

**PHASE I ARCHAEOLOGICAL INVESTIGATION  
FOR THE TRUNK HIGHWAY 53  
RELOCATION PROJECT (E-2 ALTERNATIVE),  
VIRGINIA TO EVELETH, ST. LOUIS COUNTY, MINNESOTA**

**MnDOT Contract No. 04098  
S.P. 6918-80  
Two Pines Resource Group No. 13-05  
OSA License No. 14-20**

**Prepared for:  
Minnesota Department of Transportation  
Office of Environmental Services  
Cultural Resources Unit  
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**FINAL  
October 2014**

**Level K**

**C14 - 0029**

**Consultant's Report**





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October 9, 2014

Sarah Beimers  
State Historic Preservation Office  
Minnesota Historical Society  
345 Kellogg Blvd. W.  
St. Paul, MN 55102

Regarding: S.P. 6918-80 (TH 53, St. Louis County)  
Revised Alternative E-2 Alignment  
SHPO: 2011-3404

Dear Ms. Beimers:

The purpose of this letter is to submit for your review our most recent Phase I archaeological survey of a recently revised alternative alignment (E-2) to this project. Since this new alignment falls within the area of potential effect of other architectural history identification and evaluation efforts, no additional work was done on this aspect of the project.

The enclosed 2014 report by Two Pines Resource Group entitled *Phase I Archaeological Investigation for the Trunk Highway 53 Relocation Project (E-2 Alternative), Virginia to Eveleth, St. Louis County, Minnesota* did not identify any additional archaeological properties in the Revised E-2 Alternative. As a consequence, we feel that the results of the enclosed report do not change any of our previous findings.

Sincerely,

A handwritten signature in black ink, appearing to read 'Craig Johnson'.

Craig Johnson  
Archaeologist  
Cultural Resources Unit

cc: MnDOT CRU Project File  
Robert Dwyer, MnDOT D. 1  
Cindy Lillegaard, MnDOT D. 1  
Debra Moynihan, MnDOT C.O.  
Beth Kunkel, Kimley-Horn



## **MANAGEMENT SUMMARY**

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In September of 2014, Two Pines Resource Group, LLC (Two Pines) completed a Phase I archaeological survey for the Trunk Highway (TH) 53 Relocation Project between Virginia and Eveleth in St. Louis County, Minnesota. This work was performed under contract with the Minnesota Department of Transportation (MnDOT) for the Cultural Resources Unit of the department. Because this project will receive funding from the Federal Highway Administration, it must comply with Section 106 of the National Historic Preservation Act, as amended.

For the TH 53 Relocation Project, several Build Alternatives are being studied. In July of 2012, Two Pines reported the results of Phase I and II archaeological investigations carried out for project Alternatives M-1 and E-2 (Vermeer 2012). In August and September 2013, Two Pines also reported the results of the Phase I and II archaeological investigations carried out for project Alternatives E-1, E-1A, and E-2A (Terrell 2013). The purpose of the current archaeological investigations was to determine if the area of potential effects (APE) of the revised E-2 Alternative contains any intact archaeological resources that may be eligible for listing in the National Register of Historic Places (National Register). The APE of the E-2 Alternative includes portions of Sections 9, 16, 17, 18, 20 and 21 of Township 58N, Range 17W. The project area is located within the Central Lakes Coniferous East archaeological sub-region. Dr. Michelle Terrell served as Principal Investigator for the investigations.

During the previous archaeological investigations for the TH 53 Relocation Project, two archaeological sites, 21SL1135 (Rouchleau shops), a mid twentieth-century railroad shops site, and 21SL1208 (Minnewas homestead), a 1925-1941 squatter's homestead, were identified and evaluated. One of these sites, 21SL1135, is located within the APE of the E-2 Alternative, while 21SL1208 is located within the APE of an auxiliary road. However, upon conclusion of the Phase II evaluation, both sites were found not eligible for listing in the National Register and no additional archaeological fieldwork was recommended.

