To: Chairman Cook and the VRE Operations Board
From: Doug Allen
Date: September 18, 2015
Re: Financial Plan Discussion

VRE staff and our consultants, the PFM Group, have been working on the development of a long term strategic planning model since February 2015. At the July 17, 2015 Operations Board meeting, the PFM Group provided a presentation on the operating and capital costs associated with the implementation of System Plan 2040 and a range of other system alternatives. Because of time constraints, the presentation was not completed and the Board did not have the planned discussion.

At the Operations Board meeting on September 18, 2015, PFM and VRE staff will provide a summary of the information prepared for the July Board meeting. The purpose of the discussion will be to develop a consensus regarding the future service profile for the system and the desired next steps.

The key conclusions from the financial forecasting effort are summarized below:

- Regardless of the service profile:
  - Operating expenses will escalate and additional revenue will be needed for VRE to be financially balanced over the long term.
  - A significant level of capital investment is required that cannot be handled with currently identified capital funding sources.
  - NVTA funding has created an imbalance among the VRE jurisdictions in the ability to identify funding sources for VRE related capital needs.
- Raising fares to close the financial gap is not a viable solution on its own.

- Higher ridership associated with enhanced service levels could defray some of the future operating and capital costs.

- VRE needs additional dedicated revenue beyond the sources which exist today, even to maintain the status quo.

The following additional materials are provided:

- VRE Financial Plan Analysis
  - Appendix A – charts showing the average additional operating revenue needed for each scenario and the total additional capital revenue needed for each scenario
  - Appendix B - charts showing the additional average annual revenue needed to meet both operating and capital needs and to create a financially balanced plan
  - Appendix C - an updated version of the presentation prepared for the July 17, 2015 Operations Board meeting, which includes the underlying assumptions for service level, ridership, operating expense and capital expenditures imbedded in each scenario
VRE Financial Plan Analysis
September 18, 2015

VRE and PFM have been working on the development of a long term strategic financial planning model since February 2015. The primary objective of this effort was to provide a financial forecast (revenue, operating expense and capital expense) to match varying operational and service profiles that VRE might pursue in its efforts toward implementing its System Plan 2040. Five scenarios were developed for evaluation.

The purpose of this report is to summarize the forecasted financial results and primary conclusions that have come from evaluating each of these scenarios.

Scenario Descriptions and Key Findings

Based upon discussion with the Operations Board at their May 15, 2015 meeting and discussions with VRE executive, finance, planning and operating staff, five scenarios were developed, as described on the following pages.

The underlying assumptions for service level, ridership, operating expense and capital expenditures imbedded in each scenario are detailed in the three attachments to this memo. Attachments A and B are a series of bar charts, and Attachment C is an updated copy of the presentation offered to the Operations Board at the July 17, 2015 meeting pertaining to this topic. Since the time of the presentation, additional data has been incorporated in the model. None of these enhancements substantially alter the outcomes and conclusions in this memo or previously.

Since the presentation on July 17, 2015, VRE staff have made estimates of potential discretionary funding that could reduce the unfunded capital expenditures. These estimates were of various types and include: 1) funding from discretionary sources such as NVTA and CMAQ, based on historical experience; 2) DRPT funding of the 3rd track project; and 3) receipt of major capital investment grants from FTA without which certain large-scale projects could not be implemented (Long Bridge and Gainesville-Haymarket extension).
**Baseline of Financially Constrained Scenario:**

The Baseline Scenario is a financially constrained scenario that demonstrates what operations would look like with no additional resources beyond 3% fare and subsidy increases in alternating years. The scenario starts with a forecasted amount of constrained revenue and then illustrates the operational impacts of reducing operating expenses and service to match the constrained revenue. Given the operational nature of this scenario, it was developed outside the model. Operationally, this scenario results in the unwinding of VRE's service, trains being taken out of service and raises concern regarding VRE's financial obligations to meet the federal interest in its equipment.

**Key Findings for Baseline Financially Constrained Scenario:** This scenario requires a repeating pattern of service reductions to stay within the available revenue. Service reductions would cause overcrowding, eventually leading to fewer riders using VRE. The scenario showed VRE ceasing operation by 2033 under this alternative, even with the 3% subsidy and fare increase every other year.

**Ridership Equal Scenario:**

This scenario keeps VRE service and ridership levels as they are currently. Local subsidy escalates at 3% every other year, yet operating costs still exceed operating revenue. Financial balance is achieved by raising fares to the level necessary to eliminate any gap between revenue and expense.

