Transportation on Remote Indian Reservations

by Thomas L. Anding and R. Evan Fulton

In the last two decades, policy makers and planners have increasingly looked at transportation needs in the rural portions of the United States. Some progress has been made in developing new programs to extend transit-type service into rural areas. Much of the rationale for this effort stems from the combination of low incomes, dispersed and service-needy populations, and scattered service delivery sites that are found in rural America. The rural poor have, in most cases, had lower quality transportation and less access to a personal automobile than their urban counterparts.

The case of most rural, remote Indian reservations, however, is far more dramatic in terms of need. Personal transportation quality is low and availability limited. Many reservations have a high percentage of older cars that are not reliable along with a large number of adults without valid driver's licenses. The percentage of people who need special help with transportation is much higher on reservations than in the surrounding non-reservation populations. Place this against the growing need and desire among Indians to share in off-reservation opportunities for employment,
education, health care, and other activities and the need for improving transportation on remote reservations stands as a high priority.

CURA became involved in transportation research on Indian reservations in 1989 through a small grant from the University of Minnesota's Center for Transportation Studies. CURA conducted a pilot survey on one Minnesota reservation to assess its transportation needs. This initial work was then extended to include one additional reservation in Minnesota as well as reservations in several other states—North Dakota, Wyoming, Colorado, and Utah (see Figure 1). They were participating with Minnesota in research organized under the North Central Region Transportation Research and Extension Center at North Dakota State University, known collectively as the Mountain-Plains Consortium. Later, under a research project supported by the Center for Transportation Studies at the University of Minnesota, the Leech Lake Reservation in Minnesota was included in the survey work.

Research in Minnesota

To begin this work, two formal focus group meetings were held with members of the Minnesota tribes in March of 1990. These meetings gave us a picture of what the tribes considered the relevant transportation issues were in their communities, and provided the methods we would use as the research developed as well as the basis for the questions to be asked in future surveys. In the first focus group, representatives of the four Sioux communities in southern Minnesota met in Minneapolis to discuss the particular conditions of transportation in and around their communities. Later, representatives from the Ojibwa communities in northern Minnesota met in Grand Rapids for a similar session.

One concern expressed in these initial meetings was the nature of research projects and their tendency to gather data but produce few noticeable results. As interested as the tribes were in transportation, they were less interested in seeing work done that would not produce a direct and positive result for the tribe. Out of these discussions two policies were implemented. First, the kind of information that would be gathered would need to reflect the concerns of the tribes involved, so that the data produced by the research could be immediately used by the tribes for their own purposes. This policy caused us to examine more carefully the kinds of questions we asked and it led us to concentrate on practical applications of the data.

The second policy, was the decision to use tribal members to conduct the actual surveys. Surveys were taken door-to-door by tribal members and returned to CURA for processing. Working through the tribal planning offices became the standard approach for all of our work except in two cases where we were directed to existing transportation offices. The final version of the survey we used was a twenty-five-question multiple-choice interview which included eight demographic questions, two open-ended questions, and fifteen questions directly pertaining to transportation issues.

Ultimately, CURA conducted formal survey work with three Minnesota tribes: the Fond du Lac Band of Ojibwa, the Bois Forte Band of Ojibwa, and the Leech Lake Band of Ojibwa. Interviews at these three reservations were conducted by tribal members hired and supervised by the tribal planning offices. The later survey work at the Leech Lake Reservation differed in that the transportation questions were part of a much larger multi-purpose survey.

Once the major preparations for the surveys had been made, we trained the interviewers so that they would be familiar with the survey. As the completed forms came into the tribal office, we reviewed them for omissions and inconsistencies and either returned them to the interviewers for additional work or sent them back to Minneapolis for coding. As soon as the data were processed, reports were written and sent to the tribes describing the findings.

Initial results from the surveys done at Fond du Lac, Bois Forte, and Leech Lake indicate that most tribal members have access to some kind of transportation, but that access tends to be limited to a household vehicle or the vehicle of a friend. When asked about transportation in relation to getting health care, and having access to jobs and schools, 40 percent of the households at Leech Lake and Bois Forte, and 36 percent of Fond du Lac, reported they had a transportation problem. When asked if better transportation would improve life on the reservation, 80 percent at Leech Lake and Bois Forte reported it would, while 75 percent of the Fond du Lac households reported the same. These findings point to future work, which should focus on how to improve the reliability of personal automobiles on the reservation and how to provide transportation alternatives.

