

ITEM 7 – Action
October 18, 2017

Visualize 2045: Technical Inputs
Solicitation for the Constrained Element
And Air Quality Conformity Analysis

Staff

Recommendation: Approve Visualize 2045 Solicitation of Inputs for the Constrained Element and the Air Quality Conformity Analysis.

Issues: None

Background: The Visualize 2045 Constrained Element will identify all regionally significant transportation investments the region can demonstrate we can afford between now and 2045. Federal law requires that this collection of projects and programs be analyzed to ensure that future vehicle-related emissions remain below approved regional limits.

Last month, the board was briefed on the process, schedule, and requirements for the federally required Air Quality Conformity Analysis of the Constrained Element. The board was asked for feedback on a draft Technical Inputs Solicitation (previously known as the Call for Projects) asking agencies to submit projects, programs, and policy updates for

inclusion in the Constrained Element and conformity analysis. This month, the TPB will be asked to approve the Technical Inputs Solicitation, which will be open from October 18 to November 15. The results of the Initial Financial Analysis and the Public Input Survey, carried out this summer, will also be provided.



MEMORANDUM

TO: Transportation Planning Board
FROM: Eric Randall, TPB Transportation Engineer
SUBJECT: Update on Visualize 2045 Long-Range Transportation Plan Financial Element
DATE: October 12, 2017

Visualize 2045 is the federally required long-range transportation plan for the National Capital Region. It will identify all regionally significant transportation investments planned through 2045 and provide detailed analysis to help decision makers and the public “visualize” the region’s future under current plans. This memorandum provides an update on the initial financial analysis which will inform the Technical Inputs Solicitation and conformity inputs for Visualize 2045.

REVENUE AND EXPENDITURE PROJECTIONS

Major agencies (State DOTs, WMATA, and NVTA) completed their revenue forecasts for the period 2019 through 2045 in September. Approximately \$235 billion in reasonably anticipated revenues has been forecast through 2045. Revenue estimates from many of the local jurisdictions are anticipated in the new few weeks. Revenue estimates will have to be completed and assumptions finalized no later than January 17, 2018, when the TPB is scheduled to approve technical inputs for the start of the conformity analysis. Additionally, the staff analysis to test and demonstrate fiscal constraint of the long-range plan with regard to funding availability for projects and programs will need to be completed by this date. Outstanding issues that need to be addressed prior to this date include funding for WMATA’s state of good repair program and state support for the Virginia local transit services.

The major agencies in the region also completed their review and update of currently planned projects and programs in the TIP/CLRP database in September. Approximately \$267 billion in currently planned or needed expenditures on the region’s highway and transit systems has been identified through 2045, including highways, Metro, commuter rail, and local transit systems. This includes funding for operations and state of good repair of the current system, the capital costs of currently planned additions to the highway and transit system, and also operations and state of good repair expenditures for these planned additions. This initial expenditure forecast will be modified by any additions or modifications to the highway and transit system in the responses to the Technical Inputs Solicitation. These inputs are due by November 15, 2017, and are scheduled to be released for public comment on December 14, 2017.

NEXT STEPS

TPB staff will work closely with the State DOTs and other funding agencies over the coming months towards a reconciliation of revenues and expenditures to meet the fiscal constraint requirement for the Constrained Element of Visualize 2045. TPB staff will continue to monitor the regional transit funding discussions and will coordinate with the major agencies in the region as they adjust their revenues and expenditures with their project and program inputs to then enable a determination of financial constraint. The financial element will then be finalized as part of the Visualize 2045 long range plan when submitted for approval by the TPB in October 2018.



MEMORANDUM

TO: Transportation Planning Board
FROM: Lori Zeller, TPB Transportation Planner
Ben Hampton, TPB Transportation Planner
SUBJECT: Visualize 2045 Public Input Survey: Preliminary Findings
DATE: October 12, 2017

INTRODUCTION

This memo presents preliminary findings from the Visualize 2045 Public Input Survey conducted over the summer of 2017. The survey aimed to gather people's general attitudes and opinions about transportation in the region for the purpose of informing ongoing discussions among elected officials and regional planners throughout the development of the Visualize 2045 long-range plan and beyond. The results of this and other public outreach activities will be included as a chapter in the final Visualize 2045 plan for use by leaders and planners as they continue to discuss, identify, and develop potential improvements to the region's transportation system.

