Governor's Advisory Commission on Intermodal Transportation

2019-2028 Draft Ten Year Plan Overview 2:00 pm, August 23, 2017 Keene State College Keene, NH



Meeting Goals

- Overview
- Ten Year Plan process
- State of Infrastructure Summary
- Proposed TYP highlights
- Unfunded Needs
- Ten Year Plan Schedule
- Sample Agenda for GACIT Hearings
- Recap of CMAQ



Ten Year Plan Process

- April 2017 Community outreach and regional prioritization by RPCs
- July 19th Initial GACIT meeting
- August 2017 Meetings with RPCs Executive Directors
- August 23, 2017 Draft TYP (2019-2028) Release
- September October 2017 19 Public Hearings
- November 2017 GACIT meetings & revisions
- December 2017 Governor's review & revisions
- January 15, 2018 Governor's Draft TYP transmittal to Legislature
- January May 2018 Legislative review & revisions
- June 2018 Final TYP (2019-2028) Adopted into Law

TYP Process - Pursuant to RSA 228:99 & RSA 240



Current State of Infrastructure (Tiers)

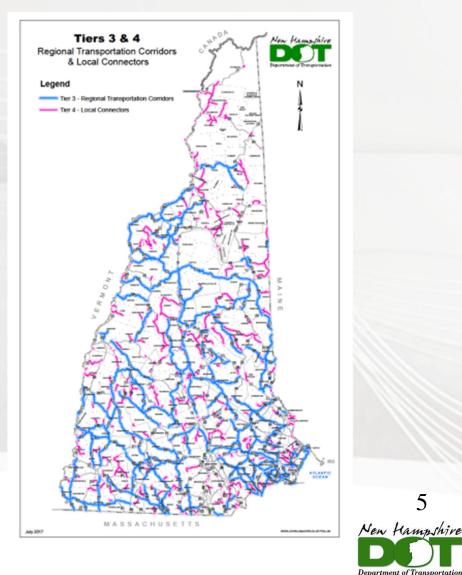
- Tiers 1 & 2 (Statewide Transportation Corridors)
 - Tier 1 Interstates,
 Turnpikes & Divided Hwys
 - Tier 2 Major Statewide
 Corridors (US 4, US 3, NH 10, NH 25)
 - These are typically higher volume, higher speed facilities. Important for commuters, tourism, and freight movement of goods



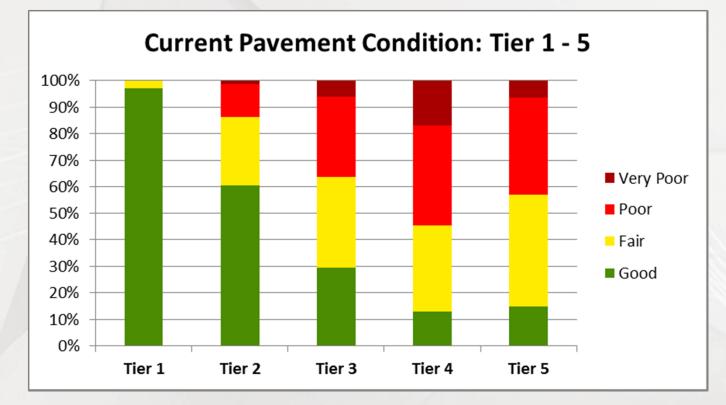


Current State of Infrastructure (Tiers)

- Tiers 3 & 4 (Regional Corridors & Local Connectors)
 - Tier 3 Regional Corridors (Rte. 140, Rte. 135, Rte. 112, Rte. 108). Moderate speeds, moderate traffic volumes, provide connectivity within regions
 - Tier 4 Secondary Highways & Unnumbered state roads (Route 103A in Sunapee or Lowell Rd in Windham).
 Usually low speed, low traffic volumes, provide local connections within or between communities



Current State of Infrastructure (con't)



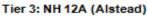
- Tiers 1 & 2 91% of roads are in good or fair condition
- Tiers 3 & 4 57% of roads are in good or fair condition
- Overall, 72% of NH's roads (state) are good/fair Conversely, 28% (1,172 miles) are poor/very poor condition



Current State of Infrastructure (Roads)



Tier 3: NH 129 (Loudon)





