

# Appendix III: Investment and Strategy Linkage

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*September 2023*

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# Appendix III: Investment Categories and Strategy Linkage

## Transportation Investment Categories

These categories help SPC define an investment scenario to establish the region's long term transportation investment strategy. When looking at proposed projects for the long range plan, they are assigned one of these investment categories based on the primary purpose of the project. The planning and project development process considers additional aspects of the projects that draw in elements from the other investment categories and help to ensure that all contextual aspects of the surrounding community are evaluated.

It is important to note that when projects move on to become TIP candidates they go through a pre-TIP planning process that considers many additional aspects of the candidate projects that draw in elements from the other investment categories. Also as part of pre-TIP planning, all TIP candidate projects go through the PennDOT Connects municipal collaboration process. The PennDOT Connects process is intended to gain a local perspective of the community vision and need for specific elements of a transportation project. This approach helps to ensure that all contextual aspects of the surrounding community, as they relate to the respective transportation improvement, are evaluated upfront so the infrastructure improvement can contribute to the overall livability and complement the community.

### PennDOT Connects Elements

- Community Vision and Current/Future Needs
- Safety Issues and Concerns
- Bicycle and Pedestrian Accommodations
- Public Transportation/Multimodal Accommodations
- Freight and Economic Development Considerations
- Stormwater Management and Green Infrastructure Opportunities
- Right-of-way and Utility Considerations
- Community Events (in or near the project area)



## Capital Maintenance – Roadways

### Roadway Preservation

Repairs and rehabilitation intended to extend the life of an existing roadway. This includes projects that necessitate significant capital expenditures such that the project would be included on the TIP. It could include resurfacing, shoulder stabilization, and other types of activities, but does not include everyday pothole patching or crack sealing types of operations that are typically funded with maintenance funds outside the TIP.

Projects in this category are broken down into three different levels that correspond to federal performance measures:

- Interstate
- NHS non-Interstate
- Non-NHS

### Roadway Reconstruction

Reconstruction of existing roadways where the road is being rebuilt. This includes interchange reconstructions that rebuild deficient ramps but are not adding new movements. It includes activities and associated projects, such as wetland banking, that are directly related to a reconstruction project. Roadway Reconstruction would also include activities such as tunnel or retaining wall (re)construction that are related to maintaining operations on an existing roadway. It does not include projects that involve a combination of reconstruction and capacity expansion (adding through lanes).

Projects in this category are broken down into three different levels that correspond to federal performance measures:

- Interstate
- NHS non-Interstate
- Non-NHS

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## Capital Maintenance – Bridges



### Bridge Preservation

Repairs and rehabilitation intended to extend the life of an existing bridge. This includes activities such as expansion dam replacement, substructure repairs, deck restorations and overlays, beam repairs, painting, fatigue and fracture retrofits, and scour countermeasures. It does not include total reconstruction or replacement of a bridge, nor does it include maintenance operations that are typically funded with maintenance funds outside the TIP.

Projects in this category are broken down into two different levels that correspond to federal performance measures:

- NHS
- Non-NHS

### Bridge Reconstruction / Replacement

Total reconstruction or replacement of an existing bridge. This includes bridges on new alignment provided that the old bridge is being taken out of service for automobile traffic. It would also include deck replacements on existing bridges.

### Bridge Removal

Bridge has been determined to be redundant and is being removed from the transportation system after its useful lifespan is over.

## Capital Maintenance – Transit



### Public Transportation – Operations

Operation of the public transit system including personnel salaries and benefits, materials and supplies, routine minor maintenance expenses, and the capital cost of contracting. Also included are the operating expenses associated with transit services resulting from a new capacity project.

### Public Transportation – Capital Maintenance, System Preservation & Modernization

Maintenance and modernization of capital assets such as preservation and rehabilitation of fixed facilities (i.e. buildings, bridges, busways, LRT lines, etc.); preservation, replacement and rehabilitation of existing vehicles (i.e. buses, LRT vehicles, support vehicles); and, modernization/upgrades of existing facilities, services and vehicles. Also included are minor service and fleet expansion (i.e. new revenue/service vehicles, new administrative and maintenance buildings, intermodal facilities, transit centers, etc.).



