A project scorecard is prepared for each project that is evaluated and scored. The scorecard is a snapshot of project information and scoring. The following provides a brief overview of the information contained in the scorecard.

① SMART SCALE PROJECT SCORECARD

VDOT DRPT — Office of INTERMODAL Planning and Investment

Route 50/17/522 Partial Median U-turn Project Id: 11746

Replace existing signalized intersection with a partial median U-turn intersection (MUT) at US 17/50 (Millwood Pike) and US 522 (Front Royal Pike)/NB I-81 on-ramp. This project is designed for implementation following construction of UPC 115717, I-81 Exit 313 bridge replacement, which involves realignment of US-50/17 and the intersection with the I-81N ramps and US-522 intersection. The MUT design will be complementary to the funded Smart Scale portion of the bridge project, which adds a WB thru lane and shared use path across the bridge and a WB left turn lane at the I-81S on-ramp. This project is a project pipeline study with VDOT.

17.7 SMART SCALE SCORE	**#7** OF 270 STATEWIDE	SMART SCALE Requested Funds	$14,762,314
	#1 OF 27 DISTRICTWIDE	Total Project Cost	$18,452,893
		Project Benefit	26.1
		Project Benefit / Total Cost	14.1

② ... **③**

Submitting Entity: Win-Fred MPO
PE/RW/CN: Not Started / Not Started / Not Started
Eligible Fund Program: HPP
Evacuation Route: Yes
Resiliency Commitment: Yes
VTRANS Need: CoSS, RN

④

SMART SCALE Area Type C

Factor	Congestion Mitigation		Safety		Accessibility			Economic Development			Environment		Land Use	
Measure	Increase in Peak Period Person Throughput	Reduction in Peak Period Delay	Reduction in Fatal and Injury Crashes	Reduction in Fatal and Injury Crash Rate	Increase in Access to Jobs	Increase in Access to Jobs for Disadvantaged Populations	Increase in Access to Multimodal Travel Choices	Project Support for Economic Development	Tons of Goods Impacted	Improvement to Travel Time Reliability	Potential to Improve Air Quality	Impact to Natural and Cultural Resources	Support of Transportation-Efficient Land Development	Support of Transportation-Efficient Land Development
Measure Value	588.2 persons	319.8 person hrs.	58.2 EPDO	3,207.1 EPDO / 100M VMT	7.8 jobs per resident	6.0 jobs per resident	1,459.8 adjusted users	11.8 adjusted points	1,180.0 thousand adj. daily tons	21,052,000.0 adj. buffer time index	61.1 adjusted points	0.3 impacted acres	40.5 access * pop/emp density	36.8 access * pop/emp density change
Normalized Measure Value (0-100)	10.6	19.6	10.4	5.2	2.0	1.0	96.4	13.2	2.5	0.3	61.1	0.2	56.3	50.8
Measure Weight (% of Factor)	50%	50%	70%	30%	60%	20%	20%	60%	20%	20%	100%	*	50%	50%
Factor Value	15.1		8.8		20.7			8.5			61.1		53.6	
Factor Weight (% of Project Score)	20%		30%		15%			25%			10%		**	
Weighted Factor Value	3.0		2.7		3.1			2.1			6.1	0.0	1.5	
Project Benefit	26.1													
SMART SCALE Cost	$14,762,314													
SMART SCALE Score***	17.7													

*Environment Factor Weight "5 (max point reduction)"

* After combining all weighted factors, up to 5 points are subtracted from the project benefit score, therefore it has no measure weight.
** Up to 100% multiplied by the benefit score based on normalized measure performance.
*** Project Benefit per $10M SMART SCALE Cost

① **Project Overview:** Includes the project name, a short description of the project, and the application ID.

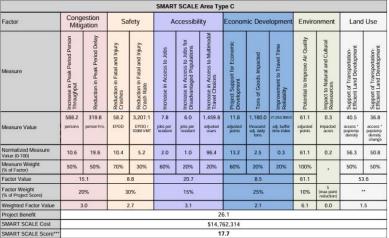**②** **Score Summary:** Provides the SMART SCALE score, rank, project cost, and benefit.

