

Community Advisory Groups

Involving Highway Users in the Research Process

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ABSTRACT

Conventional technical and economic components to any roadway evaluation are crucial. However, the immediate as well as final impacts of road construction are social. The New Mexico State Highway and Transportation Department is upgrading 118 miles of NM 44 (renamed US 550 in January 2001) from a two-lane highway to a four-lane highway in three years using the first road warranty of its kind in the United States of America. The Road LIFE project is the rigorous research evaluation of the \$62 million dollar warranty agreement where the design team developing widening plans is also fiscally responsible for long-term pavement and structures performance. National and state evaluation teams are in place. A third team, the Community Advisory Group is now established from randomly chosen individuals met and interviewed along NM 44 who are knowledgeable about their community or tribal nation and want to assist the technical and financial evaluation process from the viewpoint of how the highway upgrades affects their community.

Communities and tribal nations have a vested interest and inherent knowledge of transportation needs within their boundaries. Adding a Community Advisory Group to the national and state Road LIFE advisory groups brings the “customer” in as the final observer to the technical and financial oversight groups. The Community Advisory Group has suggested improvements and shared knowledge for the betterment of the project. Having a three tiered evaluation ensures many points of contact to find and mitigate barriers and flaws.

NEW MEXICO ROAD LIFE RESEARCH PROJECT

The purpose of Road Lifecycle Innovative Financing Evaluation (Road LIFE) is to provide an independent and technically rigorous evaluation of the return on investment resulting from the innovative approach used in the design, building and maintenance of the New Mexico State Highway 44 (NM 44) project, Figure 1. In January 2000, NM 44 became part of US 550.

The NM 44 project is a 118-mile stretch of primarily two-lane highway being expanded to four lanes financed with a pavement and structure performance warranty. This warranty is the first of its kind in the United States. The New Mexico State Highway and Transportation Department (NMSHTD) Research Bureau is charged with evaluating this twenty year project using multiple criterion such as:

- Economic development of the NM 44 corridor with the upgrade enhancement
- Benefits and costs to the citizens of the State of New Mexico by constructing the lanes miles in three years with a warranty contract versus the projected 21 years under the conventional STIP process
- Safety to the traveling public provided by the two to four lane upgrade
- Safety to the corridor communities and Indian nations along the route
- Public acceptance of this style of rapid road construction

The project incorporates new and innovative design, construction management, and financing ideas (1). The innovative financing aspect of NM 44 is of state and national importance (2, 3).

Warranty Specifics

The pavement warranty is for twenty years or road use based on cumulative axle load, whichever comes first, and includes a cost limit for maintenance performed. The warranty specifies performance requirements, such as cracking, rutting and roughness. The private company providing the warranty is responsible to maintain NM 44 to these performance requirements. The structures, mainly bridges and culverts, are covered for up to ten years. The structures warranty includes erosion and sediment control. The State of New Mexico received the warranty for a one-time fee of \$62 million.

Research Advisory Committees

To ensure the integrity of the research process, and to improve the quality of research products, advisory groups were formed to support Road LIFE. There are three advisory groups for Road LIFE: the National Expert Panel consists of leading experts who have no personal or institutional interest in NM 44; the New Mexico Research Advisory Committee consists of representatives of public and private organizations directly involved with the NM 44 project; and the Community Advisory Group consists of individuals who reside in communities and Indian nations along the NM 44 corridor and have a strong personal interest in the outcome of the construction in their community.

NM 44 ROAD LIFE COMMUNITY ADVISORY GROUP OBJECTIVES

Conventional technical and economic components to any roadway evaluation are crucial. However, the immediate as well as final impacts of road construction are social. Travelers, who use the roadway, and the communities in the vicinity, are those who will feel the immediate effects of the construction, and who will live with its long-term economic and social consequences.

Accordingly, the research team has incorporated a community advisory component into the evaluation design, with two major elements: First, a regular pattern of visiting communities along NM 44 and listening directly to residents; and second, the formation of a Community Advisory Group (CAG), in addition to the national level and state level advisory groups that have already been formed. The CAG will meet annually to review evaluation data collected from a community/end user perspective. The overall objectives are to continue to “listen to the customer”, to maintain close relations with communities and travelers along NM 44, and to assure that technical and economic analyses do not overlook issues deemed important by local communities and tribal nations.

