DRAFT Rail Plan Initiative Technical Analysis - Summary

Version: 1/7/2021

This is a sketch-level analysis to help move from the table of reasonable possible initiatives to a shorter implementation table for VTrans.

It is for use with the update of the State Rail Plan within the Rail program and may evolve over time for various reasons.

The results of technical analysis of initiatives are an aid in making well-informed decisions rather than a precise answer. They are among the factors considered when deciding which initiatives to advance to implementation.

The intent is to keep this table easy to skim. Please see worksheets on Location-Specific and Program/Policy projects for analysis. See the Table of Initiatives for more description of initiatives.

Program/Policy initiatives start at ID #1. It's difficult to analyze their specifics so they have technical analysis scores 1-20. Location-specific initiatives start at ID #100. They have scores ranging from 0-100. These are different scales.

Location Specific Initiatives *Very preliminary for discussion and refinement.*

Initiative #	Initiative Name	Goal Area	State-owned infrastructure?	Passenger or Freight	Technical Analysis Score	Technical Analysis Notes	Cost	Feasibility	Qualitative Considerations	Performance Measure (PM) Addressed
100	Vermonter Ext. to Montreal	Increase Use/Exp Cap	Yes	Passenger	95	Partial points for flood zone (the entire stretch of track over the Missisquoi National Wildlife Refuge is floodplain, in addition to the lake crossings) but missing data to give full points	Low	High	Previous commitment to extending this service	Passenger trips
116	Burlington Rail Yard Enterprise	Economic Devel.	Yes	Both	93	For more information see scoping study at https://www.ccrpcvt.org/our-work/transportation/current-projects/scoping/railyard-enterprise-project/	High	High	This is primarily a road project. VTrans has agreed to place it in the 2022 Capital Program so that preliminary design can begin.	Other
112	GMRC Bridges and Track Upgrades	Increase Use/Exp Cap	Yes	Freight	72	8 bridges with a load rating <286k, 17.9 miles of track is 90 lb. rail or less.	Medium	High	Critical east-west route. CP would like to see this line upgraded to 286k as a higher priority than the WACR Conn River	286k
104	Albany-Bennington-Burlington Passenger Service	Increase Use/Exp Cap	Yes	Passenger	85		High	Low	High cost and low feasibility. Relatively low increase in passenger ridership (64,000 - 94,000)	Passenger trips
113	WACR M&B Bridges and Track Upgrades	Increase Use/Exp Cap	Yes	Freight	84	3 bridges not capable of handling 286k, 12.7 miles of 90 lb. rail or lower. Includes new routing	Medium	Medium	Additional track being constructed to handle pending growth in traffic (granite) however there is a sense that this may be able to hold as a VTrans recommendation until the next update.	286k
115	WACR Conn. River Bridges and Track Upgrades	Increase Use/Exp Cap	Yes	Freight	69	21 bridges load rating not sufficient for 286k, rail weight between 90 and 115 pounds	High	Low	Generally identified as a lower priority by stakeholders	286k
102	Vermonter Ext. to Montreal (X2 trips)	Increase Use/Exp Cap	Yes	Passenger	83	No resiliency or safety points as adding a 2nd service does not impact infrastructure	Medium	Medium		Passenger trips
103	Ethan Allen Amtrak service extension to meet Vermonter: Burlington to Essex Jnct.	Increase Use/Exp Cap	Yes	Passenger	80	Would require #126 improving infrastructure first. Would require system schedule changes for passenger transfers between the two services	Medium	High	In conjunction with Initiative #126, noted as a high priority by stakeholders	Passenger trips
126	NECR Winooski Track and Bridge Updates (Burlington - Essex Jnct)	Increase Use/Exp Cap	No	Freight	78	Non-State asset. Work with NECR to upgrade rail and any necessary bridges to allow for 286k and FRA Class II/III. Currently Class I rail. Would be in conjunction or prior to ID #103: Extension of Ethan Allen to Essex Junction.	Medium	Medium	Noted as a high priority by stakeholders.	286k
108	1 Valley Flyer extended to WRJ	Increase Use/Exp Cap	Yes	Passenger	70	Will reduce VMT and improve safety statewide as rail is a safer mode of travel than vehicle. Supported by Town of Brattleboro	Medium	Medium		Passenger trips
