting times to other areas. The proposed Bypass Alternative would have a positive impact on the community of Jemez Pueblo in terms of community cohesion, public safety, and overall quality of life, although some current roadside businesses could suffer economic loss or require relocation. Travel time for emergency vehicles would be improved, as the proposed Bypass Alternative would provide a smoother flow of traffic with a higher posted speed limit.

Although environmental justice populations exist within the Pueblo of Jemez, no disproportionately high and adverse human health or environmental effects to these populations would be anticipated. The Pueblo of Jemez Tribal Council has passed Resolution 2008-07 in support of the Bypass Alternative. There are no residences within the vicinity of the proposed Bypass Alternative and no relocations would be required.

3.16 Section 4(f) Properties

Section 4(f) of the U.S. Department of Transportation Act of 1966, as amended, (49 USC 303, 23 USC 138) provides that transportation projects within the U.S. Department of Transportation (USDOT) should include special effort to preserve public parks and recreation areas, wildlife and waterfowl refuges and historic sites. Pursuant to Section 4(f), the FHWA and other departments of transportation

may not approve the use of land from a publicly owned park, recreation area, wildlife refuge or significant historic site unless “there is no feasible and prudent alternative to the use of the land and the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use” (49 U.S.C. 303). Section 4(f) resources are presumed to be significant unless the official having jurisdiction over the resource concludes that the site is not significant (23 CFR 771.135(c)).

To qualify as “publicly owned” under Section 4(f), a resource must be owned by a public entity, be open to the public, have its primary purpose be for park or recreation activities, and it must be significant to the community in meeting park or recreation area goals. A historic site must be of national, state or local significance or be given special consideration deemed appropriate by the USDOT to qualify as a Section 4(f) resource. Tribal lands are not considered “publicly owned” under Section 4(f); however, land or resources that are on or eligible for listing on the NRHP may fall under Section 4(f) protection.

Section 4(f) applies to all archaeological sites that are on or eligible for inclusion on the National Register and that warrant preservation in place. Section 4(f) does not apply to archaeological resources if FHWA, after consultation with the SHPO, determines that the archaeological resource is important chiefly because of what can be learned by data recovery, has minimal value for preservation in place, and the officials with jurisdiction over the Section 4(f) resource have been consulted and have not objected to use (23 CFR 774.13(b)). If proposed design alternatives or strategies would result in an impact to a Section 4(f) property, all other reasonable alternatives would need to be fully evaluated for their ability to meet the stated purpose and need.

3.16.1 Existing Conditions

The Pueblo of Jemez is a sovereign nation and the proposed project area lies entirely within Indian Trust lands; therefore, the project area would not be considered publicly owned or open to the general public within the meaning of Section 4(f). However, the NM 4 proposed bypass corridor contains twenty-three historic or archaeological sites that are eligible for listing on the NRHP. Of the twenty-three sites that are eligible for listing on the NRHP, twenty-one are eligible under Criterion D. These sites have minimal value for preservation in place, the Pueblo of Jemez Tribal Council have been consulted and do not object to the use of the land, therefore, Section 4(f) would not apply.

There are also five archaeological sites that may be eligible but have not yet been evaluated. Consultation with SHPO will be required to determine whether Section 4(f) applies to these five sites.

There are three sites in the project corridor that are eligible for listing on the NRHP under Criterion A and have been evaluated in a Draft Section 4(f) Evaluation: East Side Canal, Anthony Pecos Ditch and the existing NM 4. Of those three sites, uses as defined by Section 4(f) would be at NM 4 and the East Side Canal.

3.16.2 Potential Effects and Mitigation Measures

Implementation of the No-Build Alternative would result in no impacts to Section 4(f) properties. Pueblo of Jemez has been consulted regarding the presence of sites eligible for the NRHP. These sites

would be avoided, where possible, and a testing/recovery plan has been recommended and would be evaluated through the consultation processes with the Pueblo of Jemez, the NMDOT and SHPO.

The connections of the proposed Bypass Alternative to existing NM 4 would require a Section 4(f) use; however, the connections and removal of small segments of existing NM 4 would not alter the existing nature, use, or rural setting or feeling of NM 4 and would not impact the National Register eligibility. Appropriate crossing structures would be designed so as to not interfere with the function or historic significance of the East Side Canal. Should a reconfiguration of the East Side Canal crossings be necessary, the crossing would be documented in a historic documentation plan.

3.17 Farmland

3.17.1 Existing Conditions

The USDA NRCS defines prime farmland as land that has the best combination of physical and chemical characteristics for agricultural crops with minimum inputs. Prime farmland has a combination of soil properties, growing season, and moisture supply needed to produce sustained high yields of crops. According to the NRCS, no farmland designated as “prime” or “of statewide importance” is located in the proposed project area. There is irrigated farm land west of the project corridor in the Jemez River valley, and there are some irrigation features near the northern terminus of the proposed project.

3.17.2 Potential Effects and Mitigation Measures

No conversion of any farmland is required nor is any existing land under crops required for any ROW. There are no effects to existing farmlands in the project area from the No-Build Alternative or the Bypass Alternative.

3.18 Relocations and Easements

3.18.1 Existing Conditions

There are no relocations planned or necessary. The new roadway would require an easement agreement between the NMDOT and the Pueblo of Jemez for a 200-foot wide corridor for the length of the proposed bypass. Sections of existing roadway on NM 4 and NM 290 would be removed and the ROW would be abandoned. The prescriptive use of ROW for NM 4 through Walatowa would be discontinued.

3.18.2 Potential Effects and Mitigation Measures

There would be no relocations with either the No-Build Alternative or the Bypass Alternative. The easement agreement would be subject to approval by the BIA. Existing ROW on NM 4 through Walatowa would be returned to the Pueblo of Jemez for use and maintenance.

3.19 Multi-Modal Transportation

3.19.1 Existing Conditions

Sandoval County public transportation includes Sandoval Easy Express bus service, which runs Mondays through Fridays. Along NM 4, bus stops are at San Ysidro, Jemez Pueblo administrative offices in Walatowa, Jemez School, Cañon, and Jemez Springs. The bus service provides connections between Jemez Valley, Rio Rancho, and Bernalillo with stops at Rail Runner stations and major employment centers. Sandoval Easy Express buses are equipped with bicycle racks.

Within Walatowa, there are no pedestrian facilities and current roadway shoulders are non-existent or too narrow for safe pedestrian/bicycle use.

3.19.2 Potential Effects and Mitigation Measures

Implementation of the No-Build Alternative would result in continued pedestrian safety concerns within Walatowa, as shoulders are too narrow or non-existent. The Bypass Alternative proposes 8-foot wide shoulders, which would be sufficient to use as pedestrian and bicycle facilities and would be consistent with the MRCOG's bike corridor designation of NM 4. A change in Sandoval Easy Express Service bus stops would not be required, as the existing Landfill Road would serve as an access road to the NM 4 bypass south of the bus stop at the Jemez Pueblo Administrative Complex. A change in schedule may be required but would be less than a five minute change to accommodate additional time to access the NM 4 bypass from the landfill road.

3.20 Utilities

3.20.1 Existing Conditions

All existing utility corridors and infrastructure along NM 4 would remain. Any utilities in or near the proposed construction areas would be investigated and evaluated prior to construction.

3.20.2 Potential Effects and Mitigation Measures

With the No-Build Alternative, no changes or relocations of any existing utilities are necessary, and thus, there would be no effects to area utilities or existing service. The Bypass Alternative is not likely to encounter utilities, as the roadway is new construction, but would still require the location and consideration of any utilities that may be in the area. The NMDOT would coordinate with any affected utility owners during the design phase and continue this effort throughout all construction phases. If construction were to result in disruption of services, all utility customers would be notified in advance of the time and duration of disruption.

3.21 Hazardous Substances

3.21.1 Existing Conditions

An initial site assessment has been completed for the proposed project corridor and existing corridor (HDR Engineering, Inc. 2008) to determine the presence of any hazardous materials and/or facilities. The assessment was completed in accordance with ASTM requirements and other pertinent regulations. No Recognized Environmental Condition (REC) was noted during the assessment, which included site visits, interviews with knowledgeable local persons, and records searches.

3.21.2 Potential Effects and Mitigation Measures

There are no existing hazardous material situations that were evident during the site assessment; therefore, there are no effects to or from hazardous materials for the No-Build Alternative or the Bypass Alternative. If contaminated soil were encountered during any construction related to the action alternatives, discovery procedures outlined in the NMDOT 2010 Hazardous Material Assessment Handbook would be followed.

3.22 Construction Activities

The Bypass Alternative would result in temporary effects during construction of the new bypass. Effects would include a minor increase in noise levels from construction equipment while connections to existing NM 4 are made, short-term effects on air quality (dust, equipment emissions), and possible utility outages.

3.23 Indirect Effects and Cumulative Effects

Indirect effects are the effects of an action that occur either later in time or are removed in distance from a particular action being evaluated. Cumulative effects are those resulting from the incremental effect of an action, when added to other past actions and reasonably foreseeable future actions. The identification of reasonably foreseeable future actions, excluding the proposed project, involved the review of public documents such as land use plans, transportation assessments, and natural resource management plans.

Reasonably foreseeable future actions identified include:

- Solar Project. The Pueblo of Jemez plans to construct a photovoltaic solar power generating station on a 30-acre site just north of the Pueblo boundary, but south of the proposed Bypass Alternative alignment. The solar project area would be accessed from existing NM 4. Details on the solar facility's operations, including number of employees is undetermined at this time, but it is not expected to generate a significant increase in traffic volumes in the area. If funding is awarded, the solar project would be constructed in 2010.
- Change in Valles Caldera National Preserve Management Status. The National Park Service completed a feasibility study in December 2009 to assess the feasibility including

Valles Caldera National Preserve into the national park system. Although a decision on management status has not been made, it was determined that it was feasible to include the Valles Caldera National Preserve into the park system. This addition would likely lower access fees, simplify access, and expand the availability of recreational activities.

- Improvements to recreation areas within the Santa Fe National Forest. The U.S. Forest Service has begun preparing an EA in support of a project to improve recreational facilities including campground host site development, trailhead development, and toilet facilities.
- Change in U.S. Forest Service Travel Management Rule in Santa Fe National Forest. The U.S. Forest Service is preparing an EIS to consider the effects of changes to the Travel Management Rule. The proposed action would, among other things, increase the miles of trails designated for motorized vehicles and designate motorized access to dispersed camping.
- Improvements to the Landfill Road (BIA road SP 801). The partially unpaved Landfill Road would provide access to and from Walatowa at the southern end of the Town. It is anticipated that the Pueblo of Jemez will improve this road to increase level of service.

The most common indirect effects associated with roadway projects relate to induced development. Construction of the proposed Bypass Alternative would provide access into undeveloped areas and there is potential for land use changes to include residential, retail, commercial, and / or light industrial uses. The proposed Bypass Alternative project by itself would not be the direct cause of such development because other factors, such as economic conditions and local land use decisions, dictate development decisions. Currently, there are no plans for future development in the area of the proposed bypass; however, there has been some discussion about a potential green business center that could be built at an undetermined location.

Cumulative effects of the No-Build Alternative are minimal, as no new construction of a bypass or enhancements of the existing roadway would occur. Changes in management status and public access at the Valles Caldera National Preserve, improvements to recreational areas north of the project area, and increased miles of trails all have the potential to induce previously unanticipated travel demand on NM 4. Over time, if traffic and congestion were to increase in Walatowa, those effects could lead to the reconsideration of a build or enhancement alternative. Improvements to Landfill Road would result in a higher level of service for travelers on this road and may induce more local traffic accessing NM 4 at the southern access point. The Solar Project has the potential to increase traffic and traffic noise; however, the solar project is far enough south of the proposed Bypass Alternative that it would not increase noise in the project area.

3.24 Irreversible and Irretrievable Commitment of Resources to the Proposed Action

Project implementation would involve the commitment of resources. ROW acquired for construction would preclude future uses. Fossil fuels, labor and materials would be expended. These are not retrievable but are not rare. Construction would require a one-time expenditure of non-retrievable public funds. Resources would be committed based on the assumption that corridor users would benefit from the project. Improved safety and access benefits would be expected to justify this commitment.

3.25 Short-term Use of the Human Environment and Long-term Productivity

The relationship of the Bypass Alternative's short-term impacts and use of resources to the maintenance and enhancement of long-term productivity is positive. Construction of the project would involve the short-term use of resources such as labor and construction materials. The proposed project would also contribute to the maintenance and enhancement of long-term productivity for the communities in and near the project area and for the regional transportation network by being consistent with local planning recommendations.