Because it has been only a short time since the public input survey closed, this memo highlights a small number of "preliminary" findings that stood out during the initial tabulation and review of responses. More in-depth analysis will take place this fall and winter, and a complete report of survey findings will be published in early 2018.

The structure of this memo is as follows: First, we describe the background of the survey and the methods used to gather responses. Next, we share a few high-level findings from each of the main categories of questions asked in the survey, which were: 1) top factors which influence people's travel choices; 2) issues which affect people's travel experience; and 3) respondents' ideas for improving the region's transportation system. We then share some preliminary data showing the geographic breakdown of survey respondents and conclude with anticipated next steps for analysis.

BACKGROUND: VISUALIZE 2045 PUBLIC INPUT SURVEY

The Visualize 2045 Public Input Survey was open for eight weeks, from June 17 to August 21, 2017. The survey aimed to gather general attitudes and opinions about transportation in the region. The purpose of gathering such information was to inform ongoing discussions among elected officials and regional planners throughout the development of the Visualize 2045 long-range plan and beyond.

The survey used MetroQuest public engagement software and was available in English and Spanish versions. The simple, fun, and interactive online survey tool asked respondents about:

- Daily travel behaviors and patterns
- Key issues related to reliability, affordability, travel time, travel options, and safety

- Suggestions for transportation projects or other improvements
- Sociodemographic characteristics

Note: View a live “demo” version of the survey: <https://visualize2045-demo.metroquest.com>.

Two different methodologies were used to gather responses to the public input survey: a random sample and an “open survey.” The random sample was meant to capture a geographically representative sample of the region while the open survey was available for any member of the public who wanted to participate.

- **Random Sample.** The random sample approach used a probability-based random sample of adults residing in households located within local jurisdictions comprising the TPB Planning Area (for a list of these jurisdictions, see the tables on page 6), in order to obtain a geographically representative sample. Households were selected to participate in the survey using an address-based sampling method and randomly selected households were invited by mail to complete the survey using a web link and a unique PIN provided in the invitation letter. To ensure a random survey, the adult household member whose birthday was next after receipt of the letter was asked to complete the survey. A \$15 gift card incentive was provided upon completion.
- **Open survey.** The open survey was available for any member of the public who wanted to participate. In order to generate a wide response to the open survey, a multifaceted public outreach strategy was developed to reach a broad cross-section of the region’s population, which is described in more detail in the memo entitled “[Visualize 2045 Public Outreach: Summary of Phase 1 Activities](#)”¹. The open survey was not designed to be statistically representative of any sociodemographic factor and was not designed to be geographically representative. Respondents to the open survey had the option of providing their e-mail address to be entered into a drawing for a chance to win one of ten \$50 Visa gift cards.

Both the random sample and open surveys were conducted concurrently and used the same web-based MetroQuest tool and survey questionnaire.

In total, there were 755 respondents in the random sample and 5,460 respondents to the open survey, for a total of 6,215 respondents.

This memo presents high-level findings from the combined responses to the two samples. The findings presented here are consistent between both the random sample and the open survey. A more detailed analysis of the survey results will be presented early in 2018.

¹ Full URL for the “Visualize 2045 Public Outreach: Summary of Phase 1 Activities” memo is: <https://www.mwcog.org/file.aspx?&A=9%2btXAwqPpzJaAJqYTbPjkT%2bnOuyWhJgYZX6BMyTtHWM%3d>

WHAT FACTORS INFLUENCE PEOPLE'S TRAVEL CHOICES THE MOST?

Survey respondents were asked to identify what factors have the greatest influence on their decisions about how, when, and where to travel. The survey provided a list of five factors to choose from—reliability, affordability, travel time, travel options, and safety—and gave respondents the option to add other factors not mentioned on the list:

What's important to you?

