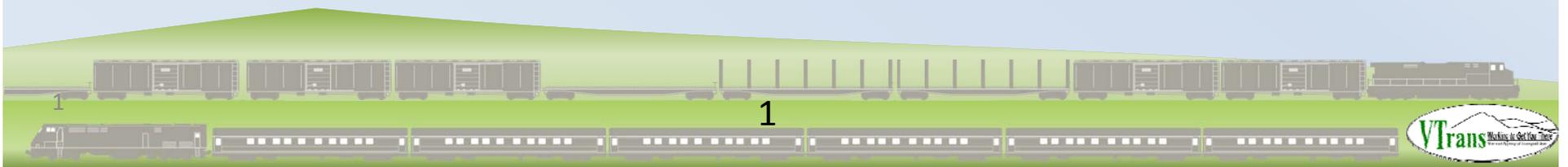


Vermont State Rail Plan

House Transportation Committee

January 14, 2016

Costa Pappis, Planning Section
Vermont Agency of Transportation



Agenda

- Introductions
- Plan Purpose
- Freight and Passenger Rail Systems
- Rail Issues and Opportunities
- Proposed Capital Plan

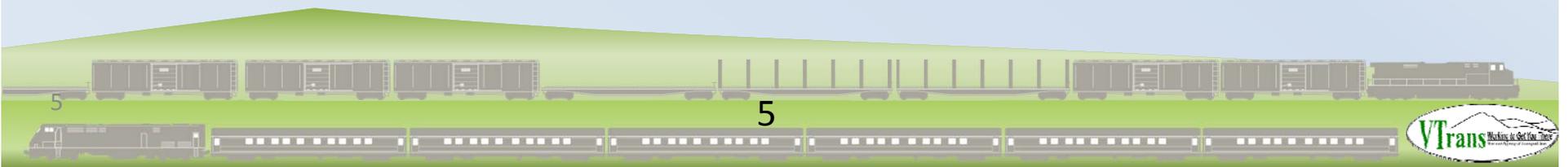
Purpose of the State Rail Plan

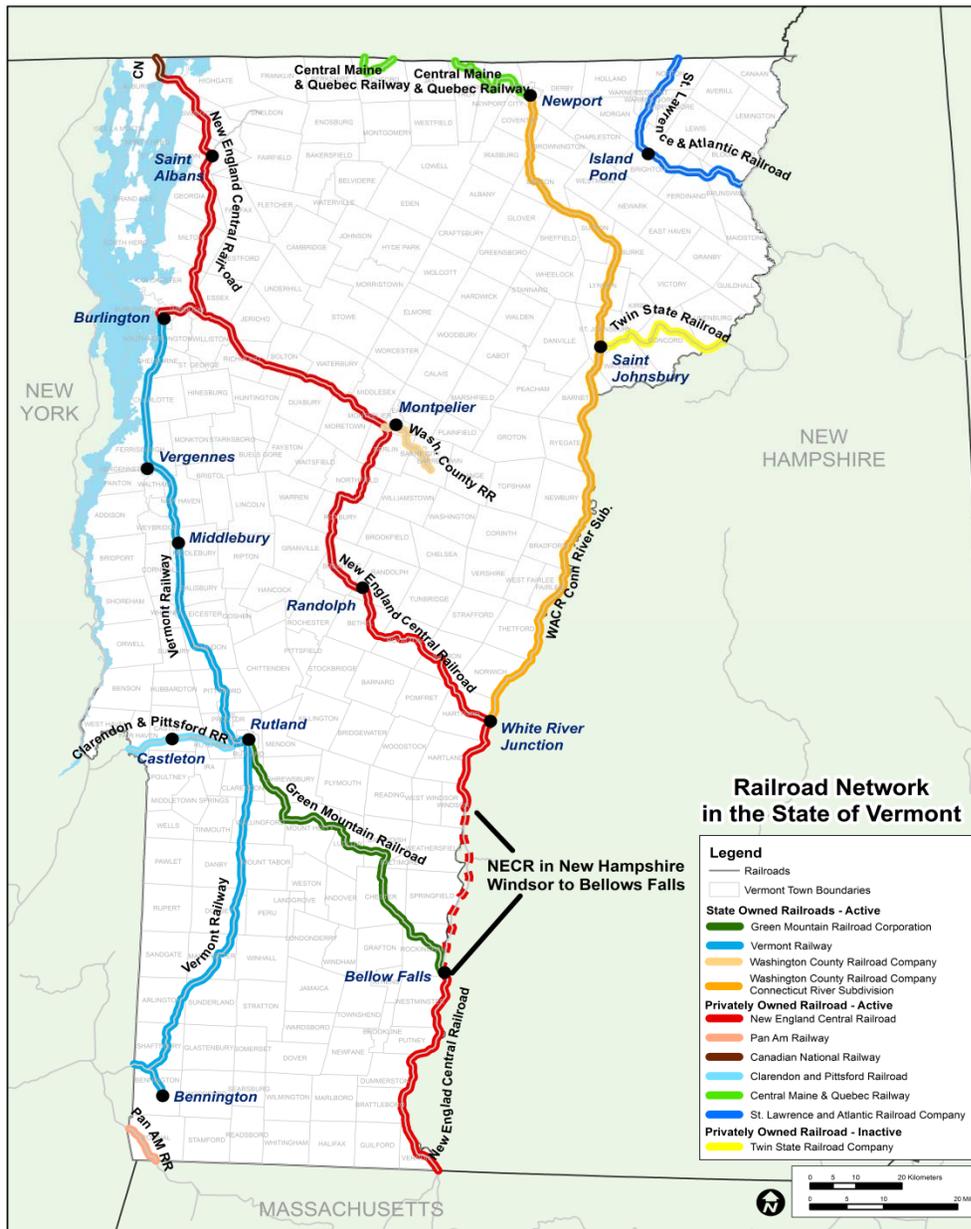
- Provides a framework for future rail investments
 - State funds
 - Federal grants
- Meets state and federal requirements for rail planning
 - State Planning Statute
 - Passenger Rail Investment & Improvement Act (PRIIA)

Why is Vermont Involved in Rail?

- Vermont owns 305 miles of active rail
 - Abandonment threats of the 1960s
 - Needs of resource-extraction industries
- The State operates two intercity passenger rail services – Ethan Allen Express and the Vermonter.

