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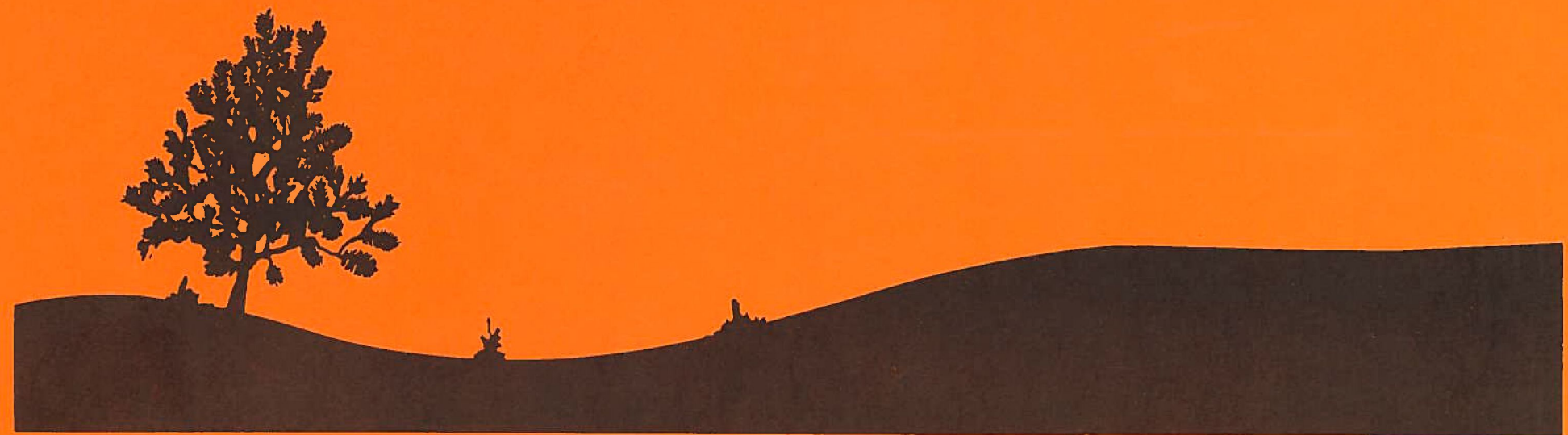
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IGNACIO NORTH

ENVIRONMENTAL
ASSESSMENT
PROJECT RS 0172(9)

file



STATE DEPARTMENT OF HIGHWAYS

JACK KINSTLINGER

EXECUTIVE DIRECTOR

DIVISION OF HIGHWAYS
E. N. HAASE
CHIEF ENGINEER



DISTRICT 5
C. A. MORAIN
DISTRICT ENGINEER

2507

STATE OF COLORADO
P. O. BOX ~~1532~~ - HIGHWAY BUILDING • DURANGO, COLORADO 81301 • (303) 259 - 1241

April 23, 1980

TO ALL INTERESTED PARTIES:


The Colorado Department of Highways is making this Environmental Assessment for Project RS 0172(9), Ignacio - North, available for review.

We invite comments that anyone may have regarding the project or the Environmental Assessment. Those who believe that the federal action for which this Environmental Assessment has been prepared does, in fact, involve a significant impact on the human environment or who believe that the analysis of the social, economic and environmental impacts presented in the Environmental Assessment is inadequate to assess their significance are invited to furnish written comments to the Colorado Department of Highways, P. O. Box 2507, Durango, CO 81301, summarizing the specific basis for their position. These comments must be received by May 27, 1980.

Sincerely,

E. N. Haase
Chief Engineer

by


for C. A. Morain
District Engineer

CAM:CJW/ba

PROJECT RS 0172(9)
IGNACIO - NORTH
LA PLATA COUNTY

ADMINISTRATIVE ACTION
ENVIRONMENTAL ASSESSMENT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND
COLORADO DEPARTMENT OF HIGHWAYS

SUBMITTED PURSUANT TO
42 U.S.C. 4332(2)(C) and 23 U.S.C. 128(a)
THIS ACTION COMPLIES WITH
EXECUTIVE ORDER 11990, PROTECTION
OF WETLANDS

SUBMITTED BY:

E.N. Haase

E.N. HAASE
Chief Engineer
Colorado Division of Highways

3/21/80

Date

CONCURRENCE BY:

JACK KINSTLINGER
JACK KINSTLINGER
Executive Director
Colorado Department of Highways

3/21/80

Date

ADOPTED BY:

A.J. Siccardi

A. J. SICCARDI
Division Administrator
Colorado Division
Federal Highway Administration

4-2-80

Date

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**** PROJECT RS 0172(9)**

IGNACIO - NORTH

SUMMARY

1. Administrative Action

Negative Declaration

2. Individuals to Contact for Information About This Project

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Federal Highway Administration
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4201 E Arkansas Avenue
Denver, Colorado 80222
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C.A. Morain, District Engineer
Colorado Division of Highways
P.O. Box 2507
Durango, Colorado 81301
Phone: Area Code 303, 259-1241

3. Description of the Proposed Action

The project provides for the design and staged construction of a two lane, rural secondary highway facility on a 5.1 mile segment of S.H. 172 in La Plata County, Colorado. The project begins at the north end of Ignacio and extends to the north for 2.8 miles and to the west for 2.3 miles along the existing alignment.

4. Alternatives

Possible alternative courses of action include:

- A. Maintenance Alternative - Adequate maintenance of the existing facility
- B. Alternate Corridor Locations
- C. Reconstruction - the proposed action
- D. Alternate modes of transportation

5. Environmental Impact

The environmental impacts of the proposed action include the destruction of vegetation and associated increases in erosion and sedimentation within the project corridor, the loss of aesthetic values, and the loss of a small amount from the tax base of the county due to the acquisition of right of way.

Mitigative measures include revegetation, erosion control techniques and landscaping.

6. Authority and Related Statutes and Orders

The following environmental regulations were used as guidelines for preparing this Environmental Assessment:

- a. 42 U.S.C. 4321 *et seq.*, National Environmental Policy Act;
- b. 42 U.S.C. 4371 *et seq.*, Environmental Quality Improvement Act;
- c. 49 U.S.C. 1653(f) and 23 U.S.C. 138, Section 4(f) of the Department of Transportation Act of 1966;
- d. 23 U.S.C. 109(j);
- e. 23 U.S.C. 315;
- f. 40 C.F.R. 1500 *et seq.*, CEQ regulations for Implementing the Procedural Provisions of the National Environmental Policy Act;
- g. 49 C.F.R. 1.48(b), DOT Delegations of Authority;
- h. DOT Order 5610. 1C, Procedures for Considering Environmental Impacts;

- i. Executive Order 11514, Protection and Enhancement of Environmental Quality, as amended by Executive Order 11991 (Council on Environmental Quality regulations establishing a new Environmental Assessment format were effective for F.H.W.A. on November 1, 1979. This Assessment was written between October 1978 and February 1979, so does not follow new format).
- j. Clean Air Act, as amended (42 U.S.C. 7401 *et seq.*);
- k. Clean Water Act, as amended (33 U.S.C. 1251 *et seq.*);
- l. Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f).
- m. Sections 303 and 307 of the Coastal Zone Management Act of 1972 (16 U.S.C. 1452, 1456);
- n. Section 2 of the Fish and Wildlife Coordination Act (16 U.S.C. 662);
- o. Section 7 of the Endangered Species Act, as amended (16 U.S.C. 1533);
- p. Executive Order 11988, Flood Plain Management, as implemented by 23 C.F.R. Part 650, Subpart A (FHPM 6-7-3-2);
- q. Executive Order 11990, Protection of Wetlands, as implemented by DOT Order 5660.1A.
- r. Paragraph 101(b)(4) of National Environmental Policy Act (NEPA) as addressed by Secretary of Agriculture; Memorandum No. 1827, Revised Statement on Land Use Policy, "Prime and Unique Farmlands".

PROJECT IN BRIEF

RESEARCH OBJECTIVE

SUMMARY

Abstract of the project, including objectives, methods, results, and conclusions. The text is oriented vertically on the page.

Main body of the document, containing detailed text oriented vertically. It appears to be a continuation of the project description or a separate section of the report.

Additional text on the left side of the page, oriented vertically. This section may contain supplementary information or a secondary abstract.

**** RS 0172(9)**

IGNACIO - NORTH

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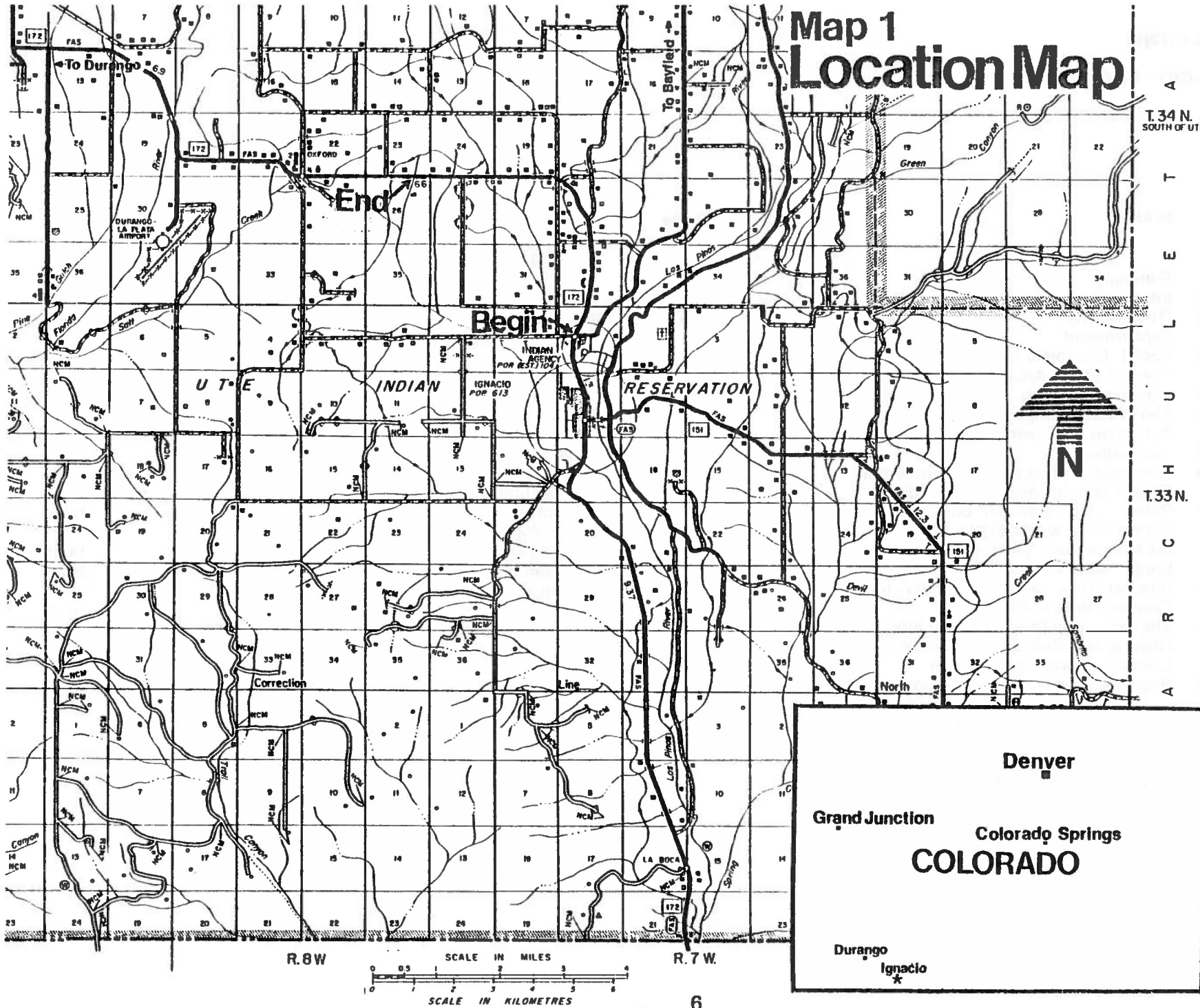
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Map 1 Location Map



T.34 N.
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R.8W SCALE IN MILES R.7W
0 1 2 3 4 5
SCALE IN KILOMETRES
0 1 2 3 4 5 6

Denver
Grand Junction Colorado Springs
COLORADO
Durango Ignacio *

****I. INTRODUCTION AND STATEMENT OF NEED**

Colorado Department of Highways Project RS 0172(9), Ignacio - North, is located on State Highway 172, beginning at the northwest corner of the Southern Ute Agency in Ignacio and extending northerly for 2.8 miles and then westerly for 2.3 miles, all in La Plata County in Southwestern Colorado (see Map 1).

State Highway 172 is the major route from Durango to Ignacio and south to the New Mexico State Line. This proposed project would provide a continuation of improvements to S.H. 172 that began in 1969 at the junction of U.S. 160 (Falfa) and continued periodically through 1976 with improvement from the airport turnoff to the west end of this proposed project. An overlay on this segment was completed in 1975 with widening from a twenty to twenty-four foot section.

The functional classification of the existing highway is minor collector. The speed limit is 55 m.p.h. for northbound traffic starting .12 miles from the beginning of the project and continuing through the end of the project boundary. .2 mile north of the beginning of the project there is a 45 m.p.h. speed limit posted for southbound traffic coming into Ignacio.

There are maintenance problems with drainage on the existing highway, particularly a drainage pipe near the end of the project which requires trenching of siltation material regularly. Also, because of the accidents which occur at the narrow ditch crossings, maintenance is needed to replace guard rail. Another maintenance problem is drifting snow in the first two miles of the project. The existing highway lies low in the direct path of wind blowing west to east. Highway 172 is carrying increasing traffic volumes. The fact that the population has increased in the vicinity is a major influence on traffic volumes. More people traveling to and from jobs via S.H. 172 add to the existing traffic. New jobs created by

development of energy resources in the area, particularly natural gas, require employees to use S.H. 172. Accompanying the increase in population is the greater demand for commercial services and entertainment in Durango. It is assumed that the more residents there are in the Ignacio area, the greater the use of S.H. 172 will be to reach Durango and the county airport.

Another major contribution to traffic volumes comes from visitors to the area. Due to the scenic, cultural and recreational opportunities which the highway provides access to, S.H. 172 is becoming more heavily used. Especially attractive are the Navajo Reservoir and the Southern Ute Reservation which grow in popularity annually.

The present highway facility in the project area is inadequate and therefore unsafe to handle the increased traffic. The roadway width is only twenty-four feet and does not have adequate shoulders. Should a breakdown occur there is not a safe area to pull off. Because of the increased residential development there is a hazardous situation when cars are slowing down and turning into driveways. The rolling hills which the highway traverses obstruct the sight distance, making it unsafe to pass. Making it additionally unsafe are the irrigation crossings where the guard rails decrease the roadway width.

The Colorado Department of Highways 1977 State Highway Sufficiency Rating and Needs Study shows that the highway is deficient in safety features and lacks the capacity to handle the traffic volume it is carrying. The rating of this segment is 65 on the 0 to 100 scale. A rating below 60 indicates a critical need for improvement. The 1978 Average Daily Traffic Volume for this segment was 1500. This is projected to increase to 2500 by 1998.

With increasing development between Ignacio and Durango being likely and traffic volumes expected to increase, it is imperative that improvements be made to the highway facility

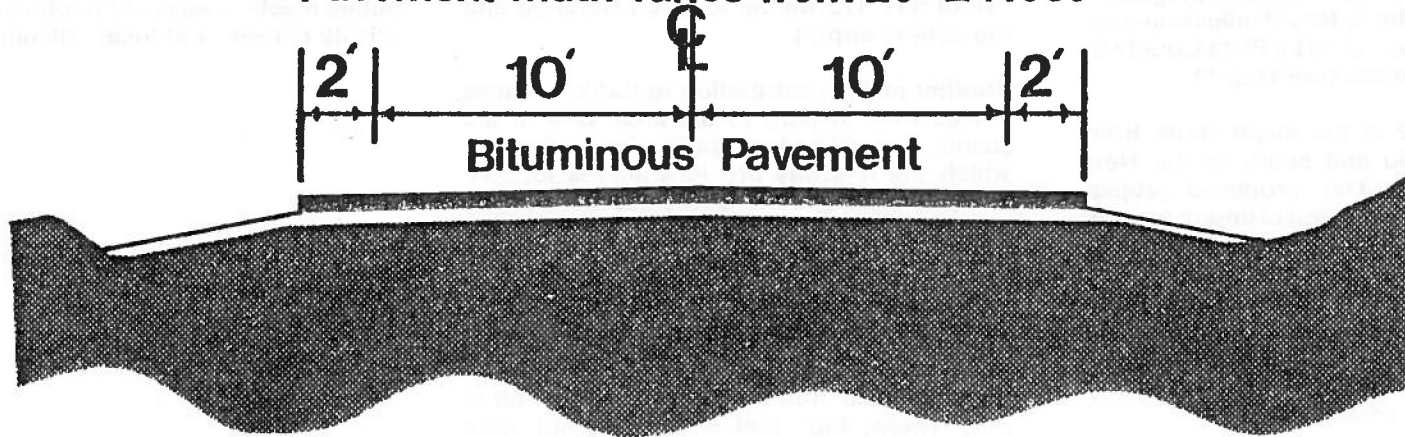
in the near future.

Project studies began on September 7, 1978, and during the month of September all federal, state and local agencies were contacted and asked to provide information or comments on the project. On October 11, 1978, an initial public meeting was held to obtain the input of private citizens and local officials.

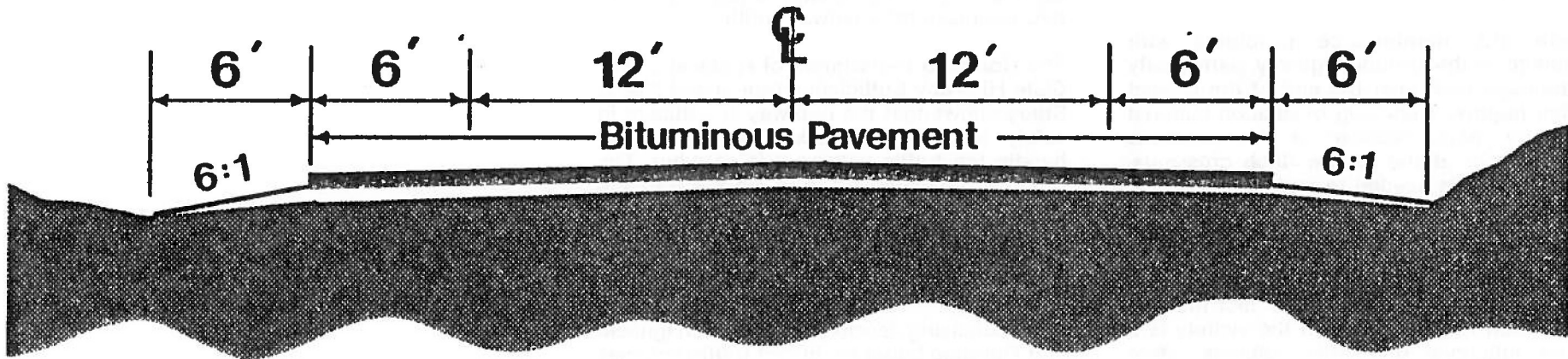
IGNACIO - NORTH

Figure 1

Pavement width varies from 20 - 24 feet



Existing Typical Section



Proposed Typical Section

****II. DESCRIPTION OF THE PROPOSED IMPROVEMENT**

Colorado Department of Highways Project RS 0172(9), Ignacio-North, provides for the construction of a two-lane rural secondary highway facility on a 5.1 mile segment of existing State Highway 172 beginning at Ignacio and extending to the northwest (Map No. 2).

The proposed typical section (Figure #1) shows two twelve-foot driving lanes with six-foot paved shoulders. The unpaved safety slope between the shoulder and the slope selection point will be six feet wide with a slope of 6:1. There are no areas steep enough to require climbing lanes, therefore the total paved section will be 36 feet wide, 48 feet wide with the addition of the unpaved safety slope.

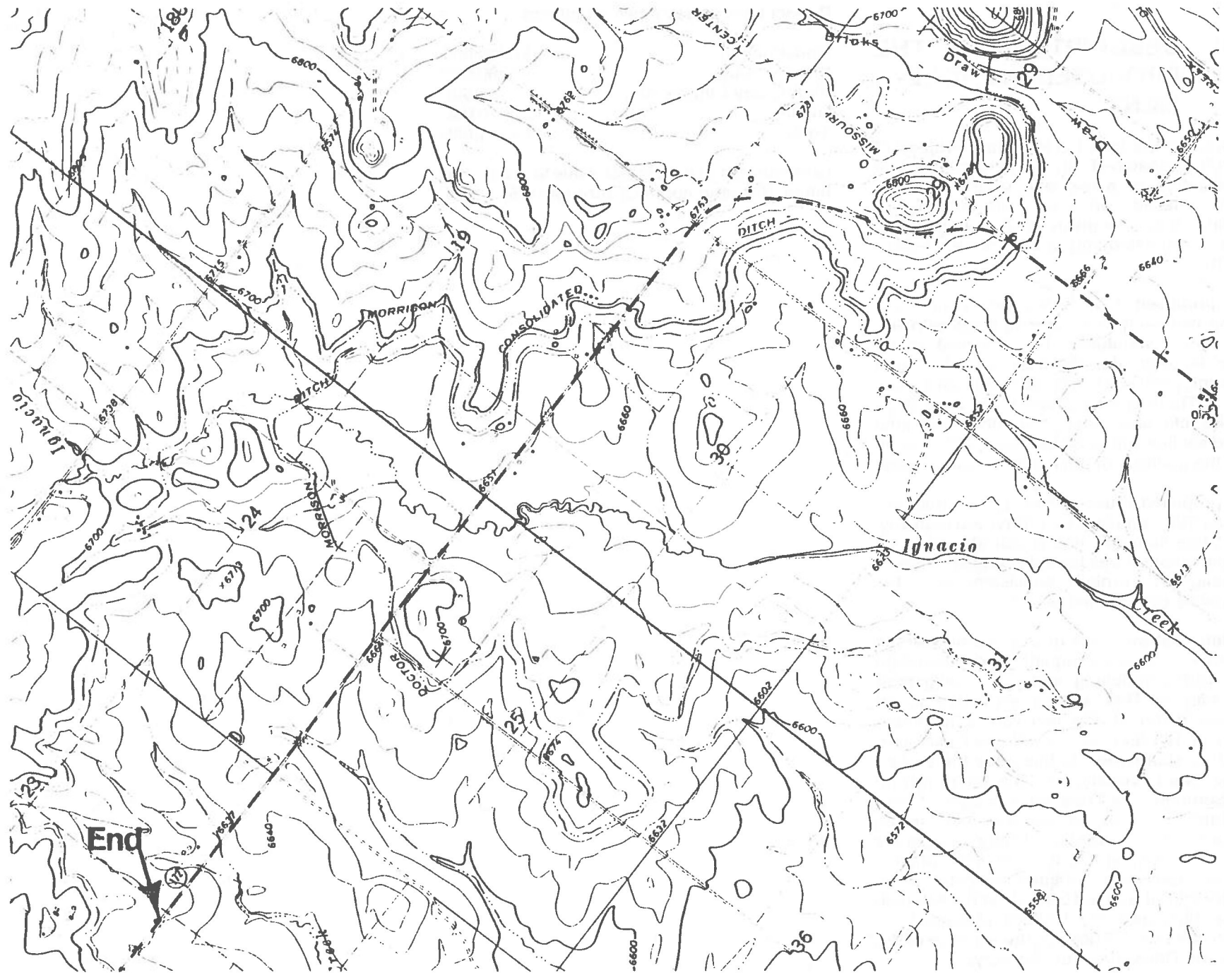
The proposed cross-section is less than the normal State standard for this type of highway. The State standard has 8-foot shoulders. A design variance was issued because of desire to keep this project consistent with the previously constructed project.

