

FEASIBILITY STUDY

Glen Alpine  
New Connector  
from SR 1147 (Causby Road) to US 70  
Burke County

U-2814

Prepared by  
Program Development Branch  
Division of Highways  
N.C. Department of Transportation



Mohammed B. Mustafa  
Highway Planning Engineer

12/17/92

Date



Whitmel H. Webb, III, P.E.  
Head of Feasibility Studies

FEASIBILITY STUDY

Olden Alpine  
New Connector  
from SR 1147 (Gandy Road) to US 70  
Pulaski County

U-2814

Prepared by  
Program Development Branch  
Division of Highways  
N.C. Department of Transportation

  
Mohammad B. Khatib  
Highway Planning Engineer

  
William H. Webb, III, P.E.  
Head of Feasibility Studies  
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I. GENERAL DESCRIPTION

This is a feasibility study recommending the construction of a connector from SR 1147 (Causby Road) at I-40 to US 70 in Glen Alpine, a distance of approximately 1.7 miles (see Figure 1). The studied project is located in west Burke County (see vicinity map). The recommended typical cross-section is a two-lane, 28-foot pavement with two 12-foot travel lanes and 8-foot usable shoulders (including 2-foot paved shoulders). The recommended right-of-way width is 100 feet with no control of access. The estimated cost of the recommended improvements is \$2,900,000 (\$400,000 for right-of-way, and \$2,500,000 for construction).

This study is not a detailed planning/environmental investigation. A feasibility study presents recommended typical cross-sections, general alignments, and estimated cost of improvement. The study also attempts to provide an early identification of potential environmental, permitting, or other issues which deserve consideration in the planning and construction stages.

II. EXISTING CONDITIONS & NEED FOR PROJECT

This project was requested by the Town of Glen Alpine. The project is included on the 1970 Glen Alpine mutually adopted Thoroughfare Plan as a proposed major thoroughfare. The recommended connector is needed to enhance, and continue improvements made by project U-1067X, scheduled for construction in 1992. Project U-1067X (see Figure 1) is a new connector from the intersection of SR 1299 and SR 1223 (Linville Street) to SR 1147 north of Glen Alpine city limits. U-1067X is intended to improve accessibility to US 70 for motorists north of Glen Alpine. The completion of the recommended facility, along with U-1067X, will provide motorists with a safer, more direct route from I-40 to areas north of Glen Alpine. The improvements would provide a more accessible route for trucks and buses to northern Burke County and promote industrial development along the route.

SR 1147 (Causby Road) is classified as a Rural Minor Collector in the Statewide Functional Classification System.

The southern terminal of the project (see Figure 1) is just north of the ramps of the I-40\SR 1147 (Causby Road) interchange. At this location the existing SR 1147 is a two-lane, 18-foot pavement with 3-foot shoulders. Burke County currently owns the land at this terminal and it may be developed into an industrial area. Land in the vicinity of the project is mostly wooded with light density residential development.

The northern terminal of the recommended project (see Figure 1) connects with the south end of SR 1299 at its intersection with US 70. SR 1299 is classified as a Rural Minor Collector in the Statewide Functional Classification System. The existing SR 1299 consists of a four-lane, 48-foot face-to-face curb and gutter section. Bridge #362 carries the roadway across the Southern Railroad. The bridge is 150 feet long, with a 44-foot clear roadway width, and a sufficiency rating of 95 (compared to a sufficiency rating of 100 for a newly constructed bridge). SR 1299 is 0.1 miles in length and will connect the recommended project to project U-1067X.

### III. RECOMMENDATIONS

It is recommended to construct a 1.6 mile long connector on a new location between SR 1147 (Causby Road) at I-40 and the south end of SR 1299 at US 70. It is also recommended that a 0.1 mile portion of SR 1147, at the southern terminal of the project be widened. The recommended typical cross-section consists of a two-lane, 28-foot pavement with two 12-foot travel lanes and 8-foot usable shoulders (including 2-foot paved shoulders). The new roadway is to be constructed on a 100 foot wide right-of-way with no control of access.

The southern terminal of the connector (see Figure 1) is on SR 1147 approximately 800 feet north of the I-40/SR 1147 interchange. From this terminal, the proposed connector would head north on a new location to form the south approach to the SR 1299/US 70 intersection.

The proposed roadway is to intersect US 70 at grade and would be controlled by a traffic signal. At the southern terminal, the resulting intersection with SR 1147 is to be at grade, and stop sign controlled.

This project would involve the construction of a new bridge over Little Silver Creek. It is estimated that the new bridge would be 60 feet long, with a clear roadway width of 30-feet. The estimated bridge length may be changed at the planning stage depending on hydrographic studies.

Project cost is estimated as follows:

Right-of-Way	\$ 400,000
Construction	\$2,500,000
Total Project Cost	\$2,900,000

#### IV. ENVIRONMENTAL CONCERNS

It is anticipated that this project will require one residential relocation.

An environmental screening was not conducted for this study. However no significant environmental problems are anticipated.