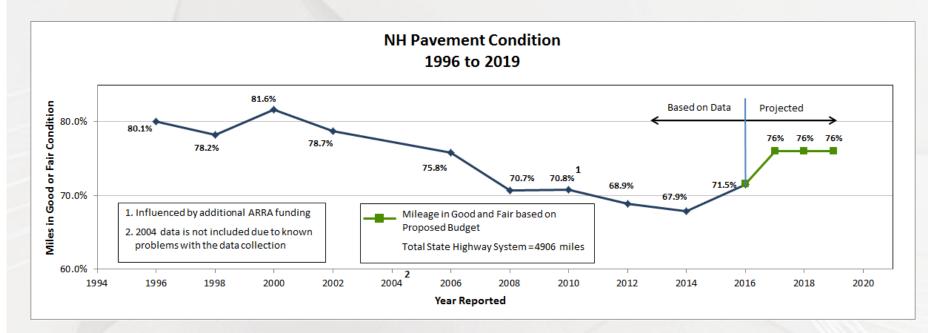
Tier 4: Rhododendron Road (Fitzwilliam)

Tier 4: Village Road (Surry)

Above photos depict representative conditions on poor and very poor Tier 3 & 4 roads



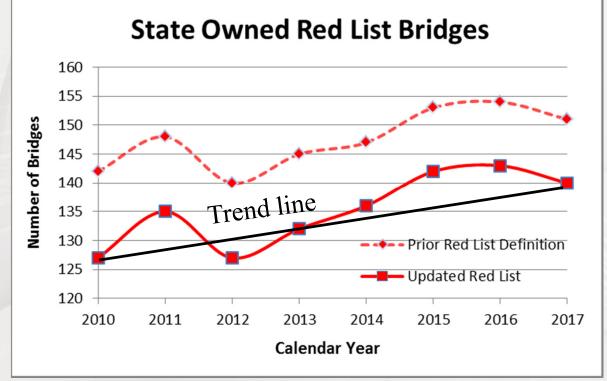
Current State of Infrastructure



- Overall % of Good & Fair Roads was on a downward trend over a 14 year period (2000 – 2014)
- That trend is now showing an upswing in condition due to the increased level of investment in pavement
- 72% of State Roads are in Good or Fair condition which is up 4% from conditions in 2014

New Hampshire Department of Transportation

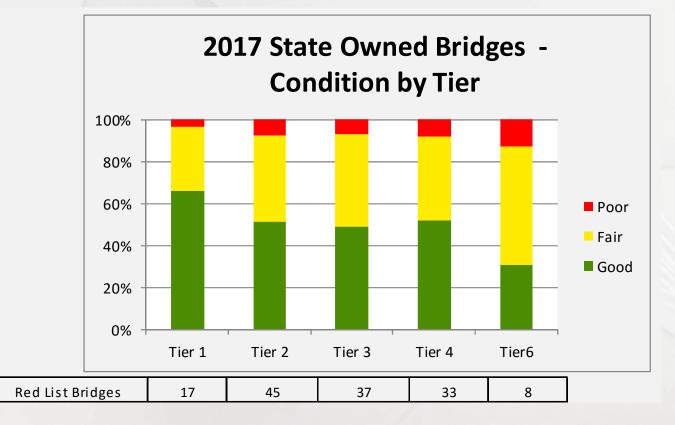
Current State of Infrastructure (con't)



- The number of state owned red list bridges (poor condition) has trended • upward over the last 7 years.
- Over the last 5 years, on average 22 bridges per year added to the red list • with 21 bridges per year removed from the red list
- Today (2017), 6.5% of State owned bridges or 140 are in poor condition. ٠
- This total reflects recent change in the red list definition as only bridges in New Hampshire ٠ poor condition are included (11 less)



Current State of Infrastructure (con't)



- Presently (2017) 140 State Red-List Bridges (new definition)
- Tiers 1 & 2 3% (62 bridges) in poor condition (red list)
- Tiers 3,4,6 4% (78 bridges) in poor condition (red list)
- Tier 5 Additionally 254 Municipal Red-List Bridges (2017)



Current State of Infrastructure (Bridges)