This approach will have significant impact on the overall evaluation of the NM 44 project. To discover whether the approach may have merit, the principal investigator and two other researchers conducted a “Listening to the Community” pre-test from October 30 through November 1, 2000.

METHODOLOGY

Our approach employed qualitative research techniques. Qualitative research methods were developed in the social sciences to enable researchers to study social and cultural phenomena. Qualitative research methods are designed to help researchers understand people and the social and cultural contexts within which they live. Kaplan and Maxwell (4) argue that the goal of understanding a phenomenon from the point of view of the participants and its particular social and institutional context is largely lost when textual data are quantified.

Examples of qualitative methods are action research, case study research and ethnography. Qualitative data sources include observation and participant observation (fieldwork), interviews and questionnaires, documents and texts, and the researcher's impressions and reactions. Qualitative research is a detailed description of situations, events, people, and behaviors. It includes what people say about their experiences, attitudes, beliefs, and thoughts through recordings, documents, transcripts, records, and narrative histories. Qualitative data sources include observation and participant observation (fieldwork), interviews, texts, and the researcher's diary of impressions and reactions. Qualitative Method (QM) is open-ended and does not impose, outsider, expert, academic, predetermined, categories such as the response choices that comprise typical questionnaires or tests. QM begins with specific observations and builds towards general observations and explorations of the people's grounded, categories-in-use (5).

Assumptions that guided the design of the pre-test methodology included:

The direct experience of travelers and local communities along NM 44 will provide perspectives and information not available to the research from other sources.

The wisdom from local and direct experience may alter assumptions made by researchers who work and reside far from the project, and/or are focused on technical or financial issues.

Gathering information from local sources requires researchers to travel to the sites in question and talk to people where they live and work, rather than asking them to travel to meetings or answer surveys.

Gathering useful information, and asking people to volunteer time to participate in an advisory group, requires the time needed to build relationships with people.

The methodology consisted of a series of interviews with people in places where they work or visit. More specifically, the interviews:

Were conducted in communities along or near the entire length of NM 44. The communities of Bernalillo, Cuba, Counselor and Bloomfield, and the Pueblo of Jemez, were visited, Figure 3.

Were conducted in places where people normally gather during the day. People were interviewed in restaurants, a trading post, a library, a community center, and tribal offices. One appointment for an interview was made; the others were spontaneous.

Used a set of eight open-ended questions to guide the conversations. The questions provided a consistent framework for conversation, yet allowed individuals to talk about what was important to them.

A rack card was designed and handed out to all people interviewed and left at community gathering places (Figure 2).

Allowed sufficient time to have in-depth interviews. Interviews took up to 45 minutes per individual. These in-depth interviews established rapport between the interviewers and interviewees, and enabled interviewees to tell the interviewer a wide range of information about the road building process and its effect on them personally and on their community.

Sought to reach people from a variety of backgrounds. Persons interviewed were Hispanic, Navajo, Jemez and Anglo; represented five communities along NM 44; and included 10 women and 8 men. Two are public officials, several retail business owners, a student, and several regular NM 44 travelers.

Secondarily, but intentionally, sought persons who might serve on the Community Advisory Group. Several people were invited to be on the CAG, based on their interest in the project and their community.

PRE-TEST FINDINGS

Findings are divided into two categories-general and specific. General findings cite themes from several or all conversations, and reflect confidence that the conclusions are generally held within communities along NM 44. General findings also comment on the researchers' reflections on their methodology. Specific findings include individual insights or suggestions that the interviewers thought noteworthy.

General Findings

1. Every person interviewed has an overall positive view of the project, citing safety, efficiency, and economic development as their reasons. Comments such as “It’ll be great when it’s done” and “It’s about time” were common.
2. Each person had a distinctive and useful observation to contribute. The interviewers gained several new and specific ideas about the evaluation and how to think about the impact of the new roadway. Researchers learned a variety of issues not before considered in relatively few interviews.
3. Many persons said they knew someone from the New Mexico State Highway and Transportation Department or a contractor and all comments about this person or their communications was positive. The contractors and the Department are viewed as being good neighbors.
4. People were open to being part of the Community Advisory Group. While a few people declined, citing time commitments or suggesting others they believed more appropriate, all appreciated being asked.
5. A mixed group of interviewers [age, gender, race] encourages people to speak longer, more openly and to find a point of rapport.
6. Having a template of general, open-ended questions encouraged dialog and reflection, allowing persons being interviewed to think and talk in a comfortable manner (5, 6, 7). This approach resulted in higher quality information as well as better rapport.