## Traffic Operations & Safety

### Efficiency / Operations

Projects that improve traffic flow, reduce congestion, and improve the operational characteristics of the existing transportation system. This includes traffic signal systems, Intelligent Transportation Systems (highway & transit), truck climbing lanes, and intersection improvements such as the addition of turning lanes. It does not include capacity expansion / roadway widening projects.

### Travel Demand Management

Projects such as carpooling, vanpooling, emergency ride home programs, telecommuting, commuter benefit strategies, parking incentives, park-n-ride lots, job access reverse commute programs, and other non-traditional types of projects that work to affect the demand side of transportation systems.

### Safety

While virtually every transportation project improves safety by bringing the transportation network up to current design standards, these are stand-alone projects to address specific safety issues. This includes projects to eliminate sight distance problems at intersections, improve at-grade highway-rail crossings, improve pedestrian safety, and address areas with high accident rates or crash clusters.

## Other Modes



### Intermodal / Freight

Projects that address other modes of transportation such as waterways (locks and dams) or improvements to the freight rail or aviation networks. This also includes projects that improve the integration of modes such as intermodal terminals.

Projects in this category are broken down into two different levels that correspond to federal performance measures:

- NHS
- Non-NHS

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## Pedestrian & Bicycle



Bicycle lanes, sidewalks, and shared use pathways that improve accessibility and mobility for bicycles and pedestrians. This includes rail-trails and other pathways that provide non-motorized links in the transportation network. It does not include trails and pathways that serve a purely recreational purpose, because federal transportation funds are not permitted to be spent on these types of projects.

### Other Transportation Enhancements

Scenic beautification, wayfinding, signage, welcome centers, streetscapes (but are not primarily pedestrian and bicycle projects).

## New Capacity – Roadways & Bridges



### Roadway & Bridge Widening / Capacity Upgrade

Roadway expansion projects that involve the addition of Single Occupancy Vehicle Capacity (SOVCAP) (a.k.a. “through”) lanes to an existing roadway or bridge in order to increase the capacity of the facility. These projects often include some level of reconstruction of the existing facility as well. This does not include widening projects that only add a two-way center turn lane.

Projects in this category are broken down into three different levels that correspond to federal performance measures:

- Interstate
- NHS non interstate
- Non NHS

### Interchange Completion

Upgrades to existing interchanges where missing ramps are being added. This does not include projects which create new interchanges.

### New Roadways / Interchanges / Bridges

Construction of roadways, interchanges, or bridges on new alignment that results in additional mileage being added to the transportation network. This would include the extension of existing roadways and construction of HOV lanes. It also includes the construction of a new bridge when the old bridge is still being left in service.

Projects in this category are broken down into three different levels that correspond to federal performance measures:

- Interstate
- NHS non-Interstate
- Non-NHS



## New Capacity – Transit

### Public Transportation – New Capacity

Major new capital investment for service expansion / modification of the public transportation system (would require an environmental assessment or environmental impact statement), excluding new administrative and maintenance facilities. This includes projects such as the construction of busways, extension of the light rail system, and other major new capital investments for service expansion or modification. It could also include transit oriented development projects. It does not include the purchase of upgraded transit vehicles to replace vehicles on existing transit routes.

## Strategy and Investment Linkage

*SmartMoves for a Changing Region* is built upon the three fundamental goals of Connected Mobility, A Globally Competitive Economy and Resilient Communities. These goals comprise a shared, holistic Vision for the future of Southwestern Pennsylvania: “A world-class, safe and well maintained, integrated transportation system will provide mobility for all, enable resilient communities, and support a globally competitive economy.” Each of these goals contains a set eight of strategies to help advance the plan and Regional Vision for the future.

Investment categories are used to group the projects and programs that establish the region’s long term transportation investment strategy. All proposed projects are assigned to an investment category based on the primary purpose of the project. The planning and project development process considers additional aspects of the projects that draw in elements from the other investment categories and help to ensure that all contextual aspects of the surrounding community are evaluated and that the transportation system is being considered holistically as an integrated system rather than a series of unrelated networks. Finally, the use of investment categories allow us to track levels of investment in each category and assist in tracking progress being made toward achieving the adopted federal performance targets.