106	Ethan Allen (Western Corridor) to 79 mph	Increase Use/Exp Cap	Yes	Passenger	70	Hard to estimate if this would improve resiliency. Includes necessary at-grade crossing improvements. This is assumed to not include track re-alignment. If track re-alignment was included, the resilience score could increase. Will reduce VMT and improve safety statewide as rail is a safer mode of travel than vehicle.	High	Low		Passenger trips
105	Vermonter to 79 mph	Increase Use/Exp Cap	Yes	Passenger	70	Assumes Initiative #100 completed first. Includes necessary at-grade crossing improvements. Hard to estimate if this would improve resiliency. This is assumed to not include track re-alignment. If track re-alignment was included, the resilience score could increase. Will reduce VMT and improve safety statewide as rail is a safer mode of travel than vehicle.	High	Low	SWCRPC Regional Plan identifies rail improvements for increased speeds as a transportation need	Passenger trips
111	Passenger Rail Station Improvements	Intermodal Conn.	Yes	Passenger	65	Montpelier (2022), Bellows Falls (2022), Brattleboro (2022-23), Essex Junction (2021) have projects planned by Amtrak. Rutland, WRJ are VT/City responsibility and not scheduled	Low	High	CCRPC would like Essex Junction broken out separately (if not all separate)	Other (asset management/stations)
107	2nd service on Ethan Allen	Increase Use/Exp Cap	Yes	Passenger	65		High	Medium		Passenger trips
125	Montpelier Main St. bike path and grade crossing improvements	Safety	Yes	Other	63	2020 VTrans Bicycle & Ped. grant, See 2019 Scoping study https://www.montpelier-vt.org/DocumentCenter/View/7105	Low	High		Rehab rail crossings
110	VTR Upgrade to CWR and 115lb (Rut-Manch)	Maintenance	Yes	Both	63	Higher track weight to allow for higher train speeds (passenger and freight) as well as maintain State of Good Repair (SOGR)	Low	High	Would take advantage of work completed under BUILD and TIGER grants in the Western Corridor	115 lb. rail
109	Connection to future rail @ Springfield: MTL-BOS	Increase Use/Exp Cap	Yes	Passenger	61	Intended to connect with future service (not Lake Shore Limited). Scores MTL-Springfield segment	Low	Low		Passenger trips
122	Phased deployment of Gates/flashers at existing and planned Amtrak public road grade crossings	Safety	Yes	Both	55	Long-term goal of State. Phased deployment at 80 public road crossings include Ethan Allen (to Burlington) and Vermonter (to Montreal) routes.	High	High	Cost of upgrades and maintenance could increase subsidy required of State for Amtrak service. Crossings are being improved through several programs.	Rehab rail crossings
120	NECR Full Double Stack Clearance	Increase Use/Exp Cap	No	Freight	54	Project unlikely to improve flood resiliency or environmental protection	High	Low		Vert Clearance
121	GMRC/CLP Full Double Stack Clearance	Increase Use/Exp Cap	Yes	Freight	54	Project unlikely to improve flood resiliency or environmental protection	High	Medium		Vert Clearance
123	Whistle stop in Brandon and Shelburne	Increase Use/Exp Cap	Yes	Passenger	51	Brandon is approx. 15 miles from both Rutland and Middlebury, Shelburne is approx. 15 miles from Vergennes and 7 miles from Burlington. Would need to assess balance of added access with added overall time	Low	Low	Feasibility of adding new stops along a new route is low.	Passenger trips
124	Quiet Zone - South Summit St. Essex Jnct	Maintenance	No	Other	19	The specific request was for this location. However, if service is added to the Winooski Branch, this should include a corridor-wide review of the potential to implement. Could be included as part of EAE to Essex Junction if that initiative is advanced and this one is not	Low	Medium	While the individual initiative scores low, quiet zones should be a consideration if Initiative #103/126 is recommended	Rehab rail crossings

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The results of technical analysis of initiatives are an aid in making well-informed decisions rather than a precise answer. They are among the factors considered when deciding which initiatives to advance to implementation.

The intent is to keep this table easy to skim. Please see worksheets on Location-Specific and Program/Policy projects for analysis. See the Table of Initiatives for more description of initiatives.

Program/Policy initiatives start at ID #1. It's difficult to analyze their specifics so they have technical analysis scores 1-20. Location-specific initiatives start at ID #100. They have scores ranging from 0-100. These are different scales.

Program/Policy Initiatives

Very preliminary for discussion and refinement.