Specific Findings

Again, specific findings include individual insights or suggestions that the interviewers thought noteworthy. These findings will be reviewed further to determine how to incorporate them into a revised Road LIFE design.

Economic Issues

1. The impact to the cost of goods and services due to an improved roadway:
Will the completed 550/44 result in a decrease in transportation costs and therefore a decrease in the price of goods overall for people of the Four Corners community? [The extreme northwestern portion of New Mexico where four states touch is commonly called the Four Corners.]
The ease of transport should lower the upcoming construction cost of the proposed Boys and Girls Club building.
2. The costs for maintaining local road infrastructure as a result of NM 44 improvements:
Bloomfield is an oil and gas production and refinery town that currently has a high amount of oversized vehicle travel.
What will the impact be on Bloomfield’s infrastructure/roads if more and/or still larger vehicles travel on and tear up the city roads?
3. Upgrading several secondary roads that connect to NM 44/US 550 may now take on a higher priority, at least for local communities.
Examples cited included NM 537, NM 44 and several county roads.
4. Cuba may become a bedroom community of Rio Rancho and its high tech economic development, since when the road is upgraded it will take approximately the same amount of time to travel from Cuba as from Albuquerque’s east side.
5. Suggestions to measure economic development impacts include:
Increases in gross receipts taxes
Frequency of travel between Albuquerque and Bloomfield
Increase in numbers of residents traveling between Albuquerque and Bloomfield
Increase in commercial traffic between Albuquerque and Bloomfield
Decrease in costs of specific goods and services.

Safety Issues

1. The increased smoothness and comfort also masks driving at high speeds.
The speed limit may need to be raised to 70 or 75 when the project is completed.
The New Mexico state highway speed limit is generally 75 mph for two-lane traffic.
People pulling out of secondary roads onto NM 44 will need more turnouts or merge lanes.
2. Emergency medical services (EMS) will be positively and negatively affected.
The Town of Bernalillo provides ambulance service for the Village of Cuba. Two lanes in each direction translate to people being shuttled more quickly and efficiently for health related incidents such as heart attacks and highway accidents.

- However, this may translate into higher local budgets for EMS and where is this money going to come from?
3. Ensure cattle or other animals stay off the road.
The interface of cattle guards with the roadway may need review. The researchers observed two instances where the grading may be too low in relation to the roadway. Ranching, both cattle and sheep, is a traditional way of life in this quadrant of the state.
 4. Safety concerns for Navajo students bused from as far away as Lybrook to attend day school classes in Bloomfield.
 5. The new road may increase safety for the pedestrian traffic on the Navajo Nation with the wider shoulders and rumble strips. It is common to see people walk along the highway, one of the few paved roads, between their home and activity sites.
 6. The road will have an impact on a variety of vehicle types. For instance, motorcyclists appreciate the smooth road.

SECOND AND THIRD INTERVIEW SESSIONS

The newly established Community Advisory Group met in Cuba, New Mexico, a “half-way” point, in May 2001 with national and state technical team members. The group met in a café meeting room where the CAG could listen to reports from the national and state technical experts. This meeting was set up as an informal meeting where people, both technical staff and community members, would feel comfortable asking questions and giving responses. Everyone was able to have lunch together and continue aspects of technical conversations or have conversations to begin to know one another.

The conversations were not taped; there was no video, and only occasionally did investigators take hand written notes. A portable PC was used for take down specific requests from the community members to ensure there requests were captured and recorded. All parties stated they had a better insight into the consequences of the road construction. The group agreed gathering cultural information to refine the social impacts of road construction would enhance current and future road design.

