



MEMORANDUM

TO: TPB Technical Committee

FROM: Charlene Howard, TPB Transportation Planner
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SUBJECT: Development of a list of walk-bike access priority station areas

DATE: July 3, 2019

OVERVIEW

This memorandum provides a status report on TPB staff activities to develop a limited list of transit station areas that will be regionally prioritized for pedestrian and bicycle investments. TPB Resolution R10-2019, approved by the board in December 2018, called upon staff to develop the list of priority station areas to advance the TPB's aspirational initiative "Improve Walk and Bike Access to Transit," which was included in Visualize 2045, the region's 2018 long-range transportation plan.

Using a regional methodology described below (see Task 1), TPB staff is identifying a preliminary draft list of priority station areas. In the coming months, staff plans to conduct site visits with the affected jurisdictions to obtain input to develop the draft regional list of stations which will be presented to TPB.

Staff will present information on this project to the TPB at its meeting on July 24.

PURPOSE

Out of the large collection of high-capacity transit stations in the region, the TPB has determined it will be helpful to identify a focused number of transit station areas where pedestrian and bicycle improvements could have a particularly significant impact on mobility and access to transit, and therefore these locations should be prioritized. These are places where critical gaps currently exist and opportunities to increase walking and biking to transit are significant. New pedestrian and bicycle facilities are particularly key for providing first- and last-mile connections to high-capacity transit.

TPB expects that the list of high-priority station areas identified through this effort will receive priority consideration for funding by the TPB's member jurisdictions and agencies. In addition, projects at these station areas will receive priority consideration for funding through the Transportation Land-Use Connections (TLC) Program, grant funding from the Transportation Alternatives Set-Aside Program (TAP), and other potential funding opportunities.

BACKGROUND

The TPB's Aspirational Initiatives, which are featured in the Aspirational Element of Visualize 2045, include an initiative titled "Improve Walk and Bike Access to Transit." The initiative noted that there are still too many station areas in our region where people drive to transit because walking and biking are too time-consuming, too unpleasant, or too unsafe. Investments to remedy these conditions should be considered regionally significant because they will not simply serve local circulation needs but will also improve access to regional transit systems, including Metrorail, commuter rail, light rail, and bus rapid transit.

In the fall of 2018, as Visualize 2045 was nearing adoption, TPB Chairman Charles Allen advised staff to work with appropriate subject-matter experts to identify specific implementation actions that TPB members could take—individually and collectively—to move the aspirational initiatives forward. In response, TPB staff engaged subcommittees at the TPB and COG in discussions about how the TPB's aspirational initiatives can be effectively pursued and implemented.

During these discussions, members of the Bicycle and Pedestrian Subcommittee and TPB staff noted that the "Improve Walk and Bicycle Access to Transit" initiative was largely conceptual and did not identify specific locations associated with the initiative. They determined that the next step in moving the initiative forward should focus on providing geographic specificity to the concept. Such an effort would build upon the studies that the TPB and WMATA have conducted to promote station access.¹ However, rather than identifying specific pedestrian and bike projects, the Subcommittee determined it would be most appropriate in this new effort to more broadly identify high-capacity station areas where such improvements could have a significant impact. Specific project identification will be left to local and state agencies.

In October of 2018, the Bicycle and Pedestrian Subcommittee called upon the TPB to develop a limited list of transit station areas that are regionally prioritized for pedestrian and bicycle access investments. The recommendation explained: "These prioritized locations will be places where critical gaps in pedestrian and bicycle infrastructure currently exist and where demand is great for walking and biking to transit." This recommendation was included in a memo on November 8 to the TPB that summarized the recommendations of all subcommittees regarding the seven initiatives.

On December 19, the TPB approved Resolution R10-2019 to "take action on recommended project, program, and policy ideas that would implement the TPB's aspirational initiatives identified in its Visualize 2045 plan."

Among other activities, the resolution directed TPB staff to:

"Identify a set of regionally prioritized high capacity transit stations where pedestrian/ bicycle access improvements have the greatest potential to utilize available capacity and increase transit ridership, by building on the previous work by the TPB and WMATA, and report on progress by end of June 2019."

¹ The TPB's 2015 study "Improving Bicycle and Pedestrian Access at Select Rail Stations" (funded through the federal Transportation, Community, and Systems Preservation grant program) identified station access improvements at 25 rail stations. In 2016, WMATA followed up with the "Metrorail Station Investment Strategy" which identified station access improvements for all remaining stations (91 total stations).

PROCESS

Staff work on this project began with the development and application of a methodology to select a draft regional list of priority stations and will be followed by targeted outreach to the TPB's member jurisdictions to ensure the list complements the jurisdictions' own policies and priorities.

TASKS

I. DEVELOP AND APPLY AN INITIAL SELECTION METHODOLOGY

Beginning in the winter of 2018, staff has taken iterative steps to develop and apply a methodology to identify a preliminary draft list of priority station areas

A. *Identify an initial list of station areas for analysis*

The starting point for this analysis involved the selection of stations that met the following baseline criteria:

- *Stations deemed "high-capacity"*: The list only includes "high-capacity transit stations," which are defined by the TPB to include Metrorail, commuter rail, bus rapid transit, light rail, and streetcar lines.
- *Cutoff year of 2025*: The analysis includes stations that are currently built or will be in place by 2025 according to the Constrained Element of Visualize 2045.²
- *Activity Center designation*: The initial list only includes stations that are within a half mile of one of the region's 141 Activity Centers.

Using the baseline criteria above, staff determined that a total of 199 stations³ would serve as the starting point for analysis.

