SUBRECIPIENTS IN GROUP TAM PLAN

- FTA Section 5311- Rural Transit Systems
- FTA Section 5310- Seniors and Individuals with Disabilities
5311 (RURAL)

- 34 systems
- $25 million dollar program
  - $3 million distributed among capital project
4 Year Plan

- Updated yearly
- Includes all capital projects
- Based off statistical analysis
  - Example - Once vehicles meet disposition guidelines they are eligible for replacement.

### Rolling Stock Disposition Guidelines

<table>
<thead>
<tr>
<th>Vehicle</th>
<th>5 years &amp; 120,000 miles</th>
<th>6 years &amp; 150,000 miles</th>
<th>150,000 miles</th>
<th>200,000 miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modified Mini Vans (MMV)</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Dedicated Access Vehicle (MV-1)</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Accessible Van (AV)</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Light Transit Vehicle-Narrow Body (LTN)</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Light Transit Vehicle-Low Floor (LTL)</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Light Transit Vehicle (LTV)</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
5311 CAPITAL PROJECT PRIORITIZATION

1. Replacement Vehicles
2. Operations Equipment
3. Safety & Security
4. Expansion Vehicles and Renovations
5. Facility/Construction Projects
5310 (SENIORS AND INDIVIDUALS WITH DISABILITIES)

- 200 agencies
  - 725 revenue vehicles
- $3.5 million dollar program
  - Discretionary grant
5310 CAPITAL PROJECT PRIORITIZATION

1. Replacement Vehicles
2. Expansion Vehicles
3. Mobility Management
4. Capitalized Maintenance*
5. Operating*
6. Equipment
FUTURE DIRECTION

Use TAM Performance Measures to select projects that will improve the State of Good Repair

Utilize TAM performance data to verify system needs

Improve investment decision strategy
MASSDOT/MBTA INVESTMENT PRIORITIZATION

Victor Rivas
- **Large** - 5th largest transit system, based on ridership
- **Mature** - oldest subway system (opened in 1897)
- **Multimodal** - 4 rapid transit lines, 182 bus routes, 5 BRT lines, 14 commuter rail lines, 3 ferry routes, paratransit
- **Widespread** - 175 communities served
- **Important to Region** - daily ridership of 1.3 million trips; 55% of work trips to Boston are made on the MBTA
In 1997, aware of an imbalance caused by expansion activity, the MBTA commissioned a study to determine the condition of its assets and to develop an SGR database that could help to:

- Determine the condition of its assets
- Define in monetary terms the SGR backlog
- Estimate the funding necessary to return the system to a state of good repair
- Articulate the case for additional funding on SGR
- Help in the capital investment selection process

The study and database implementation took 2 years to complete.

The SGR Database and its output were first used in 2000, resulting in the following:

- Within 5 years funding for SGR projects increased from about 50% to almost 80%
- Today, expansion projects are funded mainly with State dollars
Asset Management Plan (AMP)

The AMP documents how all of the MBTA's various TAM systems/processes (described below) work together to establish a framework by which decisions are made to acquire, maintain, renew, replace and dispose of transit assets.

Maintenance Management Systems

- Asset Preservation and Preventative Maintenance Tool
  - Fleet
  - Facilities
  - Linear Assets
  - IT / Other
  - Daily PM scheduling/work orders/inventory control
  - Asset inventory - micro level (component/subcomponent)
  - O&M cost data (tracked throughout life of asset)
  - Condition and performance monitoring (e.g., MMBF)

Performance Measurements

- Performance Monitoring and Reporting (Customer Focus)
  - Clearly define policy goals and objectives
  - Establish specific performance metrics in alignment with FTA required target setting
  - Monitor performance (as a result of investment decisions)

Other Asset-Related Databases

- Agencywide, for Specific Needs/Reporting Purposes
  - NTD reporting (e.g., fleet statistics, operating costs)
  - Safety Department assessments/reporting
  - Fixed asset and risk management reporting

SGR Database

- Capital Planning and Programming Tool
  - Broken Down by Asset Class
  - Long-term capital planning tool (5-20 years)
  - Comprehensive asset inventory - macro-level
  - Calculate SGR backlog at various funding levels
  - Est. impacts of underinvestment (costs, performance)

Decision Support Tool (DST)

- Project Prioritization/Selection System
  - Prioritize capital projects for 5-year CIP (done annually)
  - Identify evaluation criteria/weights based on agency goals
  - Rate/score capital projects, within financial constraints

Capital Investment Program (CIP)

- 5-Year Capital Plan, Updated Annually
  - Selected projects based on prioritization process
  - Monitor project status/spending through completion
  - Update MMS, SGR Database to reflect investments

TAM INTEGRATION OF MBTA SYSTEMS
The MassDOT/MBTA Capital Investment Plan (CIP) represents a sustained shift in the process of capital budgeting at MassDOT and the MBTA.