During the Phase I archaeological survey of the E-2 Alternative no additional archaeological resources were identified within the project APE, and as a result no additional archaeological fieldwork is recommended.

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## **INTRODUCTION**

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In September of 2014, Two Pines Resource Group, LLC (Two Pines) completed a Phase I archaeological survey for the Trunk Highway (TH) 53 Relocation Project between Virginia and Eveleth in St. Louis County, Minnesota. This work was performed under contract with the Minnesota Department of Transportation (MnDOT) for the Cultural Resources Unit of the department. Because this project will receive funding from the Federal Highway Administration, it must comply with Section 106 of the National Historic Preservation Act, as amended. The purpose of the Phase I archaeological investigation was to determine if the area of potential effects (APE) of the revised E-2 Alternative contains any intact archaeological resources that may be eligible for listing in the National Register of Historic Places (National Register).

### **PROJECT DESCRIPTION**

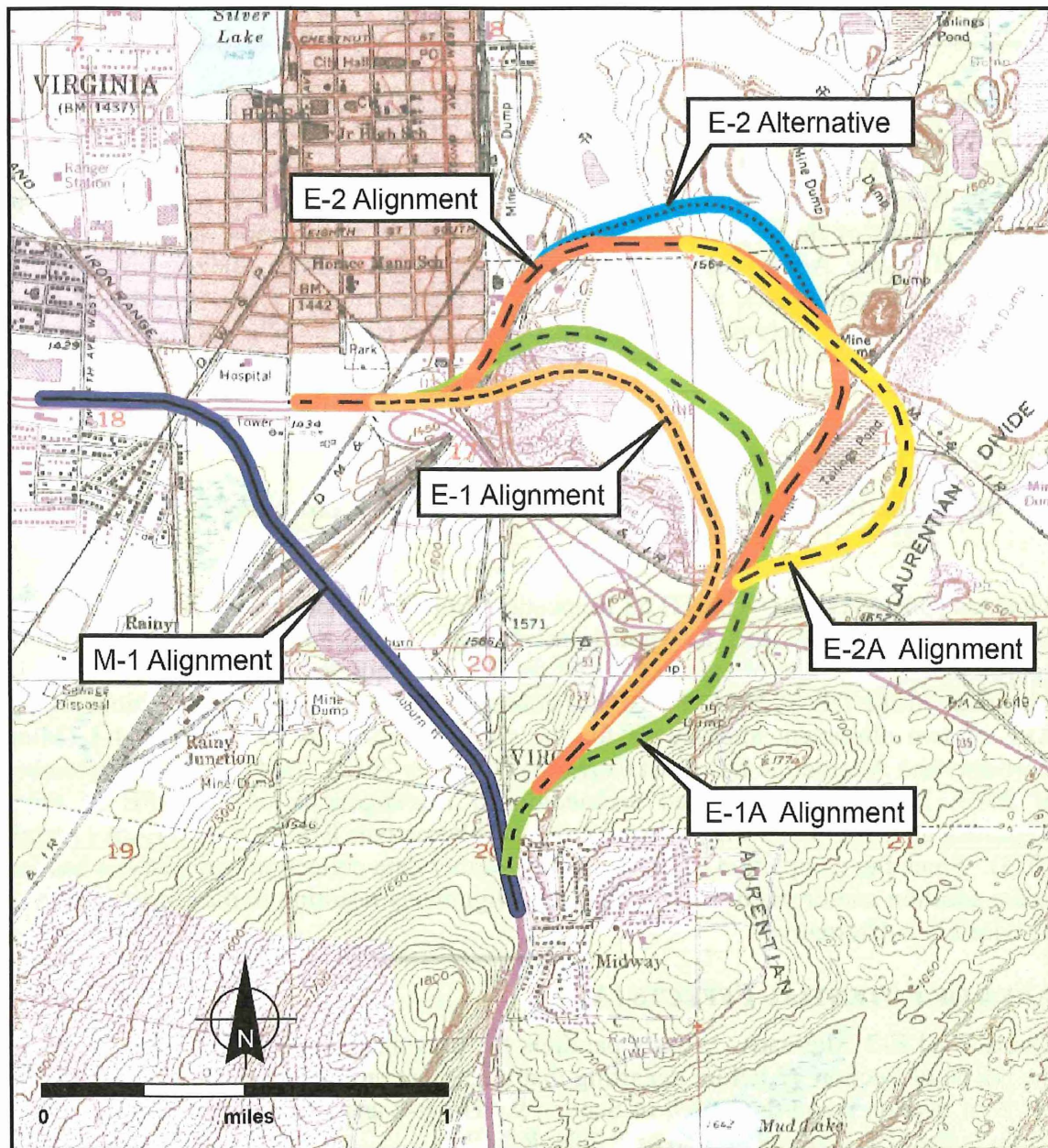
The Minnesota Department of Transportation (MnDOT) is proposing to relocate Trunk Highway (TH) 53 between Virginia and Eveleth due to a termination of their easement rights by Cliffs Natural Resources Inc. (United Taconite LLC) and RGGS Land & Minerals (S.P. 6918-80). The TH 53 Relocation Project will include the construction of a new TH 53 roadway and associated interchanges to accommodate the removal of approximately one mile of existing TH 53 from 2<sup>nd</sup> Avenue West to Vermillion Drive in Virginia. In the fall of 2011, Two Pines conducted archaeological investigations of the APE of two alignment alternatives for the project, known as Alternative M-1 (Mine Corridor) and Alternative E-2 (East Corridor) (Vermeer 2012). In August and September of 2013, Two Pines conducted archaeological investigations of the APE of three alignment alternatives for the project, known as Alternatives E-1, E1A, and E-2A (Terrell 2013). Since the completion of those studies, further data collection and analysis has led to the addition and/or modification of project alignments resulting in the consideration of a revised E-2 Alternative.