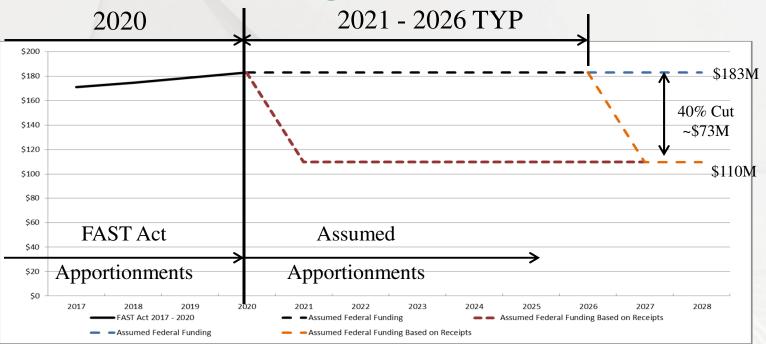


Above photos depict a bridge in Lancaster on Tier 2 Roadway – listed as Priority #4 on State's Red-List Bridges

- US 2 over Connecticut River
- First placed on Red List in 2013
- In TYP for replacement in 2019 (SB367 TIFIA Pledged Revenue) 11







- FAST Act federal funding 2016-2020 (\$167.6M-\$183M)
- \$183M Federal funding assumed 2021-2026
- Approximately \$42M rescission possible in 2020
 - will reduce the flexibility in how the apportionment is used on projects
- Approximately 40% reduction possible (\$73M) based on federal gas tax receipts
 - could result in a \$110 M federal program per year



Federal Funding Status - (con't)

2019-2028 Draft Ten Year Plan

Federal Aid (Formula) Program

HSIP (100%) and CMAQ (75%) FY 2019 & FY 2020, CMAQ (100%) FY 2021-2028



August Total =\$1,854.2 (in millions)FAST ACT Estimated Revenue =\$1,825.7 (in millions)

Notes

CMAQ, HSIP, RecTrails, TAP Programs at FAST ACT funded levels (with exception of CMAQ at 75% 2019-2020)



Proposed Ten Year Plan Focus

- 1. Focus on Pavement Preservation
 - "Keeping good roads good"
 - Maintenance and Preservation strategies on existing system
- 2. Focus on Red List Bridges & Bridge Preservation
 - Funding to address State's Red List Bridge backlog
 - Funding for bridge preservation work to extend bridge life
- 3. Dedicated SB367 funds for TIFIA loan pledged rural roads & bridges
- 4. Completion of I-93 & Funding for Exit 4A
- 5. Heightened Financial Constraint
 - FAST Act federal funding thru FY20
 - Fully financially constrained TYP
 - Increased level of accountability, predictability & ability to deliver



<u>General Financial Constraint Considerations</u> for first draft TYP (2019 – 2028)

- Assumed Level Formula Federal Funds Projects programmed at average of \$183 M/year
 - Mandated federal programs funding maintained at current levels
 - CMAQ, HSIP, TA, Off-system bridge, etc.
 - Maintain & extend all existing programs by 2 years
 - Include \$12M/year in 2026-2028 for paving
 - to replace SB367 funding directed to debt service in 2026
 - Include approximately \$60M (total) for additional individual Bridge projects in 2027-2028
 - Include \$6M/year in 2025-2028 for future Red List Bridges
 - Extends existing program and increases by 20% (\$5M to \$6M)
 - Include additional \$2M/year in 2026-2028 for culvert program
 - Include \$50M for RPC projects in 2027/2028 (\$25M/year)



RPC Project Recommendations

- \$25M/year between 9 RPC's for 2027 & 2028
- The regional allocation was based on road miles (50%) and population (50%)
- RPC's submitted a list of project recommendations that were ranked with a regional perspective
- DOT reviewed the scope, costs and other details provided in the submission – refined the project cost to meet project scope
- DOT met with each RPC to learn more about the project scope, cost estimate and overall prioritized rankings
- DOT utilized the target allocation and the prioritization provided by each RPC to identify the list of recommended projects
- Recommended projects are detailed in the supplement
- 19 individual projects totaling approximately \$51M



New Bridge Projects Included

Rehabilitation and Reconstruction Priority List (R&R priority list) includes a total of 246 bridges (16 currently under construction)

- All Red List bridges (poor condition w/ Inspection rating of 4 or less)
- All bridges that have been rated a 5 for more than 10 years and all culverts rated a 5 (near red list). Condition deteriorated too far for preservation work to be effective
- Objectively rated and prioritized with a model using consistent criteria with reproducible results
- 135 of 140 Red Listed Bridges will be addressed by 2028
 - 14 Red listed bridges were added to current Draft TYP
 - 10 bridges (old 5's) were added up to priority #88