4.0 Environmental Commitments

- A SWPPP would be prepared and a NPDES permit would be obtained because one (1) acre or more of land would be disturbed.
- BMPs would be installed and maintained both during and after construction to prevent, to the extent practicable, the discharge of pollutants and sediments to waters of the United States in conformance with the *National Pollutant Discharge Elimination System Manual, Stormwater Management Guidelines for Construction and Industrial Activities, Revision 1, December 2003*. BMPs would include procedures to maintain a clean, orderly site. BMP requirements would also include proper transport, storage, and handling of materials; spill prevention, including equipment leaks; and spill response procedures as well as inspections, preventative maintenance, documentation, and employee training. The Contractor and subcontractors would be responsible for selecting and implementing BMPs, with approval from the BIA and Pueblo of Jemez Department of Resource Protection.
- Any interruption of utility services would be short-term. The NMDOT would coordinate with any affected utility owners during the design phase and continue this effort throughout all construction phases. If construction were to result in disruption of services, all utility customers would be notified in advance of the time and duration of disruption.
- Dust suppression methods and properly maintained equipment would reduce temporary air quality effects from construction.
- If soil encountered during the proposed roadway improvements is found to be contaminated or suspected to be contaminated with hazardous or regulated materials, the discovery procedures outlined in the NMDOT 2010 Hazardous Material Assessment Handbook shall be followed.
- A Section 404 Permit from the USACE and a 401 Water Quality Certification from the EPA would be obtained for this project. Types and locations of potential mitigation measures would be determined during Section 404 permitting, in cooperation with USACE. All work within stream channels and wetlands would be subject to USACE and EPA inspections and oversight during construction.
- To avoid potential impacts to rare fish such as the Rio Grande sucker, the following measures would be implemented to avoid the movement of contaminants into the Jemez River:
 - Avoiding equipment refueling, maintenance, or storage within floodplains or within 200 feet of a watercourse

- Avoiding storage of fuel or other chemicals within floodplains or within 200 feet of a watercourse
- Cleaning heavy equipment prior to the onset of construction and daily equipment inspections
- Avoiding discharging chemical substances arising from construction or activity into surface waters or soils
- Reporting requirement for any discharge of fuel, hydraulic fluid, or other potentially toxic substance to USACE, Pueblo of Jemez, EPA, and NMDOT.
- Any riparian habitat lost to construction would be replaced with equal or better habitat within the general project area.
- Data recovery efforts to mitigate cultural resource effects would occur, requiring further consultation with the NMDOT, SHPO, and the Pueblo of Jemez. No construction activities would be allowed within these data recovery areas until notified by the NMDOT Cultural Resources Section.
- To avoid affecting migratory bird nesting activities, a nesting bird survey would be required prior to construction. If nests are found, they would be relocated in accordance with USFWS procedures.
- A meadow jumping mouse survey would be required prior to construction.
- After the FONSI is signed, the Biological Evaluation for this project will be reevaluated before construction begins.
- Measures to prevent the spread of Class B noxious weeds within the project area would be implemented by the NMDOT. Class C weeds may be controlled at local agency discretion.
- Upon completion of construction, all portions of habitat that were temporarily affected by construction would be seeded. Whenever possible, trees within the ROW would be preserved.
- NMDGF trenching guidelines would be utilized.

5.0 Public Involvement and Agency Coordination

Several public information meetings were held during the original Phase A and Phase B studies, both before and after the Notice of Intent was published in the Federal Register in March 2001. The meetings were conducted by the previous consultant in conjunction with the NMDOT. Additional meetings were held with the NMDOT, Jemez Pueblo and Bureau of Indian Affairs (BIA) as part of the Fatal Flaw Analysis and to present the recommended alternatives identified in the 2009 Phase B Detailed Evaluation of Alternatives. The meetings held are listed below and input received is summarized in Appendix A.

1. Meeting at Jemez Pueblo, June 30, 1999

Eighteen members of the Jemez Pueblo Tribal Administration, Jemez Pueblo Tribal Council, staff and seven members of the NM 4 Corridor Study team attended the meeting. No written comments were received. The meeting focused on the introduction of the study team and ascertaining Jemez Pueblo's issues and concerns relating to the NM 4 Corridor Study.

2. Meeting at Jemez Pueblo, October 26, 1999

The meeting was attended by fifteen members of the Jemez Pueblo Tribal Administration, Jemez Pueblo Tribal Council, staff and seven members of the NM 4 Corridor Study team. No written comments were received. The meeting focused on a discussion of the existing conditions, project issues raised to date, the engineering and environmental elements used in the decision making process, the status of the environmental studies, schedule and the future public involvement process.

3. Meeting at the Canon Community Center, December 22, 1999

Ten members of the public and eight members of the NM 4 Corridor Study team attended the meeting. No written comments were received. The meeting focused on the introduction of the study team, the deficiencies of the existing roadway, project issues raised to date and a discussion of the engineering and environmental factors in the decision making process.

4. Meeting at Jemez Pueblo, January 18, 2000

The meeting was attended by nineteen members of the Jemez Pueblo Tribal Administration, Jemez Pueblo Tribal Council, staff and nine members of the NM 4 Corridor Study team. No written comments were received. The meeting focused on a discussion of the proposed roadway typical section, environmental and engineering decision making factors, an environmental update, the alternatives under consideration and project schedule.

5. Meeting at Canon Community Center, January 19, 2000

The meeting was attended by seventeen members of the public and seven members of the NM 4 Corridor Study team. Six written comments were received and copies are included in Appendix A. The meeting focused on a discussion of the proposed roadway typical section, environmental and

engineering decision making factors, an environmental update, the alternatives under consideration and project schedule.

6. Meeting at Jemez Pueblo, February 15, 2000

The meeting was attended by eighteen members of the Jemez Pueblo Tribal Administration, Jemez Pueblo Tribal Council, staff and one member of the NM 4 Corridor Study project team. No written comments were received. The meeting focused on Jemez Pueblo Council's alternate alignment preferences, project construction cost and the assistance of Jemez Pueblo in seeking additional project funds.

7. Meeting at Zia Pueblo, March 24, 2000

The meeting was attended by the Zia Tribal Administrator and four members of the NM 4 Corridor Study team. A letter from Zia Pueblo is included in Appendix A. The focus of the meeting was to provide a brief history of the project and alternate alignments under consideration.

8. Meeting at Council Chambers, Village of San Ysidro, September 12, 2000

The meeting was attended by the San Ysidro Village Council and staff as well as five members of the NM 4 Corridor Study team. The focus of the meeting was to present a summary of the project and alternate alignments under consideration. No written comments were received.

9. Meeting at Jemez Pueblo, December 14, 2007

The meeting was attended by twenty-nine members of the Jemez Pueblo Tribal Administration, Jemez Pueblo Tribal Council, staff and members of the NM 4 Corridor Study team. No written comments were received. The meeting focused on a general discussion of the project. Studies completed to date were noted and the progression of study from this point was discussed.

10. Meeting at NMDOT, January 9, 2008

The meeting was attended by four members of Jemez Pueblo and of the NM 4 Corridor Study team. No written comments were received. The meeting focused on determining a direction for the project. A field visit was held on December 18, 2007 with members of Jemez Pueblo and the outgoing Governor. A discussion during the January 9, 2007 meeting yielded some preferences over alignments and design details. It should be noted that following this meeting, the Jemez Pueblo passed Resolution 2008-07 supporting the Bypass Alternative that includes Alignments F3, G1 and J-MOD.

11. Meeting at Jemez Pueblo, June 13, 2008

The meeting was attended by members of the Jemez Pueblo Tribal Administration, Jemez Pueblo Tribal Council, staff and the NM 4 Corridor Study team. No written comments were received. The meeting focused on a discussion of the results of the Fatal Flaw Analysis and a timeline for future tasks on the project.

12. Public Meeting at Jemez Springs Governing Council Room, July 14, 2009

The meeting was attended by members of the Jemez Pueblo Tribal Administration, Village of Jemez Springs Mayor, eight members of the public, NMDOT staff, and the NM 4 Corridor Study Team. The meeting was advertised in the Albuquerque Journal, the Jemez Thunder, and a news release was sent to local media. Flyers were also placed on bulletin boards within the Village of Jemez Springs area. Postcards were mailed to natural resource agency representatives who may have an interest in the proposed project. An overview of the project was provided at the meeting, including the project history, process, recommended alternative, and schedule. No written comments were received. Handouts and advertisements are provided in Appendix A.

In addition to the invitation at the July 2009 public meeting, coordination letters were mailed sent to natural resource agencies requesting comment on the proposed project. Copies of the letters are included in Appendix B.

13. Meeting at Jemez Pueblo, December 17, 2009

The meeting was facilitated by Governor Toledo of the Jemez Pueblo and attended by hunting society leaders. An overview of the project was provided, as well as the progress and next steps. The hunting society leaders verbally expressed being in favor of the Enhanced Existing alternative (which was eliminated from further evaluation in the Phase B report) and did not support the F3-G1-JMOD alternative. When requested to identify the limits of the Traditional Cultural Properties (TCP) on a map, the hunting society leaders were either unwilling or unable to identify specific limits. They noted that the hunts vary in location for each year.

14. Open House at Jemez Pueblo, December 21, 2009

The open house was attended by 26 Jemez Pueblo Tribal Members, including eleven members of Jemez Pueblo Tribal Administration, NMDOT Staff, and the NM 4 Corridor Study Team. The open house was advertised in the Pueblo of Jemez Red Rocks Reporter. E-mail invitations were sent to natural resource agency representatives who may have an interest in the proposed project. Exhibits outlining the project history, process, and alternatives were displayed and members of the NMDOT and the Study Team were available for questions. Four written comments were received and are included in the comment synopsis in Appendix A. The handouts and advertisements are also provided in Appendix A.

15. Consultation with Jemez Pueblo Department of Public Safety, January 27, 2010

The Study Team met with representatives from Jemez Pueblo Emergency Medical Services and Police Department to discuss any impacts the Bypass Alternative may have on public safety. Dave Ryan, EMS, noted that while a straight road is preferable for the transport of patients, adding two turns for access at the southern end of Walatowa would not pose a problem for safe transport or responsiveness. Police Chief Mike Toya requested a 50 mph speed limit for consistency throughout the stretch of road, with a slight reduction at curves. Chief Toya would like to see consistent fencing of the ROW, larger signage than what currently exists, and only necessary signage to be

placed. Both Mr. Ryan and Chief Toya expressed that the Bypass Alternative would alleviate safety problems within Walatowa.

16. Coordination Meeting at BIA, February 11, 2010

The Pueblo of Jemez hosted a coordination meeting at the BIA in Albuquerque. The Pueblo of Jemez Governor, Tribal Council Members, and resource-specific staff met with BIA staff and the Study Team to discuss right-of-way issues, mapping requirements, the NEPA process, EA, and Section 106 consultation.

17. Consultation with Pueblo of Jemez, October 10, 2011

Members of the consultant team met with the Pueblo of Jemez Lieutenant Governor, Assistant Tribal Administrator, resource-specific staff to discuss potential impacts to grazing.

6.0 Conclusions

This EA concludes that the proposed Bypass Alternative would provide for safe and efficient travel within the project corridor. To date, no significant adverse social, economic, or environmental impacts of a level that would warrant an EIS have been identified. Alternative selection will occur following the completion of the public review period, which will include a public hearing.

If no significant impacts are identified as a result of public review and the public hearing, a FONSI will be prepared for a selected alternative.

Authorization of this project is under the following conditions:

- Issuance of a Section 404 Permit from the USACE and a 401 Water Quality Certification from the NMED.
- Approval of a data recovery plan and memorandum of agreement to mitigate impacts to cultural resources.

Funding has been obligated through preliminary and final design of this project. Upon securing future funding for construction, an environmental reevaluation would be conducted to review whether the conclusions in this EA are still valid.