**Key Findings for Ridership Equal Scenario:** This scenario achieves fiscal balance for operations primarily through higher fares (fares increase to over $20 in FY40 (in current year dollars)). Such fare increases would likely change VRE ridership's profile. This scenario could result in deferred boarding and shifting subsidy burden to outer jurisdictions. Although operating revenue and operating expense are balanced, this scenario has future capital requirements of $2.6B, approximately $770M of which is funded, $1.4B is assumed to be available from other parties, and $500M remains unfunded. The unfunded projects are primarily related to match contributions for the Long Bridge and system projects such as the replacement of rolling stock. VRE would continue to serve around 19,000 daily riders in this scenario.
**Natural Growth Scenario:**

This scenario reflects VRE continuing to serve our base market and the “natural” growth in the region that is expected, based on Metropolitan Washington Council of Governments cooperative forecasts of regional growth in population and employment. This is achieved with longer trains, longer platforms, more parking and expanded rail yards. The Natural Growth scenario assumes fares and the local subsidy grow at 3% in alternating years.

**Key Findings for Natural Growth Scenario:** Average additional annual operating revenue would be needed ($5.2M in the near term, defined as FY2016-FY2030, to $15.5M in the longer term, FY2031 to FY2040) primarily for contracted train operations and access fees. The future capital requirements for this scenario would be $3.2B, primarily for track and signal, station and parking, and rolling stock investments. Of this $3.2B, approximately $800M is funded, $1.5B is assumed to be available from other parties, and $870M remains unfunded. It is important to note that $2.6B of this capital requirement represents core capital projects that would be required regardless of the scenario chosen. Even though the number of trains remains at 32 peak-oriented trips per day, ridership levels would increase to over 30,000 riders per day in the out years because of the increased capacity.

**Modified Service Expansion Scenario:**

This scenario builds off the Natural Growth scenario and reflects some of the System Plan 2040 service recommendations such as adding peak trains (eventually doubling the number of daily trains to 64) and the Gainesville-Haymarket extension. Even assuming that fares and the local subsidy grow at 3% every other year, this scenario forecasts a need for additional operating revenue to achieve financial balance.

**Key Findings for Modified Service Expansion Scenario:** Average additional annual revenue would be needed ($5.4M in the near term to $20M in longer term) primarily for contracted train operations and access fees. The future capital requirements would be $4B, primarily for track and signal, station and parking, and rolling stock investments. Of this $4B, approximately $820M is funded, $2B is assumed to be available from other parties, and $1.3B remains unfunded. The increased capacity with more frequent trains and lengthened
span of service, including more frequent midday service and reverse peak service, along with the Gainesville-Haymarket extension would result in approximately 45,000 daily riders.

**System Plan 2040:**

This scenario forecasts the financial outcomes expected with the full implementation of VRE’s System Plan 2040. Assuming that fares and the local subsidy grows at 3% every other year, this scenario forecasts a need for additional revenue to achieve financial balance.

**Key Finding for System Plan 2040 Scenario:** Average additional annual revenue needed would be similar to the previous scenario ($4.2M in the near term to $16.5M in longer term) primarily for contracted train operations and access fees. This scenario needs slightly less additional operating revenue compared to the Modified Service Expansion scenario because the higher ridership generates more fare revenue. The future capital requirements would also be similar (to the Modified Service Expansion scenario) at $4.1B, primarily for track and signal, station and parking, and rolling stock investments. Of this $4.1B, approximately $830M is funded, $2B is assumed to be available from other parties, and $1.3B remains unfunded. The increased capacity with the additional trains and lengthened span of service, including midday service would result in approximately 52,000 daily riders.

To help with the comparison among scenarios, tables accompany this memo that show the additional operating and capital funds needed by scenario and the estimated daily ridership associated with each scenario. A table is also included that provides an estimate of the additional revenue needed on an annual basis in order to meet a combination of the unfunded operating and net, unfunded capital needs during the period reviewed.

