

FEASIBILITY STUDY

High Point

**Skeet Club Road (SR 1820)
from US 311
to Eastchester Drive (NC 68)
Guilford County**

Division 7

U-3615

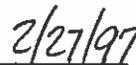
Prepared by the
Program Development Branch
Division of Highways
N. C. Department of Transportation



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U-3615

High Point
Skeet Club Road (SR 1820)
From US 311
To Eastchester Drive (NC 68)
Guilford County

I. General Description

This preliminary study describes recommended improvements to Skeet Club Road (SR 1820), in High Point. It is recommended that North Main Street (Old US 311/SR 1003) be widened from the existing 5-lane, curb-and-gutter section north of US 311 to Skeet Club Road, and Skeet Club Road be widened from North Main Street to the existing 5-lane, curb-and-gutter section just west of Eastchester Drive (NC 68). The project has a length of approximately 6.3 miles (10.2 km). For a location map, please see Figure 1.

Two alternatives were evaluated for the proposed widening. In each alternate, the widening should retain and utilize the existing alignment to the extent possible and should be generally symmetrical to the centerline of the existing roadway, except in the area of Deep River Community Park. Widening in this area should be asymmetrical to the south of the existing roadway. The widening should be accomplished on a 100-foot (30.5-m) wide right-of-way.

It is estimated that there will be 4 residences and no businesses relocated as a result of either alternate.

The studied alternates are as described below:

Alternate 1

The Alternate 1 cross section is a 5-lane, 68-foot (20.7-m) wide (face-to-face) curb-and-gutter section with 10-foot (3.0-m) wide berms.

The total cost for right-of-way and construction, for Alternate 1, is estimated to be \$22,400,000 as follows:

Right-of-way	\$ 4,300,000
Construction	18,100,000
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Total	\$22,400,000

Alternate 2

The Alternate 2 cross section is a 4-lane, median divided, curb-and-gutter section with a 12-foot (3.6-m) wide inside travel lane and a 14-foot (4.2-m) wide outside travel lane in each direction, a 16-foot (4.9-m) wide raised median, 1-foot (0.3-m) wide inside gutters, 2-foot (0.6-m) wide outside gutters, and 10-foot (3.0-m) wide berms.

The total cost for right-of-way and construction, for Alternate 2, is estimated to be \$25,500,000 as follows:

Right-of-way	\$ 4,300,000
Construction	21,200,000
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Total	\$25,500,000

This study is the initial step in the planning and design process for this project and is not to be considered the product of exhaustive environmental or design investigations. The purpose of the study is to describe the problem, recommend a treatment including costs, and identify potential problem areas that deserve consideration in the planning and design phases.

II. Need For Project

The purpose of this project is to improve the traffic carrying capacity and accident experience and to relieve traffic congestion in the fast developing Skeet Club Road area. The project was requested by the High Point Urban Area Transportation Advisory Committee.

Skeet Club Road is designated a major thoroughfare on the High Point Thoroughfare Plan. It is designated as a minor arterial on the North Carolina Statewide Functional Classification System.

The project route is generally heavily developed with residences with some open land around the western end of the project. At the east project terminus, development is heavy commercial. There is a public park located on the north side of the roadway at approximately 1.0 mile (1.6 km) west of Eastchester Drive.

Existing North Main Street is a 2-lane shoulder section with a 26-foot (7.9-m) wide pavement and 4-foot (1.2-m) wide soil shoulders. It has been widened to 5 lanes at its approach to the US 311 intersection.

Existing Skeet Club Road is a 2-lane shoulder section with a 24-foot (7.3-m) wide pavement and 4-foot (1.2-m) to 6-foot (1.8-m) wide soil shoulders. It has been widened to 5 lanes at its approach to the Eastchester Drive intersection.

At the east project terminus, Eastchester Drive is a 5-lane curb-and-gutter section. The east side of the terminus is also the west end of Wendover Avenue. Wendover Avenue is a 2-lane shoulder section which is presently being widened to a 4-lane divided facility (U-2413).

There are 2 bridges located along the project route. Bridge #65, over the High Point Reservoir (Oak Hollow Lake), is located approximately 2.3 miles (3.7 km) west of Eastchester Drive. The bridge was constructed in 1970, has a clear deck width of 36 feet (11.0 m), is 173 feet (52.8 m) long, and has a sufficiency rating of 86.2. Bridge # 80 crosses US 311. It was constructed in 1979, has a clear deck width of 44 feet (13.4 m), is 257 feet (78.4 m) long, and has a sufficiency rating of 99.7.

Along the project route, signalized intersections include US 311 (at the west terminus), Barrow Road, and Eastchester Drive.