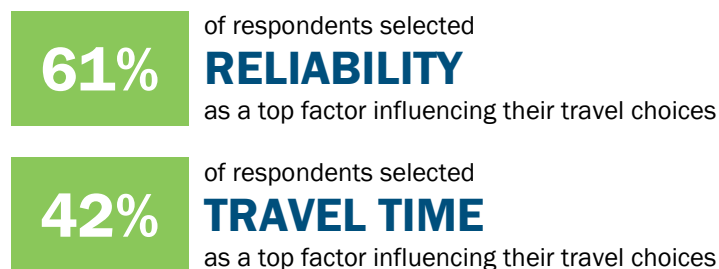
We all have different priorities when it comes to making decisions about how we get where we're going. Which factors have the greatest influence on the travel choices you make every day? (Choose two.)

Reliability	"It's important that I can count on getting where I'm going on time without unexpected delays."
Affordability	"It's important that I can afford the travel options that work best for me."
Travel Time	"It's important that I can get where I want to go as quickly as possible."
Travel Options	"It's important that I have options other than driving to get where I want to go."
Safety	"It's important that I feel safe from personal harm or injury when traveling."

"Reliability" and "Travel Time" were most often selected as top factors influencing people's travel choices. Reliability stood out as the most important factor to more than half (61 percent) of all respondents. The overwhelming response for "Reliability" placed it far ahead of the other factors. Clearly, people in the region want to be able to rely on their daily travel to get them where they are going on time and without unexpected delays.

Travel time was the second-most important factor to travelers, selected by 42 percent of respondents as one of the top two factors influencing their travel choices. This shows that people want their trips to be reliable, and they seek to reach their destinations in the shortest amount of time possible.

Top Factors Influencing People's Travel Choices



WHAT ISSUES AFFECT PEOPLE'S TRAVEL EXPERIENCE THE MOST?

Survey respondents were also asked to evaluate how different issues affect their travel experience. The purpose of asking this question was to learn more about what people in the region see as the biggest barriers to having an improved transportation experience.

The survey asked respondents about 20 different issues, grouped into categories according to the five factors on the preceding screen. Respondents were asked to rate each issue on a scale of "1" to "5", with higher ratings signifying a greater impact. As before, respondents had the opportunity to add other issues not mentioned, or to provide qualitative comments on their responses.

What affects your travel?

How much do each of the issues on this screen affect your travel? Rate each issue on a scale of "1" to "5", with higher ratings signifying a greater impact on your travel.

Reliability	Affordability	Travel Time	Travel Options	Safety
Traffic Congestion	Vehicle Ownership Costs	Time Spent in Traffic	Need for Rail Transit	Dangerous Driving
Traffic Incidents	Tolls and Parking	Time Needed for Transit	Need for Bus Transit	Infrastructure Conditions
Train Delays	Rail Fares	Lack of Faster Options	Need for Driving Options	Crime
Bus Delays	Bus Fares	Distance to Destinations	Need for Walking and Bicycling	Street Design

"Traffic congestion," "Time spent in traffic," and "Need for rail transit" rose to the top as affecting people's travel experience the most. These were the top-three rated issues in both the random sample and open survey. For all three issues, at least 55 percent of responses assigned a rating of "4" or "5" on a scale of "1" to "5", indicating a high impact on their travel experience.

Top Issues Affecting People's Travel Experience

TRAFFIC CONGESTION

"Traffic on the roads makes it hard for me to get where I'm going on time."

TIME SPENT IN TRAFFIC

"Traffic makes it take too long to drive where I need to go."

