



**THE STATE OF NEW HAMPSHIRE**  
**DEPARTMENT OF TRANSPORTATION**



*Victoria F. Sheehan*  
*Commissioner*

*William Cass, P.E.*  
*Assistant Commissioner*

His Excellency, Governor Christopher T. Sununu  
State House  
Concord, NH 03301

March 6, 2018

The Honorable Chuck Morse  
President of the Senate  
State House, Room 302  
Concord, New Hampshire 03301

The Honorable Gene G. Chandler  
Speaker of the House  
NH House, State House, 3<sup>rd</sup> Floor  
Concord, New Hampshire 03301

The Honorable Mark McConkey  
Chairman of House Public Works and Highway Committee  
LOB Room 210  
Concord, New Hampshire 03301

The Honorable Lou D'Allesandro  
Chairman of Capital Budget Committee  
LOB Room 201  
Concord, New Hampshire 03301

Tammy L. Wright  
Senate Clerk  
State House, Senate Chamber  
Concord, New Hampshire 03301

Paul C. Smith  
House Clerk  
State House Room 317  
Concord, New Hampshire 03301

Michael York  
State Librarian  
20 Park Street  
Concord, New Hampshire 03301

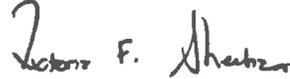


RE: NH RSA 235:23-a: FY 2017 Betterment Report

Per NH RSA 235:23-a please find attached a report detailing the expended funds of the Betterment Program and an explanation of the accomplishments of the Betterment Program.

Should you have any questions or comments, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Victoria F. Sheehan". The signature is written in a cursive style with a large initial "V".

Victoria F. Sheehan  
Commissioner

Attachment



**NH RSA 235:23-a** established a Highway and Bridge Betterment Program. The program is funded by \$0.03 per gallon of the road toll collected under **NH RSA 260:32**. 88% of the program funds are distributed to each of the six state Highway Maintenance Districts based on the percentage of the total state-maintained class I, class II and class III highways and based on the percentage of state-maintained bridges on these state highways found in each District. The remaining 12% of the funds are distributed to each city, town and unincorporated place as explained in **NH RSA 235:23-1**. The Betterment Program follows the state fiscal year. The 2017 Betterment program was from July 1, 2016 to June 30, 2017

The major purpose of the Betterment Program is to provide funds to insure adequate maintenance and improvement of the state highway system not supported with Federal Aid. Betterment funds are used to support; highway construction, reconstruction, resurfacing, highway maintenance, bridge construction, bridge reconstruction and bridge maintenance projects. The Department breaks up the Betterment Program into categories to allow the Department to target specific areas such bridge repair, drainage, force account, reconstruct secondary roads, resurfacing, pavement levelling, traffic signals, and standalone projects.



The **Bridge Category** is used to provide materials and equipment for NHDOT Bridge Maintenance forces to reconstruct and repair NH's bridges not funded through the Federal program. Funding from these projects allow Department forces to repair, reconstruct and replace: bridge decks, bridge abutments, end dams, expansion joints, wing walls, bridge rails, bridge footings, bridge steel, bridge shoes, bridge membranes, pipe inverts, and many other components. Repair or minor reconstruction at the right time can extend the life of a bridge and greatly reduce the overall life cycle cost of the structure. This work also allows some bridges to continue carrying legal loads and avoids weight restrictions or worse, closing the bridge altogether. Nineteen bridge projects were funded during FY 17.

The **Drainage** Category provides funds for competitively bid contracts or allows NHDOT forces to purchase materials and rent equipment to reconstruct, repair, slipline, or replace larger failing pipes, culverts and their appurtenances. These funds allow the Department to repair storm damaged pipes and headwalls damaged by storms or other causes that are not eligible for FEMA reimbursement. The Department is facing a challenge with a large number of corrugated steel pipes that were installed over the last 60 years that continue to rust away. Three projects were funded in FY 2017.