B. *Analyze the initial list of station areas based upon key factors*

Three key factors, described below, are being used to assess station areas where it is difficult to walk/bike and where there is current/anticipated demand for walking or biking.

² At the beginning of this project in the winter of 2018, staff proposed making 2030 the cutoff year for inclusion on the list. However, feedback from the TPB Technical Committee and others strongly suggested focusing on stations that are already constructed or will be in the near future. Therefore, the cutoff year has been changed to 2025.

³ For the sake of comparison, it is worth noting that 308 high-capacity transit stations are planned as part of the Constrained Element of Visualize 2045. These would include stations not in Activity Centers and those anticipated to be built between 2025 and 2045.

1. ***Where is it difficult to walk or bike to transit?***

Use a walkshed analysis to identify stations with deficient pedestrian and bicycle infrastructure.

Staff used an analysis of “walksheds” to identify those locations where walking and biking to transit is relatively difficult.⁴ A walkshed is a catchment area in which the outer perimeter represents the distance that people are anticipated to be willing to walk to a central destination. Planners generally assume that one half mile—a 10-minute walk on average— is the maximum distance we can expect people to walk to a train station.

As the crow flies, the outer limits of a half-mile walk would form a perfect circle with the station at the center. But in reality, a half mile of walking is often much longer than the geometric radius. Blocks are sometimes very long, sidewalks may be missing, or a natural or man-made barrier may obstruct a direct path. As routes become more circuitous, the distance covered by a half mile walk from a transit station to a final location— the actual walkshed— is often much tighter than the half-mile radius would suggest. Constrained walksheds can be expanded by bridging barriers, creating new connections, and enhancing existing connections to transit stations.

The walkshed analysis for this project included the development of maps and associated data for each station area using GIS. To develop the walksheds, staff performed geospatial analysis using ArcGIS software utilizing the Network Analyst extension, specifically using the Service Area analysis option. Service areas define an area of network facilities (e.g., streets, trails, and other elements) that can be traversed in a prescribed time or distance. Staff developed a methodology for creating walksheds for each identified high-capacity transit station that would best reflect the opportunities and deficiencies around each station area.

Staff has identified the walksheds for all 199 station areas selected for this analysis and calculated the percent of walkshed coverage within a half mile for each station area. Staff prepared a draft table containing this information along with a comparative ranking of each station’s walkshed coverage.

Staff has developed an additional product (geospatial feature class) that features walksheds for all existing high-capacity transit stations in the region. This product will be made available through the TPB’s Regional Transportation Data Clearinghouse.

⁴ At the beginning of this project in the winter of 2018, staff proposed using an analysis of intersection density to identify stations with relatively poor ped/bike infrastructure. In January, members of the TPB Technical Committee recommended that a walkshed analysis be performed and used to support this project instead of an intersection analysis. In response to this recommendation, staff opted to use a walkshed analysis.

2. ***Where is there significant potential demand for walking and biking?***
Screen stations to identify locations with high employment/population density

The station areas selected for analysis have also been screened to focus on stations with the highest population and employment densities forecast for 2025. (It is important to note that this project will seek to ensure the final draft list is regionally balanced, i.e., stations will be compared on a jurisdictional basis. Outer jurisdictions will not be expected to have the same levels of population density as core jurisdictions to be included.)

Staff have identified Traffic Analysis Zones (TAZ) in the vicinity of stations and summarized the combined population and employment density for 2025.

3. ***Where are vulnerable populations concentrated?***
Identify station areas that are in Equity Emphasis Areas

The station areas selected for analysis have been screened to identify whether they are in Equity Emphasis Areas (EEAs), which are small geographic areas that are home to relatively high concentrations of minority and low-income communities. The EEAs have been approved by the TPB to be the primary tool for regional Environmental Justice analysis. For the purposes of this study, it is important to note that the people living in these areas are more likely to be transit-dependent than the general population.

A preliminary analysis has determined that out of the 199 station areas selected for analysis, 155 are in Equity Emphasis Areas.

C. Develop a preliminary staff list based upon regional analysis

The preliminary staff list of priority station areas will be based upon a regional analysis that staff will conduct prior to outreach to individual jurisdictions. This preliminary staff list will be developed as follows:

1. ***Develop a composite score for each station***

Composite regional scores will be developed for each station under analysis using the three factors described above: 1) deficient ped/bike infrastructure (walkshed analysis); 2) demand for walking & biking (high population/employment density); and 3) vulnerable populations (Equity Emphasis Areas).

2. ***Select priority stations for each jurisdiction***

Using the composite scores, the stations with the highest scores in each jurisdiction will be flagged. Staff anticipate that the preliminary list of priority station areas for each jurisdiction will be based upon a set percentage of stations within that jurisdiction. It is anticipated that each jurisdiction with

one or more high-capacity transit stations will have at least one station included on the preliminary list of priority stations.

// SEEK JURISDICTIONAL BUY-IN

After developing the preliminary staff list of priority station areas using the methodology described above, staff will meet with key stakeholders from the jurisdictions to discuss how the stations on the list compare to jurisdiction priorities. Staff will consider adjustments to the list based upon the feedback received.

/// SEEK TPB APPROVAL

Incorporating feedback received during the jurisdiction outreach described above, staff will develop a final draft list of walk-bike access priority station areas, which will be presented to the TPB for approval.

NEXT STEPS

At the July TPB meeting, staff will present an overview of the approach used for Task I. Later this summer and in the fall, staff will meet with jurisdiction staff, as described in Task II.

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