Level II HAER Documentation of the Historic Colcord Road (Forest Road 291) and its Associated Features, Payson and Pleasant Valley Ranger Districts, East of Payson, Gila County, Arizona

Prepared for:

Gila County Public Works Division
Tonto National Forest

Prepared by:

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LSD Technical Report No. 115042b

ABSTRACT AND MANAGEMENT SUMMARY

Report Title	Level II HAER Documentation of the Historic Colcord Road (Forest Road 291) and its Associated Features, Payson and Pleasant Valley Ranger District, East of Payson, Gila County, Arizona
Agencies Involved	Gila County Public Works Division, Tonto National Forest (TNF)
ASM Permit No.	2011-30bl
LSD Project No.	115042b
Report Date	December 16, 2011
Project Description	The Gila County Public Works Division, in conjunction with TNF, requested that Logan Simpson Design Inc. (LSD) prepare Level II Historic American Engineering Record (HAER) documentation of the historic Colcord Road and its associated features. Gila County recently paved a 3.2-mile-long segment of the Colcord Road east of SR 260. This document presents the HAER Level II documentation for the entire length of the Colcord Road pursuant to stipulations of an executed Programmatic Agreement concerning the identification, evaluation, and treatment of Gila County-maintained historic roads and associated features.
Project Location	Within portions of Section 1, T10N, R14E; Section 24, T10½N, R13E; Sections 19, 20, 21, 27, 28, 34, 35, and 36, T10½N, R14E; Sections 30 and 31, T10½N, R15E; Sections 34, 35 and 36, T11N, R13E, Gila and Salt River Baseline and Meridian (USGS 7.5' O. W. Point, Ariz., 1990; Oxbow Mountain, Ariz., 1992; Parallel Canyon, Ariz., 1990; and Woods Canyon, Ariz., 1998)
Land Ownership	TNF, private
Methods	Archival research and photographic documentation

Summary

The evaluation of 11.6 miles of the historic Colcord Road resulted in the identification of 70 features and one abandoned road segment. Additionally, other features of the roadway including nine pull-outs, two gates, and one parking area were documented. The Colcord Road and its associated features have been previously determined eligible for inclusion in the National Register of Historic Places under Criteria A and C (association with events, characteristics of a type of construction). The road was constructed by the Civilian Conservation Corps in the mid-1930s for the purpose of creating a fire break between Payson and the Mogollon Rim and to facilitate vehicular traffic in the sub-rim area. Although the alignment of the road has changed over time, the road retains its setting, feeling, design, and materials, and continues to function as originally designed. Completion of the documentation has adequately documented the historic Colcord Road and this report serves as mitigation for adverse effects to the roadway resulting from the Gila County Public Works Division paving project; therefore, no further work is recommended.

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INTRODUCTION

The Gila County Public Works Division, in conjunction with Tonto National Forest (TNF), is planning a long-term road paving project along the historic Colcord Road (Forest Road [FR] 291) east of Payson, in northern Gila County, Arizona (Figure 1). The road is located within the Payson (PRD) and Pleasant Valley (PVRD) Ranger Districts of the TNF (Figure 2). Gila County recently paved a 3.2-mile-long segment of the Colcord Road east of a 2-mile-long paved segment that begins at SR 260. Although project plans have not been developed for improving the remainder of the road, Gila County ultimately plans to pave the entire road.

The Colcord Road has been previously determined eligible by the TNF for inclusion in the National Register of Historic Places (NRHP) under Criteria A and C (association with events, characteristics of a type of construction). The road was constructed by the Civilian Conservation Corps (CCC) in the mid-1930s for the purpose of creating a fire break between Payson and the Mogollon Rim and to facilitate vehicular traffic in the sub-rim area. In 2008, Logan Simpson Design Inc. (LSD) surveyed 5.35 miles of the 11.6-mile-long Colcord Road in preparation for a long-term paving project (Drake and Rayle 2009). In 2011, Gila County contracted with LSD to provide historic documentation of the remaining 6.25 miles of the Colcord Road pursuant to the stipulations of an executed Programmatic Agreement (PA) between the United States Department of Agriculture Forest Service (Forest Service), the Arizona State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation. The PA was executed to address the identification, evaluation, and treatment of Gila County-maintained historic roads and their associated features within the PRD and PVRD of the TNF. Archival research of primary and secondary documents was conducted to provide information on the history and significance of the road. Historic documentation within this report complies with the National and State Historic Preservation Acts Documentation Standards for Historic Properties guidelines (revised December 2002) and the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation: Historic American Building Survey/Historic American Engineering Record (HAER) (revised 1990). Companion videography that showcases the historic Control Road in its entirety, as well as its associated features, was submitted to the Gila County Public Works Division and the TNF in 2010.

HISTORIC CONTEXT OF ROAD DEVELOPMENT IN THE PAYSON BASIN AND MOGOLLON RIM ESCARPMENT

The design and construction of a reliable transportation network was an important factor in the settlement and economic growth and development of the Payson Basin and Mogollon Rim escarpment. For much of the nineteenth century, travel in the region and elsewhere in Arizona was considered arduous and dangerous due to its "rugged topography, lack of water, climatic extremes, and hostile relations with American Indians" (Stein 1994:12). In response to the 1857 gold rush in Arizona and the subsequent influx of thousands of Euro-American prospectors and miners that migrated to the territory, the federal government during the 1860s established 15 military posts in strategic locations across Arizona to protect settlers from Indian attacks and make its newly-acquired territory safe for travel (Collins et al. 1993:12; Stein 1994:17). Despite the establishment of these forts, the Payson Basin and areas surrounding the Mogollon Rim were not homesteaded by Euro-Americans until the late 1800s due to hostilities with the

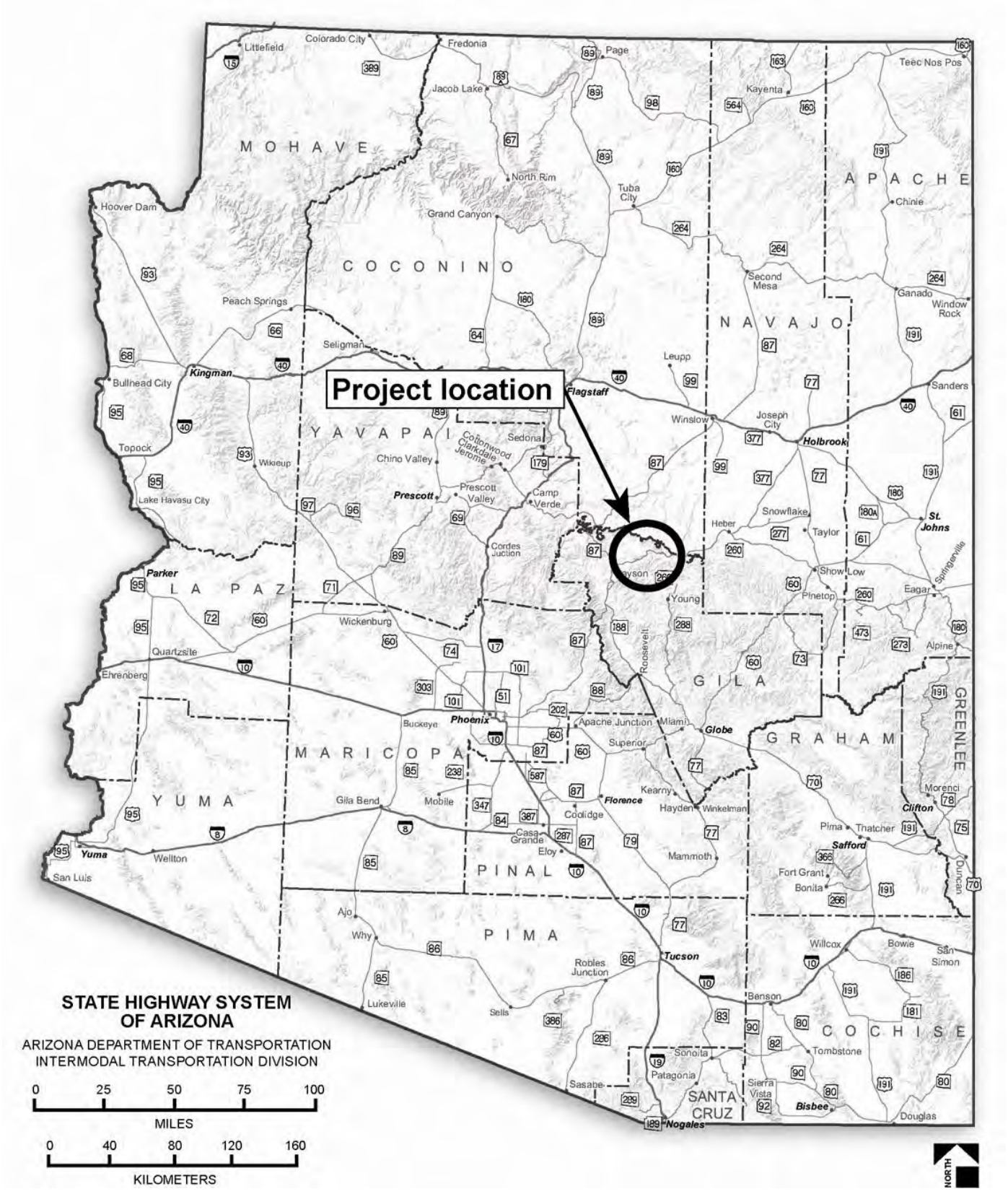


Figure 1. Location of project area.

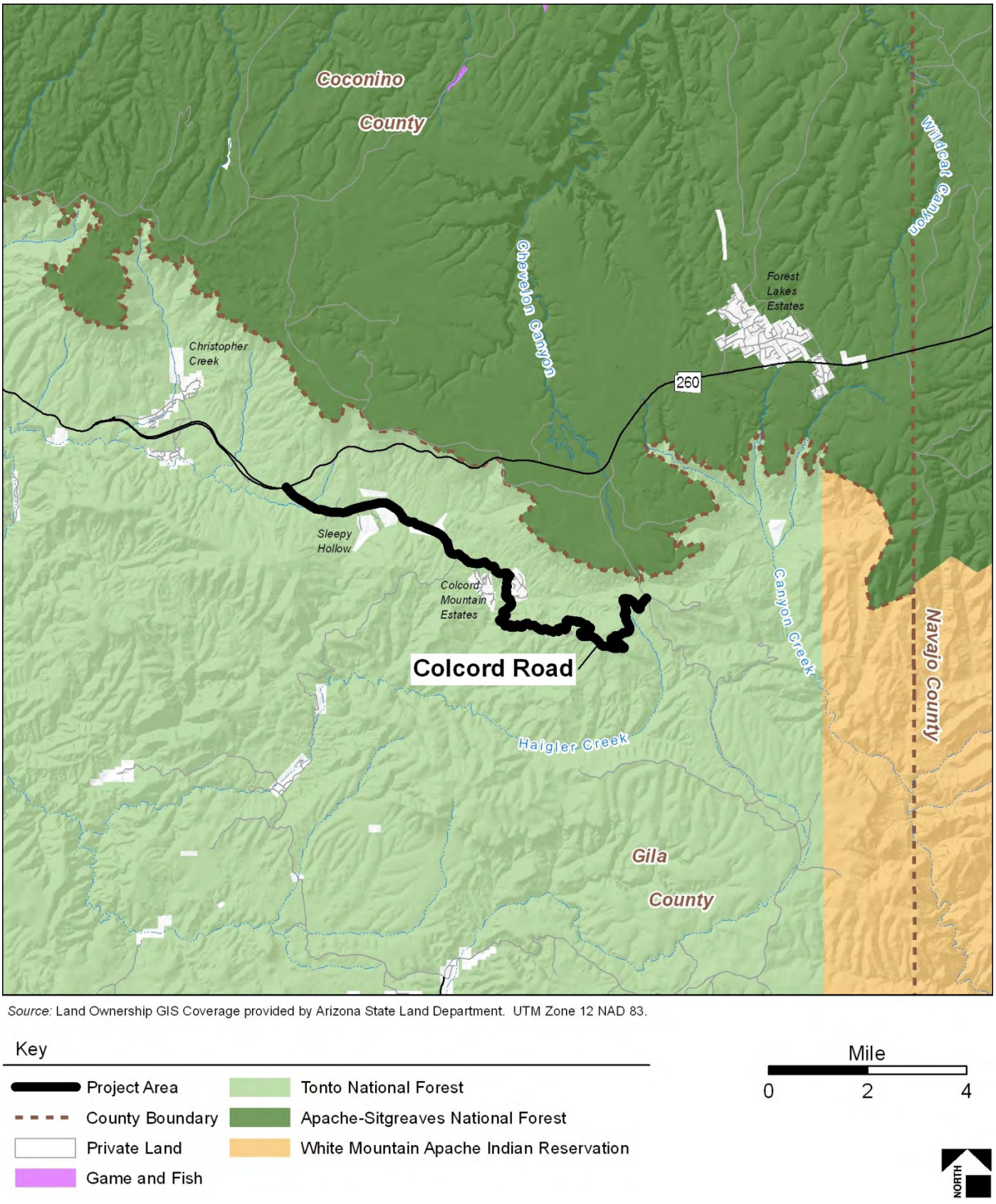


Figure 2. Land jurisdiction of project area.

Apache. In the 1870s, the Apache threat was diminished with the establishment of the White Mountain and San Carlos Apache reservations, and Euro-American farmers and ranchers began to establish permanent settlements in the area. Settlement in the region was further encouraged by a series of national public land laws, such as the National Homestead Act (1862), the Timber Culture Act (1877), and the enlarged Homestead Act (1909) (Stein 1990).

