



HIGHWAY NEEDS INVENTORY

Revised 2020

FREDERICK

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STATE HIGHWAY ADMINISTRATION



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PRIMARY
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HNI OVERVIEW

1.0 BACKGROUND

The Highway Needs Inventory (HNI) is a technical reference and planning document which identifies highway improvements to serve existing and projected population and economic activity in the State as well as address safety and structural problems that warrant major construction or reconstruction.

The projects identified in this document represent only an acknowledgment of need based on technical analysis and adopted local and regional transportation plans. **The HNI is not a construction program, and inclusion of a project does not represent a commitment to implementation.** The HNI is not financially constrained nor is it based on revenue forecasts.

The HNI may be considered as a compilation of projected major highway deficiencies. It is important to note that only a portion of the projects in this document will be addressed in the future through selective capital improvements. Many of these needs will remain unfulfilled because the Department does not anticipate that the gap between needs and resources can ever be completely closed, even with the infusion of new revenue.

2.0 LEGAL BASIS OF THE HNI

The development of the HNI is required under Transportation Article 8 of the Annotated Code of Maryland. Title 8, section 610 defines the HNI as "...an identification of needs for highway projects, based on latest evaluation of highway conditions and transportation needs..."

Section 611 further requires that "in calendar year 1979 and in each second year following, the Administration, following an assessment of the highway conditions and transportation needs of this State, shall prepare those proposed modifications of the highway needs inventory that it considers necessary."

3.0 SCOPE OF HNI

The HNI is based on a technical evaluation of highway conditions. The general scope and approximate cost of needed highway improvements in this document are based on the application of reasonable design standards. However, this does not preclude further considerations of alternative solutions to the problem, or the "no build" option. Ultimately, more detailed project planning studies would be conducted on potential projects to determine more precise cost estimates and acceptable solutions to the identified need. The HNI lists only major capital construction projects which entail a significant increase in traffic capacity, extensive right-of-way, high cost or major impact.

Low cost capital improvements, otherwise known as “system preservation projects” such as resurfacing, safety and spot improvements, commuter parking, beautification, bridge rehabilitation/reconstruction, drainage improvements, rail crossing elimination, traffic control improvements, and emergency work are not included in the HNI. These projects are included in the annual update of the Department’s Consolidated Transportation Program (CTP). Often these relatively low cost improvements serve to correct localized problems and to extend the time before major modernization of the facility becomes necessary. System preservation projects may in some cases result in an indefinite deferral of a major project.

4.0 ROLE OF THE HNI IN THE PLANNING PROCESS

The Maryland Department of Transportation’s planning process affects all modes and covers all aspects from policy/system planning and program development through detailed project planning and implementation. The key planning documents developed by the Department to establish the priority of various proposed highway improvements are as follows: (1) State Report on Transportation (SRT); (2) Maryland Transportation Plan (MTP); and (3) the Consolidated Transportation Program (CTP).

The HNI serves as a technical reference and reflection of these planning documents. In addition, the Department participates in the development of local and regional transportation plans which are the responsibility of local and regional planning agencies.

5.0 HNI TERMINOLOGY

There are 29,265 center line miles of roadway in the state of Maryland. Of this total, the Maryland Department of Transportation State Highway Administration (MDOT SHA) maintains 5,243 center line miles (17.92%). Although this represents less than 20 percent of the total miles of roadways in the state, these highways account for approximately 70% of the total vehicle miles of travel in the state. The 5,243 miles of highways maintained by the MDOT SHA are categorized for funding purposes as Primary and Secondary highways.

5.1 Primary System

The State Primary Systems consists of approximately 1,288 miles of state maintained routes or 25 percent of the total State maintained road mileage. The State Primary System was originally adopted in 1972 and revised in 1978 in accordance with provisions of State law. The Primary System serves the state in the same manner as the Interstate System serves the nation. It has been a policy of the Department to develop the Primary System with a maximum practical degree of access control in order to provide safety to the motorist.