Existing highway right of way widths average 60 feet, which are inadequate to accommodate the needed widening and minor alignment adjustments. This will be expanded to an average width of 150 feet with a minimum width of 120 feet, which will meet minimum F.H.W.A. standards. On this basis the project will require approximately 30 acres of private and Southern Ute Tribal land or right of way. No businesses or homes will have to be relocated for the project. Utility companies have been notified that the relocation of lines will be necessary. Utilities relocated from public right of way will be done at the expense of the utility company. Utilities relocated from private land will be done at the expense of the Colorado Department of Highways.


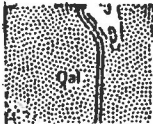


Project costs break down as follows:

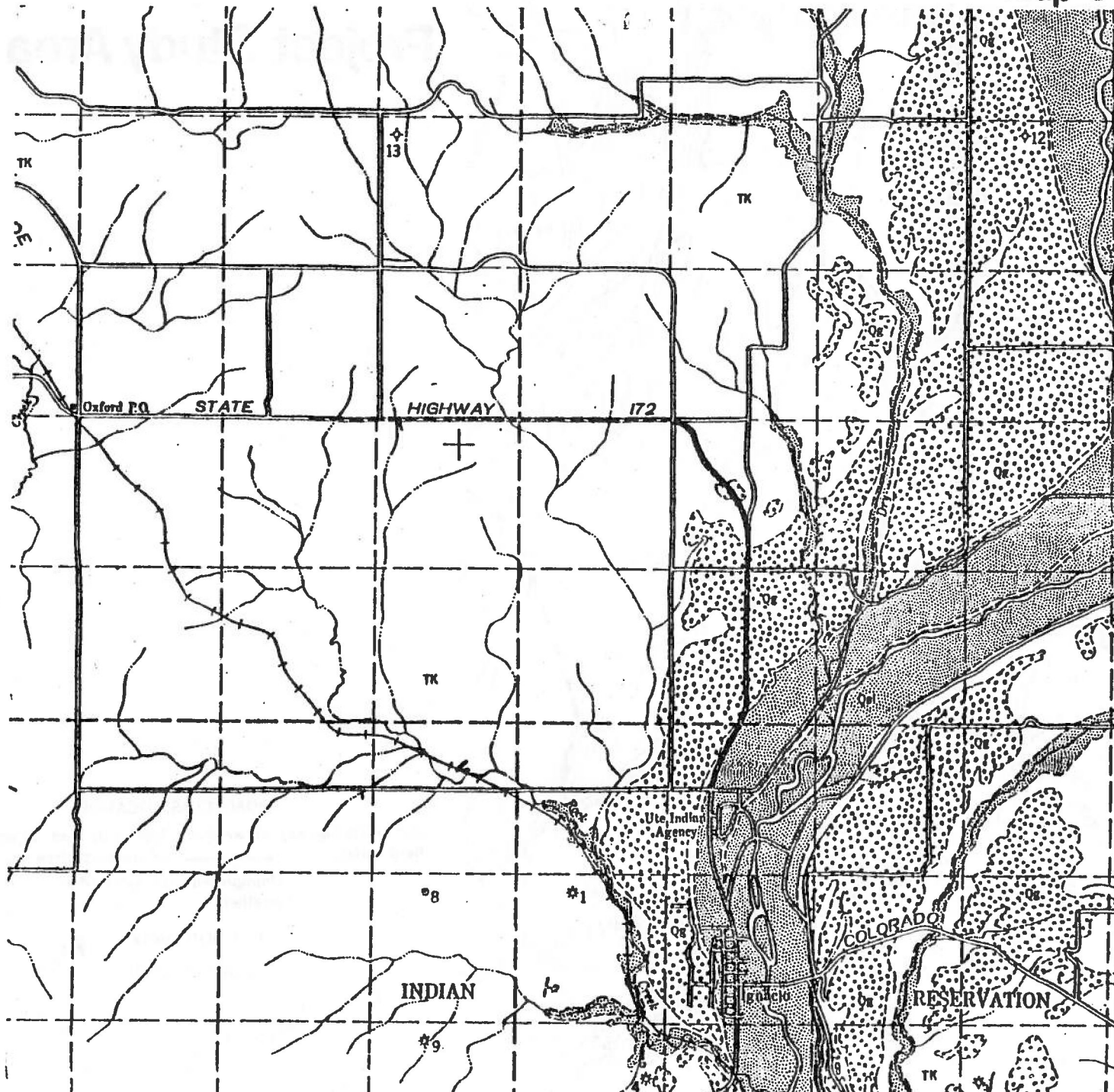
Construction	\$1,800,000
Right of Way	60,000
Preliminary Engineering	91,666
Utilities	20,000
Total	\$1,971,666

Construction of the project is due to start in the fall of 1980 and continue through 1981.



Geology

-  High level Gravel
-  Alluvium
-  Undiffer-entiated Deposits
-  Project RS0172(9)



****III. SOCIAL, ECONOMIC AND ENVIRONMENTAL CONTEXT OF THE AREA**

A. HISTORY

The area in which this project lies shows evidence of occupations dating back to the early Basketmaker period of the Anasazi Indians of Mesa Verde fame and it was possibly occupied even earlier.

Early Spanish expeditions, including the famed Dominguez-Escalanti expedition of 1776-77, entered the southern part of the State of Colorado and continued through the present site of Ignacio to the Durango area via a route close to State Highway 172. Many of the names for places and rivers came from the Spanish expedition.

The area had its first permanent settlement in 1877 following the removal of the Utes from Cimarron and Abiqui, New Mexico, to a reservation 15 miles wide by 120 miles long in southwestern Colorado. The agency set up headquarters at their present site in the same year. A post office and trading post were quickly established near the Southern Ute Agency.

In 1899 non-Indians were allowed to homestead on the Southern Ute Reservation and today some of the prime land around the Agency is owned by non-Indians. When the need for a community was felt in the area, two settlers platted the townsite on their homesteads which were obtained from Southern Ute allotted lands.

The new town was named after Ignacio, a Southern Ute chief. The town was located above the flood plain of the Los Pinos River and several homes were moved there to avoid the spring floods.

Ignacio was platted in 1910. On July 7, 1913, the town was incorporated.

The D. & R.G.W. Railroad was built from Antonito, Colorado, to Durango via Cumbres Pass, Chama, New Mexico, and Ignacio in 1880-1881. Those who did not take the train into Durango traveled a route similar to the train. This route was more of a direct line between Ignacio and Durango than the present highway, which runs along section lines directly north-south or east-west. The wagon route ran directly from Ignacio to Durango, crossing the present highway at the end of the proposed project. It entered Durango at Horse Gulch, which exists today only as access to a private ranch.

The first record of a road on similar alignment to the present highway was 1933. In 1944 this gravel road officially became a state highway. The first oiling was completed in October 1951. The first paving was completed in January 1954. In 1955 the right angle turn (north of Ignacio turning west to Oxford) was bypassed with a series of curves. These curves are to be improved for safety with this proposed project.

B. ECOLOGY

The Ignacio area is in southwestern Colorado and comprises parts of eastern La Plata and western Archuleta Counties. It extends southward from the southern foothills of the San Juan Mountains into the northern part of the San Juan Basin. Physiographically it is thus on the margin of the Colorado Plateaus. The topography, climate and vegetation of the Ignacio area are transitional between those of the San Juan Mountains to the north and those of the San Juan Basin to the south. The hogbacks in the north give place southward to flat-topped and steep-walled mesas, and the entire area drains southward into the San Juan River by way of the Piedra, Los Pinos, Florida and Animas Rivers.

Land masses to the northeast and north provided most of the sedimentary material preserved in the Ignacio area. Along the Los Pinos (Pine) River a gravel terrace supports the

town of Ignacio, layers of gravel (quaternary deposits) ranging from a few feet to more than 50 feet. Alluvium deposits have been distinguished from high level gravel on the geology map (Map No. 3).

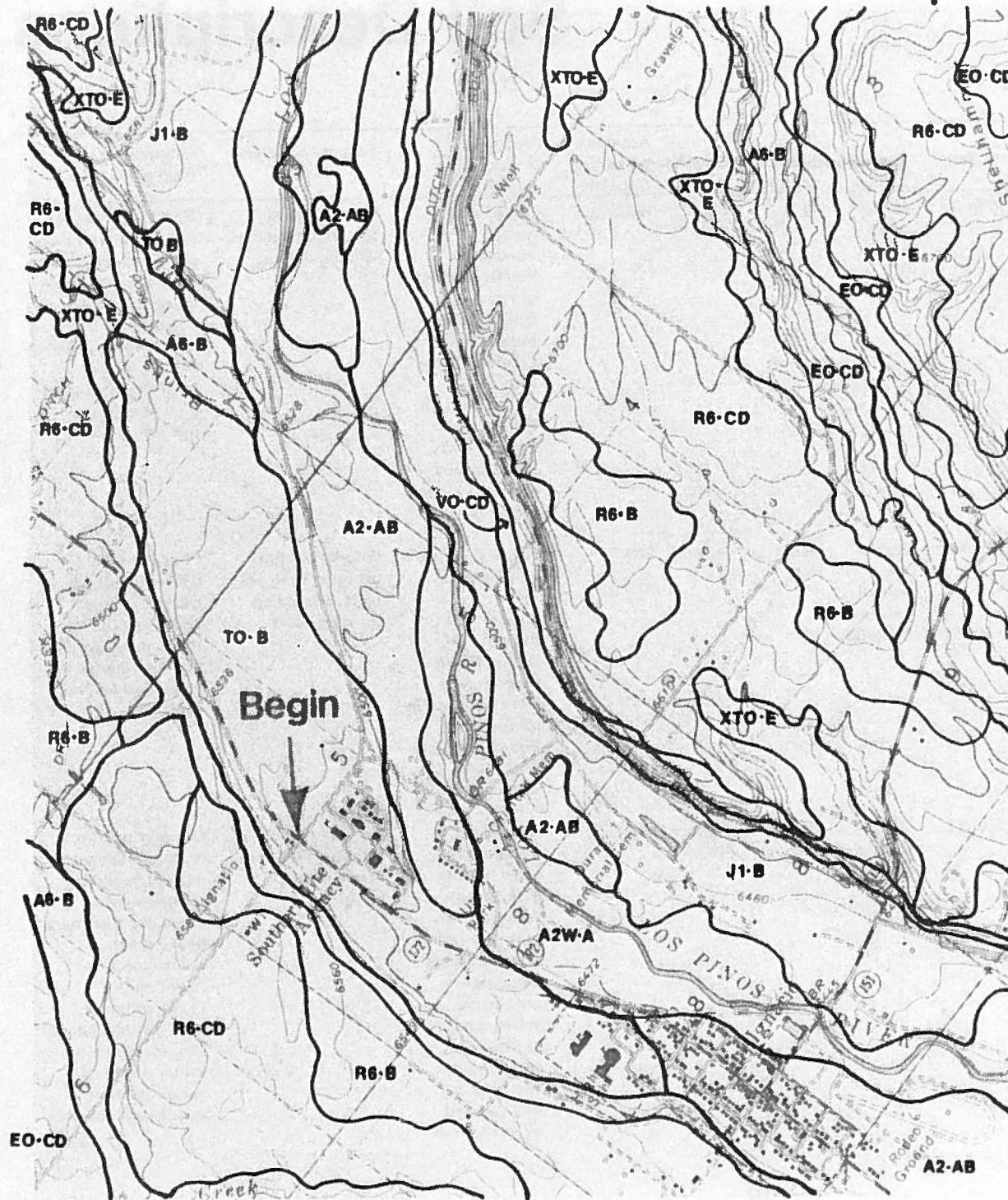
The flood plain of the Los Pinos River is restricted to the area of the alluvium deposits shown on the geology map. The existing state highway 172 lies just outside this boundary of the 500 year flood plain near the beginning of the proposed project but will not encroach upon it. (FHPM 6-7-3-2)

The altitude in the project study area ranges from 6500 to 6900 feet above sea level. In precipitation, the area is intermediate between the humid mountains to the north and the semi-arid mesas to the south. The average annual precipitation is recorded at 15.75 inches, ranging from a high of 25.73 to a low of 7.25 inches. The average annual air temperature is 48.5 degrees. The average frost free season is 109 days, between May and September.

The variety of soils and the slopes which these soils are typically associated with are shown on Map No. 4. Typically, the soil in the project study area is clay-loam, formed in alluvium or glacial outwash on gently sloping terraces. The soil types are described by milepost on Fig. 2. Each soil type has a distinguishable permeability, surface runoff, erosion hazard and available water capacity, and vegetation types that are associated with each soil. Generally, there are similar types of grasses that grow on these soils with the exceptions being those limited by slope or permeability. For instance, near the end of the project there is the presence of wet limon silty clay which has slow permeability, affected by a seeped water table condition caused by water losses from irrigated land above it. Suitability for development is a basic consideration when analyzing soil types and their associated vegetation and wildlife habitat.

continued on page 22

Map 4



Soils and Slopes

A2W-A	Fluvoquents 0 to 1% slope (typ.)
A2-AB	Pescar fine sandy loam 0 to 2%
A6-B	Limon silty clay loam 1 to 3%
A6W-B	Limon silty clay-wet 1 to 3%
AO-B	Werlow loam 1 to 3%
E6-CE	Midway clay loam 3 to 25%
E8-CD	Gaynor clay 3 to 10%
EO-CD	Heldt silty clay loam 3 to 12%
J1-B	Cheyenne fine sand loam 1 to 3%
R6-B	Witt loam 1 to 3%
R6-CD	Witt loam 3 to 12%
TO-B	Sedillo gravelly loam 0 to 3%
V7-C	Sili clay loam 3 to 6%
VO-CD	Kim loam 3 to 12%
XE6-E	Midway rock outcrop 12 to 65%
XTO-E	Ustothorents 12 to 60%



Figure 2

Soil Descriptions

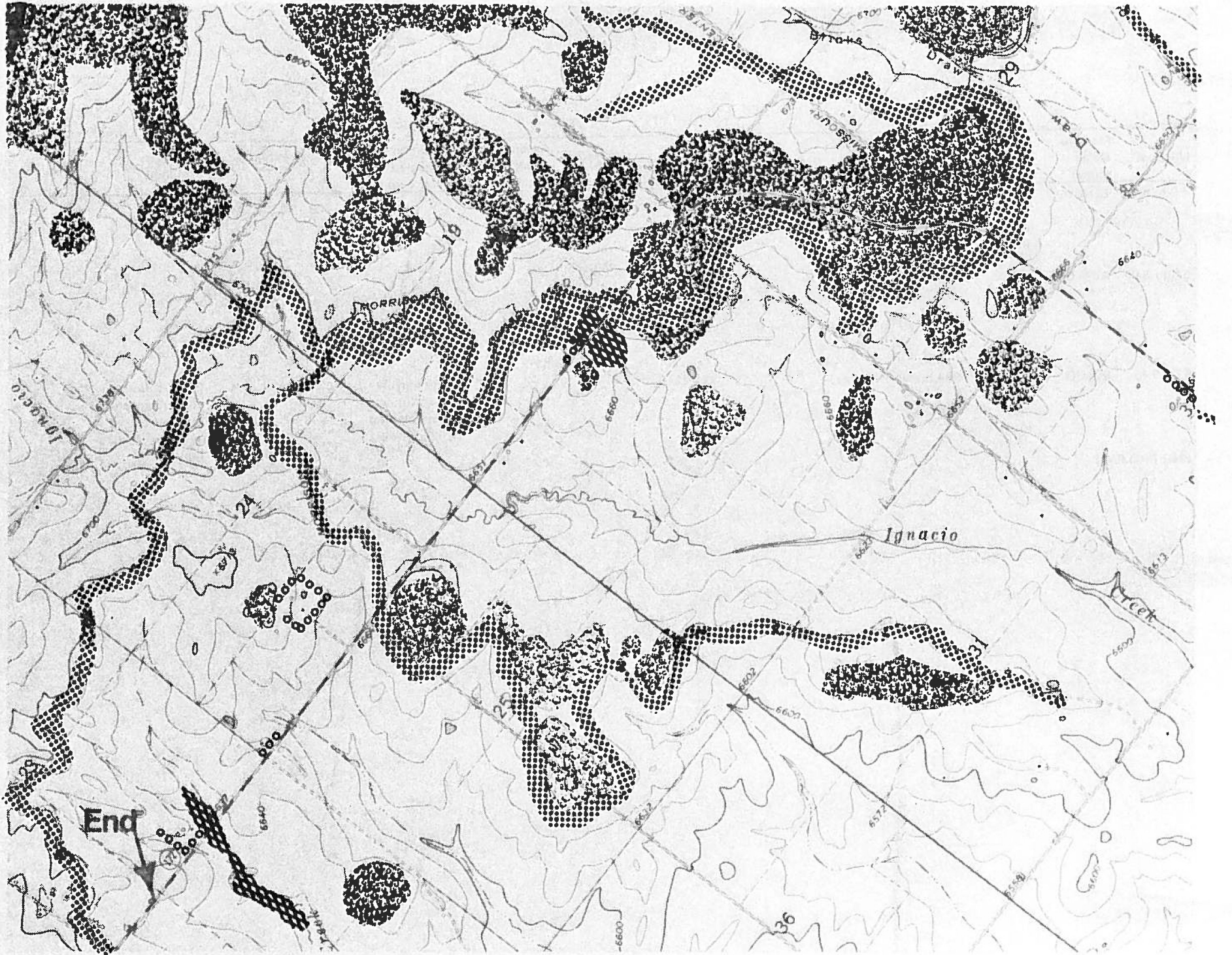
Milepost	Map No. Designation	Soil Type	Description	% Slope	Permeability	Surface Runoff	Erosion Hazard	Available Water Capacity	Vegetation Associated w/Soil Type	Primary Land Use	Potential Problems
0 to .7	To - B	Sedillo gravelly loam	Deep well drained soil on gently sloping high terraces, formed in alluvium or glacial outwash.	0 to 3	Moderately slow	Slow	Slight	Moderate	Indian ricegrass Junegrass Western wheatgrass Blue grama Mutton grass Fenders three awn Big sagebrush Bitter brush Service berry Other forbes, shrubs and perennial grasses	Used primarily for rangeland and wildlife habitat	Good potential for development. Few problems with drainage. Reseeding of construction area to help speed up vegetative regrowth where mismanaged, plus help to control soil erosion.
.7 to .8	XTO-E	Ustorthents	Deep, excessively drained soils on old terrace edges and on steep slopes, formed in gravelly and cobbly alluvium and colluvium	12 to 60	Varies x/texture of parent material	Rapid	Severe	Low	Same as above with addition of: Needle and thread Rabbit brush Pinyon pine Rocky Mountain juniper Ponderosa pine Snowberry Gamble oak	Wildlife habitat for burrowing animals. Too steep for rangeland.	Poor potential for development because of slope. Construction of roads must overcome problems of slope and surface runoff.
.8 to 1.8	R6-CD	Witt loam	Deep well drained soil on gently sloping to sloping uplands and mesa tops, formed in loess with some glacial cobbles.	3 to 12	Moderately slow	Moderate	Moderate	High	Alfalfa, barley and oats grow on irrigated areas. Wheat grown primarily on dryland areas. Same native grasses as above. Large narrowleaf cottonwoods line right of way planted by landowner.	Used primarily for irrigated and non-irrigated crop land.	Limiting feature is slope. Reseeding will speed up revegetation of areas depleted by heavy grazing, cultivation and road banks. Preservation of cottonwoods necessary for aesthetic value, wind and sun protection in spring and summer.

Milepost	Map No. Designation	Soil Type	Description	% Slope	Permeability	Surface Runoff	Erosion Hazard	Available Water Capacity	Vegetation Associated w/Soil Type	Primary Land Use	Potential Problems
1.8 to 1.9	EO-CD	Heldt silty clay loam	Deep well-drained soil on valley filling side slopes and upland valleys, formed in fine textured alluvium from shale slopes	3 to 12	Very slow	Moderate	Moderate	High	Indian rice-grass June grass Western wheat-grass Big sagebrush Pinyon pine Rocky Mountain juniper Barley, oats and alfalfa principal crops grown in irrigated areas. Wheat grown on non-irrigated areas.	Used mainly for irrigated and non-irrigated crop land.	Remaining acreage is used for pasture and range. Water must be controlled to minimize the potential of soil erosion.
1.9 to 2.7	XE6-E	Midway rock outcrop complex	Shallow, well-drained soil on shaley foothills and shale and sandstone rock outcrops. Midway soil is residual material from shale.	12 to 65	Very slow	Rapid	High	Low	Bluegrama Indian rice-grass Western wheat-grass Needle and thread Pinyon pine Rocky Mountain juniper Big sagebrush	Used primarily for rangeland.	Slope and shrink-swell of this soil are its main limitations.
2.7 to 3.9	E8-CD	Gaynor clay	Moderately deep, well drained soil on slideslopes of shale hills, formed in residuum from shale.	3 to 10	Very slow	Moderate	High	Moderate	Indian rice-grass Junegrass Western wheat-grass Blue grama Big sagebrush Pinyon pine	Mainly used for irrigated pasture and hay and range.	Primary concerns of management are controlling erosion by maintaining organic material in the surface layer. Limitations to road bed are high shrink-swell characteristics.