Initiative #	Initiative Name	Goal Area	State-owned infrastructure?	Passenger or Freight	Technical Analysis Score	Technical Analysis Notes	Cost	Feasibility	Qualitative Considerations	PM Addressed
3	Maintain State-owned freight trackage at FRA Track Class 2 or better and state-owned passenger rail trackage at Class 4 or better where viable based on geography	Maintenance		Both	16	Class 2 is 25 MPH for freight, 30 MPH for passenger. Class 4 is 60 MPH for freight, 80 MPH for passenger.	High	High		FRA Class 4 for passenger
2	Upgrade all lines to 286K weight-bearing capability	Increase Use/Exp Cap		Freight	15	286,000 pound is the national standard for freight rail cars. Increasing all Vermont lines to this standard will improve regional and national connections and enhance freight business opportunities in the State	High	High		286k
6	Preserve and fully use industrial land parcels with access to rail sidings as well as the rail infrastructure that provides the access.	Economic Development		Freight	15	Work with RPCs, railroads, agencies, economic development groups, municipalities, etc. to update inventory of these properties and help publicize in a strategic manner. Maintain viability of industrial zoned land near existing or potential sidings, spurs, etc.	Low	High		Recruit rail using businesses/Freight Volume
14	Improve multi-modal connections to Amtrak stations including transit, bicycle, and pedestrian access. Improve wayfinding.	Intermodal Connectivity		Passenger	15	Work with transit & tourist services to match scheduling, increase comfort and reliability of transfers. Work with municipalities to develop station area plans, improve wayfinding, and enhance bicycle and pedestrian accommodations (crosswalks, bicycle lanes, bicycle parking)	Medium	Medium		Passenger trips
13	Increase resilience of rail system to make critical infrastructure more resilient now and to prepare for increasing storm severity	Safety		Both	13	180 miles of rail (109 state owned) in flood risk areas. Work with railroads to identify priorities and funding to increase resilience	High	Medium		Other
18	Seek grants and innovative funding approaches for freight and passenger rail	Funding		Both	13	Continue to position state to pursue federal grant opportunities and work collaboratively with ACCD and other economic development agencies to identify opportunities for freight funds	Low	High		Other
8	Facilitate development of freight transload locations in or near Vermont	Intermodal Connectivity		Freight	12	As demand warrants, work with customers and railroads to identify opportunities to expand or develop new transload facilities. An intermodal site could be explored where there are high vollumes and Class 1 access.	Medium	Medium		Recruit rail using businesses/Freight Volume
19	Publicize existing voluntary efforts of railroads and encourage "freight as a good neighbor" (NCHRP Syntheses 320) while respecting rail's exemptions from local control.	Safety		Freight	10	Highlight and support coordination on rail maintenance, operations, and construction activities.	Low	High		Other
9	Maintain and improve freight network connections for Vermont businesses to regional short-haul markets and competitive Class I railroad (mix of physical and policy matters)	Intermodal Connectivity		Freight	9	Advocate on behalf of Vermont businesses for enhanced operating agreements between shortline and Class I railroads to improve efficiency of interchanges. Make physical improvements to support effective interchanges, for example for the State-owned Bennington Rail Yard to be able to support interaction with long Class 1 train sets.	Medium	Medium	This initiative will help address various complex current and future efforts to enhance efficient connections between short line and Class 1 railroads with results that support Vermont businesses..	Recruit rail using businesses/Freight Volume
4	Further enhance marketing of Vermont passenger rail	Increase Use/Exp Cap		Passenger	8	Work more closely with ACCD, economic development and tourist groups, chambers, etc.	Low	High		Passenger trips
7	Develop quick-response capability to leverage economic development opportunities	Economic Development		Freight	8	Collaborate with state and local economic development agencies to develop tools to help identify, promote, and calculate public/private benefits of developing rail-served sites	Low	High		Recruit rail using businesses/Freight Volume
10	Maintain, publicize, and enhance appropriate communication regarding rail movement and storage of hazardous materials (hazmat) while respecting rail exemptions from local control	Safety		Freight	8	Publicize voluntary efforts by railroads. Share the big picture. Maintain appropriate communication. Explore opportunities as part of shift underway to Statewide Emergency Planning Committee.	Low	Medium		Other
15	Explore transit-oriented development (TOD)	Intermodal Connectivity		Passenger	8	Work with municipalities to explore and support TOD near Amtrak stations.	Medium	High		Passenger trips
20	Maintain and modernize freight rail yards such as NECR and CP Yards	Maintenance		Freight	8	Supports sorting of cars for various destinations and support functions such as car/locomotive maintenance, storage and inspection	Medium	Medium		Recruit rail using businesses/Freight Volume
1	Post freight rail system performance measures, including trends	Maintenance		Freight	7	Performance measures may need to be modified. Could be in VTransparency or elsewhere	Low	High		Other
5	Educate shippers about rail and intermodal service options and contracting approaches.	Economic Development		Freight	7	Work with economic development agencies to encourage intermodal rail freight use by private businesses where viable	Low	Medium		Recruit rail using businesses/Freight Volume
11	Workforce Development	Economic Development		Freight	6	Partner on job training with DOL, educational facilities, and businesses	Medium	Medium		Other
12	Track and respond to COVID-related changes regarding impacts on the passenger and freight rail system, both direct and from demographic changes	Funding		Both	6	Work with Dept. of Health, Education (school enrollment), and RPCs, & others. to understand demographic and transportation change. Increase advertising and bike/ped station access where population is increasing; engage more with e-commerce shippers	Low	High		Other
16										
17										

