

## Matrix of INVEST 1.1 Criteria Changes

Criteria		Type of Edits in Version 1.1 <sup>1</sup>			
		Formatting <sup>2</sup>	Editorial <sup>3</sup>	Content <sup>4</sup>	Description of Content Edits <sup>4</sup>
System Planning Module	SP-01: Integrated Planning: Economic Development and Land Use	•			
	SP-02: Integrated Planning: Natural Environment	•	•		
	SP-03: Integrated Planning: Social	•			
	SP-04: Integrated Planning: Bonus	•		•	Clarified that scoring of SP-04.1 is either 5 or 10 points, not a sliding scale. This is not a change because this is how the online tool scored projects.
	SP-05: Access & Affordability	•	•	•	Clarified that scoring of SP-05.3b is conditional on SP-05.3a.
	SP-06: Safety Planning	•		•	Provided link for PlanSafe.
	SP-07: Multimodal Transportation and Public Health	•		•	Clarified SP-07.2: Engage Stakeholders scoring requirement.
	SP-08: Freight and Goods Movement	•			
	SP-09: Travel Demand Management	•		•	Clarified that scoring on SP-09.4 is either 3 or 5 points. This is not a change because this is how the online tool scored projects.
	SP-10: Air Quality	•			
	SP-11: Energy and Fuels	•	•	•	Clarified that System-Level Data Collection and Forecasting is based upon on-road VMT and provided definition of eco-driving.
	SP-12: Financial Sustainability	•			
	SP-13: Analysis Methods	•		•	Reordered scoring requirements SP-13.2 and SP-13.3.
	SP-14: Transportation Systems Management & Operations	•	•	•	Clarified that scoring on SP-14.4 is either 3 or 5 points, not a sliding scale. This is not a change because this is how the online tool scored projects.
	SP-15: Linking Asset Management and Planning	•		•	Clarified focus of Asset Management Planning.
	SP-16: Infrastructure Resiliency	•	•	•	Clarified that hazards include structural failures and that vulnerability assessments are GIS-based. Clarified that scoring on SP-16.4 is either 2 or 5 points, not a sliding scale. This is not a change because this is how the online tool scored projects.
	SP-17: Linking Planning and NEPA	•			
Project Development Module	PD-01: Economic Analyses	•	•		
	PD-02: Life-Cycle Cost Analyses	•		•	Provided a link for RealCost software.
	PD-03: Context Sensitive Project Development	•		•	Provided links to NCHRP reports 480 and 642.
	PD-04: Highway and Traffic Safety	•	•		
	PD-05: Educational Outreach	•	•		
	PD-06: Tracking Environmental Commitments	•			
	PD-07: Habitat Restoration	•		•	Provided definition of traditional alignment and removed use of "original alignment".
	PD-08: Stormwater	•		•	Provided definitions of Best Management Practices (BMPs) and Low Impact Development (LID).

## Matrix of INVEST 1.1 Criteria Changes

Criteria	Type of Edits in Version 1.1 <sup>1</sup>				
	Formatting <sup>2</sup>	Editorial <sup>3</sup>	Content <sup>4</sup>	Description of Content Edits <sup>4</sup>	
Project Development Module	PD-09: Ecological Connectivity	•		•	Provided definition of traditional alignment and removed use of "original alignment".
	PD-10: Pedestrian Access	•	•		
	PD-11: Bicycle Access	•	•	•	Separated comfort feature and added definition.
	PD-12: Transit & HOV Access	•			
	PD-13: Freight Mobility	•			
	PD-14: ITS for System Operations	•	•	•	Revised technology names and groups to fit referenced website better.
	PD-15: Historical, Archaeological, and Cultural Preservation	•			
	PD-16: Scenic, Natural, or Recreational Qualities	•			
	PD-17: Energy Efficiency	•			
	PD-18: Site Vegetation	•	•	•	Revised goal to be more active. Changed non-toxic to non-noxious. Added definitions of non-invasive plant species, noxious species, and site vegetation.
	PD-19: Reduce and Reuse Materials	•	•		
	PD-20: Recycle Materials	•	•		
	PD-21: Earthwork Balance	•			
	PD-22: Long-Life Pavement Design	•	•		
	PD-23: Reduced Energy and Emissions in Pavement Materials	•			
	PD-24: Contractor Warranty	•	•		
	PD-25: Construction Environmental Training	•			
	PD-26: Construction Equipment Emission Reduction	•		•	Removed "non-road" because this criterion applies to road and non-road.
	PD-27: Construction Noise Mitigation	•		•	Revised goal to be more achievable (removed "eliminate") and removed mention of secondary affect of improving human health.
PD-28: Construction Quality Control Plan	•				
PD-29: Construction Waste Management	•				
Operations and Maintenance Module	OM-01: Internal Sustainability Plan	•	•		Clarified that internal includes administrative and maintenance & operations functions.
	OM-02: Electrical Energy Efficiency and Use	•			
	OM-03: Vehicle Fuel Efficiency and Use	•		•	Provided link to AASHTO Equipment Management Technical Service webpage. Clarified that a plan is needed to measure performance and demonstrate outcomes.
	OM-04: Reuse and Recycle	•		•	Clarified scoring with respect to OM-01 Internal Sustainability Plan. Clarified that a plan is needed to measure performance and demonstrate outcomes.
	OM-05: Safety Management	•	•	•	Corrected number of points earned for scoring requirement OM-05.4 and provided link for PlanSafe.

## Matrix of INVEST 1.1 Criteria Changes

	Criteria	Type of Edits in Version 1.1 <sup>1</sup>			
		Formatting <sup>2</sup>	Editorial <sup>3</sup>	Content <sup>4</sup>	Description of Content Edits <sup>4</sup>
Operations and Maintenance Module	OM-06: Environmental Commitments Tracking System	•		•	Clarified that most scoring requirements are intended to allow for scalability in the ECTS. Clarified that a plan is needed to measure performance and demonstrate outcomes.
	OM-07: Pavement Management System	•		•	Provided link for GASB 34. Clarified that a PMS is needed to measure and demonstrate outcomes and in which to include sustainable specifications..
	OM-08: Bridge Management System	•		•	Added link for AASHTO Guidelines for Bridge Management Systems. Clarified that a BMS is needed to measure performance and demonstrate outcomes.
	OM-09: Maintenance Management System	•		•	Corrected reference to Road Maintenance Plan. Provided examples of vehicle-based technologies.
	OM-10: Highway Infrastructure Preservation and Maintenance	•	•	•	Corrected reference to Traffic Control Maintenance Plan. Clarified that a plan is needed to measure performance and demonstrate outcomes.
	OM-11: Traffic Control Infrastructure Maintenance	•	•	•	Clarified that a plan is needed to measure performance and demonstrate outcomes.
	OM-12: Road Weather Management Program	•		•	Clarified that a plan is needed to measure performance and demonstrate outcomes.
	OM-13: Transportation Management and Operations	•		•	Clarified table is for system-wide applications.
	OM-14: Work Zone Traffic Control	•		•	Clarified that CB Wizard is used to broadcast alert messages to truck drivers. Clarified that a plan is needed to measure performance and demonstrate outcomes.

**Notes:**

1. Scoring of criteria was clarified in some cases, but not changed in Version 1.1.
2. Formatting changes typically include separating background and scoring requirements; showing the full URL instead of hyperlinks; and numbering prerequisites, scoring requirements, and tables for better clarity and alignment between requirements and the web tool questions.
3. Editorial changes include grammar, word choice, and typos and do not affect the content of the material.
4. Content changes typically include clarifications, definitions, and added or updated links and references intended to clarify the intent or scoring of