5.2 Secondary System

The Secondary System is a network of State routes which serve inter-regional and localized traffic. This network consists of 3,955 miles (75.45%) of the total state maintained roadways and provides feeder and support functions to the Primary System. It also complements county highway systems.

6.0 IMPROVEMENT TYPES

For projects in the Consolidated Transportation Plan (CTP), the specific improvement type identified is also shown in the HNI. Improvement types shown for other projects in the HNI are categorical rather than specific, pending project planning studies. The project planning studies may lead to the selection of a “no build” option or a different improvement type than shown in the HNI.

The improvement types used in the HNI may entail significant right-of-way acquisition, significant increases in capacity and/or significant environmental impact. The basic improvement types used in the HNI are described as follow:

6.1 Reconstruction

These are improvements where old pavement and appurtenances such as drainage structures are removed and replaced or substantially modified. Such reconstruction may apply to the existing number of lanes or dualization, adding or modifying interchanges or existing highway on the same alignment.

6.2 Construction

These are improvements of a totally new facility and appurtenances, including bridges. A new facility will generally provide a highway where none exists, or an alternate facility to an existing highway that will remain open and continue to serve through traffic.

6.3 Access Control Improvement

Control of access by definition is where the ingress and egress to abutting land, onto and/or across the highway is fully or partially restricted by public authority. Highway access can be controlled as follows:

6.3.1 Full Control

This gives preference to through traffic by providing grade separation interchanges with selected public roads only and by prohibiting intersecting at-grade and direct private driveway connections.

6.3.2 Partial Control

This gives preference to through traffic to a degree that, in addition to or in lieu of interchanges with major public roads, there may be selected at-grade intersections to public streets only.

6.3.3 Uncontrolled Access

This allows the number of points of ingress and egress to be limited only by control over the placement and the geometric design of connections as necessary for the safety of the traveling public.

6.4 Lane Definitions

The specific number of lanes is referenced only for two lane highways in the HNI, and any highway improvement needing more than two lanes is generally referred to as “multi-lane”. Where the case for a multi-lanes improvement is more firmly established; the following terms may be used:

