Summary of Prioritization Exercise

INTRODUCTION

This memo summarizes illustrative results of the analysis of the project prioritization method presented to the Transit Service Delivery Advisory Committee (TSDAC) on April 30, 2017. This analysis applies projected available state transit capital funding to a scored list of capital projects to determine which projects would receive funding.

This memo begins by describing the analysis methodology, including key assumptions and scenario inputs. This followed by a summary of the results of each scenario and conclusions.

The purpose of this analysis was to evaluate the proposed state of good repair and minor enhancement prioritization methodology to ensure that the approach resulted in a balanced program (asset types and geographic distribution).

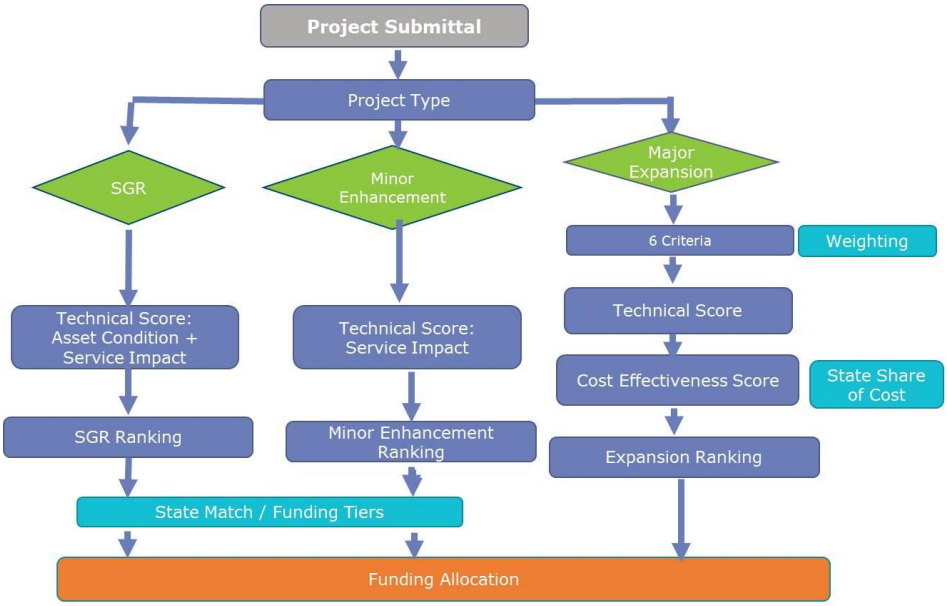
METHODOLOGY

Projects were scored based on the information submitted in FY18 state transit capital grant applications. . The scoring utilized in this illustration generally follows the methodology from the Revenue Advisory Board report with 60% of scoring based on asset condition and 40% based on service impact. A process flow chart is included below as Figure 1.

For this illustration, projects are funded in order from highest to lowest score, as funding permits. All projects that score at or above the minimum scoring threshold to receive funding are funded, while those below this threshold are not funded. Since available funding may not be sufficient to cover all projects that receive the same lowest funded score, reserve or other funding sources may be required.

Two illustrative levels of revenue are considered. The estimation is based on one illustrative year of grant applications and revenues. The analysis does not make any assumptions or adjustments for carryover funding from prior years or multi-year funding commitments.

Figure 1 – Prioritization Flow Chart



SCENARIO INPUTS

Table 1 summarizes key assumptions for both project prioritization funding scenarios analyzed.

Table 1 – Key Assumptions

ASSUMPTION	DESCRIPTION
Projects	FY18 Transit capital projects, based on transit capital grant applications. State of Good Repair (SGR) and Minor Enhancement (MIN) projects are included in the data set. Major expansion and multi-year projects are excluded. • SGR projects are defined as those that replace in-kind assets. If a project is replacing an existing asset, it was included as a SGR project, even if it added new functionality to the transit system. • MIN projects are defined as new and small expansion assets, which are below $2 million in cost, less than a 5% increase in total fleet size, or less than 5 vehicles. • MAJ projects are those that are over the threshold established for a minor enhancement project.
Scoring	The asset condition scoring applies only to state of good repair projects and is based on age for all assets, except for vehicles. Vehicles are scored with 60% of points based on mileage and 40% based on age. The service impact score is applied to both state of good repair and minor enhancement projects for a total of up to 40 points. Points were assigned in four categories: operating efficiency, reliability, accessibility/customer experience, and safety/security. This analysis does not consider a minimum score below which a project would be ineligible to receive funding.
Revenues	Two scenarios: **Low Revenue:** $37.2 million in projected state capital assistance grant funds **High Revenue:** $56.7 million — Includes $37.2M in projected state capital assistance grant funds, with the addition of federal funding over which the state has discretion, including: — Flexible Surface Transportation Program funds — Appalachian Development Public Transportation Assistance Program funds — FTA Section 5339 Bus and Bus Facilities funds
State Share	68% maximum state participation rate. Actual state participation rate for each project is calculated as lesser of 68% or remaining project cost after federal funds and minimum local share are deducted.
Funding Split	State of Good Repair: 95% of available funding; Minor Enhancement: 5% of available funding. The scenario assumed all available funds would be allocated to State of Good Repair and Minor Enhancement with no funds reserved for Major Expansion.