The 1996 Average Daily Traffic (ADT), within the project limits, is estimated to be approximately 10,300 vehicles per day (vpd) and the design year (2020) estimate is approximately 21,300 vpd.

The current estimated Level Of Service (LOS) is Level E which will prevail through the design year (2020) if improvements are not made. With the recommended improvements, the LOS is expected to improve to a Level A which should be a Level B in the design year.

During the period from March 1, 1993, through February 29, 1996, there were 120 accidents reported within the project termini. This resulted in an accident rate of 204.6 accidents per 100 million vehicle miles (Acc/100MVM), compared to a statewide average of 347.8 Acc/100 MVM for all urban secondary routes during 1994. There were no fatalities reported during the period, but 49 of the accidents resulted in injuries. The most prevalent accident types were left-turn (36.6%), rear-end (22.58%) and ran-off-road (18.3%). The recommended cross section will reduce the potential for these types of accidents.

III. Recommendations

It is recommended that North Main Street (Old US 311/SR 1003) be widened from the existing 5-lane, curb-and-gutter section north of US 311 to Skeet Club Road, and Skeet Club Road be widened from North Main Street to the existing 5-lane, curb-and-gutter section just west of Eastchester Drive (NC 68). The project has a length of approximately 6.3 miles (10.2 km). For a location map, please see Figure 1.

Two alternatives were evaluated for the proposed widening. In each alternate, the widening should retain and utilize the existing alignment to the extent possible and should be generally symmetrical to the centerline of the existing roadway, except in the

area of Deep River Community Park. Widening in this area should be asymmetrical to the south of the existing roadway. The widening should be accomplished on a 100-foot (30.5-m) wide right-of-way.

A detailed description of the alternates is as follows:

Alternate 1 includes:

1. A 5-lane, 68-foot (20.7-m) wide (face-to-face) curb-and-gutter cross section with 10-foot (3.0-m) wide berms, for the entire project length.
2. Construction of a new connector from existing SR 1003/North Main Street/Old US 311 to the realigned Skeet Club Road at the existing intersection of SR 1003/North Main Street/Old US 311 and Skeet Club Road.
3. Widening Bridge #80, over US 311, to a clear deck width of 68 feet (20.7 m) and replacing Bridge # 65, over the High Point Reservoir, with a new 68-foot (20.7-m) wide (clear deck width) bridge.
4. Upgrading the existing traffic signal at Barrow Road and installing new signals at Dilworth Road and Johnson Street.

It is estimated that there will be 4 residences and no businesses relocated as a result of either alternate.

The total cost for right-of-way and construction, for Alternate 1, is estimated to be \$22,400,000 as follows:

Right-of-way	\$ 4,300,000
Construction	18,100,000
Total	\$22,400,000

Alternate 2 includes:

1. A 4-lane, median divided, curb-and-gutter cross section with a 12-foot (3.6-m) wide inside travel lane and a 14-foot (4.2-m) wide outside travel lane in each direction, a 16-foot (4.9-m) wide raised median, 1-foot (0.3-m) wide inside gutters, 2-foot (0.6-m) wide outside gutters, and 10-foot (3.0-m) wide berms, for the entire project length.
2. Construction of median crossovers at the new SR 1003/North Main Street/Old US 311 connector, Old Mill Road, Tanglebrook Road, Dilworth Road, Johnson Street, Barrow Road, Braddock Road, and at the Deep River Community Park.
3. Construction of a new connector from existing SR 1003/North Main Street/Old US 311 to the realigned Skeet Club Road at the existing intersection of SR 1003/North Main Street/Old US 311 and Skeet Club Road.
4. Construction of a second bridge, having a clear deck width of 28 feet (8.5 m), over US 311 and adjacent to Bridge #80 and replacing Bridge #65, over the High Point Reservoir, with new dual bridges having a clear deck width of 28 feet (8.5-m).

5. Upgrading the existing traffic signal at Barrow Road and installing new signals at Dilworth Road and Johnson Street.

At each project terminus, the widened roadway should be tapered to meet the existing 5-lane cross sections.

It is estimated that there will be 4 residences and no businesses relocated as a result of either alternate.