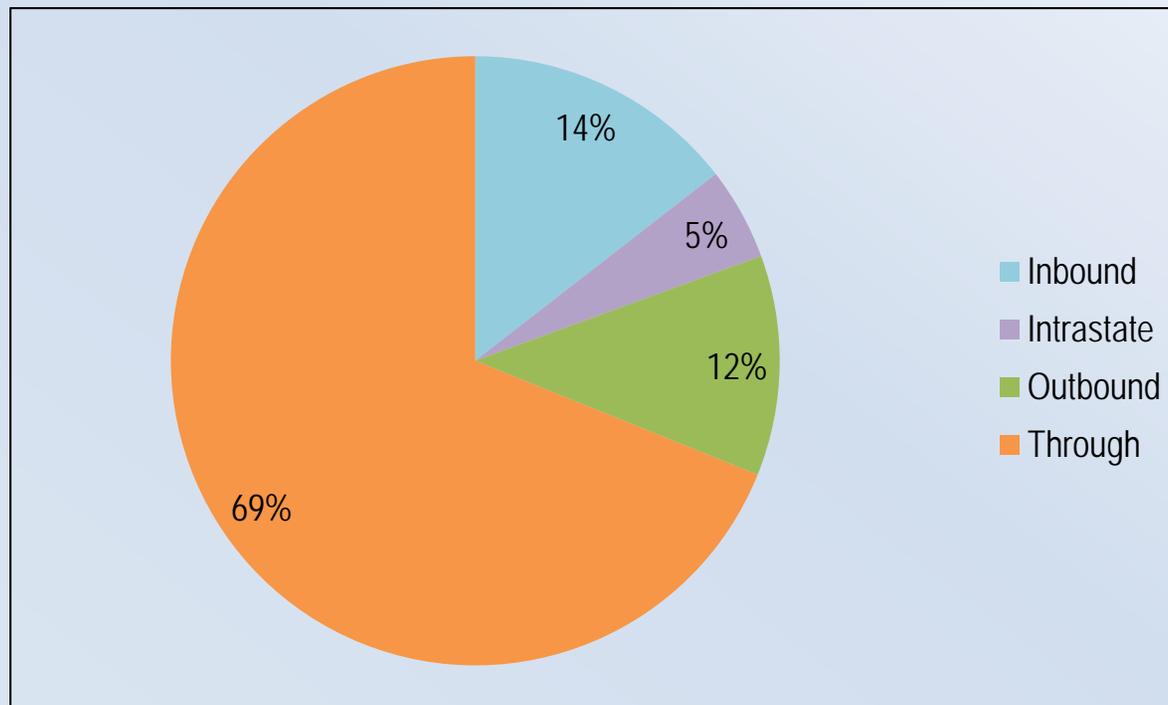
Freight Rail



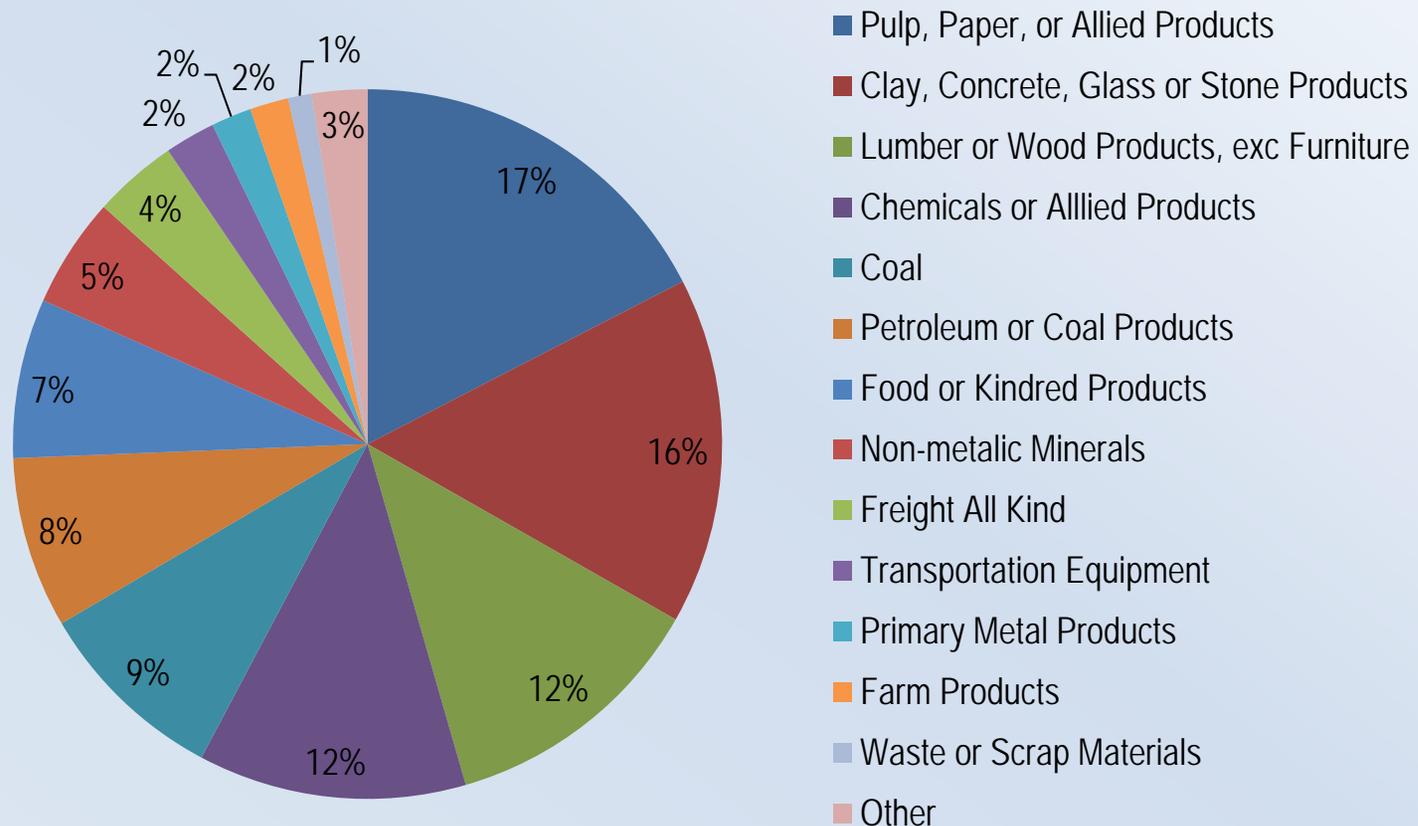


Freight Movements

6.7 Million Tons Carried Annually



Top Freight Commodities



Our Rail Freight Trading Partners

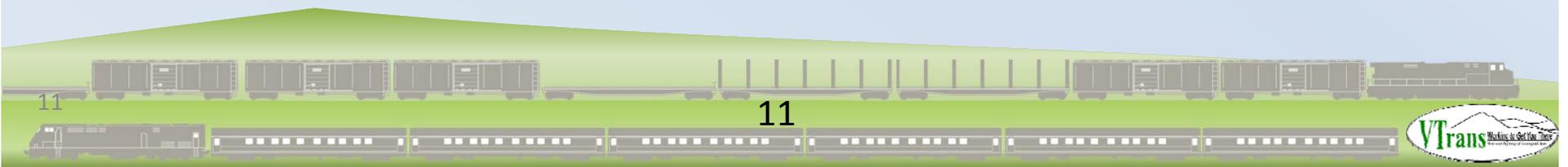


Tonnage

Trends in Freight Rail

- Rail freight shipments have declined
 - 10 million tons in 2006 to 6.7 million in 2011
 - Changes in carload standards
 - Vermont's changing economy
- Rail has a major economic impact for its shippers
 - 130 railroad employees and 3,700 jobs in businesses that use state-owned rail lines

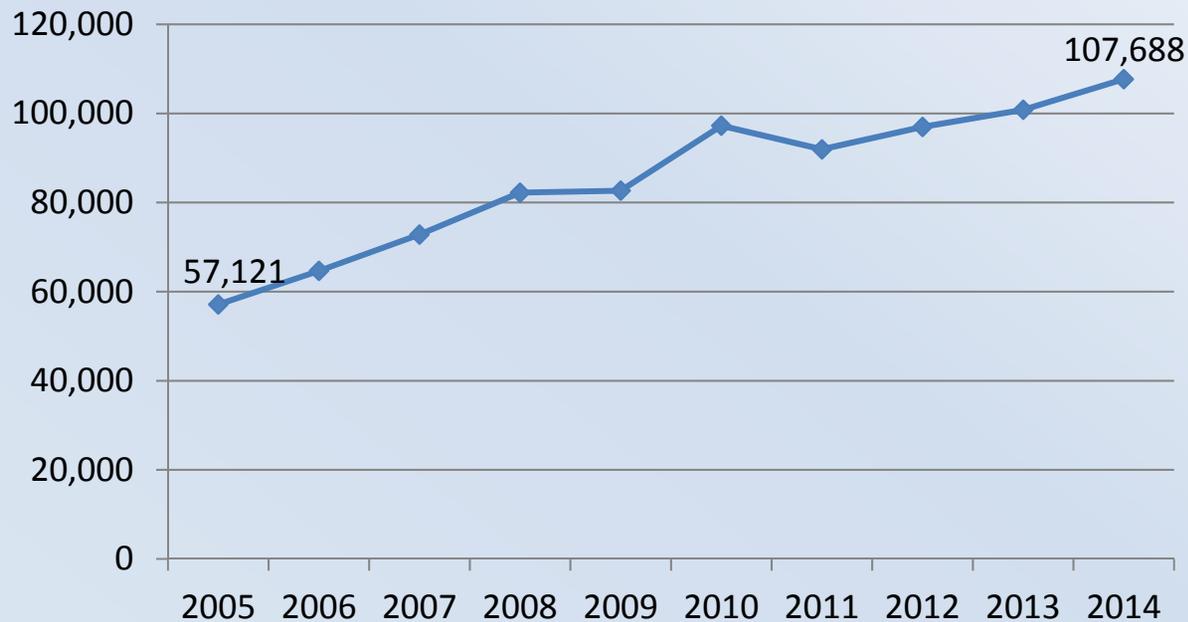
Passenger Rail





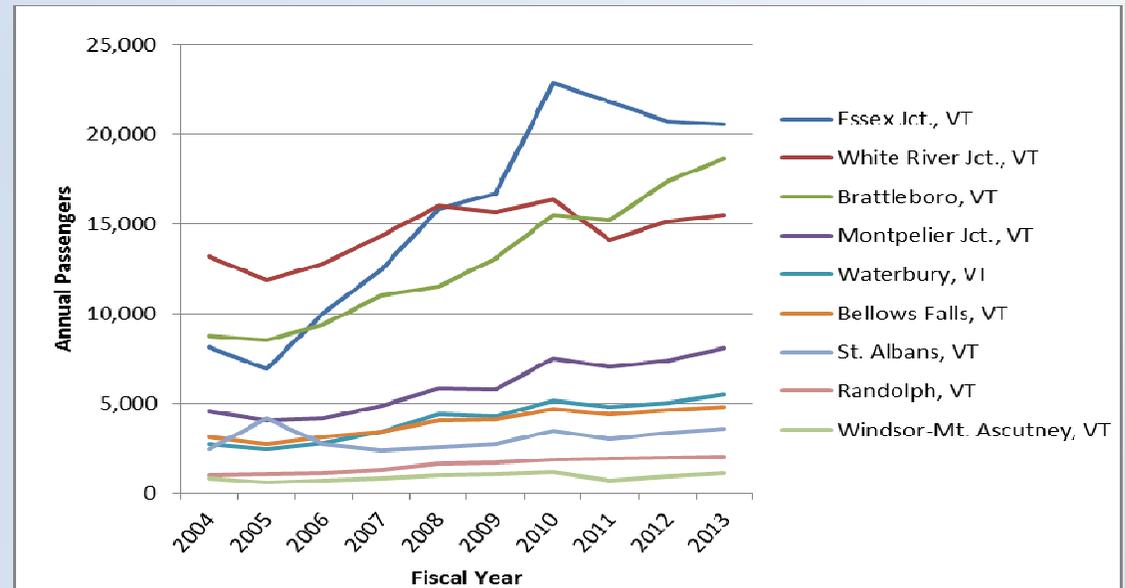
Ridership Trends

Rail Ridership at Vermont Stations, 2005-2014



Rail was a big beneficiary of earmarks and federal grants during the 2000s which totaled over \$100 million.

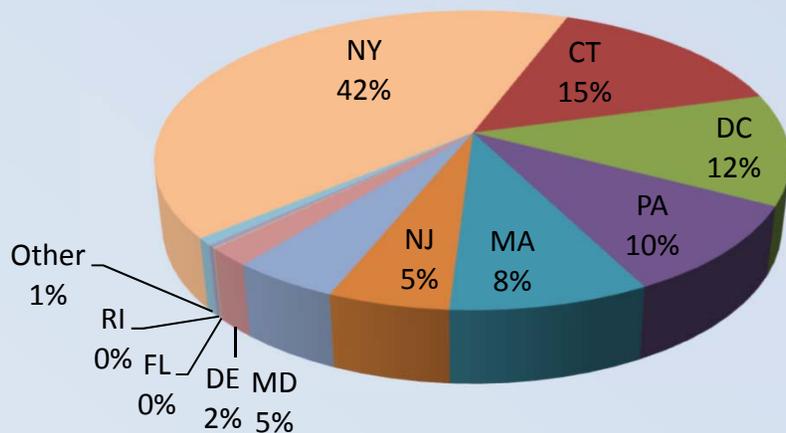
Station Usage



Where Passengers Travel To

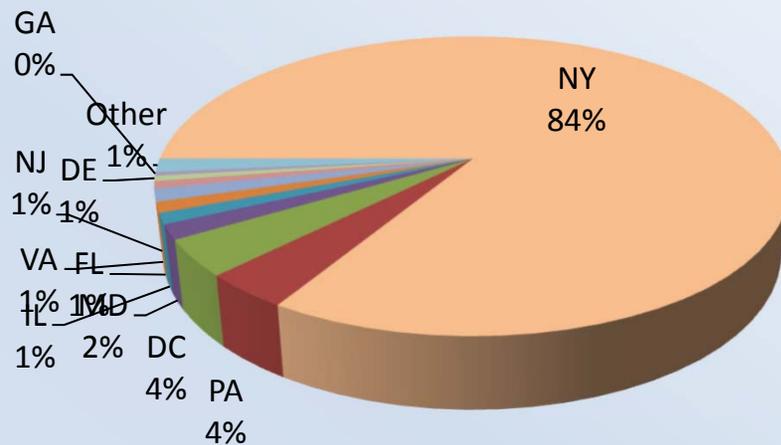
**Total Trips: 79,803
(VT Stations, 2013)**

