



Virginia Department of Rail and Public Transportation

Performance-Based Operating Assistance Allocation Guidance

~~DRAFT – December 19, 2018~~

Fiscal Year 2020
July 1, 2019 – June 30, 2020

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INTRODUCTION AND OVERVIEW

Virginia's Department of Rail and Public Transportation (DRPT) allocates operating assistance funding to transit agencies across the Commonwealth through an allocation process based on the Code of Virginia and Commonwealth Transportation Board (CTB) policy. Beginning in Fiscal Year (FY) 2020 the entirety of each transit agency's allocation will be based on a new performance-based methodology.

This document describes the proposed methodology for allocating state operating assistance grants in Fiscal Year 2020 and future years.

DRPT, working with Virginia's Transit Service Delivery Advisory Committee (TSDAC), has developed a proposed methodology for allocating operating assistance funding to comply with a 2018 legislative mandate to base grant amounts on each agency's performance (Section 33.2-1526.1 of the *Code of Virginia*). This recommendation is subject to review and approval by the Commonwealth Transportation Board.

The metrics and their weights were considered during several meetings of the TSDAC and CTB in 2018. The proposed methodology balances the need for reliable annual funding as well as the availability and reliability of performance data to support the six policy goals TSDAC identified:

- Promote Fiscal Responsibility
- Support Robust Transit Service
- Improve Transit Patronage
- Incentivize Efficient Operations
- Promote Mobility
- Support Social Safety Net

OPERATING ASSISTANCE METHODOLOGY

PROPOSED PROCESS

The proposed performance-based operating allocation methodology would allocate operating assistance based on a combination of an agency's sizing and performance factors. Sizing factors represent an agency's relative size to other agencies across the Commonwealth. Performance factors represent an agency's performance trend for a given metric relative to statewide trends for all agencies.

The data required from each agency to compute the operating allocation formula includes:

- **Operating Cost for System Sizing:** Most recent audited operating cost available, net of depreciation, projects funded in other DRPT programs, and non-transit related expenses. New transit service will be based on budgeted operating costs for the year of implementation until audited operating costs are available.
- **Operating Cost for Performance Metric:** Total operating costs less depreciation, ineligible costs, and costs not related to transit.
- **Ridership** – Unlinked Passenger Trips - Number of passengers who board public transportation vehicles, regardless of whether a passenger is transferring from another transit vehicle.

- **Revenue Vehicle Hours (RVH)** - Hours traveled by revenue vehicles (buses, vans, railcars, etc.) while in revenue service. For uni-directional commuter routes greater than 20 miles in length, non-revenue hours associated with deadhead trips will be considered as revenue vehicle hours for the purpose of allocating operating assistance.
- **Revenue Vehicle Miles (RVM)** - Miles traveled by revenue vehicles while in revenue service. For uni-directional commuter routes greater than 20 miles in length, non-revenue miles associated with deadhead trips will be considered as revenue vehicle miles for the purpose of allocating operating assistance.
- **Passenger Miles Traveled (PMT)** - Cumulative sum of the distances traveled by each passenger. This metric is used for calculation of the Commuter Rail Pool, and is estimated for small transit agencies based on reported ridership relative to statewide average distance traveled by commuter rail and commuter bus agency passengers.

COMMUTER RAIL ~~POOL~~SIZING

Due to the unique cost structure of Commuter Rail compared to other transit services, Commuter Rail receives a unique treatment in the sizing process. Currently, the only Commuter Rail agency in the Commonwealth of Virginia is Virginia Railway Express (VRE). The **size-weight** for the Commuter Rail pool is calculated by taking the percentage of VRE's Passenger Miles Traveled, Revenue Vehicle Hours, and Revenue Vehicle Miles compared to statewide totals. Each factor is weighted at 1/3 (33.33%) and multiplied by the total amount of operating assistance available statewide.

- 33.33% Passenger Miles Traveled
- 33.33% Revenue Vehicle Hours
- 33.33% Revenue Vehicle Miles

Funds not allocated to ~~the~~ Commuter Rail ~~pool are based on this sizing metric are~~ allocated to the remainder of transit agencies on the basis of the sizing factors described below.

The ~~Commuter-commuter Rail-rail~~ allocations ~~is are~~ then adjusted by the performance metrics to establish the annual allocation by agency.