Projected Outputs of Draft TYP (2019-2028) with Level Federal Funding

- Pavement Resurfacing 450 mi/year (estimated 2020-2028)
 - Preservation 133 mi/year
 - Light Capital 116 mi/year
 - Rehabilitation 12 mi/year
 - Additional Crack Seal 165 mi/year

State-Owned Bridges

- Rehabilitate / Replace: 79 bridges (61 Red list Bridges)
- Bridge Maintenance (39 Red list Bridges over 4-year period)
- 135 of 140 red list bridges addressed through 2028 including previous TYP projects

TIFIA Pledged Pavement Resurfacing

- 185 mi/year (estimated)
- Light Capital & Roughness Paving on Poor & Very Poor Roads

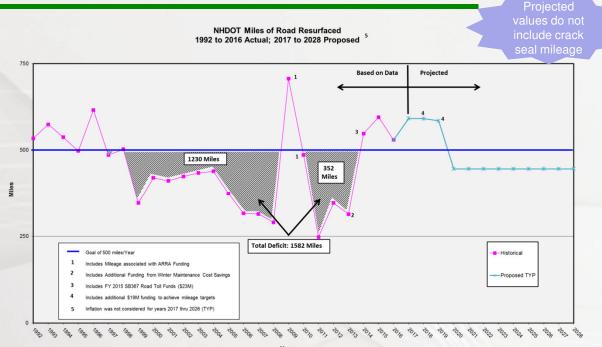
- **TIFIA Pledged Bridge Work**
- Rehabilitates/Replaces 23 bridges



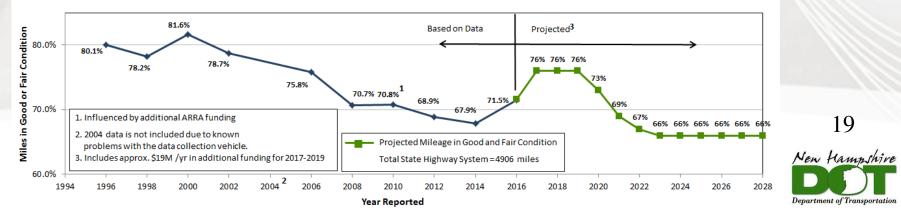
A Look Ahead – Road Condition

Based on current level of investment in the TYP

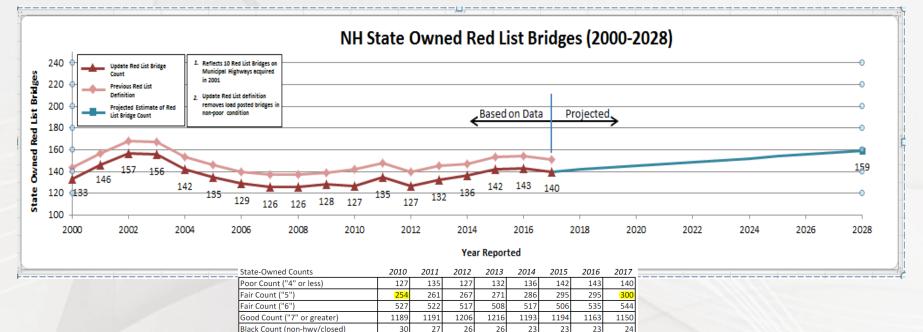
- Past years backlog of deficit paving reduced the state's overall pavement condition from a high of 82% of roads in good or fair condition to a low of 68%
- Current and projected pavement in good or fair condition is expected to rise to 76% with the current level of investment through 2019 then decline to 66% in the outer years of the TYP.