The **Force Account** Category provides funds to allow NHDOT forces the ability to prepare and advertise contracts or rent equipment and purchase materials for the unforeseen events that happen along our roadways and roadsides that need immediate attention. The six NHDOT Highway Maintenance Districts have discretion over the use of these funds and use them to address failing roadway elements including pipes, catch basins and retaining walls. These funds also allow the Districts to proactively replace end of life drainage pipes and structures ahead of the resurfacing projects.

The **Reconstruct Secondary Roads** category funds projects where the Department reconstructs sections of poor roadway. This work is efficient as it is designed in the field and accomplished with state forces, rented equipment, locally purchased gravels and low bid Contractors. During FY 2017 reconstruction was reduced to less than 10 miles in favor of paving very rough roads.





The **Resurfacing** category makes up more than  $\frac{1}{2}$  of the Betterment program. In FY 2017 the Department resurfaced 230 miles using Betterment funds. The Department recognizes pavement preservation strategies as the most efficient way to keep good roadways good. Preservation strategies require regular thin lift overlays including chip seals, micro surfacing and thin lift pavements to keep good roads sealed and to prevent water, salt and other elements from deteriorating the pavement and the gravels below. The Department invests in as much preservation paving as possible but the bulk of the resurfacing goes to poor roads and serves to provide surface maintenance that provides a better ride for several years before the existing cracks reflect through. This surface maintenance strategy is necessary to keep the roads passable and to facilitate plowing the roads in the wintertime.

**Pavement Levelling** is another surface maintenance paving treatment. The Department purchases the hot mix asphalt from an approved supplier and either places the mix with our own forces and a grader or uses private contractors for this work. This treatment is very thin and is used to fill the ruts in the road, restore the crown back into the road and/or hold a broken up section of road together. The Districts have discretion over where this work takes place as often the roadway conditions change even in April, May and June and pavement levelling is used to keep the roads passable and provide a surface that is drivable.





The Department maintains more than 435 traffic signals on the state highway system. The **Signals** category provides funding to upgrade existing traffic signal systems. The Department has converted span wire signal systems to mast arm systems and upgraded traffic signal hardware. The 2017 Betterment funds were used to develop Systems Engineering Processes to facilitate communication from a central DOT location in Concord to complex signal systems. This communication will allow monitoring and improvements to signal systems without travelling to the site.

The **Stand Alone** Betterment funding category is reserved for unforeseen emergencies that will not be refunded by FEMA or Federal highway Administration Emergency relief funds. Slope failures are one such common unforeseen emergency that occur on state maintained roads that run along the state's river banks. These failures are often discovered during routine roadway maintenance and fixed before they are seen from the road. Occasionally a larger failure will take some of the road requiring a closure and detour.



Betterment funding allocations are dispersed to each of the six highway maintenance districts for each Betterment category. These allocations are based on the projected revenues and are used to plan the projects within each district. Unused or unspent allocations carry forward from year to year within the Betterment Program. As projects are completed within the fiscal year planned and final expenditures are determined, the balance of funds are reallocated to other existing or new projects. Figure 1 shows the percentage of FY 2017 expenditures per highway maintenance district.