SIZING

To correlate funding allocations with the relative size of each agency, a **size-weight** factor is calculated with a combination of sizing metrics, at specific percentage weights. The size-weight for each metric is computed in the following manner:

$$\text{Agency Size-Weight} = (\text{Sum of Agency Sizing Metric} / \text{Statewide Totals}) * \text{Weight}$$

The proposed sizing metrics and weights for the sizing formula are:

- 50% Operating Cost
- 30% Ridership
- 10% Revenue Vehicle Hours
- 10% Revenue Vehicle Miles

If the statewide sum of agency size-weights does not equal 100%, then the ratios are normalized such that the statewide sum of size-weights for all agencies totals 100%.

$$\text{Agency Normalized Size-Weight} = \text{Agency Size-Weight} / \text{Sum of Statewide Size-Weights}$$

PERFORMANCE ADJUSTMENTS

Once the **normalized size-weight** for each agency has been determined, the size-weight is adjusted by the five **performance metrics**.

The proposed performance metrics are:

- Passengers per Revenue Vehicle Hour
- Passengers per Revenue Vehicle Mile
- Operating Cost per Revenue Vehicle Hour
- Operating Cost per Revenue Vehicle Mile
- Operating Cost per Passenger

For each performance metric, three years of historical data plus the most recent year of data is used to calculate performance trends for each agency and statewide. Each agency's three-year trend in year-over-year percentage change relative to the statewide trend is calculated. The formula for this trend is:

$$\text{Trend Factors} = 3\text{-Year Average of (Annual Change in each Agency's Performance Metric} / \text{Annual Change in Statewide Performance Metric)}$$

For Passengers per Revenue Vehicle Hour and Passengers per Revenue Vehicle Mile, these **trend factors** are then multiplied by the size-weight to compute a **size-performance weight**.

$$\text{Size-Performance Weight} = \text{Agency Size-Weight} * \text{Trend Factor}$$

For Operating Cost per Revenue Vehicle Hour, Operating Cost per Revenue Vehicle Mile, and Operating Cost per Passenger, an inverse function is used, and the size-weight is multiplied by 1 divided by the trend factor, to incentivize decreasing Cost trends.

$$\text{Size-Performance Weight} = (\text{Agency Size-Weight} * 1) / \text{Operating Cost-based Trend Factor}$$

All size-performance weights are then normalized such that the statewide sum of size-weights for all agencies for each metric are equal to 100%.

$$\text{Agency Normalized Size-Performance Weight} = \text{Agency Size-Performance Weight} / \text{Sum of Statewide Size-Performance Weights}$$

FUNDING ALLOCATIONS

At this stage, each agency has 5 normalized size-performance weight factors. These factors are multiplied by their weight (20% for each performance metric), summed, and multiplied by total available funding. This sum is the agency's total operating assistance allocation.

Agency Funding Allocation = Available Funding *

$$\begin{aligned}
 & [(Passengers\ per\ RVH\ Normalized\ Size-Performance\ Weight * 20\%) + \\
 & (Passengers\ per\ RVM\ Normalized\ Size-Performance\ Weight * 20\%) + \\
 & (Operating\ Cost\ per\ RVH\ Normalized\ Size-Performance\ Weight * 20\%) + \\
 & (Operating\ Cost\ per\ RVM\ Normalized\ Size-Performance\ Weight * 20\%) + \\
 & (Operating\ Cost\ per\ Passenger\ Normalized\ Size-Performance\ Weight * 20\%)]
 \end{aligned}$$

FUNDING CAP

A cap on funding allocations is used to minimize the volatility of funding received by each agency. The cap is proposed to be set at 30% of an Agency’s latest year of operating costs. The recommended percentage is informed by the highest operating assistance grant received under the FY 2019 allocation methodology by Virginia transit agencies, which is generally below 30% of operating costs. After applying this cap to the operating assistance allocation, an unallocated funding pool remains. These funds are proposed to be redistributed to agencies below this cap proportional to their Agency Funding Allocation.

TRANSITION METHODOLOGY (FY2020)

In order to lessen the impacts of the new methodology on the predictability of agency funding, ~~two~~one transition years ~~are~~was proposed by ~~TSDAC-DRPT~~ to progressively adjust the sizing metrics.

-The proposal is for the Operating Cost ~~sizing formula~~ to be weighted at 60% and for Ridership at 20% for the sizing metrics in FY2020. For FY2021 onward, ~~the~~ Operating Cost ~~sizing formula is~~ will proposed to be weighted at 50% and for Ridership at 30% in the sizing metrics.

SIZING METRICS	TRANSITION YEAR ±	FUTURE YEARS
	FY2020	FY2021 ONWARD
Operating Cost	60%	50%
Ridership	20%	30%
Revenue Vehicle Hours	10%	10%
Revenue Vehicle Miles	10%	10%

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