### **AREA OF POTENTIAL EFFECTS (APE)**

The revised E-2 Alternative closely parallels the previously surveyed E-2 Alignment in the NE ¼ of Section 17 before departing that alignment and arcing further north into the SE ¼ of Section 8 and the SW ¼ of Section 9. The E-2 and E-2 Alternative Alignments rejoin in the NW ¼ of Section 16 of T 58N, R 17W.

The APE for archaeology is that portion of the E-2 Alternative that diverges from the previously proposed alignments depicted in blue (Figure 1). The study area is a 400-ft. wide corridor (200 ft. on either side of the proposed centerline). The APE crosses the S ½ of the SE ¼ of Section 8, the SW ¼ of the SW ¼ of Section 9, and the N ½ of the NW ¼ of Section 16 of T 58N, R 17W.

The UTM coordinates (Zone 15, NAD 83) for the surveyed segment of the E-2 Alternative are: west end - 535557E 5262520N; east end 536658E 52622156N. These coordinates were determined electronically using Acme Mapper 2.1.



**FIGURE 1. PROJECT LOCATION**

*(M-1, E-1, E-1A, E2, AND E-2A ALIGNMENTS WERE PREVIOUSLY SURVEYED)*

## RESEARCH DESIGN

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All work was conducted in accordance with the *MnDOT's Cultural Resources Unit Project and Report Requirements* (MnDOT 2011), *SHPO Manual for Archaeological Projects in Minnesota* (Anfinson 2005), the *State Archaeologist's Manual for Archaeological Projects in Minnesota* (Anfinson 2011), and the *Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation* (National Park Service 2002).

### OBJECTIVES

The purpose of the Phase I archaeological investigation was to determine whether the project area contains any intact archaeological resources that may be potentially eligible for listing on the National Register. The NRHP criteria, summarized below, are used to assess the significance of documented archaeological sites. While all four criteria are considered, archaeological sites are typically eligible for listing in the National Register under Criterion A or D.