**Conclusions**

Without intending to minimize the level of detailed analysis underpinning each scenario, we offer the following key conclusions and takeaways from the review of each scenario, individually and as a group:
A. Under any service profile, forecast growth in VRE’s operational expenses is driven primarily by VRE’s contractual agreements with its operator and the obligation to pay access fees to host railroads. Taken together, these categories of cost were budgeted at $31.5 million in VRE’s FY2016 budget, nearly 40% of its total operating expenses. Whether VRE pursues an expansion of its service profile or continues existing service levels, operating expenses will escalate. Even with a multi-year plan for regular, modest fare increases and regular local subsidy increases (such as 3% every other year), additional revenue will be needed for VRE to be financially balanced over the long term.

B. Regardless of scenario, VRE has a core level of capital investment that is significant. While each scenario has a differing level of capital investment, all scenarios have a common universe of needed capital investment totaling $2.6 billion that must be met over the period from FY2016 to FY2040. This capital need is driven by the VRE-DRPT-CSX MOU to complete a third main track between Washington, D.C. and Fredericksburg (including expansion of the Long Bridge over the Potomac River) and the need to maintain, renew and replace existing rolling stock over the next 20+ years. VRE is able to fund approximately $2.2B of the $2.6 billion, on average, between the various scenarios, using estimates of both federal formula funds and the funds provided by other parties, including the funds committed by DRPT for the 3rd track project. However, the core amount of capital expenditures cannot be fully defrayed with existing sources of funds alone. Moreover, there is a significant imbalance between the capital funds available for projects within the NVTA region and those outside the NVTA region. This imbalance constrains the ability to implement needed capital improvements in non-NVTA jurisdictions and limits the funds available to the system as a whole.

C. Raising fares to close the financial gap is not a viable solution on its own. Ridership Equal assumes that fares are raised to close the financial gap, resulting in an average fare of $20.56 incurred in FY40 (in 2016 dollars, vs. the current average fare of $7.90) and a reduction in ridership due to expectations regarding the elasticity of demand. The other scenarios are based on every other year fare increases of 3%; however, to close the annual operating financial gaps in the Modified Service Expansion and System Plan 2040 scenarios using fare increases
alone, average fares would need to be raised to $15.04 and $13.81, respectively. While these levels of fare increases eliminates financial deficits for operations, it also drives VRE’s fare box recovery ratio to 68% and would tend to skew the ridership away from those who do not have transit benefits or are otherwise particularly sensitive to fare levels. Moreover, VRE has not consistently implemented multiple fare increases over a short period of time as contemplated by the financially balanced versions of these two scenarios; in practice, a significant rate rising regime could result in lower ridership than what the model’s demand elasticity assumption contemplates.

D. Higher ridership due to enhanced service levels could defray future operating & capital costs. As noted above in A and B, VRE faces escalating costs even under the status quo. The financial forecasts for enhanced service levels in the Modified Service Expansion and System Plan 2040 scenarios illustrate that VRE could realize certain operating economies of scale and generate additional revenue from new riders, despite the higher capital expenditures needed to implement these scenarios.

E. VRE needs additional revenue beyond the sources which exist today, even if it is to maintain the status quo. Each of VRE’s existing sources of revenue has its limitations. State and federal sources of funds are outside of VRE’s direct control and subject to a wide range of influencing factors. Local subsidies are limited by individual jurisdictions’ ability to pay, and their need to balance their local budgets to meet many competing priorities. Lastly, fares are driven by market factors, and demand is elastic. A reliable and predictable revenue stream is needed to meet a forecast of known escalating costs tied to contractual obligations with VRE’s operator and the railroads. A new revenue stream is also needed to fund a core amount of capital expenditures necessary to maintain, renew and replace VRE’s equipment to assure a state of good repair. A reliable and predictable revenue stream for both operating and capital (equipment-related) expenses would permit VRE to be financially sustainable over the long term.
Next Steps

These scenarios portray different operating profiles that VRE may decide to pursue and the attendant financial forecasts. The next step in the process is to develop a consensus regarding the future service profile for the system and develop a multi-year financial plan which is financially balanced reflecting that vision. A key part of developing a balanced financial plan will entail the identification and evaluation of potential new revenue streams beyond those that VRE currently employs today.
Appendix A

The charts below show the average additional operating revenue needed for each scenario, and the breakdown of total capital expenditures required to support the buildout of each scenario.

### Average Annual Operating Revenue Needed

![Average Annual Operating Revenue Needed Chart]

### Total Capital Expenditures (FY16-FY40)

![Total Capital Expenditures Chart]
Appendix B

The charts below show the average annual additional operating revenue and capital expenditure funding needed for each scenario in order to create a financially balanced plan.