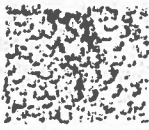
Figure 2 (cont.)

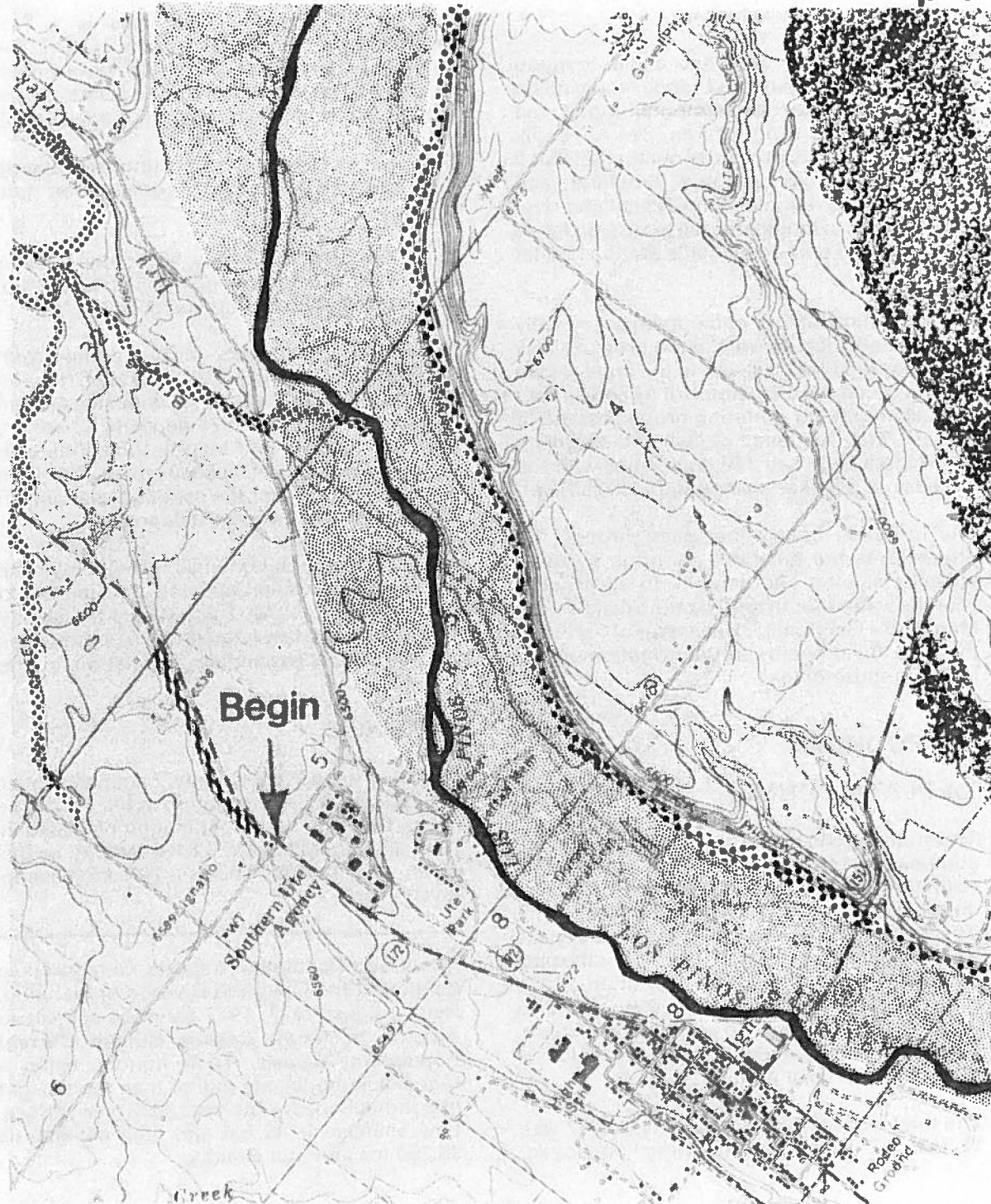
Milepost	Map No. Designation	Soil Type	Description	% Slope	Permeability	Surface Runoff	Erosion Hazard	Available Water Capacity	Vegetation Associated w/Soil Type	Primary Land Use	Potential Problems
3.9 to 4.0	A6-B	Limon silty clay loam	Deep well-drained soil on broad valleys in alluvial positions, formed in fine textured alluvium from shale hills.	1 to 3	Slow	Moderately rapid	High	High	In irrigated areas, alfalfa hay. Western wheat-grass Junegrass Big sagebrush Rabbitbrush	Used primarily for irrigated crops and range	High shrink-swell potential. Avoid perching water on the slowly permeable subsoil to control erosion.
4.0 to 4.2	EO-CD	Heldt silty clay loam	See previous page								
4.2 to 4.4	E8-CD	Gaynor clay	See previous page								
4.4 to 4.5	EO-CD	Heldt silty clay loam	See previous page								
4.5 to 4.7	A6W-B	Limon silty clay loam wet	Deep, poorly drained soil on broad valleys in alluvial positions, formed in fine textured alluvium from shale hills. Affected by a seeped water table condition caused by water losses from irrigated land at higher elevations	1 to 3	Slow	Moderately rapid	High	High	Sedges Rushes Cattails Western wheat-grass Alkali sacaton Redtop	Used primarily for irrigated crop land and range land.	Drains and drainage systems are essential to lower the water table and minimize the wetness condition.
4.7 to 4.85	EO-CD	Heldt silty clay loam	See previous page								
4.85 to 4.9	E8-CD	Gaynor clay	See previous page								

Milepost	Map No. Designation	Soil Type	Description	% Slope	Permeability	Surface Runoff	Erosion Hazard	Available Water Capacity	Vegetation Associated w/Soil Type	Primary Land Use	Potential Problems
4.9 to 5.0	EO-CD	Heldt silty clay loam	See previous page								
5.0 to 5.05	A6W-B	Llmon silty clay loam wet	See above								
5.05-5.15	EO-CD	Heldt silty clay loam	See previous page						Large narrow-leaf cottonwoods planted by landowner.		Preservation of cottonwoods if possible for aesthetic, protection value
END PROJECT											



Vegetation

-  **Pinyon - Juniper**
-  **Riverbottom**
Cottonwood-Willow
-  **Clayey Foothills**
Western Wheatgrass, Big Sage,
Wheat, Alfalfa, Hay, Oats or
Pasture Grass where Irrigated
-  **Irrigation ditch**
Intermittent Aquatic
-  **Streamside - Aquatic**
-  **Bog**
Cattails, Sedges, Rushes
-  **Cottonwood - Willow**
Planted near Homes



continued from page 13

In Appendix A there is a list of flora found in the project study area.

Pinon and juniper are the dominant species in the drier areas of the project study area (see Vegetation Map 5). Vegetation is sparse or absent in the spaces between the trees where unirrigated.

Much of the land is irrigated. A variety of vegetation grows along the banks of the irrigation ditches, including willows, chokecherry, alder, snowberry, rose, currant and other shrubs. In many places the farmer or rancher has chosen to clear vegetation to allow more grasses to grow to the water's edge.

In irrigated areas the vegetation found is alfalfa hay, barley, oats, Indian ricegrass, June grass, western wheatgrass, big sagebrush, blue grama and pinon pine.

In unirrigated areas wheat is grown. Otherwise, the unirrigated areas are used for range and wildlife. Pinon pine, Rocky Mountain juniper, big sagebrush, mutton grass, Fendler's three awn, bitterbrush, service berry and other forbs, shrubs and perennial grasses grow where the unirrigated land has not been overgrazed.

The most significant amount of vegetation in the project study area is along the Pine River. Although the river area is not directly adjacent to the proposed highway project, the ecosystems are interdependent. The land in the flood plain supports tufted hairgrass, slender wheatgrass, redtop, Nebraska sedge, Baltic rush, cottonwood, bistort and willows.

Many of the trees along the highway corridor were planted by the residents of the project area. Across from the power substation (milepost 1.1) a number of large cottonwoods line the property. Near the end of the project the properties of two roadside residents are lined with willows and cottonwoods. These trees have an aesthetic value and provide shade and wind resistance, therefore

increasing property values.

The project study area has a fair to good potential for openland and range land wildlife such as mule deer, elk, cottontail rabbit, red fox, squirrel and various birds (See Appendix C). These animals and birds obtain their food and shelter from irrigated cropland and pasture, native rangeland, and canal and river banks. Areas of rangeland, tall grasses in fence rows and odd corners of fields are the habitat for wildlife.

The migration of big game animals, namely deer and elk, occurs west of the project study area near the Florida River. In the most severe winters, such as this winter of 1978-79, deer and elk migrate to wintering grounds south of Ignacio. The frequency of deer and elk which cross State Highway 172 diminishes with the increase in distance east of the Florida River.

The irrigation canals that pass through the project area are inhabited by trout, suckers, kokanee salmon and sculpin. In an average year the water runs in the irrigation canals from March 15 - October 15. Spawning of fish from the Pine River occurs in the irrigation canals between these dates.

C. ECONOMY

LA PLATA COUNTY

The study area in which the project lies is in the southeastern portion of La Plata County. The county had a 1970 population of 19,199. The July 1, 1977, population estimate was 23,411¹. This is a 21.9% increase over the 1970 census and indicates a growth rate of 3.1% for the past seven years. A straight line projection of this growth rate to the year 2000 yields a population of 40,267. To achieve that figure, however, would necessitate an expansion of the economic base in the county.

The total labor force in the county in 1977 was 12,249, of which 11,343 were employed,

leaving 7.4% unemployed. This is a 14% increase over the total labor force in 1975. The leading employer in 1977 was government (2,470), followed closely by service trades (2,083) and retail and wholesale trade (1,926).

Seasonal industries in the county are logging and sawmill operations, construction and tourism.

In 1977 in La Plata County, 53% of the families earned annual incomes of over \$10,000. 30% of the families earned incomes over \$15,000.

There are four banks in the county with deposits totaling \$98,164,000 (1978). This is an increase of 28% over 1977 deposits and an increase of 82% over 1970 deposits. There are also two savings and loan associations with deposits totaling \$74,082,000 (1978). This is an increase of 11% over the previous year and an increase of 54% over 1970 deposits.

Since 1970 retail sales in La Plata County have increased from approximately \$60 million to \$150 million in 1977. This reflects the steady increase in tourism related business activities as well as an expanding population in the county.

DURANGO

Durango, in La Plata County, contains almost one-quarter of the population in the San Juan Basin. Durango had a population of 10,333 in 1970 and an estimated 14,106 people in the urban area in 1977. This is a 26% increase in seven years.

¹Colorado Population Reports, Demographic Section of the Colorado Division of Planning, issue August 1978. 1977 estimate subject to revision in future **Census Bureau Current Population Reports**. Their figures, using a regression model, are higher than the straight line projections for the year 2000 given above. Low estimate is 45,700 and high estimate is 93,200 for La Plata County.

The largest manufacturing employers in Durango are the Coca-Cola Bottling Co., the Jackson-David Bottling Co., Telluride Iron Works, Redfield Co. (rifle scopes), the Durango Herald and the San Juan Lumber Company.

The largest commercial or service employers in Durango are Tamarron, Mercy Hospital, Community Hospital, the New Strater Corporation, the Ramada Inn and Eventide of Durango. The many motels servicing the large tourist industry are leading employers in Durango.

Fort Lewis College in Durango has had an increase in enrollment from 1,315 in 1971 to 3,000 in 1978. This, along with the increase in number of tourists to Durango, indicates the growing popularity of this area. The number of tourists riding the narrow gauge train (35,871 in 1960 to 105,656 in 1972 to 120,000 in 1978) and the number of tourists visiting Mesa Verde National Park 35 miles west of Durango (434,025 visitors in 1967 to 525,918 in 1970 to 654,000 in 1978) are all statistics that demonstrate the increase in tourism in the Durango area.

IGNACIO

Ignacio had a population of 613 in 1970. In 1978 the estimate was 686, showing an 11.9% increase in eight years.

The largest employers in Ignacio are the Southern Ute Agency, the Bureau of Indian Affairs and other government agencies, the El Paso Gas Company and the Northwest Pipeline Corporation. Though not in the town of Ignacio, the La Plata County airport is a large employer, although most of the employees are from Durango. The other employers are small commercial or service employers.

Seasonal industries in Ignacio include

construction and tourism.

The construction of residences for tribal members and other Ignacio citizens is increasing yearly. There are proposed construction projects that will aid the local economy if approved. These include the expansion of Sky Ute Downs and this proposed highway widening project.

Navajo Lake, located 17 miles south of Ignacio, provides recreational opportunities for the fisherman, boater, camper and swimmer. Since Ignacio lies on the highway from the larger population centers to the lake, this is an advantage of vicinity that businesses can benefit from.

The major economic factors affecting the proposed project are the commercial and recreational developments in and around Ignacio. Both are significant traffic generators and with their development there will be increased pressure for development along the entire corridor. This development pressure will result in escalating land values and increased traffic on State Highway 172.

SOUTHERN UTE INDIAN TRIBE

Most of the 770 members of the Southern Ute Indian Tribe residing on the reservation live in the immediate vicinity of Ignacio. The unemployment rate (1972) was 55% and remains fairly stable at that rate. There is an available labor force of 242 Southern Ute Indian Tribe members. Of these 108 have permanent employment.

Some of the younger members with high school diplomas and employable skills are working within the tribal and BIA organizations through the E.E.A. program. Older members are unemployed because of low-level educational achievement and lack of training. While agriculture is the dominant self-employed activity, wage employment of the service type is primary with various tribal organizations and programs as well as the

federal government being the major employers.

The Southern Ute Reservation economy, rather than declining, is just beginning to be developed. Tribal revenue is derived basically from oil and gas leases and royalties, coal leases, interest from tribal investments and timber harvest. The timber harvest is showing a steady annual decline but the income from energy resource development is increasing.

Since January of 1972 the Southern Ute Tourist Center (Pino Nuche), a tribally owned commercial complex consisting of a motel, restaurant, museum, arts and crafts shop, and convention facilities, has provided employment for a number of tribal members. It is now enjoying a favorable business patronage. Pino Nuche lies just 1/2 mile south of the beginning of the proposed project. Many tourists and residents of the area will travel to Pino Nuche via State Highway 172.

D. SOCIAL FACTORS

La Plata County is unusual in its makeup when compared with the rest of the counties in the San Juan Basin (Planning and Management Region 9). It is 53.8% urban while the rest of the counties around it are nearly 90% rural. This is due largely to Durango which contains nearly one-fourth of the population of the entire region. Due partially to the presence of Fort Lewis College, Durango is also the cultural and social center for the region.

Following are two tables prepared by the Colorado Department of Health from the 1970 census showing various aspects of the social makeup of the county.

AGE DISTRIBUTION

<u>5 yrs.</u>	<u>5-14</u>	<u>15-17</u>	<u>18-20</u>
7.4%	21.0%	6.8%	7.9%
<u>21-44</u>	<u>45-64</u>	<u>65-</u>	
26.5%	20.5%	9.9%	

RACIAL - ETHNIC

<u>White</u>	<u>Spanish Surnamed</u>	<u>Negro</u>
94.6%*	19.4%	0.1%
<u>American Indian</u>	<u>Other</u>	
4.8%	0.5%	

* Includes Spanish

La Plata County is served by two hospitals, both located in Durango, with a total bed capacity of 156 and 24-hour ambulance service. There are 36 physicians, 125 registered nurses and 17 dentists. There is also one nursing home with 117 beds. Six pharmacies are available for prescriptions.

There are three school districts in the county with a total of 15 public schools and 4 non-public schools. Fort Lewis College in Durango is a four-year degree-granting state supported college with a 1976 enrollment of 2,807.

Law enforcement is provided by the Colorado State Patrol with offices in Durango, the La Plata County Sheriff Department with 18 uniformed officers and 6 vehicles, and the Durango Police Department with 30 officers and 11 vehicles. The area in which the project is located lies outside the city police jurisdiction.

Ignacio is served by the county forces as well as the state patrol. In addition, there is a town marshal and two deputies, one of which works for the CETA program.

Fire protection in the rural areas of the county is provided by a volunteer Department of 22 men with 6 pieces of equipment. The City of Durango has a paid fire department of 13 men and 6 pieces of equipment.

The town of Ignacio has an all-volunteer fire department with 2 pieces of equipment.

In Ignacio the average number of people per housing unit is 3.59. There are 275 housing units, yielding an estimated population in the Ignacio urban area (1972)² of 988. The majority of these people are Spanish-American.

The average size of the tribal family is 5.1 persons. Tribal members receive medical and dental care at the U.S. Public Health Service (USPHS) Clinic at Tribal Headquarters near Ignacio. A study conducted by the USPHS in 1968-9 indicates that the highest incidence of disease among tribal members is attributed to respiratory disease caused by environmental factors.

In emergencies, such as accidents or sudden acute illness requiring hospitalization, Ignacio residents must be transported to Durango hospitals 25 miles distant. When an ambulance driver is not available, which is frequently the case at night or on weekends, an ambulance must be called from Durango with subsequent delay in emergency treatment.

²Comprehensive Plan for the Ignacio Urban Area, 1972. Prepared by the Animas Regional Planning Commission.

****IV. EXISTING LAND USE**

The area in which the project is located is a rural portion of La Plata County. The land around the project area is either private or is owned by the Southern Ute Indian Tribe. The exceptions are two churches on land that is semi-private, owned by non-profit corporations (See Land Ownership Map No. 6).

The main use of land in the project area is for agriculture. Irrigated hay, pasture and row crop land is the most common. There is also unirrigated unimproved rangeland and pasture used for grazing of cattle and horses. Along the Pine River there is naturally irrigated land. This land is cleared and cultivated up to the edge of the bank to make maximum use of the land for agriculture.

The number of acres required to manage hay and livestock is high. Although the ranches in the project area are not substantially large enough to support year-round grazing, the surrounding summer ranges in the mountains of Colorado and New Mexico permit the rancher to use his property primarily as wintering grounds.

The farmlands involved with this project do not fit into the "prime or unique" status. This is because the land is used for grazing and/or hay production and does not have soil quality for high yield crops.

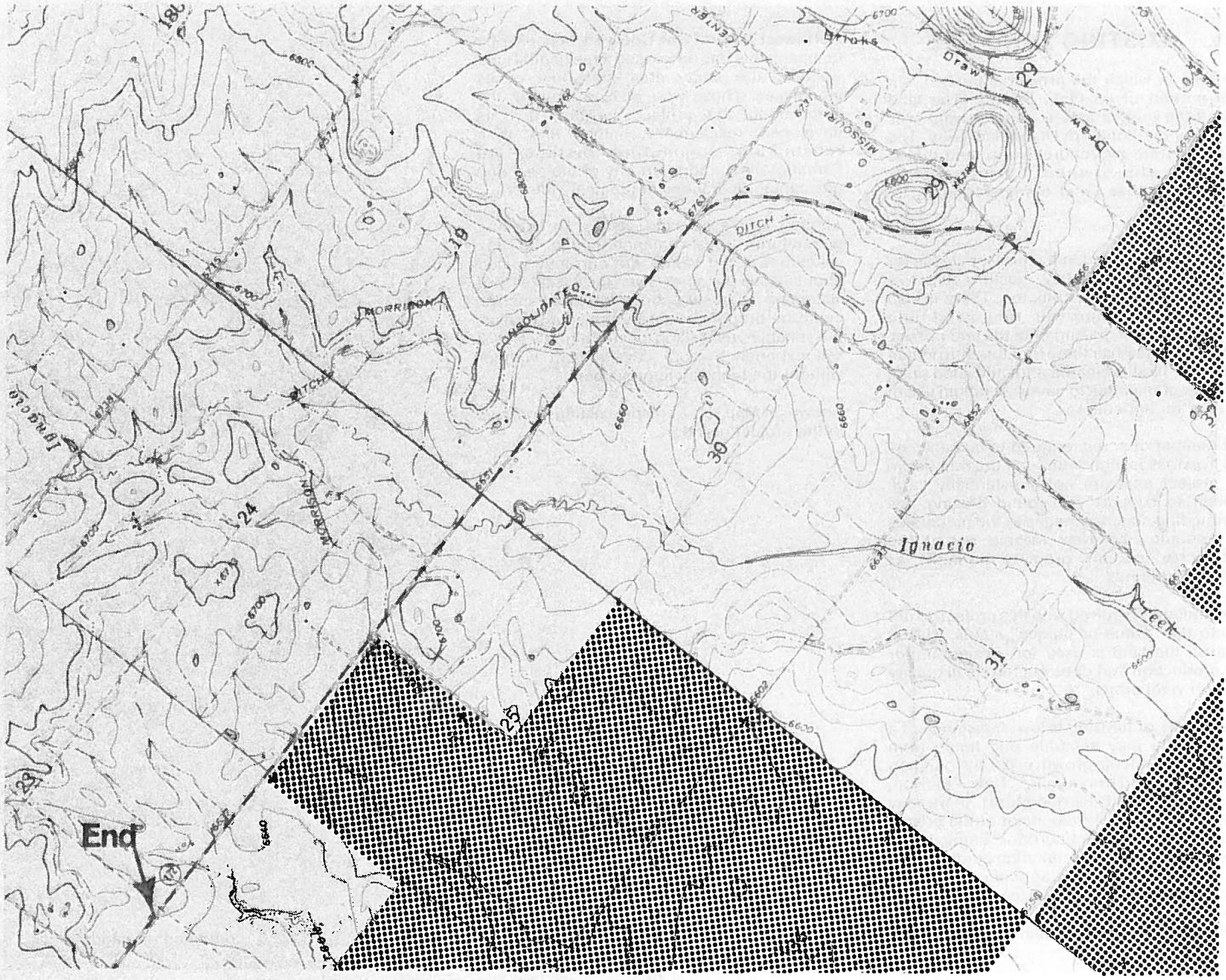
The density of housing is low. A distance of a quarter mile may separate one home from another but with the growth in the surrounding communities (Farmington, New Mexico, Durango, Bayfield, Florida Mesa), there may be more intensive development of the private land within the project corridor. Employment opportunities in the surrounding communities are placing demands on agricultural land for residential development. Growth of energy resource development is one of the contributors to employment opportunities.