- Criterion A – association with events that have made a significant contribution in our past;
- Criterion B – association with the lives of persons significant in our past;
- Criterion C – embodiment of the distinctive characteristics of a type, period, or artistic values; or representation of the work of a master; possession of high artistic values; or representation of a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D – potential to yield information important to prehistory or history (National Park Service 2002).

### LITERATURE SEARCH

On June 21, 2013, staff from Two Pines obtained the results of a SHPO database query for previously identified archaeological sites within one mile of the APE of the previous study (Terrell 2013). Staff subsequently conducted research at the SHPO to obtain information on identified archaeological sites and cultural resource surveys previously conducted within the project area. The APE of the E-2 Alternative was contained within the previous query. In addition, historical maps, historical aerial photographs, and current topographic maps of the E-2 Alternative alignment APE were reviewed prior to the Phase I fieldwork. This research was conducted to gain an understanding of the environmental and cultural history of the APE in order to assess which portions had greater potential for containing intact archaeological sites.

## **PHASE I ARCHAEOLOGICAL SURVEY**

The Phase I archaeological survey consisted of a systematic visual inspection of the APE of the project alignment. The purpose of the inspection was to identify any surface features, such as extant foundations, to refine the assessment of archaeological potentials as determined by the literature review, and to identify existing levels of disturbance within the APE. Areas demonstrably disturbed through mining activities, road or other construction activities, and other modern land uses were excluded from systematic survey unless the potential existed for intact cultural deposits to be present beneath the disturbance. Likewise, portions of the APE meeting the conditions for low archaeological potential were not subject to systematic survey. Particular emphasis was placed on examining those areas immediate to former roads and rail lines which have the highest potential of containing historical-period structural features.

## **LABORATORY ANALYSIS**

No artifacts were collected during the Phase I investigation.

## LITERATURE SEARCH

### PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

Background research conducted at the SHPO revealed that with the exception of the archaeological investigations previously conducted by Two Pines for the TH 53 Relocation Project in 2011 (Vermeer 2012) and in 2013 (Terrell 2013), no archaeological surveys have previously occurred within or adjacent to the E-2 Alternative APE.

### RECORDED ARCHAEOLOGICAL SITES

A one-mile radius around the E-2 Alternative APE was used to characterize the archaeological resources in the project's vicinity. Three archaeological sites have been previously recorded within a one-mile (1.6 km) radius of the project area (Table 2). One of these sites (21SL1135) is located within the APE of the E-2 Alternative.

TABLE 1. ARCHAEOLOGICAL SITES WITHIN ONE MILE OF THE PROJECT AREA

Site No.	T	R	S	¼ Section	Description
21SL0457	58N	17W	20	S-SE-SW	Precontact lithic scatter
21SL1135	58N	17W	8	S-SW-SE	Railroad and truck shops
	58N	17W	17	N-NW-NE	Railroad and truck shops
21SL1208	58N	17W	16	E-SW-SW	Squatter Homestead

Site 21SL457 (Jackson) is a precontact lithic scatter located on top of a ridge and approximately ¼ mile to the south/southwest of the most proximate portion of Alternative E-2 Alternative.

Site 21SL1135 (Rouchleau Shops) was recorded during the previous survey of Alternative E-2 and is located within the APE of the E-2 Alternative. The site consists of the remains of mid twentieth-century railroad (and subsequently truck) shops associated with the operations of the Rouchleau Mine. This site has been determined not eligible for listing in the National Register (Vermeer 2012).

Site 21SL1208 (Minnewas Homestead) was recorded during the previous survey of Alternatives E1-A and E-2A, and will likewise probably be within the footprint of an auxiliary road necessitated by the E-2 Alternative. The site consists of twentieth-century surface artifact scatters and features associated with the occupation of a squatter homestead from ca.1925 through ca. 1940. This site has been determined not eligible for listing in the National Register (Terrell 2013).