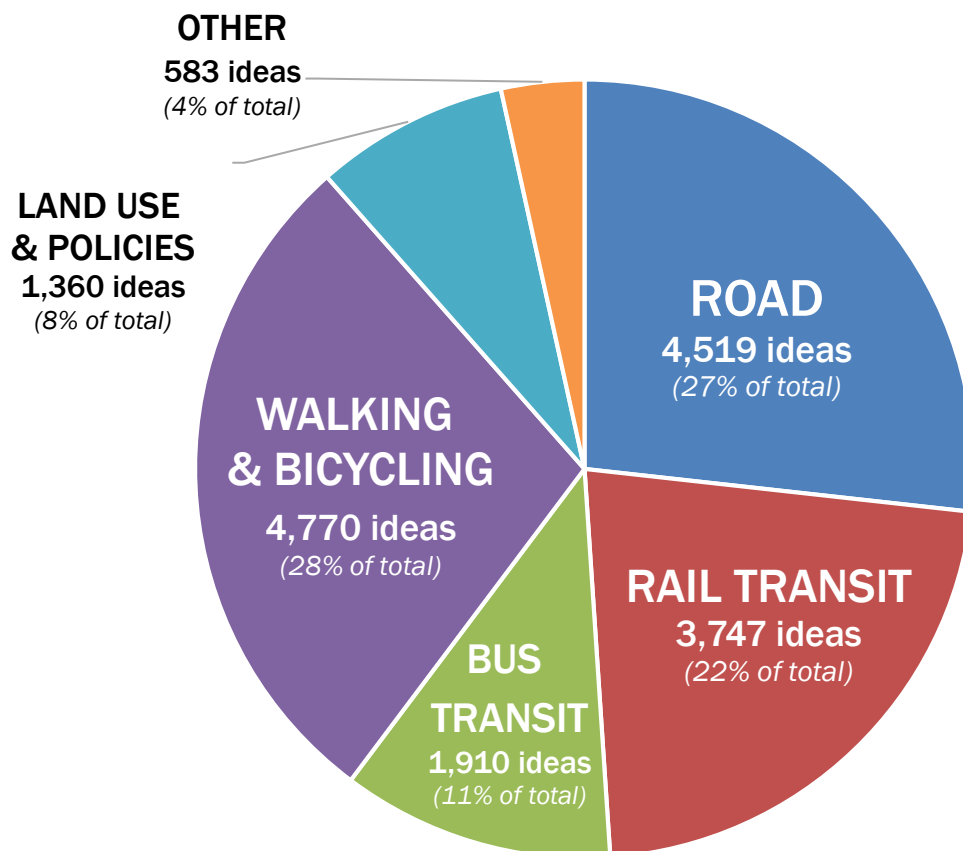
NEED FOR RAIL TRANSIT

"More or better rail transit options would make my travel experience better."

WHAT IDEAS DO PEOPLE HAVE FOR IMPROVING THE TRANSPORTATION SYSTEM?

Finally, respondents were invited to submit their ideas and suggestions for ways to make the region's transportation system better. Respondents could drag and drop markers onto an interactive map to identify where and what kind of improvement they thought should be made. Six main types of improvements were provided as options: road, rail transit, bus transit, walking and bicycling, land-use and policies, and other. Within each of these categories were further options, including improvements to existing facilities, construction of new facilities, and service expansions.

A total of 16,889 markers were placed on the map. The markers were spread throughout the region and included numerous ideas within each of the modal categories. Deeper analysis of these ideas and suggestions will be forthcoming in future analyses of the survey responses.



WHERE DO VISUALIZE 2045 SURVEY RESPONDENTS LIVE?

The survey aimed to reach a broad and diverse cross-section of the region's population. One particular focus was on geographic diversity. The random sample employed a sampling methodology designed specifically to capture a geographically representative sample of households in the region. The open survey, though less scientifically structured in its approach, also employed strategies aimed at reaching people in all parts of the region.

The tables below show the jurisdiction of residence of survey respondents, separated by the random sample and open survey. The tables also show the breakdown of responses by geographic sub-area (Urban Core, Inner Suburbs, Outer Suburbs). Responses were received from each of the TPB's 23 member jurisdictions. Future analysis will identify jurisdictions and sub-areas which were over- and under-represented in the random sample. It will also show the make-up of both samples in terms of other sociodemographic factors, including age, gender, race and ethnicity, disability status, income, and usual travel mode.