Archival research suggests that the first roads in the Payson Basin and along the Mogollon Rim escarpment were primitive wagon roads constructed by the military and Euro-American settlers. Between 1846 and 1874, the United States military had established three primitive wagon trails across the Arizona territory. One of these roads, known today as Crook's Trail, stretched east-west along the Mogollon Rim in central Arizona (Bowman 1978). Pioneered by General George W. Crook in 1871, the 200-mile-long road was used as a supply route by wagons and pack animals traveling between Fort Whipple near the territorial capital at Prescott to Fort Apache on the White Mountain River (Bowman 1978). The location of the trail was also of great strategic importance as it allowed the movement of military troops along the Mogollon Rim during the Apache Indian Campaign (Bourke 1891).

The establishment of Crook's Trail was also important to non-military traffic as it further opened the Payson Basin and Mogollon Rim area to Euro-American settlement. In the early 1880s, the communities of Pine and Payson (then known as Green Valley or Union Park) were founded to the south and west of the Mogollon Rim, and numerous homesteads and settlements were established in the vicinity of Tonto Creek. An 1886 USGS topographic map of the region depicts numerous northeast-trending road segments that originate near Payson and generally follow Tonto Creek (Figure 3). Named wagon routes that traversed the region during this time included the Payson to 13 Ranch Wagon Road, which consisted of a lightly-engineered road that stretched east-northeast from Payson to the 13 Ranch near Christopher Creek. Historic GLO maps of the T10½N, R15E (plat no. 00373, filed 4/19/1912) and T11N, R13E (plat no. 00427, filed 6/03/1907) suggest that few improvements were made to these routes by the early 1900s, as most of the roads are depicted as short discontinuous segments that meander around topographic features to connect numerous ranches and homesteads.

As ranching activities spread throughout the region, environmental damage caused by a combination of overgrazing and adverse weather conditions led to the establishment of the Tonto Forest Reserve in 1905 to protect the watersheds of the Salt and Verde Rivers (Macnider and Effland 1989). In 1906, the Tonto Forest Reserve was transferred to the Forest Service, and on March 4, 1907, the area became the Tonto National Forest (TNF). Between 1907 and 1928, the Forest Service made numerous improvements to main roads in the region, including the Crook's Trail, which was renamed the Old Rim Road during this time (Moore 2006:17–18). However, side roads linking ranches and homesteads along the East Verde River and Tonto Creek were not improved during this time and most remained in primitive condition.

Despite various TNF improvement projects in the region, the Payson Basin and western Mogollon Rim area remained relatively isolated by the end of the 1920s. A 1924 TNF map suggests that most settlements in the region were accessed by two main roads (Figure 4). The more primitive of the two routes, the westernmost road, began south of Pine and extended east until terminating at the East Verde River. This

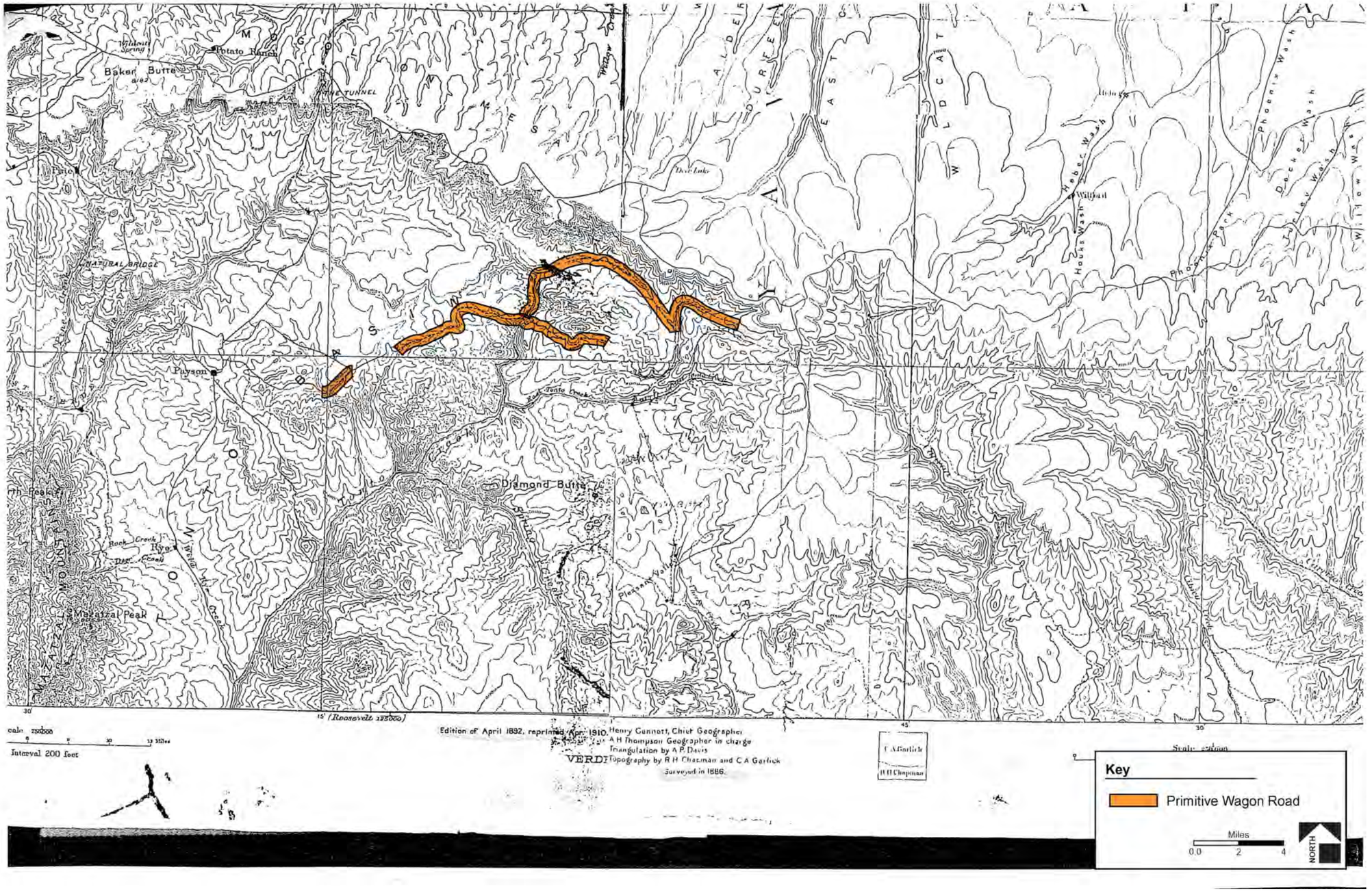


Figure 3. Excerpt from an 1886 USGS map showing primitive wagon roads in the Payson Basin and western Mogollon Rim area.

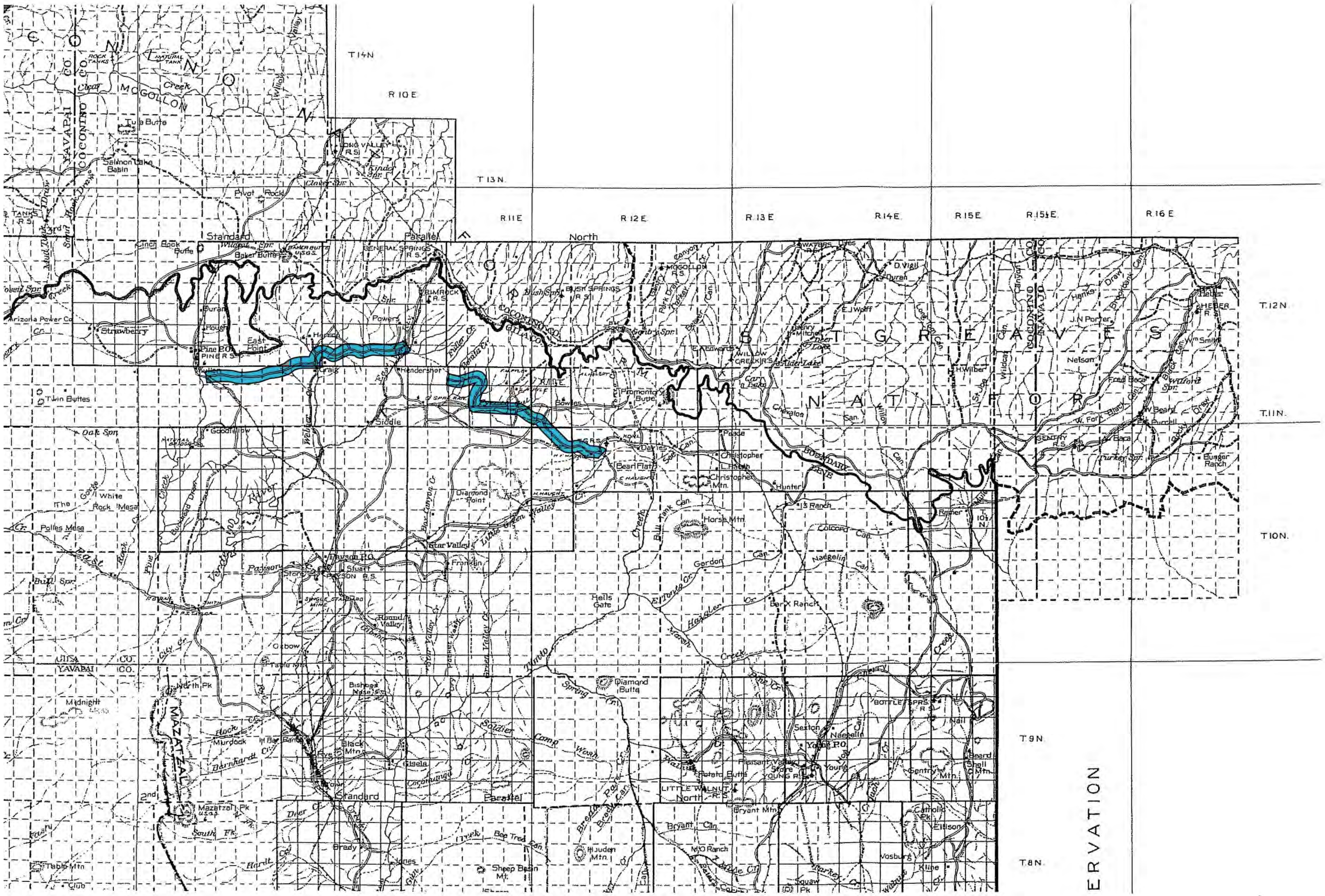


Figure 4. Excerpt from a 1924 TNF map showing the two main roads in the western Mogollon Rim area.

road is depicted as a dashed line on the map and is presumably little more than a trail (see Figure 4). The second road is depicted as more formalized; this route began east of the river, to the south of Fuller and Bonita creeks, and extended west where it connected with numerous roads and continued in a generally southeast direction to its terminus with the Payson to 13 Ranch Wagon Road near the Indian Garden Ranger station (later known as Guard Station).

The lack of a formal road network in the region also had a profound impact on tourism during the late 1920s and early 1930s. Although the eastern Mogollon Rim area was visited by tourists from neighboring Mormon communities and the railroad towns of Holbrook and Winslow, access to cool pine forests of the TNF remained difficult and often required an arduous journey along narrow and winding dirt roads across the Mogollon Rim, the high desert of the Colorado Plateau, or the southern sections of the Apache Forest (Moore 2006:17). While the Forest Service recognized the economic importance of opening the forests in central Arizona to increased recreational use, the gripping effects of the Great Depression hampered large-scale construction and improvement projects in the TNF during the early 1930s.

The TNF and the CCC

On March 31, 1933, Franklin Roosevelt created the CCC through the Emergency Conservation Work Act, in an effort to speed economic recovery and provide work for thousands of unemployed young men on the nation's public lands (Booth 1991:7; Moore 2006:1). The program was largely a federal effort; enrollees were employed and paid by the Federal government, work projects were coordinated by the Department of the Interior (USDI) and the Department of Agriculture (USDA), and the camps and off-work activities were regulated by the United States (US) Army (Collins 1999:207). The first recruiting program started one week after the bill was signed, and by August 1933, nearly 300,000 young men based in 1,300 camps were at work on a variety of projects across the United States (Wright 1993:25). Two years later, the program had grown to include more than 505,000 enrollees, including a few hundred women, stationed at 2,650 camps in all 48 states, the Alaska and Hawaii territories, Puerto Rico, and the Virgin Islands (Moore 2006). Since the program was directed by the US Army, the enlistees included approximately 3,000 reserve officers who ran the camps, each of which was sponsored by a federal or state agency.

For CCC administrative purposes, the War Department divided the United States into nine corps areas, each of which was further divided into sub-districts (Moore 1991:22; Wright 1993:26). Arizona was part of the 8th Corps, and was initially part of the New-Mexico District; however, by 1935, most of central and northern Arizona was part of the Phoenix District (Wright 1993:26). An abundance of federal land made Arizona an attractive place for CCC camps, and in its first season of operation, Arizona had 20 regular camps and three veteran camps with 4,000 men and veterans and 550 locally employed men who supplied expertise and skills to the camps and helped cultivate relationships between the camps and host communities (Booth 1991; Collins 1992:210). By 1936, the Phoenix District included 18 companies, each of which contained approximately 200 men stationed at numerous camps across the state. Additionally, a number of side camps, or "fly" camps, were also in operation throughout the state. The side camps were occupied temporarily by small groups of men who worked on projects located at inconvenient distances from the main camp (Wright 1993:26).

The CCC camps were designated by letters and numbers that indicated their classification regarding land ownership or type of work, their order of formation, and their home state (Otis et al. 1986:29). For instance, the Airport Camp, or Camp F-45-A, was the 45th camp in Arizona (A) sponsored by the Forest Service (F). Camps also received less formal names that were generally associated with a geographical location or person (Otis et al. 1986:28). The camps were occupied over a period of time as manpower needs and work projects varied (Wright 1993:26). By 1936, the facilities of the camps had been standardized to include four barracks, a mess hall, a bath house, a latrine block, a schoolhouse, and 12 officers and service buildings (CCC Historical Background, n.d.). The buildings were prefabricated so the camp could be moved to another location when work in the area was complete (CCC Historical Background, n.d.).

