

Essential Transit Infrastructure Plan

AUGUST 2022



CONTENTS

Executive Summary	3
Introduction & Goals	3
Current Conditions	3
Initial Goals	4
Goals	4
Expected Outcomes	8
Chapter 1: Essential Transit Infrastructure	9
Landing Pads	9
Trash Cans	9
Benches	9
Shelters	10
Seating Options	10
Display Options.....	11
Solar Lighting.....	11
Shelter Design Elements as Adopted by Each Jurisdiction	11
Notes on Older Shelters	12
Chapter 2: ETI Placement Goals & Guidelines	13
Installation & improvement of Landing Pads	13
Installation of Shelters, Benches, & Trash Cans	14
Assumptions for ETI Placement.....	15
ETI Qualification Rubric	15
Current Stage in Site Selection Process.....	16
Special Projects.....	18
Chapter 3: Bus Stop Improvements Workflow	19
Stop Selection	19
Requesting a Bench or Shelter	20
Chapter 4: Essential Transit Infrastructure Cleaning & Maintenance	21
Jurisdictional Responsibilities	21
GRTC Responsibilities	21
Chapter 5: Risks & Considerations	22
Current Manufacturing Climate: Supply Chain Delays & Inflation.....	22
Procurement	22
Funding Challenges	22
Coordination	22
Right-of-Way Restrictions	22
Chapter 6: Projected Costs	23
Chapter 7: Funding Sources	25
Chapter 8: Expected Outcomes	26
Appendix A – Currently Installed ETI	27
Appendix B – Stops Eligible for a Bench or Shelter	42
Appendix C – Dimensional Standards for ETI	74

Executive Summary

Introduction & Goals

GRTC provides a range of Essential Transit Infrastructure (ETI) at stops including, but not limited to, benches, trash cans, and shelters. ETI elements are intended to provide comfort, convenience, accessibility, safety, and dignity to riders. This document is meant to outline implementation goals and strategies for the installation of ETI at GRTC local stops and transit facilities.

This is one of several GRTC strategic initiatives planned that aim to address the various impediments to transit access and ultimately inequities. GRTC champions social and economic mobility by prioritizing connecting people to essential human services and needs. With proper operational and capital investment, transit is a factor that can improve overall quality of life.

CURRENT CONDITIONS

There are 1,609 active local stops in GRTC's service area of 216 square miles. These bus stops vary in accessibility and infrastructure condition across the network. Currently 26% of those stops have either a bench or a shelter, and less than half have ADA compliant landing pads. Image 1 below shows an investment in an ideal waiting area at a BRT station. Image 2 shows an ideal ADA compliant bus stop, and image 3 shows a bus stop that completely lacks infrastructure.