Vermonter

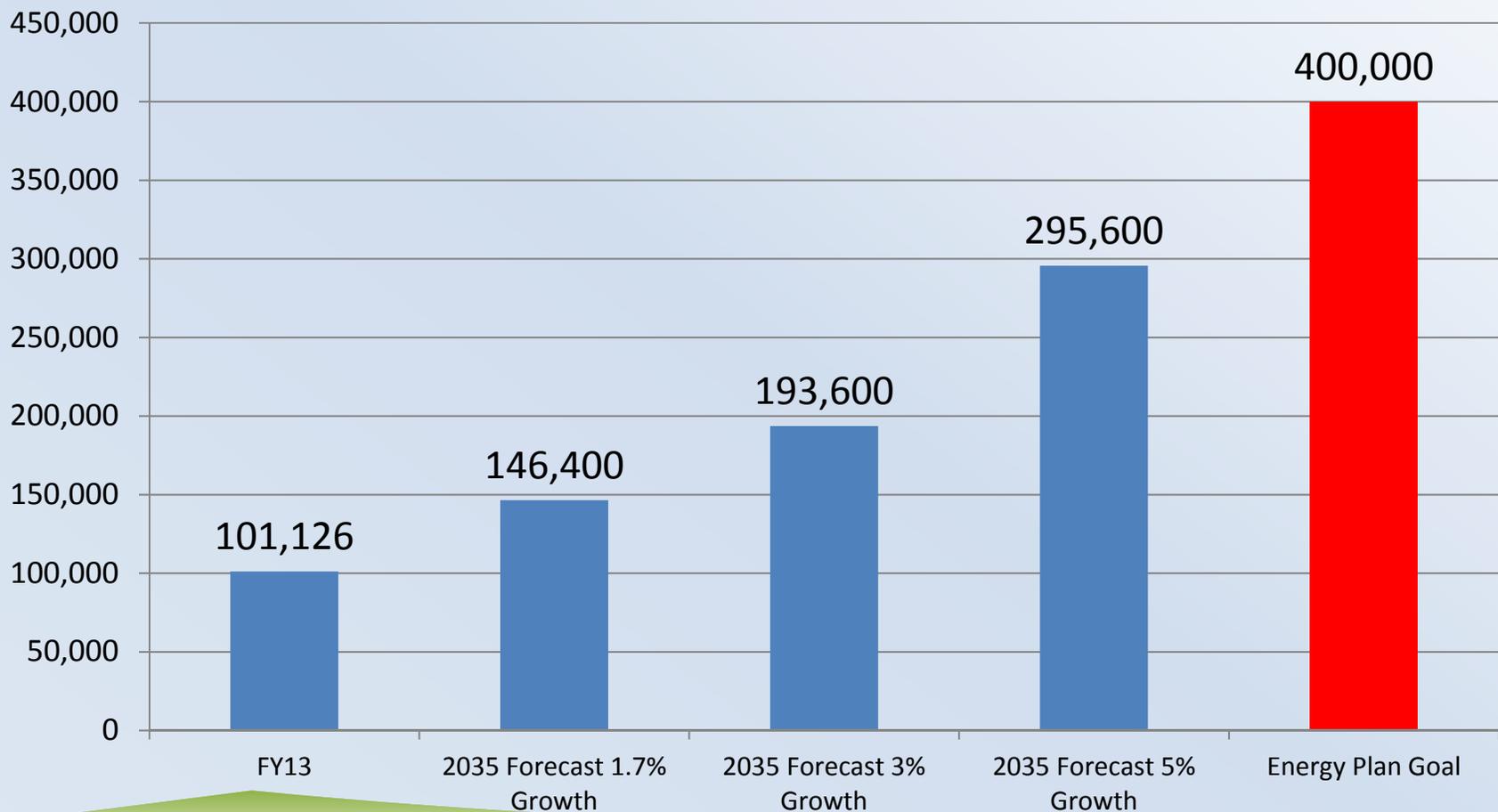


**Total Trips: 21,026
(VT Stations, 2013)**

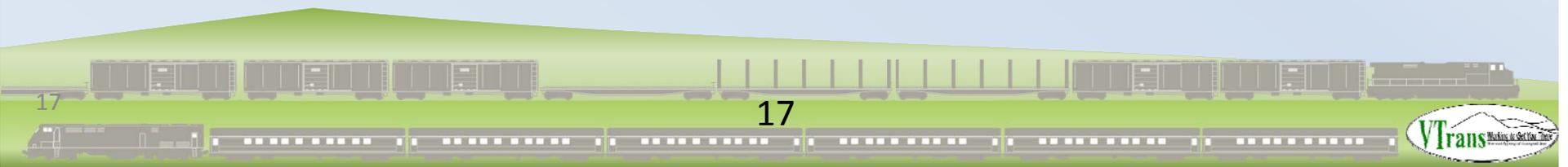
Ethan Allen Express



What Will Passenger Ridership Look Like in 2035 Under Current Trends?

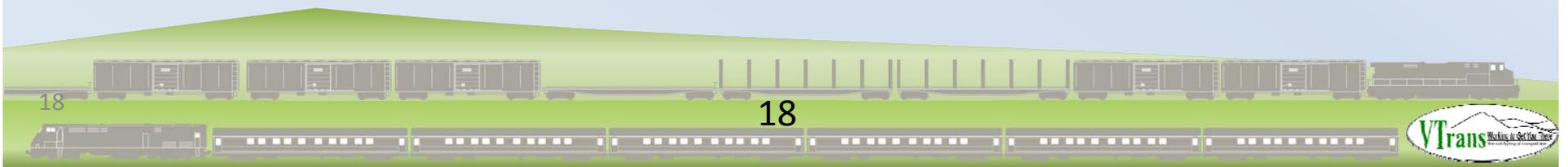


Issues and Challenges



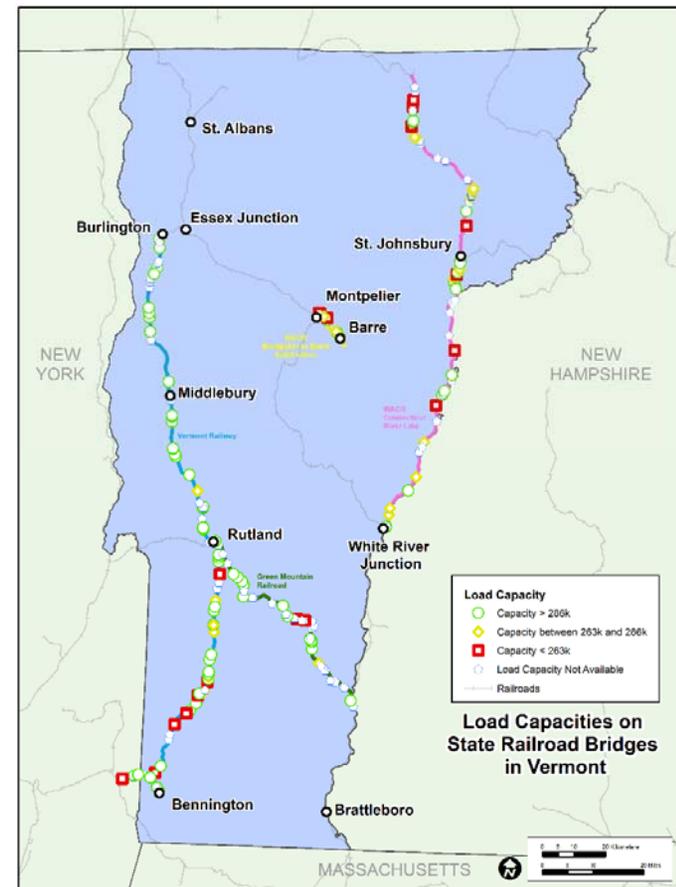
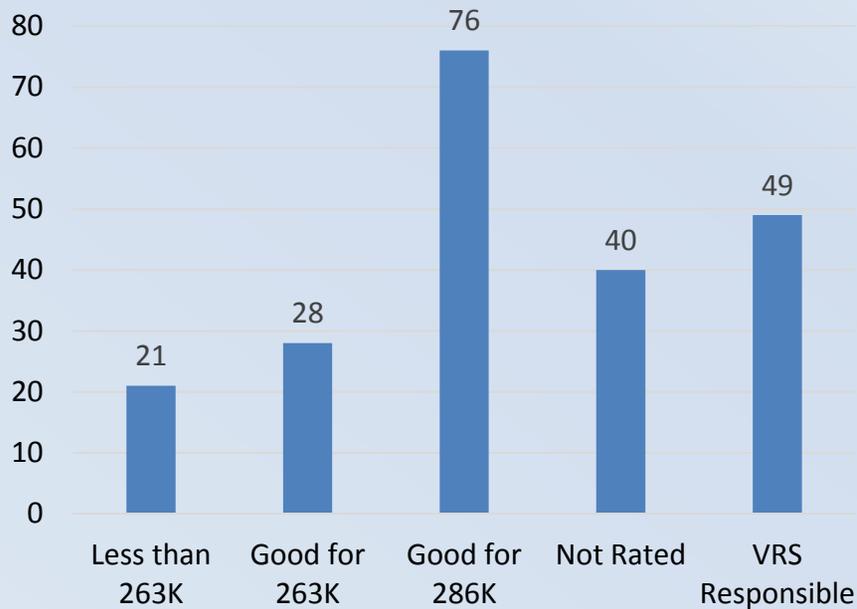
Issues: Deferred Maintenance

- Underinvestment in State-Owned Rail Lines
 - Very little investment from 1960s to 1990s
 - System conditions threaten both freight and passenger systems
 - Intercity passenger rail can only function with an active rail freight operator



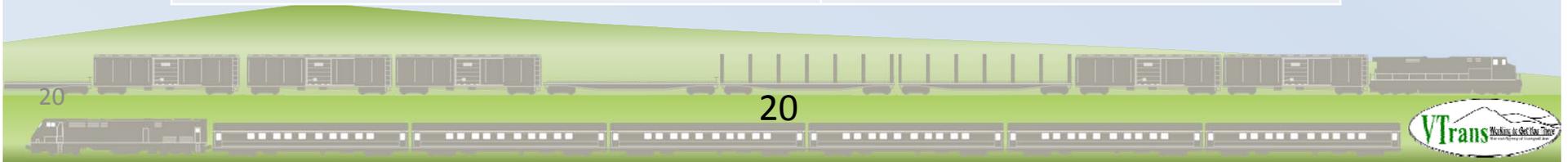
Issues: Bridge Conditions

Load Rating of 214 Rail Bridges as of April 2015



Issues: Bridge Capital Needs

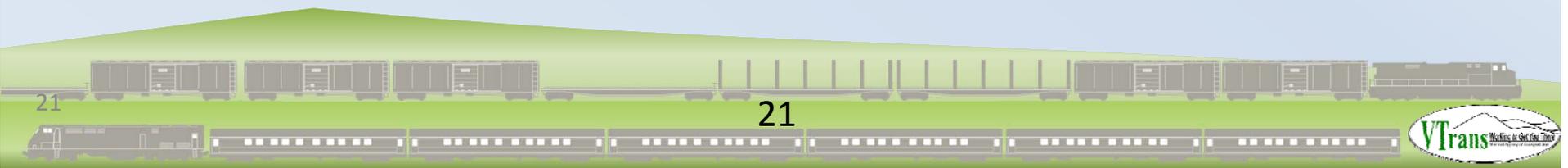
Line	Long Term Cost Estimate
Cost of Bringing Bridge Superstructures to 286K	
VTR Northern	\$18,473,725
VTR B&R	\$28,958,565
VTR Hoosick	\$5,618,000
GMRC	\$46,211,420
WACR CRL	\$60,112,270
WACR M&B	\$4,310,000
Total	\$163,683,980
Repairs to Substructures	\$40,000,000
Total Superstructures and Substructures	Approx. \$203,683,980