In Arizona, nearly 53,000 enlistees participated in the CCC over a 9-year period, with workers primarily from Arizona, New Mexico, Texas, Oklahoma, Pennsylvania, and New Jersey (Moore 2006). In 1933, 28 camps with an enrollment quota of 4,800 were planned for Arizona, and at the program's peak in 1935, there were 50 camps across the state, mostly in southeastern Arizona and the Gila River Valley (Booth 1991:23; Otis et al. 1986:29). The first CCC camp in Arizona was established north of Willcox at Treasure Park on May 24, 1933 (Booth 1991:39).

The Forest Service was the main sponsor of CCC camps in Arizona, with 18 camps on Forest Service land by the end of 1938 (Collins 1999; Wright 1993:28). Of these camps, 12 were located on lands administered by the TNF (Table 1) (Wright 1993:28). Other federal and state agencies that operated camps in Arizona included the Soil Conservation Service, the Division of Grazing, the Bureau of Land Management, and the Arizona Fish and Wildlife Department (Merrill 1981:109). CCC camps were also established across the state at four national parks and monuments, four state parks, and one county park (Merrill 1981:109).

Table 1. CCC camps on the TNF (adapted from Wright 1993:28).

Camp name	Camp designation	Nearest town	Occupation date
Cherry Creek	F-26-A	Tonto Basin	1936–1937
A-Cross Camp	F-29-A	Tonto Basin	11/1933–05/1938
Airport	F-45-A	Miami	11/1933–05/1935
Ashdale	F-34-A	Cave Creek	10/1933–05/1941
Bar X Ranch	F-24-A	Young	06/1933–11/1933
East Verde	F-77-A	Payson	Summer 1938–11/1941
Indian Gardens	F-23-A	Payson	05/1933–10/1937
J. K. Ranch	F-36-A	Miami	11/1933–05/1935
Pinal Mountain	F-16-A	Globe	05/1933–03/1942
Sunflower	F-25-A	Tonto Basin	10/1933–06/1935
Superior	F-31-A	Superior	1935
Tonto Creek	F-38-A	Tonto Basin	11/1933–05/1935

The main CCC camp in the Mogollon Rim area was Indian Gardens (Camp F-23-A), which was located approximately 15 miles east of Payson and immediately north of SR 260 in the vicinity of Tonto Creek (Indian Gardens CCC camp occupation log, n.d.). Established in 1933, the camp was the second largest CCC camp in the state (Moore 2006). A CCC camp occupation log for Indian Gardens suggests that the camp was occupied seasonally by enrollees of Company 807 between May 1933 and June 1937 (Table 2). The log also indicates that the camp was known as Camp Gatewood (Indian Gardens CCC camp occupation log, n.d.).

Table 2. Occupation dates and enrollee counts for the Indian Gardens CCC camp (Source: Indian Gardens CCC camp occupation log, n.d.).

Occupation dates	Total number of enrollees	Number of African-American enrollees	State of residency		
			AZ	TX	OK
May 24, 1933 to October 31, 1933	188	—	84	104	—
May 1, 1934 to August 31, 1934	178	3	77	101	—
May 16, 1935 to June 30, 1925	216	—	81	135	—
May 15, 1936 to June 30, 1936	159	—	70	59	30
May 29, 1937 to June 30, 1937	125	—	20	89	16

A November 15, 1937 edition of the Indian Gardens camp newspaper, the *Tonto Wrangler*, provides an approximate timeline for work projects completed by camp enrollees between 1934 and 1937 (Table 3). Other improvement projects completed by Company 807 enrollees during this time included the development of the Tonto-Horton, Pine, and Sycamore recreation areas; trail construction; fence installation; timber stand improvement; installation of the water pipeline system; and the construction of 750 check dams, 2 livestock springs, and 100 cubic yards of flood control levees along the Horton and upper Tonto Creeks (Courtney 1988; Irish 1983; Moore 2006).

Table 3. Indian Gardens camp activities, 1934–1937 (Source: *Tonto Wrangler*, 15 November 1937).

Date	Camp activities
Summer 1934	Road improvement from Payson to Kohl's Ranch; established a side camp at Gordon Canyon for road construction.
Summer 1935	Stream improvement; fish pond construction; side camp initiated construction on the north end of the Tonto Basin-Payson telephone line.
Summer 1936	Stream improvement; completed construction of the Indian Gardens ranger station and Diamond Point lookout tower; side camp began construction on the Tonto Basin ranger station.
Summer 1937	Road grading from Pleasant Valley to Indian Gardens; fish stream improvement; garden improvements at the Indian Gardens ranger station; side camp at the East Verde River performed road construction and improvements

Construction of the Colcord Road

Among the most significant and time-consuming projects completed by enrollees of the Indian Gardens camp was construction of the Colcord Road, then known as Forest Highway (FH) 11 (Moore 2006:56). The road was one of numerous roads built and/or improved by the CCC during the mid-1930s for the purpose of fire suppression (Moore 2006:19). Historic maps suggest that the road followed the same general

alignment as an earlier route, known as the Payson to 13 Ranch Wagon Road, which was constructed in the 1880s to connect Payson to numerous homesteads and settlements in the vicinity of Tonto Creek. This road is shown on an 1886 USGS topographic map as a northeast trending alignment that generally follows Tonto Creek (see Figure 3). North of the confluence of Tonto Creek and East Tonto Creek, the road branches to the northeast where it follows the upper arm of Tonto Creek and continues to the southeast along the base of the Mogollon Rim where it terminates approximately 3 miles west of the historic alignment of FH 12 (now the Young Highway or FR 512). The southeast branch continues southwest approximately 4 miles before terminating 8.5 miles west of FH 12.

A TNF map indicates that by 1924, the majority of the route is in "good" to "fair" condition; only a 2-mile-long segment of the road to the south of Promontory Butte is characterized as "minor" or "very poor" condition. The road generally follows the 1886 alignment, although in some areas, it meanders around topographic features to connect various ranches and homesteads established along the roadway (see Figure 4; Figure 5). Additionally, the western end of the Colcord Road alignment is shown turning north at 13 Ranch and ascending the Mogollon Rim.

After 1930, the wagon road was improved and re-designated as FH 11. The road comprised 11.6 miles of the overall FH 11 route, which spanned 40 miles between Payson and FH 12. A series of TNF and Bureau of Public Roads maps show the Colcord Road along its present-day alignment between the 13 Ranch and FH 12. However, a TNF map indicates that the road had deteriorated to "minor" or "very poor" condition by the time the CCC arrived at the TNF in 1933 (Figure 6).

A CCC newspaper for the Indian Gardens camp suggests that work on the Colcord Road commenced during the summer of 1934 (*Tonto Wrangler*, 15 November 1937). That summer, a fly camp was established at Gordon Creek for crews working on the Colcord Road alignment. Construction of the route was initiated by ten CCC enrollees around May 1, 1934, and continued for several seasons before the road was completed in 1937 (Moore 2006:87).

A 1939 Bureau of Public Roads as-built drawing of FH 11 indicates that CCC improvements to Colcord Road included grading sections of the existing roadway, sub-grade reinforcement, and the construction of road features including culverts and bridges (Figure 7). The map indicates that portions of the eastern end of the roadway were graded between 1935 and 1936. Additionally, the drawings suggest that the sub-grade of the road to the west of Ponderosa Estates was reinforced with crushed gravel or disintegrated granite in 1936. At this time, the road bed measured 8 ft wide and consisted predominantly of existing roadway and routes surveyed between 1931 and 1934. Two sections of FH 11 to the west—in Little Green Valley and northwest of Bear Flat—were graded while segments east of Tonto Creek near See Canyon had crushed rock or macadam applied to the road surface.

Following completion of the route in 1937, the Indian Gardens camp and Gordon Creek fly camp were abandoned and a new CCC camp was established north of Payson along the East Verde River (Moore 2006). The CCC continued its operations in the Payson Basin and along the Mogollon Rim

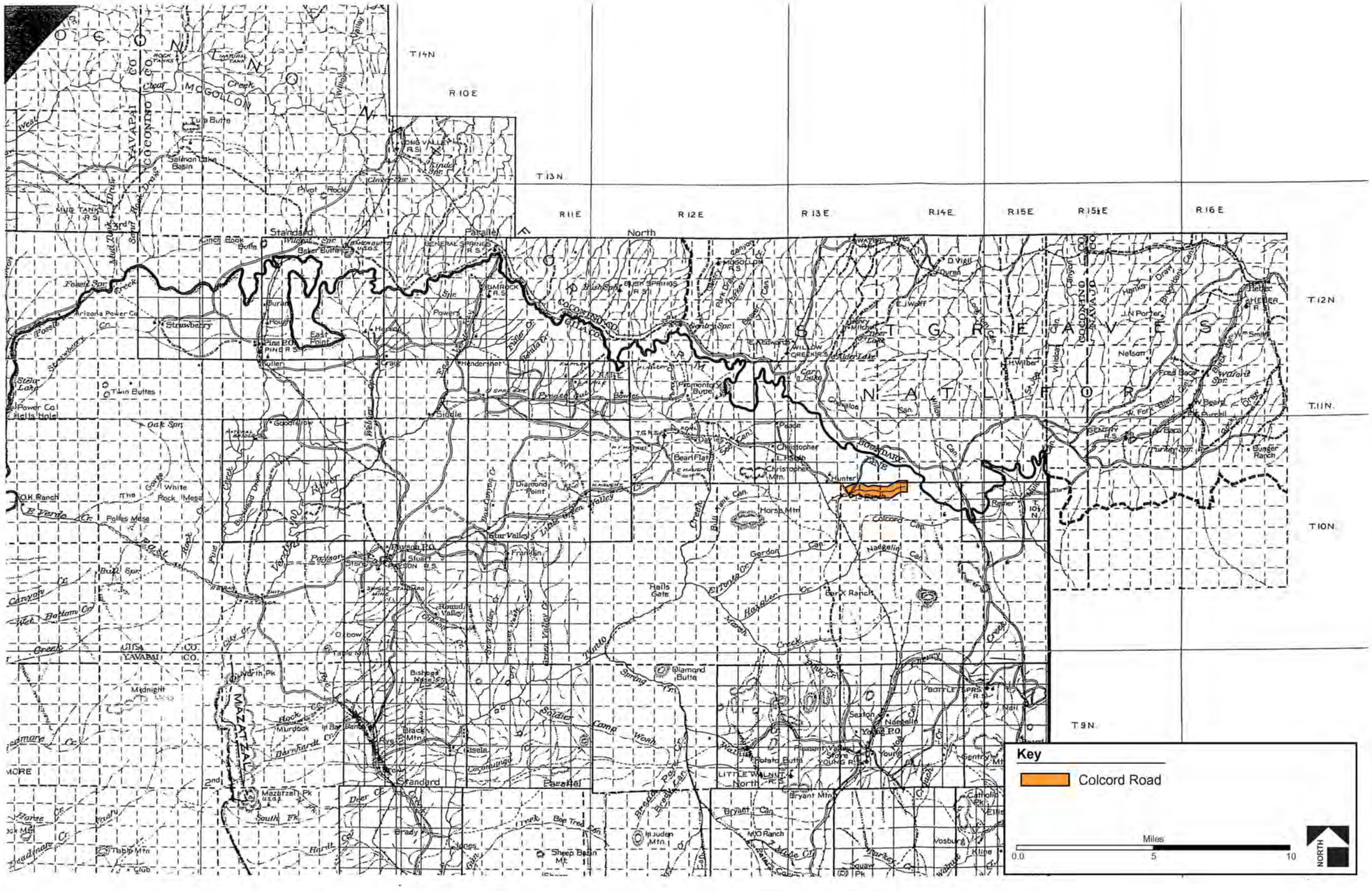


Figure 5. Excerpt from a 1924 TNF map showing the western end of the Colcord Road.