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7.0 Literature Cited

- Brown, K. and Brown, M. 2006. A Class I and Class III Survey along NM 4 between Mile Posts 15.3 and 18.7 in the Village of Jemez Springs, Sandoval County, New Mexico. Report 145, Marron and Associates, Inc. Albuquerque. NMCRIS 102495.
- Chapin, CE. And Cather, S.M. 1994. Tectonic setting of the axial basins of the northern and central Rio Grande rift, in Keller, G.R and Cather, S.M. eds. Basins of the Rio Grande rift: Structure, stratigraphy, and tectonic setting: Geologic Society of America special paper 291, p5-25.
- Connell, S.D. 2001. Stratigraphy of the Albuquerque Basin, Rio Grande Rift, Central New Mexico: A progress Report. In: Stratigraphy and Tectonic Development of the Albuquerque Basin, Central Rio Grande Rift, Field Trip Guidebook for the Geological Society of America Rocky Mountain-South-Central Section Meeting, Albuquerque, NM, Pre-Meeting Field Trip, Mini-Papers.pp A10-A-11.
- Craigg, S.D. 1992. Water resources of the Pueblos of Jemez, Zia, and Santa Ana, New Mexico. U.S. Geological Survey Open File Report 89-4091., 122 p.
- Dick-Peddie, W.A. 1993. New Mexico Vegetation. University of New Mexico Press. Albuquerque. 244 p.
- Environmental Protection Agency. Effluent Limitations Guidelines and Standards for the Construction and Development Point Source Category. Federal Register vol. 74, no. 229, pp. 62996-63058. December 1, 2009.
- Federal Highway Administration (FHWA). 2008. *Tribal Road Safety Audits: Case Studies*. Report No. FHWA-SA-08-005. 52 p.
- Galusha, T. 1966. The Zia sand formation, new early to medial Miocene beds in New Mexico: American Museum Novitates, v2271, 12 p.
- Hawley, J.W. 1978. Guidebook to Rio Grande Rift in New Mexico and Colorado: NM Bureau of Mines and Mineral Resources Circular 163, 241 p.
- HDR Engineering, Inc. 2009. Phase B: Detailed evaluation of alternatives. NM 4-Jemez Pueblo Boundary to NM 290. Prepared for New Mexico Department of Transportation. Project No. FLH-TPM-004-1(9) CN3480. 122p.
- HDR Engineering, Inc. 2008. Phase I Initial Site Assessment New Mexico Highway 4 Jemez Pueblo Bypass. NM 4-Jemez Pueblo Boundary to NM 290. Prepared for New Mexico Department of Transportation. Project No. FLH-TPM-004-1(9) CN3480. 46 p.

FLH-TPM-004-1(9), CN 3480

Environmental Assessment

Loebig, D., T.R. Goar, J.C. Aklen, K. Van Citters and G. Duncan. 2001. Cultural Resource Survey for New Mexico 4 from Junction U.S. 60 (NM 44) to Junction NM290 and the Proposed Jemez Pueblo Bypass (TPM-004-1[9], Control Number 3480), Sandoval County, New Mexico. TRC Mariah Associates, Inc., Albuquerque. NMCRIS 71707

Marron & Associates, Inc. 2009. Biological Evaluation for NM 4 Realignment Project, FLH-TMP-004-01(9), CN 3480, Sandoval County, New Mexico. Prepared for New Mexico Department of Transportation. 16 p.

Marron & Associates, Inc. 2009. Wetland Determination and Delineation Report for the Proposed NM 4 Bypass at the Pueblo of Jemez, Sandoval County, Project, FLH-TMP-004-01(9), CN 3480. Prepared for New Mexico Department of Transportation. 32 p.

McEnany, T. 2009. A cultural resource survey for the proposed NM 4 Bypass Project, Jemez Pueblo, Sandoval County, New Mexico. NMDOT Project No. FLH-TPM—004-1(9), CN 3480 New Mexico Department of Transportation District 6. NMCRIS 113135.

MRCOG. 2006. Jemez Valley Corridor Assessment. 36 p.

Natural Resources Conservation Service (NRCS). 2010. NRCS Web Soil Survey, 2010.
<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx/>

Natural Resources Conservation Service (NRCS). 2010. NRCS Official soil Series Descriptions (OSD) with series extent mapping capabilities. <http://soils.usda.gov/technical/classification/osd/index.html>

New Mexico Department of Transportation. Administrative Directive (AD) 236 Noise Abatement, Santa Fe, NM, May 1, 2002.

New Mexico Department of Transportation. 2010 Hazardous Material Assessment Handbook. Santa Fe, NM, 2010.

Sandoval County. 2007. Jemez Valley Area Plan. 52 p.

Telford, R.H. 1982. Neogene stratigraphy of the northwestern Albuquerque Basin: New Mexico Geological Society Guidebook 33, pp. 273-278.

Tetra Tech. 2001. Detailed Evaluation of Initial Alternatives (Phase B) for NM 4 (US 550 to NM 290), Sandoval County, New Mexico, Project No. FLH-004-1(9), CN: 3480.

Tetra Tech. 2002. Draft Environmental Impact Statement (DEIS) for NM 4 (US 550 to NM 290), Sandoval County, New Mexico, Project No. FLH-004-1(9), CN: 3480.

USDA. 2008. Natural Resources Conservation Service (NRCS). Soil survey of Sandoval County Area, New Mexico, Parts of Los Alamos, Sandoval, and Rio Arriba Counties.

Wells, D. and D, Justus. 2000. Cultural Resource Survey Highway Drainage Improvements on NM290 Sandoval County, New Mexico. Report 4022-05, Ecosystem Management, Inc., Albuquerque. NMCRIIS 70035.

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Appendix A

Public Involvement Summary and Materials

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Stakeholder Comment Synopsis

Substantive Comments	Response
<p>What about wildlife migration across the bypass?</p>	<p>Permeability points would be included in the design to reduce the potential for wildlife-vehicle collisions and decrease wildlife habitat fragmentation. For larger mammals, such as deer, the permeability points would have an openness factor of greater than one and preferably, greater than five. The proposed bridge across Vallecito Creek would have an openness factor of greater than five and would provide a serviceable crossing location for wildlife. Large culverts, especially box culverts larger than four feet in width and six feet in height would provide permeability points for most animals. Placement of permeability points would be determined during preliminary design in coordination with the Pueblo of Jemez.</p>
<p>It is my understanding there will not be an exit or entrance onto the new highway from the old highway 4. Although there were no plans or designs for this section, for emergency purposes, there needs to be access to get onto the proposed alignment. What about increased emergency vehicle access time if southern access to the Pueblo is closed?</p>	<p>Southern access to and from the Pueblo would be available at Landfill Road. In discussions with Pueblo EMS and police, the use of the Landfill Road to reach the NM 4 Bypass at the south end of the Pueblo would not be a concern to their services. The speed limit on the bypass would be higher than existing NM 4, reducing the time impact.</p>
<p>Public open house on 12/21/09 was not an effective approach to get public comments from pueblo members and the timing of the meeting was poor since it was too close to the holidays.</p>	<p>The date of the open house was chosen pursuant to a request from the Pueblo of Jemez Tribal Administration. The format of the meeting was selected to best accommodate a variety of schedules.</p>
<p>The alignment should start at the cemetery road and the intersection of highway 4 and continue due east, meeting with the proposed alignment past the cemetery. The main entrance to the Pueblo should be at that intersection. If the Transfer Station and the Pueblo's Walatowa Woodlands have to be relocated to meet engineering design, then so be it. Moving the south end alignment approximately ½ mile north to the cemetery road results in: 1) less environmental or cultural impacts since more of the existing NM 4 could</p>	<p>The purpose of this project includes correcting geometric deficiencies on existing NM 4 and improving community cohesion. The section of existing NM 4 south of the cemetery road/Landfill Road contains both vertical and horizontal geometric deficiencies, which would require reconstruction to meet project purpose and need. Cost savings from less new ground disturbance would likely not be recognized due to the reconstruction of that section of existing NM 4. Additionally, moving the beginning of the bypass north</p>

Substantive Comments	Response
<p>be used; 2) less resistance from hunting societies; 3) huge cost savings, since it will eliminate new ground disturbance, design, and less new construction; 4) emergency vehicles (ambulance) would have quicker and better access to transport patients in life and death situations. Moving the south end alignment north to the cemetery road can still meeting the pueblo's directive to provide roadway safety and controlled access into the pueblo with proper design and signage. If this change results in a slower speed, then that is good since this bypass is not intended to be a freeway express zone for residents in the Jemez Valley north of the Pueblo.</p>	<p>would result in similar environmental and cultural impacts as the proposed alignment because a comparable section of right-of-way would be required to construct a bypass that is compliant with AASHTO design standards. Consultation with hunting societies has revealed opposition to any bypass alternative; however, the No-Build Alternative and Enhanced Highway Alternative (previously eliminated from further evaluation) do not meet project purpose and need. Pueblo EMS and police have indicated that the use of the Landfill Road to reach the NM 4 Bypass at the south end of the Pueblo would not be a concern to their services or affect timing for patient transport.</p>
<p>Buffalo Hill Road going east will connect with the bypass, creating traffic congestion at the intersection of Buffalo Hill Road and Antelope Hill Road. If this road is used to utilize the bypass, the traffic will be congested and the hairpin turn will be a hazard to traffic going in either direction. The road is only wide enough for one vehicle to turn going east or west to highway 4. Also, the maintenance of either road when wet inclement weather occurs, there is heavy water runoff where a natural arroyo used to exist. Debris from upstream is washed below since these are all dirt roads.</p>	<p>Buffalo Hill Road will not connect with the proposed Bypass Alternative.</p> <p>Drainage structures will divert stormwater runoff into appropriate areas to be determined during design.</p>
<p>Land is a premium in this narrow Jemez Valley. To mitigate vehicular and pedestrian safety for Jemez Pueblo members as well as regional travelling public and to ensure cultural/religious privacy, a bypass must be built. The challenge is displacing some competing uses for land but our current and future growth depends on safe road systems.</p>	<p>No response necessary.</p>

Public Involvement and Tribal Coordination Summary

1. Meeting at Jemez Pueblo on June 30, 1999

Eighteen members of the Jemez Pueblo Tribal Administration, Jemez Pueblo Tribal Council, staff and seven members of the NM 4 Corridor Study team attended the meeting. No written comments were received.

The meeting focused on the introduction of the study team and ascertaining Jemez Pueblo's issues and concerns relating to the NM 4 Corridor Study. Issues raised and comments included:

- Congestion on NM 4 through Jemez Pueblo makes it difficult to cross the road;
- Access control into Jemez Pueblo, especially on religious days;
- Safety of pedestrians and animals walking along and crossing the roadway;
- The need to relocate NM 4 to the east to improve community cohesion;
- The Jemez Pueblo Tribal Council speaks for the Pueblo on all issues relative to this study.

2. Meeting at Jemez Pueblo on October 26, 1999

The meeting was attended by fifteen members of the Jemez Pueblo Tribal Administration, Jemez Pueblo Tribal Council, staff and seven members of the NM 4 Corridor Study team. No written comments were received.

The meeting focused on a discussion of the existing conditions, project issues raised to date, the engineering and environmental elements used in the decision making process, the status of the environmental studies, schedule and the future public involvement process. Issues raised and comments included:

- The study team was invited to submit articles to the Pueblo monthly newsletter. Articles are to be submitted by the 25th of each month to the Jemez Pueblo Governor's office;
- The Council stated that the Council represents Pueblo residents;
- A question arose about if the study team has coordinated with San Ysidro about the bypass around the community;
- Roadway improvements would extend from US 550 to NM 290.

3. Meeting at the Canon Community Center on December 22, 1999

Ten members of the public and eight members of the NM 4 Corridor Study team attended the meeting. No written comments were received.

The meeting focused on the introduction of the study team, the deficiencies of the existing roadway, project issues raised to date and a discussion of the engineering and environmental factors in the decision making process. Issues raised and comments included:

- ROW for an alternate alignment would need to be negotiated with Jemez Pueblo on a mutually beneficial arrangement;
- Jemez Mountain Electric Co-op expressed the need for early coordination;
- Surrounding community residents maintain post office boxes in the Jemez Pueblo post office, and therefore, access needs to be maintained;
- Concern was expressed concerning the NM 4 and NM 290 intersection;
- A view expressed was a possible inconvenience factor by the possible roadway alignment.

4. Meeting at Jemez Pueblo on January 18, 2000

The meeting was attended by nineteen members of the Jemez Pueblo Tribal Administration, Jemez Pueblo Tribal Council, staff and nine members of the NM 4 Corridor Study team. No written comments were received.

The meeting focused on a discussion of the proposed roadway typical section, environmental and engineering decision making factors, an environmental update, the alternatives under consideration and project schedule. Issues raised and comments included:

- Under Bypass Alternative Alignment I1, the relocation of the Athletic Center would be addressed during ROW acquisition. The cost of a potential relocation of the Athletic Center would be addressed during the standard ROW acquisition process;
- Bypass Alternative Alignments I and I1 are not acceptable to Jemez Pueblo due to cultural resource impacts on or near those alignments;
- Jemez Pueblo Council favors Bypass Alternative Alignment K and the extension of Alignment K to meet NM 4 south of Red Rocks;
- The Bureau of Indian Affairs (BIA) or Jemez Pueblo would assume responsibility for NM 4 if a new alignment is built;
- The issues of design speed and posted speed was discussed;

- The ownership of the existing Vallecitos Creek bridge was questioned. The ownership of the bridge is dependent on the selected alignment;
- Bypass Alternative Alignment G in the central part of the corridor follows Jemez Pueblo's alignment and is acceptable;
- Jemez Pueblo favors alignments in the southern end of the corridor in the following order: Bypass Alternative Alignment F1, Bypass Alternative Alignment F and Bypass Alternative Alignment C;
- The study team was directed to provide information to Jemez Pueblo residents through the community newsletter. The Jemez Pueblo Tribal Council is empowered to act for the community. No Jemez Pueblo community meetings are to be scheduled. All communication is to be directed to the Jemez Pueblo Governor's office.