### ARCHAEOLOGICAL SITE POTENTIAL

The assessment of an area's potential to contain archaeological resources consists of an analysis of terrain, water sources, and other environmental and landscape conditions in and adjacent to that area as they were historically. Areas that were occupied by water,



permanently or frequently inundated (e.g., wetlands, floodplains), poorly drained, or exhibited slopes of greater than 20 percent would have been inhospitable to human occupation and are therefore considered to have low potential for containing archaeological resources.

### ***Precontact Archaeological Site Potential***

Generally, areas in Minnesota with greater potential for containing precontact archaeological resources are in proximity, typically less than 500 ft., to a water source or wetland, though the applicability of this condition varies depending on the nature of the water source (perennial versus intermittent), the size of the body of water, the extent of the floodplain, and the availability of other water sources in the vicinity, i.e., proximity to a small pond may be less indicative of archaeological potential if a large lake is nearby. Topographic prominence is also frequently indicative of high precontact archaeological potential, though relative topographic prominence as a gauge of archaeological potential often is tied to other conditions, such as proximity to water. Proximity to previously recorded precontact archaeological sites often suggests high potential for precontact resources, inasmuch as previously recorded sites may not have been fully defined or as the areas around previously recorded sites are typically subject to similar environmental/landscape conditions. The absence, however, of precontact archaeological sites in an area does not necessarily point to low archaeological potential, given that the area may not have been subject to previous survey.

Only one precontact archaeological site has been previously identified within a one-mile (1.6 km) radius of the TH 53 Relocation project area. This site is located atop a high ridge, which is a landform setting not present within the APE. There is also a lack of permanent and substantial natural water sources within the project area. However, the original General Land Office (GLO) survey map of the project area, which dates to 1879, depicts a stream running proximate to portions of the project area in Sections 16, 17, and 20 (GLO 1879). Locations proximate to this stream would be considered to have high potential for containing precontact archaeological resources, but the majority of these locations was subsequently disturbed by mining operations and the development of the city of Virginia and for the most part, no vestiges of the stream remain. Furthermore, within the APE of the E-2 Alternative this stream was channeled through a ditch. The remainder of the APE, whether or not it once held high potential for precontact archaeological resources, has been so severely disturbed that no potential resources would remain intact.

### **HISTORIC SITES ARCHAEOLOGICAL POTENTIAL**

While the project area was intensively utilized during the historical period, the primary cultural resources present within the APE (mine pits, dumps, roads and rail grades), are unlikely to have archaeological information potential although they may be considered contributing elements to a mining archaeological district should mining related archaeological features be documented.

## ENVIRONMENTAL HISTORY

The TH 53 Relocation project is located within the Central Lakes Coniferous East archaeological sub-region. The following environmental history of this sub-region is based largely on information contained in Borchert and Gustafson's *Atlas of Minnesota Resources and Settlement* (1980) and an overview entitled "Minnesota's Environment and Native American Culture History" by Gibbon et al. (2002).

The Central Lakes Coniferous East archaeological sub-region includes parts of central and northeast Minnesota. Portions of St. Louis, Carlton, Itasca, Aitkin, and Lake counties make up this region. The western portion of the Great Lakes Basin is encompassed by this sub-region.

The climate within this sub-region has an average annual precipitation of 25 inches. January highs average 16 degrees Fahrenheit (F), while July highs average 77 degrees F. The frost-free season lasts between 100-120 days, from around late May to early to mid-October. In this region soil types are generally medium to coarse-textured forest soils. Exposures of bedrock are rare, but Precambrian outcrops can be found to the northeast within this region, along with fine-textured soils and peat deposits. Additional high-quality flaking material for the manufacture of lithic tools can also be found in the region, including chert, jasper, and taconite.