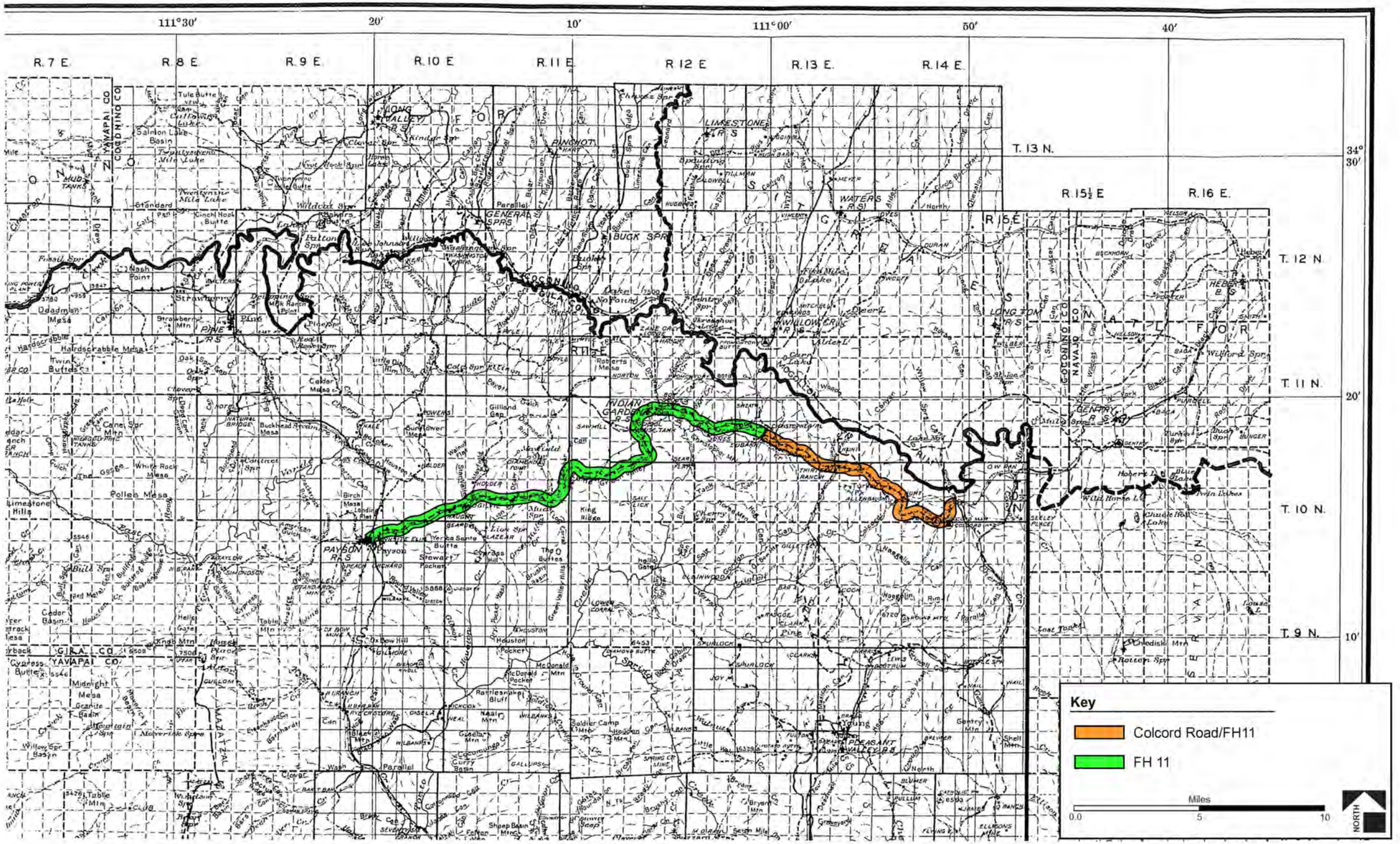


Figure 6. Excerpt from a 1933 TNF map showing the early alignment of the FH 11 and the Colcord Road.

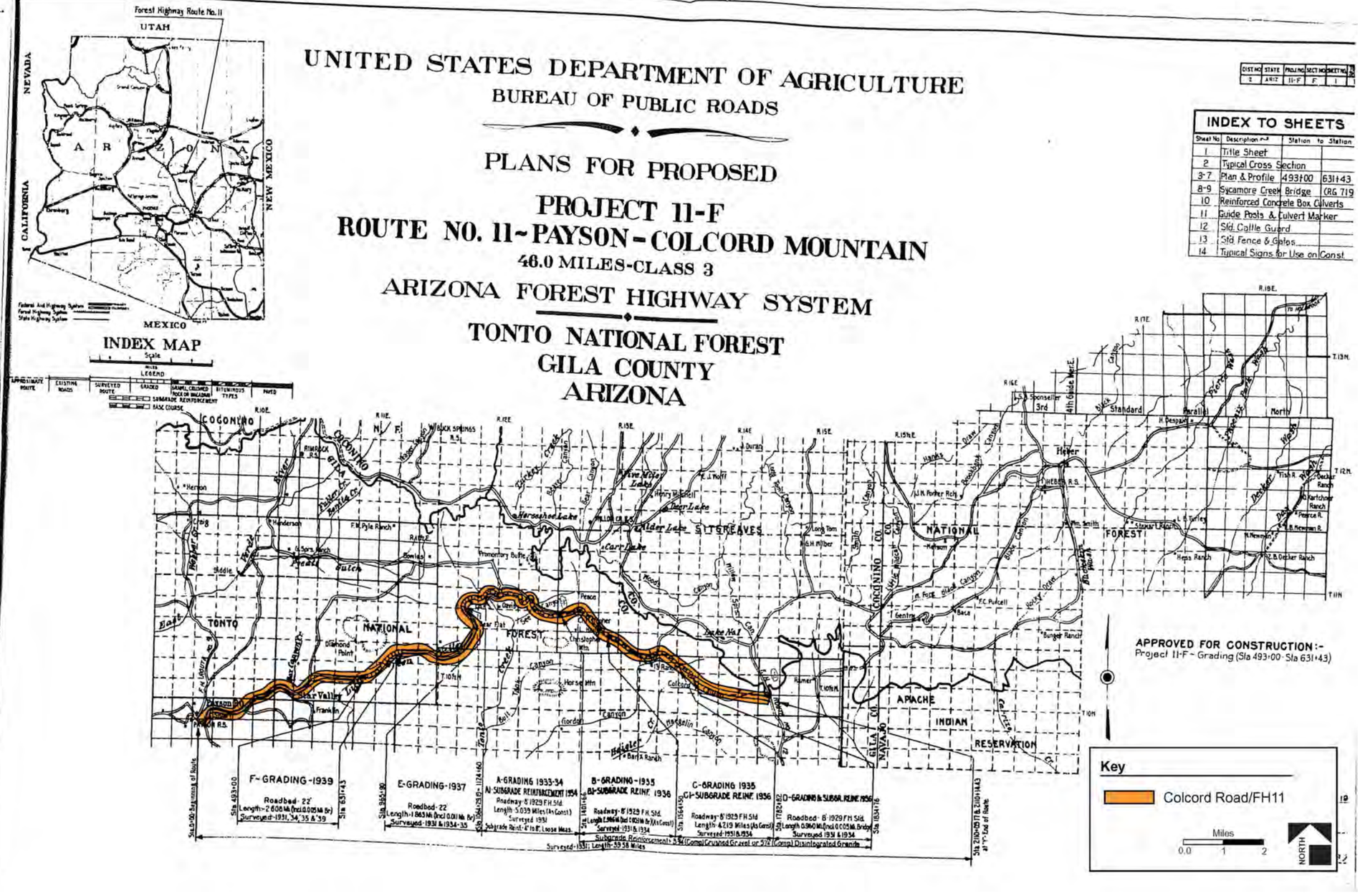


Figure 7. 1939 Bureau of Public Roads as-built plan showing CCC improvements to the early alignment of FH 11.

escarpment until June 1942 when the onset of American participation in World War II and the decision to formally stop federal funding effectively ended the program. After this date, the Colcord Road was completed and subsequently maintained and improved by the Forest Service and Gila County.

A 1946 TNF map suggests that the western end of the route between 13 Ranch and FH 12 was realigned between 1939 and 1946 (see Figure 7; Figure 8). Additionally, a 1952 Bureau of Public Roads as-built plan for the Colcord Road suggest that portions of the route were widened from 8 ft to 14 ft after 1952 (Figure 9).

The FH 11 alignment was eventually re-designated as the Colcord Road, and subsequently, Forest Road (FR) 291. The road was named after cattle rancher, William C. Colcord, who homesteaded on Walnut Creek west of Young in 1886 (Northern Gila County Historical Society 1984). Colcord was an active participant in Gila County politics and civic matters and many geographic points in the region including Colcord Mountain and Colcord Street in Payson are named after him. Following the completion of SR 260 in the late 1950s, the road became an important access route that opened up the TNF to recreational uses. Tourism in the region was further encouraged with the paving of SR 260 in the 1960s (Keane and Bruder 2003), and by the late 1960s, housing developments such as Ponderosa Estates and Colcord Estates were established along the road.

Today, the Colcord Road continues to serve as an access road for numerous summer homes, hiking and off-road vehicle trails, and wooded recreational areas established along the roadway. It also remains an important fire-break between the Mogollon Rim and communities north and south of the road and continues to facilitate the rapid deployment of fire-fighting personnel. Although portions of the road are continually maintained by the Gila County Road Department, the alignment of the road has changed little since its realignment between 1939 and 1946, and numerous historic features including a CCC-era bridge, retaining wall, and culverts remain along the route.

DOCUMENTATION OF THE HISTORIC COLCORD ROAD

The in-use alignment of the historic Colcord Road documented by LSD spans 11.6 miles between the Young Highway (FR 512) on the east and SR 260 on the west. The eastern 5.35 miles of the Colcord Road and its associated features were previously documented by LSD in 2008 (Drake and Rayle 2009); the remaining 6.25 miles were documented by LSD archaeologists Greta Rayle and Leigh Davidson on April 26 and April 27, 2011. The results of both efforts have been consolidated and are summarized in the sections below.

The Colcord Road extends primarily east to west and crosses numerous creek valleys and ridge systems. The road is paved with asphalt for the 5.35 miles east of SR 260 and then continues as an improved and regularly maintained dirt and gravel road until it terminates at the Young Highway. This segment of Colcord Road is mostly unpaved except for a paved segment where the road spans a bridge at an unnamed spring within Colcord Canyon. The level travel surface varies in width from 14 ft to 26 ft, with

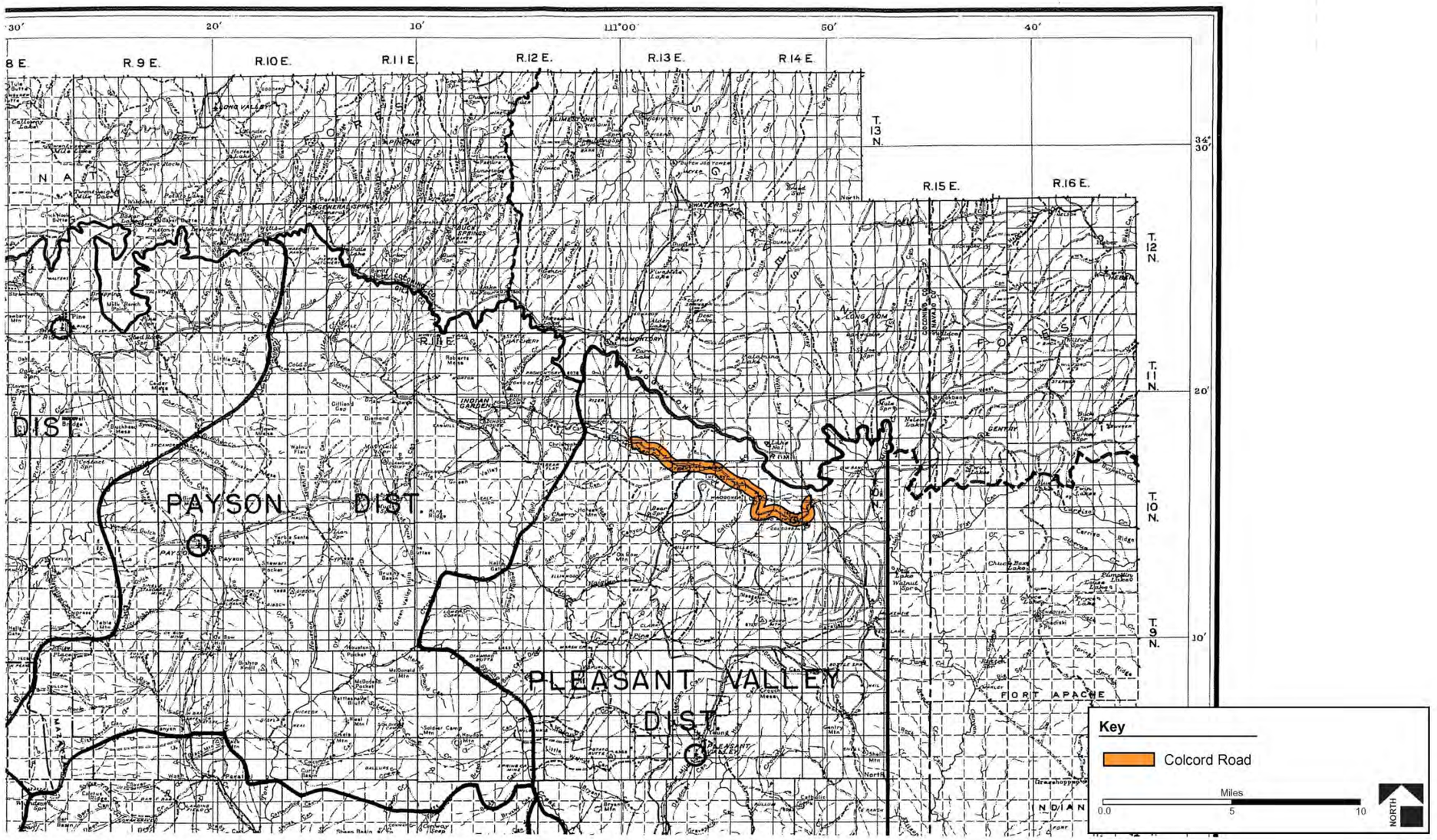
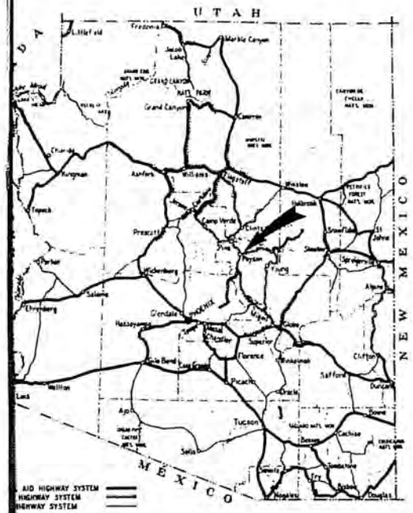


Figure 8. Excerpt from a 1946 TNF map showing the CCC-era alignment of the Colcord Road.