CURA is continuing contacts with these reservations to make additional use of the survey results. At Bois Forte there has been discussion of organizing a transit system to bring tribal employees to the Lake Vermillion Casino from the village of Nett Lake, some fifty miles away. At Fond du Lac, the survey results have been used in general planning and were recently used in a grant application to the federal government. The Leech Lake Tribal Planning Office is involved with CURA in a joint effort to provide some new public transportation in cooperation with the Minnesota Department of Transportation, Cass County, and the Region 5 Development Commission.

Research in the Western States

As CURA began its work with the Minnesota tribes, other states in the Mountain-Plains Consortium approached the University of Minnesota to request CURA's participation in their own research projects. In this way, CURA became involved in additional tribal research in several western states. The first of these states to be visited was North Dakota.

Cover photo: This road on the Wind River Reservation in central Wyoming is typical of roads on remote Indian reservations. Narrow shoulders and no wind breaks make it particularly treacherous in severe winter conditions.
Representatives of the Colorado Department of Transportation joined tribal members for a workshop in Towaoc, Colorado in September 1991 to define transportation needs for the Ute Mountain Ute Tribe and discuss how they could be met.

North Dakota. We considered several communities and settled finally on the Fort Berthold Reservation of the Three Affiliated Tribes. This reservation was chosen because of its remoteness from urban centers and the existence of the reservoir Lake Sakakawea (behind the Garrison Dam), which trisects the reservation. Historically, the Three Tribes inhabited the Missouri River Valley until it was inundated by the reservoir in the early 1950s. Now, access across the reservoir to other parts of the reservation is limited to one narrow bridge near the northern border of the reservation. Tribal communities are separated from services offered at the main reservation town by the reservoir; a drive of up to seventy miles one way is required to access these services from the outlying communities.

The work at Fort Berthold was completed and a report on the survey prepared for the Three Tribes in the fall of 1991. In addition to the general survey findings, the results show that over half the respondents do not believe that Lake Sakakawea improves their quality of life. Over 60 percent say that the lake interferes with their travels around the reservation and 73 percent say that reducing this travel would improve their quality of life. Not surprisingly, 77 percent say that constructing a bridge across the lake would reduce their travel distance. Travel distance, weather-related conditions, and road quality rank as the three highest concerns for members of the Three Tribes while driving on the reservation.

The Three Affiliated Tribes incorporated the survey findings into testimony offered by the Tribal Business Council and tribal members before the Senate Select Committee on Indian Affairs and the House Interior and Insular Affairs Committee in 1992. These committees were responsible for developing a bill signed by President Bush the same year which contains substantial compensation to the tribes for land lost under Lake Sakakawea. In part, the data collected by the tribes from the survey contributed to their argument that compensation was justified.

Wyoming. There is only one reservation in the state—the Wind River Reservation. This is the homeland of the Shoshone Tribe and of the Northern Arapahoes. At Wind River we discovered a transportation system already well beyond the basic needs assessment of the CURA survey. The Wind River tribes have a joint transportation board which oversees the operation of SANTA, the Shoshone and Arapahoe Nations Transit Authority. The tribes had recently completed a number of surveys covering, in part, the issue of transportation needs. Although we looked at several different options for adding to the work done by the tribes, we were never able to settle on one issue or set of issues from which we could develop a project. The most likely project would have been a ridership survey for the SANTA bus line—which offers transportation between several towns on the reservation. However, because this operation was only just getting started and a new transportation manager had just arrived, the timing for such a study was wrong.

Although CURA did not perform a formal research project at Wind River, what we learned about their transportation program provided an understanding of how successful reservation transit systems can be established and produced ideas for other reservations. The exchange of ideas with key personnel from SANTA at CURA-sponsored workshops helped fuel the overall transportation project.

Utah. Here we considered a number of options. The decision to select the Uintah and Ouray Reservation, home of the Northern Utes, was made in part because of its remoteness, in part because it is the largest reservation in Utah, and in part because of its ongoing transportation program. At the Uintah and Ouray Reservation a combined motor pool and transit system was already in place. The operation is tribally owned and staffed by tribal members. It has a long history of involvement with state and federal programs, and was included in a 1980 study of transportation. This work reported on an effort to develop transportation on eleven reservations. The Uintah and Ouray Reservation received three large diesel buses which were to become part of a tribal transit system. The current transportation manager at Uintah and Ouray worked on that program with the Utah Department of Transportation.