6.4.1 Divided Highway.

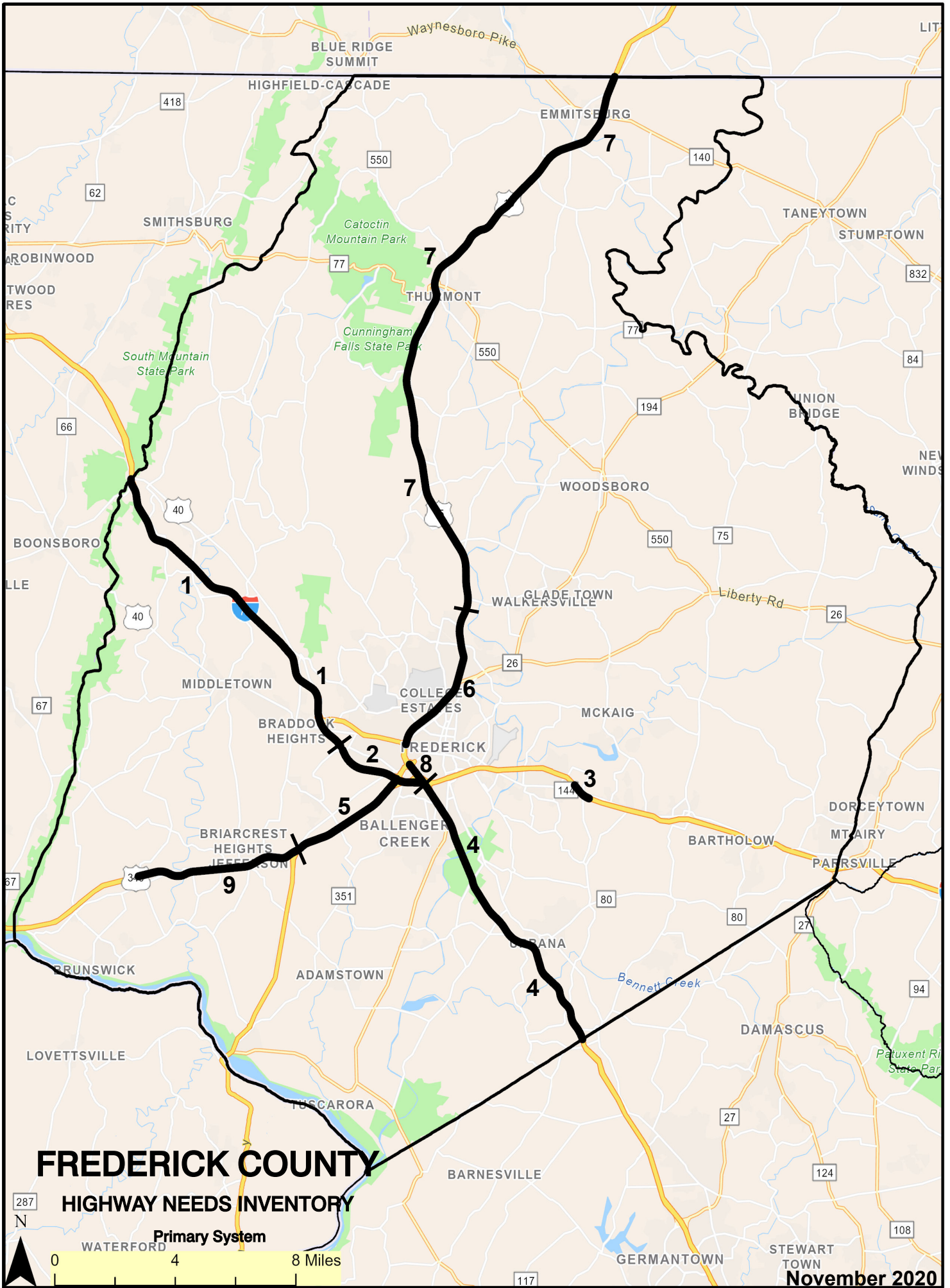
This is a multi-lane highway where opposing roadways are separated by a median or barrier.

6.4.2 Freeway.

This is divided highway, usually serving a principal arterial function, providing for unrestricted through traffic movement and full control of access (called an expressway under current Maryland law).

7.0 COST ESTIMATES

Cost estimates for prospective improvements are approximate, and are based on likely improvement types. The estimates are not detailed engineering estimates nor do they reflect substantive engineering analysis. These cost estimates do not imply fixed decisions, nor do they preclude alternative solutions to the problem. They merely provide the basis for a general appraisal of the total cost of all highway needs, as well as some idea of the distribution of highway needs across the State.