Issues: Track Needs

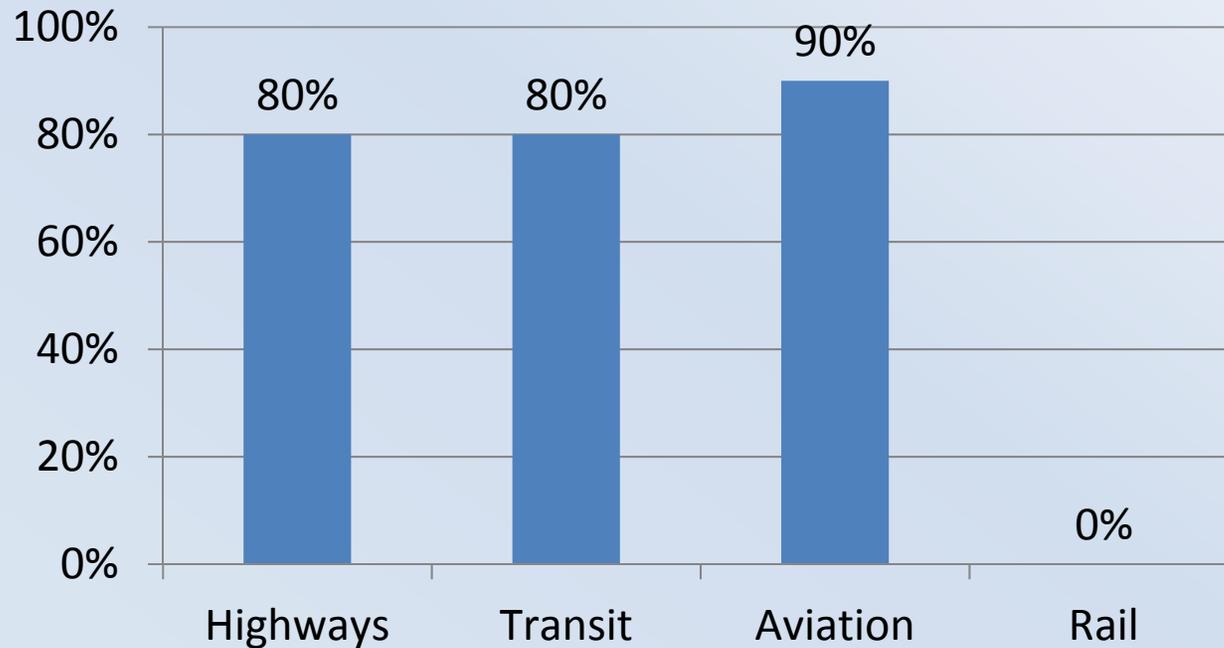
Estimated Cost of Track Work for Freight Operations

Line	Long Term Cost Estimate
VTR Northern	\$12,000,000
VTR B&R	\$16,500,000
VTR Hoosick	\$4,800,000
GMRC	\$18,500,000
WACR CRL	\$22,500,000
WACR M&B	\$6,500,000
NECR Winooski	\$4,000,000
SLA Track and Bridge	\$3,300,000
CMQ Ties and Bridge	\$1,300,000
Total	\$89,400,000

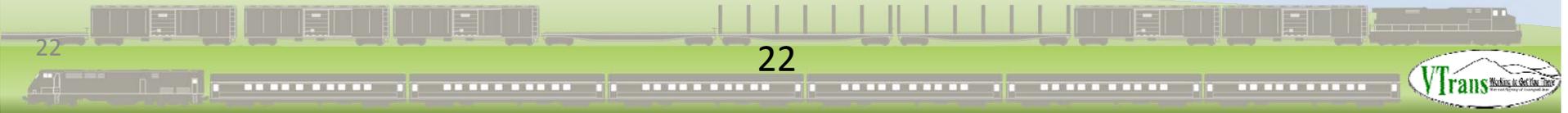


Issues: No Dedicated Federal Rail Funding

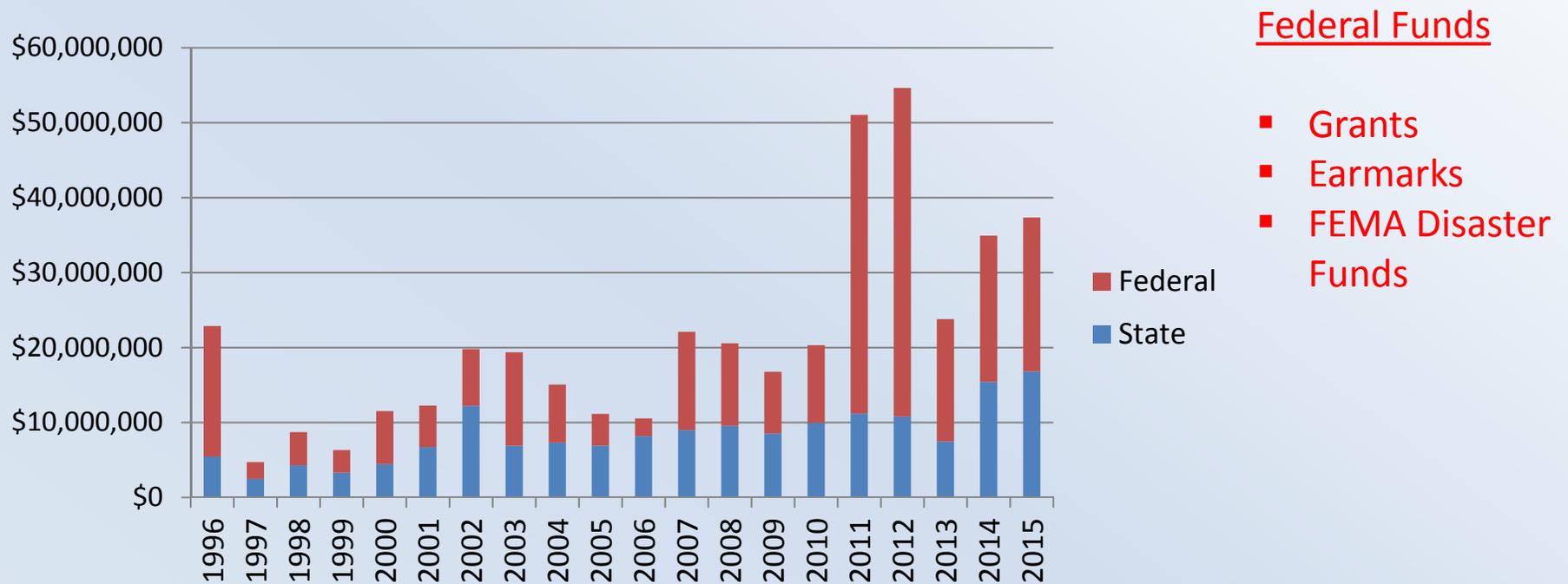
Typical Federal Cost-Share for Capital Investments



Note: Funding for highways, transit, and aviation also includes other types of federal cost-share



Historical Rail Program Funding Levels

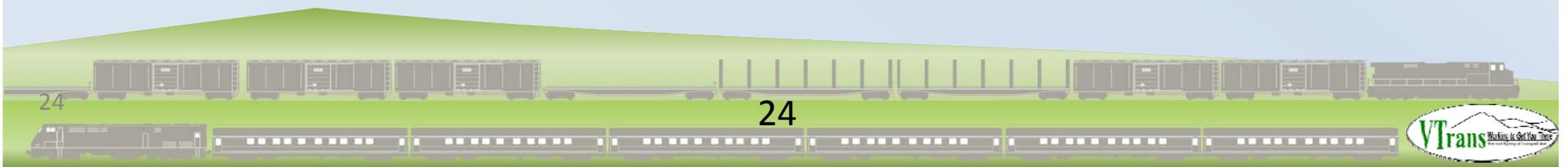


We are highly dependent on federal funding to implement rail projects



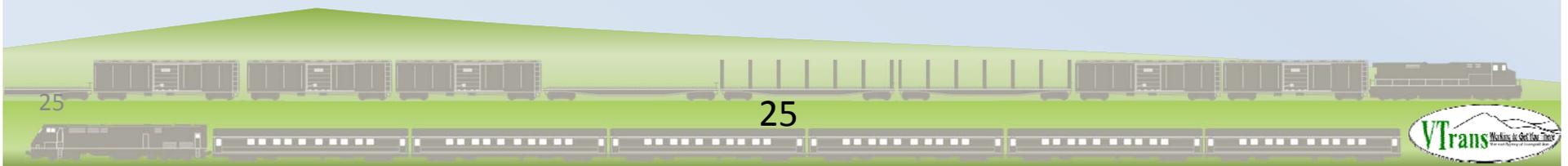
Issues: Freight Volumes Declined

- Declining rail freight places pressure on revenues
 - Rail operator has less to invest in maintenance
 - State collects less revenues from rail operator.

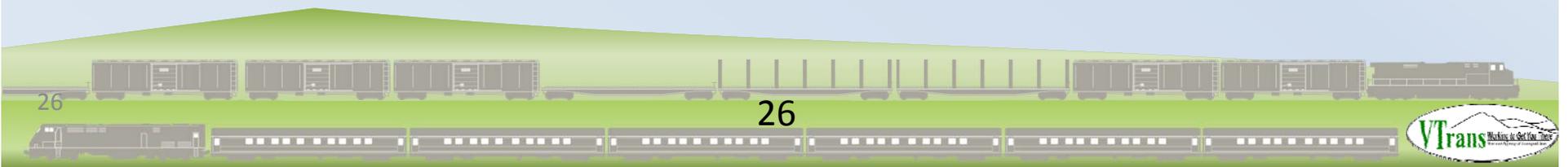


Issues: Changes in Federal Passenger Rail Funding

- Escalating costs of passenger services.
 - PRIIA Sec 209 resulted in a two-tiered intercity passenger rail system – *national routes* and *state-supported services*.
 - States must now pay full cost of state-supported services.
 - Vermont's costs have increased from \$4.5 million to over \$8 million annually.