Several ideas for a project with CURA were discussed, including a survey, and ultimately some informal survey work was done by the tribe’s transportation manager in the winter of 1991. The transportation manager used the CURA survey on his own initiative and gathered ridership information which he was able to incorporate into his planning and budget development. In addition, a research project was designed to compare the use of two new federal programs (Section 16b2) transit vans at the reservation: one equipped with a two-way radio and one without the radio. The objective of the project was to compare the two vans in terms of passenger miles and routing flexibility by using van logs once the vehicles were in operation. The study was conducted in the spring of 1992.

The data from this study suggest that the addition of a two-way radio makes running a transit van more cost efficient and provides more routing flexibility. During the research period, the van with the radio made more trips than the van without a radio (54:43), it accumulated more miles (2,888:1,780), and it carried more passengers (207:171). In addition, the radio-equipped van averaged more miles per trip (54:41) than the other van. Over the period of a year, these figures would translate into 26 percent more trips for the radio-equipped van, which would accumulate 62 percent more miles, carry 21 percent more passengers, and average 32 percent more miles per trip.

Colorado. We approached the Ute Mountain Ute Tribe in Colorado. Of the two Ute homelands in the state, the Ute Mountain Reservation is more remote, serviced by fewer roads, and lacking in development. At the Ute Mountain Reservation we found a good opportunity to conduct basic survey research and then follow-up with a project to assist in transportation planning and

management development.

The Utes have a well established administration which includes a planning office from which the CURA survey was conducted. The tribe currently has a transit program administered from the planning office. It offers transportation from the main reservation town of Towaoc into a full service town, Cortez, about seventeen miles away. The older model van used for this route was becoming unreliable. The tribe was aware of the need to reorganize reservation transportation and the CURA survey provided a good starting point.

The survey was completed in May of 1991. In addition to the basic survey questions, the Ute Mountain survey assessed attitudes towards public transportation. Between 60 and 90 percent of residents at the two main tribal communities (Towaoc, Colorado and White Mesa, Utah) expressed willingness to use a public transportation system even though they would have no choice regarding who their fellow riders would be. A majority indicated they would sacrifice the flexibility of driving their own car or getting a ride with someone else if a bus were available. In addition, about half the community members were interested in becoming part of a vanpool or ride-sharing agreement with other tribal members. The data supported the idea that the tribal transit system could continue to succeed if it was expanded.

Discussions with officials at the Colorado Department of Transportation (CDOT) explored funding for the tribe under the Urban Mass Transit Administration's Section 18 and Section 16b2 plan, which would provide additions to the tribe's transit program. The tribal council approved the idea for additional work and CURA agreed to carry out a research effort that would result in the tribe becoming eligible for these funding programs. The state of Colorado requires an approved Five Year Transportation Development Plan, so this became the focus of the work.

Unlike other transit development plans in Colorado, the Ute Mountain effort took a broad scope approach. The idea was to build a foundation of transportation management within the tribal administration along with expanding the transportation program. Tribal members from the Four Corners area and beyond were invited to participate in a two-day workshop to define tribal transportation needs and how they could be successfully addressed. Important to the workshop were representatives from the Colorado Department of Transportation. The CDOT had previously worked with another Colorado tribe that failed to implement its transit development plan. Their participation in this workshop was intended to promote understanding between the state and the tribe as to what the state was willing and able to do, and what the needs of the tribe were. The discussion of positions at the workshop resulted in considerable flexibility on the part of the state over the content of the transit development plan.

By June 1992 a plan had been developed through the joint efforts of the newly formed Transportation Advisory Committee, the transportation consultant hired by the tribe, and CURA. A significant portion of the plan was devoted to outlining the role and duties of a transportation manager. Addressing the issue of management was a major goal of the work. Over the summer, several minor revisions were made and in late September 1992 the plan was adopted by a resolution of the Ute Mountain Ute Tribe.

Currently, the tribe has begun implementing the plan by organizing a vehicle loan program. It is also preparing an application to the state of Colorado for federal funding under Section 18 and Section 16b2. If fully implemented over the next five years, the plan will provide an integrated program for maintaining and replacing official tribal vehicles, will offer official vehicles for loan, and will operate the tribal transit system.