Northwest Natural Gas Co. is an example of a company that has developed a residential area west of the study area for some of its employees. Those who wish to move to the area along the project corridor, if it is developed residentially, might find it a reasonable commuting distance to Farmington, Durango, or any of the coal and gas mining operations in the near vicinity.

Already increased land values are making agricultural uses untenable due to tax valuations. Land values are currently priced about \$2,000 per acre. Given the availability of water and no drastic economic change such as could be brought about by the energy crisis, the suitable private land located along S.H. 172 will experience more development with or without the highway improvement.

Shown on Map No. 7 are the existing land uses in the project corridor.

continued on page 30

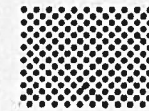


Map 6

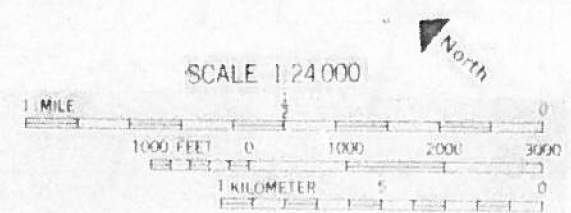
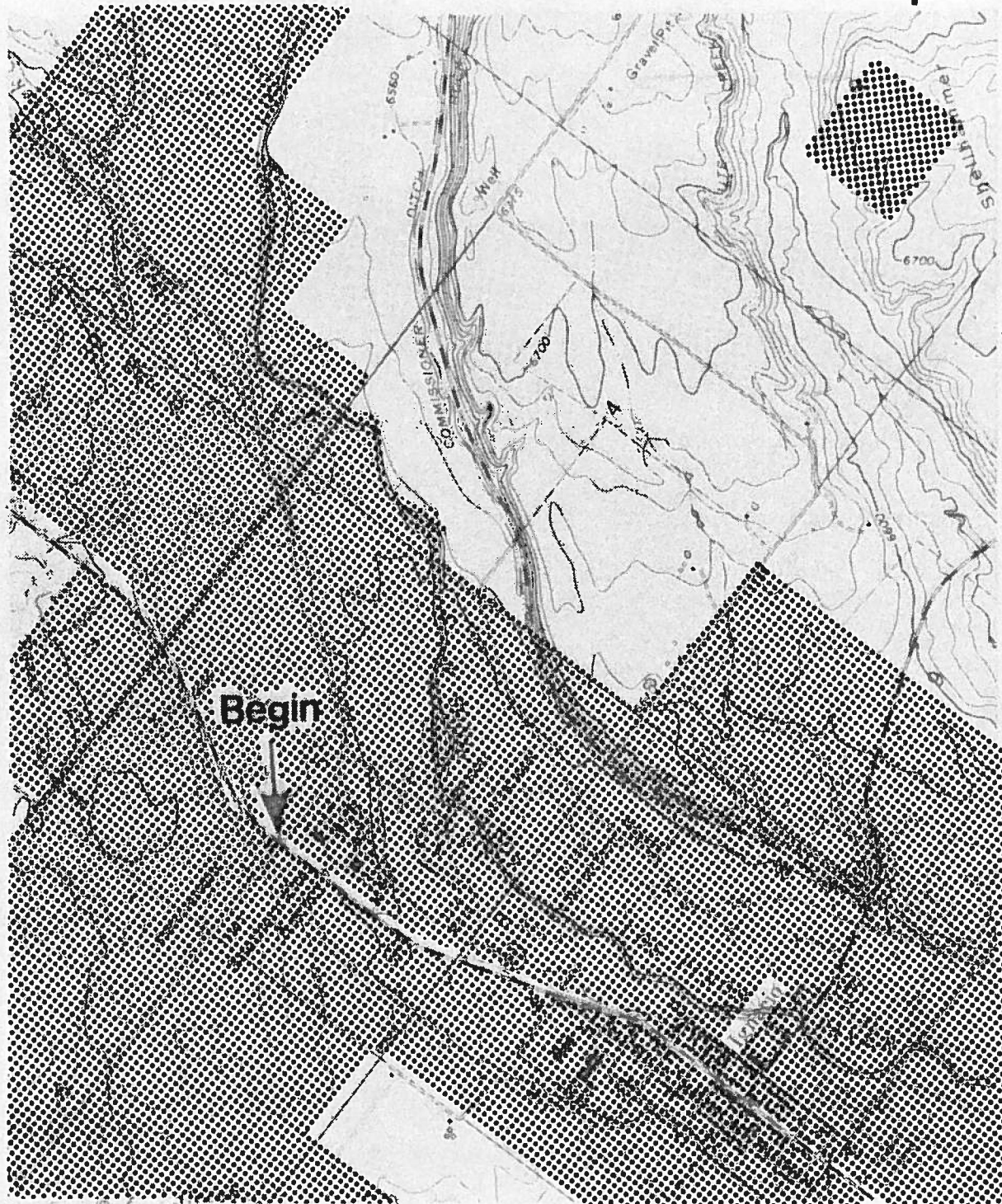
Land Ownership

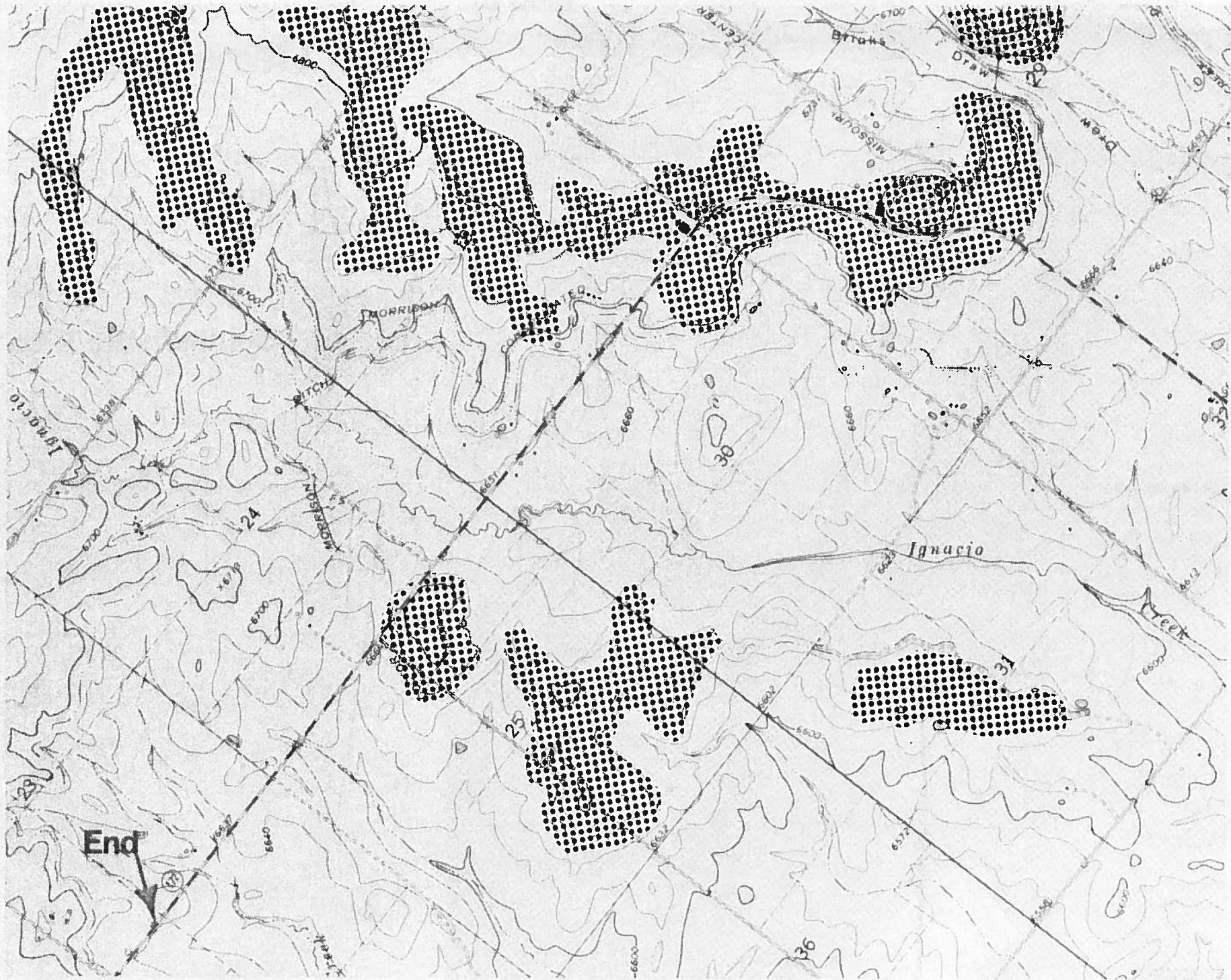


Private













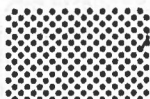

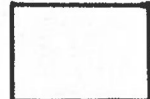

Southern Ute Tribe

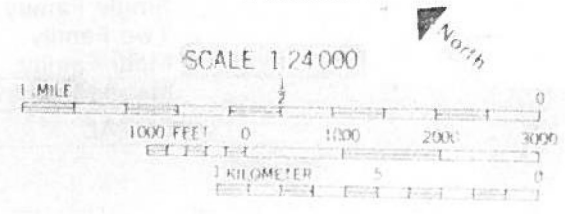
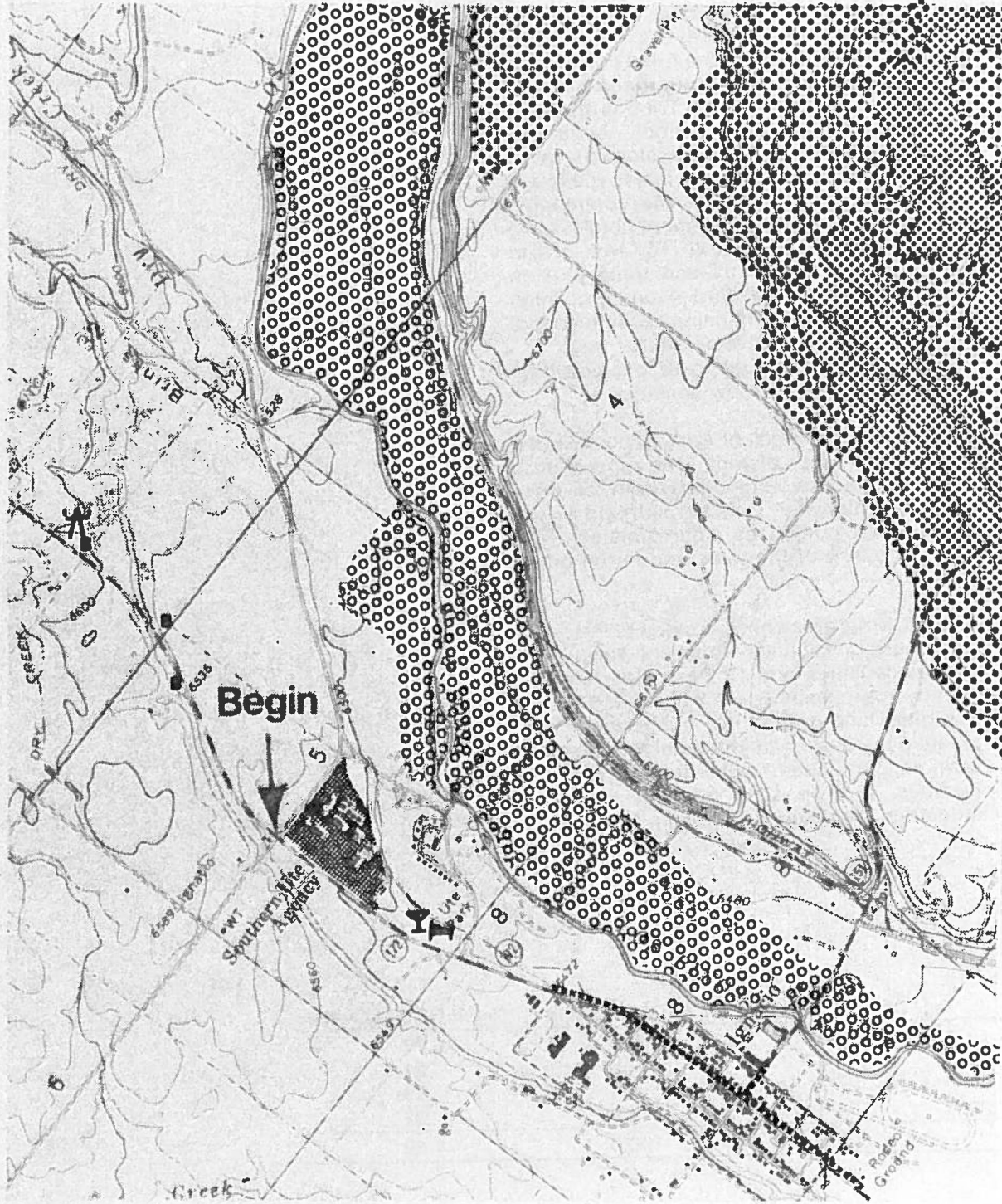




Map 7

Land Use

-  School
-  Church
-  School Bus Stop Shelter
-  Power Substation
-  Restaurant and Motel
-  Single Family Home
-  Mobile Home
-  Outbuilding
-  Governmental - Southern Ute
-  Naturally Irrigated
-  Unirrigated Pasture
-  Unirrigated Unimproved Rangeland
-  Irrigated Hay Pasture or Row Crops
-  Commercial



continued from page 25

Included in the project corridor is the Southern Ute Agency and the town of Ignacio. The Southern Ute Agency is the headquarters of the Southern Ute Indian Tribe. Within the Agency there are tribal government offices, Bureau of Indian Affairs offices, a restaurant, bar and motel complex (Pino Nuche), a community center, medical center, Head Start School and girls and boys dormitories, maintenance and warehouse buildings. They are situated on approximately ten acres in the northern end of Ignacio.

The recent renovation of Sky Ute Downs, horse conditioning and training center, will attract more people to Ignacio via S.H. 172. The improvements will increase a seasonal use of the facilities. An estimate of users per day of Sky Ute Downs is not available but since this will be the only racing track authorized for gambling in the Four Corners area, the impact is thought to be considerable. The capacity of the open stands will be 1,000. The arena is also being modified to better accommodate the contestants and spectators of the rodeo and horse show events held there.

The existing residential use for the Ignacio Urban Area is comprised of approximately 505.6 acres or 7.59% of the total lands within the urban area. The residential land use has been divided into four subcategories which include single family residential, two family residential, multi-family residential and mobile homes.

Approximately 145 houses are proposed (or have been built) on Southern Ute Indian Tribal lands in the area east of the tribal complex. A residential estate area with fourteen housing sites has been built by the Tribe in the area northeast of the high school. Additional housing is proposed to be developed west of town on the plateau, along major roadways and on the fringe area of the community. Twenty-five low rent supplement houses have been constructed next to the tribal fairgrounds. Except for a 3-acre trailer park on the south end of Goddard Avenue, no high density development is being recommended. Modern density developments such as duplexes are encouraged to be located within the area proposed for low density.

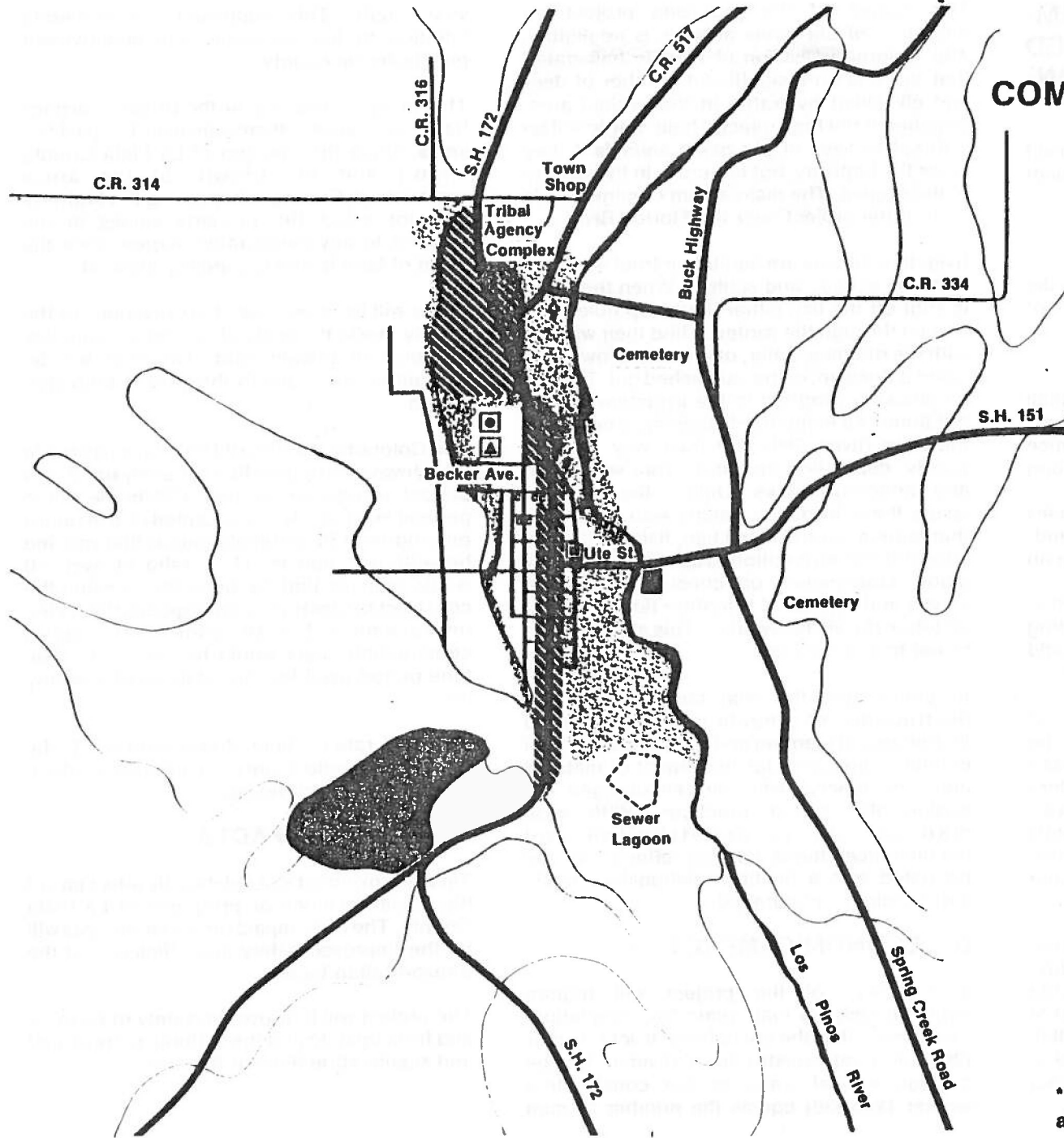
The commercial areas of Ignacio consist of a central business district with some strip commercial uses extending north of town along the highway. Commercial land in the urban area comprises approximately 87.8 acres or 1.32% of the total land in the urban area.

The industrial area consists of the El Paso Gas warehousing facilities south of town. The sewage facilities and El Paso Gas facilities occupy approximately 654.9 acres or 9.88% of the total land within the urban area. It is planned to develop an industrial area south of town in conjunction with the El Paso Gas facilities. A town shop building and other industries are planned (See Map No. 8).

USE CATEGORY	ACREAGE	% OF ACREAGE	% OF URBAN AREA
Single Family	449.3	89.2	6.77
Two Family	13.8	2.8	.21
Multi-Family	27.7	5.1	.39
Mobile Home Parks	14.8	2.9	.22
TOTAL	505.6	100.0	7.59

Map 8

**IGNACIO
COMPREHENSIVE PLAN***



- ↑ Existing Park
- ↑ Proposed Park

- Residential Low Density
- Commercial
- Industrial
- Open Area
- Elementary
- Junior High
- High School
- C Church

↑
N
No Scale

*Adopted by Ignacio Town Council and Southern Ute Tribe May 1972

****V. THE PROBABLE IMPACT OF THE PROPOSED ACTION ON THE ENVIRONMENT**

In this section the impact of the proposed action on various factors in the environment will be discussed.

A. ECOLOGY

The main ecological concern with the proposed action is the destruction of vegetation. This can result in:

- 1) Erosion and sedimentation problems.
- 2) Elimination of shelter for birds, small mammals and insects
- 3) Elimination of shade and wind resistance provided by cottonwoods for homes along the existing highway
- 4) Decrease in aesthetic value. Grass species such as Indian ricegrass and needle-and-thread grass are replaced by weeds in an unhealthy range site.
- 5) Decrease in property value. In the case of the homes with trees close to the existing highway, the loss of these taxes would result in a decrease in property value.

Another concern is the elimination of vegetation to be used by agriculture. The diminishing of rangeland and pasture land as a result of right of way acquisition means less vegetation available for livestock browse. However, because of the permit rangelands within a reasonable vicinity to the study area, the impact is primarily on the smaller rancher who does not use permit rangelands.

Potential impact of the proposed project on the marsh which lies adjacent to the existing highway was discussed with Colorado Division of Wildlife. The marsh is the result of irrigation overflow and the Division of Wildlife does not feel that it is a significant wetland or that the project will have a significant impact on it. See correspondence in Appendix B.

The impact of the proposed project on migration of big game animals is negligible. The Colorado Division of Wildlife has stated that there is an insignificant number of deer and elk killed by traffic in the project area. Whether or not the project is built, traffic will be a threat to lives of big game animals if they cross the highway, but few cross in the vicinity of the project. The mainstream of migration is west of the project near the Florida River.

Irrigation ditches are habitat for trout, suckers, kokanee salmon and sculpin. When the water is shut off the fish either find deep holes that remain through the winter or find their way out with the draining water, or die in shallow water when it dries up, or they are fished out. There is no stocking program in the irrigation canals, but there is a major trout stocking program on the Pine River. Fish find their way into the canals, depending on shade from vegetation and undercut banks. Unless the highway spans these irrigation canals with structures that leave a natural canal bed, fish habitat will be restricted. As mentioned in the water quality study, coincidence on construction in the canals and season of irrigation flow (May 15-October 15) will be avoided. This alleviates the threat to fish habitat.

In conclusion, the vital concerns are the destruction of vegetation. Established techniques of planting and construction which minimize land area for movement of material and machinery will be encouraged as ecologically sound practices. With wise management of construction and maintenance, these adverse effects can be mitigated and a healthy relationship to the surroundings encouraged.