5. Meeting at Canon Community Center on January 19, 2000

The meeting was attended by seventeen members of the public and seven members of the NM 4 Corridor Study team. Six written comments were received and copies are attached hereto.

The meeting focused on a discussion of the proposed roadway typical section, environmental and engineering decision making factors, an environmental update, the alternatives under consideration and project schedule. Issues raised and comments included:

- Improvements to the existing alignment are an alternate under consideration;
- Bypass Alternative Alignment K would be a disaster without its continuation north to existing NM 4;
- NM 4 is designated a National Scenic Byway. The concern is that if an alternate alignment is selected, the National Scenic Byway status would not be maintained;
- The paving of NM 126 will increase traffic on NM 4;
- Sandoval County is performing a Rails-to-Trails Study incorporating the study area;
- Los Alamos hazardous waste transports are not anticipated on NM 4;
- There is concern about the monetary value of the land required for the alignment alternatives;
- Population growth in the surrounding communities was accounted for 2020 traffic projections;
- A question arose about the plans the NMDOT has to address the northern segment of NM 4 to Los Alamos;
- A question arose about the effect of the bypass on the addresses;

- The study team needs to coordinate with the BIA.

6. Meeting at Jemez Pueblo on February 15, 2000

The meeting was attended by eighteen members of the Jemez Pueblo Tribal Administration, Jemez Pueblo Tribal Council, staff and one member of the NM 4 Corridor Study project team. No written comments were received.

The meeting focused on Jemez Pueblo Council's alternate alignment preferences, project construction cost and the assistance of Jemez Pueblo in seeking additional project funds. Issues raised and comments included:

- Jemez Pueblo prefers the following alignments: Bypass Alternative Alignment F1, Bypass Alternative Alignment F, Bypass Alternative Alignment C, Bypass Alternative Alignment G, Bypass Alternative Alignment K1 and Bypass Alternative Alignment J;
- Jemez Pueblo committed to seek additional federal funds for the project;
- A discussion of the impact of the material hauler, the number of roads required and the structural integrity of the Vallecitos Creek bridge was held. Jemez Pueblo, of its own decision, may negotiate the blading of a haul road to remove traffic from NM 4 and the community.

7. Meeting at Zia Pueblo on March 24, 2000

The meeting was attended by the Zia Tribal Administrator and four members of the NM 4 Corridor Study team. A letter from Zia Pueblo is attached hereto.

The focus of the meeting was to provide a brief history of the project and alternate alignments under consideration. Issues raised and comments received included:

- Zia Pueblo will not support any alignment that crosses Zia Pueblo land;
- Zia Pueblo desires left and right turn lanes off of NM 4 to the existing turnout located east of NM 4 and north of the Jemez Creek bridge;
- Temporary Construction Permit (TCP) consultation on the selected alignment will be through the Zia Tribal Administrator's office.

8. Meeting at Council Chambers, Village of San Ysidro on September 12, 2000

The meeting was attended by the San Ysidro Village Council and staff as well as five members of the NM 4 Corridor Study team.

The focus of the meeting was to present a summary of the project and alternate alignments under consideration. No written comments were received. Issues raised and comments included:

- Traffic control or re-engineering of the NM 4 and NM 550 intersection;
- Possibility of an alternate Alignment A;
- Traffic control and accidents at the "S" Curve near the Church;
- Coordination with existing engineering projects in San Ysidro;
- Issues the San Ysidro Council has previously raised with various state officials included:
 - alleviation of motorists passing on the shoulders;
 - presence of horses on the roadway;
 - elimination of the passing zone in the San Ysidro Village along this portion of NM 4;
 - reducing the speed limit below the 35 mph level in Alignment A, which contains two churches.

Additional meetings were held with the NMDOT, Jemez Pueblo and BIA as part of the Fatal Flaw Analysis. These meetings were held to inform the Jemez Pueblo Council on progress of the project and introduce potential alternatives to the original Phase B study alignments. These meetings are summarized as follows:

9. Meeting at Jemez Pueblo on December 14, 2007

The meeting was attended by twenty-nine members of the Jemez Pueblo Tribal Administration, Jemez Pueblo Tribal Council, staff and members of the NM 4 Corridor Study team. No written comments were received.

The meeting focused on a general discussion of the project. Studies completed to date were noted and the progression of study from this point was discussed. Issues raised and comments included:

- A concern was raised in regards to alignments traveling across farmland. It was noted that alignments can be adjusted to decrease impacts to farmland and other significant features. Specifically, the J-MOD alignment can be adjusted to minimize the impacts to farmland at its tie-in

location with existing NM 4. As a result of the alignment modification, the costs of that alignment will increase because of earthwork and additional roadway.

- There was a question about if there was a conflict between a home being built near Alignment F3 and Alignment F4 and that new roadway. The study team assured those in attendance that their walk-through of the project did not show any homes being built on or immediately adjacent to either alignment.
- Jemez Pueblo asked if having only one entrance near the beginning of Alignment G1 was still viable. The study team indicated that it would be possible as well as additional entrances if desired.
- A question about the load that the new Vallecitos Creek bridge could carry was raised. The study team stated that the bridge would be designed to the current NMDOT bridge design procedures.

10. Meeting at NMDOT on January 9, 2008

The meeting was attended by four members of Jemez Pueblo and of the NM 4 Corridor Study team. No written comments were received.

The meeting focused on determining a direction for the project. A field visit was held on December 18, 2007 with members of Jemez Pueblo and the out-going Governor. A discussion during the January 9, 2007 meeting yielded some preferences over alignments and design details. However, it was decided to wait until the new Jemez Pueblo administration was seated before new actions were taken.

A discussion regarding the repercussions of introducing new alignments ensued. It was explained to those in attendance that introducing several new alignments would mean starting at that beginning of Phase A and investigating all cultural, biological, archeological and additional conflicts in the vicinity of the alignments. It was indicated that preferences expressed by the out-going Jemez Pueblo Governor did not entirely reflect the preferences of the Council. However, discussions with the in-coming Jemez Pueblo Governor indicated that the project needed to move forward. The Jemez Pueblo Council is in favor of Alignment F3, Alignment G1 and Alignment K-MOD. They also are in favor of alignment J-MOD if complete funding for the previous three alignments mentioned can not be secured.

The NMDOT asked that Jemez Pueblo send a letter stating their alignment preferences. A representative from Jemez Pueblo requested a graphic showing the alignments with aerial photography to use for future discussions with the Council and the Governor.

It should be noted that following this meeting, on February 12, 2008 the Jemez Pueblo passed Resolution 2008-07 supporting the Bypass Alternative that includes Alignments F3, G1 and J-MOD. The Council has expressed preference to eliminate K-MOD from further analysis. A memo from the Jemez Pueblo was provided to the NMDOT stating these preferences on April 11, 2008. A copy of this memo is attached hereto.

11. Meeting at Jemez Pueblo on June 13, 2008

The meeting was attended by members of the Jemez Pueblo Tribal Administration, Jemez Pueblo Tribal Council, staff and the NM 4 Corridor Study team. No written comments were received.

The meeting focused on a discussion of the results of the Fatal Flaw Analysis and a timeline for future tasks on the project. Issues raised and comments included:

- The Pueblo reiterated their support for the F3-G1-J-MOD alignment;
- The Pueblo raised concern with the cut at the existing intersection with NM 4 and NM 290. The study team informed the Pueblo that that level of detail will be evaluated in the Preliminary and Final design phases of the project. The design intent will be to reduce the impact to the escarpment;
- The project team emphasized the need for additional funding to support the Final Design efforts and construction. The Jemez Pueblo will be responsible for locating and securing any additional funding.

12. Public Meeting at Jemez Springs Governing Council Room, July 14, 2009

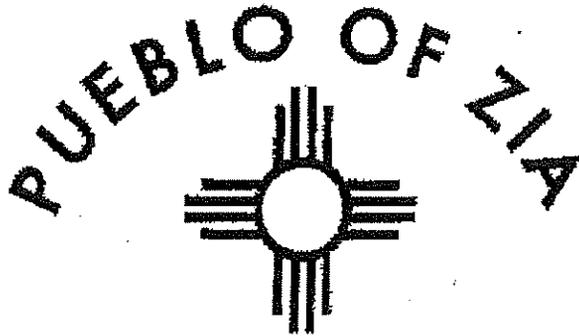
The meeting was attended by members of the Jemez Pueblo Tribal Administration, Village of Jemez Springs Mayor, eight members of the public, NMDOT staff, and the NM 4 Corridor Study team. The meeting was advertised in the Albuquerque Journal, the Jemez Thunder, and a news release was sent to local media. Flyers were also placed on bulletin boards within the Village of Jemez Springs area. Postcards were mailed to natural resource agency representatives who may have an interest in the proposed project.

An overview of the project was provided at the meeting, including the project history, process, recommended alternative, and schedule. No written comments were received. Questions and comments included:

- Clarification on alignment, bypass beginning and endpoints, and access points to the Pueblo of Jemez
- Schedule for construction, including time for final design and construction

- Funding sources
- How the bypass would affect Jemez Valley communities outside of the Jemez Pueblo, including travel time, difference in length, and speed limit:
 - Travel time
 - Safety improvements
 - Speed Limit
- Traffic impacts during construction
- Coordination with local fire departments during construction to ensure that fire trucks are able to pass through narrow lanes
- Interest in what the Pueblo of Jemez's stance is on the project and whether the Pueblo will provide right-of-way for the project
- Interest in the Village of San Ysidro's stance on the project and whether improvements would start at San Ysidro
- Reasons an interested party or stakeholder might be against the project
- Whether there will be bicycle and pedestrian facilities on the bypass and if the shoulders would be asphalt

PHONE (505) 867-3304
FAX (505) 867-3308



IN REPLY REFER TO:

135 CAPITOL SQUARE DR.
ZIA PUEBLO, NEW MEXICO 87053-8013

March 24, 2000

Mr. Michael Wm. Malloy, P.E.
Gannett Fleming
4501 Indian School Rd. NE
Suite 101
Albuquerque, NM 87110

Dear Mr. Malloy:

The Pueblo of Zia is aware of the Realignment Study of State Road 4 from San Ysidro to north of Jemez Pueblo. Three alignments being reviewed under this study (C, D & E) would impact Pueblo of Zia property on the north end of San Ysidro. We are hereby informing you that the Pueblo of Zia doesn't support the three aforementioned alignments. We strongly recommend these alignments be eliminated from further consideration.

We wish you success on the rest of the study. If you have any questions on this matter, please contact Peter M. Pino at my office.

Sincerely,

A handwritten signature in cursive script that reads "Vincent Pino".

Vincent Pino
Governor

January 19, 2000

My name is Sifredo (Fred) Toledo. I reside in Jemez Pueblo. I have a BA Degree in Anthropology from the University of New Mexico; and I am also a military retiree.

I have made my opposition to the proposed road project to by-pass Jemez Pueblo known; but I have purposely held back my reasons. I wanted to make sure all those in the positions of making the final decisions to be aware of what the consequences would be if the new road was built.

1. The most devastating and detrimental impact it will create is the abolishment of the community rabbit hunts which have been going on for the last four hundred years. Jemez Pueblo of today was founded in the 1600's. The leaders of the traditional hunt societies have vehemently opposed the project; unfortunately, their opposition never went beyond the Pueblo. Historically, the Jemez people have always been reluctant to give out any information on their traditional religious activities. However, the Jemez people's way of life have been studied and documented. (see Parsons & Ellis). The hunts are not just merely a sport for the Jemez people it contains all aspects of their community life such as: religion, entertainment, social interaction, leadership training for the young men, and food distribution, etc... (see encl (1)).

2. Some aspects of the ceremonials/rituals of the hunt societies will be forced to be abolish; therefore, it will be devastating for their survival and ultimately set a dangerous course for the community.

3. Ancient pueblo people had also used this area; documentation exist which indicate the existance of pit houses throughout the proposed project area.

Those who advocate the change are heading towards a cultural/traditional suicide. It is very sad that these advocates ignore the harassment, frustration, and hardship the Jemez people were subjected to by the outsiders who were bent on building the present State Highway 4 through Jemez Pueblo in the early 1940's. The recommendation should be to improve on what we have, the new proposed road will not solve all of the problems it will only create new problems. Patrolling and installing traffic lights would help; in addition to widening the SR 4 in the Pueblo.