Plan Focus Areas



Rail System Goals

- Maintain the State's Rail System in a State of Good Repair
 - Maintain all bridges to the 263,000 lbs carload standard
 - Maintain track to appropriate FRA track class
 - Remove slow orders – with priority along passenger rail routes
 - Upgrade rail to continuously welded rail along passenger routes
 - Rehabilitate passenger rail stations

- Expand the Rail System's Capacity to Accommodate Growth Objectives
 - Upgrade all bridges to the 286,000 lbs carload standard
 - Upgrade to 115 lbs/yard rail
 - Eliminate vertical clearance obstacles
 - Install platforms at new passenger stations

Rail System Goals

- Expand the Rail System's Use
 - Increase the use of rail by shippers and receivers currently using rail
 - Attract new rail shippers and receivers to locate along rail lines
 - Preserve inactive rail corridors
 - Implement new intercity passenger rail service along western corridor (Burlington, Vergennes, Middlebury, Rutland, Manchester, Bennington) and extend *Vermont* to Montreal
 - Exceed FRA Intercity Passenger Rail Performance and Service Quality indicators
 - Increase existing and planned passenger routes to a minimum of FRA Class 4 Track in order to allow operating speeds to 79MPH

Plan Goals

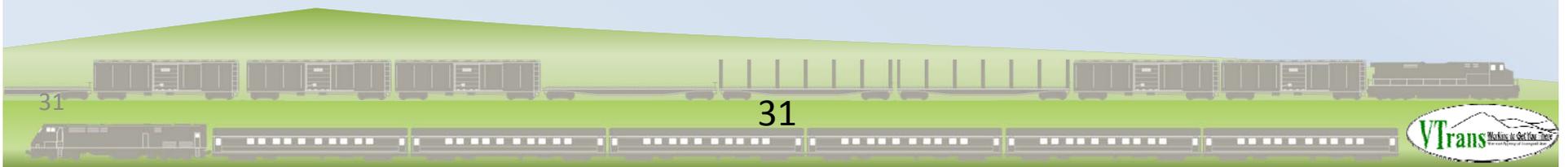
- Provide a Rail System that is Financially Sustainable
 - Examine other passenger rail service providers in order to reduce operating subsidies
 - Pursue federal grant opportunities to rehabilitate the rail network
- Improve Intermodal Connectivity
 - Integrate rail stations with local and intercity bus transportation

Rail System Goals

- Improve the Rail System to Support Economic Development
 - Coordinate rail and economic development efforts
 - Provide incentives for new and existing businesses to use rail
 - Support the development of transload facilities

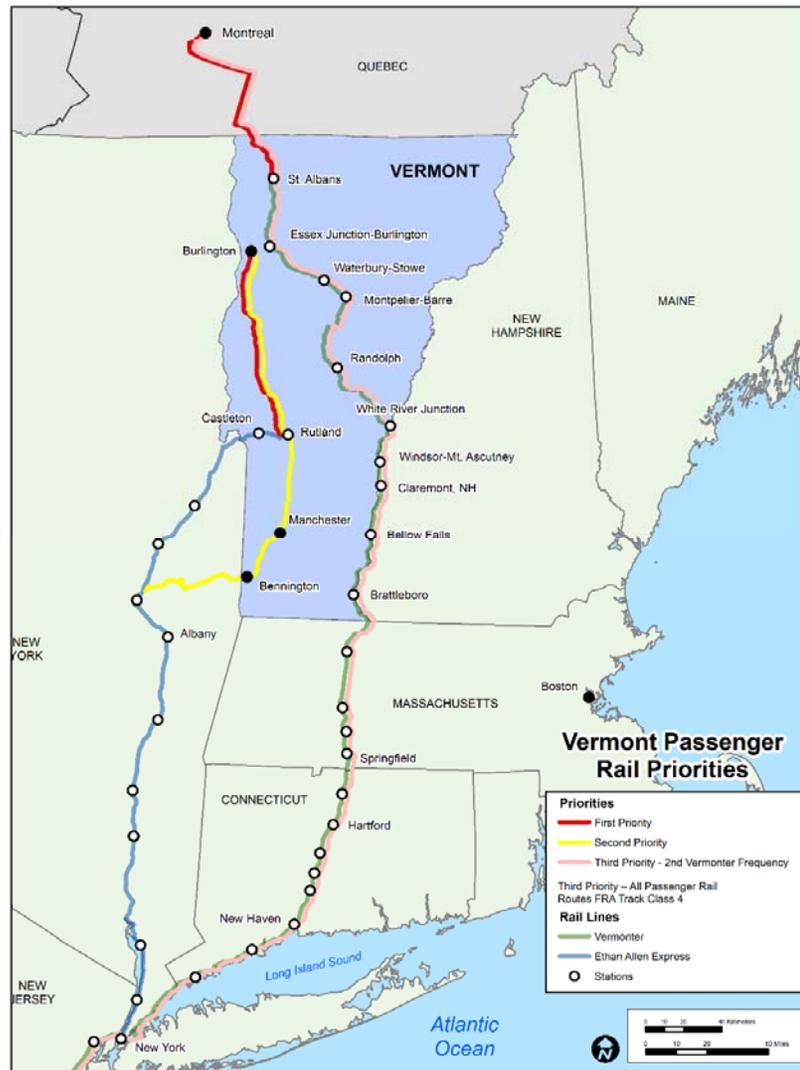
- Enhance Safety of the Rail System
 - Reduce rail-highway grade crossing collisions
 - Participate in disaster planning with local, state, federal authorities

Intercity Passenger Rail



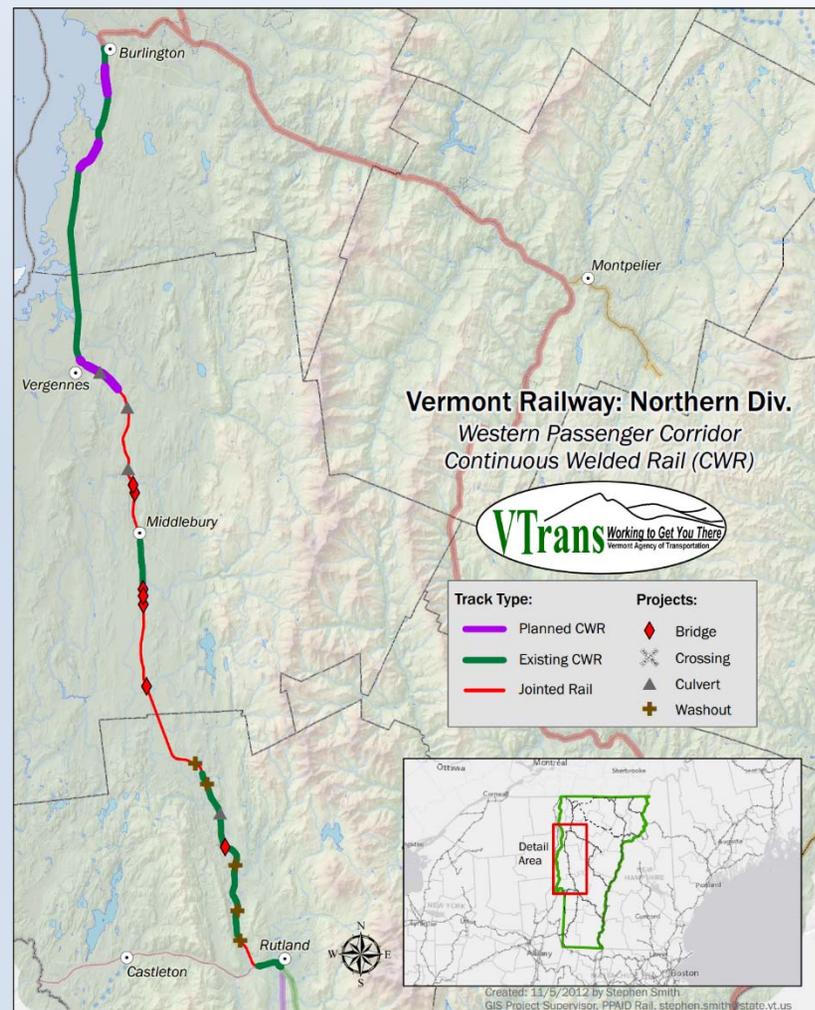
Intercity Passenger Rail Priorities

- Ethan Allen Express extension to Burlington
- Vermonter extension to Montreal
- New western corridor service through Bennington
- Additional frequency along the Vermonter



Ethan Allen Extension to Burlington

- Work to upgrade track to FRA Track Class 3 (59 mph maximum) performed in stages
- \$26.4 million capital cost estimate
- Incremental annual subsidy @ \$350K - \$1 million/year



Vermont Extension to Montreal

- No capital costs to begin operating service (Class 3, 59 MPH track ready).
- High-Speed Rail & TIGER grants + railroad invested over \$90 million along corridor.
- Estimated incremental annual subsidy @ \$2 million for existing single round trip per day.