NH Pavement Condition 1996 to 2028



A Look Ahead – State Bridge Condition



2127

2136

2143

٠

2153

2155

2160

2159

Based on recommended level of investment in draft TYP

Number of State Red List Bridges (SRL) - which is representative of bridges in poor condition (rating of 4 or lower) is expected to increase

Total State-Owned Count

- Higher number of fair condition bridges w/ rating of 5 today than 7 years ago
- 135 of 140 red list bridges addressed

- 2158 Current SRL bridge total - 140 ٠
- Bridges added to SRL by 2028 242 •
 - 22 Bridges added annually over last five years – extrapolated to 2028 projects to 242 bridges
 - Bridges expected to be removed from SRL by 2028 - 223
 - 121 removed by Bridge Maintenance forces



102 removed by projects

TYP Funding Synopsis

Typical Annual Funding Utilization

FAST Act Federal Funding approximately \$183M/year

- Paving & Bridge Projects (avg.):
 \$84M
- Mandated Federal (CMAQ, TA, SPR, HSIP, LTAP, etc): \$34M
- GARVEE Debt Service through 2025 (\$7.3M 2026-28): <u>\$24M</u>

Annual Dedicated Funding: \$142M/year

• Individual Roadway Projects (remainder funding): avg. - \$41M/year

Transit Funding (FTA): averages \$32 M/year Airport Funding (FAA): averages \$26 M/year



TYP Funding Synopsis (con't)

Betterment Funding \$22M/year

 Preservation & Maintenance (Roads & Bridges)
 Turnpike Funding for Capital & TRR averages \$63M/year

SB367 Funding for I-93 Expansion, SAB, TIFIA DS

- \$30M per year net of Municipal Block Grant Aid
- State Aid Bridge: \$6.8M/year
- I-93 Debt Service: Averages \$2.0M/year (thru 2025)
- TIFIA Pledged Paving & Bridge Work: \$12M/year (paving)

\$ 9M/year (bridges)

I-93 Debt Service 2026-2034 increases to \$23.4M/yearver Hampshire

Draft TYP (2019 – 2028) Funding

						Highway an	d Bridge							Other Modes	1		
	Highway Funded Non-Highway Funded Non-Highway Funded																
FY	FHWA ^{1A5}	TIFIA Financing 1-93	Connecticut River Bridge GARVEE	Betterment ²	SAB 2	I-93 Debt Service	TIFIA Pledged Paving & Bridge	SAH ²	Other ³ Matching Funds	Sub Total	Turnpike ⁷ Improvement	Turnpike R&R	Rail ⁵	Transit ⁶	Airport	TYP FY Total	% of Tot Program
	\$ 181.33									274.60	\$ 34.80	\$ 14.30 \$	2.10	\$ 29.33		386.23	10.39
2020	\$ 183.44 \$ 188.82		\$ 25.09 \$ 15.57	\$ 22.46 \$ 22.43						289.29 259.49	\$ 44.20	\$ 12.30 \$				429.12 375.01	11.59
2021 2022	\$ 188.82 \$ 187.06		\$ 15.57	\$ 22.43				•	\$ 1.84 \$ 2.15	259.49	\$ 46.35 \$ 33.10					340.45	10.09
2023	\$ 184.63	•	\$.	\$ 22.43				+	\$ 1.43	243.24	\$ 50.60					367.44	9.8%
2024	\$ 184.97	\$ -	\$ -	\$ 22.43	\$ 8.50	\$ 2.20		\$ -	\$ 1.24	240.82	\$ 61.70	\$ 13.30 \$	0.60	\$ 31.49		366.11	9.8%
2025	\$ 185.07	*	\$ -	\$ 22.43				\$ -	\$ 2.95	238.53	\$ 52.00					360.86	9.7%
2026 2027	\$ 187.53 \$ 184.59		\$	\$ 22.43 \$ 22.43				\$.	\$ 0.55 \$ 0.19	242.42 239.11	\$ 57.60 \$ 51.80					371.37 366.31	9.9%
2027	\$ 184.59 \$ 186.76		\$.	\$ 22.43	\$ 8.50 \$ 8.50			s -	\$ 0.19	239.11 242.86	\$ 51.80 \$ 61.40		2.10			366.31 375.13	9.8%
gram Total	1,854.20	11.64	61.37	224.19	94.94	84.36	140.66	5.79	37.89	2,515.04	493.55	137.30	12.00	324.03	256.11	3,738.03	100.09
% of Total Program	73,7%	0.5%	2.4%	8.9%	3.8%	3.4%	5.6%	0.2%	1.5%	100.0%							
	\$1,853.01 (\$1.19) 1. I-93 Payments bi 2. Carryover fund fr 3. Total comprised 4. Figures include in 5. FHWA categorie 6. Self-funded FTA	om the State Aid from project mat aflation a includes approx	Highway program tching costs Main imately \$1.16 mil	n e, Vermont, and o lion annually to a	ther states ddress railroad o	\$307.01 (\$12.95)		\$5.79	\$37.89 \$0.00	\$ 2,500.90 \$ (14.14)		\$ <u>137.30</u> \$ \$-\$		\$ 324.03	\$ 256.11	\$ 3,723.90 \$ (14.14)	
	 Proposed Turnpi FHWA and SB36 FHWA Revenue I FHWA Revenue I 	7 State Aid Bridge based on FAST Ac	revenue include	s the local matchin ortionments			e (no toll increase)								22-Aug-17	