This project would involve the construction of a new bridge over Little River Creek. It is estimated that the new bridge would be 60 feet long, with a clear roadway width of 30 feet. The estimated bridge length may be changed at the planning stage depending on hydrologic studies.

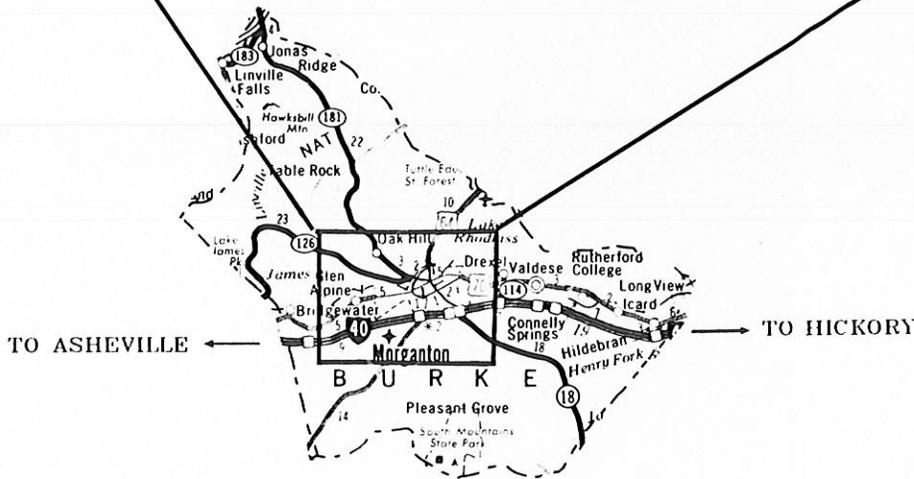
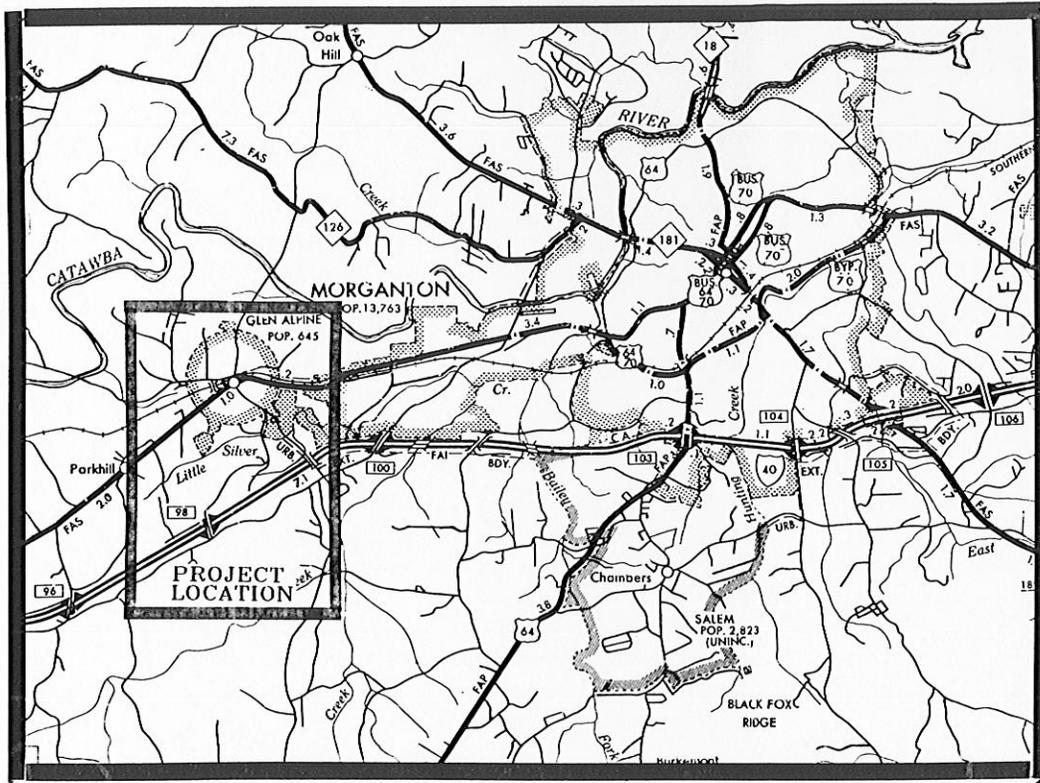
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#### IV. ENVIRONMENTAL CONCERNS

It is anticipated that this project will require one residential relocation.

An environmental screening was not conducted for this study. However, no significant environmental problems are anticipated.