During the Late Holocene period, conifers such as white, jack, and red pine dominated the region, though deciduous trees such as elm, maple, basswood, ash, oak, aspen, and birch were interspersed in areas. Subsistence resources in this sub-region would have consisted of deer, beaver, moose and black bear. Fish and waterfowl would also have been plentiful due to the many lakes and rivers in the area. Wild rice was extensive in the area, and was an important part of regional lifeways during the Terminal Woodland period.

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## SURVEY RESULTS

The Phase I archaeological fieldwork for the survey of the E2 Alternative of the TH 53 Relocation project was conducted on September 24, 2014. Dr. Michelle Terrell served as Principal Investigator and conducted the fieldwork with Joseph Pnewski and Lexie Thorpe.

The majority of the revised E-2 Alternative parallels the previously surveyed E-2 Alignment only diverging from that alignment for approximately 0.5 miles in the SE  $\frac{1}{4}$  of Section 8 and the SW  $\frac{1}{4}$  of Section 9. It is this previously unsurveyed portion of the E-2 Alternative that was the subject of the Phase I archaeological survey (Figure 2).

Within the survey area the alignment of the E-2 Alternative crosses four former rail grades (two of which form part of wye or triangular junction). The rail grades encountered within the alignment lack ties and rails and portions of them have been converted to access roads. These truncated rail segments do not retain sufficient integrity or information potential to warrant further evaluation as an historic property.