- Highway Funded (state & federal) Average \$252M per year
- Turnpike Funded Average \$63M per year for TRR & Tpk Capital
- Other Modes Average \$60M per year
- Constrained over 10-year period

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Draft TYP (2019 – 2028) Funding

2019-2028 Ten Year Plan All Funding

FISCAL			I-93	MANDATED	INDIVIDUAL					DEBT	GRAND
YEAR	PAVEMENT	BRIDGES	EXPANSION	FEDERAL	PROJECTS	ROADSIDE	RAIL	TRANSIT	AIRPORTS	SERVICE	TOTAL
2019	76.19	91.03	26.15	30.03	71.15	8.12	2.10	29.80	31.10	20.55	386.23
2020	74.85	109.13	26.88	31.00	66.78	8.47	0.60	29.76	52.98	28.68	429.12
2021	80.70	99.02	11.00	33.72	58.57	8.47	0.60	29.46	25.92	27.56	375.01
2022	78.53	63.82	16.50	33.17	63.86	8.47	2.10	32.00	14.66	27.35	340.45
2023	76.10	74.82	0.00	33.17	88.66	8.47	0.60	30.82	27.78	27.02	367.44
2024	81.24	56.95	0.00	33.17	109.32	8.47	0.60	31.49	18.20	26.67	366.11
2025	84.50	58.78	0.00	33.17	92.94	8.47	2.10	34.23	20.40	26.28	360.86
2026	85.03	62.95	0.00	32.82	91.84	10.47	0.60	33.60	23.36	30.72	371.37
2027	71.88	70.49	0.00	32.84	88.66	10.47	0.60	39.16	21.54	30.67	366.31
2028	72.18	72.99	0.00	32.84	99.56	10.47	2.10	34.19	20.18	30.62	375.13
Total	781.19	759.99	80.52	325.92	831.36	90.31	12.00	324.51	256.11	276.13	3738.03
% Grand Total	20.9%	20.3%	2.2%	8.7%	22.2%	2.4%	0.3%	8.7%	6.9%	7.4%	100.0%

~ Dollars include indirect costs and inflation (2.55%)

8/22/2017

FY17-FY26 Estimated Program Expenditures

- Pavement (state & federal) averages \$78M per year
- Bridges (state & federal) averages \$76M per year
- I-93 Expansion \$80M through 2022
- Mandate Federal averages \$33M per year
- Individual Projects- \$831M over ten-year period
- Transit & Airports \$590M over ten-year period
- Total Program \$3.74 Billion

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Turnpike System Capital Program

Under Current Toll Structure

(FY19-FY28) **Turnpike Capital Program Expenditures** \$ million dollars Actual Expenditures (FY09 - FY17); FY18 (projected) Projected Expenditures (FY19 - FY28) Projected Expenditures (FY29- FY32) \$493.6M \$94.3 M \$454.1M 70.0 61.7 61.2 60.0 52.0 51.8 49 7 Net Annual Debt 50.0 Service 46.4 44.2 42.5 40.0 35.2 34.8 30.0 22.0 20.0 11.1 10.0 FY 32 FY 14 FY 15 FY 16 FY 17 FY 18 FY 19 FY 20 FY 21 FY 22 FY 23 FY 24 FY 25 FY 26 FY 27 FY 28 FY 29 FY30 FY 31

TIMETABLE FOR MAJOR TURNPIKE PROJECTS' CONSTRUCTION

Construction Dover End & GSB Rehabilitation (\$79M):	2019 - 2022	
Construction of FEET Widening , Nashua-Bedford (\$127M):	2022 - 2026	
Manchester Exit 7 Reconstruction (\$52M):	2024 - 2026	
➢ Manchester Exit 6 Improvements & FEET Widening (\$99M):	2026 - 2029	25
*Bow-Concord: I-93 Widening (I-89 to I-393) (\$132M):	2027 – 2031 ^{Ma}	en Hampsh