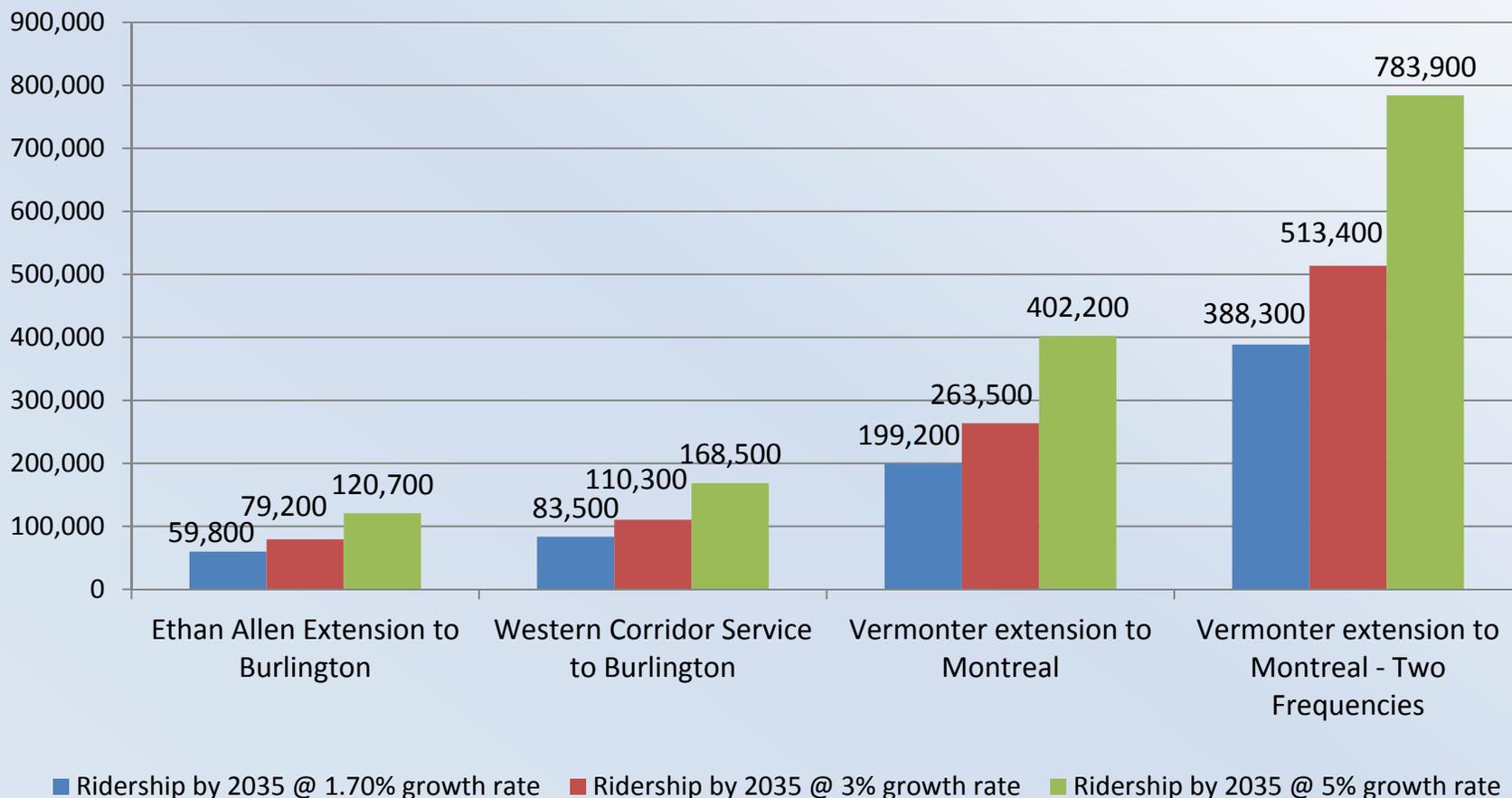


New Train between Albany and Burlington through N. Bennington and Manchester

- \$88 million capital cost for the Vermont portion of the route.
- Requires parallel investments in New York
- Operating subsidy estimated at \$4.1 million /year



Summary of Proposed Service Build out Options On and Offs at Vermont Stations in Year 2035



Long-Term Objective – FRA Track Class 4 (up to 79 mph)

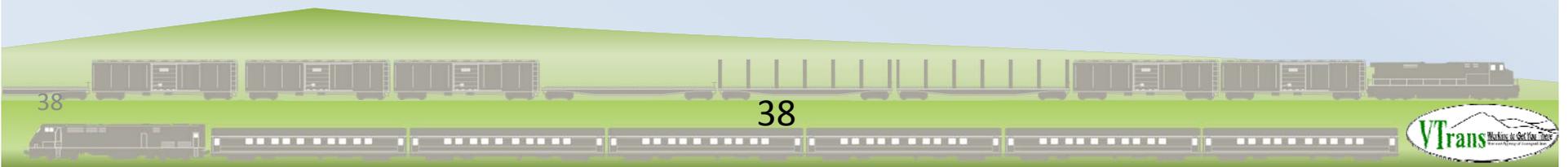
Short-Term Passenger Needs

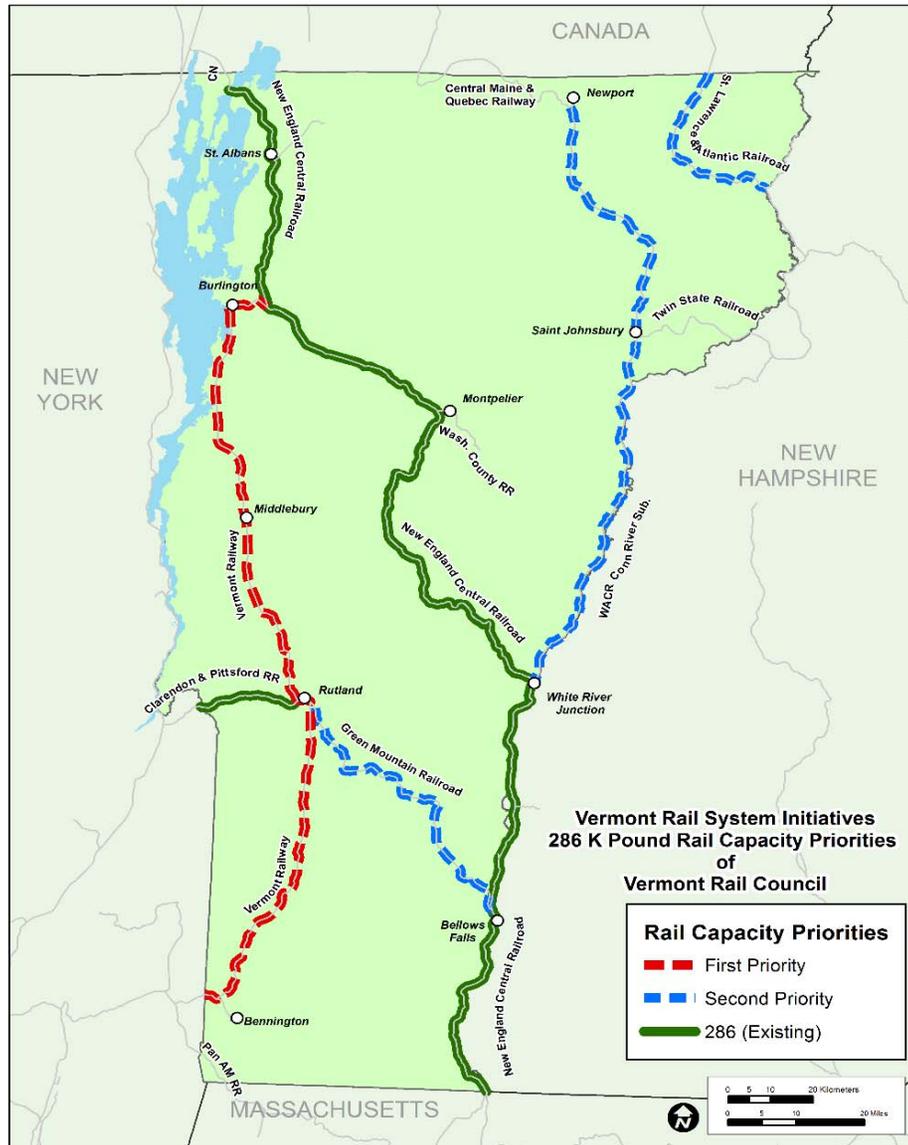
- \$114.4 million
- Extension to Burlington
- New Bennington Route

Long-Term Passenger Needs

- \$370.3 million
- All Passenger Rail Routes
Class 4, 79 MPH speeds

Freight Rail

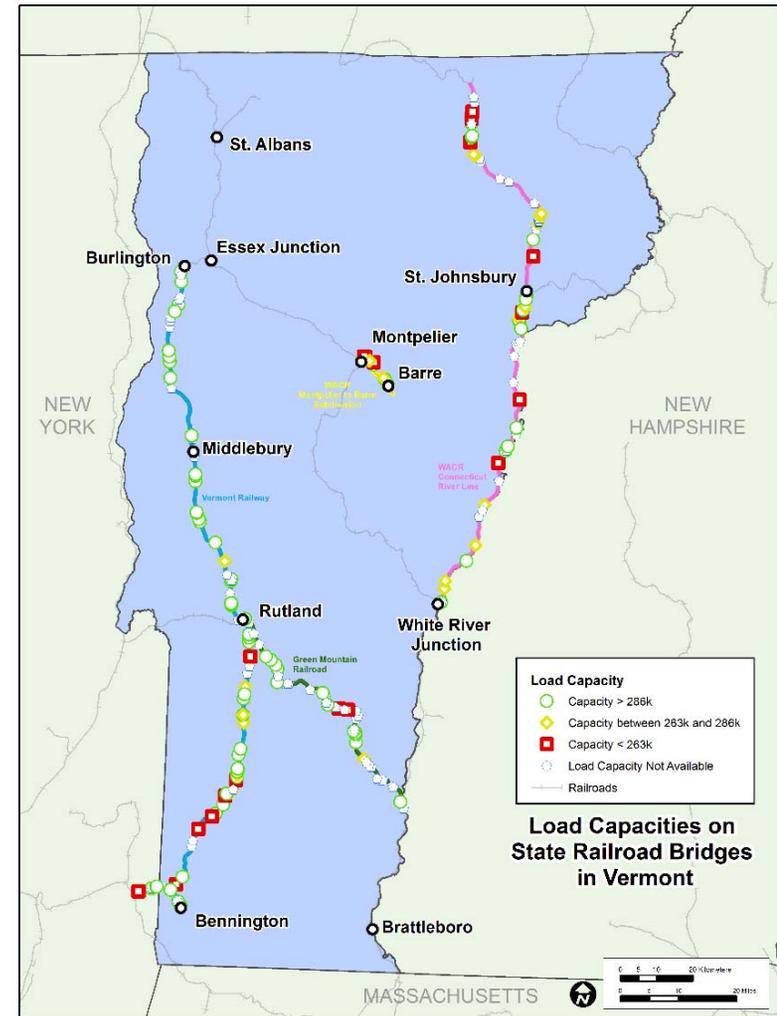
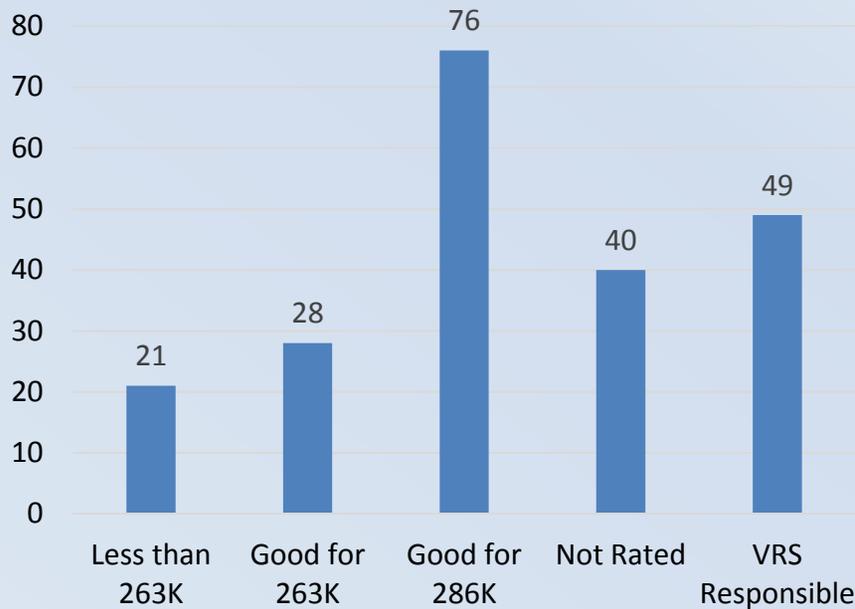