RANDOM SAMPLE		OPEN SURVEY	
Sub-Area/Jurisdiction	Respondents	Sub-Area/Jurisdiction	Respondents
Urban Core	213	Urban Core	1,657
City of Alexandria	29	City of Alexandria	152
Arlington County	49	Arlington County	351
District of Columbia	135	District of Columbia	1,154
Inner Suburb	395	Inner Suburb	1,969
Fairfax County*	167	Fairfax County*	723
Montgomery County	134	Montgomery County	993
Prince George's County	94	Prince George's County	253
Outer Suburb	147	Outer Suburb	897
Charles County	16	Charles County	87
Fauquier Urbanized Area	3	Fauquier Urbanized Area	14
Frederick County	35	Frederick County	250
Loudoun County	41	Loudoun County	134
Prince William County*	52	Prince William County*	412
TOTAL	755	Outside TPB Planning Area	386
		Total Reporting a ZIP Code	4,909
		No ZIP Code Reported	551
		TOTAL RESPONDENTS	5,460

NOTE: The Fairfax County total includes the independent cities of Fairfax and Falls Church and the Prince William County total includes the independent cities of Manassas and Manassas Park.

NEXT STEPS FOR ANALYSIS

Over the next few months, we will be analyzing the survey data in more detail to develop a comprehensive picture of attitudes and opinions about the region's transportation system. This more in-depth analysis will feature cross-tabulations to shed light on associations between responses. The categories of survey response data we will be working with include:

- Factors which influence people's travel choices
- Issues which affect people's travel experience
- Ideas for improving the transportation system
- Sociodemographic data (mode of travel used most frequently, race and ethnicity, income, age, gender, disability status, and home location)

Some questions we are planning to look at include:

- Did people's responses differ based on the travel mode they use most frequently?
- Did people's responses differ based on their sociodemographic characteristics such as income, race and ethnicity, gender, and disability status?
- How do respondents' selection of priorities relate to their rating of issues?
- Where are there high concentrations of ideas for transportation improvements?

The analysis will be summarized in a final report, which is planned to be released in early 2018. The results of the survey aim to inform ongoing discussions among elected officials and regional planners throughout the development of the Visualize 2045 long-range plan and beyond. The results of this and other public outreach activities will be included as a chapter in the final Visualize 2045 plan for use by leaders and planners as they continue to discuss, identify, and develop potential improvements to the region's transportation system.

Technical Inputs Solicitation for the Constrained Element and Air Quality Conformity Analysis

Andrew Austin, Eric Randall, Lori Zeller

Transportation Planning Board
October 18, 2017



Federal Requirements

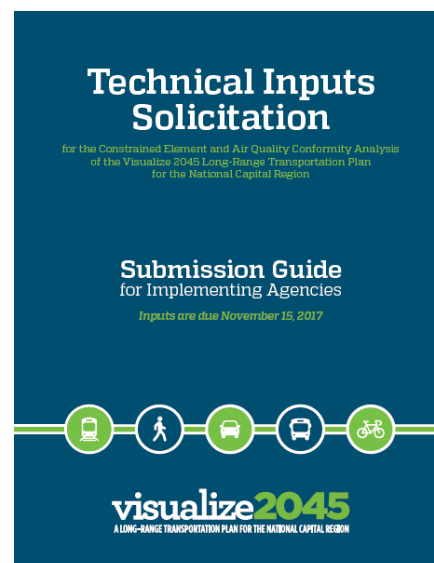
- **Financial Constraint**
Sufficient funding from existing or anticipated revenue sources must be demonstrated to be “reasonably expected to be available” to build, operate, and maintain the planned transportation system.
- **Air Quality Conformity**
Vehicle-related emissions under the Constrained Element of the plan must remain below approved regional limits.