For more detail information on the importance of society groups and the Society system in Jemez Pueblo, the following books are recommended.

Parsons, Elsie Grew. 1925. The Pueblo of Jemez. (Papers of the Phillips Academy Southwestern Expedition, 3). New Haven: Yale University Press.

Ellis, Florence Hawley. 1954. A Reconstruction of the Basic Jemez Pattern of Social Organization, with Comparisons to Other Pecosan Social Structures. University of New Mexico Publication in Anthropology Number 11.

Ellis, Florence Hawley Ellis. Authoritative Control and the Society System in Jemez Pueblo. 1953. Southwestern Journal of Anthropology 9:386:394.

For information on Jemez Pueblo and the State Highway 4 the following book is recommended:

Sando, Joe S. 1984. New Hemish, A History of Jemez Pueblo. University of New Mexico Press: Albuquerque.

There are several rabbit hunts, "in the spring," five, according to one White observer, eight days apart. These hunts are made no doubt in connection with the dances or ceremonies to be described. As elsewhere rabbit hunts are held a day or two before a dance or ceremony² for the benefit of officiators. Judging from the rabbit skins bunched together on the top of a pole outside the house of the cacique, the cacique is a beneficiary of many hunts.³

Rabbit Hunt, October 7, 1921

The evening of October 6, a hunt was called by the *capitan* (war captain) for the day following, by order of the *tabb'sh* who during the Deer dance had informed the *capitan* that the *Kats'any* wanted them to go out hunting this day. "It was the *tabb'sh* who made them hunt."

The Hunters' society, it was said, would put down prayer-sticks before the hunt, in the direction the hunters were to take, and the hunt fire would be built by the Hunters' society.

About two in the afternoon small parties began to start off to the eastern mesa, men, young and old, ahorse, girls in twos and threes, carefully dressed in manta and kerchief and well whitened moccasins, afoot. There were family groups as well, now and then a woman with a baby on her back, two little boys riding double, little girls, all gay and talkative and excited. Following one of the small parties I missed the largest congregation which I saw finally at a distance, and so missed seeing, too, whatever ceremonial may have initiated the hunt. Instead I watched two men whittling their newly made rabbit clubs. These were the chief weapons, now and then a bow or a gun, no boomerang-like throwing-sticks, they are not used at Jomez. Presently the large group broke, the dogs began to run, there was shouting from one hilltop group to another, a rabbit was started. Dogs

and horse raced, a club was thrown, and missed, more and more joined the rush. Everyone was excited. Some women ran. The woman first to reach the trophy would receive it. Next day "to pay" she would send the hunter some food.

The range covered by the scattering hunt crowd was considerable; but they kept within hearing of one who issued orders, probably a war captain. After the first rabbit was killed the hunt was directed southwards. Having special work in hand I had to return to town and it was after dark when I met the returning hunters riding back along the trails from the south or running afoot, several of the younger men. The women and children had returned earlier, straggling back as they wished. There had been a formal close to the hunt, however, I was told. Next morning in our house, a rat as well as a rabbit was skinned for the pot.

SANTA FE NORTHWESTERN RAILROAD

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enough support to force the Indians to give the right-of-way free of charge.

It soon became apparent that building the highway adjacent to the hills east of the village would cost a great deal more for construction. This resulted in an editorial in the *Bernalillo Times*, on March 6, 1941—"Don't Blame the Highway Department if You Get Your Neck Broken Riding Through the Jemez Pueblo."

Five miles of gravel road will cost \$217,000. That's more than the damn reservation is worth. Yes, that is what it would cost the Highway Department, \$43,400 for each mile to put the much-needed five miles of new road through the Jemez Indian Pueblo by using the right-of-way that the Indians and the Indian Service Bureau are willing to allow the state to use.

That the Indian can show so little consideration for his neighbors, the rancher, farmer and worker of the Jemez country is hard to conceive . . .

If the Indians like Garbo want to be alone, all right, let them. But let it work both ways. No Indian living in a Pueblo which will not cooperate with the state in securing a decent inexpensive right-of-way for a road should be allowed to buy an auto license in order to use other highways.

Let's stop being sentimentalists. The advice of this newspaper to the Highway Department is to accept the offer of Mr. Tom Gallagher of the New Mexico Timber Company to move the railroad tracks over to the edge of the right-of-way (granted by an act of Congress) and use the balance of the right-of-way for a road. "Then let them howl!"

On March 11, Governor Manuel Ypsa replied to the editorial with an explanation of the tribe's stand, published in the *Albuquerque Journal*. He explained that the people of Jemez were perfectly willing for the Highway Department to use the right-of-way that was first agreed upon in 1940, with the slight changes that the surveyor said could easily be made. One of the changes was the proposal to bypass the ruins of Sato-kwa, below Jemez. The Indians had the backing of their general superintendent and Oscar Love, of the Albuquerque National Trust and Savings Bank.

Nevertheless, the Board of County Commissioners of Sandoval County did file suit to condemn the right-of-way without the changes that Jemez asked for, and the defendants were ordered to appear at the U.S. Courthouse in Santa Fe on August 14, 1941. Judgment was declared on December 11, 1941, by U.S. Circuit Judge Sam Bratton, condemning the right-of-way on Jemez land—the second plan—with payment to be made to the defendants in the amount of \$3,134, as recommended by land appraisers.

COMMENT REQUEST FORM

Corridor Study for NM 4, NM 44 to NM 290
Sandoval County, New Mexico

PUBLIC INFORMATION MEETING COMMENT SHEET
January 19, 2000

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

Please return your comments regarding this project at the sign-in table, or if you prefer, mail it to the address below by February 1, 2000. Please print clearly.

Good Presentation! I will support A.D.
I am opposed to any by the road!

Please send me copies of the meeting at the address below.
Thanks
Judy

MAIL TO:
K. Lynn Berry
Public Involvement Coordinator
NMSHTD/Room 213
PO Box 1149
Santa Fe, New Mexico 87504-1149

Your Name & Address
(Please Print)
Jerry Smith
P.O. Box 257
Terry, NM 87024

COMMENT REQUEST FORM

Corridor Study for NM 4, NM 44 to NM 290
Sandoval County, New Mexico

PUBLIC INFORMATION MEETING COMMENT SHEET
January 19, 2000

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

Please return your comments regarding this project at the sign-in table, or if you prefer, mail it to the address below by February 1, 2000. Please print clearly.

*As a Ponderosa resident and business owner
I believe design K would be the most
appropriate for us. As life-long residents, some
of us have been here for generations and
we hope to be involved in decisions*

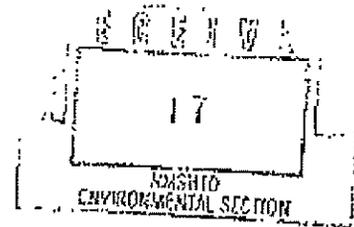
MAIL TO:
K. Lynn Berry
Public Involvement Coordinator
NMSHTD/Room 213
PO Box 1149
Santa Fe, New Mexico 87504-1149

Your Name & Address
(Please Print)
Linda Salazar
107 Valley Vineyard Ln.
Ponderosa, NM 87044

New Mexico Highway 4 Alignment Study

Comment by Jemez Cougar Society

January 2000



The community and public involvement has been considered a major objective of the Study Team in the identification of any issues that may affect the proposed alignment of New Mexico Highway 4 within the Jemez reservation. The objectives of the various phases outlined by the Study Team describe gathering information on corridor analysis, assessments, refinements, options and general explanation of corridor decision making. This is a response to requested comments on the Alignment Study.

The Jemez Cougar Society is religious sect within the social fabric of the Jemez people. In maintaining its religious and hunting responsibilities the proposed alignment will have an impact on the Society's religious and cultural practices. The reservation land base has geographical and practical limitations for any new development, housing, recreational and economic uses. The land base affected by several of the alignment proposals will affect traditional shrines, impact suitable wildlife habitat and revamp existing hunting practices tied to protocol. Water Resources, notably Springs, will need additional analysis by the Study Team in light of the new option proposed by the tribal council. The Society maintains that the scenic views, undisturbed biological areas will lead to wildlife stress, disruption to their life cycles, unacceptable noise levels, accessibility for additional vehicle traffic, trash and additional erosion. The air quality in proposed areas as well as new erosion/flooding to community homes and silt effecting downstream Jemez River will need analysis.

After review and discussions of the alternative routes presented at a public hearing, the Cougar Society supports the tribal council concerns and issues for approving the Alignment study. Based on consensus agreement, the Society recommends Option B - Improvements to the existing road and replacement of the bridge at Vallecito creek. Safety is a major concern that may be corrected with speed control, straightening out curves, properly placed lights, pedestrian walkways, safety designed widening of road, limit access to Pueblo proper and Right of way improvements. A traffic control officer is recommended. Drainage improvements east of existing road will eliminate major flooding to homes. Privacy and traffic noise levels can be controlled by strategically placed barriers that are appealing and functional. This option appears to be most beneficial to community members by improving their existing access road, cost effective compared to other routes and is possible when competing for federal funding.

The Tribe is anticipating the increased traffic on Highway 4 due to development, population increases and recreational opportunities. However, there will be a bottle neck of traffic if the rest of Highway 4 corridor is not improved including San Ysidro, Canon and Jemez Springs and parts in between. If Highway 4 is a scenic highway then requirements for such a designation need to be adhered to. Adding new by-pass roads will leave communities with the same problems with existing roads and no improvements. Maintenance costs, safety, law enforcement and emergency medical coverage will continue to be the taxing responsibility of these communities.

Tony C. Toledo

March 1, 2000

*Headman, Cougar
Society*

COMMENT REQUEST FORM

Corridor Study for NM 4, NM 44 to NM 290
Sandoval County, New Mexico

28
PLANNING
ADVISORY BOARD SECTION

PUBLIC INFORMATION MEETING COMMENT SHEET

January 19, 2000

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

Please return your comments regarding this project at the sign-in table, or if you prefer, mail it to the address below by February 1, 2000. Please print clearly.

THE STUDY TEAM IS TO BE CONGRATULATED ON THE PROFESSIONAL MANNER IN WHICH THEY HAVE CONDUCTED THE STUDY TO DATE. FOLLOWING ARE A FEW COMMENTS:

- THE TEAM IS ADVISED TO EXAMINE THE PROPOSED TRAFFIC VOLUMES IN LIGHT OF THE COMMENTS AT THE LAST PUBLIC MEETING, E.G., THE PROPOSED RECONFIGURATION OF NM 121.

- ONE PROBLEM WITH TRAFFIC ON NM 4 IS THE WIDE VARIATION IN DRIVER'S SPEED. SOME DRIVERS WILL DRIVE SLOW REGARDLESS OF ROAD STANDARDS. THIS WAS A REAL PROBLEM ON NM 44 BEFORE IT WAS DOUBLE-LANED. CONSIDERATION OF PASSING LINES ON NM 4 MAY ALLEVIATE SOME OF THESE PROBLEMS.

- IT APPEARS THE PUBLIC'S RECOMMENDATION OF CONTINUING THE ROAD STRAIGHT ACROSS VALLEITO CB. AND TURNING INTO NM 4 SOUTH OF RED ROCKS MAY BE THE BEST SOLUTION. ALTHOUGH COELY, THIS WOULD AVOID THE UNDESIRABLE ALIGNMENT NEEDED TO TURN THE ROAD BACK INTO NM 4 AT THE EXISTING BRIDGE SITE.

- I AM CONCERNED WITH THE STUDY TEAM'S DECISION NOT TO CONSIDER ALIGNMENTS THAT WOULD BYPASS SAN YSIDRO. THE PRESENT ALIGNMENT THROUGH SAN YSIDRO IS ESSENTIALLY THROUGH A RESIDENTIAL AREA AND

MAIL TO:

K. Lynn Berry
Public Involvement Coordinator
NMSHTD/Room 213
PO Box 1149
Santa Fe, New Mexico 87504-1149

Your Name & Address
(Please Print)

ARTURO D MARTY

243 LARK LANE

JEMEL SPRINGS, NM 87035

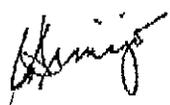
THE NEW STANDARDS WILL NOT ALLEVIATE THE RIGHTS-OF-WAY AND SAFETY PROBLEMS THAT EXIST WITH THE PRESENT ROAD. SPEEDING TRAFFIC IS A PROBLEM IN THE VILLAGE NOW. THE SPEED LIMITS WILL PROBABLY NOT BE INCREASED AND THE HIGHER STANDARD ROAD WILL ENCOURAGE PEOPLE TO DRIVE FASTER THAN THEY PRESENTLY DO. IMPROVING THE ROAD THROUGH THE VILLAGE NOW WILL ONLY MAKE IT MORE DIFFICULT IN FUTURE RECONSTRUCTION PROJECTS TO CONSIDER BYPASSING THE VILLAGE. MAYBE ALTERNATE ALIGNMENTS BYPASSING THE VILLAGE ARE NOT VIABLE, BUT I THINK THEY SHOULD AT LEAST BE ADDRESSED IN THIS STUDY.