B. ECONOMIC IMPACT

Construction of the project will require approximately 28 man years for completion. This means that the cost of construction labor (26% of total construction) divided by the average annual wage of the construction worker (\$16,830) equals the number of man

years (28). This represents a moderate addition to the economic and employment picture in the county.

The value of property in the project corridor has shown steady increases over the past ten years, since the opening of La Plata County airport and the growth of the areas surrounding Durango. Improving the highway will not affect the property values in the corridor to any measurable degree since the value of land is already greatly inflated.

There will be some loss of tax revenues to the county due to the acquisition of approximately 30 acres of private land. This loss will be difficult to offset due to the already high land values.

The Colorado Division of Highways has made a highway users benefit/cost analysis of this project, using interest rates of 2% to 4%. Three percent is generally the accepted rate of return on long-term investments and at that rate the benefit/cost ratio is .11. A ratio of over 1.0 would indicate that the benefits outweigh the construction costs over the expected life of the improvement before additional capital construction costs would be necessary. The time period used for this analysis was twenty years.

At the 2% rate the benefit/cost ratio is .13. The benefit/cost ratio is only one criteria on which to judge a project, however.

C. SOCIAL IMPACTS

This improvement will not directly affect any of the social facilities or programs of La Plata County. The only impact on social services will be the improved safety and efficiency of the transportation facility.

The project will improve the safety of travel to and from Ignacio and the cultural, recreational and scenic attractions in the area.

Widening of State Highway 172 to provide adequate shoulder for safe pull-off will make trips by emergency vehicles much safer.

D. AIR QUALITY IMPACTS

The project lies in a rural area that does not now have air quality problems. The Colorado Division of Highways has contacted the Colorado Department of Health regarding this project and inquired as to the extent of air quality analysis that would be required. Their response on February 6, 1979, was that "air quality should not be a substantive issue in the assessment of the project, and we do not consider it necessary that an air quality analysis report be prepared for the project". The State Implementation Plan does not require transportation control measures in this area; therefore, the project is consistent with it. See Appendix B for a copy of the response from the Colorado Department of Health, Air Quality Division.

E. WATER QUALITY IMPACTS

Construction of this project within the area study limits should not cause permanent degradation to any immediate water resources. The primary water courses potentially affected by the proposed construction are the Indian and Morrison Irrigation Canals which cross the project alignment. Construction will have a temporary adverse impact upon water quality as a result of erosion. This will be reflected by a temporary increase in suspended solids and turbidity.

The canals run in an average year from May 15 to October 15. They have run as early as May 10. Any construction in or around these water courses should take place before May 10 and after October 15. Construction that is necessary between these dates will implement erosion control features to minimize the impact of increased sediment yield. Such measures will include mulching, revegetation and temporary water diversion structures.

F. NOISE IMPACTS

Noise sensitive areas located near the project consist of 21 single family units, 2 mobile homes and 2 churches that lie within 500 feet of the highway.

There are two alternates being considered for this project, the "Maintenance" alternate (null) and the improvement project. Noise levels were predicted from the present site of the highway for both alternates.

The noise levels predicted for the sensitive areas exceed the design noise level requirements in three instances by 1 to 4 decibels. An analysis of the data in Appendix D shows that in three instances the receptors in the study area will be exposed to noise levels in excess of the design level by 1996. Comparison of the noise levels for the "Maintenance" alternate (null) with those for the improved highway indicate no significant difference. The improved highway would follow the existing alignment closely so that the distance from the noise source to the receptor would not be significantly different with the proposed improvements. Any increase in predicted noise level between the present time and the design year may be attributed to the increase in traffic that will occur whether or not the proposed project is constructed. Therefore, construction of the project will not create any noticeable noise level increase.

Noise barriers are not feasible because the low housing density would yield a low cost/benefit ratio. Barriers also interfere with sight distances and the lack of access control would reduce the effectiveness of barriers. Other noise abatement measures, such as prohibition of certain type vehicles, modified speed limits, exclusive lane designations or traffic control devices would be equally ineffective.

G. SECTION 4(f) CONSIDERATIONS

No lands from any campground, recreation area, cultural site or historic site will be required for the project; therefore, a Section 4(f) Statement is not required for this project.

****VI. ALTERNATIVES**

A. MAINTENANCE ALTERNATE

As was pointed out in Section I, the present highway is deficient in safety features as measured by the Colorado Department of Highways Sufficiency Rating and Needs Study. The rating of 65 indicates the need for improvement.

The minimum responsible alternate that could be done is a maintenance alternate. This would entail normal maintenance plus a shoulder widening and overlay project sometime within the 20-year period projected for the life of the proposed improvement. Costs for widening and overlay of a 2" mat in 1979 dollars would be approximately \$470,000.

The maintenance alternate would not correct the above discussed deficiencies in capacity and safety features. As traffic volumes increase, as they are projected to, an increasing accident rate can be expected and the facility's structural adequacy will decline. Eventual reconstruction will cost much more than reconstruction will as proposed now.

B. ALTERNATE CORRIDOR LOCATIONS

Due to social, economic and environmental consequences of relocating the existing alignment, the highway facility is by necessity confined to the general location of the present facility. Any new location would introduce new traffic and land use patterns to the area, disrupt many ecosystems, and have a significant impact on the agriculture and the economy of the region. There are no advantages to changing the location of the highway that would offset these problems.

C. OTHER MODES OF TRANSPORTATION

RAILROADS

The area is dependent on highways for the movement of most of its passengers and goods. The closest railroad is the Denver and Rio Grande Western narrow gauge line from Durango to Silverton which provides summer passenger service as a scenic tourist attraction. No freight is carried by the train. The nearest railhead for freight is in South Fork or south of Farmington, New Mexico. There are no present plans for these railways to expand service to the Ignacio area.

AIRPORTS

Air service for La Plata County is provided by the La Plata County Airport located seventeen miles southeast of Durango and eight miles west of Ignacio. Frontier and Air New Mexico provide commercial service with nine incoming and outgoing flights daily. There is also an air park three miles south of Durango that provides airplane and helicopter charter service. State Highway 172 is the means by which people get to and from the airport from Durango and Ignacio. There is a taxi service to Ignacio via the highway.

BUS LINES

Ignacio is not served by any commercial bus line. There are no mass transit operations planned or, at this time, feasible in the area of the project. The Southern Ute Indians have purchased some buses with Urban Mass Transit Funds for use in transporting the elderly and the handicapped.

****VII. PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED**

Approximately 30 acres of land will be added to the highway right of way. It is highly valued land and does represent some loss of tax revenue that will not be offset by facility improvement. Land use should not change as a direct result of this project.

There will be destruction of vegetation in order to construct cut and fill slopes within the project corridor. This will lead to an increase in sediment loads in local streams through increased erosion and will cause degradation of aesthetic values along the highway. These problems will be mitigated by revegetation and other erosion control and selective landscaping techniques, which will be included in construction plans and specifications.

Noise along the highway presently exceeds the national ambient noise standards at a few locations. The new facility will not change the noise levels. No noise abatement procedures are planned since their construction would create problems which outweigh their benefits.

****VIII. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USE OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY**

A. SHORT-TERM IMPACTS

Some temporary short-term impacts will occur as a result of the construction of the proposed improvement. Some noise and dust will result from construction activities. Some short delays in traffic flow will occur during construction. Some trees and other vegetation will be destroyed.

Employment rolls in the area will increase temporarily due to the influx of workers associated with construction and the hiring of local labor. Payrolls and purchases of construction supplies and materials will have a beneficial impact on the economy of the area.

B. LONG-TERM EFFECTS

Long-term productivity is dependent on many factors and, since the proposed improvement is an upgrading of an already existing route which will not appreciably change the characteristics of that route, this improvement will only marginally affect long-term productivity.

Every effort will be made to preserve the aesthetic qualities of the area in order to maintain its scenic value.

The completion of this project will mean that projected traffic loads for the next twenty years on State Highway 172 between Durango and Ignacio will be adequately provided for. The construction of this project, since it is an upgrading of an existing facility, will not limit future options for planners and regional leaders in any field.

****IX. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES**

Land acquired for the right of way for the highway, construction materials including fuel for the machinery, and the labor to construct the highway will be permanently committed to the highway. These would be the only permanent commitment of resources since land use changes are not expected to occur as a result of the improvements.

****X. THE IMPACT ON PROPERTIES AND SITES OF HISTORIC AND CULTURAL SIGNIFICANCE**

A. HISTORIC SITES

The State Historical Society of Colorado has notified the Colorado Division of Highways that two sites in the project study area are included in the Colorado Inventory of Historic Places. They are the Ute Cemetery and the Ute Memorial Monument. The Ute Cemetery is located 1/2 mile north of State Highway 151 on the east bank of Los Pinos River. Contained here under special markers are the graves of Chief Ouray and Buckskin Charley, leaders of the Utes. Also located here are the graves of Chiefs Ignacio and Severo.

At the north end of Ignacio across from the Ute Agency Office is the Ute Memorial Monument. Dedicated in 1939, this monument honors four Ute chiefs: Ouray, Buckskin Charley, Severo and Ignacio.

There are no sites in the project study area presently listed on the National Register of Historic Places.

Neither of the above mentioned sites will be affected by the project. The Ute Memorial Monument is close to the beginning of the project but is along the portion of Highway 172 that has already been widened.

B. ARCHAEOLOGICAL SITES

In June 1979, an archaeological surface survey was conducted by a four member crew of the Colorado Department of Highways archaeology staff for the proposed widening and partial realignment of Colorado Highway 172. The survey was conducted in compliance with Title 23 CGR, Park 765, Section 4, Paragraph B.

Eight prehistoric sites were recorded. Five sites are single or multiple component early Basketmaker habitation sites with associated light to heavy lithic scatters. One of these sites is a limited activity site of unknown cultural affiliation which includes a large roasting pit and an area of associated rock debris. This may be of an early Basketmaker or proto-historic or historic Navajo or Ute cultural affiliation. One additional site is a single component, Archaic campsite. The final site recorded is a proto-historic Navajo campsite with a possible underlying Basketmaker component.

Four of these sites meet the criteria for consideration for National Register status. According to the present design plans for this project, three of these four National Register status sites will be destroyed. These three sites will require thorough excavation before construction of the proposed project. Adequate CDH funds and time have been committed to retrieve the data³.

****XI. COMMENTS AND CO-ORDINATION**

On September 7, 1978, all federal, state and local agencies were contacted regarding the proposed project. None of the contacted agencies registered any objections to the proposal and no potential conflicts with any other agency's projects were identified.

On October 11, 1978, an informal public meeting was held at the Pino Nuche building in Ignacio to consider the proposed project. The meeting was attended by three landowners along the project corridor, three Southern Ute Indian Tribe planners, and six highway department personnel. No one objected to the project. The landowners expressed concern over the safety conditions that existed and were there to see what improvements would be made to improve the highway.

The public will be offered the opportunity for a public hearing when this document is made available for review.

³ Clarke, Steven K. and Carothers, Neita V., "An Archaeological Survey of the Proposed Widening and Realignment of Colorado Highway 172", Colorado Department of Highways Highway Salvage Report #30, July 1979.

APPENDIX A

APPENDIX A

**** CHRONOLOGY OF EVENTS**

July 1978 - Project RS 0172(9) is included in the 1978-79 fiscal year budget. The project calls for preliminary engineering and economic, social, and environmental studies.

September 7, 1978 - Federal, state and local agencies on the District list are notified of the project by mail and are asked for comments.

September 17, 1978 - The public is notified of the project and the time and date for a public meeting is advertised in local newspapers.

October 11, 1978 - Public meeting in Ignacio held to gather information and determine public concern.

November 24, 1978 - The public is notified of the project category designation (Intermediate) through advertisements in local newspapers.

February 6, 1979 - Air quality clearance from Colorado Division of Health is given for Project RS 0172(9).

October 1978 to February 1979 - Data gathering phase for environmental assessment. Writing of text and graphics work performed.

June 1979 - Archaeological survey performed.

August 1979 - Completion of Rough Draft Environmental Assessment.

January 1980 - Approval of Rough Draft Environmental Assessment.

CHRONOLOGY OF EVENTS

1870-1871 - ...
1872 - ...
1873 - ...
1874 - ...
1875 - ...
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1900 - ...

APPENDIX B

APPENDIX B

RS 0172 (9)
Ignacio North

STATE DEPARTMENT OF HIGHWAYS

JACK KINSLINGER

EXECUTIVE DIRECTOR

DIVISION OF HIGHWAYS
E. M. HAASE
CHIEF ENGINEER



DISTRICT B
C. A. MORAIN
DISTRICT ENGINEER

P. O. BOX 1961 - HIGHWAY BUILDING - DURANGO, COLORADO 81301 • (303) 259-1241
September 7, 1978

The current budget for the Division of Highways, State of Colorado, includes Project #RS 0172 (9), Ignacio North, which provides for preliminary economic, social, environmental and engineering studies for the eventual improvement of approximately 5.1 miles of State Highway 172 in La Plata County. The project begins at the North city limits of Ignacio and extends northerly towards Oxford a distance of 5.1 miles.

Current plans call for the eventual construction of a facility having two 12 foot driving lanes with 6 foot wide paved shoulders for a total paved width of 36 feet. There will be some minor alignment adjustments, and the project will require the acquisition of additional right of way, but it will not require the relocation of homes or businesses. Attached hereto is a vicinity map showing the general location of the project.

We are soliciting the views of all agencies, groups and individuals who we feel may be interested in or affected by the proposed development. This is to insure the maximum extent practical that the highway location and design reflect and are consistent with Federal, State and local goals and objectives. We would appreciate receiving any information you have or comments you wish to make regarding this highway improvement at your earliest convenience. This will enable us to consider them during this early planning stage.

The Division of Highways will be holding a preliminary public meeting to discuss this project on October 11, 1978 at 7:30 P.M. at the Pino Nuche Purasa Hotel in Ignacio, Colorado.

Please feel free to contact this office if further information is desired.

Very truly yours,
C. A. Morain
District Engineer

By *C. J. Watson*
C. J. Watson
Dist. Environmental Mgr.

CAU/CJM/pdw

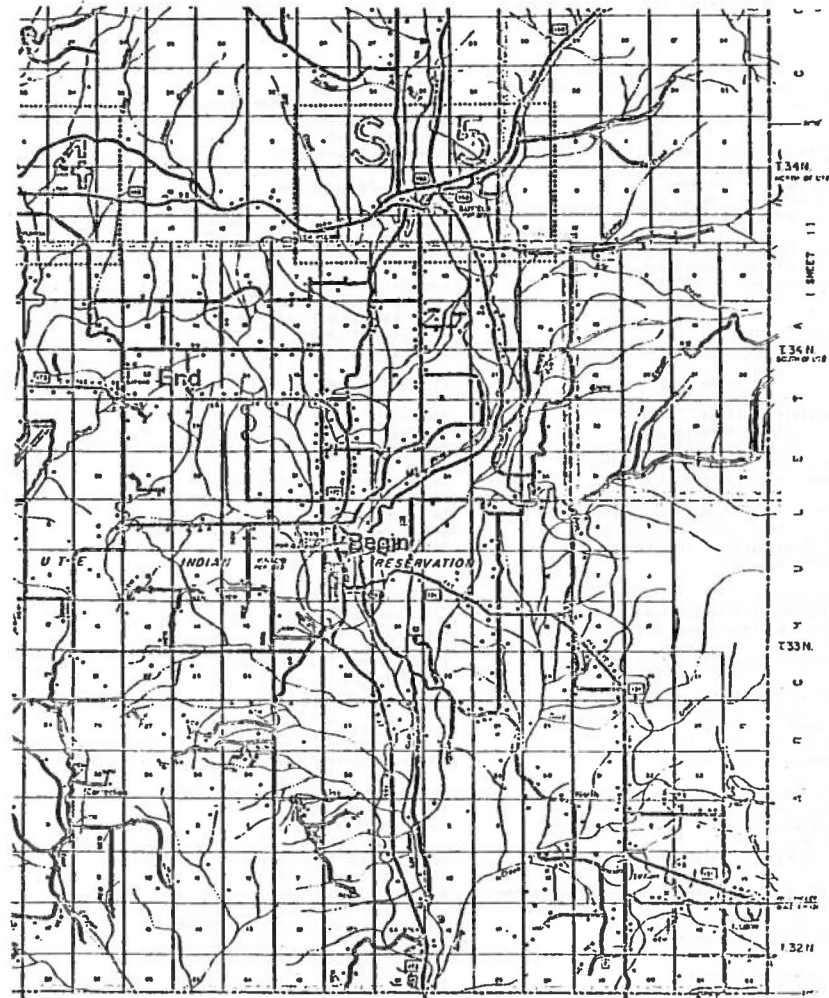
Enclosures

cc: Haase
Capron

P. D. Goodman
Morain/Dutton

J.H. Mayfield
Rex

Lave
File



RS0172(9) IGNACIO - NORTH

Copies of this letter sent to the following:

Project No. RS 0172 (9)
Ignacio North

Four Corners Environmental Research Unit
P.O. Box 435
Durango, Colorado 81301

Deputy Asst. Sec'y for Environmental Affairs
U.S. Department of Commerce
Main Commerce Building
14th and Constitution Ave.
Washington, D.C. 20230

State Director
Bureau of Land Management
1600 Broadway, Room 700
Denver, Colorado 80202

District Manager
Bureau of Land Management
P.O. Box 1269
Montrose, Colorado 81401

The District Chief
U.S. Geological Survey, WRD
Colorado District, Stop 415
Box 25046, Denver Federal Center
Denver, Colorado 80225

Chief, Environmental Impact Assessment Prog.
U.S. Geological Survey (IS-101)
U.S. Department of the Interior
Reston, Va. 22092

Area Manager
Fish and Wildlife Service
Federal Building, Room 2215
125 South State Street
Salt Lake City, Utah 84138

Regional Director
Rocky Mountain Region
National Park Service
655 Parfet Street, Box 25287
Denver, Colorado 80225

Region 4 Director
Bureau of Reclamation
125 South State St.
P.O. Box 11568
Salt Lake City, Utah 84147

Chief, Intermountain Field Operation Center
Bureau of Mines
Bldg. 20, Denver Federal Center
Denver, Colorado 80225

State Conservationist
Soil Conservation Service
P.O. Box 17107
Denver, Colorado 80217

Regional Director
Economic Development Administrator
Commerce Department
909 17th Street
Denver, Colorado 80202

Regional Administrator
Region VIII
Environmental Protection Agency
1860 Lincoln Street, Suite 900
Denver, Colorado 80203

Regional Director
Department of Health, Education & Welfare
10001 Federal Office Building
1961 Stout Street
Denver, Colorado 80202

District Engineer
Army Corps of Engineers
Sacramento District
650 Capitol Mall
Sacramento, California 95814

Phillip H. Schmuck, Director
State Clearinghouse, Dept. of Local Affairs
Colorado Division of Planning
520 State Centennial Building
1313 Sherman Street
Denver, Colorado 80203

Hr. Bill E. Roundtree
7156 County Road 240
Durango, Colorado 81301

Colorado Open Space Council
1325 Delaware
Denver, Colorado 80204

Rocky Mountain Historists (AAA)
4100 East Arkansas Avenue
Denver, Colorado 80222

Colorado Motor Carriers Association
4060 Elati Street
Denver, Colorado 80216

Keep Colorado Beautiful
4260 East Evans Avenue
Denver, Colorado 80222

Sierra Club, Rocky Mountain Chapter
1325 Delaware
Denver, Colorado 80204

Audubon Society
1325 Delaware
Denver, Colorado 80204

League of Women Voters of Colorado
1600 Race Street
Denver, Colorado 80206

Colorado Trout Unlimited
4260 East Evans
Denver, Colorado 80222

Colorado Assn. of Commerce and Industry
1390 Logan, Suite 300
Denver, Colorado 80203

Colorado Society of Architects
1426 Larimer Street
Denver, Colorado 80202

Trail Users Council of Colorado, Inc.
Bernard L. Reymond, President
4845 East Kansas Drive
Denver, Colorado 80222

Hr. Jim Donaghan
Governor's Office
State Capitol Building
Denver, Colorado 80203

Air Pollution Control Division
Colorado Department of Health
4210 East 11th Avenue
Denver, Colorado 80220

Water Quality Division
Colorado Department of Health
4210 East 11th Avenue
Denver, Colorado 80220

Colorado State Engineer
Water Resources
7th Floor, State Centennial Bldg.
1313 Sherman Street
Denver, Colorado 80203

State Board of Land Commissioners
6th Floor, State Centennial Bldg.
1313 Sherman Street
Denver, Colorado 80203

State Historical Society of Colorado
State Museum Building
200 14th Avenue
Denver, Colorado 80203

Office of the State Archaeologist
Denver University, Pioneer Hall
2199 S. University Blvd.
Denver, Colorado 80210

Colorado Soil Conservation Board
8th Floor, State Centennial Bldg.
1313 Sherman Street
Denver, Colorado 80203

Colorado Department of Natural Resources
7th Floor, State Centennial Bldg.
1313 Sherman Street
Denver, Colorado 80203

Colorado Division of Wildlife
6060 Broadway
Denver, Colorado 80216

Colorado Division of Parks & Outdoor Recreation
8th Floor, State Centennial Bldg.
1313 Sherman Street
Denver, Colorado 80203

Colorado Water Conservation Board
8th Floor, State Centennial Bldg.
1313 Sherman Street
Denver, Colorado 80203

Commissioner of Agriculture
Colorado State Agricultural Department
State Services Building, Room 406
1525 Sherman Street
Denver, Colorado 80203

Colorado State Forest Service
Colorado State University
Fort Collins, Colorado 80521

Division of Commerce and Development
5th Floor, State Centennial Bldg.
1313 Sherman Street
Denver, Colorado 80203

Four Corners Regional Commission
Suite 238, Petroleum Bldg.
3535 E. 30th Street
Farmington, New Mexico 87401

Navajo Trail Association
P.O. Box 472
Monte Vista, Colorado 81144

Board of County Commissioners
La Plata County Courthouse
Durango, Colorado 81701

Supervisor
U.S.D.A., Forest Service
San Juan National Forest
P.O. Box 341
Durango, Colorado 81301

P.B.R.
Regional Planning
965 1/2 Main Avenue
Durango, Colorado 81301

San Juan Regional Commission
1911 North Main Avenue
Durango, Colorado 81301

Regional Director
Heritage Conservation and Recreation Service
Box 25387, Denver Federal Center
Denver, Colorado 80225

Superintendent
Consolidated Ute Indian Agency
Ignacio, Colorado 81137

Mr. Paul Canatsey
La Plata County Engineer
La Plata County Courthouse
Durango, Colorado 81301

La Plata Electric Association, Inc.
P.O. Box 1051
Durango, Colorado 81301

District Engineer
Mountain Bell Telephone Company
P.O. Box 2688
Grand Junction, Colorado 81501

Western Slope Gas Company
26266 State Highway 160
Durango, Colorado 81301

Form No. 37
(05-66) 2
April, 1973

Project No. RS 0172(9)
Ignacio - North
DIVISION OF HIGHWAYS, STATE OF COLORADO

DISTRICT NUMBER V

Durango Colorado October 12 1973

TO: D. L. Vernon
FROM: C. A. Horain
SUBJECT: Transmittal of Proof of Publication

We are herewith forwarding two copies of the Proof of Publication for a public notice which announced the holding of a public meeting for Project No. RS 0172(9), Ignacio - North.