Composite Findings from the CURA Surveys

While the original intention of these projects did not include analysis of the composite data, putting together the results from a few key questions seems useful. It provides an interesting glimpse into the nature of transportation problems on six reservations from a sample of over 1,500 households.

The composite survey results indicate that nearly eight out of ten residents on the reservation rely on a household vehicle (a car, truck, van, or motorcycle) to provide their daily transportation. Less than 15 percent of these households own vehicles that are under two years old, over 25 percent are between five and ten years old, and another 25 percent are over ten years old. Would better transportation improve their lives? Fifty-two percent of the households said it would improve life a great deal while only 6 percent said it would make no improvement (Figure 2).

Had they ever turned down a job because of a transportation problem? Thirty-six percent indicated they had (Figure 3). Had a household member lost a job because of a transportation problem? One out of four indicated they had (Figure 4). Had transportation problems caused them to lose an opportunity for school education? Twenty-seven percent said yes (Figure 5). Had a health crisis requiring medical attention created a transportation problem? Almost a third (29 percent) of the households reported that it had (Figure 6). Overall, half of the households reported having a transportation problem in relation to work, education, or health—in at least one of the categories just listed. The magnitude of the
problem becomes dramatic when shown in this way. Field observations and more detailed analysis of the data only confirmed this picture of transportation needs on these reservations.

One additional question from the composite findings is worth looking at. What is your household income? Income level has an obvious effect on the quality of personal transportation. Figure 7 shows the desperate situation of reservation residents in terms of income. Would large subsidies to purchase new vehicles provide a solution? At what cost and for how long? Substantial improvement in long-term economic development for these populations seems a more likely course of action, leaving immediate needs to be met by improving transportation alternatives.

In spite of all this, transportation and transit issues are not ranked high among most tribes, where the focus must be on more immediate social and economic needs. Tribal administrators are aware of the fundamental role played by transportation in both social and economic issues, but scarce resources require tribes to prioritize their planning and implementation efforts. Even though transportation organization and management have not been planning priorities among most tribes, cumulatively, the survey indicates that over 90 percent of the tribal members queried believe that better transportation will improve their quality of life at least a little.

Conclusions and Recommendations

Overall, our conclusions and recommendations from the seven reservations we worked with on transportation issues can be grouped into five points.

1. The quality and availability of personal transportation on these reservations do not meet the needs of their residents. Supplemental transit and para-transit is needed. While the quality of reservation roads remains far from perfect, there has been considerable improvement. As a result, road condition may no longer be the highest priority for future action. Survey results clearly indicate that important daily life activities such as access to jobs, education, and health care have been adversely affected by the lack of transit or para-transit. Focusing on the movement of people rather than vehicles is called for in future transportation planning.

2. There are no easy, quick-fix, low cost solutions for providing these needed supplemental transportation options.

In addition to the more conventional forms of transportation, innovative and sometimes unconventional substitutes must be tried. These should include, but not be limited to, volunteer drivers, informal taxi operations, and car and van pooling. These substitutes may be able to overcome the barriers of distance and poor personal transportation that currently place rural Indians at a disadvantage.

3. Clearly, more attention to management of existing and future transportation on the reservations is needed. For some reservations, establishing well-run full-service motor pool operations is a next step. Transportation advisory committees need to be established and used on a regular basis. They should include representatives from the broader reservation community, as well as operations and service providers. Another goal should be to increase professional staffing in transportation.

4. Building cooperative efforts with state agencies is necessary if reservation transportation is to improve. The state Departments of Transportation have the technical assistance and funding needed to assist tribal governments.

Figure 2. Would Better Transportation Improve Your Life? (1,484 households)

A great deal 52%
Not at all 6%
Somewhat 29%
A little 13%

Figure 4. Have You Ever Lost a Job Because of a Transportation Problem? (1,251 households)

No 75%
Yes 25%

Figure 3. Have You Ever Turned Down a Job Because of a Transportation Problem? (1,304 households)

No 64%
Yes 36%

Figure 5. Have You Ever Lost an Opportunity for School Education Because of a Transportation Problem? (1,266 households)

No 73%
Yes 27%

Figure 6. Has a Health Crisis Requiring Medical Attention Ever Created a Transportation Problem for You? (1,278 households)

No 71%
Yes 29%

Figure 7. What Is Your Yearly Household Income? (1,219 households)

Under $15,000 75%
$15,000 and over 8%
$25,000 and over 17%
$24,999 17%
While many states have no history of cooperative efforts for tribal transportation planning and programming, the current situation clearly calls for such action. Legislation under the federal Intermodal Surface Transportation Efficiency Act (ISTEA) mandates cooperative efforts, and it is clearly in the best interests of future reservation transportation to see that it occurs.