③ **Project Information:** Provides information about the project, applicant, delivery status, requested funding, and project need.

④ **Evacuation Route and Resiliency Commitment:** Per Virginia Code § 33.2-214.1 B. (ii), it is identified for the applicant whether such projects are located on a primary evacuation route. Per Virginia Code § 33.2-214.1 B. (iii), the applicant self-identifies, whether a project has been designed to be or the project sponsor has committed that the design will be resilient.

⑤ **How to calculate the SMART SCALE Score using the Scoring Table:**

1. The *Measure Value* is determined by assessing the data and characteristics of the project and is then normalized as a percentage of the highest *Measure Value* in that year's cohort of projects.
2. The *Normalized Measure Value* is then multiplied by the *Measure Weight*.
3. *Normalized Measure Values* are then summed to equal the *Factor Value*.
4. The *Factor Value* is then multiplied by the appropriate *Factor Weight* for the area type of the project.
5. *Project Benefit* is then calculated from the sum of the *Weighted Factor Values*.
6. The *SMART SCALE Score* is calculated by taking the *Project Benefit* and dividing by the *SMART SCALE Cost* (in tens of millions).

*The *Land Use Factor Value* is not weighted by a typology-based value. The *Factor Value* is converted to a *Land Use Multiplier* by dividing the value by 100 and adding 1. This multiplier is applied to the *Project Benefit* sum to return the *Final Project Benefit*.

Explanations of Measures Values:

- Congestion Mitigation
  - Person throughput is the projected increase in persons moving through the project limits during the peak period for current year.
  - Delay is the projected reduction in cumulative time for all persons to move through the project limits for current year.
- Safety
  - Reduction of fatal and injury crashes and crash rate is calculated using the Equivalent Property Damage Only (EPDO) methodology used by FHWA. This equates all crash severities on the same scale by assigning a higher weight to fatal and injury crashes than those that are property damage only.
  - Crash rate reduction is determined by the number of crashes per 100 Million Vehicle Miles Traveled (VMT). This measure also uses the EPDO methodology stated in the first safety measure.
- Accessibility
  - Access to jobs is the number of jobs to which each person has access within 45 minutes (60 minutes for transit; bike/ped projects). The total number of jobs divided by the population equates to jobs per person.
  - Access to jobs for disadvantaged populations is calculated in the same manner as the first Accessibility measure, only for a particular subset of the population.
  - Increase to multimodal travel choices is determined by how the project supports travel choices and the connections between modes. Points are assigned based on project characteristics, and are then multiplied by the number of non-single occupancy vehicle users.
- Economic Development
  - Project support for economic development evaluates the support of sites that will attract growth industries using an inventory captured in VEDP's VirginiaScan real estate database that will include evaluation of job creation potential, capital investments in sites, and estimation of the potential market demand of sites by including site visits.
  - Tons of goods impacted determines the amount of daily freight tons impacted by the project and multiplies the tonnage by a point value based on certain criteria.
  - Improvement to travel time reliability uses weather event frequency and impact as well as incident frequency and impact along with a buffer index to evaluate the improvement in travel time reliability. This value is multiplied by corridor Vehicle Miles Traveled (VMT) to scale the results.
- Environment
  - Potential to improve air quality based on project benefits to non-single occupancy vehicle (SOV) users and reduced delay for freight movement.
  - Evaluates potential natural and cultural acreage impacted using a tiered buffer around the project limits, and is a subtractive measure based on the total potential sensitive acreage impacted.
- Land Use
  - Future Transportation Efficient Land Use measure reports a project's non-work accessibility scaled by the surrounding area's 2040 population and employment density.
  - Increase in Transportation Efficient Land Use measure reports a project's non-work accessibility scaled by the surrounding area's 2010 to 2040 increase in population and employment density.