DRAFT Rail Plan Initiative Technical Analysis - LOCATION-SPECIFIC INITIATIVES

Version: 1/4/2021

This is a sketch-level analysis to help move from the table of reasonable initiatives to a shorter implementation table consistent with Agency of Transportation project selection efforts.
It is for use with the update of the State Rail Plan within the Rail program and may shift as project selection methodology evolves. Note it is based on the VPSP2 Qualification sheet.
The results of technical analysis of initiatives are an aid in making well-informed decisions rather than a precise answer. They are among the factors considered when deciding which initiatives to advance to implementation.
The intent is to keep this table easy to skim, with technical notes referenced in brackets and assumptions explained at the bottom. **See the Table of Initiatives for more detail about each.**
Note that program/policy initiatives are scored in a more general but parallel manner in the next worksheet
RPC and municipal staff are requested to provide the information in rows shaded blue.

Initiative header information:

Initiative Number	Initiative Name	State-owned rail infrastructure?	Goal Area	Freight/passenger/both/other
116	Burlington Rail Yard Enterprise	Yes	Economic Devel.	Both
124	Quiet Zone - South Summit St. Essex Jnct	No	Maintenance	Other
100	Vermonter Ext. to Montreal	Yes	Increase Use/Exp Cap	Passenger
102	Vermonter Ext. to Montreal (2 trips/day)	Yes	Increase Use/Exp Cap	Passenger
109	Connection to future rail @ Springfield: MTL-BOS	Yes	Increase Use/Exp Cap	Passenger
110	VTR Upgrade to CWR and 115lb (Rut-Manch)	Yes	Maintenance	Both
112	GMRC Bridges and Track Upgrades	Yes	Increase Use/Exp Cap	Freight
113	WACR M&B Bridges and Track Upgrades	Yes	Increase Use/Exp Cap	Freight
115	WACR Conn. River Bridges and Track Upgrades	Yes	Increase Use/Exp Cap	Freight
120	NECR Full Double Stack Clearance	No	Increase Use/Exp Cap	Freight
121	GMRC/CLP Full Double Stack Clearance	Yes	Increase Use/Exp Cap	Freight
103	EAE Burlington to Essex Jnct.	Yes	Increase Use/Exp Cap	Freight
104	Albany-Bennington-Burlington Passenger Service	Yes	Increase Use/Exp Cap	Passenger
105	Vermonter to 79mph	Yes	Increase Use/Exp Cap	Passenger
106	Western Corridor to 79mph	Yes	Increase Use/Exp Cap	Passenger
107	2nd service on Ethan Allen	Yes	Increase Use/Exp Cap	Passenger
108	1 Valley Flyer extended to White River Junction	Yes	Increase Use/Exp Cap	Passenger
123	Whistle stop in Brandon and Shelburne	Yes	Increase Use/Exp Cap	Passenger
126	NECR Winooski Track and Bridge Updates (Burlington - Essex Jnct)	Yes	Increase Use/Exp Cap	Freight
111	Passenger Rail Station Improvements	Yes	Intermodal Conn.	Passenger
122	Phased Deployment of Gates/flashers at existing and planned Amtrak public road grade crossings	No	Safety	Both
125	Montpelier Main St. bike path and grade crossing improvements	Yes	Safety	Other

Scoring table (Possible Points columns):

