



**VERMONT
AGENCY OF TRANSPORTATION
Structures Section**

FY2019 Budget

Kristin Higgins, Structures Program Manager

Structures Program Overview

\$95.5 million for bridges:

- State Bridge increased by \$26 million
- Interstate Bridge decreased by \$12 million
- Town Highway Bridge decreased by 3.2 million

Advanced Development = Projects Ready for Construction

Projects moving from Candidates to D & E

New Candidate Projects

Accelerated Bridge Program update

State Highway Bridge Program FY2019

\$57,636,326

1	International Bridge Rehab with Quebec – Construction Funding
2	Construction funding for Construction Manager – General Contractor (CMGC) projects *
6	Maintenance Projects (Federally Funded ID/IQ)
27	Bridge replacement projects - Construction Funding
33	Funding for scoping and design of programmed projects

* Middlebury and North Hero - Grand Isle both using Alternative Contracting

State Highway Bridge Program Summary:

- Up \$26 million from last year
- Middlebury and NH-GI spending \$30.8 Million in FY19
- Middlebury and NH-GI spending \$90 Million over the next 4 years
- Killington US4 project delayed another year - construction in SFY20/21
- Increased spending through SFY21
- SFY22 back to \$45 Million

RICHFORD-SUTTON, PQ BHF 0814(1)

**BR 3 ON VT105A, OVER THE MISSISQUOI RIVER BETWEEN RICHFORD, VT
AND SUTTON, QUEBEC**



NORTH HERO-GRAND ISLE BHF 028-1(26)



North Hero – Grand Isle Project Costs Increase

\$77.75 million (Includes Preliminary Engineering)

- \$46.5 million - October 2016 (2018 Capital Program)
- \$70.2 million - April 2017 Preliminary Estimate
- \$77.75 million - October 2017 Final Estimate
- 11% increase from Preliminary to Final Plans
 - Refinement of final design details and specifications
 - Quote obtained for Acrow moveable temporary bridge
 - Temporary bridge piers designed for ice and boat loads
 - Escalation - Increase in material and labor costs over 4 year construction duration. Escalation accounts for \$3 million.

Middlebury WCRS(23)



Middlebury Tunnel Project Costs Increase

Estimated Project Costs:

- Temporary Bridges (actual cost) - \$2,275,000
- Preliminary Engineering - \$7,850,000
- Construction - \$48,800,000
- Railroad Detour and Extended Work Windows - \$12,000,000
- Total estimated construction cost for new tunnel = \$60,800,000
- Total estimated project cost = **\$70,925,000**

Other significant Project Costs Increase

Searsburg BF 010-1(50):

- Budgeted treatment was a culvert liner (\$670 K)
- During permitting regulators determined the corridor to be important bear habitat
- Liner option no longer acceptable. Structure needs to be bigger to allow bears to travel through the corridor
- Replacement structure now a bridge (\$1.8 M)

Woodstock Village:

- The 2018 estimate was a scoping estimate which underestimated the cost to construct the project
- Throughout the design phase Structures designers were understanding the complications and the project costs escalated
- The contractors bid was just over \$1.4 million to construct

HARTFORD (QUECHEE) NH 020-2(45) Quechee Gorge

Project Update:

- **Project Scope complete – Major Preservation Project**
 - New Bridge Deck
 - Wider sidewalks
 - Steel repairs and painting
 - Traffic barrier with separate pedestrian barrier
- **Project Design:**
 - Consultant Designer procurement underway
 - Public presentation spring 2018
 - Structural Design, Maintenance of traffic and permitting
 - Construction Contract Fall 2020 with construction starting in 2021

Interstate Bridge Program FY2019

\$24,543,000

1	Design - Build Bridge Replacement Projects *
2	Bridge Replacement Projects – Construction Funding **
3	Maintenance Projects (Federally Funded ID/IQ)
14	Bridge and Deck Replacement Projects – Engineering and Right of Way
1	Funding for scoping of programmed projects ***

* Rockingham

** Middlesex and Derby (Bridges over I89 and I91)

*** Richmond US2 over I89

Interstate Bridge Program Summary:

- Down \$12 million from SFY18
- 4 Design build projects completed
- Rockingham spending \$15 Million in SFY19 and \$13 Million in SFY20
- Maintaining funding \$25 - \$30 + Million over next 4 years

Rockingham IM091-1(66) Design Build

Construction Spending:

Through 2018 = \$18.4 Million

Projected 2019 = \$18 Million

Projected 2020 = \$13 Million

Projected 2021 = \$1.6 Million

Total Costs \$51 Million

Project Progress:

Northbound bridge demolition completed in December. Three new pier foundations progressing simultaneously with two abutments beginning in February. Plan to have new 800' long northbound bridge open to traffic this Fall.