The linkages between the Strategies and the investments being made in the plan are critical in depicting, in a transparent manner, how each of investments and investment categories support and help to advance the Strategies, and, in some cases, how the Strategies can also enhance the investments - ultimately working together to achieve the Regional Vision and Major Goals.

The matrix (Table III-1) depicts the linkages with the investment categories and whether they have a direct (D) or indirect (ID) relationship.

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For example, the Strategy that discusses connecting public transit regionwide has a direct relationship with the investment categories of Transit Operation and Capital Maintenance as well as Transit New Capacity. This Strategy also has a direct relationship with the Safety and Operations Investment Category, as connecting transit regionwide will heavily rely on the region's ITS Infrastructure and technologies such as automatic vehicle location systems (AVL), transit signal priority (TSP), and traveler information systems (TIS), all of which are associated with transportation system operations. Active transportation facilities that provide first- and last- mile accessibility and other community enhancements (pedestrian scale lighting, curb extensions, accessible, accommodating public transit stops, etc.) are essential in successfully connecting transit across the region.

The capital maintenance of roadways and bridges has an indirect relationship with connecting transit regionwide, as the transit vehicles, in most cases, will be using the same roads and bridges as personal vehicles.



Table III-1: Strategy and Investment Matrix

	Capital Maintenance Roadways	Capital Maintenance Bridges	Capital Maintenance/ Operations Transit	Operations and Safety	Intermodal/ Freight	Pedestrian and Bicycle	Enhancements	New Capacity Road and Bridge	New Capacity Transit
<b>Connected Mobility</b>									
<b>Equity</b>									
Mobility For All - Equity Keeps Us Whole	D	D	D	D	N/A	D	D	N/A	D
<b>High Tech Mobility – Connected Systems and Autonomous Vehicles</b>									
Modernize Infrastructure	D	D	D	D	D	D	D	D	D
Minimize Negative Impacts (CAVs)	ID	ID	ID	D	D	D	D	N/A	N/A
<b>Prioritize and Streamline - Faster Project Development</b>									
Holistic Planning	D	D	D	D	D	D	D	D	D
Streamline Processes	D	D	D	D	D	D	D	D	D
<b>Funding and Financing</b>									
Funding Partnerships	ID	ID	ID	ID	ID	ID	ID	ID	ID
Educate and Promote	D	D	D	D	D	D	D	D	D
Connect Transit Region-Wide & Implement SMC	ID	ID	D	D	N/A	D	D	ID	D
<b>Globally Competitive Economy</b>									
<b>Grow, Train and Retrain – Workforce for Change</b>									
Find More Candidates	N/A	N/A	D	N/A	N/A	D	N/A	N/A	N/A
Train for What's Next	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sharpen Soft Skills	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Prioritize, Improve, Support - Infrastructure Supports Us</b>									
Prioritize Economic Environmental and Community Benefits	D	D	D	D	D	D	D	D	D
Be Efficient	D	D	D	D	D	D	D	D	D
Optimize Regional Energy Assets	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Partner and Deploy - Technology Advances Us</b>									
Utilize Emerging Technologies	D	D	D	D	D	D	D	D	D
Broadband Everywhere	ID	ID	ID	ID	N/A	ID	ID	D	D
<b>Sustainable and Resilient Communities</b>									
<b>Resilient Communities - Elevate Community</b>									
Reinvest Where We Began	D	D	D	D	D	D	D	D	D
Champion Best Practices	D	D	D	D	D	D	D	D	D
Conserve Our Resources	D	D	D	D	D	D	D	N/A	N/A
Invest in Resilience	D	D	D	D	D	D	D	D	D
<b>Tackle Climate Change, Air &amp; Water - The Earth Sustains Us</b>									
Build to Last	D	D	D	D	D	D	D	D	D
Adapt and Improve (Climate Change)	D	D	D	D	D	D	D	N/A	D
Take Care of Water	ID	ID	ID	N/A	ID	ID	D	ID	ID
Clear the Air	N/A	N/A	D	D	D	D	D	N/A	D

D = Direct Association  
 ID = Indirect Association  
 N/A= Not Applicable