Criteria	Poss	116	124	100	102	109	110	112	113	115	120	121	103	104	105	106	107	108	123	126	111	122	125
SAFETY - 20 Points																							
Are there existing crash locations of any mode recorded within the initiative area? (2015-2019 data)																							
>> If "Yes", will the initiative improve safety at existing crash locations or reduce train derailments?	20	0	0	20	0	0	20	aaaaa	20	aaaa	0	0	0	20	20	20	0	0	0	0	0	20	20
>> If "No", have any safety issues been identified in a plan or report that will be improved by the initiative (for example, Section 130 grade crossing ranking or an RPC or municipal study)? Partial points awarded if initiative will reduce overall VMT which will have safety benefits (5 or 10 depending on level of impact)	15	15	0	10	10	10	5	5	5	5	5	5	10	10	10	10	10	10	5	15	5	0	0
Safety Max Points =	20	15	0	20	10	10	20	20	20	5	5	5	10	20	20	20	10	10	5	15	5	20	20
ASSET CONDITION - 20 Points																							
Does this initiative maintain or improve assets?																							
>>If yes, and if passenger, does the initiative maintain or improve track to class 3 or better? (yes 10 pts, no 5 pts)	10	5	0	10	10	5	5	5	0	0	0	0	10	10	10	10	10	10	0	0	5	5	0
>>If yes, and freight-only, does the initiative maintain or improve track to Class 2 or better? (yes 10 pts, no 5 pts)	10	10	0	0	0	0	10	10	10	10	5	5	0	0	0	0	0	0	0	10	0	0	0
Does this initiative upgrade or maintain rail or rail bridge capacity to 286k?	15	0	0	0	0	0	15	5	15	15	0	0	0	0	0	0	0	0	0	15	0	0	0
Does the initiative upgrade or maintain State of Good Repair on non-rail or non-bridge assets (e.g., stations, access roads, maintenance facilities, etc.)	10	10	0	10	10	0	0	0	0	0	10	10	10	0	0	0	0	0	10	10	10	10	10
Does this initiative modernize and enhance the rail system through ITS, signal upgrades, computer upgrades, communications systems?	5	5	5	5	0	0	0	0	0	0	0	0	5	5	5	5	0	5	0	0	0	5	0
Asset Condition Max Points =	20	20	5	20	20	5	20	20	20	20	15	15	20	15	15	15	10	15	10	20	15	20	10
MOBILITY - 5 Points																							
Is the initiative necessary for the network role of the rail system beyond State boundaries (bring track, structure, or clearance to necessary national standards, complete new rail passenger intercity connections)?	5	2.5	0	5	5	5	5	5	5	5	5	5	5	5	0	0	5	5	0	5	0	0	0
Mobility Max Points =	5	2.5	0	5	5	5	5	5	5	5	5	5	5	5	0	0	5	5	0	5	0	0	0
CONNECTIVITY - 10 Points																							
Does this Rail initiative enhance or improve connectivity for pedestrians or bicyclists?	2	2	0	2	2	2	0	0	0	0	0	0	2	2	2	2	2	2	2	0	2	0	2
>>If "Yes", is the initiative located on a "High Priority" bicycle Corridor identified by VTrans? Connectivity at stations is the main way to get points (station located w/in 0.5 miles of High Priority Bicycle Corridor that could provide access)	4	0	0	4	4	0	0	0	0	0	0	0	4	4	4	4	4	4	4	0	4	0	4
RPC and municipal staff: If "Yes", is the initiative included in an RPC or municipal plan to enhance connectivity for pedestrians or bicyclists?	3																						
>>If "Yes", is the initiative located completely or partially within an area designated as a Downtown, Village Center, New Town Center, Growth Center or Neighborhood Development? (http://maps.vermont.gov/ACCD/PlanningAtlas/index.html?viewer=PlanningAtlas)	4	4	4	4	4	2	0	0	0	0	0	0	4	4	4	4	4	4	2	0	4	4	4
RPC and municipal staff: If "Yes", is the initiative included in an RPC-designated area comparable to the State centers and growth areas?	3																						