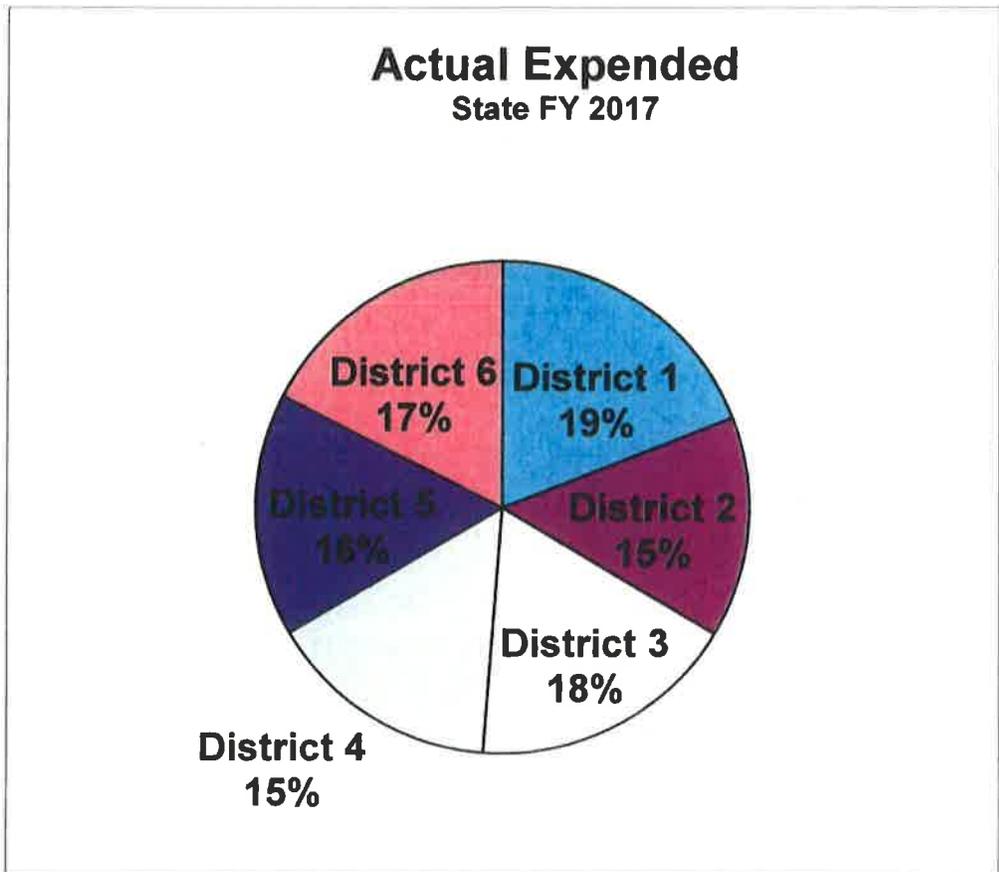


Figure 1. FY 2017 Betterment percentage of funds spent per District

Figure 2 shows the value of projects programmed for each District compared to the actual amount expended.