The notice was published on September 17 and October 6, 1973, in The Durango Herald.

C. A. Horain
District Engineer

by 
C. J. Watson
District Environmental Manager

Encl.

CJH/ba

cc: P. D. Goodman w/copy
Horain/Dutton "
J. H. Hpyfield "
L. H. Hpyfield "
L. H. Hpyfield "

PROOF OF PUBLICATION

County of La Plata, }
State of Colorado }

DURANGO HERALD

P.O. BOX 61, DURANGO, COLORADO 81301
SUNDAY, Durango-Cortez Herald

I, Shelley N. Hale, do solemnly swear that I am the LEGAL NOTICE SUPERVISOR of the Durango Herald, and that I have personal knowledge of the essential facts stated herein; that the same is a daily newspaper printed in whole, and published in the County of La Plata, State of Colorado, and has a general circulation therein; that said newspaper has been published continuously and uninterruptedly in said County of La Plata for a period of more than twelve months next prior to the first publication of the annexed legal notice or advertisement; that said newspaper has been admitted to the United States mails as second-class matter under a provision of the Act of March 3, 1879, or any amendments thereof, and that said newspaper is a daily newspaper duly qualified for publishing legal notices and advertisements within the meaning of the laws of the State of Colorado.

That the annexed legal notice or advertisement was published in the regular and entire editions of said daily newspaper one time only.

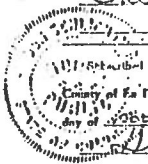
A. D. 19 1978;
once each day for consecutive four days; once each week on the same day of each week for the period of consecutive insertions; and that the first publication of said notice was in the issue of said newspaper dated September 17

A. D. 19 78, and that the last publication of said notice was in the issue of said newspaper dated October 6

A. D. 19 78.

In witness whereof I have hereunto set my hand this 9th day of October, A. D. 19 78

Shelley N. Hale



and signs before me, a notary public in and for the County of La Plata, State of Colorado this 9th day of October, A. D. 19 78

Don Selchlichter
Notary Public

My Commission expires April 28, 19 82

Public Notice
Colorado Division of Highways
District 1
The Colorado Division of Highways will hold a public meeting to obtain public input concerning Project No. RS 0172 (9), Ignacio-North. This meeting will be held at 1:00 p.m. on Wednesday, October 10, 1978 in the meeting room of the Pine Hedges Hotel in Durango, Colorado.
Project 17, 0172 (9), Ignacio North, begins at the north city limits of Ignacio and extends northwesterly towards Durango a distance of 1.5 miles. The project calls for the construction of a new facility that will have 12 lanes with separate north and south shoulders for a total width of 60 feet. The project will require the acquisition of an additional right-of-way but will not require the relocation of any houses or business lots.
Representatives of the Colorado Division of Highways will be on hand to discuss the project development and scheduling with maps and sketches showing the proposed project for the project to cost project or pertinent information developed by the Division of Highways.
C. A. Morsin
District Engineer
Published September 17, October 6, 1978

DDH Form No. 37
(05-70) 2
Apr 11, 1973

Project No. RS 0172(9)
Ignacio - North
DIVISION OF HIGHWAYS, STATE OF COLORADO
DISTRICT NUMBER V

Durango Colorado November 29 19 78

TO: D. L. Vernon
FROM: C. A. Morsin
SUBJECT: Transmittal of Proof of Publication

We are herewith forwarding two copies of the Proof of Publication for a public notice which announced category designation for project No. RS 0172(9), Ignacio - North.

The notice was published in the Durango Herald on November 26, 1978.

C. A. Morsin
District Engineer
by C. J. Watson
C. J. Watson
District Environmental Manager

Encis.
CJM/ba
cc: Masse/Capron/Cox
F. D. Goodman w/copy
Morsin/Dutton "
J. H. Mayfield "
Lacy/TK file "

RECEIVED
DIST. 5-DURANGO
OCT 11 1978

PUBLIC NOTICE
 COLORADO DIVISION OF HIGHWAYS
 Current Projects in District 5

The following project is included in the 1978-79 fiscal year budget for District 5 of the Colorado Division of Highways. This project has been placed in the Intermediate category of three categories of action which are based upon the extent to which projects affect factors of economic, social and environmental significance in the area. This notification is in compliance with the Colorado Division of Highways Action Plan pursuant to the Federal Highway Act of 1970 Section 135-B, Section 109-A Title XXIII United States Code.

An Intermediate project generally provides for extensive construction on a highway facility but would not require large amounts of new right of way or relocation of homes or businesses. An Intermediate project may significantly change the function of a road but generally economic, social and environmental effects would be insignificant.

Project PS 0172(9), Ignacio - North, begins at the north city limits of Ignacio and extends northwesterly towards Durango a distance of 5.1 miles. The project calls for the construction of a new facility that will have two 12-foot driving lanes with 6-foot wide paved shoulders for a total paved width of 36 feet. The project will require the acquisition of additional right of way but will not require the relocation of homes or businesses.

When new information is available interested parties who have requested to be kept informed will be notified of changes regarding this project by District 5. If any individual, group or organization is interested in receiving information and wishes to be placed on the district's mailing list for one year, please send your name, address and concern to the Colorado Division of Highways, P.O. Box 1551, Durango, CO 81301.

C. A. Varola
 District Engineer

Published in The Durango Herald
 November 24, 1978

PROOF OF PUBLICATION

County of La Plata, }
 State of Colorado }

DURANGO HERALD
 P.O. BOX 61, DURANGO, COLORADO 81301
 SUNDAY, Durango-Cortez Herald

Legal Notices Supervisor

I, Shelley H. Hale, do solemnly swear that I am the _____ of the Durango Herald, and that I have personal knowledge of the essential facts stated herein; that the same is a daily newspaper printed in whole, and published in the County of La Plata, State of Colorado, and has a general circulation therein; that said newspaper has been published continuously and uninterrupted in said County of La Plata for a period of more than twelve months next prior to the first publication of the aforesaid legal notice or advertisement; that said newspaper has been admitted to the United States mails as second class matter under a provision of the Act of March 3, 1879, or any amendments thereof, and that said newspaper is a daily newspaper duly qualified for publishing legal notices and advertisements within the meaning of the laws of the State of Colorado.

That the aforesaid legal notice or advertisement was published in

the regular and entire editions of said daily newspaper on the only,

November 24 _____ A. D. 19 78

once each day for _____ consecutive issue days; once each week on

the same day of each week for the period of _____

consecutive insertions; and that the first publication of said notice was in the

issue of said newspaper dated _____

A. D. 19 _____, and that the last publication of said notice was in the issue

of said newspaper dated _____

A. D. 19 _____

In witness whereof I have hereunto set my hand this 24th

day of November _____ A. D. 19 78

Shelley H. Hale

Subscribed and sworn before me, a notary public in and for the

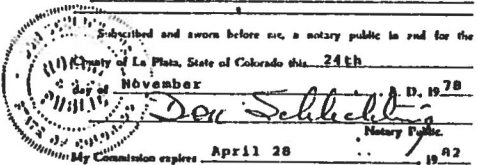
County of La Plata, State of Colorado this 24th

day of November _____ A. D. 19 78

Don Schlichting

Notary Public

My Commission expires April 28 19 82



PUBLIC NOTICE
 COLORADO DIVISION OF HIGHWAYS
 Current Projects in District 5
 The following project is included in the 1978-79 fiscal year budget for District 5 of the Colorado Division of Highways. This project has been placed in the Intermediate category of three categories of action which are based upon the extent to which projects affect factors of economic, social and environmental significance in the area. This notification is in compliance with the Colorado Division of Highways Action Plan pursuant to the Federal Highway Act of 1970 Section 135-B, Section 109-A Title XXIII United States Code.
 An Intermediate project generally provides for extensive construction on a highway facility but would not require large amounts of new right of way or relocation of homes or businesses. An Intermediate project may significantly change the function of a road but generally economic, social and environmental effects would be insignificant.
 Project PS 0172(9), Ignacio - North, begins at the north city limits of Ignacio and extends northwesterly towards Durango a distance of 5.1 miles. The project calls for the construction of a new facility that will have two 12-foot driving lanes with 6-foot wide paved shoulders for a total paved width of 36 feet. The project will require the acquisition of additional right of way but will not require the relocation of homes or businesses.
 When new information is available interested parties who have requested to be kept informed will be notified of changes regarding this project by District 5. If any individual, group or organization is interested in receiving information and wishes to be placed on the district's mailing list for one year, please send your name, address and concern to the Colorado Division of Highways, P.O. Box 1551, Durango, CO 81301.
 C. A. Varola
 District Engineer
 Published in the Durango Herald, November 24, 1978.

RECEIVED
 DIST. 5-DURANGO
 NOV 26 1978

DURANGO HERALD FORM 94 10 5/78

Office of the
State Archaeologist
839-3391



COLORADO
HISTORICAL
SOCIETY

The Colorado Heritage Center 1300 Broadway Denver, Colorado 80203

September 14, 1978

Mr. Carl J. Watson
District Environmental Manager
District 5
State Department of Highways
P.O. Box 1551
Durango, CO 81301

RE: Project No. RS 0172 (9) Ignacio North, Colorado Division of
Highways, Improvement of 5.1 miles of State Highway 172 in
La Plata County.

Dear Mr. Watson:

This office has received and reviewed Project No. RS 0172 (9),
Colorado Division of Highways improvement of 5.1 miles of State
Highway 172 in La Plata County.

It is our suggestion that prior to any disturbance, you contact
the Highway Department's Archaeologist, Mr. John Gooding, in the
Colorado Department of Highway's state offices, to recommend action
that would comply with all the federal mandates, Executive Order
11593 and the National Historic Preservation Act of 1976 as imple-
mented in 36 CFR 800, concerning Cultural Resource Management.

Thank you for the opportunity to comment on the above project.

If this office can be of further assistance to you, please
feel free to call upon ES Reviewer Betty LeFree (Office of the State
Archaeologist) at 839-3391.

Sincerely

for Arthur C. Wimbend
State Historic Preservation Officer

ACT(BJI):ng
cc: Dr. Bruce Rippeteau; State Archaeologist
Mr. James Hartmann; Coordinator Historic Preservation
John Gooding; CDH
Stephen O. Ellis, Clearinghouse

RECEIVED
DIST. 5 DURANGO

SEP 27 1978

STATE OF COLORADO
DEPARTMENT OF HIGHWAYS
4201 EAST ARKANSAS AVENUE
DENVER, COLORADO 80222

RICHARD D. LAMM
GOVERNOR
JACK KINSTLINGER
EXECUTIVE DIRECTOR
E. N. HAASE
CHIEF ENGINEER

TO: C. A. Morain Attention: Carl Watson
FROM: F. Goodman/J. Gooding / A. Kihm
RE: Paleontological Survey on Ignacio-North, Project RS-0172(9)
Subaccount 79059
DATE: June 18, 1979

The ROW for the proposed alignment of SH 172 was surveyed on
June 12th and 13th, 1979, by CDOW personnel. Allen J. Kihm, CDOW staff
paleontologist, conducted the survey. All rock outcrops on the ROW were
surveyed for paleontological resources. The entire ROW was surveyed;
however, the only outcrops were located in section 29, T34N, R7W,
La Plata County, Colorado.

The only rock unit represented in outcrop in the Animas Formation.
The beds are predominantly variegated sandy shale or clay shale with
interbedded brown sandstone lenses. The unit as a whole, crosses the
Cretaceous - Tertiary boundary in age and as such, fossils are
important because of their relationship to the time when dinosaurs died out
and mammals became the dominant life form.

Fossils have been found in the Animas Formation including the type
specimen (the individual upon which a new species is named) of
Almonesys annexa, taken from approximately 6 miles northwest of the
project area (Hay, O.P., 1910. Description of eight new species of fossil
turtles from west of the one hundredth meridian. Proc. U.S. Nation. Mus.
vol. 38 (1747): 307-326). In addition, dinosaur material has been
reported from the unit (Simpson, C.G., 1950. Cenozoic formations and
vertebrate faunas. In: Guidebook for the fourth field conference of the
Society of Vertebrate Paleontology in northwestern New Mexico. E.H. Colbert
and S. A. Northrop, eds., pp. 74-85).

The amount of fossil material found in the formation is low and no
fossils were found during this survey. As a result it is concluded that
the construction of this project will have NO ADVERSE AFFECT. However,
the possibility remains that fossils could be encountered during
construction. If this occurs, the CDOW staff paleontologist at this
office should be notified immediately.

Allen J. Kihm
Staff Paleontologist

JG/nc

cc: OF
CF
RF



AS 172(7)
COLORADO STATE DEPARTMENT OF HIGHWAYS

January 7, 1980

*com
Cip*

Dr. Bruce Rippeteau
 Office of the State Archaeologist
 Colorado Heritage Center
 1300 Broadway
 Denver, Colorado 80203

Attention: Ms. Betty LeFree

Dear Dr. Rippeteau:

Enclosed herein is a copy of Colorado Highway Salvage Report No. 30, a report of the results of an archaeological survey of the proposed widening and realignment of Colorado Highway 172 near Ignacio. Eight prehistoric archaeological sites were recorded. Three of these sites were tested. We request concurrence from your office that: a) sites 5LP262, 5LP263, and 5LP264 are eligible for nomination to the National Register; and b) our proposed mitigation plan for all sites is appropriate.

Site Eligibility: It is our opinion that sites 5LP262, 5LP263, and 5LP264 meet the criteria for nomination to the National Register of Historic Places in that they are likely to yield information important to the prehistoric record. On this same basis, sites 5LP258, 5LP259, 5LP260, 5LP261, and 5LP265 do not meet the criteria. Site 5LP258 has been rendered insignificant by recovery of artifactual material which, left in place, would have given the site significance. Surface artifactual materials seen on sites 5LP259, 5LP260, 5LP261, and 5LP265 are not sufficiently diagnostic to render these sites significant; there are no indications of potentially productive sub-surface levels at any of these sites or at site 5LP258.

The prehistory of the immediate area is not well known. Only one site, LA2605, has been professionally excavated in the immediate area (Fenega and Wendorf, 1956). A number of sites similar in cultural affiliation have been professionally excavated in association with the Navajo River Project conducted during the early 1960's, as described in this letter and the accompanying report, but these are a significant distance from the area here in question. Therefore, the professional excavation, data analysis and reporting of the sites adversely affected by this project would not only be extremely valuable in elucidating the prehistoric cultural processes of this specific area, but would also be quite useful in clarifying the temporal and cultural relationships of the prehistoric human populations in the general area.

Statements of Significance: Only a very limited number of archaeological investigations have been conducted in and relevant reports written on the area surrounding Ignacio. Because of this lack of studies, the cultural chronology of the immediate survey area is poorly defined. Local prehistory

RECEIVED
 DIST. B. DURAND
 JAN 11 1980

4201 EAST ARKANSAS AVENUE DENVER, CO 80222 (303) 757-9525



**COLORADO
 HISTORICAL
 SOCIETY**

Ms. LeFree

The Colorado Heritage Center 1300 Broadway Denver, Colorado 80203

January 21, 1980

Harvey R. Atchison
 Director
 Division of Transportation Planning
 Colorado State Department of Highways
 4201 East Arkansas
 Denver, CO 80222

Dear Mr. Atchison:

This office has received and reviewed the Colorado State Department of Highway's request for concurrence in their determination (a) that archaeological sites 5LP262, 263 and 264 are eligible to the National Register of Historic Places, and (b) there will be a "No Adverse Effect" on these resources in accordance with the Advisory Council on Historic Preservation's "No Adverse Effect" determinations for Archaeological Resources.

Based on the information supplied in the correspondence of January 7, 1980, from CDH, I find that sites 5LP262, 263 and 264 are eligible to the National Register of Historic Places according to criteria (d) (36 CFR 60.6).

I also find that in place preservation of these properties is not necessary to fulfill purposes set forth in the State Historic Preservation Plan. Therefore, I concur that the CDH "No Adverse Effect" determination meets the criteria set forth in Parts I and II of the Advisory Council on Historic Preservation guidelines in accordance with 36 CFR 800.

Documents of this concurrence should be forwarded to the Keeper of the National Register and the Advisory Council.

If this office can be of further service, please do not hesitate to call upon Head of Compliance Betty LeFree (Office of the State Archaeologist) at 839-3391.

Sincerely,

 Arthur C. Townsend
 State Historic Preservation Officer

ACT(RJL):ng
 cc: B. Rippeteau, State Archaeologist
 J. Hartmann, Coordinator, Historic Preservation
 L. Wall, Advisory Council on Historic Preservation

RECEIVED
 DIST. B. DURAND
 JAN 30 1980



Office of
Chief

United States Department of the Interior

BUREAU OF MINES

BUILDING 20, DENVER FEDERAL CENTER
DENVER, COLORADO 80225

Intermountain Field Operations Center

September 15, 1978

Mr. C. J. Watson *CJW*
District Environmental Manager
State Department of Highways
P. O. Box 1551
Durango, Colorado 81301

Dear Mr. Watson:

Thank you for your letter dated September 7 in which you solicited comments on the State Department of Highway's plans for improving approximately 5.1 miles of State Highway 172 in La Plata County.

Because the project involves improvement of an existing highway, we foresee no major conflicts between the project and the mineral sector of the economy. Therefore, we have no objections to the planned improvement of this portion of State Highway 172.

Sincerely yours,

John L. Reuss, Acting Chief
Intermountain Field Operations Center

cc: Special Assistant to the Secretary,
Missouri Basin Region, Denver, Colo.



RECEIVED
MAY 8 1978
SEP 16 1978

STATE DEPARTMENT OF HIGHWAYS

JACK KINSTLINGER

EXECUTIVE DIRECTOR

DIVISION OF HIGHWAYS
E. N. HAASE
CHIEF ENGINEER



STATE OF COLORADO

4201 EAST ARKANSAS AVENUE • DENVER, COLORADO 80222 • (303) 737-6011

September 19, 1978

Mr. William Auberle, Director
Air Pollution Control Division
Colorado Department of Health
4210 East 11th Avenue
Denver, Colorado 80220

22-04-04

Am
cc Watson
COLORADO STATE PATROL
COL. C. WAYNE KEITH,
CHIEF
C-C
cc: Morin
EWD

Dear Mr. Auberle:

We are in the process of evaluating the Environmental Impact of a proposed highway project, RS 0172(9), Ignacio-North. The project calls for upgrading the present facility with two 12 foot driving lanes with 6 foot paved shoulders for a total paved width of 36 feet. There will be some minor alignment adjustments and the project will require the acquisition of additional right-of-way, but it will not require the relocation of homes or businesses. The project begins at the north city limits of Ignacio and extends northerly toward Oxford for a distance of 5.1 miles along SH 172.

Average daily traffic volume in 1978 was 3100. Projected 1998 traffic volumes increase by 40 percent giving a predicted volume of 4340. Thus, due to the low traffic volume and the fact that the capacity of the road will not be appreciably changed, we believe that this project will not significantly alter the air quality of the area.

Your review and comment on this project is requested.

Very truly yours,

Jack Kinstlinger
Executive Director

H. K. Patterson
Harvey K. Patterson
Director
Division of Transportation Planning

DED/mss

cc: E. N. Haase
Vetsy Goodman
R. F.
File

RECEIVED
SEP 25 1978



COLORADO DEPARTMENT OF HEALTH

4210 EAST 11TH AVENUE DENVER, COLORADO 80220 PHONE 320-8333
Anthony Robbins, M.D., R.P.A. Executive Director

September 19, 1978

State Department of Highways
P.O. Box 1551
Highway Building
Durango, Colorado 81301

ATTENTION: Mr. C.A. Morain
District 5
District Engineer

RE: Proposed Highway Improvement
Project ERS 0172 (9), Ignacio
North, La Plata County.

Gentlemen:

The Air Pollution Control Division has no comment regarding the proposed project, other than to advise the Highway Department that a fugitive dust permit must be obtained from the Division prior to commencement of construction.

Appropriate application forms are enclosed for your convenience. These should be filled out and submitted along with a \$40.00 filing fee. Should you have any questions, please do not hesitate to contact me at 320-4180, Extension 4129.

Very truly yours,

A.C. Bishard, P.E., Chief
Stationary Sources Section
Air Pollution Control Division

By:

J. Plog
J. Plog, P.E.
Air Pollution Control Engineer
Air Pollution Control Division

JP:pic
cc: S. Miller-APCD/Grand Junction
Engineer, Pollution Control

RECEIVED
DIST. S. DURANT, U

SEP 20 1978

Watson Cam

RICHARD D. LAMM
GOVERNOR



COLORADO GEOLOGICAL SURVEY
DEPARTMENT OF NATURAL RESOURCES
715 STATE CENTENNIAL BUILDING - 1313 SHERMAN STREET
DENVER, COLORADO 80202 PHONE (303) 819 2611

JOHN R. ROLD
Director

September 22, 1978

Mr. Stephen O. Ellis
Colorado Clearing House
Colorado Division of Planning
1313 Sherman St., Room 520
Denver, CO 80203

Dear Mr. Ellis

RE: IGNACIO NORTH-HIGHWAY
IMPROVEMENTS

We have reviewed the proposal for highway improvement for State Highway 172 in La Plata County. There appears to be no geologic reason why this proposal should not be approved assuming that the appropriate geotechnical concerns are handled during the planning and construction.

If we can be of further assistance, please contact our office.