FREDERICK COUNTY

HIGHWAY NEEDS INVENTORY

Primary System

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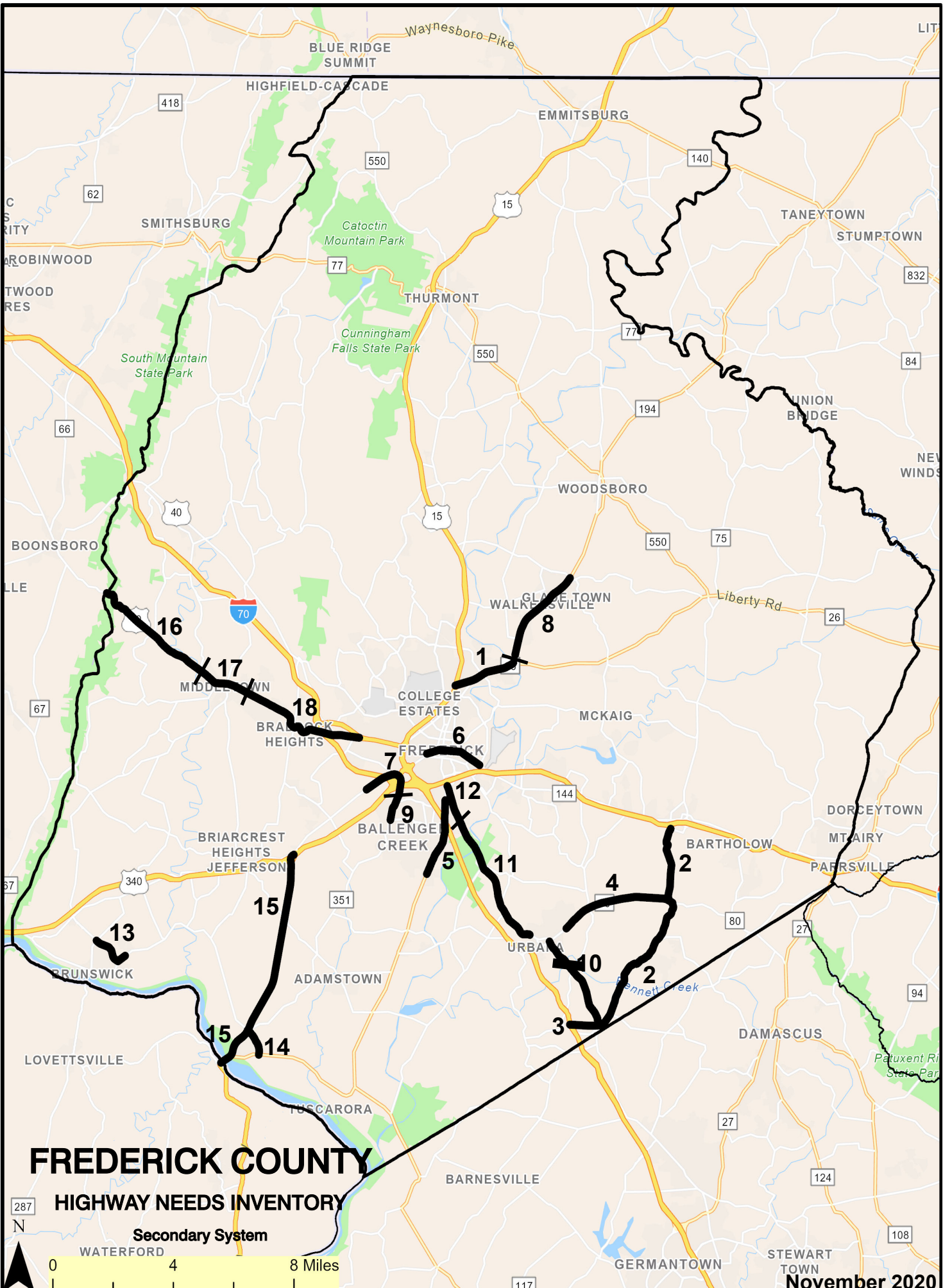
November 2020

HIGHWAY NEEDS INVENTORY

Frederick County - Primary

(Revised 2018)