Figure 2 – Scoring Methodology – Age of Asset

Age Score System	
< ULB	0
=0 years beyond ULB	30
<=1	35
<=2	40
<=3	45
<=4	50
<=5	55
>5	60

Figure 3 – Scoring Methodology – Mileage (vehicles only)

Mileage Score System	
< 95% of ULB Mileage	0
+/- 5% ULB Mileage	30
5-10% > ULB Mileage	35
10-15% > ULB Mileage	40
15-20% > ULB Mileage	45
20-25%> ULB Mileage	50
25-30%> ULB Mileage	55
>30% ULB Mileage	60

Figure 4 – Scoring Methodology – Service Impact

Criteria	Definition
Service Frequency, Travel Time and/or Reliability	Speeds up transit routes or allows for increased frequency. Significant impact on reliability either through preventing breakdowns or removing vehicles from mixed traffic
Service Operating Efficiency	Provides for significantly more cost-effective provision of service
Service Accessibility and/or Customer Experience	Significant improvement in a customer's ability to access the system or a significant improvement in the ease of use of the system.
Safety and Security	Provides a significant improvement in safety or security

SCENARIO RESULTS

Results are presented for two scenarios, low revenue (state transit capital funds only) and high revenue (includes federal discretionary funds, in addition to state). The intent of the two scenarios is to provide a constrained scenario and one that reflects the prioritization outcomes utilizing additional funding.

LOW REVENUE SCENARIO

This scenario is based on projected available state transit capital revenues of $37.2 million. As noted above, the state participation rate is capped at 68% and funding is split 95% and 5% between SGR and MIN respectively.

Funded Projects:

- SGR: 296 out of 370 projects
- MIN: 42 out of 93 projects
- Total: 338 out of 463 projects (73% funded)

Lowest Funded Score:

- SGR: 54
- MIN: 29

State Participation Rate: 68%

Total State Funding Needed to Fully Funding Projects: $60.8M

Unfunded State Share: $23.6M

Table 2 - Low Revenue Scenario Results

State of Good Repair by Category	**State Funding**	**Percent of Total**
Vehicle - Revenue Vehicles	$33.5M	81.1%
Admin/Maintenance Facilities	$0.6M	1.5%
Bus Shelters/Customer Facilities	$1.3M	3.2%
Maintenance Equipment & Parts	$1.1M	2.6%
System Infrastructure	$1.0M	2.4%
Technology - Administrative	$0.5M	1.3%
Technology – Operations	$0.7M	1.8%
State of Good Repair Subtotal	$38.8M	93.9%
Minor Enhancement	*$2.5M*	*6.1%*
Total	**$41.3M***	**100.0%**

*Note: higher total than available funds, since reserve or other funding sources are used to fully fund the state participation for each project that obtained the last score funded.

HIGH REVENUE SCENARIO

This scenario is based on projected available state transit revenues as well as federal transit funds over which the state has discretion. The combined sources total $56.7 million. For the purpose of this exercise, the revenue scenario does not differentiate among the systems or projects that could receive these funds; however in actuality, DRPT would need to ensure that there are enough eligible projects in the funded list that could utilize these revenues. As in the low revenue scenario, the state participation rate is capped at 68%, and funding is split 95% and 5% between SGR and MIN respectively.

Funded Projects:

- SGR: 353 out of 370 projects
- MIN: 43 out of 93 projects
- Total: 401 out of 463 projects (87% funded)

Lowest Funded Score:

- SGR: 18, all scored projects are funded; projects that were not scored were not funded
- MIN: 28

State Participation Rate: 68%

Total State Funding Needed to Fully Fund All Projects: $60.8M

Unfunded State Share: $4.1M

Table 3 - High Revenue Scenario Results

State of Good Rapair by Category	**State Funding**	**Percent of Total**
Vehicle - Revenue Vehicles	$44.2M	78.6%
Admin/Maintenance Facilities	$0.7M	1.2%
Bus Shelters/Customer Facilities	$1.4M	2.5%
Maintenance Equipment & Parts	$1.4M	2.5%
System Infrastructure	$3.4M	6.0%
Technology - Administrative	$0.7M	1.3%
Technology - Operations	$1.3M	2.4%
State of Good Repair Subtotal	*$53.1M*	*94.5%*
Minor Enhancement	*$3.1M*	*5.5%*
Total	**$56.2M**	**100.0%**

OUTCOMES AND CONCLUSIONS

This analysis shows the implications of applying two different revenue amounts to a scored and prioritized list of projects seeking state capital assistance. These projects include SGR and Minor Enhancement projects, and do not include any Major Expansion or multi-year projects. In this analysis, a maximum state participation rate of 68% is used. The effective state participation rate for most projects is less than 68% from the state, as their need is first reduced by federal and local funds, before state funding is applied. To provide for some funding of Minor Enhancements, available revenues are partitioned, with 5% dedicated to Minor Enhancements, and 95% remaining for SGR.

The resulting funding outcomes of this analysis are based on the available data, and in practice, capital projects not included in this analysis (i.e. Major Expansions and Multi-Year projects) would be expected to receive a portion of the available revenues. While the analysis was simplified in terms of funding and project assumptions, the exercise fulfilled the purpose of testing illustrative results for implementation. The analysis shows that between 73 and 87% of the state of good repair and minor enhancement projects would be funded based on the assumptions in the analysis. The projects that would be funded represent a mix of asset types and geographic distribution that show the process results in a balanced program of projects.

The results are subject to change based on adjustments in available revenues, eligible projects, and further changes to the program structure or project scoring methodology.