Visualize 2045 Timeline

January 2017	Update Kickoff
Summer 2017	Public Outreach Phase 1 Financial Analysis Begins
Fall 2017	Technical Inputs Solicitation Initial Financial Analysis
Winter/Spring 2018	Planning Factors Analysis
Spring/Summer 2018	Technical Analysis
October 2018	Final TPB Approval

Technical Inputs Solicitation

- Previously known as the Call for Projects
- Provides necessary inputs for Constrained Element and Air Quality Conformity Analysis
- **TODAY: Act to approve the solicitation and officially open the solicitation period!**



Main Input Categories

- ✓ Roadway Projects
- ✓ Transit Projects
- ✓ Bicycle or Pedestrian Projects
- ✓ Operations and Maintenance Programs
- ✓ Transit Service and Fare Assumptions

Solicitation Schedule

Solicitation Opens	October 18
Solicitation Closes	November 15
Staff Review of Inputs	November
Committee and Board Review of Inputs	December
Comment Period	December 14–January 13
Review of Comments and Board Approval	January 17, 2018

Your Role

- Become acquainted with project and program details
- Ensure key questions are answered and details are provided
- Ensure consistency with locally adopted plans and priorities
- Ensure that sufficient local input from the public and local officials has been provided
- Discuss whether and how submissions support regional policy goals and priorities



Regional Policy Considerations



Initial Financial Analysis

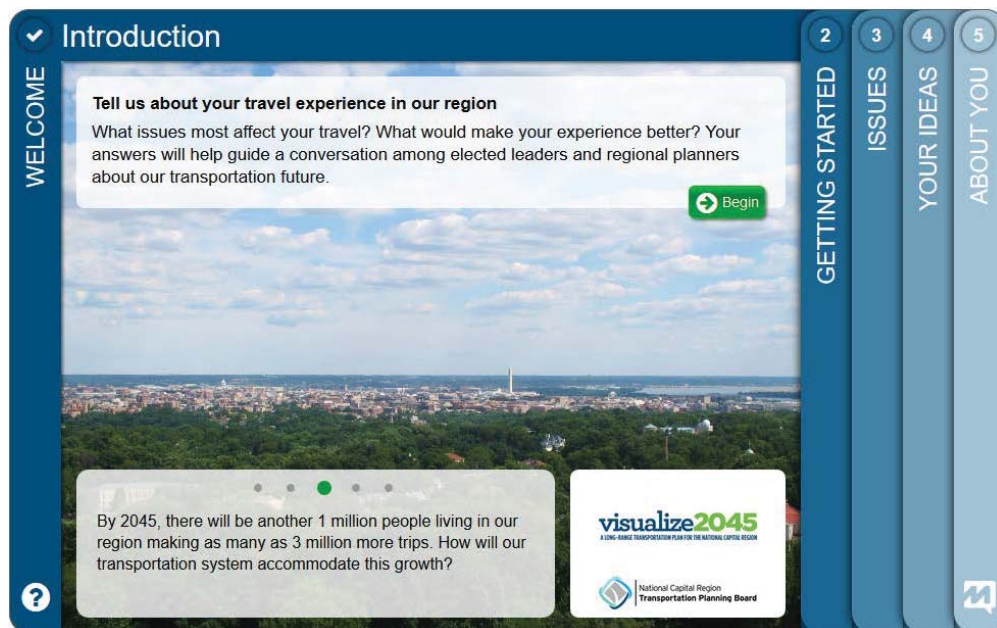
- **“Financial constraint” requirement:** *Sufficient funding from existing or anticipated revenue sources must be demonstrated to be “reasonably expected to be available” to build, operate, and maintain the planned transportation system.*
- **Initial Financial Analysis informs Technical Inputs Solicitation**

Reasonably Anticipated Revenues	Planned Expenditures
<ul style="list-style-type: none">• State fuel and vehicle taxes• Federal program and grant funds• Sales tax• Tolls and Fares• Private contributions	<ul style="list-style-type: none">• Operation & Maintenance of the highway system• Operation and State of Good Repair of WMATA, MARC/VRE, local transit systems• Construction of new projects

Initial Financial Analysis: Status

- **Initial Forecasts:**
 - ~\$235 billion in reasonably anticipated revenues
 - ~\$267 billion in currently planned or needed expenditures
- **Technical Inputs Solicitation submissions:**
Revenue and expenditure forecasts will be changed to reflect project, program, and policy submissions. (Inputs are due Nov. 15 and will be released for public comment Dec. 14.)
- **Reconciliation and “Financial Constraint” test:**
Finalize inputs so that reasonably anticipated revenues are equivalent to planned expenditures.