ARIZONA

UNITED STATES DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

AS CONSTRUCTED PLANS FOR

PROJECT 11-H

ROUTE NO. 11 ~ PAYSON - COLCORD MOUNTAIN

39.6 MILES - CLASS 3

ARIZONA FOREST HIGHWAY SYSTEM

TONTO NATIONAL FOREST
GILA COUNTY
ARIZONA

DIV. NO.	STATE	PROJ. NO.	SECT. NO.	SHEET NO.	TOTAL SHEETS
7	ARIZ	11-H	H	1	27

Construction Revisions Shown

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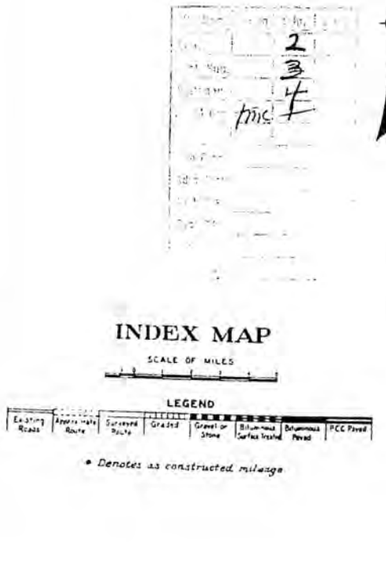
1	Title Sheet
2	Typical Cross Sections
3	Estimate of Quantities
4-16	Plan & Profile, Sta. 2+71.28 to Sta. 384+44.19
17	1 Span 12 Ft. Culvert
18	2 Span 12 Ft. Culvert
19	4 Span 12 Ft. Culvert
20	Std. R.C. Box Culverts
21	Std. Conc. Headwalls (D2-B)
22	Std. Cattle Guards
23	Std. Fence & Gates (Ariz.)
24	Metal Guide Posts
25	Miscellaneous Structures (D2-A)
26	Special Project Sign (D7-S2)
27	Typical Signs

DESCRIPTION OF PROJECT:~
Project Arizona Forest Highway 11-H, Grading and Bridges
Beginning at Junction F.H. 9 and 11 near Payson;
Ending 7.2 Miles easterly near Lion Spring Draw
Sta. 2+71.28 to Sta. 384+44.19
Length 7.230 Miles



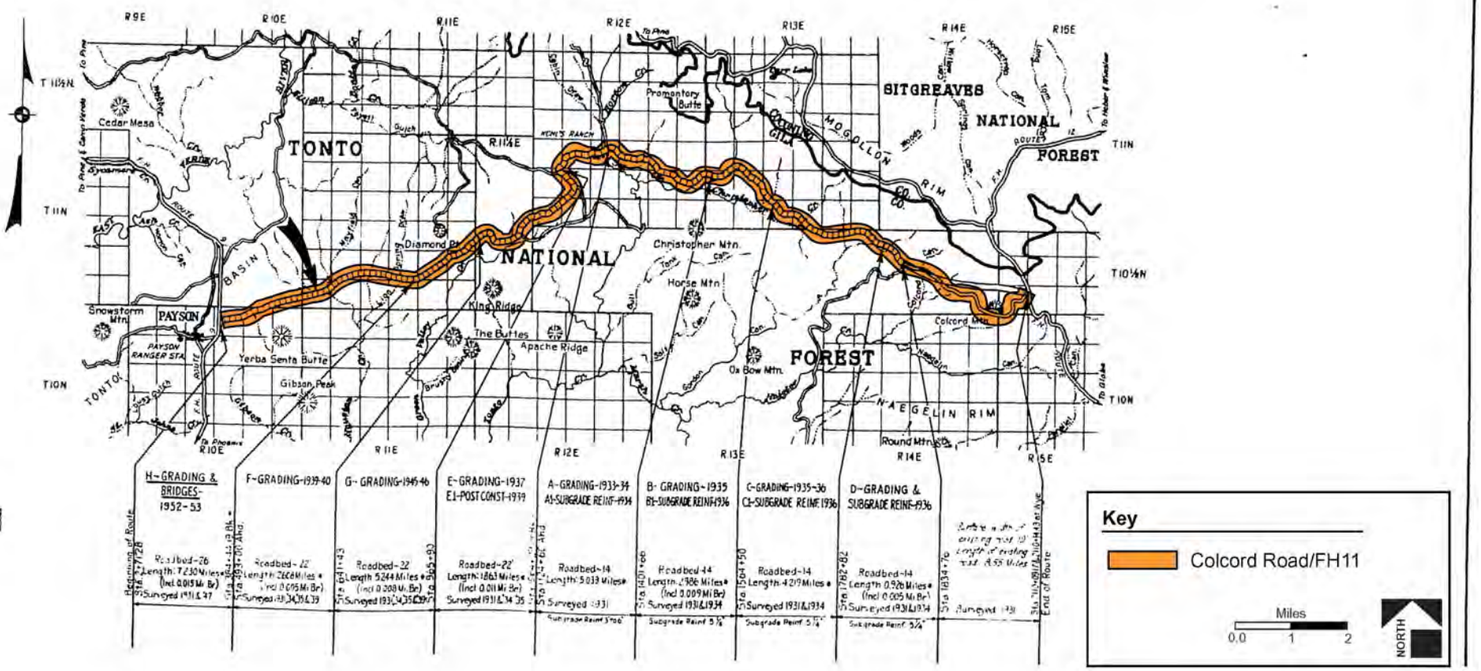


Figure 9. 1952 Bureau of Public Roads as-built plan showing the current, in-use alignment of the Colcord Road.

the widest segments located near SR 260 and the Young Highway and in developed areas. Road cuts varying in height from 3 ft to 15 ft are present along hill slopes. The road surface is generally flanked on either side with gravel shoulders and/or unlined drainage ditches; the shoulders vary in width from 15 inches to 3 ft, and the drainage ditches average 3 ft wide by 2 ft deep.

Between Colcord Estates and the Young Highway, the road consists of an unpaved two-track road that is not maintained and skirts across the top of Colcord Mountain. In numerous areas along this stretch of roadway, small earthen and cobble berms are present along the southern and northern shoulders to discourage run-off and erosion (Photograph 1). Additionally, where the road switchbacks around curves along the flanks of Colcord Mountain, the roadbed has been extended and spoil piles are present due to snow removal and plowing (Photograph 2). Additional photographs of the in-use alignment of the historic Colcord Road are included in Appendix A.

Associated Features

The survey of 11.6 miles of the historic Colcord Road resulted in the identification of 70 features (Table 4). The features were classified by type according to a typology created by Drake and Rayle (2009) for similar CCC-era features documented along the historic Control Road, a 23-mile-long road located west of Colcord Road in the PRD of the TNF. The features consist of four different types: corrugated metal pipe (CMP) culverts, or Type 1 features; masonry box culverts (MBCs), or Type 2 features; bridges, or Type 4 features; and retaining walls, or Type 6 features. With the exception of three bridges, two MBCs, and one retaining wall, all of the features are Type 1 CMP culverts. The CMP culverts include 29 Type 1A culverts and 36 Type 1B culverts (see below). The features were numbered sequentially west to east beginning at SR 260. Topographic maps showing the location of each feature along the entire length of Colcord Road are included in Appendix B. Photographs of unique and exceptional features are included in Appendix C.

Table 4. Summary of features along the Colcord Road.

Type	Description	Number
1	CMP[a] culvert	66
2	MBC[b]	2
4	Bridge	1
6	Retaining wall	1

[a] CMP = corrugated metal pipe; [b] MBC = masonry box culvert.

Type 1A CMP Culverts

The 30 historic Type 1A culverts documented along Colcord Road consist of a single CMP with no accompanying headwall or wing wall (Photographs 3 and 4). The Type 1A culverts have a variety of different pipe diameters: one is 16 inches; 14 are 18 inches; six are 20 inches; six are 24 inches; one is 30 inches; and two are 54 inches.

One Type 1A culvert (Feature 31) that spills into Gordon Canyon Creek has three associated embankments (Photograph C.1). The embankments consist of dry-laid sandstone and conglomerate slabs

Photograph 1. Photograph of the historic Colcord Road showing cobble and earthen berms along the northern shoulder of the roadway, facing north.

Photograph 2. Photograph of the historic Colcord Road showing evidence of plowing along the flanks of Colcord Mountain, facing northwest.

Photograph 3. Feature 58, an example of Type 1A CMP, facing north.

Photograph 4. Feature 9, an example of Type 1A CMP, facing south.

and boulders placed on the downslope side of the feature. The nearest embankment is immediately west of the CMP and consists of 23-ft-long and 8-ft-high mound of large conglomerate boulders that were likely placed with the aid of machinery. The remaining embankments are located further downstream on the north and south sides of the creek bank. The northern embankment measures 80 ft long and 9 ft high and almost completely covers the creek bank. The embankment on the south side is slightly smaller, measuring60 ft long and approximately 4 ft high, and covers only the lower third of the creek bank. Feature 31 is the only road feature in the current project area that has associated embankments.

The greatest concentration of Type 1A culverts are located approximately 2.2 miles east of SR 260. Eight Type 1A culverts are located within a 1.1-mile-long section of roadway, which is within and/or adjacent to the Gordon Canyon Creek valley. Interestingly, the valley is among the flattest sections in the project area and is also the location of the CCC Gordon Canyon Creek side camp (Moore 2006), which makes the area easiest to access with machinery and additional labor and materials. Throughout the remainder of the project area, Type 1A culverts are more randomly dispersed, with only one or two culverts present in a 0.5-mile area.

Type 1B CMP Culverts

Thirty-six Type 1B culverts with one or more associated dry-laid masonry headwalls were documented within the project corridor (Table 5). One Type 1B culvert with a 24-inch-diameter double CMP (Feature 42) was recorded (Photograph C.2); all others are constructed of a single pipe (Photographs 5 and 6). The diameters of the pipes are as follows: one is 16 inches; 15 are 18 inches; three are 20 inches; seven are 24 inches; four are 36 inches; two are 48 inches; one is 54 inches; and three are 60 inches. Masonry materials include sandstone and limestone slabs and conglomerate boulders. Most rocks are of a size that could have been moved by one or more men, but several of the larger culverts have large boulders that would have required machinery and/or draft animals to place. The most substantial Type 1B culvert (Feature 1) is 24-ft long and 8-ft high, with five courses of sandstone slabs (Photograph C.3)

Table 5. Summary of Type 1B Features along Colcord Road.

Feature no.	Side of Road	Headwall Length	Headwall Height	Courses High	Pipe Diameter (inches)	UTMs[a] (Centerpoint)
1	South	–	–	–	60	502780 mE, 3794537 mN
	North	24 ft	8 ft	5	60	
2	South	11 ft	4 ft 6 in	7	24	502876 mE, 3794477 mN
	North	–	–	–	24	
3	South	3 ft 6 in	1 ft 8 in	4	18	502978 mE, 3794416 mN
	North	4 ft	2 ft 4 in	3	18	
4	South	21 ft	7 ft	4	54	503228 mE, 3794252 mN
	North	21 ft	4 ft 6 in	4	54	
5	South	–	–	–	24	503387 mE, 3794165 mN
	North	4 ft 6 in	2 ft	2	24	

continued

Table 5. Summary of Type 1B Features along Colcord Road.

Feature no.	Side of Road	Headwall Length	Headwall Height	Courses High	Pipe Diameter (inches)	UTMs[a] (Centerpoint)
6	South	3 ft 6 in	2 ft 6 in	6	18	503501 mE, 3794107 mN
	North	–	–	–	18	
7	South	6 ft 6 in	2 ft 6 in	5	18	503661 mE, 3794070 mN
	North	–	–	–	18	
8	South	3 ft 6 in	1 ft 6 in	5	18	503765 mE, 3794056 mN
	North	–	–	–	18	
11	South	–	–	–	18	504218 mE, 3793990 mN
	North	5 ft	1 ft 6 in	4	18	
12	South	–	–	–	18	504317 mE, 3793971 mN
	North	7 ft	2 ft 6 in	4	18	
13	South	4 ft 6 in	2 ft	3	18	504493 mE, 3793997 mN
	North	2 ft 6 in	1 ft 6 in	2	18	
14	South	14 ft	5 ft	6	48	504604 mE, 3794042 mN
	North	18 ft	5 ft	7	48	
15	South	–	–	–	18	504705 mE, 3794080 mN
	North	3 ft	1 ft 6 in	4	18	
17	South	3 ft	1 ft 6 in	3	18	504978 mE, 3794150 mN
	North	4 ft 6 in	1 ft 6 in	3	18	
19	South	5 ft 6 in	3 ft	6	36	505273 mE, 3794212 mN
	North	7 ft 6 in	4 ft	3	36	
20	South	11 ft	3 ft	3	36	505611 mE, 3794284 mN
	North	9 ft 6 in	4 ft 6 in	5	36	
21	South	16 ft	6 ft	5	60	505782 mE, 3794276 mN
	North	11 ft	5 ft	5	60	
22	South	8 ft	3 ft	3	36	505890 mE, 3794235 mN
	North	5 ft	1 ft 6 in	1	36	
27	South	20 ft	9 ft	3	60	506689 mE, 3793651 mN
	North	–	–	–	60	
34	South	10 ft	8 ft	4	48	507772 mE, 3793020 mN
	North	15 ft	8 ft	5	48	
35	South	–	–	–	18	507809 mE, 3792905 mN
	North	5 ft	1 ft 6 in	3	18	
36	South	2 ft 6 in	3 ft	4	18	507843 mE, 3792754 mN
	North	–	–	–	18	
38	South	4 ft	1 ft 6 in	2	18	508135 mE, 3792619 mN
	North	–	–	–	18	

continued

Table 5. Summary of Type 1B Features along Colcord Road.