Does this Rail initiative improve connectivity for transit users (physical infrastructure, amenities, or new access to existing public transit service)?	4	4	0	4	4	4	0	0	0	0	0	0	4	4	4	4	4	4	4	0	4	0	0
Does this Rail initiative enhance or improve connectivity for freight (e.g. rail freight transfer with trucks, transfer between trains)?	8	8	0	0	0	0	4	4	4	4	4	4	0	0	0	0	0	0	0	8	0	0	0
Connectivity Max Points =	10	10	4	10	10	8	0	4	4	4	4	4	10	10	10	10	10	10	8	8	10	4	10
ECONOMIC ACCESS - 10 Points																							
Does the initiative significantly serve an area designated for growth by the State? (Downtown, Village Center, New Town Center, Growth Center, Neighborhood Development)	5	5	0	5	5	5	5	5	5	2.5	2.5	2.5	5	5	5	5	5	5	2.5	5	5	1	5
Does the initiative significantly support an effort identified in the State CEDS Plan?	3	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
RPC and municipal staff: Does the initiative significantly serve an area designated for growth by the RPC in its CEDS or regional plan? Use partial points if in just one. (5)	5																						
Does the initiative enhance competition and/or reduce transportation costs for Vermont businesses? (See Notes on Economic Competitiveness)?	5	5	0	2.5	2.5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0	0
Does the initiative reduce transportation system capital and/or maintenance costs for the State (this could be on the rail line or by reducing truck impacts to the road system)?	3	3	0	3	3	0	5	3	5	5	3	3	3	3	0	0	0	0	0	3	3	0	3
Economic Access Max Points =	10	10	0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	7.5	10	10	1	8
RESILIENCY - 10 Points																							
Is more than 50% of this initiative in a flood risk area? Initiative must realistically be able to improve flood resiliency (eg, clearance projects would not count) [see additional Notes about Risk].	5	5	0	2.5	0	0	0	2.5	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Does the initiative help to accommodate disruptions and changes in network demand (e.g. trees falling, high winds, soil erosion/track sinkage, infrastructure damage)?	5	5	0	5	5	2.5	0	5	5	5	0	0	5	5	0	0	0	5	5	5	5	0	0
Resiliency Max Points =	10	10	0	7.5	5	2.5	0	7.5	10	10	0	0	5	5	0	0	5	5	5	5	5	0	0
ENVIRONMENT - 10 Points																							
Will the initiative reduce vehicle miles traveled and/or vehicle emissions at a back-of-the-envelope level, including by reducing related congestion?	10	10	0	10	10	10	2.5	10	10	10	10	10	10	10	10	10	10	10	5	5	10	0	0
Environment Max Points =	10	10	0	10	10	10	2.5	10	10	10	10	10	10	10	10	10	10	10	5	5	10	0	0
COMMUNITY - 10 Points																							
RPC and municipal staff: Has the municipality or RPC endorsed the initiative, while recognizing that railroads are exempt from local controls? May give half points if consistent but not listed.	5	5	0	2.5	2.5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	5
Is this the type of initiative that is intended to improve the municipality's sense of community (provide for public space, traffic calming, trees, lighting, gateway, historic preservation)? Does this initiative provide opportunities for residents to connect to community resources?	5	5	0	5	5	5	0	0	5	0	0	0	0	0	0	0	0	0	0	5	5	5	5
Community Max Points =	10	10	0	7.5	7.5	5	0	5	5	0	0	0	0	0	0	0	0	0	0	5	10	5	10
HEALTH ACCESS - 5 Points Being awarded to all rail initiatives on the assumption is all rail projects improve health access by fewer vehicles on roads and																							