Rockingham IM091-1(66)



Town Highway Bridge Program FY2019

\$13,324,994

0	Construction funds for rehabilitation of covered bridges
3	Construction funds for bi-state projects
15	Bridge replacement projects – Construction Funding
20	Funding for scoping and design of programmed projects

* 2 VT - NH Connecticut River projects and 1 VT - NY project

Town Highway Bridge Program Summary:

- Down \$3 million from last year
- Newfane delayed last year and on Schedule for construction SFY21/22
- Brattleboro – Hinsdale spending \$15 Million over the next 5 years (Construction 2020)
- \$13 - \$14 Million for the next 3 years and building back up to \$20 Million

Advanced Development – Ready for Construction

Advanced Development (Ready Fall of 2018 - Budgeted Fall of 2019):

- Killington
- Westminster
- Calais
- Calais
- Calais

Advanced Development (Ready Fall of 2019 - Budgeted Fall of 2020):

- Sharon
- Royalton
- Newfane
- Readsboro
- Essex
- Pittsfield

Projects moving from Candidates to D & E

<u>Project</u>	<u>FY19 Spending</u>
Enosburg BF 0283()	\$40,000
Chester BF 025-1()	\$45,000
Lowell BF 029-2()	\$40,000
Chester BF 025-1()	\$45,000
Barre Town BF 0169()	\$45,000
Waterbury BF 0284()	\$45,000
Braintree BF 0241()	\$40,000

New Candidate Projects

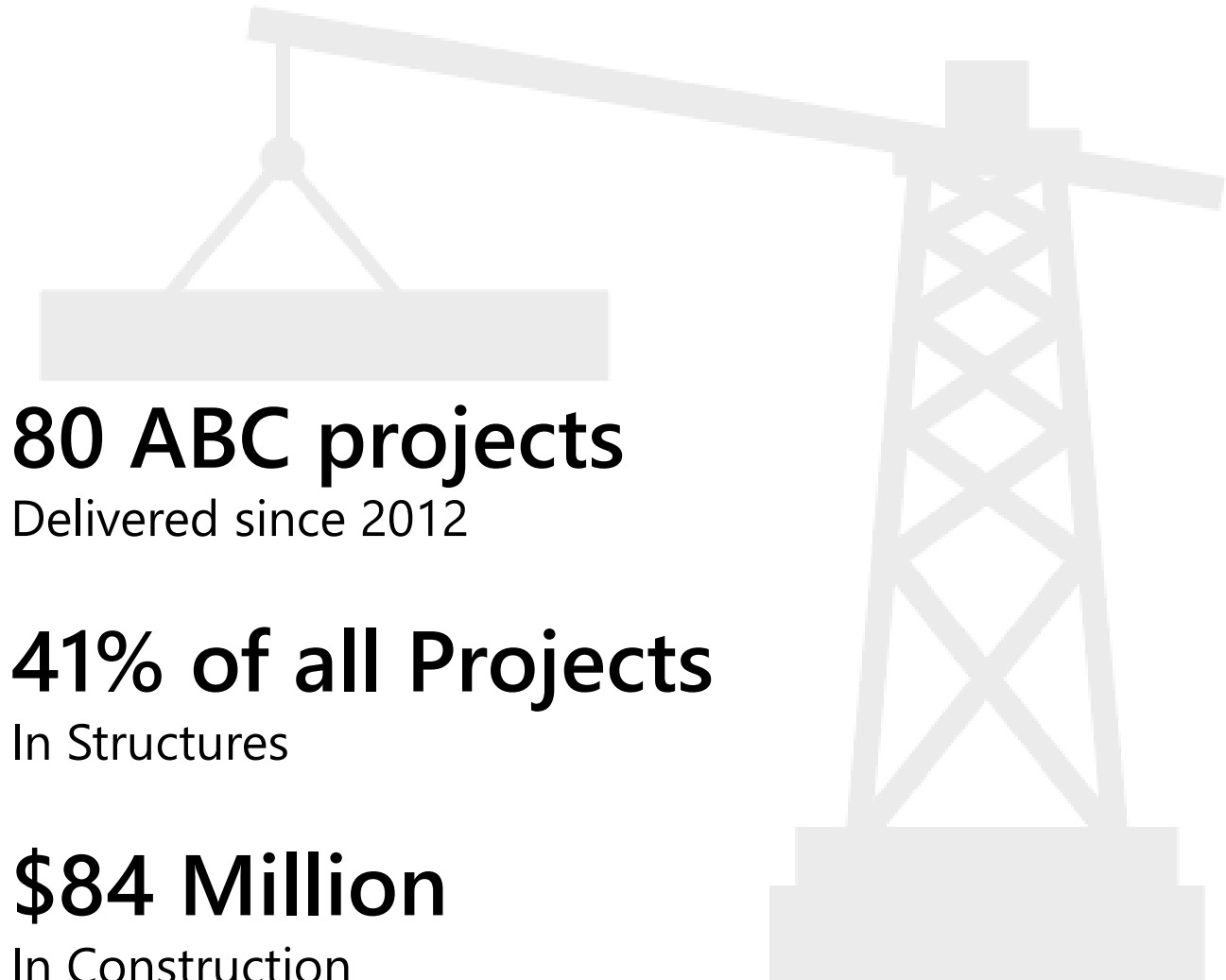
State Highway :