Feature no.	Side of Road	Headwall Length	Headwall Height	Courses High	Pipe Diameter (inches)	UTMs[a] (Centerpoint)
41	South	6 ft	3 ft	6	24	509008 mE, 3792361 mN
	North	5 ft	2 ft 6 in	5	24	
42	South	9 ft	2 ft	2	24	509315 mE, 3792216 mN
	North	–	–	–	24	
44	South	2 ft	2 ft	1	36	509749 mE, 3791999 mN
	North	–	–	–	36	
45	West	4 ft 5 in	2 ft	2	24	509755 mE, 3791896 mN
	East	7 ft	2 ft 5 in	4	24	
46	West	3 ft 2 in	2 ft 9 in	3	20	509837 mE, 3791097 mN
	East	6 ft 6 in	2 ft 4 in	3	20	
49	South	5 ft 4 in	2 ft 2 in	3	18	509568 mE, 3790529 mN
	North	3 ft 8 in	3 ft	2	18	
50	South	5 ft 3 in	2 ft 4 in	3	16	509852 mE, 3790332 mN
	North	3 ft 2 in	1 ft 11 in	IND	16	
51	West	3 ft 2 in	2 ft	2	18	509858 mE, 3790299 mN
	East	6 ft 6 in	2 ft 3 in	IND	18	
53	West	4 ft 10 in	3 ft 6 in	4	18	510007 mE, 3790268 mN
	East	4 ft 2 in	2 ft 7 in	3	18	
54	West	–	–	–	20	510267 mE, 3790304 mN
	East	6 ft 1 in	3 ft 1 in	3	20	
55	West	–	–	–	20	510363 mE, 3790376 mN
	East	3 ft 2 in	2 ft 1 in	2	20	
57	West	–	–	–	24	513313 mE, 3789743 mN
	East	4 ft 10 in	3 ft	4	24	
67	South	–	–	–	24	513582 mE, 3790931 mN
	North	4 ft 1 in	3 ft 3 in	6	24	

[a] = UTM coordinates are Zone 12, NAD 1983 CONUS.

Photograph 5. Feature 2, an example of Type 1B CMP with a dry laid masonry headwall, facing north.

Photograph 6. Feature 49, an example of Type 1B CMP with a dry laid masonry headwall, facing north.

Design variations to Type 1B features include the use of L-shaped and C-shaped headwalls. One feature (Feature 50) has an L-shaped headwall and one feature (Feature 53) has a C-shaped headwall. Both of the features are located approximately 1.0 mile south of Ponderosa Estates. Feature 50 is (Photograph C.4). Feature 53 consists of a single 18-inch-diameter CMP with a 4-ft long by 3-ft-high dry laid stone headwall. South of the CMP, the headwall curves slightly to the east and north forming the shape of a wide "C" (Photograph C.5). Additionally, one of the Type 1B culverts (Feature 22) has a small retention area on its downslope side (Photograph C.6). The interior and eastern bank of the retention area is lined with cobbles. A second CMP, associated with a private driveway, is located to the north of the feature and shares the retention area.

The placement of Type 1B features is more evenly spaced than that of Type 1A features. The greatest concentration of Type 1B culverts is within the first mile from SR 260, where there are 5 consecutive features (Features 11, 12, 13, 14, and 15) to the east of Hunter Creek. The remaining features are predominantly situated in groups of three, with most of the Type 1B culverts located to the west of Colcord Mountain.

Type 2 MBCs

Two Type 2 MBCs were identified along the Colcord Road alignment. Both of the Type 2 features (Features 16 and 30) span north-south tributaries to Gordon Canyon Creek. The features are similarly constructed of form-poured concrete with masonry wing walls extending from each side. The wing walls are constructed of sandstone blocks in a rusticated Ashlar design. Ashlar is dressed stone work of any type of stone; the blocks are large rectangular rocks sculpted to have square edges and even faces.

Feature 16 is 1.6 miles east of SR 260 and Feature 30 is 1.7 miles east of Feature 16. Feature 16 has two wing walls extending from both the upslope and downslope sides (Photographs C.7–C.9). The wing walls extend 17 ft to 22 ft and are 16.5 ft-high. The sandstone blocks used in the wing walls average 18 inches by 10 inches; the largest is 40 inches by 13 inches. An approximate 20-ft-long stretch of the upstream drainage channel and a 14-ft-long downstream stretch were stabilized with unshaped or minimally shaped sandstone rocks and mortar. Feature 30 has two wing walls on the upslope and downslope sides that extend 15 ft to 18 ft and range from 16.5-ft to 19-ft high (Photographs C.10–C.14). The sandstone blocks in the wing walls average 18 inches by 12 inches; the largest is 30 inches by 24 inches. There was no bank stabilization associated with Feature 30.

Type 4 Features

In addition to the Type 1 CMPs, one Type 4 feature, or bridge (Feature 47), was documented along the Colcord Road alignment. The bridge spans an unnamed spring within Colcord Canyon and consists of a concrete beam bridge with a concrete curbs and metal guardrails (Photograph C.15). The concrete deck consists of a single span and measures 20 ft long by 16 ft wide. The bridge has masonry abutments that consist of 7 courses of shaped sandstone slabs that are mortared with concrete. The abutments vary in length and height; the northern abutment is 7 ft 8 inches long by 3 ft 5 in high and the southern abutment is curved and measures 11 ft 7 in long by 3 ft 1 in high (Photograph C.16). Three and four courses of stacked concrete block are present on top of the masonry abutments (Photograph C.17). The concrete block is

modern and provides additional stabilization for the banks. The abutments rest on poured concrete footers that measure 11 inches high by 1 ft wide (see Photograph C.15). A brass cap with "USDA Forest Service B.R. 11" engraved in the metal is present on the north curb of the structure.

The original construction date for the bridge is not known. Historic records pertaining to the bridge are scarce and informant accounts of CCC work projects along the roadway are conflicting. However, archival research suggests that other bridges with masonry abutments in the region, and specifically those along the Control Road, were constructed by the CCC between 1939 and 1941 (Herbert and Root 2011; Moore 2006; Rayle 2011). The bridge's stone work as well as the type of concrete used for its deck, curbs, and footers suggests that the structure was likely built by the CCC when the road was constructed in the 1930s.

Type 6 Features

One Type 6 feature, a retaining wall (Feature 48), was identified along the Colcord Road alignment. The feature consists of a 29 ft long by 1 ft wide by 2 ft high retaining wall located approximately 0.1 mile southwest of Feature 47, the one-lane bridge (Photograph C.18). The wall parallels the western shoulder of the roadway and is comprised of 2 to 3 courses of dry laid conglomerate boulders. The age of the wall is not known; however, its design suggests that it was likely constructed by the CCC at the same time as the bridge and culverts.

Other Features

Other features documented along the historic Colcord Road alignment include pull-outs (n = 9), barricades (n = 2), and parking areas (n = 1). Topographic maps showing the locations of these features are provided in Appendix D.

Pull-outs are located at numerous locations along the Colcord Road. In most cases, the pull-outs are located along steep and narrow sections of the roadway where additional shoulder space is needed for vehicular safety. These pull-outs parallel the roadway and range in size from 18 ft to 92 ft long by 13 ft to 18 ft wide (Photograph 7). Pull-outs are also located in developed areas and where the roadway intersects with private driveways and/or access roads. These pullouts are much larger in size and often serve as informal parking areas for recreationists (Photograph 8). Additionally, one of the pull-outs (Pull-out 9) is located along Valentine Ridge and serves as an informal scenic overlook for the Naegelin Canyon (Photograph 9).

Two gates are present along the Control Road alignment. The westernmost gate (Gate 1) is situated in the vicinity of Ponderosa Estates where the paved roadway ends and the road becomes a primitive and unimproved access road, and the easternmost gate (Gate 2) is located 0.1 mile from the eastern end of the Colcord Road. Both gates consist of a swinging steel gate anchored to a single steel post. A sign with road closure information is located 12 ft east of Gate 2.

Photograph 7. Pull-out 6, an example of a pull-out located along a narrow section of roadway for vehicular safety purposes, facing southwest.

Photograph 8. Pull-out 1, an example of a pull-out that serves as an informal parking area for recreationists, facing southwest.

Photograph 9. Pull-out 8, overlooking Naegelin Canyon from Valentine Ridge, facing west.

In addition to the pull-outs and barricades, one parking area was documented along the Control Road alignment. The parking area is located at Colcord Lookout at the top of Colcord Mountain, and the scenic overlook is situated along Valentine Ridge to the east of Naegelin Canyon. The parking area is irregular-shaped and graveled and is designed to accommodate parking for more than one vehicle. At its maximum dimensions, the parking area measures 62 ft long by 59 ft wide. A fenced enclosure surrounds the lookout tower and abuts the south side of the parking area; the east and west sides of the parking area are bounded by barricades that consist of large wooden logs placed on top of 1.5-ft-high cobble and earthen berms.

Abandoned Road Segments

In addition to the features identified along Colcord Road, one abandoned road segment (RS) was documented (see Appendix D). The RS is approximately 411 ft long by 10 ft wide and follows the contours of a small hill on the north side of the roadway. A log has been placed in the center of the roadbed at the east end of the RS where it intersects the in-use alignment of the Colcord Road to discourage further use of the route (Photograph 12). The age of the RS is not known. The route is not depicted on historic maps of the region and information pertaining to its construction was not available.

Photograph 10. Photograph of the Colcord Lookout parking area at the top of Colcord Mountain, facing south.

Photograph 11. Photograph of the abandoned road segment, facing south.

Photograph 12. Photograph showing the abandoned road segment where it intersects with the in-use alignment of the Colcord Road, facing northeast. Colcord Road is visible at the bottom of the photograph.

Discussion and Recommendations

The historic Colcord Road has been previously determined eligible for inclusion in the NRHP under Criteria A and C (association with events, characteristics of a type of construction). The road is directly associated with CCC activities in Arizona and can contribute important information regarding CCC undertakings along the Mogollon Rim and in the Payson region in the 1930s and early 1940s. The evaluation of 23 miles of the historic Colcord Road resulted in the identification of 70 features and one abandoned road segment. The features include 66 CMP culverts, 2 MBCs, one bridge, and one retaining wall. All of these features were constructed by the CCC and contribute to the NRHP eligibility of the historic Colcord Road. Additionally, other features of the roadway including nine pull-outs, two barricades, and one parking area were documented. While these features contribute to the setting, feeling, and aesthetic experience of traveling the route, they are likely modern in age and do not contribute to the road's NRHP eligibility. While the alignment of the road has changed over time, it continues to retain its integrity of setting, feeling, materials, and design. Despite modern improvements and maintenance to the route, the road also continues to function as originally designed and segments of the road remain unpaved. Although project plans have not been fully developed for improving the unpaved segments of roadway, Gila County ultimately plans to pave the entire route which constitutes an adverse effect to the roadway. Completion of this Level II HAER documentation report has adequately documented the historic Colcord Road and this report serves as mitigation for adverse effects to the roadway resulting from the Gila County Public Works Division paving project; therefore, no further work is recommended.

Section II.B.8 of the executed PA between the Forest Service, the SHPO, and the Advisory Council on Historic Preservation specifies that recommendations for enhancing heritage education curriculum and public interpretation of the affected road be made. LSD believes that interpretative signage showcasing the CCC's involvement in the development of the Colcord Road could be placed at pull-outs and parking areas to educate recreationalists and residents about the CCC's overall contribution to the TNF and Mogollon Rim area. Additionally, in the area where the abandoned road segment intersects the existing road, an interpretative sign discussing the earlier alignments of the road could be installed. If possible, an exemplary example of a CCC-constructed feature could be preserved and a roadside display discussing the types of features that were originally present and their construction methods could also be developed.

SUMMARY AND RECOMMENDATIONS

The Gila County Public Works Division, in conjunction with the TNF, is planning a long-term road paving project along the historic Colcord Road (FR 291) east of Payson, in northern Gila County, Arizona. The road is located within the PRD and PVRD of the TNF. Gila County recently paved a 3.2-mile-long segment of the Colcord Road east of a 2-mile-long paved segment that begins at SR 260. Although project plans have not been developed for improving the remainder of the road, Gila County ultimately plans to pave the entire road.

The evaluation of 11.6 miles of the historic Colcord Road resulted in the identification of 70 features and one abandoned road segment. Additionally, other features of the roadway including nine pull-outs, two gates, and one parking area were documented. The Colcord Road and its associated features have been previously determined eligible for inclusion in the National Register of Historic Places under Criteria A and C (association with events, characteristics of a type of construction). The road was formally constructed by the Civilian Conservation Corps in the mid-1930s for the purpose of creating a fire break between Payson and the Mogollon Rim and to facilitate vehicular traffic in the sub-rim area. Although the alignment of the road has changed over time, the road retains its setting, feeling, design, and materials, and continues to function as originally designed. Completion of the documentation has adequately documented the historic Colcord Road and this report serves as mitigation for adverse effects to the roadway resulting from the Gila County Public Works Division paving project; therefore, no further work is recommended.

REFERENCES

Booth, P.M.
1991 The Civilian Conservation Corps in Arizona, 1933–1942. Unpublished Master's thesis, Department of History, University of Arizona, Tucson.

Bourke, J. G.
1891 *On the Border with Crook.* Charles Scribner's Sons, New York.

Bowman, E. G.
1978 *A Guide to the General Crook Trail*. Museum of Northern Arizona and the Boy Scouts of America, Flagstaff.

Collins, W. S.
1999 *The New Deal in Arizona*. Arizona State Parks Board, Phoenix.

Collins, W. S., M. Sturgeon, and R. Carriker
1993 *The United States Military in Arizona, 1846–1945*. Arizona State Historic Preservation Office, Phoenix.

Courtney, R. E.
1988 Letter from R. E. Courtney to J. M. Bremmer, dated June 7, 1988. On file, TNF Supervisor's Office, Phoenix.

Drake, D. and G. Gomez
2009 A Cultural Resources Survey of 76.9 Acres along 5.35 Miles of the Colcord Road (FR 291), Payson and Pleasant Valley Ranger Districts, Tonto National Forest, East of Payson, Gila County, Arizona. LSD Technical Report No. 085271a, Logan Simpson Design, Tempe.