Two researchers again went into the community and interviewed CAG members in July 2001. These members stated that it would be difficult to have a one meeting along the road where all group members could be present to have a synergy of exchange. While researchers and CAG members thought the idea to get the entire CAG together was good, it seemed impractical for a 118-mile stretch of road. As researchers, we may have imparted too much value on a full member meeting implying or imprinting more regionalism upon this group than existed. Transportation professionals appropriately have meetings with colleagues from all parts of the country to discuss a project; that one meeting contact approach may prove unwise for villages, towns, cities and Indian nations along a highway. Many points of contacts may be more appropriate in gathering community values. These contacts could be in person, by telephone or Email contact.

CONCLUSIONS

Communities and tribal nations have a vested interest and inherent knowledge of transportation needs within their boundaries. Adding a Community Advisory Group to the national and state Road LIFE advisory groups brings the “customer” in as the final observer to the technical and financial oversight groups. It is anticipated that involvement by the NM 44 community in the early stages of the technical evaluation will improve the final product and increase ownership and satisfaction of the NM 44 community in four lanes to the Four Corners.

The Pre-test method exceeded the researcher’s initial expectations. This open-ended interview process is a useful and promising component of a long-term evaluation design in building trust in the communities and nations along NM 44. A Community Advisory Group complements the national and state design framework. The community values, the social aspects of the road, are crucial in a complete evaluation of NM 44’s process and progress.

RECOMMENDATIONS

The suggested next steps include regular visits over the next several months to listen and form the NM 44 Road LIFE Community Advisory Group. Nine interviewees are members of the fledgling advisory group. This group should continue to interact and strive to meet annually. It is anticipated that next year, a community group of approximately 10 persons residing along NM 44 will be invited and convened to review the first technical and financial findings of the state and national advisory. The group’s observations, suggestions and critiques will be sent to the NMSHTD Research Bureau for inclusion into the yearly reports. A long-term community perspective

enhances this project by assisting the technical assessment groups in finding and addressing any flaws within the system. An active community advisory group will help resolve transportation problems and is crucial to its long-term success.

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LIST OF FIGURES

FIGURE 1 Map of New Mexico and the Four Corners area showing location of NM 44/US 550. Map provided courtesy of Mesa.

FIGURE 2 Rack Card (front and back) used for handout to NM 44 travelers and community members

FIGURE 3 Map of NM 44 showing Indian Reservations, villages, and towns. Map modified and provided courtesy of Mesa, PDC.