Does the initiative provide improved access by transit, walking, or biking to major medical facilities or healthy food destinations (grocery store, low-income meals program)?	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Does the initiative improve access to physical activity facilities (senior center, park, trails, school)?	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Health Access Max Points =	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

COMMENTS -- Information about an initiative not captured above

1. https://www.ccrpcvt.org/our-work/transportation/current-projects/scoping/rail-yard-enterprise-project/
2. Could be included as part of EAE to Essex Junction if that initiative is advanced and this one is not. The specific request was for this location. However, if service is added to the Winooski Branch, this should include a corridor-wide review of the potential to implement.
3. Partial points for flood zone (the entire stretch of track over the Missisquoi National Wildlife Refuge is floodplain, in addition to the lake crossings) but missing data to give full points. Includes minor safety improvements associated with adding/maintaining substantial infrastructure improvements. Will reduce VMT and improve safety statewide as rail is a safer mode of travel than vehicle. Supported by Town of Brattleboro
4. Assumes Initiative #100 completed first. No safety points or resiliency points as adding a 2nd service does not impact infrastructure. Will reduce VMT and improve safety statewide as rail is a safer mode of travel than vehicle. Supported by Town of Brattleboro
5. Intended to connect with future service (not Lake Shore Limited). Scores MTL-Springfield segment. Will reduce VMT and improve safety statewide as rail is a safer mode of travel than vehicle.
6. 8 bridges with a load rating <286k, 17.9 miles of track is 90 lb. rail or less. CP would like to see this line upgraded to 286k as a higher priority than the WACR Conn River
7. 3 bridges not capable of handling 286k, 12.7 miles of 90 lb. rail or lower. Includes consideration of new routing
8. 21 bridges load rating not sufficient for 286k, rail weight between 90 and 115 pounds
9. Project unlikely to improve flood resiliency or environmental protection
10. Project unlikely to improve flood resiliency or environmental protection
11. Includes minor safety improvements associated with adding/maintaining substantial infrastructure improvements. Realistically would need to be paired with or follow initiative #126. Will reduce VMT and improve safety statewide as rail is a safer mode of travel than vehicle.
12. Includes minor safety improvements associated with adding/maintaining substantial infrastructure improvements. Will reduce VMT and improve safety statewide as rail is a safer mode of travel than vehicle.
13. Assumes Initiative #100 completed first. Includes necessary at-grade crossing improvements. Hard to estimate if this would not include track re-alignment. If track re-alignment was included, the resilience score could increase. Will reduce VMT and improve safety statewide as rail is a safer mode of travel than vehicle.
14. Hard to estimate if this would improve resiliency. Includes necessary at-grade crossing improvements. This is assumed to not include track re-alignment. If track re-alignment was included, the resilience score could increase. Will reduce VMT and improve safety statewide as rail is a safer mode of travel than vehicle.
15. No flood zone resiliency or safety ("yes" category) points as adding a 2nd service does not impact infrastructure. Will reduce VMT and improve safety statewide as rail is a safer mode of travel than vehicle.
16. Will reduce VMT and improve safety statewide as rail is a safer mode of travel than vehicle. Supported by Town of Brattleboro
17. Will reduce VMT and improve safety statewide as rail is a safer mode of travel than vehicle.
18. RPC has spent money and applied for grants in the past. Currently Class I rail. Work with NECR to upgrade rail and any necessary bridges to allow for 286k and FRA Class II/III. Potentially in conjunction or prior to ID #103
19. Montpelier (2022), Bellows Falls (2022), Brattleboro (2022-23), Essex Junction (2021) have projects planned by Amtrak. Rutland, WRJ are VT/City responsibility and not scheduled
20. Key long-term goal of State. Phased deployment at 80 public road crossings on Ethan Allen (to Burlington) and Vermonter (to Montreal) routes
21. https://www.montpelier-vt.org/DocumentCenter/View/7105

| Initiative Total Score | 93 | 19 | 95 | 83 | 61 | 63 | 72 | 84 | 69 | 54 | 54 | 80 | 85 | 70 | 70 | 65 | 70 | 51 | 78 | 65 | 55 | 63 |

TECHNICAL NOTES--Sources, Assumptions, Etc.

[Class] *See pps. 77-78 of Tech Memo #1 for more information on track classes

[Risk] Is this initiative is in a 100-year flood plain (damage during storm events) or the ANR River Corridors (where rivers are trying to shift), or a dam inundation area? This is an attempt to be consistent with TRPT as that methodology develops. This may be replaced by an expanded TRPT in the future. Points are awarded if an initiative would logically improve asset conditions in the risk area to help prevent future damage

[Compet] Does this initiative promote competition by providing an alternative to an existing route or service, by introducing a competing service provider, and/or does this initiative otherwise reduce transportation costs for Vermont businesses?

DRAFT Rail Plan Initiative Technical Analysis - PROGRAM & POLICY

Version: 1/4/2021

This is a sketch-level analysis to help move from the table of reasonable possible initiatives to a shorter implementation table consistent with Agency of Transportation project selection efforts.

It is for use with the update of the State Rail Plan within the Rail program and may shift as project selection methodology evolves. Note it is based on the VPSP2 Qualification sheet.

The results of technical analysis of initiatives are an aid in making well-informed decisions rather than a precise answer. They are among the factors considered when deciding which initiatives to advance to implementation.

The intent is to keep this table easy to skim, with technical notes refereced in brackets and assumptions explained at the bottom. **See the Table of Initiatives for more detail about each one.**

This worksheet screens initiatives that are not specific to a place, such as programs and policies. It uses a more qualitative approach within the same goal **categories as on the specific initiatives worksheet--see that worksheet for more information.**

This screening uses a 1-20 scale as a reminder of the more general analysis, though wieghting of categories is the same carrying through from VPSP2.

RPC and municipal staff are requested to particularly review the columns shaded blue in the context of their plans and studies. If an inititive should get points based on RPC or municipal work, please briefly explain in the Notes field.