- Elmore VT-12, bridge 90 - Large culvert in serious condition
- Lowell VT-100, bridge 237 - Large culvert in serious condition
- Rockingham VT-103, bridge 6 - Large culvert in serious condition
- Plymouth VT-100, bridge 107 - Deck replacement

Town Highway :

- Montpelier US-2, bridge 64 - Deck replacement
- Ludlow Village VT-103, bridge - 26 Deck replacement

Accelerated Bridge Program



80 ABC projects

Delivered since 2012

41% of all Projects

In Structures

\$84 Million

In Construction

98% on time

Bridge openings

Accelerated Bridge Program

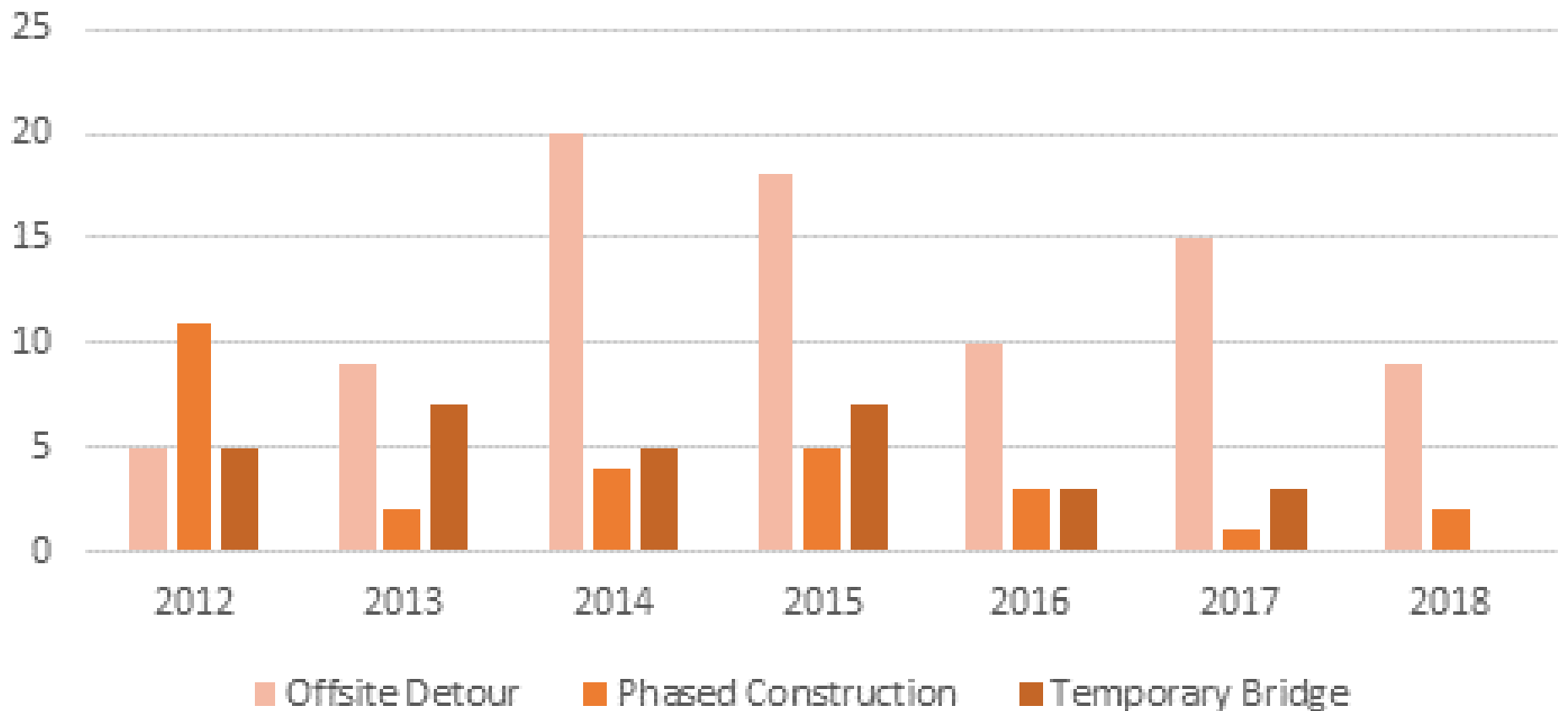
	Accelerated Bridge Program	Conventional Bridge Program	% ABP	% Conventional
2012	4	12	25%	75%
2013	9	12	43%	57%
2014	14	12	54%	46%
2015	8	23	26%	74%
2016	8	8	50%	50%
2017	12	9	57%	43%
2018	5	10	33%	67%
2019	3	13	19%	81%
TOTAL (2012-2019)	61	101	38%	62%

