

FEASIBILITY STUDY

Hillsborough
Nash Street (SR 1156)
From King Street (SR 1150)
To Revere Road (US 70 Business)
Orange County
U-3435

Prepared by
Program Development Branch
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I. GENERAL DESCRIPTION

This preliminary study describes proposed improvements to the vertical alignment of Nash Street (SR 1156) from King Street (SR 1150) to Revere Road (US 70 Business) in Hillsborough. The project location is shown on Figure 1. The studied cross-section is a 2-lane curb and gutter section, 32 feet (9.8 m) wide from face-to-face of curbs, for the entire project length of 0.7 miles (1.1 km). The required right-of-way width is 80 feet (24.4 m).

Three residential and no business relocations are anticipated due to this project.

The total cost including construction and right-of-way is estimated to be \$ 4,100,000.

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

II. NEED FOR PROJECT

The purpose of this project is to improve the vertical alignment of Nash Street in Hillsborough. The project was requested by the Durham - Chapel Hill - Carrboro Transportation Advisory Committee.

Nash Street (SR 1156) is classified as a Rural Minor Collector in the North Carolina Statewide Functional Classification System, and is a Minor Thoroughfare on the Hillsborough Thoroughfare Plan. Land use along the project corridor is mostly single family residential. The A. L. Stanback Middle School is located at the West Union Street intersection.

Existing Nash Street is a two-way, two-lane road with grass shoulders. Nash Street is characterized by poor vertical alignment with grades ranging from 6% to 8%. This results in poor sight distance at the intersecting streets within the project limits. The posted speed limit is 35 mph

with a 25 mph speed zone at the A. L. Stanback Middle School. There are no sidewalks within the project limits.

Traffic volume estimates for Nash Street for the years 1996 and 2020 are 2,500 vehicles per day (vpd) and 4,000 vpd respectively. The Level of Service (LOS) without the proposed improvements is estimated to be LOS B in 1996 and LOS C in 2020. With the proposed improvements the LOS is estimated to be LOS B in 1996 and LOS C in 2020.

During the three year period beginning April 1, 1992, and ending March 31, 1995, there were 16 accidents reported on Nash Street within the project limits. This resulted in a total accident rate of 1,032 accidents per 100 million vehicle miles (ACC/100MVM), which is nearly three times greater than the statewide average of 357 ACC/100MVM for all rural secondary routes, in North Carolina, for 1994.

There were no fatal accidents reported; however, 7 accidents resulted in 15 injured persons. The most prevalent type accidents were Angle (56%), Left-Turn (13%), Ran Off Road (13%), and Rear End (13%). The proposed improved vertical alignment with improved sight distance will reduce the potential for these type accidents.

III. RECOMMENDATIONS

It is proposed to improve the vertical alignment of Nash Street (SR 1156) from King Street (SR 1150) to Revere Road (US 70 Business) in Hillsborough. The project location is shown on Figure 1. The studied cross-section is a 2-lane curb and gutter section, 32 feet (9.8 m) wide from face-to-face of curbs, with one 14-foot (4.2-m) wide lane for each direction of travel. Also berms, 8 feet (2.4 m) wide, will be constructed outside the curbs on each side. The required right-of-way width is 80 feet (24.4 m).

Three residential and no business relocations are anticipated due to this project.

The total cost including construction and right-of-way is estimated to be \$4,100,000 as follows:

Construction.....	\$2,400,000
Right-of-Way.....	<u>1,700,000</u>
Total Cost.....	\$4,100,000

IV. OTHER COMMENTS

An environmental screening was not conducted for this study. No wetlands, historic properties, or endangered species are anticipated.

The Town of Hillsborough, has requested that this project include an accommodation for bicycles, and the Office of Bicycle and Pedestrian Transportation has recommended 14-foot (4.2-m) wide lanes to accommodate bicycles. The proposed cross-section provides these wide lanes. The estimated cost for this bicycle accommodation is \$ 150,000 and is included in the above total project cost.

The Town of Hillsborough has expressed a desire for sidewalks on this project. Cost participation by the Town for new sidewalks will be based on current NCDOT policy. The cost of sidewalks on one side of Nash Street is estimated to be \$ 100,000. This cost is not included in the above project cost.