This CIP is informed by a strategic vision, influenced by public and stakeholder input sought at the beginning of the process; built around funding programs; and projects in it were selected based on an objective and comparative evaluation.
PRIORITIES

1. Reliability
   Maintain and improve the overall condition and reliability of the transportation system
   - Necessary routine and capital maintenance
   - State of Good Repair projects designed primarily to bring asset condition up to an acceptable level
   - Asset management and system preservation projects

2. Modernization
   Modernize the transportation system to make it safer and more accessible and to accommodate growth
   - Compliance with federal mandates or other statutory requirements for safety and/or accessibility improvements
   - Projects that go beyond State of Good Repair and substantially modernize existing assets
   - Projects that provide expanded capacity to accommodate current or anticipated demand on existing transportation systems

3. Expansion
   Expand diverse transportation options for communities throughout the Commonwealth
   - Projects that expand highway, transit and rail networks and/or services
   - Projects that expand bicycle and pedestrian networks to provide more transportation options and address health and sustainability objectives
## CAPITAL SELECTION CRITERIA

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Preservation</td>
<td>Projects should contribute to a state of good repair on the transportation system.</td>
</tr>
<tr>
<td>Mobility</td>
<td>Projects should provide modal options efficiently and effectively.</td>
</tr>
<tr>
<td>Cost Effectiveness</td>
<td>Projects should result in benefits commensurate with costs and should be aimed at maximizing the return on the public’s investment.</td>
</tr>
<tr>
<td>Economic Impact</td>
<td>Projects should support strategic economic growth in the Commonwealth.</td>
</tr>
<tr>
<td>Safety</td>
<td>Projects should contribute to the safety and security of people and goods in transit.</td>
</tr>
<tr>
<td>Social Equity &amp; Fairness</td>
<td>Projects should equitably distribute both benefits and burdens of investments among all communities.</td>
</tr>
<tr>
<td>Environmental &amp; Health Effects</td>
<td>Projects should maximize the potential positive health and environmental aspects of the transportation system.</td>
</tr>
<tr>
<td>Policy Support</td>
<td>Projects should get credit if they support local or regional policies or plans; or state policies not addressed through the other criteria.</td>
</tr>
</tbody>
</table>
# SELECTION CRITERIA WEIGHTS

<table>
<thead>
<tr>
<th>Evaluation criteria</th>
<th>Description</th>
<th>Highway</th>
<th>Rail</th>
<th>Transit</th>
<th>Aeronautics</th>
<th>IT/RMV</th>
</tr>
</thead>
<tbody>
<tr>
<td>System preservation</td>
<td>Projects should contribute to a state of good repair on the transportation system</td>
<td>15</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td>Projects should provide modal options efficiently and effectively</td>
<td>20</td>
<td>20</td>
<td>25</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Cost effectiveness</td>
<td>Projects should result in benefits commensurate with costs and should be aimed at maximizing the return on the public’s investment</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Economic impact</td>
<td>Projects should support strategic economic growth in the Commonwealth</td>
<td>10</td>
<td>20</td>
<td>15</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td>Projects should contribute to the safety and security of people and goods in transit</td>
<td>15</td>
<td>20</td>
<td>10</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Social equity &amp; fairness</td>
<td>Projects should equitably distribute both benefits and burdens of investments among all communities</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Environmental and health impacts</td>
<td>Projects should maximize the potential positive health and environmental aspects of the transportation system</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Policy support</td>
<td>Projects should get credit if they support local or regional policies or plans; or state policies not addressed through other criteria</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Employ IT criteria that focuses on business value and operations impact, but also takes into account ability to support these goals.
SEPTA’S ASSET MANAGEMENT PROGRAM
Laura J. Zale
August 21, 2017
Service area includes Southeastern PA, NJ, and DE

Multimodal:
- Heavy Rail
- Commuter Rail
- Light Rail
- Bus
- Trackless Trolley
- Paratransit
• Created by the consolidation of bankrupt transit providers between 1964 and 1983.

• Utilizing infrastructure maintained and owned by Amtrak, freight, and the City
The image shows a flowchart with the following elements:

- **VMIS**
- **IMMS**
- **SGR Database**
- **Capital Planning**
- **Capital Projects**

The flowchart illustrates the relationship and data flow between these elements. The SGR Database appears to be central to the flow, informing both Capital Planning and the Capital Projects. The diagram indicates that the SGR Database informs Capital Planning, which in turn informs Capital Projects. The diagram also shows various data flows and influences, such as operations, partnership, funding, adaptation, mandates, and growth, indicating the collaborative and data-driven nature of the process.
Drivers include Positive Train Control, Plant Rationalization, and Normal Replacement.
- Incorporation of maintenance and renewals.
- Lifecycle management in planning.
Planning Requires Data and Balance
SEPTA’S ASSET MANAGEMENT PROGRAM

Laura J. Zale
August 21, 2017