				Possible Points	4	4	1	2	2	2	2	2	1	20	
Initiative Number	Initiative Name	Goal Area	Does initiative improve freight rail, passenger rail, both, or other?		Safety	Asset Condition	Mobility	Connectivity	Economic Access	Resiliency	Environment	Community	Health Access	Total	Notes
1	Post freight rail system performance measures, including trends	Maintenance	Freight		2	2	0	0	1	0	1	0	1	7	
2	Upgrade all lines to 286K weight-bearing capability	Increase Use/Exp	Freight		0	4	1	2	2	1	2	2	1	15	
3	Maintain State-owned freight trackage at FRA Track Class 2 or better and state-owned passenger rail trackage at Class 4 or better where viable based on geography	Maintenance	Both		4	4	1	1	2	2	1	0	1	16	
4	Further enhance marketing of Vermont passenger rail	Increase Use/Exp	Passenger		0	0	1	0	2	0	2	2	1	8	
5	Educate shippers about rail and intermodal service options and contracting approaches.	Economic Development	Freight		0	0	1	0	2	0	1	2	1	7	
6	Preserve rail siding access to existing industrial sites and preserve and fully use parcels with access to rail	Economic Development	Freight		0	4	1	2	2	1	2	2	1	15	Should score higher under Community - both the SWCRPC Regional Plan and ECVEDD CEDS promote rail access in industrial areas.
7	Develop quick-response capability to leverage economic development opportunities	Economic Development	Freight		0	2	0	0	2	0	1	2	1	8	
8	Facilitate development of freight transload and intermodal terminals in or near Vermont	Intermodal Connectivity	Freight		0	2	1	2	2	1	2	1	1	12	Transload could be viable in various locations. Intermodal only likely viable with high volumes and Class 1 access so perhaps WRJ.
9	Maintain and improve freight access to regional short-haul markets and competitive Class I railroad connections	Intermodal Connectivity	Freight		0	0	1	2	2	1	2	0	1	9	
10	Enhance communication and coordination regarding rail movement and storage of hazardous materials (hazmat) movement by rail and storage on rail sidings while respecting rail exemptions from local control	Safety	Freight		4	0	0	0	0	0	1	2	1	8	
11	Workforce Development	Economic Development	Freight		0	0	0	0	2	1	0	2	1	6	
12	Track and respond to COVID-related changes regarding impacts on the passenger and freight rail system, both direct and from demographic changes	Funding	Both		0	0	0	0	1	1	1	2	1	6	
13	Increase resilience of rail system to make critical infrastructure more resilient now and to prepare for increasing storm severity	Safety	Both		2	4	0	1	1	2	1	1	1	13	
14	Improve multi-modal connections to Amtrak stations including transit, bicycle, and pedestrian access. Improve wayfinding.	Intermodal Connectivity	Passenger		4	2	0	2	2	0	2	2	1	15	
15	Explore transit-oriented development (TOD)	Intermodal Connectivity	Passenger		0	0	0	2	2	0	1	2	1	8	
17															
18	Seek grants and innovative funding approaches for freight and passenger rail	Funding	Both		2	2	0	1	2	2	1	2	1	13	
19	Promote and encourage "freight as a good neighbor" (see reference at end) while respecting rail's exemptions from local control. This could be an annual workshop on freight movement in Vermont with alternating years focusing on rail. This would support implementation of the Vermont rail and freight plans.	Safety	Freight		2	2	0	0	1	1	1	2	1	10	
20	Maintain and modernize freight rail yards such as NECR and CP Yards	Maintenance	Freight		0	4	0	0	2	0	1	0	1	8	

DRAFT Notes to Explore in Future Updates of Rail Plan

Version: 12/21/2020

Criteria may continue to evolve in future Rail Plan updates. Note they should use State-wide, readily available data.

Experience using these criteria will be considered with regard to more-detailed use for Rail projects assuming VPSP2 is expanded to them. Note the Rail Plan is not the same as the Rail Program.

CATEGORY	Near Future	Further Future
SAFETY	Consider learning from or incoprorating Section 130 rail crossing prioritization work	
ASSET CONDITION		
MOBILITY		
CONNECTIVITY		
ECONOMIC ACCESS		
RESILIENCY	Exploring if we can bring in locations previous damaged from FEMA data though it may not be ready in time.	Could eventually likely apply the Statewide methodology developed for TRPT to the rail system
ENVIRONMENT		
COMMUNITY		
HEALTH ACCESS		
Comment Field		
CCRPC recommends evaluating operational and capital projects separately from each other, then describing opportunities to coordinate or harmonize them.		