**GLEN ALPINE**  
**NEW ROUTE**  
**FROM US 70 TO SR 1147 NORTH OF**  
**I-40/SR 1147 INTERCHANGE**  
**BURKE COUNTY**  
**U-2814**

DATE: FEB 1992 | VICINITY MAP

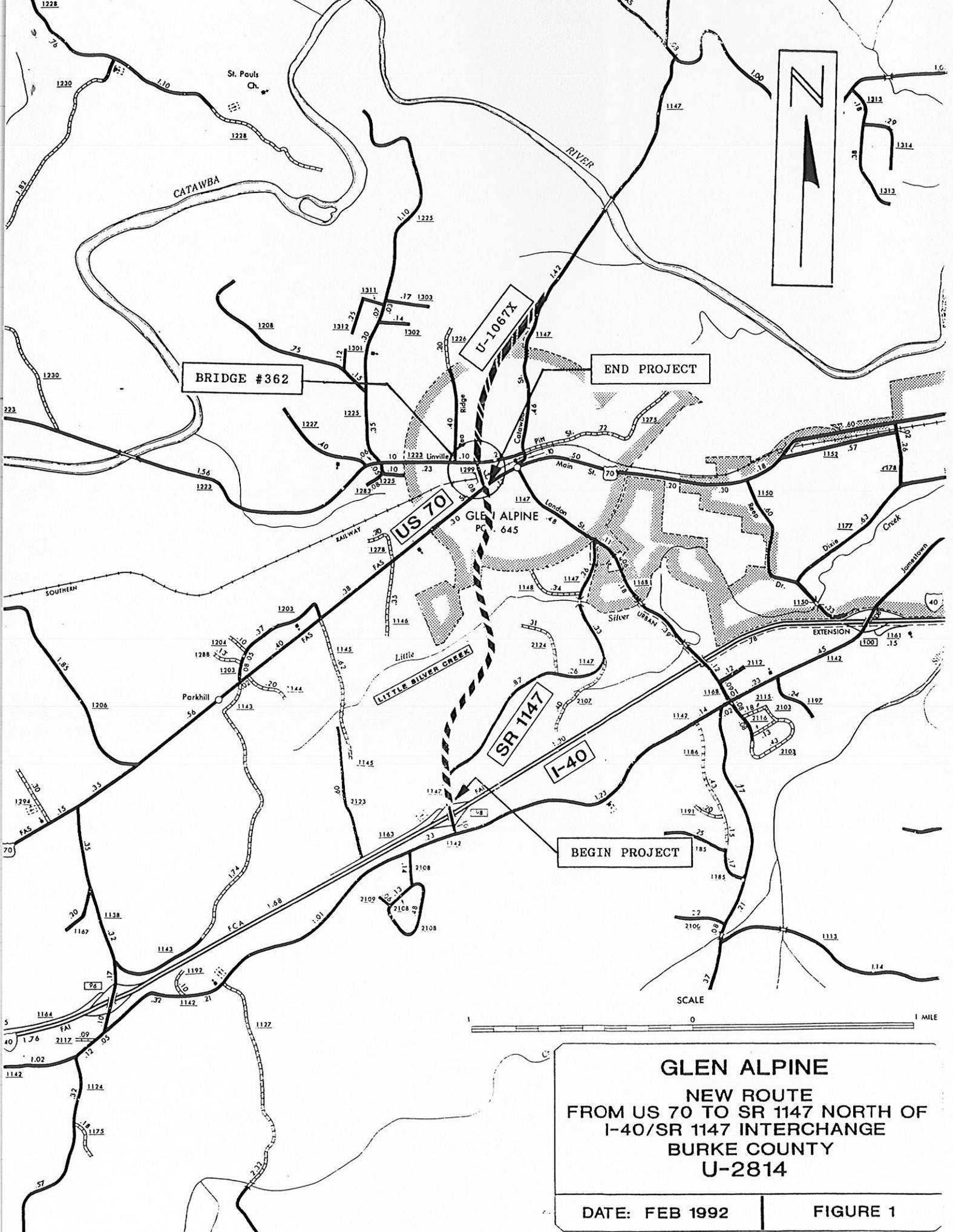


TO THE NORTH — TO THE SOUTH



U-2814  
HARRIS COUNTY  
1-4052 - 1/4 SECTION  
FROM US 20 TO BLANK NORTH OF  
NEW ROUTE  
GLEN ALPINE

DATE: FEB 1982	COMPLY MAP
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BRIDGE #362

U-1067X

END PROJECT

US 70

GLEN ALPINE  
Pop. 645

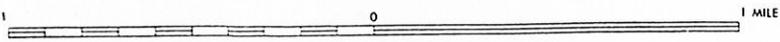
LITTLE SILVER CREEK

SR 1147

I-40

BEGIN PROJECT

SCALE



**GLEN ALPINE**  
**NEW ROUTE**  
**FROM US 70 TO SR 1147 NORTH OF**  
**I-40/SR 1147 INTERCHANGE**  
**BURKE COUNTY**  
**U-2814**

DATE: FEB 1992

FIGURE 1



GLEN ALPINE  
 NEW ROUTE  
 FROM US 70 TO SH 174 NORTH OF  
 F-407B INT INTERCHANGE  
 BURKE COUNTY  
 U-9214

DATE: FEB 1965

FIGURE 1