Herbert, Rand F. and Garret Root
2011 Photographs and Written Historical and Descriptive Data of the Tonto National Forest Bridges. JRP Historical Consulting, Davis, California. Draft HAER report on file, TNF Supervisor's Office, Phoenix.

Irish, J.
1983 Tonto National Forest Owes Much to the CCC. Manuscript on file, TNF Supervisor's Office, Phoenix.

Keane, M. and J. S. Bruder
1999 *Good Roads Everywhere: Historic and Regulatory Contexts for the Evaluation of Arizona Roads*. Dames and Moore Intermountain Cultural Resource Services Research Paper No. 42, Dames and Moore, Phoenix.

Macnider, B. S., and R. W. Effland
1989 *Cultural Resources Overview: The Tonto National Forest*. Cultural Resources Report No. 51, Archaeological Consulting Services, Tempe.

Merrill, P. H.
1981 *Roosevelt's Forest Army: a History of the Civilian Conservation Corps, 1933–1942*. P. H. Merrill, Montpelier, Vermont.

Moore, R. J.
2006 *The Civilian Conservation Corps in Arizona's Rim Country: Working in the Woods*. University of Nevada Press, Reno.

Northern Gila County Historical Society
1984 *Rim County History Illustrated*. Rim County Printery, Payson.

Otis, A. T.
1986 *The Forest Service and the Civilian Conservation Corps, 1933-1942.* USDA Forest Service, Washington, D.C.

Rayle, G. J.
2011 Level II HAER Documentation of the Historic Control Road (FR 64) and its Associated Features, Payson and Pleasant Valley Ranger Districts, East of Payson, Gila County, Arizona. LSD Technical Report No. 115032a, Logan Simpson Design, Tempe.

Ryan, D. A.
2000 An Archaeological Survey of the Control Road Hazard Tree Removal Project, Payson Ranger District, Tonto National Forest. TNF Project No. 00-32. Manuscript on file, TNF Supervisor's Office, Phoenix.

Stein, P. H.
1990 *Homesteading in Arizona: 1870–1942*. Arizona State Historic Preservation Office, Phoenix.

1994 *Historic Trails in Arizona from Coronado to 1940*. Arizona State Historic Preservation Office, Phoenix.

Wright, T. E.
1993 *Keeping the Boys Busy: Archaeological and Documentary Investigations of AR-03-12-06-1391, A Civilian Conservation Corps Erosion Control Site in Tonto Basin, Gila County, Arizona, with a Brief Account of CCC Activities on Tonto National Forest Lands and a Suggested Historic Context and Research Issues for CCC Erosion Control Sites in the Tonto National Forest.* Cultural Resources Report No. 93:81, Archaeological Research Services, Tempe.

APPENDIX A: PHOTOGRAPHIC DOCUMENTATION OF THE IN-USE ALIGNMENT OF THE HISTORIC COLCORD ROAD (TRAVELING WEST TO EAST)

Photographs of the In-use Alignment of the Historic Colcord Road

A.1. Photograph of a paved segment of the Colcord Road near the east end of SR 260 (UTM Zone 12, NAD 1983 CONUS: 502598 mE, 3794753 mN), photographer Jackie Orcholl, October 2008, facing east (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

A.2. Photograph of the Colcord Road through the upland section (UTM Zone 12, NAD 1983 CONUS: 505437 mE, 3794242 mN), photographer Jackie Orcholl, October 2008, facing west (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

A.3. Photograph of the Colcord Road near Ponderosa Estates where the alignment becomes primitive and unmaintained (UTM Zone 12, NAD 1983 CONUS: 509693 mE, 3791517 mN), photographer Leigh Davidson, April 2011, facing southwest (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

A.4. Photograph of the Colcord Road in the vicinity of Feature 47 (UTM Zone 12, NAD 1983 CONUS: 509825 mE, 3790905 mN), photographer Leigh Davidson, April 2011, facing northeast (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

A.5. Photograph of the Colcord Road in the vicinity of Feature 49 (UTM Zone 12, NAD 1983 CONUS: 509568 mE, 3790529 mN), photographer Leigh Davidson, April 2011, facing northeast (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

A.6. Photograph of the Colcord Road in the vicinity of Feature 50 (UTM Zone 12, NAD 1983 CONUS: 509852 mE, 3790332 mN), photographer Leigh Davidson, April 2011, facing northeast (Source: Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

A.7. Photograph of the Colcord Road near the summit of Colcord Mountain (UTM Zone 12, NAD 1983 CONUS: 512671 mE, 3789834 mN), Leigh Davidson, April 2011, facing southeast (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281). Colcord Lookout Tower is visible near the top center of the photograph.

A.8. Photograph of the Colcord Road in the vicinity of the Colcord Lookout Tower (UTM Zone 12, NAD 1983 CONUS: 512999 mE, 3789627 mN), photographer Leigh Davidson, April 2011, facing east (Source: Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

A.9. Photograph of the Colcord Road at the junction of an unnamed, two-track dirt road (UTM Zone 12, NAD 1983 CONUS: 513477 mE, 3789562 mN), photographer Leigh Davidson, April 2011, facing west (Source: Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

A.10. Photograph of the Colcord Road near the eastern end of the project area (UTM Zone 12, NAD 1983 CONUS: 514288 mE, 3791194 mN), photographer Leigh Davidson, April 2011, facing southwest (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

A.1.

A.2.

A.3.

A.4.

A.5.

A.6.

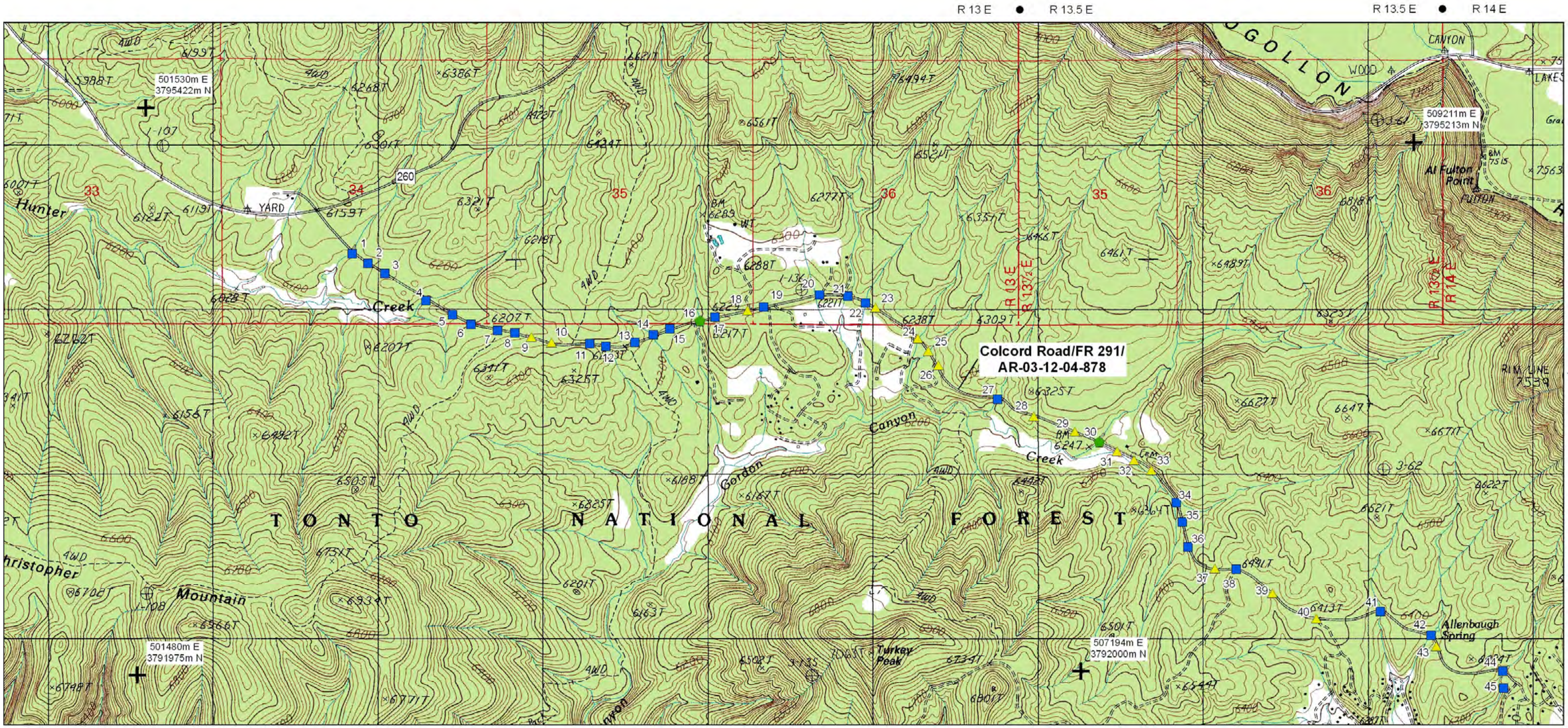
A.7.

A.8.

A.9.

A.10.

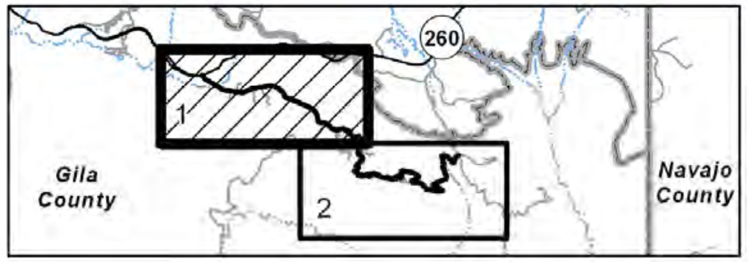
APPENDIX B: TOPOGRAPHIC MAPS SHOWING FEATURES ALONG THE HISTORIC COLCORD ROAD



Source: USGS 7.5' Quadrangles Woods Canyon, Ariz. (1990).
Map Projection: NAD 1983, UTM Zone 12 North. *Note:* All numbers that are labeled are preceded by Feature.

Key

- ▲ Type 1A Feature
- ■ Type 1B Feature
- ★ Type 1C Feature
- ● Type 2 Feature
- ■ Type 4 Feature



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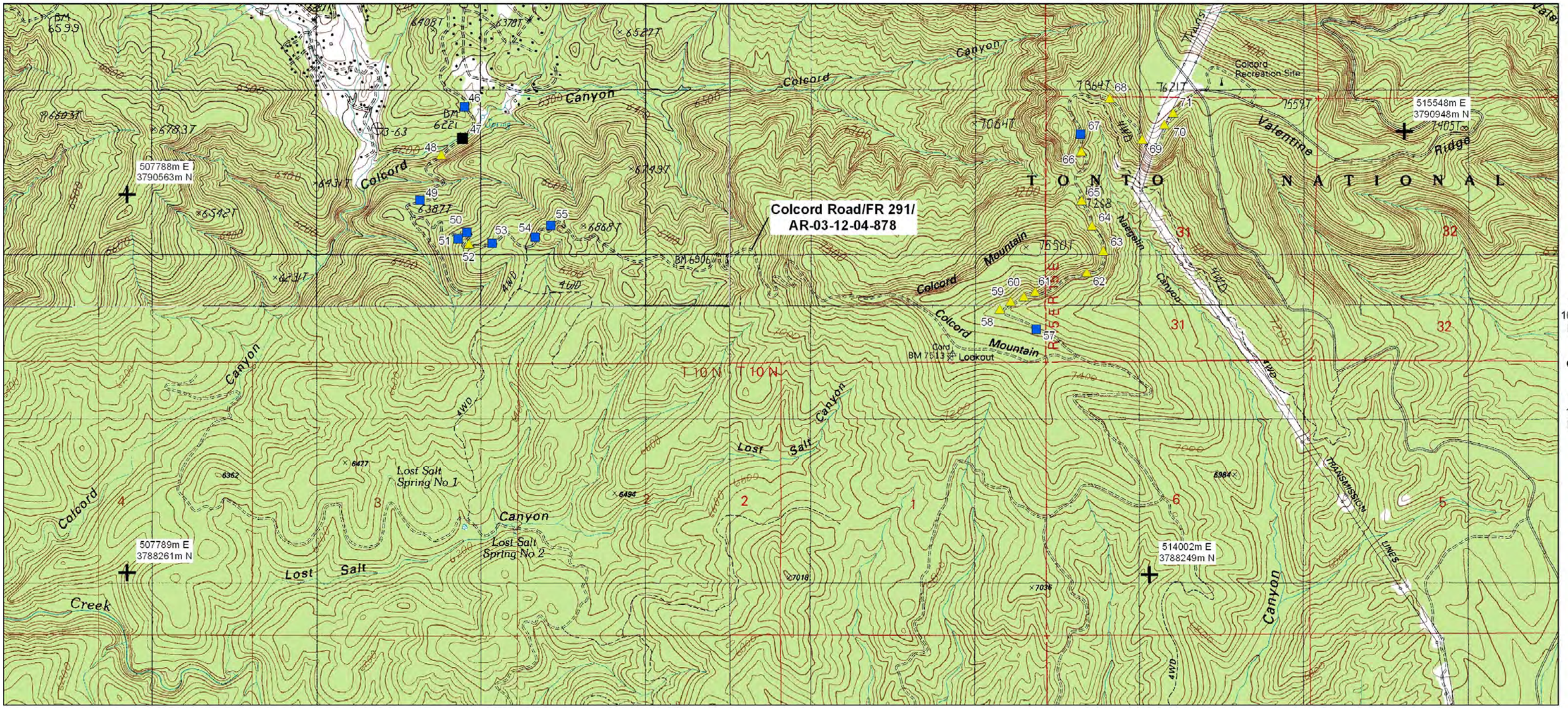
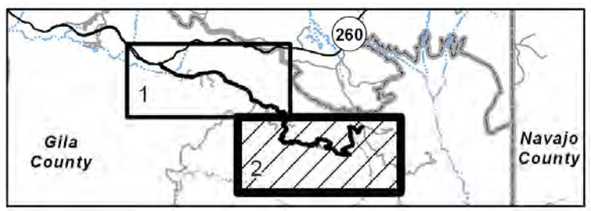


Source: USGS 7.5' Quadrangles O W Point, Ariz. (1990), Oxbow Mountain, Ariz. (1992), Parallel Canyon, Ariz. (1990), and Woods Canyon, Ariz. (1990).
Map Projection: NAD 1983, UTM Zone 12 North. *Note:* All numbers that are labeled are preceded by Feature.