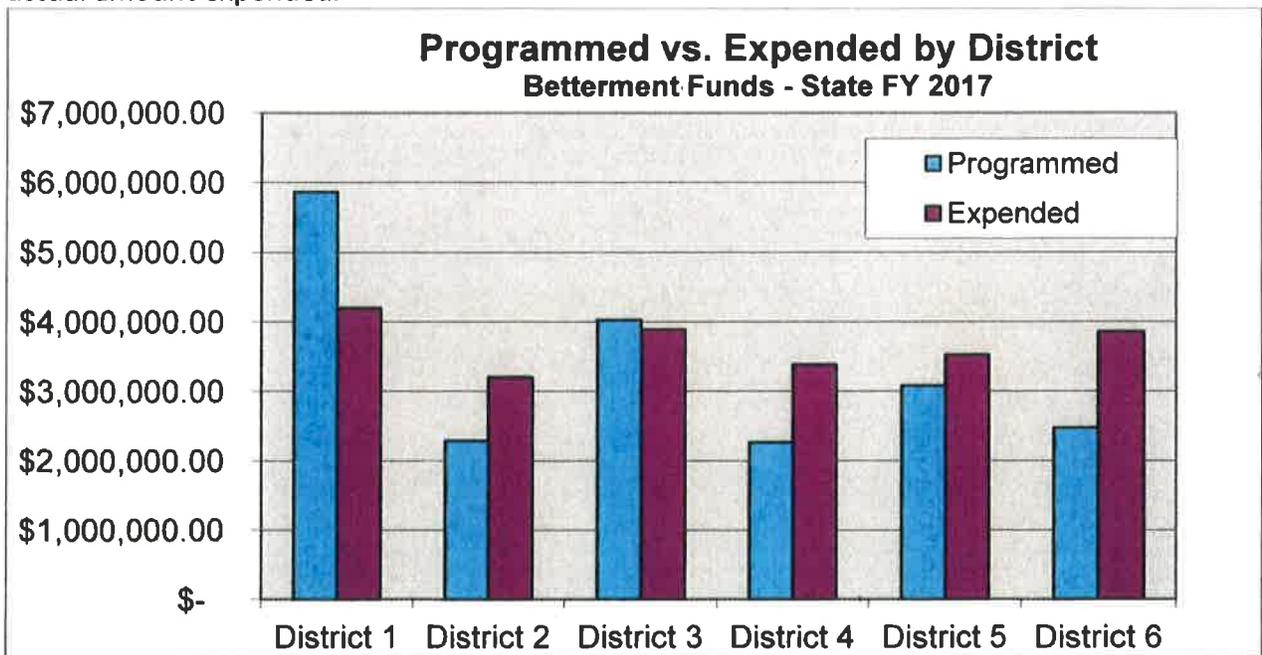


Figure 2. Programmed Projects vs. Expenditures

The following information on the Betterment Program is attached to support this report:

- The FY 2017 Betterment Projects list.
- NH RSA Section 235:23-a Highway and Bridge Betterment Program

<b>Project Name / Location</b>	<b>Project Number</b>	<b>Route /Road</b>	<b>Betterment</b>
ACWORTH	40750	Rte 123A	\$3,474.75
ALEXANDRIA	40244	Fowler River Road	\$55,777.03
ALTON	41352	NH 11	\$6.00
BATH	28896	NH 135	\$2,163.14
BATH	41453	NH 135	\$733.79
BERLIN	40716	NH 110	\$130.00
BOW	40318	NH 3A	\$86,138.73
BOW-HOPKINTON	40766	I-89	\$296.00
BOX CULVERT REPAIRS - PERMIT FEES	41134	District 3 State Roads	\$625.00
Brookfield	29038	Governors Road	\$31,071.18
Canaan	M205	Canaan Patrol Section	\$3,963.60
CANTERBURY	40178	Intervale Road	\$180,852.38
CARROLL	26902	US 302	\$14,839.89
CENTER HARBOR	41356	Winona Road	\$43,646.97
CHARLESTOWN, NH - SPRINGFIELD, VT	29801	NH 11	\$551,244.38
CONCORD - EMERGENCY CULVERT REPAIRS	40780	I393	\$0.38
D-1 REHABILITATION OF SECONDARY ROADS	29222	NH 26	-\$135,437.31
D-4 2017 PREPAVING PIPE PROJECT	41318	Multiple	\$39,832.57
D5 SLOPE PIPES	41002	District 5	\$2,553.58
DALTON	40742	NH-142	\$18.00
Default Aeronautics	10898	Default	\$1,180.33
Default- Executive Office	10878	Default	-\$2,435.30
District 1 Resurfacing	16161D	Various	-\$327.51
District 1 Resurfacing	16161E	Various	\$2,626,373.42
District 2 Resurfacing	M298	District 2 Administrative Charges	\$459.08
District 2 Resurfacing	16162E	Various	\$2,324,009.19