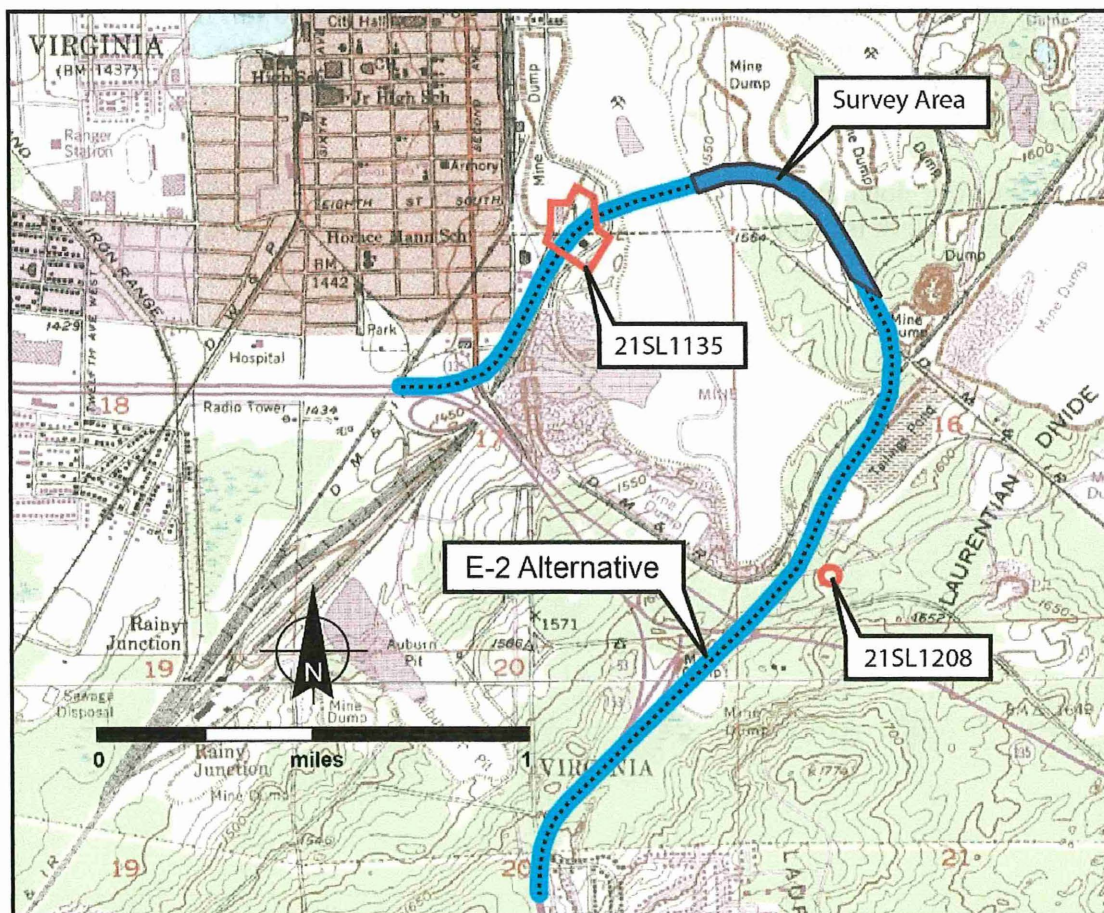


FIGURE 2. CORRIDOR OF THE E-2 ALTERNATIVE

The east end of the surveyed portion of the alignment and a segment of the west end also encompass portions of mine dumps associated with the operations of the Coons and Ohio mine, respectively. These resources do not have archaeological information potential, although they may be considered contributing elements to a mining historic district should one be identified.

Within the survey area, the proposed alignment of the E-2 Alternative also crosses, and parallels two sections of a former road system in the S  $\frac{1}{2}$  of the SE  $\frac{1}{4}$  of Section 8. Maps and aerial photographs indicate that these roads once connected Virginia to mine operations and mine locations in Section 9. According to aerial photographs, the segment of the roadway within the APE was abandoned between 1940 and 1948. Portions of these roadways can only be identified by the presence of occasional patches of asphalt within an otherwise wooded environment, while other sections have been widened and converted to access roads. Due to the truncated nature of these roadways and their lack of a sense of trajectory, they do not retain sufficient integrity to warrant further evaluation as an historic property.

Although no structures or facilities were documented within the survey area on mining company maps, portions of the APE proximate to former roads and rail lines were closely examined as these areas have the highest potential of containing historical-period structural features. However, no indications of former structures were encountered within the APE.

Due to the low potential for intact archaeological resources to be present, no further archaeological work is recommended within the APE of the E-2 Alternative.

## **SUMMARY AND RECOMMENDATIONS**

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In September of 2014, Two Pines Resource Group, LLC (Two Pines) completed a Phase I archaeological survey for the TH 53 Relocation Project between Virginia and Eveleth in St. Louis County, Minnesota. The purpose of the Phase I archaeological survey was to determine if the APE of the E-2 Alternative alignment contains any intact archaeological resources that may be eligible for listing in the National Register. This work was performed under contract with the Minnesota Department of Transportation (MnDOT) for the Cultural Resources Unit of the department. Because this project will receive funding from the Federal Highway Administration, it must comply with Section 106 of the National Historic Preservation Act, as amended.

The majority of the E-2 Alternative's APE had been previously surveyed in the course of studies of other TH 53 alternative alignments, particularly that of Alternative E-2. During these previous archaeological investigations for the TH 53 Relocation Project, two archaeological sites, 21SL1135 (Rouchleau shops), a mid twentieth-century railroad shops site, and 21SL1208 (Minnewas homestead), a 1925-1941 squatter's homestead, were identified and evaluated. One of these sites, 21SL1135, is located within the APE of the E-2 Alternative, while 21SL1208 is located within the APE of an auxiliary road. However, upon conclusion of the Phase II evaluation, both sites were found not eligible for listing in the National Register and no additional archaeological fieldwork was recommended.

The remaining previously unsurveyed portion of the APE of the E-2 Alternative underwent a pedestrian survey. During the Phase I archaeological survey, no additional archaeological resources were identified within the project APE. Based on these results, no additional archaeological fieldwork is recommended within the APE of the E-2 Alternative of the TH 53 Relocation Project.

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