Preliminary Survey Findings



Preliminary Survey Findings

Top Factors Influencing People's Travel Choices

61% of respondents selected **RELIABILITY** as a top factor influencing their travel choices

42% of respondents selected **TRAVEL TIME** as a top factor influencing their travel choices

Preliminary Survey Findings

Top Issues Affecting People's Travel Experience

TRAFFIC CONGESTION

"Traffic on the roads makes it hard for me to get where I'm going on time."

TIME SPENT IN TRAFFIC

"Traffic makes it take too long to drive where I need to go."

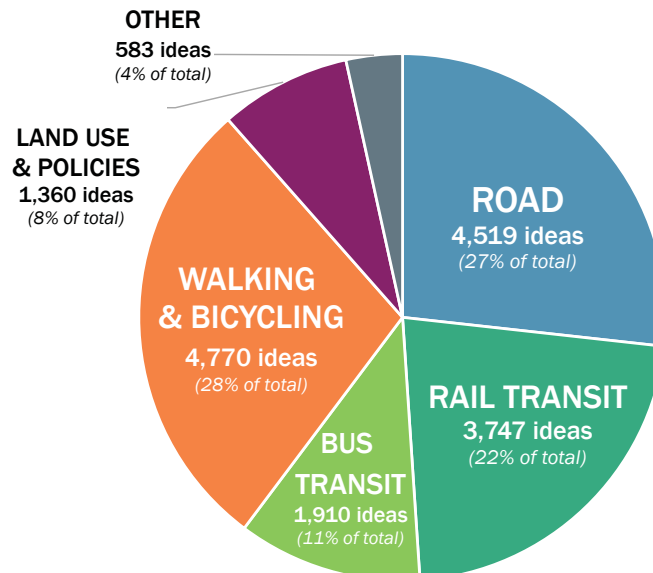
NEED FOR RAIL TRANSIT

"More or better rail transit options would make my travel experience better."



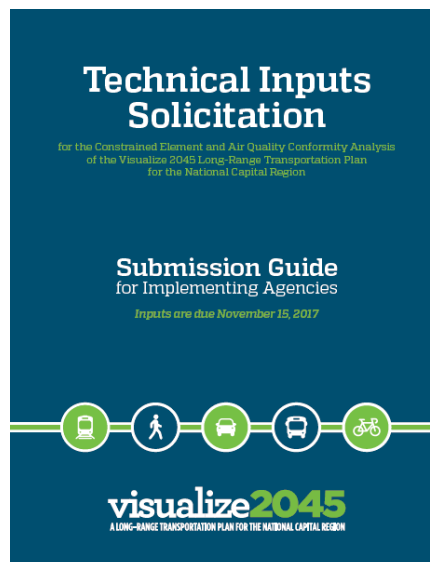
Preliminary Survey Findings

Ideas for Improving the Region's Transportation System



Requested Action

- **Approve Visualize 2045 Technical Inputs Solicitation for the Constrained Element and the Air Quality Conformity Analysis**



National Capital Region
Transportation Planning Board

Agenda Item #9: Visualize 2045 Update
September 20, 2017

15

Andrew Austin

TPB Transportation Planner
(202) 962-3353
aaustin@mwco.org

Eric Randall

TPB Transportation Engineer
(202) 962-3254
erandall@mwco.org

Lori Zeller

TPB Transportation Planner
(202) 962-3290
lzeller@mwco.org



Metropolitan Washington Council of Governments
777 North Capitol Street NE, Suite 300
Washington, DC 20002



National Capital Region
Transportation Planning Board