District 3 Resurfacing	16163D	Various Roadways	-\$39,494.55
District 3 Resurfacing	16163E	Various	\$3,354,493.36
DISTRICT 4 GRADER SHIM FY 2017	41018	Various District 4 Roads	\$37,595.42
District 4 Resurfacing	16164E	Various	\$2,277,747.50
DISTRICT 5 Resurfacing	16165F	Various	\$3,173.11
District 5 Resurfacing	16165E	Various	\$2,246,070.43
DISTRICT 5 SLOPE PIPES	40052	I-93/I-293/I-89/I-393	\$17,408.76
DISTRICT 6	11666Y	Various Roads in District Six	\$52,642.14
District 6 Resurfacing	16166E	Various	\$2,035,709.60
DISTRICT WIDE LEVELING	40903	District 2	\$364,485.53
DISTRICT WIDE PRE-PAVE PIPES 2016	40897	Multiple	\$19,864.56
DIXVILLE	29432	Spur Road	\$41,186.27
Dixville	29776	NH 26	\$777,575.72
DUBLIN ROAD PIPE REPLACEMENT	41254	Dublin Road	\$200.00
Durham	M694	District 6 Non-MATS District-Wide Charges	\$150.00
EAST KINGSTON	40673	108	\$7,887.66
Ellsworth	40715	Tricothic Road	\$3,694.57
Enfield	M294	District 2 Non-MATS District-Wide Charges	\$2,860.00
ERROL	40885	NH-16/NH-26	\$91,772.75
Franconia/Butterhill	M124	Franconia/Butterhill Patrol Section	\$292.29
GILFORD	29569	US3/NH11	\$33,008.08
Gilford	29666	NH 11C	\$69,023.02
GORHAM	40826	NH 16	\$19,603.20
GRADER SHIM - DISTRICT 5	11665Y	Various District 5	\$146,573.28
Groveton	M104	Groveton Patrol Section	\$265.78
HAMPTON	41178	NH 101	\$19,357.22
HAMPTON	40927	Route 1A-Ocean Boulevard	\$11,595.15
HAMPTON FALLS	40502	NH 84	\$27,435.46

Hollis	15310		\$7,145.17
HOOKSETT	41276	I-93 SB	\$118.00
Hooksett	M508	Hooksett Patrol Section	\$33.95
LANCASTER	40471	Route 3	\$27,292.65
Lancaster	40522	NH 135	\$5,580.19
Lancaster	M194	District 1 Non-MATS District Wide Charges	\$71.76
Lancaster/Whitefield	M107	Lancaster/Whitefield Patrol Sections	\$422.56
LANCASTER-NORTHUMBERLAND	41438	Lost Nation Road	\$1,600.00
LEBANON	15880	I-89	\$2,450.00
LEBANON	26723	NH Route 120	\$86,280.00
Lisbon	M114	Front & Rear Patrol Sections & Webster Shed G	\$1,931.76
LITTLETON	40790	I-93 SB & NB	\$13,556.70
LOUDON	41292	NH 106	\$4,811.25
LYME	41162	East Thetford Road	\$16,270.37
Marlborough	M412	Marlborough Patrol Section	\$880.00
Meredith	M309	Meredith Patrol Section	\$1,697.57
MILAN	40861	East Side River Road	\$12,131.50
Moultonborough	16436	NH 109	-\$1,475.00
MOULTONBOROUGH	16437	NH 109	\$1,475.00
NEW BOSTON	99402Z	NH 13	\$42,786.89
NORTH HAMPTON	16060	WALNUT AVENUE	\$437,525.11
North Hampton/Rye	M610	North Hampton/Rye Patrol Section	\$22.68
NORTHUMBERLAND	41167	Lost Nation Road	\$29,993.90
Orford	M201	Orford Patrol Section	\$13,133.96
Ossipee	40302	NH 16/25	\$474.01
OSSIPEE	41019	NH Route 171	\$48,634.48
OSSIPEE	41181	NH16B	\$4,098.18
PEMBROKE AND HOPKINTON DRAINAGE IMP.	40941	Broadway and Route 103	\$50,513.75