Accelerated Bridge Construction

	Accelerated Bridge Construction	Conventional Construction	% ABC	% Conventional construction
2012	7	9	44%	56%
2013	8	13	38%	62%
2014	18	8	69%	31%
2015	23	8	74%	26%
2016	8	8	50%	50%
2017	13	8	62%	38%
TOTAL (2012-2017)	77	54	59%	41%

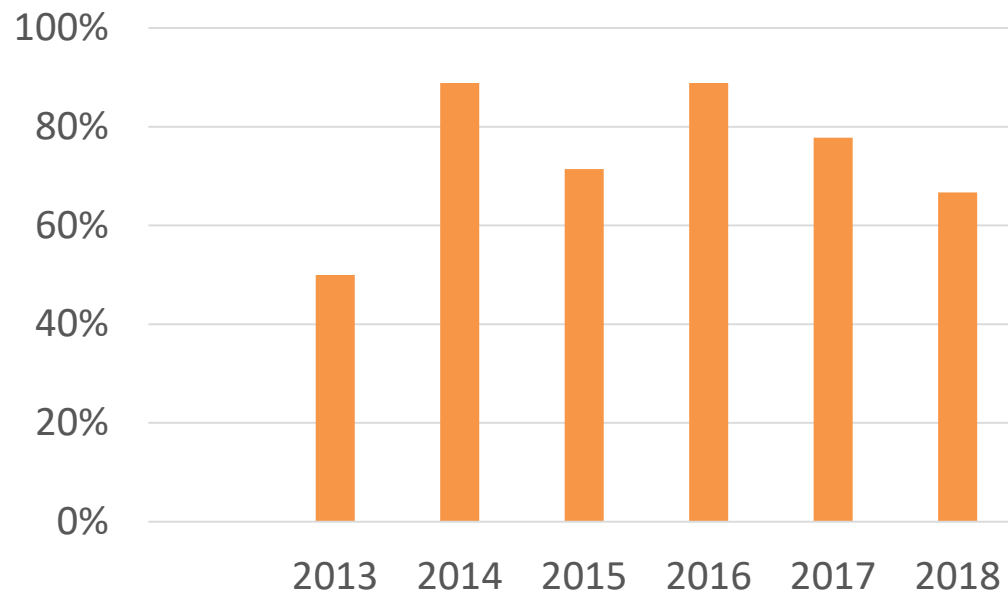
Short Term Road Closures

Number of Projects Utilizing Maintenance of Traffic Option



Act 153

	Number of Towns
2012	Act 153 is passed
2013	3
2014	8
2015	10
2016	8
2017	6
2018	4