286K Track Capacity Priorities

Freight Rail Needs/Priorities - Bridges

**Load Rating of 214 State-Owned
Bridges at April 2015**

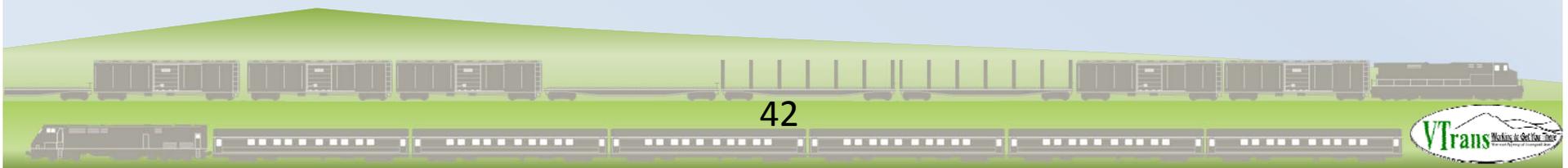


Bridge Estimates for State-Owned Lines

Line	Long Term Cost Estimate
Cost of Bringing Bridge Superstructures to 286K	
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WACR M&B	\$6,500,000
NECR Winooski	\$4,000,000
SLA Track and Bridge	\$3,300,000
CMQ Ties and Bridge	\$1,300,000
Total	\$89,400,000



Freight Rail Needs/Priorities

Yards and Industrial Access

Yard Projects

Project	Cost
CMQ Newport	\$184,000
NECR White River Jct, St. Albans	\$4,339,000
NECR/GMRC Interchange	\$4,003,000
NECR St. Albans Roundhouse	\$300,000
GMRC Yard Projects	\$800,000
VTR Yard Projects	\$800,000
WACR Conn River Yard Projects	\$700,000

Industrial Access Projects

Project	Cost
Access to Franklin Industrial Park, former Goodyear Power Plant in Windsor	\$260,000
GMRC Sidings	\$478,000
WACR Montpelier Sidings	\$1,584,000
VTR Sidings and Structures	\$1,675,000
WACR Conn River Sidings	\$1,927,000
GMRC Passing Sidings	\$1,155,000
VTR Passing Sidings	\$2,002,000
WACR Conn River Passing Sidings	\$3,344,000

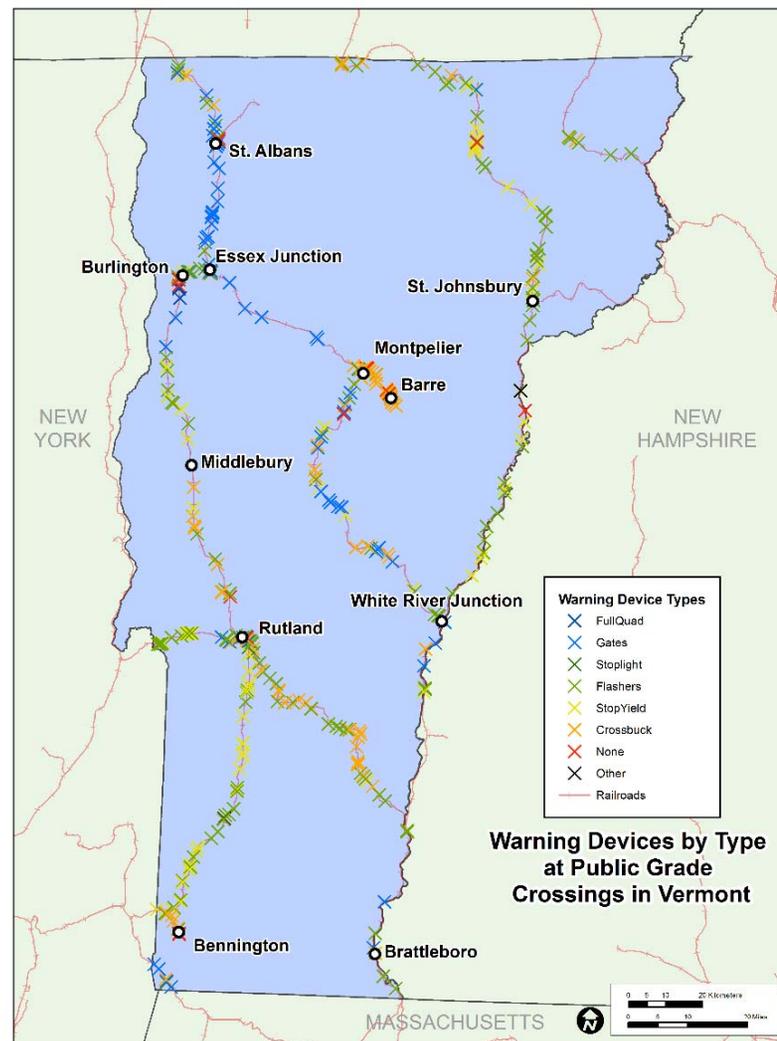
Grade Crossing Needs

2004 – 2013 Public Crossing Accident Statistics

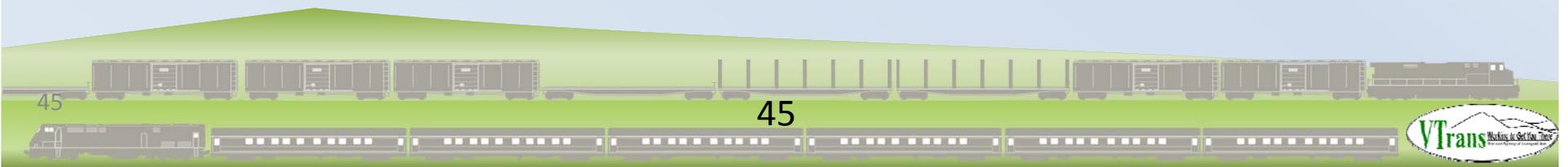
Year	Fatalities	Injuries	Property Only	Total
Freight Total	0	11	12	23
Passenger Total	2	2	6	10
10 Year Total	2	13	18	33

Public Crossings by Warning Device

Protection Type	Count
Gates	71
Lights	151
Crossbuck/Sign	146
Other	1
None	12
Total	381



Capital Plan

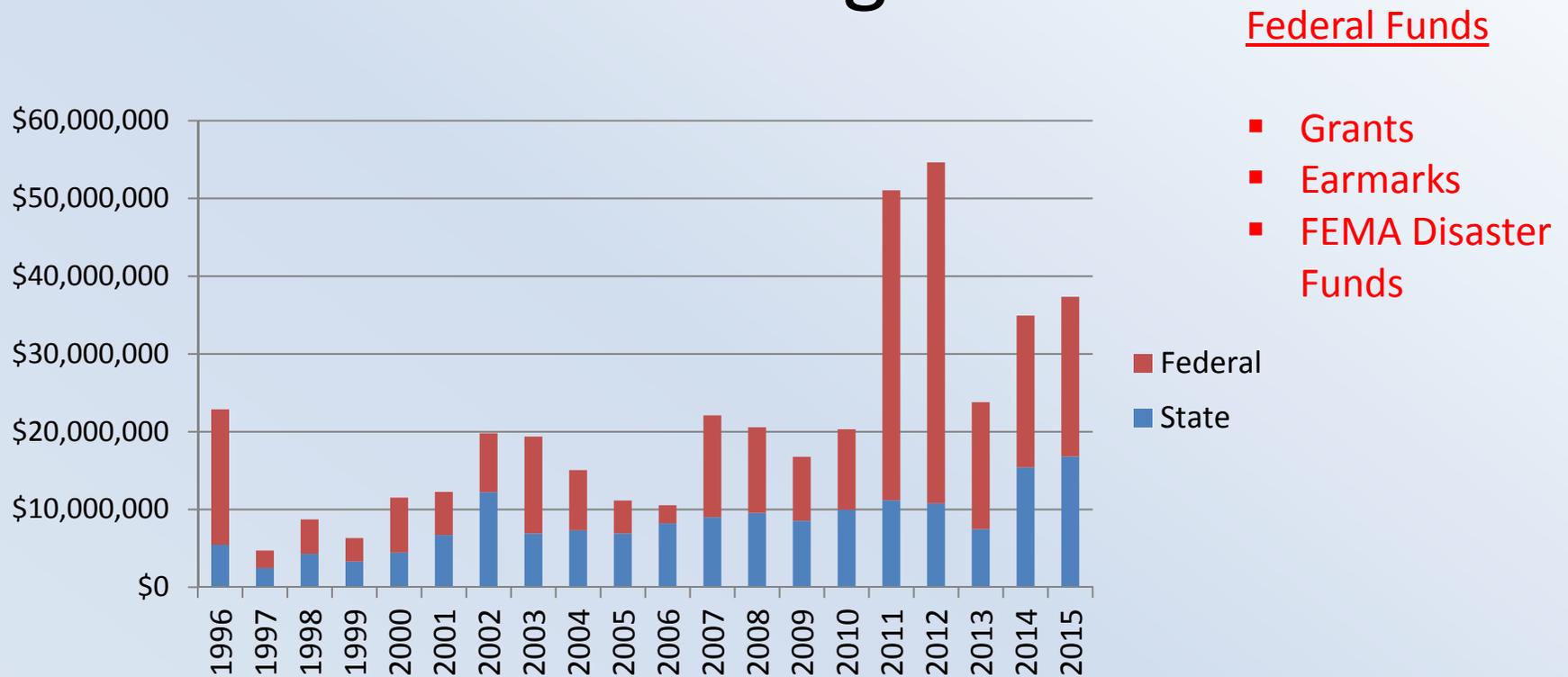


Capital Plan Focus

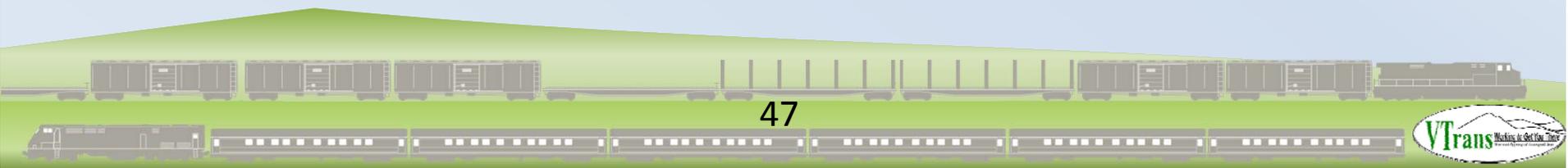
- Maintaining State Rail Lines Operable
 - Bridges and track which can cause system failures
- Economic Development Projects
 - Encourage job growth
- Intercity Passenger Rail Priorities