PIERMONT/CHURCH STREET	41060	NH 25	\$46,455.87
PINKHAMS GRANT	41325	NH 16	\$25.00
PINKHAMS GRANT	41343	NH 16	\$35,841.90
Pittsburg	M101	Pittsburg Upper & Lower Patrol Sections	\$162.86
PLYMOUTH - TEST TRENCHES	41228	US Route 3	\$426.00
PMRAP PROJECT	41007	Hooksett Road, Auburn	\$165,338.98
PRISON CREW DISTRICT 5	16101E	Various	\$214.89
RANDOLPH	28334	US 2	\$67,860.47
Resurfacing District 1	29571	Various	-\$257.32
Resurfacing District 3	40193	Various	\$7,342.06
Resurfacing District 5	40195	Various	\$66,964.17
Resurfacing District 6	40196	Various	\$986.40
ROLLINSFORD	16284	NH Rte 4	-\$130.28
Rumney	M203	Rumney Patrol Section	\$56.54
RYE	40707	1A	\$5,509.60
SALEM TO MANCHESTER	13933I	I-93	\$1,036.93
SANBORNTON	28635	NH 132	\$68,853.02
SANDWICH	28574	NH113	\$56.20
Special 99804Z Bridge Maintenance	99804Z	Default	\$300.39
Special 99806Z Bridge Maintenance	99806Z	Default	\$16.25
Special 99810Z Bridge Maintenance	99810Z	Default	\$536.05
Special 99844Z Bridge Maintenance	99844Z	Various	\$279.76
Special Bridge Maintenance	99870Z	Statewide	\$116.64
Special Bridge Maintenance	99872Z	Statewide	\$125.15
Special Bridge Maintenance	99874Z	Statewide	\$60.08
SPECIAL Bridge Maintenance	99889Z	Statewide	\$56.14
STATEWIDE	41312	Traffic Signal Systems Engineering	\$19,916.03
STATEWIDE Bridge	40789	Various	\$3,500.00

STATEWIDE Bridge Maintenance	23380	SPECIAL	\$169.02
STATEWIDE Bridge Plug Joints	40943	Various	\$72,910.00
STATEWIDE Bridge underwater inspection	29137	VARIOUS	\$3,850.00
STATEWIDE Resurfacing	40863	Tier 2 - Northern	\$26,972.97
STATEWIDE Resurfacing	40868	Tier 2 - Southwest	\$2,542.00
Statewide Resurfacing Bonded Wearing Course	29794	Various	\$1,604,034.64
STATEWIDE Resurfacing Engineering	23790F	Various Roadway	\$175.00
Statewide Special 99816Z	99816Z	Default	\$86.22
SUGAR HILL	40380	NH 18	\$67,795.47
SUNAPEE	41013	NH 103B	\$36,073.23
SURRY BOX CULVERT	41213	Route 12A	\$272.60
Thornton	M325	Thornton Patrol Section	\$38.28
TILTON MAIN STREET DRAINAGE	40916	NH11/US3	\$3,933.78
Training	28339	Special	\$250.16
Various Bridge Crack Sealing	99900Z	Statewide	\$60.08
Various Bridge Washing and Oiling	99901Z	Statewide	\$1,588.84
VARIOUS DISTRICT 1 TOWNS	40881	Various District 1 Roads	\$127,961.13
VAROUS DISTRICT 1 TOWNS SHIM	11661Y	Various District 1 Roads	\$366,904.02
Wakefield	40710	Rte 125, Rte 153	\$762.35
WAKEFIELD	41166	NH 16	\$2,116.56
WALPOLE	25781	County Road	\$16,290.67
WALPOLE, NH - WESTMINSTER, VT	40070	NH123	\$342,423.54
WARNER	29778	Kearsarge Mountain Road	\$78,867.50
WARREN	23420	NH 25C	\$257,021.83
Washington	29761	NH 31	\$20,575.49
WEARE RETAINING WALL RECONSTRUCTION	40882	NH Route 77	\$163,297.86
WENTWORTH	40912	Wentworth Village Road	\$1,970.41
WESTMORELAND	29282	Route 12 - Atkins	\$28,446.00

WESTMORELAND	41173	Route 12	\$6,000.00
WINCHESTER	29483	NH 10	\$88.39
Winchester	M410	Winchester Patrol Section	\$111.21
WOLFEBORO NH28 UNDER DRAIN AND CATCH BAS	41091	NH Route 28	\$77,706.19
<b>Total by Accounting unit Fiscal Year 2017</b>			<b>\$22,065,767.19</b>

# TITLE XX TRANSPORTATION

## CHAPTER 235 FEDERAL AND STATE HIGHWAY AID

### Construction and Reconstruction Aid

#### Section 235:23-a

##### **235:23-a Highway and Bridge Betterment Program; Funding. –**

I. There is established a highway and bridge betterment program for the purpose of highway construction, reconstruction, and resurfacing, and for bridge construction, bridge reconstruction and bridge maintenance, in each highway district in the state and for the purpose of insuring adequate maintenance and improvement of that portion of the state highway system not supported with federal aid.