Sincerely,

David C. Shelton
David C. Shelton
Engineering Geologist

DCS/ds

SEP 22 1978

GEOLOGY
STORY OF THE PAST . . . KEY TO THE FUTURE



United States Department of the Interior

IN REPLY REFER TO
(164)

BUREAU OF LAND MANAGEMENT
San Juan Resource Area Headquarters
Federal Building, Room 104
701 Camino del Rio
Durango, Colorado 81301

September 25, 1978

CO State Department of Highways
Mr. C. J. Watson
District Environmental Manager
P. O. Box 1551
Durango, Colorado 81301

Dear Mr. Watson:

The project proposed in your letter dated September 7, 1978, will not effect any lands or programs that are managed by this agency.

We appreciate the opportunity you have given us to respond to this request.

Sincerely yours,

Jerry D. Kendrick
Jerry D. Kendrick
Area Manager



Save Energy and You Serve America!

RECEIVED
DIST. 8 - DURANGO
SEP 26 1978



DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
880 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814

REPLY TO
ATTENTION OF

SPKED-W

Watson
EJC *Cam*

26 September 1978

Mr. C. A. Morain
District 5 Engineer
Colorado Department of Highways
P. O. Box 1551
Durango, Colorado 81301

Dear Mr. Morain:

This is in response to your 7 September 1978 letter requesting our review comments on the proposed highway improvement, Project #RS 0172 (9), Ignacio North, in La Plata County, Colorado.

There are no Corps of Engineers flood control projects or investigations which would be affected by the project; however, we recommend that new or modified drainage structures be sized to avoid restrictions which could cause increased flood damages. Further, if there is to be fill material placed in a waterway or wetland area, a Department of Army Permit under the Clean Water Act, (33 USC 1344), as amended, may be required, and such activities should be coordinated with our office.

We appreciate the opportunity to comment on the proposed project.

Sincerely yours,

Joseph D. Carstensen
JOSEPH C. WARELL
Chief, Engineering Division

RECEIVED
DIST. 8 - DURANGO
OCT 3 1978

WESTERN SLOPE GAS COMPANY
P. O. BOX 478
DURANGO, COLORADO 81301

October 5, 1978

Colorado State Department of Highways
P.O. Box 1551
Highway Building
Durango, Colorado 81301

Attn: Mr. C. J. Watson *CJW*

Dear Sir:

This letter is to inform you of a possible conflict of our facilities with your Project #RS 0172(9), Ignacio North. Our 2" steel Bayfield line crosses Highway 172 north of Ignacio in the vicinity of County roads 316 and 509. The exact location and depth of this line is best determined at the location. We will be glad to do this as requested by you or your contractor.

We would appreciate your keeping us informed of the progress of this project.

Sincerely,

Roger A. Miller

Roger A. Miller
Superintendent

A. H. Rex

RECEIVED
DIST. 9 - DURANGO
OCT 10 1978



Department of Local Affairs
Colorado Division of Planning

Philip H. Schmuck, Director



Richard D. Lamm, Governor

October 12, 1978

Mr. C. A. Mornin
District Engineer
Division of Highways
P. O. Box 1551
Durango, Colorado 81301

SUBJECT: Project RS 0172(9), Ignacio North

Dear Mr. Mornin:

The Colorado Clearinghouse received your notice of the commencement of planning for the above-referenced project and has circulated it to interested state agencies for their review. The comments resulting from the review are enclosed.

Thank you for the opportunity to participate in your planning.

Very truly yours,

Stephen O. Ellis
Stephen O. Ellis
Principal Planner

SE/CSJ/vt
Enclosure

cc: Office of the Governor
Department of Natural Resources
Department of Highways
San Juan Regional Commission

RECEIVED
DIST. 9 - DURANGO
OCT 16 1978

520 State Centennial Building, 1313 Sherman Street, Denver, Colorado 80203 (303) 492-2351

STATE OF COLORADO
Richard D. Lamm, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
Jack R. Orleb, Director
6090 Broadway
Denver, Colorado 80216 (825-1192)



October 3, 1978

TO: Stephen O. Ellis, Principal Planner
Colorado Clearinghouse

FROM: *Ivan Wescoatt*
Ivan Wescoatt, Wildlife Environmentalist
Colorado Division of Wildlife

SUBJECT: Ignacio North - Highway Improvements
STATE DEPARTMENT OF HIGHWAYS RS 0172(9)

The highway improvements, as planned, should not cause any additional impacts on wildlife. We assume normal rehabilitation will be included as part of the project.

We appreciate being notified of the proposal.

dih

cc: Bob Rosette

OCT 05 1978

DIV. OF PLANNING

DEPARTMENT OF NATURAL RESOURCES, Harris Sherman, Executive Director • WILDLIFE COMMISSION, Vernon C. Williams, Chairman
Thomas Farley, Vice Chairman • Sam Caudill, Secretary • Jean K. Tool, Member • Roger Clark, Member

STATE OF COLORADO
Richard D. Lamm, Governor
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WILDLIFE
Jack R. Orleb, Director
6090 Broadway
Denver, Colorado 80216 (825-1192)



October 31, 1979

Mr. Carl Watson
Highway Engineer
Colo. Div. of Highways
Durango, Colo. 81301

Dear Carl,

You recently inquired about the value of wetlands along Colorado Highway 172 between Oxford and Ignacio in reference to a proposed highway widening project.

The several wetlands along Colorado 172 are small, less than 2 or 3 acres each on the average, fed by irrigation runoff and are on the order of about 100 to 200 feet wide at most. Private agricultural practices in some places have reduced the amount of wetland on the private lands adjacent to the right of way.

The combined wetlands do provide nesting cover for about 3 to 5 broods of ducks each year and numerous red-winged blackbirds and a few species of songbirds.

In summary, your proposed project will have minimal effect on the current wildlife species as the highway improvements, as I am aware of them, will not reduce the existing wetlands by any significant amount.

Sincerely,

Gene Bassett
Gene Bassett
District Wildlife Manager
Bayfield, Colorado

DEPARTMENT OF NATURAL RESOURCES, Harris Sherman, Executive Director • WILDLIFE COMMISSION, Vernon C. Williams, Chairman
Thomas Farley, Vice Chairman • Sam Caudill, Secretary • Jean K. Tool, Member • Roger Clark, Member



COLORADO DEPARTMENT OF HEALTH

4210 EAST 11TH AVENUE DENVER, COLORADO 80220 PHONE 320-8333

CCI MORAIN

CSD

February 6, 1979

xc Watson

M. H. Adair
Mrs. G. Ashby
Mr. Donald

USA
Mr. Harvey R. Atchison, Director
Division of Transportation Planning
Colorado Department of Highways
4201 East Arkansas Avenue
Denver, Colorado 80222

RE: State Highway 172, from Ignacio North
Project RS 0172 (9)

Dear Mr. Atchison:

We have reviewed the project description of Project RS 0172 (9), State Highway 172 from Ignacio north toward Oxford.

We concur with the Department of Highways' conclusion that the impact of the project on air quality should be minimal. Accordingly, air quality should not be a substantive issue in the assessment of the project, and we do not consider it necessary that an air quality analysis report be prepared for the project.

We appreciate the opportunity to review this project. We apologize for our late response to it.

Sincerely,

Stephen M. Kelsey
Senior Planner
Air Pollution Control Division

SIK:dg

RECEIVED
DIST. B. DURANVILLE
FEB 16 1979

STATE OF COLORADO
DEPARTMENT OF HIGHWAYS
4201 EAST ARKANSAS AVENUE
DENVER, COLORADO 80222

Richard B. Lamm
GOVERNOR
Jack Kinstlinger
EXECUTIVE DIRECTOR
E. N. Haase
CHIEF ENGINEER

CLM

CSD
CME

TO: C. A. Morain Attention: Carl Watson
FROM: P. Goodman/J. Gooding / A. Kiha
RE: Paleontological Survey on Ignacio-North, Project RS-0172(9)
Subaccount 79059
DATE: June 18, 1979

The ROW for the proposed alignment of SH 172 was surveyed on June 12th and 13th, 1979, by CDOR personnel. Allen J. Kiha, CDOR staff paleontologist, conducted the survey. All rock outcrops on the ROW were surveyed for paleontological resources. The entire ROW was surveyed; however, the only outcrops were located in section 29, T34N, R7W, La Plata County, Colorado.

The only rock unit represented in outcrop in the Animas Formation. The beds are predominantly variegated sandy shale or clay shale with interbedded brown sandstone lenses. The unit as a whole, crosses the Cretaceous - Tertiary boundary in age and as such, fossils are important because of their relationship to the time when dinosaurs died out and mammals became the dominant life form.

Fossils have been found in the Animas Formation including the type specimen (the individual upon which a new species is named) of *Alamosensu annexa*, taken from approximately 6 miles northwest of the project area (Hay, O.P., 1910. Description of eight new species of fossil turtles from west of the one hundredth meridian. Proc. U.S. Nation. Mus. vol. 38 (1917): 307-326). In addition, dinosaur material has been reported from the unit (Simpson, G.G., 1950. Cenozoic formations and vertebrate faunas. In: Guidebook for the fourth field conference of the Society of Vertebrate Paleontology in northwestern New Mexico. E.M. Colbert and S. A. Northrop, eds., pp. 74-85).

The amount of fossil material found in the formation in low and no fossils were found during this survey. As a result it is concluded that the construction of this project will have NO ADVERSE EFFECT. However, the possibility remains that fossils could be encountered during construction. If this occurs, the CDOR staff paleontologist at this office should be notified immediately.

Allen J. Kiha
Staff Paleontologist

JG/nc

cc: OF
CF
RF

APPENDIX C

APPENDIX C

**** PARTIAL LISTING OF MAMMALS WITHIN
PROJECT CORRIDOR**

Mule Deer	<i>Odocoileus hemionus</i>
Elk	<i>Cervus canadensis</i>
Bobcat	<i>Lynx rufus</i>
Mountain Lion	<i>Felis concolor</i>
Striped Skunk	<i>Mephitis mephitis</i>
Badger	<i>Taxidea Taxus</i>
Mink	<i>Mustela vison</i>
Long-tailed Weasel	<i>Mustela frenata</i>
Ermine	<i>Musela erminea</i>
Marten	<i>Martes americana</i>
Black Bear	<i>Ursus americanus</i>
Raccoon	<i>Procyon lotor</i>
Red Fox	<i>Vulpes vulpes</i>
Coyote	<i>Canis latrans</i>
Porcupine	<i>Erethizon dorsatum</i>
Muskrat	<i>Ondatia zibethicus</i>
Beaver	<i>Castor canadensis</i>
Chickaree	<i>Tamiasciurus hudsonicus</i>
Abert's Squirrel	<i>Aciurus aberti</i>
Gunnison's Prairie Dog	<i>Cynomys gunnisoni</i>
Golden-mantled Ground Squirrel	<i>Spermophilus lateralis</i>
Yellow-bellied Marmot	<i>Marmota flaviventris</i>
Colorado Chipmunk	<i>Eutamias quadrivittatus</i>
Least Chipmunk	<i>Eutamias minimus</i>
White-tailed Jackrabbit	<i>Lepus townsendii</i>
Nuttall's Cottontail	<i>Sylvilagus nuttallii</i>
Northern Pocket Gopher	<i>Thomomys talpoides</i>
Water Shrew	<i>Sorex palustris</i>
Wandering Shrew	<i>Sorex vagrans</i>
Marsh Shrew	<i>Sorex cinereus</i>
Townsend's Big-eared Bat	<i>Plecotus townsendii</i>
Western Jumping Mouse	<i>Zapus princeps</i>
Deer Mouse	<i>Peromyscus maniculatus</i>
Bushy-tailed Woodrat	<i>Neotoma cinerea</i>
Long-tailed Vole	<i>Microtus longicaudus</i>
Montane Vole	<i>Microtus montanus</i>
Heather Vole	<i>Phenacomys intermedius</i>
Gapper's Red-backed Vole	<i>Clethrionomys gapperi</i>
Ringtail Cat	
Grey Fox	
Crustaceans	
Mollusks	

**** BIRDS OF THE PROJECT CORRIDOR**

Gulls	Whistling Swan
Common Loon	Canada Goose
Eared Grebe	White-fronted Goose
Western Grebe	Snow Goose
Pied-billed Grebe	Mallard
White Pelican	Gadwall
Great Blue Heron	Pintail
Common Egret	American Green-winged Teal
Snowy Egret	Blue-winged Teal
Black Crowned Night Heron	Cinnamon Teal
American Bittern	American Widgeon
White-faced Ibis	Shoveler
Wood Duck	Common Snipe
Redhead	Long-billed Curlew
Ring-necked Duck	Spotted Sandpiper
Canvasback	Solitary Sandpiper
Lesser Scaup Duck	Willet
Common Goldeneye	Greater Yellowlegs
Bufflehead	Baird's Sandpiper
Ruddy Duck	Least Sandpiper
Common Merganser	Long-billed Dowitcher
Red-breasted Merganser	Western Sandpiper
Turkey Vulture	Marbled Godwit
Goshawk	American Avocet
Sharp-shinned Hawk	Wilson's Phalarope
Cooper's Hawk	Ring-billed Gull
Red-tailed Hawk	Franklin's Gull
Swainson's Hawk	Forster's Tern
Golden Eagle	Black Tern
Bald Eagle - endangered species	Band-tailed Pigeon
Lesser Nighthawk	Mourning Dove
Sparrow Hawk	Barn Owl
American Kestrel	Great Horned Owl
Blue Grouse	Long-eared Owl
White-tailed Ptarmigan	Short-eared Owl
Turkey	Poor-will
Sandhill Crane	Common Nighthawk
Virginia Rail	White-throated Swift
Sora	Broad-tailed Hummingbird
American Coot	Rufous Hummingbird
Killdeer	Ruby-throated Hummingbird
Belted Kingfisher	Purple Martin
Common Flicker	White-breasted Nuthatch
Red Shafted Flicker	Red-breasted Nuthatch
Lewis' Woodpecker	Pygmy Nuthatch
Yellow-bellied Sapsucker	Brown Creeper

Williamson's Sapsucker	Dipper
Hairy Woodpecker	House Wren
Downy Woodpecker	Canyon Wren
Northern Three-toed Woodpecker	Mockingbird
Western Flycatcher	Catbird
Western Wood Pewee	Ring-neck Pheasant
Olive-sided Flycatcher	Brown Thrasher
Vermillion Flycatcher	Sage Thrasher
Horned Lark	Robin
Violet-green Swallow	Hermit Thrush
Tree Swallow	Swanson's Thrush
Rough-winged Swallow	Veery
Barn Swallow	Western Bluebird
Cliff Swallow	Mountain Bluebird
Gray Jay	Blue-gray Gnatcatcher
Steller's Jay	Golden-crowned Kinglet
Scrub Jay	Ruby-crowned Kinglet
Black-billed Magpie	Bohemian Waxwing
Common Raven	Northern Shrike
Pinyon Jay	Loggerhead Shrike
Clark's Nutcracker	Starling
Black-capped Chickadee	Solitary Vireo
Mountain Chickadee	Warbling Vireo
Common Bushtit	Orange-crowned Warbler
Virginia's Warbler	Baird's Sparrow
Yellow Warbler	Vesper Sparrow
Black-throated Gray Warbler	Lark Sparrow
Townsend Warbler	Gray-headed Junco
Northern Waterthrush	Tree Sparrow
Common Yellowthroat	Chipping Sparrow
Wilson's Warbler	Brewer's Sparrow
Western Meadowlark	White-crowned Sparrow
Yellow-headed Blackbird	Lincoln's Sparrow
Red-winged Blackbird	
Brewer's Blackbird	
Brownheaded Cowbird	
Western Tanager	
Black-headed Grosbeak	
Blue Grosbeak	
Lazuli Bunting	
Evening Grosbeak	
Cassin's Finch	
House Finch	
Pine Grosbeak	
Pine Siskin	
American Goldfinch	
Lesser Goldfinch	
Red Crossbill	
Green-tailed Towhee	

Rufous-sided Towhee
Lark Bunting
Savannah Sparrow

** FLORA

TREES

Rocky Mountain Juniper
Pinon Pine
White Fir
Engelmann Spruce
Colorado Blue Spruce
Ponderosa Pine
Narrowleaf Cottonwood

Juniperus scopulorum
Pinus cembroides endulis
Abies concolor
Picea engelmannii
Picea pungens
Pinus ponderosa
*Populus angustifolia**

SHRUBS

Mountain-ash
Buckbrush
Mountain-mahogany
Shrubby Cinquefoil
Chokecherry
Currant
Gooseberry
Rose
Willows
Snowberry
Red-berried Elder
Raspberry
Rabbitbrush
Common Juniper
Mountain Juniper
Serviceberry
Ninebark
Narrowleaf Yucca+
Sagebrush

Sorbus scopulina+
Ceanothus fendleri+
Cercocarpus montanus+
Potentilla fruticosa
*Prunus virginiana melanocarpa**
*Ribes lacustre**
*Riber leptanthum**
Rose woodsii+
Salix+*
Symphoricarpos oreophilus
Sombucus racemosa
Rubus idaeus sachalinensis+*
Chrysothamnus parryi
Juniperus communis+
Juniperus scopulorum+
*Amelanchier alnifolia**
Physocarpus monogynus

Artemisia cana+

* = edible, + = medicinal

FORBS

Yarrow
Monkshood
Pussytoes
Columbine
Arnica
Larkspur
Marsh-marigold
Fleabane
Nodding Onion
Western Tansy Mustard
Silverweed Cinquefoil
Common Dandelion
Solomon Plume
Tall Nettle
Lupine
Russian Thistle
Sunflower
Scarlet Gilia
Wild Flax
Thistle
Western Jacobs Ladder
Purple Lady's Slipper
Horsetail
Vetch
Winged Eriogonum
Milkweed
Yellow Bee Plant
Primrose
False Dandelion*
Salsify
Strawberry
Pasture Sagebrush
Buckwheat
Bedstraw
Geranium
Orange Sneezeweed
Cow Parsnip
Fern-leaved Lovage
Green Mertensia
Mountain Bluebell
Penstemon strictus
Pasqueflower
Viviparous Bistort
Groundsels
Starwort
Romonzoff Green Centian
Meadow-rue

*Achillea lanulosa**+
Aconitum columbianum
Antennaria alpina
Aquilegia caerulea
Arnica longifolia+
Delphinium alpestre
*Caltha leptosepala**
Erigeron elatior
*Allium cernuum**
*Descurainia richardsonii**
*Potentilla arnserina**
*Taraxacum officinale**+
*Smilacina racemosa**
*Urtica dioica**
Lupinus parviflorus
*Salsola iberica**
*Helianthus annuus**
Iponopsis aggregata
*Limn. lewisii**
*Cirsium scopulorum**
Polemonium caeruleum
Cypripedium fasciculatum+
*Equisetum arvense**
*Vicia americana**
*Eriogonum alatum**
*Asclepias hallii**+
*Cleome lutea**
Primula parryi

*Tragopogon dubius**+
*Fragaria vesca**+
Artemisia frigida+
Fagopyrum esculentum
*Galium boreale**+
Geranium richardsonii+
Dugaldia hoopesii
*Heracleum sphondylium**
Ligusticum filicinum
Mertensia viridis
Mertensia ciliata

Pulsatilla patens
*Polygonum viviparum**
Senecio+
*Stellaria jamesiana**+
*Frasera speciosa**
Thalictrum alpinum

Valerian
Skunk-cabbage*
Wild Iris
Fireweed
Yellow Sweet-clover*+
Splitleaf painted cut

Splitleaf painted cup

*Valerian edulis**+

*Iris missouriensis**
Chamerion angustifolium

Castilleja rhexifolia

GRASSES AND GRASS-LIKE PLANTS

Wheat-grasses
Cheat-grass
Sedge grasses
Wild Oats
Blue Wild Rye
Fescue grasses
Prairie Junegrass
Onion Grass
Mountain Muhly
Bluegrasses
Squirreltail
Needle grasses
Foxtail
Spike Trisetum
Tufted Hairgrass
Alpine Timothy
Timothy
Indian Ricegrass
Blue Grama

*Agropyron**
Bromus tectorum
Carex
*Avena fatua**
*Elymus glaucus**
Festuca
Koeleria cristata
Melica spectabilis
Muhlenbergia montana
Poa
Sitanion hystrix
Stipa
Hordeum jubatum
Trisetum spicatum
Deschampsia caespitosa
Phleum alpinum
Phleum pratense
*Oryzopsis hymenoides**
Bouteloua gracilis

CACTUS

Cactus

Mammillaria

* = edible, + = medicinal

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. This is essential for ensuring the integrity of the financial statements and for providing a clear audit trail.

2. The second part of the document outlines the various methods used to collect and analyze data. These methods include interviews, surveys, and the analysis of existing records. Each method has its own strengths and limitations, and it is important to choose the most appropriate one for the specific research objectives.

3. The third part of the document discusses the importance of maintaining accurate records of all transactions.

4. The fourth part of the document outlines the various methods used to collect and analyze data. These methods include interviews, surveys, and the analysis of existing records. Each method has its own strengths and limitations, and it is important to choose the most appropriate one for the specific research objectives.

5. The fifth part of the document discusses the importance of maintaining accurate records of all transactions. This is essential for ensuring the integrity of the financial statements and for providing a clear audit trail.

6. The sixth part of the document outlines the various methods used to collect and analyze data.

7. The seventh part of the document discusses the importance of maintaining accurate records of all transactions.

8. The eighth part of the document outlines the various methods used to collect and analyze data. These methods include interviews, surveys, and the analysis of existing records. Each method has its own strengths and limitations, and it is important to choose the most appropriate one for the specific research objectives.

9. The ninth part of the document discusses the importance of maintaining accurate records of all transactions. This is essential for ensuring the integrity of the financial statements and for providing a clear audit trail.

APPENDIX D

APPENDIX D

**** NOISE ASSESSMENT**

PROJECT NO. RS 0172(9), IGNACIO - NORTH

In accordance with F.H.W.A. Noise Regulations as stated in FHPM 7-7-3 Type IB projects, a noise assessment of Project RS 0172(9) has been conducted.

A. IDENTIFICATION OF PROJECT

This project includes widening and overlay of State Highway 172 from the northwest corner of the Southern Ute Agency (milepoint 0.0) to the end of the previous project (milepoint 5.1). The typical section designed has two 12' driving lanes with 6' shoulders.