Capital Plan

Past Funding Levels

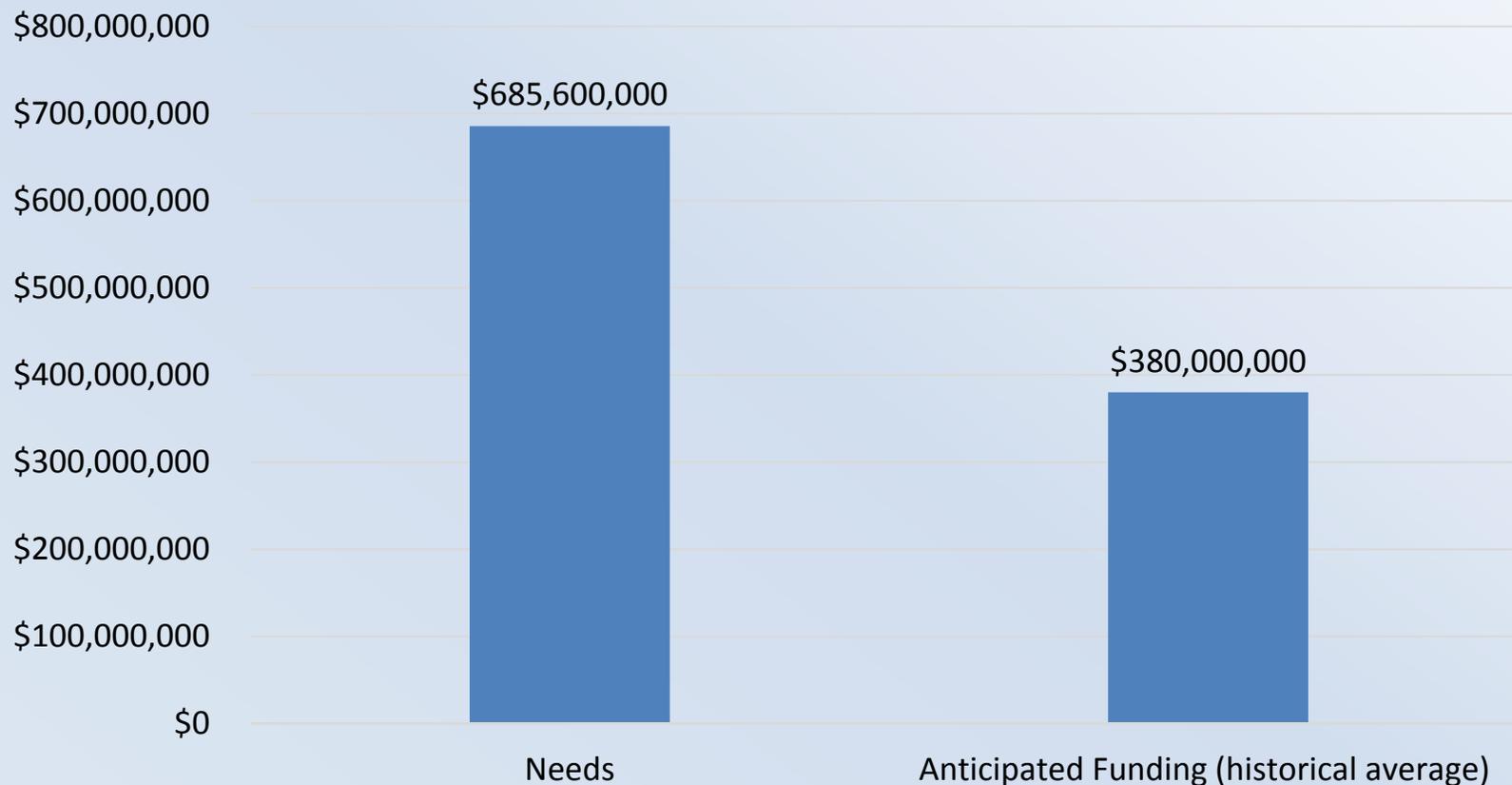


Since 2002, Averaged \$15M in Federal Funding
 Most State Funding Applied to Operating & Administration Budget, around \$4M Capital Budget



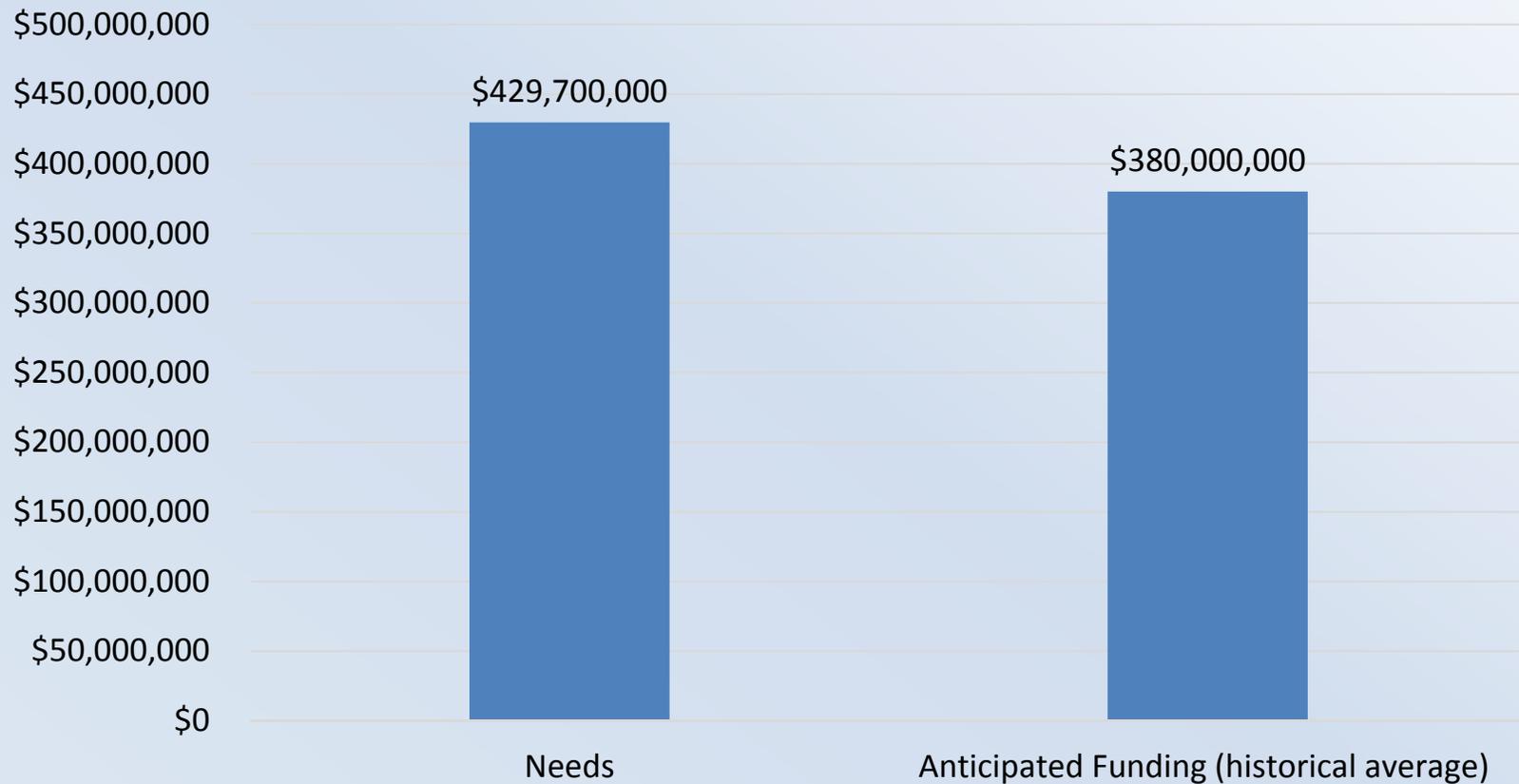
Comparison of All Needs and Available Funding over 20 Years Based on Past Funding Levels

All Passenger & Freight Needs



Comparison of All Needs and Available Funding over 20 Years Based on Past Funding Levels

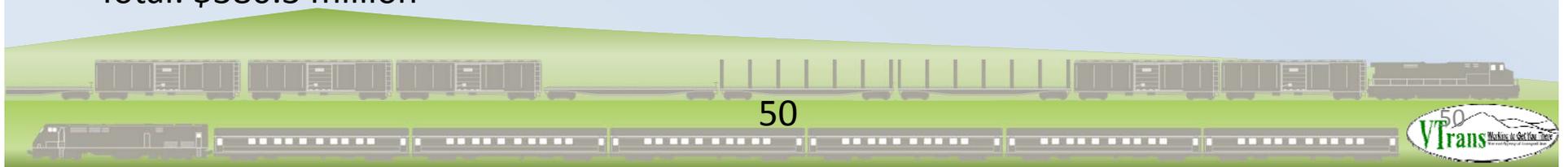
All Passenger & Freight Needs Except Upgrade to Class 4



Passenger Rail Proposed 20-Year Capital Plan

2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035		
Ethan Allen to Burlington \$26.4M																					
Vermont Extension to Montreal \$0																					
				Ethan Allen Express Burlington to Essex Junction (\$0)																	
			Rail Station Upgrades (Statewide) \$10 M																		
										Enhanced 79mph Vermont Upgrades \$177.3M											
				New Albany-Bennington-Manchester Route \$88M																	
										Enhanced 79mph Western Corridor Upgrades \$78.6M											

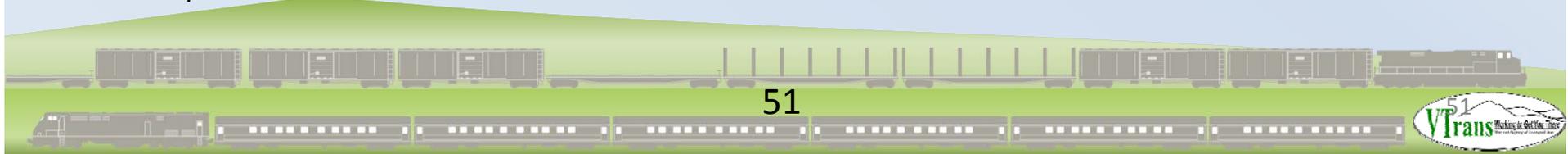
Total: \$380.3 million



Freight Rail Proposed 20-Year Capital Plan

2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
Bridge Upgrades on VTR and GMRC \$123.5M																				
										Bridge Upgrades on WACR \$80.2M										
Non Passenger Track Upgrades on GMRC, NECR Winooski, SLR, CMQ \$27.1M																				
										Non Passenger Track Upgrades on WACR \$29M										
Yard Improvements, Economic Dev. Passing Sidings, \$19.5M																				
NECR Unrestricted Double Stack Clearance \$5.7M																				
		Burlington Railyard Enterprise Project \$10 M																		
					GMRC/CLP Double Stack \$10.3M															

Total: \$305.3 million



More Info

- Where: VTrans website, review plan and reports
[http://rail.vermont.gov/about us/reports plans](http://rail.vermont.gov/about_us/reports_plans)