Key

- Type 1A Feature
- Type 1B Feature
- Type 1C Feature
- Type 2 Feature
- Type 4 Feature



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APPENDIX C: PHOTOGRAPHIC DOCUMENTATION OF UNIQUE AND EXCEPTIONAL FEATURES ALONG THE HISTORIC COLCORD ROAD

Photographs of Unique and Exceptional Features located along the Historic Colcord Road

C.1. Photograph of Feature 31, a Type 1A feature with a nearby embankment, photographer Jackie Orcholl, October 2008, facing northeast (*Source*: Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.2. Photograph of Feature 42, a Type 1B feature with a double CMP, photographer Jackie Orcholl, October 2008, facing south (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.3. Photograph of Feature 1, the most substantial Type 1B feature documented along the Colcord Road alignment, photographer Jackie Orcholl, October 2008, facing south (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.4. Photograph of Feature 50, a Type 1B feature with an L-shaped headwall, photographer Leigh Davidson, April 2011, facing northwest (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.5. Photograph of Feature 53, a Type 1B feature with a C-shaped headwall, photographer Leigh Davidson, April 2011, facing southwest (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.6. Photograph of Feature 22, a Type 1B feature with a small retention area, photographer Jackie Orcholl, October 2008, facing northwest (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.7. Photograph of Feature 16, a Type 4 feature, photographer Jackie Orcholl, October 2008, facing north (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.8. Photograph of Feature 16, a Type 4 feature showing rusticated Ashlar construction technique, photographer Jackie Orcholl, October 2008, facing south (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.9 Photograph of Feature 16, a Type 4 feature showing rusticated Ashlar construction technique, photographer Jackie Orcholl, October 2008, facing south (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.10. Photograph of Feature 30, a Type 4 feature, photographer Jackie Orcholl, October 2008, facing south (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.11. Photograph of Feature 30, a Type 4 feature, showing the construction detail of the west abutment, photographer Jackie Orcholl, October 2008, facing south (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.12. Photograph of Feature 30, a Type 4 feature, showing the construction detail of the east abutment, photographer Jackie Orcholl, October 2008, facing north (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.13. Photograph of Feature 30, a Type 4 feature, showing the concrete deck and east abutment, photographer Jackie Orcholl, October 2008, facing north (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.14. Photograph of Feature 30, a Type 4 feature, showing the guardrail on the south side of the bridge, photographer Jackie Orcholl, October 2008, facing north (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.15. Photograph of Feature 47, a Type 4 feature, photographer Leigh Davidson, April 2011, facing east (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.16. Photograph of Feature 47, a Type 4 feature, showing the eastern abutment and retaining wall, photographer Leigh Davidson, April 2011, facing west (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.17. Photograph of Feature 47, a Type 4 feature, showing the concrete block added to the southwest wing wall, photographer Leigh Davidson, April 2011, facing south (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.18. Photograph of Feature 48, a Type 6 feature, photographer Leigh Davidson, April 2011, facing southeast (*Source:* Logan Simpson Design Inc., 51 West Third Street, Tempe AZ 85281).

C.1.

C.2.

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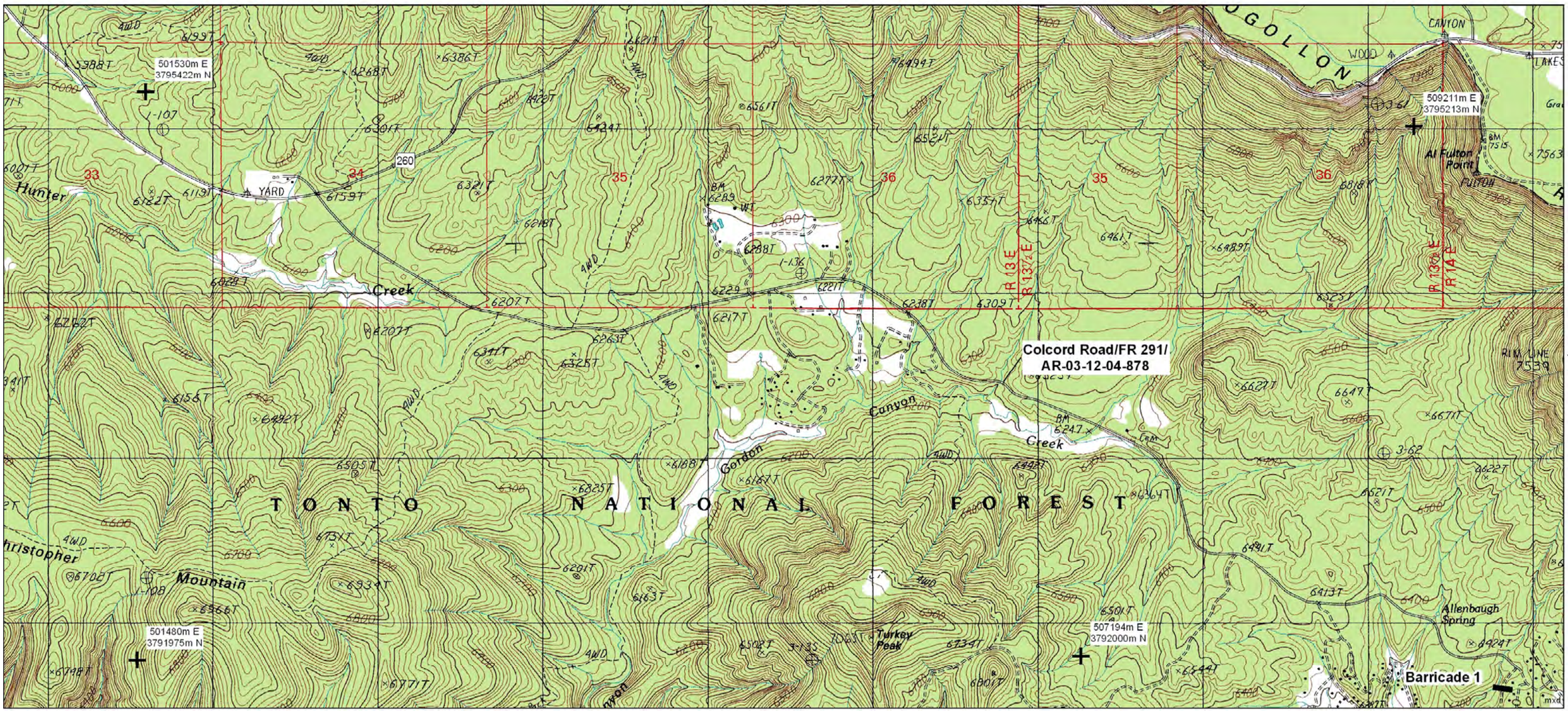
C.18.

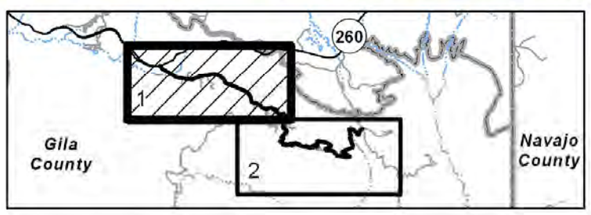
APPENDIX D: TOPOGRAPHIC MAPS SHOWING OTHER FEATURES AND ABANDONED ROAD SEGMENTS ALONG THE HISTORIC COLCORD ROAD



Source: USGS 7.5' Quadrangles Woods Canyon, Ariz. (1990).
Map Projection: NAD 1983, UTM Zone 12 North. *Note:* All numbers that are labeled are preceded by Feature.

Key

- Abandoned Road Segment
- Barricade



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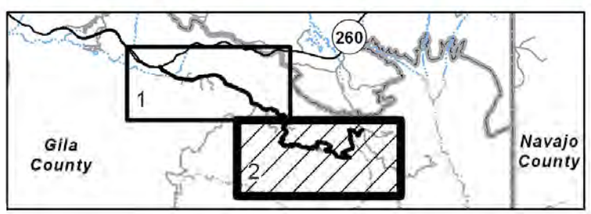
T 10.5 N • T 10 N

Pull out 1
Pull out 2
Colcord Road/FR 291/
AR-03-12-04-878
Pull out 3
Pull out 4
Pull out 5
Pull out 6
Pull out 7
Pull out 8
Pull out 9
Barricade 2
Colcord Lookout
parking area
Colcord Recreation Site
T O N T O N A T I O N A L
507788m E
3790563m N
515548m E
3790948m N
507789m E
3788261m N
514002m E
3788249m N
Lost Salt Spring No 1
Lost Salt Spring No 2
Colcord Canyon
Lost Salt Creek
Valentine Ridge
Transmission Line
T 10 N
R 14 E
R 15 E

Source: USGS 7.5' Quadrangles O W Point, Ariz. (1990), Oxbow Mountain, Ariz. (1992), Parallel Canyon, Ariz. (1990), and Woods Canyon, Ariz. (1990).
Map Projection: NAD 1983, UTM Zone 12 North. *Note:* All numbers that are labeled are preceded by Feature.

Key

- Abandoned Road Segment
- Barricade
- Pull out



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APPENDIX E: PHOTOGRAPH RECORDS AND NEGATIVES

Logan Simpson Design Photo Record

Project Name: Documentation of Historic Colcord Road (FR 291)

Photographer: Leigh Davidson **Date:** 04/26/11–04/27/11

Roll Number: 1 **Exposures:** 36 **Film Type:** Ilford 100 Black and white

Exposure no.	Direction	Description
1	SE	Feature 47, west side
2	SW	Feature 47, east side
3	SW	Feature 47, overview from road
4	NE	Feature 47, overview from road
5	SW	Road overview from Feature 47
6	NE	Road overview from Feature 47
7	NE	Feature 48
8	SE	Feature 48
9	SE	Feature 53, west side
10	SW	Feature 53, east side
11	SE	Road overview
12	S	Road overview
13	N	Road overview
14	SE	Road overview with fire tower (visible in the center of the photograph)
15	SW	Road overview in the vicinity of Pull-out 4 and Feature 58
16	N	Road overview between Features 63 and 64
17	S	Road overview between Features 63 and 64
18	NE	Road overview showing the junction of Colcord Road and a 4WD road
19	W	Road overview showing the junction of Colcord Road and a 4WD road
20	W	Road overview from Pull-out 9
21	S	Road overview in the vicinity of Feature 70
22	N	Road overview in the vicinity of Feature 70
23	SW	Road overview at the east end of the Colcord Road project area
24–32	–	Photographs of Control Road (see Rayle 2011)


Roll 1_115042 001


Roll 1_115042 002


Roll 1_115042 003


Roll 1_115042 004


Roll 1_115042 005


Roll 1_115042 006


Roll 1_115042 007


Roll 1_115042 008


Roll 1_115042 009


Roll 1_115042 010


Roll 1_115042 011


Roll 1_115042 012


Roll 1_115042 013


Roll 1_115042 014


Roll 1_115042 015


Roll 1_115042 016


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Roll 1_115042 018


Roll 1_115042 019


Roll 1_115042 020


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Roll 1_115042 022


Roll 1_115042 023

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Logan Simpson Design Photo Record

Project Name: Documentation of Historic Colcord Road (FR 291)

Photographer: Leigh Davidson **Date:** 04/28/11–04/29/11

Roll Number: 2 **Exposures:** 36 **Film Type:** Ilford 100 Black and white

Exposure no.	Direction	Description
1–35	–	Photographs of Control Road (see Rayle 2011)
36	SW	Road overview at the west end of the Colcord Road project area

Roll 2_115042 036

E.2.36.

Logan Simpson Design Photo Record

Project Name: Documentation of Historic Colcord Road (FR 291)

Photographer: Leigh Davidson **Date:** 04/29/11

Roll Number: 3 **Exposures:** 36 **Film Type:** Ilford 100 Black and white

Exposure no.	Direction	Description
1	NE	Road overview southwest of Feature 47
2	SW	Road overview southwest of Feature 47
3	NE	Feature 49, south side
4	SW	Road overview in the vicinity of Feature 49
5	NE	Road overview east of Feature 49
6	W	Road overview
7	E	Road overview
8	SW	Feature 50, south side
9	NE	Road overview
10	NW	Road overview
11	SW	Road overview
12	NE	Road overview
13	SE	Road overview with fire tower visible in the background
14	W	Road overview in the vicinity of the fire tower
15	E	Road overview in the vicinity of the fire tower
16	N	Road overview north of Feature 62
17	W	Road overview showing the junction of Colcord Road and a 4WD road
18	SW	Road overview from Pull-out 9
19	SW	Road overview at the east end of the Colcord Road project area
20–36	—	Photographs of Control Road (see Rayle 2011)


Roll 3_115042 001


Roll 3_115042 002


Roll 3_115042 003


Roll 3_115042 004


Roll 3_115042 005


Roll 3_115042 006


Roll 3_115042 007


Roll 3_115042 008


Roll 3_115042 009


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Roll 3_115042 017


Roll 3_115042 018


Roll 3_115042 019

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