B. IDENTIFICATION OF NOISE SENSITIVE AREA THAT MAY BE AFFECTED BY THE HIGHWAY PROJECT

Existing activities and land uses that could be affected by the project are listed in Table I. Also shown in this table are the activity categories for each receptor. Activity category and corresponding design noise levels are shown on Table II.

C. PREDICTION OF HIGHWAY GENERATED NOISE

Prediction of the Design Hour Volume Leq levels was made using the new F.H.W.A. Highway Traffic Noise Prediction Method. Table III provides a generalized relationship between the Leq noise level and receptor to roadway centerline distance for the entire study section. From the information available in Tables II and III set back distances and/or noise insulating requirements may be determined to shield the various receptors along the study corridor. The Design Hour Leq level represents the equivalent steady state sound level which in a stated period of time

would contain the same acoustic energy as the time-varying sound level during that same time period. Leq noise levels were predicted on the basis of the existing roadway using 1976 traffic data. Null levels (if this project is not constructed) were predicted with 1996 traffic on the present highway and future levels were predicted with 1996 traffic on the proposed improvement.

D. COMPARISON OF PREDICTED NOISE LEVELS WITH DESIGN NOISE LEVELS

Table I shows Leq noise level comparisons between future levels, present levels, null levels, and design levels. An analysis of this data shows that in three (3) instances the receptors in the study area will be exposed to noise levels in excess of the design level by 1996.

E. ANALYSIS OF FEASIBLE NOISE ABATEMENT MEASURES

Noise barriers are not feasible due to low housing density which yields a rather low cost/benefit ratio. Barriers also interfere with sight distances and the lack of access control would make the effectiveness of barriers questionable in most instances. Noise abatement measures such as prohibition of certain vehicle types, time use restrictions for certain type vehicles, modified speed limits, exclusive lane designations or traffic control devices would be ineffective. Noise impact is expected to be minimal due to low traffic volumes and low housing density.

F. SITUATIONS WHERE IT APPEARS THAT EXCEPTIONS TO THE DESIGN NOISE LEVELS ARE JUSTIFIED

Exceptions to the design noise levels are not required for this project.

Table I

Milepost	Receptor	Distance from	Direct'n Rt. Lt.	Activity Category (see Table)	Design Hour Volume			Leq Noise Level Comparisons			Abatement Measures
					Noise Levels Present	Null	(dBA) Future	Future & Present	Future & Null	Future & Design	
0.0	House	57'	Lt.	B	65	68	68	+3	0	+1	None
0.4	House	300'	Lt. (20' up)	B	55	56	56	+1	0	-11	"
0.7	House	400'	Rt. (15'dn)	B	53	54	54	+1	0	-13	"
0.85	House	300'	Lt.	B	55	56	56	+1	0	-11	"
1.05	House	60'	Rt.	B	65	67	67	+2	0	0	"
1.1	House	50'	Lt.	B	66	68	68	+3	0	+1	"
1.1	Trailer	30'	Lt.	B	70	71	71	71	0	+4	"
1.3	House	85'	Rt.	B	63	64	64	+1	0	-3	"
1.55	House	250'	Rt.	B	56	57	57	+1	0	-10	"
1.8	House	250'	Rt.	B	56	57	57	+1	0	-10	"
2.1	Church	200'	Rt.	B	57	59	59	+2	0	-8	"
2.8	House (Gallegos)	60'	Rt.	B	65	67	67	+2	0	0	"
2.9	Church	250'	Rt.	B	56	57	57	+1	0	-10	"
2.95	House	400'	Rt.	B	53	54	54	+1	0	-13	"
2.95	House	425'	Rt.	B	53	54	54	+1	0	-13	"
3.0	House	450'	Rt.	B	52	53	53	+1	0	-14	"
3.3	House	150'	Rt.	B	59	61	61	+2	0	-6	"
3.6	House	75'	Lt.	B	64	65	65	+1	0	-2	"
3.6	House	300'	Rt.	B	55	56	56	+1	0	-11	"
3.7	House (Preston)	60'	Lt.	B	65	67	67	+2	0	0	"
3.8	House (Anderson)	300'	Rt.	B	55	56	56	+1	0	-11	"
3.8	Trailer	290'	Rt.	B	54	56	56	+2	0	-11	"
4.4	House	500'	Rt.	B	51	53	53	+2	0	-14	"
4.85	House	100'	Rt.	B	62	63	63	+1	0	-4	None
5.15	House	100'	Rt.	B	62	63	63	+1	0	-4	"

Table II
Design Noise Level/Land Use Relationships

Land Use Category	Design Noise Level - Leq	Description of Land Use Category
A	57 dBA (Exterior)	Tracts of lands in 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. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
B	67 dBA (Exterior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, picnic areas, recreation areas, playgrounds, active sports areas, and parks.
C	72 dBA (Exterior)	Developed lands, properties or activities not included in categories A and B above.
D	--	For requirements on undeveloped lands see paragraphs 11a and c of FHPM 7-7-3.
E*	52 dBA (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

*See paragraphs 8c, d, and e of FHPM 7-7-3 for method of application.

Table III
1996 Design Hour Volume Leq Noise Levels (dBA)

Distance from Highway Centerline			
<u>50'</u>	<u>100'</u>	<u>200'</u>	<u>400'</u>
68	63.5	59	54.5

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Description of Assets	1956	1957
Cash and cash equivalents	100	100
Accounts receivable	200	200
Inventory	300	300
Property, plant, and equipment	400	400
Total Assets	1000	1000

APPENDIX E



1. Looking north on State Highway 172, at the north west corner of the Southern Ute Agency in Ignacio. This is the beginning of the project. In the foreground the section has been improved with a previous project. The section past the intersection of C.R. 314 and S.H. 172, shown in the middleground, will be widened with the proposed project. Relocation of the house on the left will not be necessary. The speed limit leaving Ignacio is 45 m.p.h.



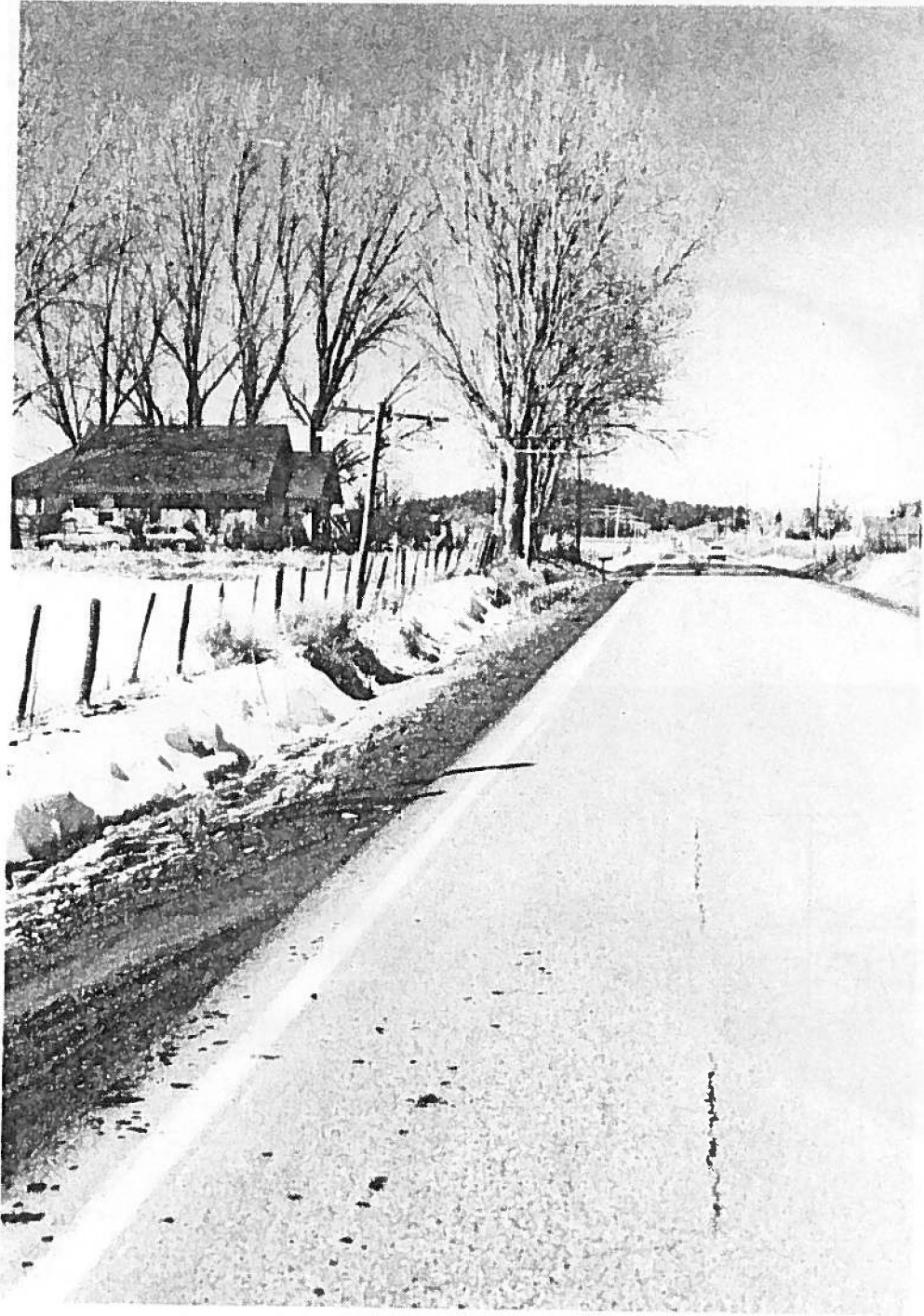
2. Looking northeast. The absence of paved shoulders is evident. The structure on the left is a shelter for children waiting for the school bus. Hazards exist with buses pulling on and off the highway. Speed limit increases to 50 m.p.h. here. The proposed project would include the construction of 6-foot paved shoulders on both sides of 12-foot driving lanes.

3. Looking south towards Ignacio. The Southern Ute Tribal Agency is in the background on the left. The vertical alignment is poor here - shown is a dip in the highway in the middleground. Also the site distance in the downhill passing zone is restricted in the summer by willows obscuring the view of the second curve in this photo. Cracks in the pavement can be seen in the lower right hand corner of the photo.



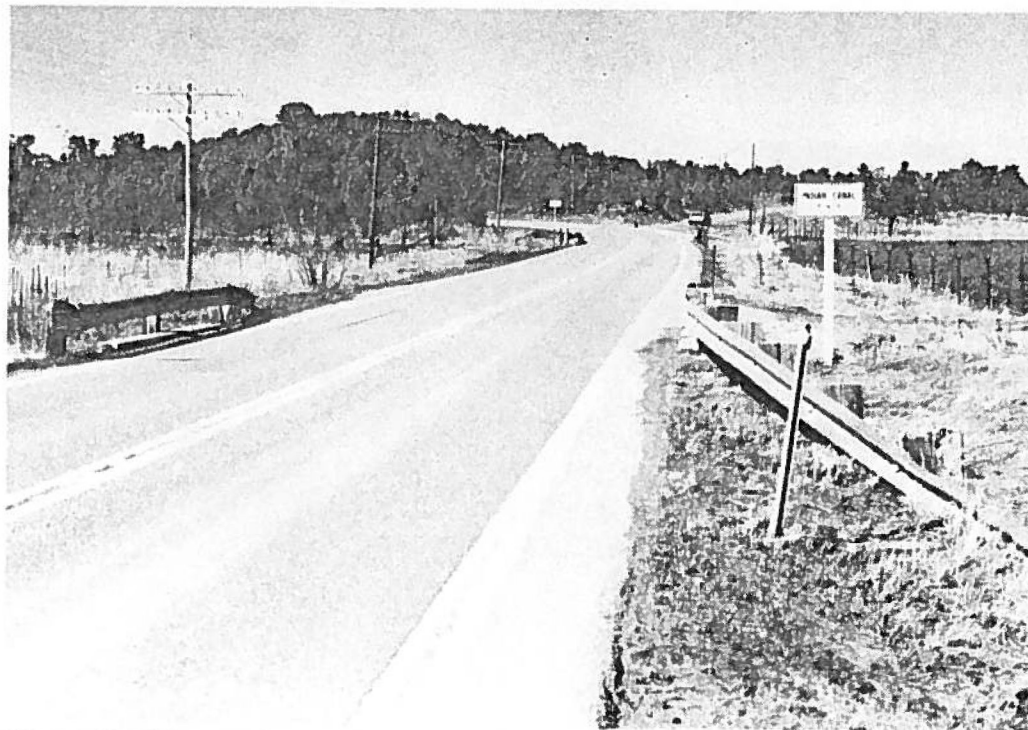
4. Looking north towards the San Juan Mountains. Conflict with the highway widening is evident with the power substation of the right and the large Cottonwood trees in the background on the left. The Utility company will dismantle the power substation at their expense before construction of this proposed project. It is not known at the time of this writing if the cottonwood trees will have to be destroyed along the right of way. In front of the power substation there is another school bus shelter which may be moved further to the right.



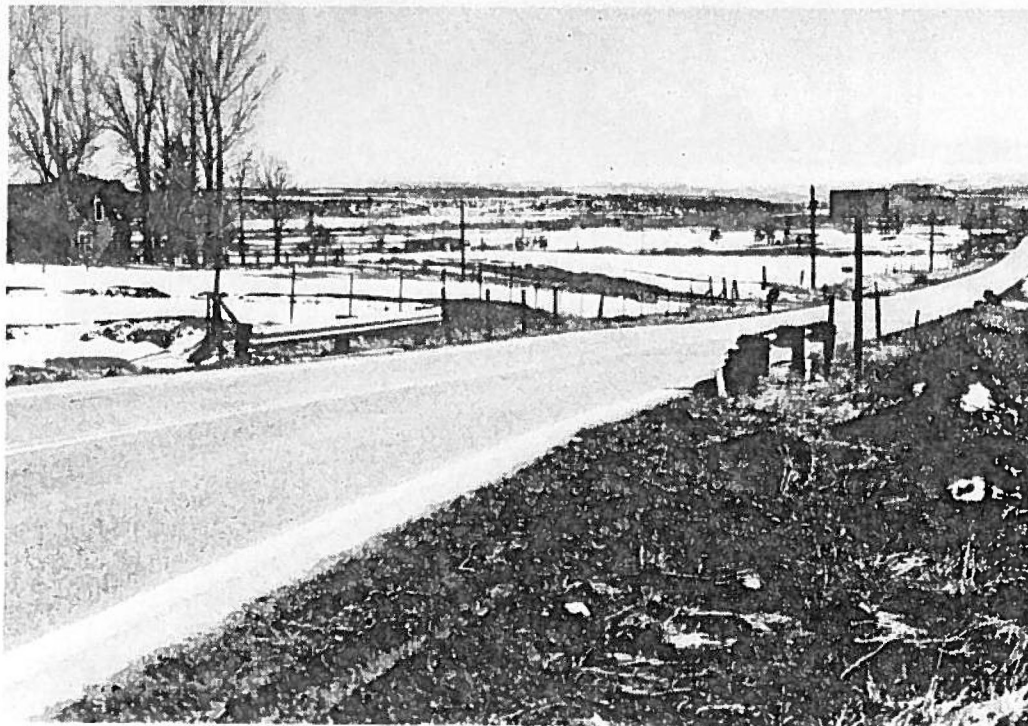


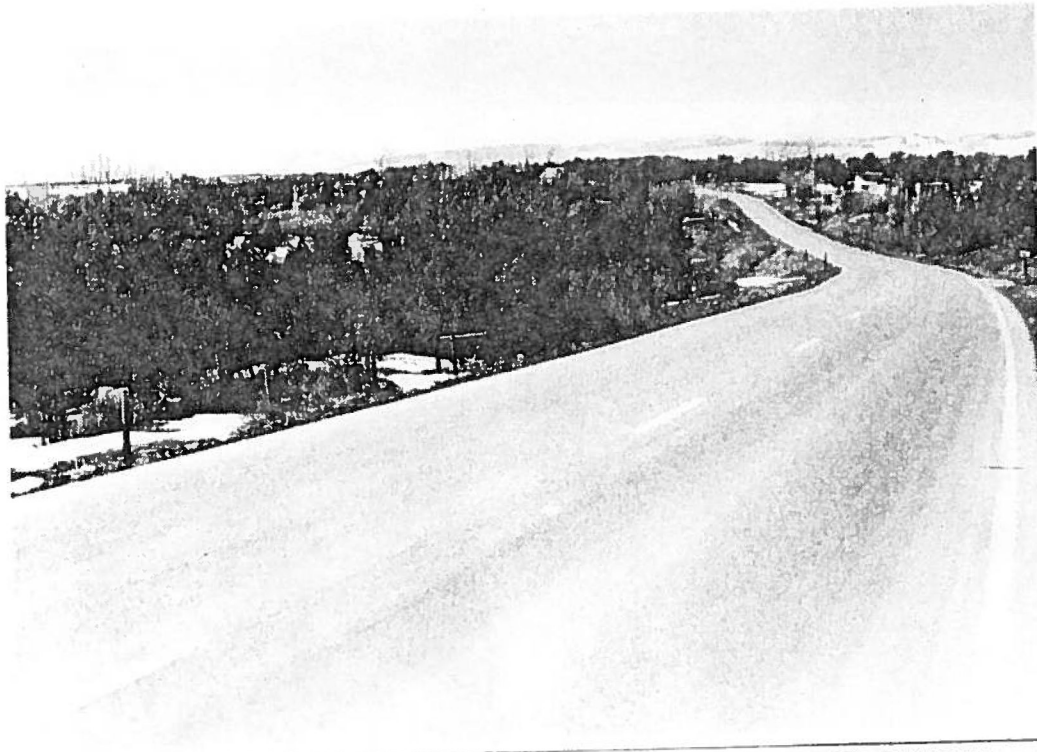
5. A closer look at the possible conflict with widening S.H. 172 and the cottonwood trees standing on land which may be necessary as additional right-of-way for the widening.

6. Looking north at two narrow ditch crossings. The Indian Canal in the foreground, and the Morrison Canal, in the background, flow in an average year between May 15 and Oct 15. Construction of two new structures here will avoid conflict with water flow necessary to irrigate the farms surrounding the project corridor.



7. Looking south at the Morrison Canal ditch crossing. The narrow crossing is the cause of accidents involving the guardrail and vehicles which are limited to an unsafe section width here. Maintenance problems include guardrail replacement at the crossings and drifting snow caused by cross winds in the background of this photo.





8. Looking northwest towards the La Plata Mountains. The problem which exists without adequate paved shoulder is evident when vehicles turn on and off the highway at the residential driveways. Vehicles which cannot pull off when slowing down cause others to pass where it is unsafe. At this particular spot you are coming over a hill when the driveway on the right occurs. The proposed project would construct 6-foot paved shoulders here.

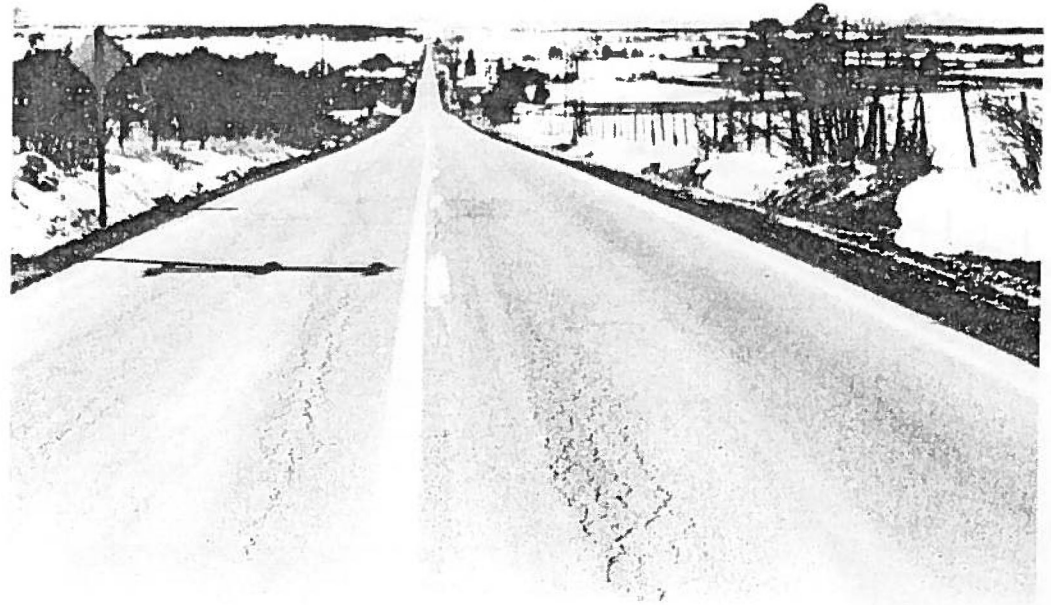


9. Looking northwest at a blind intersection shown on photo no. 10. Unless you've driven toward this intersection before you are not aware that vehicles may be crossing your lane just around the corner. Sight distance would be improved by flattening the cut on the left or increasing the fill for the road bed when constructing the proposed project.

10. Looking east. Two county roads intersect with S.H. 172 in the middle ground of this photo, creating the situation addressed in photo no. 9. Utility lines will need to be relocated to provide adequate shoulder here. The utility company will relocate lines at their expense since they lie within the state right-of-way.



11. Looking west toward Oxford and the Florida Mesa. The foothills of the La Plata Mountains lie in the background. The vertical alignment is a problem in the middleground of this photo. Because of its "rolling" nature sight distance is impaired. In the foreground "alligator" cracking in the pavement is evident. The proposed project will provide a new or recycled pavement mat and there will be more cuts and fills made to improve the vertical alignment.





12. Looking east. There will be conflict with the proposed widening and the trees lining the present right-of-way. The group of deciduous trees on the left may be destroyed if the proposed alignment remains on the existing center line or is shifted at all to the left.



13. Looking west. Seasonal drainage is a problem along the right-of-way. Though not evident because these pictures were taken in late winter, water accumulate in ditches like the one on the left, causing maintenance time and expense to improve drainage. The proposed project will correct many of the problem by changing drainage slopes and cross culverts.

14. Looking west at the end of the project. One of the wet areas mentioned in this document is on the right in the foreground. Just past that are tree lining the right-of-way that may be destroyed with the proposed project. The end of the project is identified by the improved section with the widened shoulder where the car is seen in the photo.



15. Looking east toward the H-D mountains east of Bayfield. The improved section on which the photographer is standing is typical of the section called for in the proposed project.



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