The total cost for right-of-way and construction, for Alternate 2, is estimated to be \$25,500,000 as follows:

Right-of-way	\$ 4,300,000
Construction	21,200,000
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Total	\$25,500,000

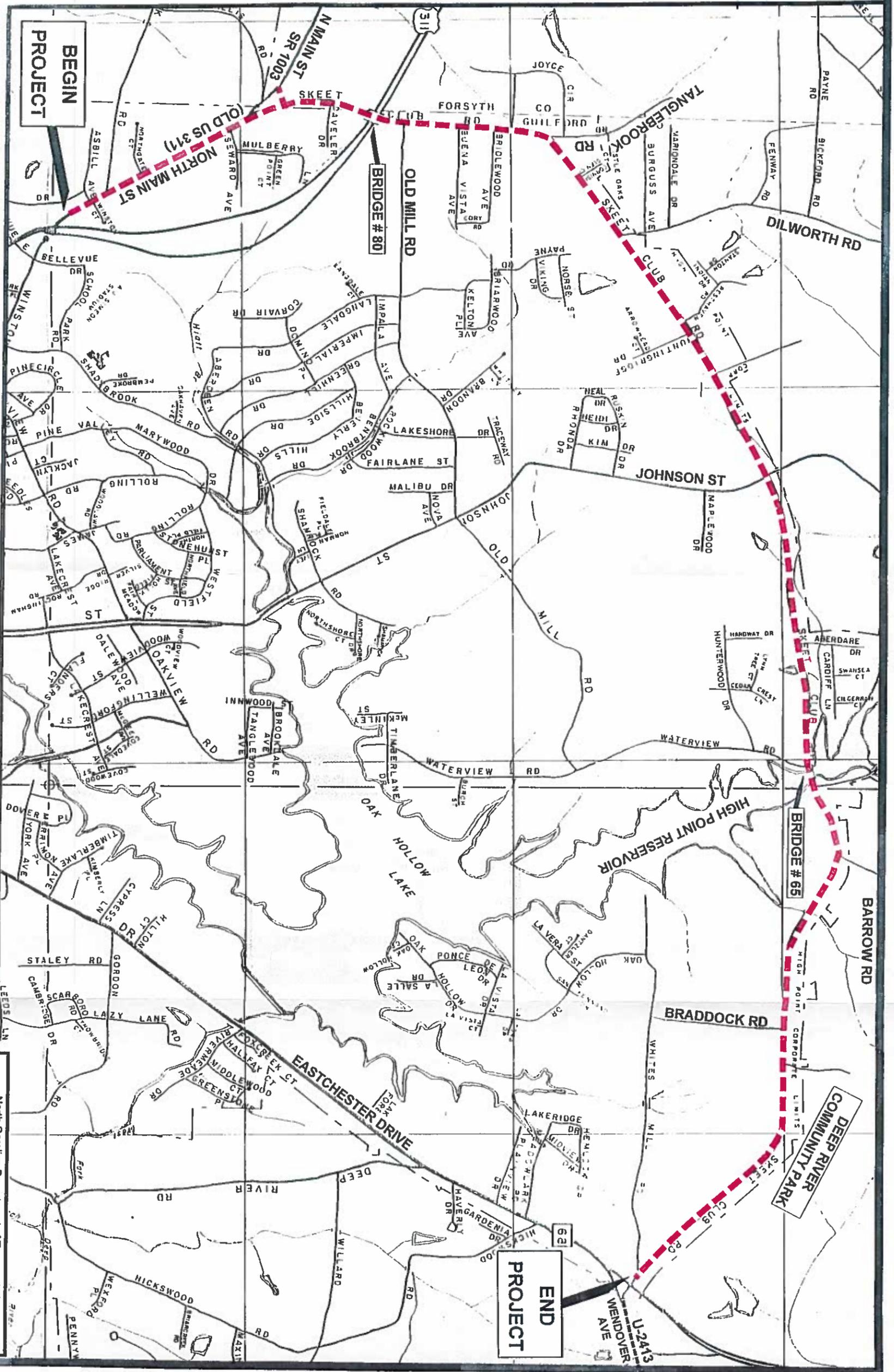
IV. Other Comments

This project crosses the High Point Reservoir (Oak Hollow Lake) approximately 1.5 miles (2.4 km) north of the High Point water supply intake. No adverse affects are anticipated as a result of this project.

An environmental screening was not conducted for this study; however, due to the construction potential in the area of the High Point Reservoir, Corps of Engineers permits and wetlands mitigation will be required. The costs for wetlands mitigation is not included as part of the above estimated project costs.

Based on maps available at the Department of Environment, Health, and Natural Resources - Natural Heritage Section, no threatened or endangered species were identified in the project corridor.

The NC DOT Office of Bicycle and Pedestrian Transportation has identified this project as having a need for bicycle accommodations. Therefore, the recommended improvements include 14-foot (4.2-m) wide outside lanes.



North Carolina Department of Transportation
 Program Development Branch
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 Skeet Club Road
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 High Point, Guilford County
 DIVISION 7
 FIGURE 1