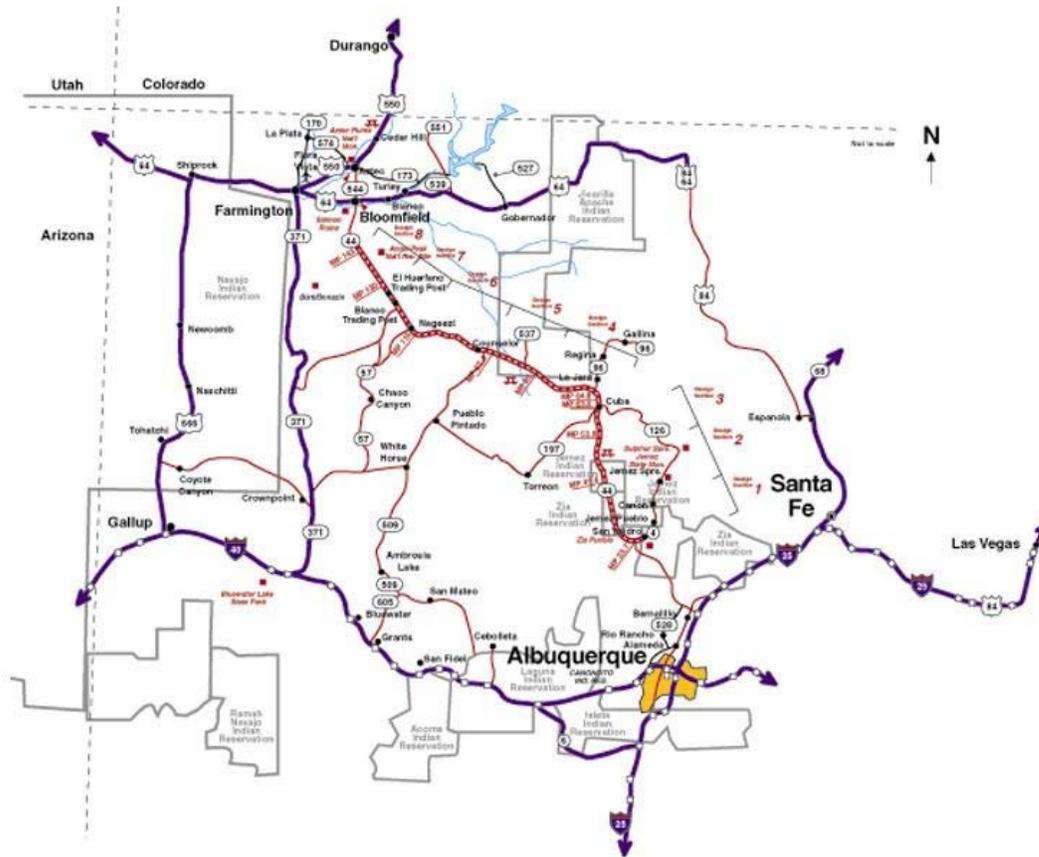


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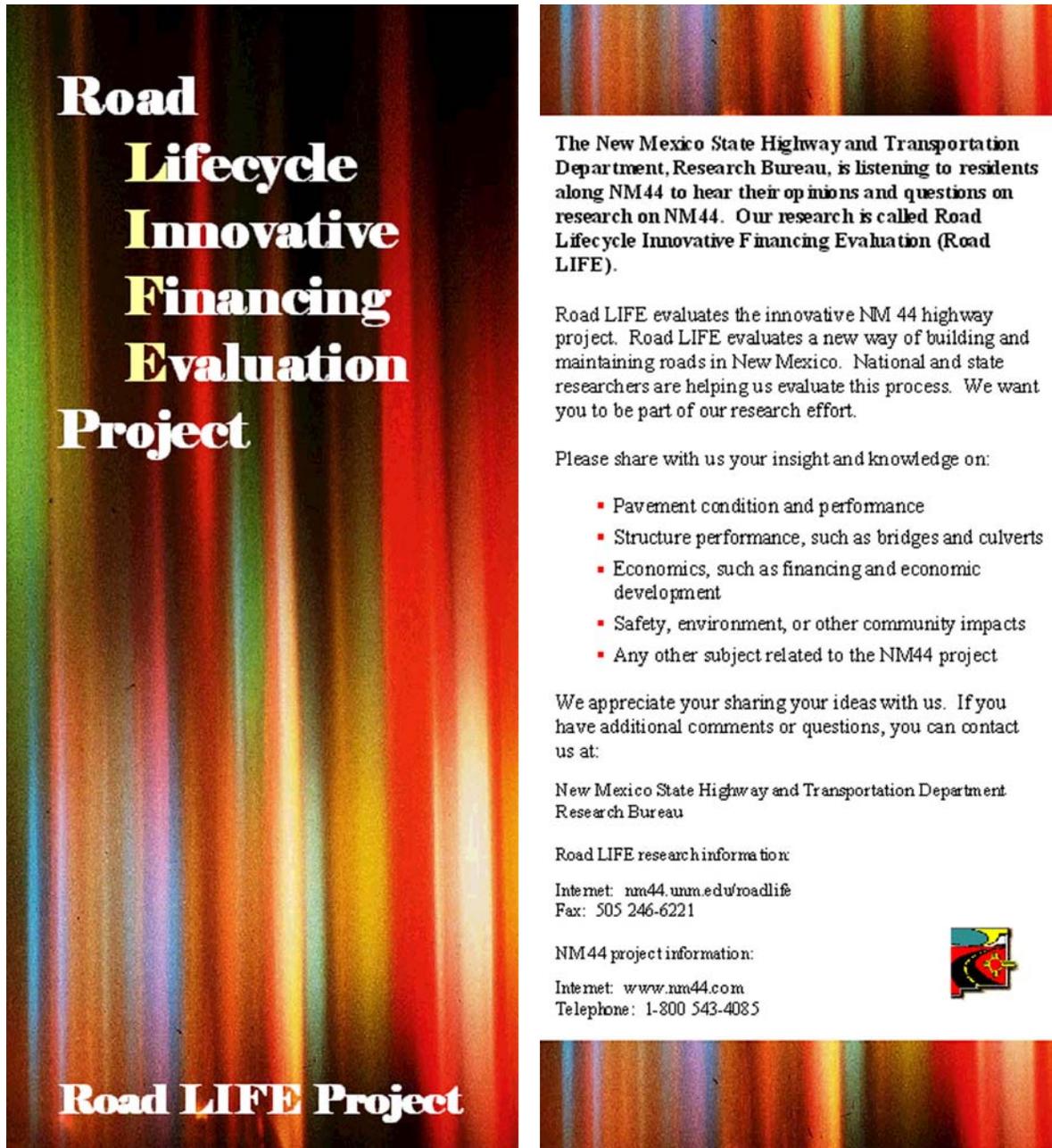