*Only includes Tpk. portion (south of Exit 14), Does not include Federal portion - Est. cost \$178M, completion 2033



\$494M Projected Capital Spending

Turnpike System Capital Program

<u>Major Turnpike Projects could be completed within TYP window</u> (construction advanced and accelerated to complete work by 2028)

- FEET Widening, Nashua-Bedford construction completed by 2024
- Manchester Exit 6 & 7 construction completed by 2026
- *Bow-Concord I-93 Improvements construction completed by 2028

*Turnpike extension north of Exit 14 to include Federal portion required by Legislation

Under New Toll Structure (28% Toll Increase)

- ➢ Hooksett ML & Bedford ML Plazas: 50 cent increase (\$1.00 toll to \$1.50 toll)
- Hampton ML Plaza:
- Hampton Side Plaza:
- Dover & Rochester ML Plazas:
- Hooksett Ramp Plaza:

- 50 cent increase (\$2.00 toll to \$2.50 toll)
- 25 cent increase (\$0.75 toll to \$1.00 toll)
- 25 cent increase (\$0.75 toll to \$1.00 toll)
- 25 cent increase (\$0.50 toll to \$0.75 toll)
- \$36M additional annual toll revenue per year
- > No Additional Bonding Proposed (FY17 outstanding bond balance \$401M)

Toll Increase is paid by users of the system

- Users directly benefit from the capital investment
- **\$16M/Year or 45%** of additional revenue from out-of-state travelers



<u>General Financial Constraint Considerations</u> for first draft TYP (2019 – 2028)

- Assumed Level Formula Federal Funds Projects programmed at average of \$183 M/year
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 - Include additional \$2M/year in 2026-2028 for culvert program
 - Include \$50M for RPC projects in 2027/2028 (\$25M/year)



Unfunded Needs (con't)

Bridge Investment

- Additional investment of \$6M/year needed for bridge preservation work (to keep bridges off red-list)
- Additional investment of \$24M/year needed to address additional 8 red list bridges per year (bridges that are anticipated to be added to red list but not addressed during the TYP period – effectively reduce the redlist by 80 bridges over ten-year period)

Pavement Investment

- Additional investment of \$12M/year needed to rehabilitate 1% of poor and very poor Tier 2, 3 & 4 roads each year
- Additional investment of \$12M/year needed for the pavement preservation & maintenance program, to maintain overall pavement condition of state roads at 76% good and fair.
- Total Additional Investment of \$54M per year for State Roads & Bridges

Nen Hampshire Department of Transportation

Unfunded Needs (cont.)

Other Assets

- Approximately 50,000 culverts under state roads will need replacement additional \$6 M/year to replace all within 50 years (\$10K each)
- Approximately 1130 miles of guardrail on state roads additional \$3M/year to replace all within 75 years (\$250K per mile)
- 300 signalized intersections \$1 M/year to replace on a 25 year cycle (\$80K per location)
- 44 Rock slopes identified as high hazard \$2 M/year to address all in 10 years

Public Interest Items

- Sound Walls Type 2 Policy
- Capitol Corridor Train Service
- Transit Operating Assistance for Local Public Transit Service
- Vilas Bridge not fully funded



Upcoming TYP Meetings

- Ten Year Plan Public Hearings begin Sept 11th thru Oct 26th
- 19 Public Hearings are planned
- **Council District 1:** Errol, Berlin, Conway, Lebanon, Littleton, Plymouth, Laconia
- Council District 2: Keene (co-hosted), Dover, Rochester (cohosted), Concord (co-hosted)
- Council District 3: Kingston, Newmarket, Hampton,
- Council District 4: Londonderry, Bedford, Manchester (cohosted),
- Council District 5: Merrimack, Peterborough (co-hosted), Bedford (co-hosted), Merrimack



TYP Hearing – Draft Agenda

- 1. Executive Councilor David K. Wheeler
 - Welcome
 - Introduce presenters
 - GACIT process

2. NH Department of Transportation

- Statewide philosophy
- Statewide prioritization process

3. Regional Planning Commission

- Regional philosophy
- Regional prioritization process

4. Public Comments

- Elected Officials
- Open Comment Period
- 5. Closing Comments



THANK YOU

QUESTIONS & COMMENTS