THANK YOU FOR THE OPPORTUNITY TO MAKE THESE COMMENTS.

Continued March

**Jemez Pueblo-
Transportation
Planning Office**

Memo

To: Jerry Trujillo, Project Engineer
From: Larry Armijo, Transportation Manager 
CC: Vince Toya, Tribal Administrator
Date: April 11, 2008
Re: Comments to Draft-Fatal Flaw Analysis, Project No. FLH-TPM-004-1(9)
CN 3480

I have reviewed the Draft-Fatal Flaw Analysis, NM 4 Bypass, Jemez Pueblo dated March 2008 and have the following comments.

1. The Jemez Pueblo Tribal Council has passed Resolution No. 2008-07 dated February 12, 2008 supporting the F3-G1-J Mod alignment.
2. Transportation concerns raised by the Tribe should include the following:
 - Adequate fencing to control livestock along NM 4 through tribal lands
 - Concerns with tribal boundary crossings (need cattleguards).
 - Clogged culverts along NM 4 and maintenance of drainage channels downstream from NM 4
 - Accessibility to sporting areas, homes and farm fields with adequate cattleguards, gates and turnouts.
 - Guardrails for protection of homes and other public facilities in residential areas.
 - Poor lighting, pavement markings and delineation of intersections along NM 4 and tribal roadways.
 - Deterioration of shoulders along NM 4.
3. A Road Safety Audit (RSA) for NM 4 Through the Jemez Pueblo was completed in May 2007 with funding provided by the Federal Highway Administration. Copies of the RSA have provided to the Project Engineer and the HDR to support proper documentation of existing safety concerns by the tribe.

If you have any questions or need additional information, please do not hesitate to call me. Thank you.



NEWS RELEASE

For More Information, Contact:
Amy Quartell, (505) 830-5400

For Immediate Release:
July 1, 2009

Proposed NM 4 Bypass to be Discussed at Public Meeting

Jemez Pueblo, NM - The New Mexico Department of Transportation is hosting a public information meeting to present the proposed corridor of a NM 4 bypass from the Jemez Pueblo boundary to NM 290. This proposed project will serve to reduce traffic congestion through Jemez Pueblo and increase motor and pedestrian safety.

The meeting will take place on Tuesday, July 14, from 6:00 p.m. to 8:00 p.m. at the Village of Jemez Springs Governing Council Room, located at 042 Jemez Springs Plaza.

Staff from the New Mexico Department of Transportation and project consultant, HDR Engineering, Inc., will be on hand to present the proposed corridor and answer questions from those in attendance. The design team will also be seeking input regarding environmental concerns related to the project.

Those who would like to offer comments on the proposed project but are unable to attend the meeting can submit written comments to: NM 4, HDR Engineering, Inc., 2155 Louisiana Blvd., Suite 9500, Albuquerque, NM 87110, Fax (505) 830-5454, email: NM4@hdrinc.com.

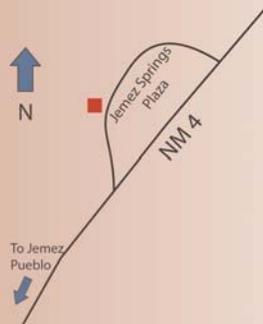
Persons with disabilities that require special accommodations for the meeting should direct their requests to Kelly Sims with HDR at (505) 830-8845. Requests should be submitted at least two days prior to the meeting.

— # # # —

PUBLIC MEETING

YOU ARE INVITED
to a public information meeting
hosted by the New Mexico
Department of Transportation to
present the proposed corridor for a
NM 4 bypass from the Jemez Pueblo
boundary to NM 290.

The New Mexico Department of
Transportation will present the
proposed design alternatives,
including the preferred alternative
carried forward from the study
phase of the project and how it
would affect the area. The public
is encouraged to ask questions and
provide comment.



Date: Tuesday, July 14th, 2009
Time: 6:00 p.m. to 8:00 p.m.
Place: Village of Jemez Springs
Governing Body Conference Room
042 Jemez Springs Plaza
Jemez Springs, NM 87025



To request Americans with Disabilities Act (ADA)-related accommodations for this meeting,
please contact Kelly Sims, HDR Engineering, Inc. at 505-830-8845 at least 48 hours before the meeting.

STATE OF NEW MEXICO
County of Bernalillo SS

NOTICE OF PUBLIC MEETING

You are invited to a public information meeting hosted by the New Mexico Department of Transportation to present the proposed corridor for a NM 4 bypass from the Jemez Pueblo boundary to NM 290.

Date: Tuesday, July 14th, 2009
Time: 6:00 p.m. to 8:00 p.m.
Place: Village of Jemez Springs
Governing Body Conference Room
042 Jemez Springs Plaza
Jemez Springs, 87025

The New Mexico Department of Transportation will present the proposed design alternatives, including the preferred alternative carried forward from the study phase of the project and how it would affect the area. The public is encouraged to ask questions and provide comment.

Those who would like to offer comments but are unable to attend the meeting can submit written comments to: NM 4, HDR Engineering, Inc., 2155 Louisiana Blvd. NE, Suite 9500, Albuquerque, NM 87110, Fax (505) 830-5454, email: NM4@hdrinc.com.

To request Americans with Disabilities Act (ADA)-related accommodations for this meeting, please contact Kelly Sims, HDR Engineering, Inc. at 505-830-8845 at least 48 hours before the meeting. Journal: July 8, 2009.

Bill Tafoya, being duly sworn, declares and says that he is Classified Advertising Manager of **The Albuquerque Journal**, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made of assessed as court cost; that the notice, copy of which is hereto attached, was published in said paper in the regular daily edition, for 1 times, the first publication being on the 8 day of July, 2009, and the subsequent consecutive publications on _____, 20____.

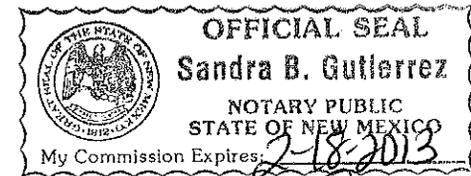


Sworn and subscribed to before me, a Notary Public, in and for the County of Bernalillo and State of New Mexico this 8 day of July of 2009.

PRICE 29.63

Statement to come at end of month.

ACCOUNT NUMBER C 81365



Sandra B. Gutierrez

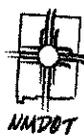
perplexed people for millennia. Ancient Greeks found huge fossil bones, and thought they must be the remains of the Titans, gods in the form of giant heroic people. Most of us have heard that until recently, most people thought that fossils of sea creatures found on mountain tops were clear evidence of the Biblical flood of Noah's fame. This belief is a bit overblown, because by the mid-1600s, people like Leonardo da Vinci and Nicolas Steno, another brilliant Italian Renaissance man, had already made keen observations about fossils and the rock strata that contained them. The many layers of

with their kid: "Dad (Mom), what do you do?"

It isn't easy becoming a fossil. An awful lot of luck has to come to play before we find it in the field or see the fossil in a museum. First, the critters with hard parts, bones or shells made of something that has a chance of not rotting away, are most likely to become fossils. Of course, there are exceptions to this because we find fossil plants like petrified wood, but these organisms require even additional lucky circumstances to become a fossil. Then the creature has to die in the right way and in

recognition into tiny bits. And what do you suppose would happen to our critter if it were overrun by a lava

erosion can still rob us of our find if someone with enough interest
(continued on next page)



NOTICE OF PUBLIC MEETING

You are invited to a public information meeting hosted by the New Mexico Department of Transportation to present the proposed alignment of a NM 4 bypass from the Jemez Pueblo boundary to NM 290.

- Date:** Tuesday, July 14th, 2009
- Time:** 6:00 p.m. to 8:00 p.m.
- Place:** Village of Jemez Springs
Governing Body Conference Room
042 Jemez Springs Plaza
Jemez Springs, 87025

The New Mexico Department of Transportation will present the design alternatives, including the preferred alternative carried forward from the study phase of the project and how it will affect the area. The public is encouraged to ask questions and provide comment.

Those who would like to offer comments but are unable to attend the meeting can submit written comments to: NM 4, HDR Engineering, Inc., 2155 Louisiana Blvd. NE, Suite 9500, Albuquerque, NM 87110, Fax (505) 830-5454, email: NM4@hdrinc.com.

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NM 4 Corridor Study

Jemez Boundary to NM 290

Project No. FLH-TPM-044-1(9), CN 3480

Public Information Meeting

Tuesday, July 14, 2009

Village of Jemez Springs

Governing Council Room

NM 4 History

NM 4 was initially constructed in 1934 and 1948 to travel through San Ysidro, Jemez Pueblo and Jemez Springs.

Neighboring communities include Canon, Ponderosa and Zia Pueblo.

Purpose and Need of NM 4 Corridor Study

- To correct geometric deficiencies and improve to current roadway standards
- To respect the privacy of Jemez Pueblo during cultural ceremonies

NM 4 Corridor Study History

The initial Corridor Study began in 1999 with the development alternatives (Phase A). Alternatives developed included the No-Action Alternative, Enhancement of Existing NM 4 Alternatives, and Bypass Alternatives.

The Bypass Alternative includes several alignments to be evaluated.

In 2001, a Detailed Evaluation of Alternatives (Phase B) was completed and the Corridor Study was placed on hold.

The Corridor Study resumed in 2008. The study team performed a Fatal Flaw Analysis to evaluate previous study documentation against current 2009 standards. As a result, the Phase B Evaluation of Alternatives was refined and completed in 2009.

Currently, the Study Team is progressing through Phase C, Environmental Documentation and Processing.

Recommendations

The Study Team recommends further evaluation of the following alternatives in Phase C:

- No-Action Alternative
- Bypass Alternative (Alignments F3, G1, and J-MOD)

What is a Corridor Study?

It is a three-phase process that includes:

Phase A, Initial Evaluation of Alternatives

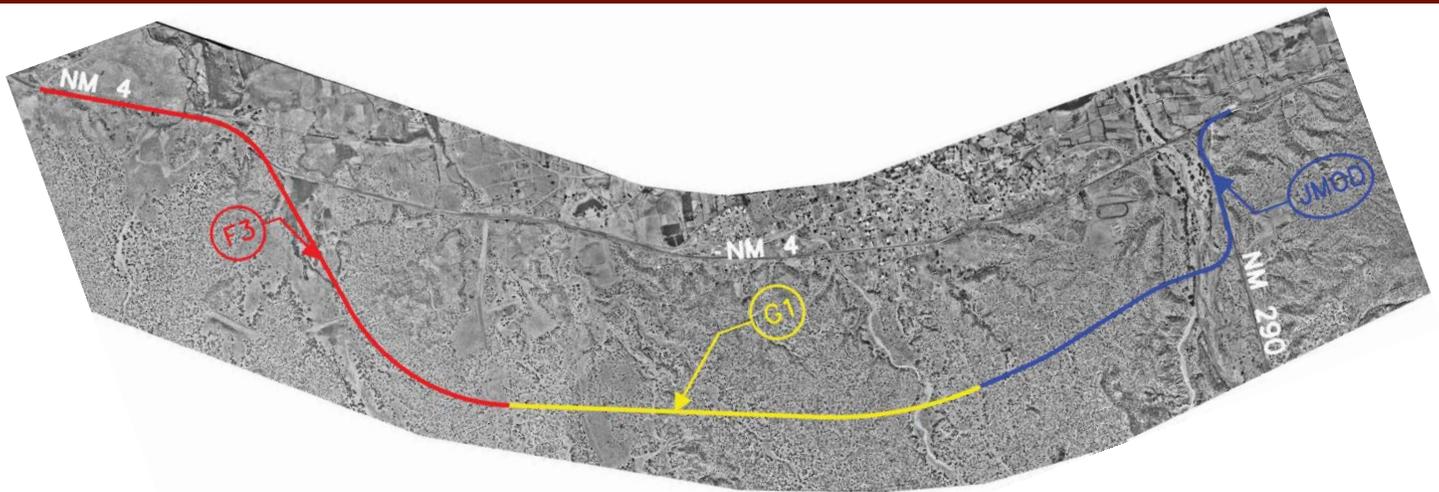
- Develop the purpose and need for project
- Develop and assess all alternatives that may provide a reasonable solution
- Determine which alternatives advance to Phase B
- No-Action Alternative always advanced to Phase B