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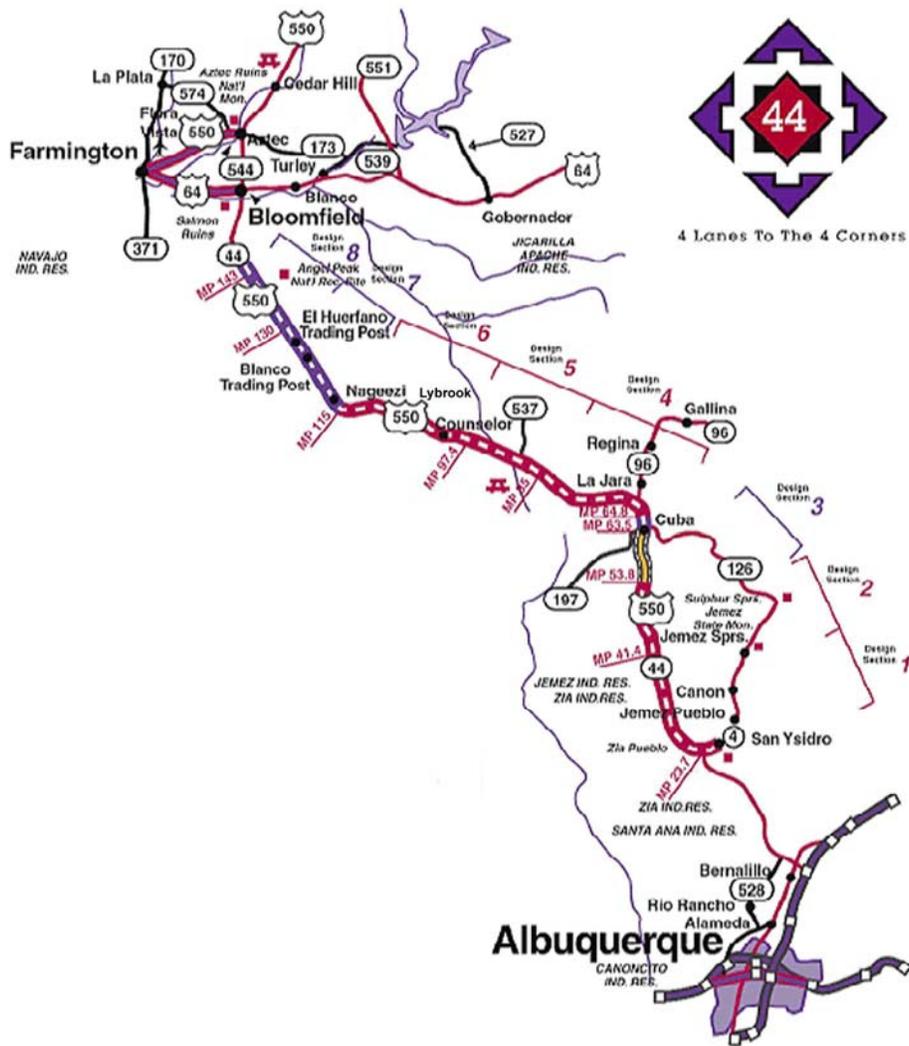


FIGURE 3 Map of NM 44 showing Indian Reservations, villages, and towns. Map modified and provided courtesy of Mesa, PDC.