Map Ref.	Route-Route Name Limits	County	Priority Length	Improvement Type Cost (\$000)
1	IS 70 Washington County line to west of Mt. Phillip Road	Eisenhower Memorial Highway	No 11.6	Freeway reconstruct (includes interchanges) \$426,300
2	IS 70 Mt. Philip Road to I-270	Baltimore National Pike/Eisenhower Mem. Highway	Yes 3.0	Freeway reconstruct (includes interchanges) \$119,000
3	IS 70 0.5 mile east and west of Old National Pike (mpt 20.25)	Baltimore National Pike	No 1.0	Freeway interchange reconstruct on I-70 over MD 144/Meadow Road \$81,900
4	IS 270 Montgomery County line to I-70 (US 40)	Dwight Eisenhower Highway	Yes 10.1	Freeway reconstruct (includes Managed lanes/interchanges) \$687,800
5	US 15 US 340 West Split to I-70	Jefferson National Pike	Yes 4.1	Freeway reconstruct with interchanges \$63,800
6	US 15 US 40 to North of Biggs Ford Road	Frederick Freeway	Yes 6.4	Freeway reconstruct (includes interchanges) \$792,100
7	US 15 North of Biggs Ford Road to Pennsylvania State line	Catoctin Mt. Highway	No 19.8	Freeway reconstruct (includes interchanges) \$2,452,500
8	US 40 US 15 to I-70	Frederick Freeway	Yes 1.4	Multi-lane reconstruct \$413,400
9	US 340 St. Mark Road to US 15	Jefferson National Pike	No 5.5	Freeway reconstruct (includes interchange) \$240,300



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Frederick County - Secondary

(Revised 2018)

Map Ref.	Route-Route Name Limits	County	Priority Length	Improvement Type Cost (\$000)
	MD 26 Liberty Road		Yes	Multi-lane reconstruct, including a grade separation at Monocacy Boulevard
1	US15 (Catoctin Mountain Hwy) to MD 194 (Woodsboro Pike)		2.1	\$118,700
2	MD 75 Green Valley Road MD 355 to I-70		8.1	Multi-lane reconstruct \$136,800
3	MD 75 Ex Green Valley Road MD 355 (N. Frederick Road) to I-270		1.2	Multi-lane construct, including a new interchange at I-270 \$112,000
4	MD 80 Fingerboard Road MD 75 to Carriage Hill Drive		3.9	Multi-lane reconstruct \$71,700
5	MD 85 Buckeystown Pike English Muffin Way to north of Grove Road.		2.4	Multi-lane divided reconstruct, including interchange reconstruct at I-270 \$187,300
6	MD 144 FA West Patrick Street Monocacy Blvd to Jefferson Street		1.9	Two-lane urban reconstruct, including a grade separation at I-70 \$36,300
7	MD 180 Jefferson Pike Greenfield Drive to Ballenger Center Drive		1.7	Multi-lane reconstruct (includes interchange at US 15) \$109,500
8	MD 194 Woodsboro Pike 0.1 mile north of MD 26 to Devilbiss Bridge Road		3.3	Divided highway reconstruct \$56,000
9	MD 351 Ballenger Creek Pike Corporate Drive to Ballenger Center Drive		3.3	Multi-lane reconstruct \$45,000
10	MD 355 Urbana Pike MD 75 Rel to MD 80		3.2	Multi-lane reconstruct \$44,900
11	MD 355 Urbana Pike Sprigg Street South to New Technology Way		4.1	2 lane reconstruct \$81,700
12	MD 355 Urbana Pike New Technology Way to MD 85		1.5	Multi-lane reconstruct \$20,800

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Frederick County - Secondary

(Revised 2018)

Map Ref.	Route-Route Name Limits	County	Priority Length	Improvement Type Cost (\$000)
13	MD 464 Souder Road MD 79 to Corporate limits of Brunswick	No	1.3	2 lane reconstruct \$23,500
14	MD 464 Ex Tuscarora Road relocated East of US 15 to 0.25 mile east of Rock Hall Road	No	0.9	2 lane reconstruct/construct \$12,700
15	US 15 Catoctin Mountain Highway Potomac River to US 340	Yes	7.2	Freeway reconstruct (includes interchanges and access control improvements) \$368,400
16	US 40 AL Old National Pike Washington County line to west of Middletown	No	4.5	2 lane reconstruct \$60,300
17	US 40 AL West/East Main Street West of Middletown to West of Hollow Road	No	2.7	2 lane urban reconstruct \$38,800
18	US 40 AL Old National Pike West of Hollow Road to US 40	No	3.2	Divided highway reconstruct \$39,600