Phase B, Detailed Evaluation of Alternatives

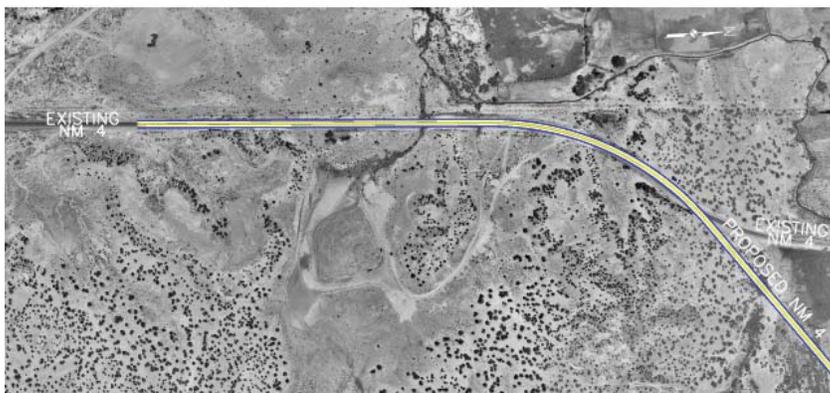
- Refine the advanced alternatives to greater detail
- Analyze alternatives based on engineering, environmental and cost impacts
- Determine which alternatives advance to Phase C
- No-Action Alternative always advanced to Phase C

Phase C, Environmental Documentation and Processing

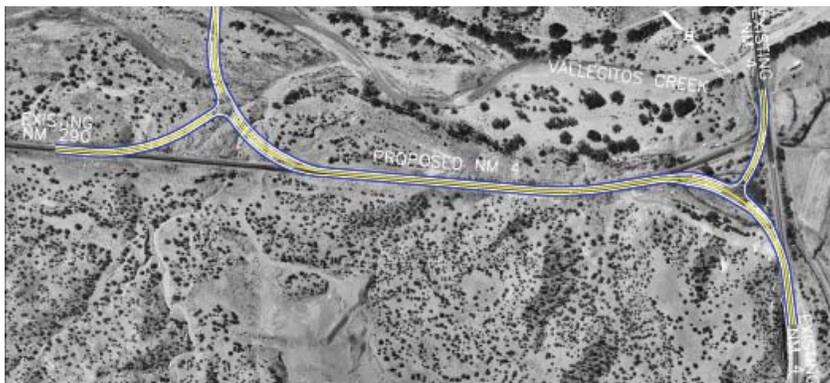
- Summarizes findings to date
- Establishes that alternatives do not pose negative impacts to the environment
- Establishes that the transportation and community benefits of the alternatives outweigh the effects on the environment
- Concludes the Corridor Study process



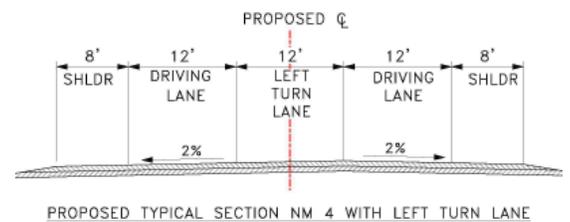
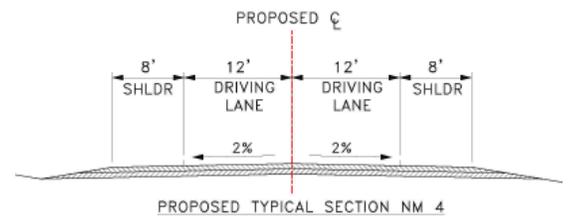
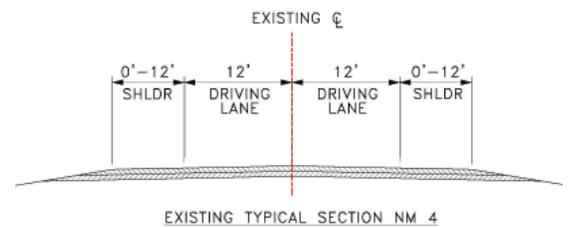
NM 4 Recommended Bypass Alignment (F3 - G1 - JMOD Alignment)



Connection with NM 4 at south end of project



Connection with NM 4 at north end of project



How to submit input:

1. Submit comments at meeting
2. Mail comments to:
 NM 4
 HDR Engineering, Inc.
 2155 Louisiana Blvd. NE
 Suite 9500
 Albuquerque, NM 87110
3. Fax comments to: (505) 830-5454
4. Email comments to:
 NM4@hdrinc.com

Schedule

- August 2009:** Draft Environmental Assessment to be submitted
- October 2009:** Final Environmental Assessment to be submitted
 Preliminary Design to begin
- January 2010:** Preliminary Design Complete, Final Design to begin, Public Information Meeting
- Date To Be Determined:** Construction to begin

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Appendix B

Agency Coordination Letters

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July 23, 2009

Gedi Cibas
NM Environment Department
PO Box 26110
Santa Fe, NM 87502-6110

**Re: New Mexico Department of Transportation NM 4 Corridor Study
Jemez Pueblo Boundary to NM 290
Project No. FLH-TPM-004-1(9), CN 3480**

Dear Ms. Cibas:

The New Mexico Department of Transportation (NMDOT), with input from the Town of Walatowa (Jemez Pueblo), is proposing to build a NM 4 bypass from the San Ysidro/Jemez Pueblo Grant Boundary line to NM 290, just east of where NM 290 currently intersects with existing NM 4. The proposed bypass would be approximately 3.2 miles in length and would run parallel to the existing NM 4 alignment roughly ¼ mile east.

Increased traffic due to commercial and recreational development outside of Jemez Pueblo conflicts with traditional roadway use within Jemez Pueblo. This traffic is creating safety concerns for pedestrians, livestock, residential and commercial uses within the Pueblo along the NM 4 corridor. Access into the Pueblo during religious days and other cultural events has complicated the activities of Pueblo members. The bypass is proposed to correct geometric deficiencies, improve the roadway to standards, and to respect the privacy of Jemez Pueblo during cultural ceremonies. HDR Engineering, Inc. is preparing the environmental assessment and supporting documentation for this project in order to comply with the National Environmental Policy Act and related legislation.

Project Area: The project area and recommended bypass alternative appear on the attached map. The project area crosses rolling terrain composed of ridges, draws and shallow canyons, as well as the Town of Walatowa. This area is urban with commercial, residential and Jemez Pueblo government facilities. The proposed action would occur entirely on Jemez Pueblo lands, and within Sandoval County. Vallecitos Creek, a tributary to the Jemez River, occurs on the northern edge of the project area, and flows into the Jemez River west of the Town of Walatowa. Most of the NM 4 project area is located in arid upland populated by coniferous woodland. However, there are several sources of water within the project area that provide sufficient hydrology to support wetland vegetation and warrant wetland determinations. NM 4, which has been designated a National Scenic Byway, is recommended as eligible for the National Registry of Historic Places under Criterion A and nineteen (19) archaeological sites are eligible under Criterion D. Fifteen wildlife species with agency status could potentially occur in the project area but only the gray vireo was found. There are no rare or unique plant communities within the project limits.

Bill Richardson
Governor

Gary L. J. Giron
Cabinet Secretary

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Vice Chairman
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Commissioner
District 1

Request for evaluation: The engineering firm of HDR is conducting project development for the NMDOT. We request your evaluation of the effects of the proposed project, if any, to determine the potential to affect resources or issues of concern to your agency. If you have any concerns or questions regarding this project, or require any further information, please contact me or Kelly Sims of HDR at (505) 830-5400 or send an email to: kelly.sims@hdrinc.com. Thank you for your attention to this matter.

Sincerely,



Rochelle Byars
Environmental Design Division



July 23, 2009

Marcy Leavitt
NMED - Surface Water Quality Bureau
PO Box 26110
Santa Fe, NM 87502

**Re: New Mexico Department of Transportation NM 4 Corridor Study
Jemez Pueblo Boundary to NM 290
Project No. FLH-TPM-004-1(9), CN 3480**

Dear Ms. Leavitt:

The New Mexico Department of Transportation (NMDOT), with input from the Town of Walatowa (Jemez Pueblo), is proposing to build a NM 4 bypass from the San Ysidro/Jemez Pueblo Grant Boundary line to NM 290, just east of where NM 290 currently intersects with existing NM 4. The proposed bypass would be approximately 3.2 miles in length and would run parallel to the existing NM 4 alignment roughly ¼ mile east.

Increased traffic due to commercial and recreational development outside of Jemez Pueblo conflicts with traditional roadway use within Jemez Pueblo. This traffic is creating safety concerns for pedestrians, livestock, residential and commercial uses within the Pueblo along the NM 4 corridor. Access into the Pueblo during religious days and other cultural events has complicated the activities of Pueblo members. The bypass is proposed to correct geometric deficiencies, improve the roadway to standards, and to respect the privacy of Jemez Pueblo during cultural ceremonies. HDR Engineering, Inc. is preparing the environmental assessment and supporting documentation for this project in order to comply with the National Environmental Policy Act and related legislation.

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Bill Richardson
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Sincerely,



Rochelle Byars
Environmental Design Division



July 23, 2009

Lesley McWhirter
U.S. Army Corps of Engineers
4101 Jefferson Place NE
Albuquerque, NM 87109-3435

**Re: New Mexico Department of Transportation NM 4 Corridor Study
Jemez Pueblo Boundary to NM 290
Project No. FLH-TPM-004-1(9), CN 3480**

Dear Ms. McWhirter:

The New Mexico Department of Transportation (NMDOT), with input from the Town of Walatowa (Jemez Pueblo), is proposing to build a NM 4 bypass from the San Ysidro/Jemez Pueblo Grant Boundary line to NM 290, just east of where NM 290 currently intersects with existing NM 4. The proposed bypass would be approximately 3.2 miles in length and would run parallel to the existing NM 4 alignment roughly ¼ mile east.

Increased traffic due to commercial and recreational development outside of Jemez Pueblo conflicts with traditional roadway use within Jemez Pueblo. This traffic is creating safety concerns for pedestrians, livestock, residential and commercial uses within the Pueblo along the NM 4 corridor. Access into the Pueblo during religious days and other cultural events has complicated the activities of Pueblo members. The bypass is proposed to correct geometric deficiencies, improve the roadway to standards, and to respect the privacy of Jemez Pueblo during cultural ceremonies. HDR Engineering, Inc. is preparing the environmental assessment and supporting documentation for this project in order to comply with the National Environmental Policy Act and related legislation.

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Sincerely,



Rochelle Byars
Environmental Design Division



July 23, 2009

Linda Riddle
U.S. Forest Service Jemez Ranger District
PO Box 150
Jemez Springs, NM 87025

**Re: New Mexico Department of Transportation NM 4 Corridor Study
Jemez Pueblo Boundary to NM 290
Project No. FLH-TPM-004-1(9), CN 3480**

Dear Ms. Riddle:

The New Mexico Department of Transportation (NMDOT), with input from the Town of Walatowa (Jemez Pueblo), is proposing to build a NM 4 bypass from the San Ysidro/Jemez Pueblo Grant Boundary line to NM 290, just east of where NM 290 currently intersects with existing NM 4. The proposed bypass would be approximately 3.2 miles in length and would run parallel to the existing NM 4 alignment roughly ¼ mile east.

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Sincerely,



Rochelle Byars
Environmental Design Division



July 23, 2009

Bob Sivinski
NM Energy, Minerals and Natural Resources Dept.
1220 S. St. Francis Dr.
Santa Fe, NM 87505

**Re: New Mexico Department of Transportation NM 4 Corridor Study
Jemez Pueblo Boundary to NM 290
Project No. FLH-TPM-004-1(9), CN 3480**

Dear Mr. Sivinski:

The New Mexico Department of Transportation (NMDOT), with input from the Town of Walatowa (Jemez Pueblo), is proposing to build a NM 4 bypass from the San Ysidro/Jemez Pueblo Grant Boundary line to NM 290, just east of where NM 290 currently intersects with existing NM 4. The proposed bypass would be approximately 3.2 miles in length and would run parallel to the existing NM 4 alignment roughly ¼ mile east.

Increased traffic due to commercial and recreational development outside of Jemez Pueblo conflicts with traditional roadway use within Jemez Pueblo. This traffic is creating safety concerns for pedestrians, livestock, residential and commercial uses within the Pueblo along the NM 4 corridor. Access into the Pueblo during religious days and other cultural events has complicated the activities of Pueblo members. The bypass is proposed to correct geometric deficiencies, improve the roadway to standards, and to respect the privacy of Jemez Pueblo during cultural ceremonies. HDR Engineering, Inc. is preparing the environmental assessment and supporting documentation for this project in order to comply with the National Environmental Policy Act and related legislation.

