

**THE EQUITY FORMULA FOR
ALLOCATING HIGHWAY
CONSTRUCTION FUNDS IN NORTH
CAROLINA**

Policy Report No. 1

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1. Introduction

The allocation of highway construction funds across North Carolina is governed by an equity formula established in 1989. From time to time questions have emerged about this formula and how it is applied. Most recently, these questions have centered on whether or not congressionally earmarked projects are included in the formula.

This policy report is intended to increase the public understanding of how the equity formula works. Produced by the Transportation Policy, Planning, and Finance Group at the Institute for Transportation Research and Education (ITRE) at North Carolina State University, this policy report is one of a series dedicated to facilitating constructive discussion about important transportation policy issues in North Carolina.

The report is organized in three subsequent sections. Section 2 provides necessary background information on the funding of highway projects in North Carolina. Section 3 describes the equity formula in detail. Finally, Section 4 discusses some common questions about the formula.

2. Background

North Carolina Department of Transportation (NCDOT) has three sources of funds to use in constructing highway projects in the state.

1. Federal funds;
2. Highway Fund monies; and
3. Highway Trust Fund monies.

The federal funds primarily come from the 18.3 cents per gallon paid by consumers for federal gasoline taxes. These monies are distributed to North Carolina and all the other states by Congress according to formulae that it establishes. Federal funds can be used to pay for constructing highways and for resurfacing highways.

The Transportation Equity Act for the Twenty-first Century of 1998 (TEA-21) establishes the federal distribution formula for six years beginning with fiscal year 1998. TEA-21 authorizes about \$740 million in federal funds to be returned to North Carolina annually for highway construction and reconstruction. It also lists approximately \$220 million in special projects earmarked by Congress over the six years. These earmarked projects are included in the \$740 million.

The Highway Fund (Fund) and the Highway Trust Fund (Trust Fund) both apply to the state gasoline tax revenues resulting primarily from the 21.85 cents per gallon and other motor vehicle fees paid by North Carolina motorists. The Fund was established in 1921; the Trust Fund in 1989. The Fund allows for discretion in how its monies are used; they may be spent to provide the 20% match for federal funds, to construct state-

funded highways, to conduct maintenance of highways, or to support other NCDOT functions.

The Highway Trust Fund, on the other hand, is constrained by the Legislature to be used for specific purposes; a sum, not to exceed four and one-half percent (4.5%) of the trust fund revenues, may be used each to administer the Trust Fund. The rest of the funds in the Trust Fund shall be used as follows:

1. 61.95% to plan, design, and construct projects of the Intrastate System;
2. 25.05% to plan, design, and construct the urban loop projects;
3. 6.5% to supplement the Powell Bill appropriation to cities for city street maintenance; and
4. 6.5% for secondary road construction.

3. The Equity Formula

In 1989, when the Trust Fund Bill was being debated, the General Assembly was concerned with ensuring that the Trust Fund revenues would be distributed in an equitable manner across the state. It asked the NCDOT to develop an equity formula to address this concern. The department developed an equity formula which applies to the intrastate system projects and both state and federal funds expended under the Transportation Improvement Program, other than funds expended on the seven urban loop projects.

The equity formula divides the state into seven distribution regions with each region composed of two adjacent highway divisions (See Figure 1). The equity formula limits the allocation of funds based on the following factors:

- (1) Twenty-five percent (25%) on the number of miles to complete the Intrastate System projects in a distribution region compared to the estimated miles to complete the total Intrastate System;
- (2) Fifty percent (50%) on the estimated population of the distribution region compared to the total estimated population of the State; and
- (3) Twenty-five percent (25%) on the fraction one-seventh, which is an equal share to each distribution region.

This formula is updated annually and is applied to each seven-year update of the Transportation Improvement Program. Each year the department expends funds, as nearly as practical, equal to that region's percentage share of the funds. In any consecutive, seven-year period the Transportation Improvement Program must be "balanced" so that each region must receive between 90% and 110% of the formula amounts for the seven years.

The distribution formula and the preliminary distribution of funds for the period FY 1999-2005 are in the attached tables. Table 1 illustrates the formula and preliminary

funding availability for the seven-year period. Table 2 shows the distribution of twenty-five percent (25%) of funds based on region's share intrastate mileage to complete. Table 3 illustrates the distribution of fifty percent (50%) of funds based on region's share of population. Table 4 shows the distribution of the remaining twenty-five percent (25%) of funds based on an equal share for each region. Table 5 illustrates the total distribution of funds for the FY 1999-2005 period and is the sum of Tables 2, 3 and 4.

4. Questions About the Formula

The most common questions about the formula relate to how it is applied. One such question is whether or not congressionally mandated projects are included in the formula. Congressional projects are subject to the formula just like other federal funds except urban loop projects, which are excluded from the formula. This means that congressional earmarking of a project may result in delay of other projects in that region; however, TEA-21 provides a substantial increase in funding, which provides new funding for congressional projects without impacting existing projects.

Another frequent question is when a major project is scheduled for construction and suffers major delays. In this event a region may not get its fair share in a given period. The only way to compensate is to over program in the next period. For example, Division X had a \$100 million project fully funded in the FY 90-96 Transportation Improvement Program (TIP), subject project experiences major delays and all construction is delayed beyond FY 96. There is a potential short fall in that region's fair share of \$100 million, during the FY 90-96 period if other projects are not accelerated. The only option is to fund the subject region in the FY 97-03 TIP at fair share plus ten percent.