5. There are excellent opportunities to cooperate in planning and delivering transit services with companies that currently provide services in areas around reservations. This is especially true for "checkerboard" reservations, where the population and land ownership is mixed between Indians and non-Indians. In most mixed areas some services already exist, but a substantial need continues to go unmet.

It is obvious that a substantial increase in personal income would result in a much improved transportation base on any reservation. While there have been some recent success stories related to casino gaming, the general picture is still bleak. One can only hope that the near future will bring some economic development to change this. Making progress on the recommendations listed here will require that transportation on remote Indian reservations becomes a clearly stated high priority for tribal, local, and state governments. This is challenging, but if reservation life is to be improved, as it should be, the challenge must be met.

Project Awards

In an attempt to keep our readers more up-to-date about CURA projects, we are featuring a few capsule descriptions of projects underway in each issue of the CURA Reporter.

Neighborhood Planning for Community Revitalization (NPCR). To date, many Minnesota neighborhoods have lacked the resources to make the most informed and effective use of Minneapolis' Neighborhood Revitalization Program. In order to aid neighborhoods in making better use of the revitalization program, CURA has been awarded a grant from the United States Department of Education to establish the NPCR project. The project will supply faculty and students over the next five years to implement applied research projects which neighborhood organizations have developed to assist them in their revitalization efforts. CURA is heading a consortium of institutions involved in the plan, which include, along with the University of Minnesota, Metro State University, Minneapolis Community College, the University of St. Thomas, Augsburg University, Hamline University, and Macalester College. With the assistance of the project director, Kris Nelson, neighborhoods will develop proposals. A coordinating council of consortium members will select which proposals to support. Each neighborhood selected will then be responsible for hiring and supervising a student to carry out the proposal. Awards will be granted each year to fund at least four graduate research assistants and eight undergraduate interns. Faculty advisors and internship mentors will be provided for each student. In addition, the project will fun two major applied research projects each year that are negotiated between the neighborhood organizations and consortium faculty.

Hill Visiting Professor. The All-University Council on Aging has received a Hill Visiting Professor grant to bring James Jackson to the University of Minnesota for Spring Quarter, 1995. Jackson is a professor of psychology and a professor of health behavior and health education in the School of Public Health at the University of Michigan, Ann Arbor. He is also director of the African American Mental Health Research Center at Ann Arbor. Jackson is an expert on diversity issues for American Indians, Orientals, and African Americans and is a mentor for many minority scholars. During his visit in Minnesota he will assist in developing curriculum and research in the area of cultural diversity and aging and will work with community organizations of color in long-term planning.

Graduate Interns for State Agencies. This CURA program fosters opportunities for graduate students to work outside the University while providing technical assistance and research skills to state agencies, usually for one academic year. Four students are working in state offices under the program this year.

Cultural Diversity Plan. A student is assisting Minnesota Planning (Office of Strategic and Long Range Planning) in implementing the state of Minnesota's cultural diversity plan. This involves research to survey and measure current agency practices as well as developing specific objectives for progress.

Energy Retrofit Program. A student is working with the Plant Management Division of the Minnesota Department of Administration to monitor energy improvements under a $15 million energy retrofit program being completed in all state-owned or wholly-leased buildings. The student is analyzing and monitoring energy bills and physically inspecting buildings to verify their energy use and cost savings.

Framework to Protect and Sustain the Environment. A student is assisting the Minnesota Environmental Quality Board in analyzing the effects of expected economic growth on land use and the environment. The end result will be a series of recommendations for local and state government initiatives that will provide a framework for managing growth so as to protect and sustain the environment.

Evaluations of State Agencies and Programs. A student is working with the staff of the Minnesota Legislative Auditor's Office in evaluating selected state agencies and programs. The evaluations supply information, analysis, and recommendations for the state legislature. The student does library research, interviewing, data collection, data analysis, and report writing.

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