Project Area: The project area and recommended bypass alternative appear on the attached map. The project area crosses rolling terrain composed of ridges, draws and shallow canyons, as well as the Town of Walatowa. This area is urban with commercial, residential and Jemez Pueblo government facilities. The proposed action would occur entirely on Jemez Pueblo lands, and within Sandoval County. Vallecitos Creek, a tributary to the Jemez River, occurs on the northern edge of the project area, and flows into the Jemez River west of the Town of Walatowa. Most of the NM 4 project area is located in arid upland populated by coniferous woodland. However, there are several sources of water within the project area that provide sufficient hydrology to support wetland vegetation and warrant wetland determinations. NM 4, which has been designated a National Scenic Byway, is recommended as eligible for the National Registry of Historic Places under Criterion A and nineteen (19) archaeological sites are eligible under Criterion D. Fifteen wildlife species with agency status could potentially occur in the project area but only the gray vireo was found. There are no rare or unique plant communities within the project limits.

Bill Richardson
Governor

Gary L. J. Giron
Cabinet Secretary

Commission

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Chairman
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David Schutz
Vice Chairman
District 5

Gregory T. Ortiz
Secretary
District 6

Norman Assed
Commissioner
District 3

Jim Franken
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John Hummer
Commissioner
District 1

Request for evaluation: The engineering firm of HDR is conducting project development for the NMDOT. We request your evaluation of the effects of the proposed project, if any, to determine the potential to affect resources or issues of concern to your agency. If you have any concerns or questions regarding this project, or require any further information, please contact me or Kelly Sims of HDR at (505) 830-5400 or send an email to: kelly.sims@hdrinc.com. Thank you for your attention to this matter.

Sincerely,



Rochelle Byars
Environmental Design Division



July 23, 2009

Rosendo Trevino, III
USDA Natural Resource Conservation Service
6200 Jefferson NE
Albuquerque, NM 87109

**Re: New Mexico Department of Transportation NM 4 Corridor Study
Jemez Pueblo Boundary to NM 290
Project No. FLH-TPM-004-1(9), CN 3480**

Dear Mr. Trevino, III:

The New Mexico Department of Transportation (NMDOT), with input from the Town of Walatowa (Jemez Pueblo), is proposing to build a NM 4 bypass from the San Ysidro/Jemez Pueblo Grant Boundary line to NM 290, just east of where NM 290 currently intersects with existing NM 4. The proposed bypass would be approximately 3.2 miles in length and would run parallel to the existing NM 4 alignment roughly ¼ mile east.

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Sincerely,



Rochelle Byars
Environmental Design Division



July 23, 2009

Brian Gleadle
NM Department of Game and Fish
3841 Midway Place NE
Albuquerque, NM 87109

**Re: New Mexico Department of Transportation NM 4 Corridor Study
Jemez Pueblo Boundary to NM 290
Project No. FLH-TPM-004-1(9), CN 3480**

Dear Mr. Gleadle:

The New Mexico Department of Transportation (NMDOT), with input from the Town of Walatowa (Jemez Pueblo), is proposing to build a NM 4 bypass from the San Ysidro/Jemez Pueblo Grant Boundary line to NM 290, just east of where NM 290 currently intersects with existing NM 4. The proposed bypass would be approximately 3.2 miles in length and would run parallel to the existing NM 4 alignment roughly ¼ mile east.

Increased traffic due to commercial and recreational development outside of Jemez Pueblo conflicts with traditional roadway use within Jemez Pueblo. This traffic is creating safety concerns for pedestrians, livestock, residential and commercial uses within the Pueblo along the NM 4 corridor. Access into the Pueblo during religious days and other cultural events has complicated the activities of Pueblo members. The bypass is proposed to correct geometric deficiencies, improve the roadway to standards, and to respect the privacy of Jemez Pueblo during cultural ceremonies. HDR Engineering, Inc. is preparing the environmental assessment and supporting documentation for this project in order to comply with the National Environmental Policy Act and related legislation.

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Sincerely,



Rochelle Byars
Environmental Design Division



July 31, 2009

Sam Cata
NM State Historic Preservation Office
Bataan Memorial Building, 407 Galisteo Street, Suite 236
Santa Fe, NM 87501

**Re: New Mexico Department of Transportation NM 4 Corridor Study
Jemez Pueblo Boundary to NM 290
Project No. FLH-TPM-004-1(9), CN 3480**

Dear Mr. Cata:

The New Mexico Department of Transportation (NMDOT), with input from the Town of Walatowa (Jemez Pueblo), is proposing to build a NM 4 bypass from the San Ysidro/Jemez Pueblo Grant Boundary line to NM 290, just east of where NM 290 currently intersects with existing NM 4. The proposed bypass would be approximately 3.2 miles in length and would run parallel to the existing NM 4 alignment roughly ¼ mile east.

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Bill Richardson
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Sincerely,



Rochelle Byars
Environmental Design Division



July 31, 2009

Susan MacMullin
U.S. Fish and Wildlife Service
2015 Osuna NE
Albuquerque, NM 87113

**Re: New Mexico Department of Transportation NM 4 Corridor Study
Jemez Pueblo Boundary to NM 290
Project No. FLH-TPM-004-1(9), CN 3480**

Dear Ms. MacMullin:

The New Mexico Department of Transportation (NMDOT), with input from the Town of Walatowa (Jemez Pueblo), is proposing to build a NM 4 bypass from the San Ysidro/Jemez Pueblo Grant Boundary line to NM 290, just east of where NM 290 currently intersects with existing NM 4. The proposed bypass would be approximately 3.2 miles in length and would run parallel to the existing NM 4 alignment roughly ¼ mile east.

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Bill Richardson
Governor

Gary L. J. Giron
Cabinet Secretary

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Sincerely,



Rochelle Byars
Environmental Design Division



BILL RICHARDSON
Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Office of the Secretary

Harold Runnels Building
1190 Saint Francis Drive (87505)
PO Box 5469, Santa Fe, NM 87502-5469
Phone (505) 827-2855 Fax (505) 827-2836
www.nmenv.state.nm.us



RON CURRY
Secretary
Jon Goldstein
Deputy Secretary

August 12, 2009

Rochelle Byars
Environmental Design Division
NMDOT
General Office P.O. Box 1149
Santa Fe, NM 87504-1149

**RE: New Mexico Department of Transportation NM 4 Corridor Study, Jemez Pueblo
Boundary to NM 290, Jemez Pueblo, Sandoval County**

Dear Ms Byars:

Your letter regarding the above named project was received in the New Mexico Environment Department (NMED) and was sent to various Bureaus for review and comment. Comments were provided by the Air Quality, Ground Water Quality, Petroleum Storage Tanks and Surface Water Quality Bureaus and are as follows.

Please note that NMED does regulate or have jurisdiction over tribal lands. However, the Department does have jurisdiction over non-tribal lands and the following comments are related to non-tribal lands. It is recommended that the New Mexico Department of Transportation contact EPA Region VI for additional information.

Air Quality Bureau

The proposed project regarding the NM 4 Corridor Study, Jemez Pueblo is located in Sandoval County. Sandoval County is currently considered to be in attainment with all New Mexico and National Ambient Air Quality Standards.

Construction activities identified in this proposal have the potential to create temporary increases in emissions due to combustion-related construction equipment. Dust associated with vehicular use and earth-moving activities may also impact local air quality. However, the increases should not result in non-attainment of air quality standards. Please refer to 20.2.72 NMAC for more information on air quality permitting requirements.

Surface Water Quality Bureau

The U.S. Environmental Protection Agency (USEPA) requires National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) coverage for storm water discharges from construction projects (common plans of development) that will result in the disturbance (or re-disturbance) of one or more acres, including expansions, of total land area. Because this project appears to exceed one acre (including staging areas, etc.), it may require appropriate NPDES permit coverage prior to beginning construction (small, one - five acre, construction projects may be able to qualify for a waiver in lieu of permit coverage - see Appendix D).

Among other things, this permit requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the site and that appropriate Best Management Practices (BMPs) be installed and maintained both during and after construction to prevent, to the extent practicable, pollutants (primarily sediment, oil & grease and construction materials from construction sites) in storm water runoff from entering waters of the U.S. This permit also requires that permanent stabilization measures (revegetation, paving, etc.), and permanent storm water management measures (storm water detention/retention structures, velocity dissipation devices, etc.) be implemented post construction to minimize, in the long term, pollutants in storm water runoff from entering these waters. In addition, permittees must ensure that there is no increase in sediment yield and flow velocity from the construction site (both during and after construction) compared to pre-construction, undisturbed conditions (see Subpart 10.C.1.b)

You should also be aware that EPA requires that all "operators" (see Appendix A) obtain NPDES permit coverage for construction projects. Generally, this means that at least two parties will require permit coverage. The owner/developer of this construction project who has operational control over project specifications, the general contractor who has day-to-day operational control of those activities at the site, which are necessary to ensure compliance with the storm water pollution plan and other permit conditions, and possibly other "operators" will require appropriate NPDES permit coverage for this project.

The CGP was re-issued effective June 30, 2008. The CGP, Notice of Intent (NOI), Fact Sheet, and Federal Register notice can be downloaded at: <http://cfpub.epa.gov/npdes/stormwater/cgp.cfm>. In addition, this project may require permit coverage under § 404 of the federal Clean Water Act. We suggest you contact the U.S. Army Corps of Engineers, Albuquerque District regarding permitting requirements under that program.

I hope this information is helpful to you.

Sincerely,



Georgia Cleverley
Environmental Impact Review Coordinator
NMED File #3009

Attachment

Facility ID	Facility Name	Address1	Address2	City	Zip	Owner ID	Owner Name	Native Land	Releases	AST	UST	Permit Year	Permit Tanks	AI ID
28737	JEMEZ SPRINGS MUNICIPAL SCHOOLS	CANON ROUTE	BOX FOUR A	PUEBLO OF JEMEZ	87024	14508	JEMEZ SPRINGS MUNICIPAL SCHOOLS	No	0			1995	1	7664
28738	JEMEZ TRADING POST TOYA WILLIAM	STATE HWY 4	PO BOX 68	PUEBLO OF JEMEZ	87024	15782	ARCHIBEQUE JACOB	Yes	0					1056
51692	DURHAM SCHOOL SERVICES	29 RIVER VIEW RD		PUEBLO OF JEMEZ	87024	17012	EVER READY OIL COMPANY	No	0	1	0	2010	1	11437



United States
Department of
Agriculture

Forest
Service

Santa Fe National Forest

Jemez Ranger District
051 Woodsy Lane
P.O. Box 150
Jemez Springs, New Mexico 87025
575-829-3535 FAX 575-829-3223

File Code: 1900

Date: August 6, 2009

Rochelle Byars
New Mexico Department of Transportation
PO Box 1149
Santa Fe, NM 87504

Dear Ms. Byars,

Thank you for the information and the opportunity to comment on the NM 4 Corridor Study affecting the Jemez Pueblo Boundary to NM 290. It is our determination that the entire proposed project is on Pueblo of Jemez lands and outside of National Forest System lands. As a result of this and review of the proposed project by wildlife, archeological, fire, and recreation specialists, the Forest Service has no comments regarding direct or indirect impacts to wildlife, archeological, or other Forest resources.

Though the proposed project is not located on National Forest System lands, the proposed project may reduce potential conflicts regarding traffic and safety issues with permitted uses of the Santa Fe National Forest currently requiring travel through the pueblo corridor on NM 4. This information may be helpful to you in future environmental analysis concerning this project. If you have any questions, please contact Mike Dechter, NEPA Coordinator, or Linda Riddle.

Thank you again for the opportunity to comment on the proposal.

Sincerely,

LINDA RIDDLE
District Ranger, Jemez





New Mexico DEPARTMENT OF
TRANSPORTATION
 MOBILITY FOR EVERYONE

087401

FLH-5
 MME

cc: SC

July 31, 2009

Sam Cata
 NM State Historic Preservation Office
 Bataan Memorial Building, 407 Galisteo Street, Suite 236
 Santa Fe, NM 87501

**Re: New Mexico Department of Transportation NM 4 Corridor Study
 Jemez Pueblo Boundary to NM 290
 Project No. FLH-TPM-004-1(9), CN 3480**

Dear Mr. Cata:

The New Mexico Department of Transportation (NMDOT), with input from the Town of Walatowa (Jemez Pueblo), is proposing to build a NM 4 bypass from the San Ysidro/Jemez Pueblo Grant Boundary line to NM 290, just east of where NM 290 currently intersects with existing NM 4. The proposed bypass would be approximately 3.2 miles in length and would run parallel to the existing NM 4 alignment roughly ¼ mile east.

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General Office | P. O. Box 1149 | Santa Fe, NM 87504-1149

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Sincerely,



Rochelle Byars
Environmental Design Division

COMMENTS



Michelle Ensey
for NM State Historic Preservation Officer

A cultural resources study must be completed and submitted to this office by the lead agency for review.