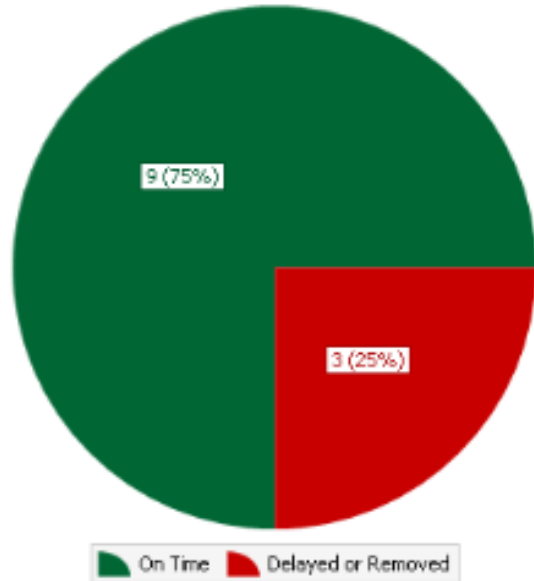


Road Closures - 2018

	PROJECT NAME	PROJECT NUMBER	ROUTE	Program	Duration	Scope
2018	WATERFORD	BF 0225(4)	VT-18	Accelerated	Weekend	Precast Concrete Box
2018	WATERFORD	BF 0225(5)	VT-17	Conventional	Weekend	Precast Concrete Box
2018	RICHFORD-SUTTON, PQ	BHF 0814(1)	VT-105A	Conventional	Full	Truss Rehabilitation
2018	SANDGATE	BO 1441(30)	C3009	Conventional	Full	Superstructure Replacement
2018	JOHNSON	BF 032-1(19)	VT-100C	Accelerated	21 Days	Precast 3-Sided Structure
2018	WEYBRIDGE-NEW HAVEN	BF 0225(5)	VT-18	Accelerated	21 Days	Full Bridge Replacement
2018	MORRISTOWN	BRS 0240(3)S	VT-15A	Conventional	weekend	Full Bridge Replacement
2018	WOODSTOCK VILLAGE	BF 020-2(43)	US-4	Accelerated	21 Days	Superstructure Replacement
2018	JOHNSON	BF 020-2(7)	US-4	Accelerated	21 Days	Precast 3-sided Structure
2018	JOHNSON	BF 0248(4)	VT-100C	Accelerated	21 Days	Superstructure Replacement - 2 bridges
2018	DANBY	BF 0130(3)	Maj-0130	Conventional	Full	Full Bridge Replacement

Performance Measures

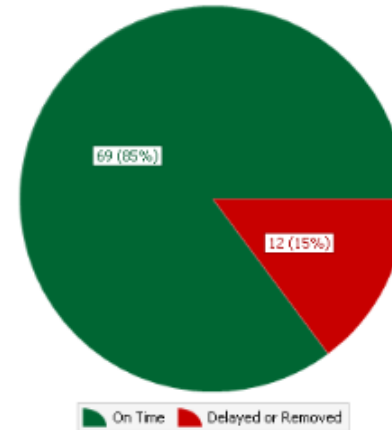
Projected Year End



	Program	On-Time	Delayed	% On - Time
➔	Interstate Bridges	1	0	100%
➔	State Highway Bridges	7	0	100%
➔	Town Highway Bridges	1	3	25%
➔	VTrans Program Totals	9	3	75%

Structures

Projected Year End



	Program	On-Time	Delayed	% On - Time
➔	Aviation	0	0	0%
➔	Bike & Pedestrian Facilities	0	0	0%
➔	Interstate Bridges	1	0	100%
➔	Maintenance	0	0	0%
➔	Multi-Modal Facilities	0	0	0%
➔	Municipal Mitigation	0	0	0%
➔	Park & Ride Lots	0	3	0%
➔	Paving	20	2	91%
➔	Rail	12	1	92%
➔	Rail/Highway Crossings	0	0	0%
➔	Roadway Projects	11	1	92%
➔	State Highway Bridges	7	0	100%
➔	Town Highway Bridges	1	3	25%
➔	Traffic & Safety	17	2	89%
➔	Transportation Alternatives	0	0	0%
➔	VTrans Program Totals	69	12	85%

Agency

Innovation



St. Johnsbury Before

St. Johnsbury After

Georgia IMCULV