II. The program shall be funded from \$.03 per gallon of the road toll imposed under RSA 260:32; of these revenues, in each fiscal year 88 percent shall be deposited into a separate account established in the highway fund called the highway and bridge betterment account, to be allocated as provided in paragraph III. The amount deposited into the highway and bridge betterment account is hereby continually appropriated and shall be nonlapsing. The remaining 12 percent shall be distributed in accordance with the formula in RSA 235:23, I, and shall be in addition to any amounts to be allocated under that paragraph.

III. The commissioner shall allocate the funds in the highway and bridge betterment account for the 6 state highway districts in the following priority:

(a) [Repealed.]

(b) For each state highway district in the state, based upon a formula in which 1/2 of the amount of the funds distributed is based upon the proportion which the mileage of state-maintained class I, class II, and class III highways, excluding turnpikes, in each district, as of January 1 of the previous year, bears to the total of such mileage in the state; and 1/2 of the amount of the funds distributed is based upon the proportion which the number of state maintained class I, class II and class III highway bridges, excluding turnpikes, in each district as of January 1 of the previous year bears to the total of such number of bridges in the state.

IV. The commissioner shall prepare a report not later than December 1 of each year which details the way in which the transportation department has expended funds for highway construction, reconstruction, and resurfacing, and for bridge construction, bridge reconstruction and bridge maintenance according to the provisions of paragraph III. The report shall also clearly evaluate how well the betterment program is achieving its purpose using quantitative measures wherever practical. The report shall be submitted no later than December 1 of each year to the president of the senate, the speaker of the house, the governor, the senate clerk, the house clerk, the state library, the chairperson of the house public works and highways committee, and the chairperson of the senate capital budget committee.

**Source.** 1991, 249:2. 1992, 289:64, III. 1994, 155:3; 311:1, 2. 1995, 9:32, eff. June 11, 1995. 1998, 101:1, eff. July 1, 1998.

<http://www.gencourt.state.nh.us/rsa/html/xx/235/235-23-a.htm>



# TITLE XX

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III. Excluding funds under RSA 260:32-b, III(c) that are used for bridge work, the commissioner, based on budget appropriations, shall allocate and expend at least 70 percent of the funds in the highway and bridge betterment account for the 6 state highway districts in the following priority:

(a) [Repealed.]

(b) For each state highway district in the state, based upon a formula in which 1/2 of the amount of the funds distributed is based upon the proportion which the mileage of state-maintained class I, class II, and class III highways, excluding turnpikes, in each district, as of January 1 of the previous year, bears to the total of such mileage in the state; and 1/2 of the amount of the funds distributed is based upon the proportion which the number of state maintained class I, class II and class III highway bridges, excluding turnpikes, in each district as of January 1 of the previous year bears to the total of such number of bridges in the state. Due to timing of contracted work and actual expenditures, the commissioner shall use a rolling 5-year average to ensure that a minimum of 70 percent of the funds are expended in each district based on the formula. The commissioner shall distribute the remaining funds on a statewide basis to achieve regional equity based on condition, taking into account deviations in bid prices and existing infrastructure condition, excluding funds used for emergency repair.

IV. The commissioner shall prepare a report not later than December 1 of each year which details the way in which the transportation department has expended funds for highway construction, reconstruction, and resurfacing, and for bridge construction, bridge reconstruction and bridge maintenance according to the provisions of paragraph III. The report shall also clearly evaluate how well the betterment program is achieving its purpose using quantitative measures wherever practical. The report shall be submitted no later than December 1 of each year to the president of the senate, the

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**Source.** 1991, 249:2. 1992, 289:64, III. 1994, 155:3; 311:1, 2. 1995, 9:32. 1998, 101:1. 2007, 263:36, eff. July 1, 2007; 263:37, eff. July 1, 2009. 2017, 227:3, eff. July 1, 2017.