Figure 1: ADA compliant BRT station

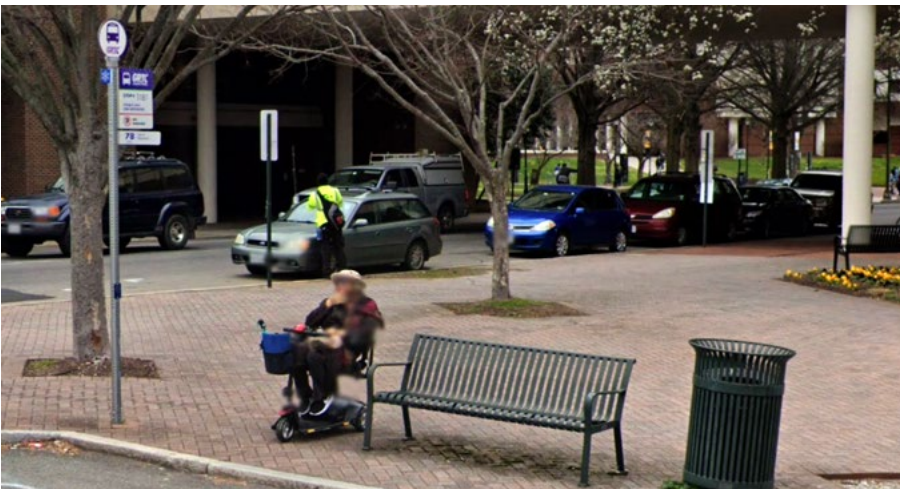


Figure 2: ADA compliant local stop



Figure 3: Local stop lacking infrastructure

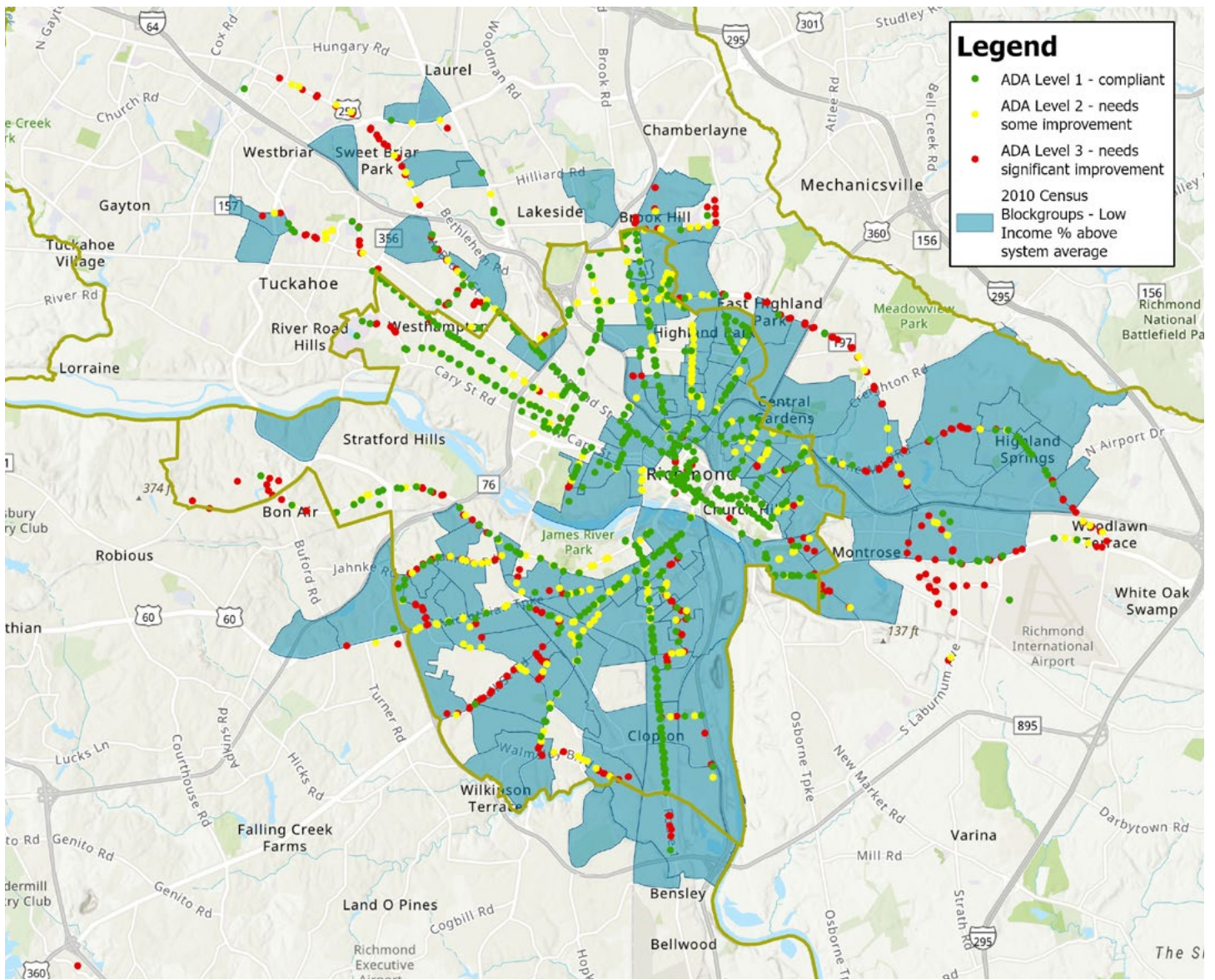


Figure 4: Correlation between low-income Census block groups and lack of bus stop infrastructure

Figure 4 displays the inequity in infrastructure investment by displaying tiered ADA compliant bus stops overlaid with low-income status. The blue geographies display census block groups with a low-income percent above the GRTC system average. You can see a correlation with low income and low ADA compliance.

Initial Goals

GOAL 1:

GRTC’s goal is for 50–75% of stops to have a shelter or seating by 2027.

GOAL 2:

Improve ADA compliance at bus stops through coordination with the jurisdictions.

ATTAINABLE & MODERATE SCENARIOS:

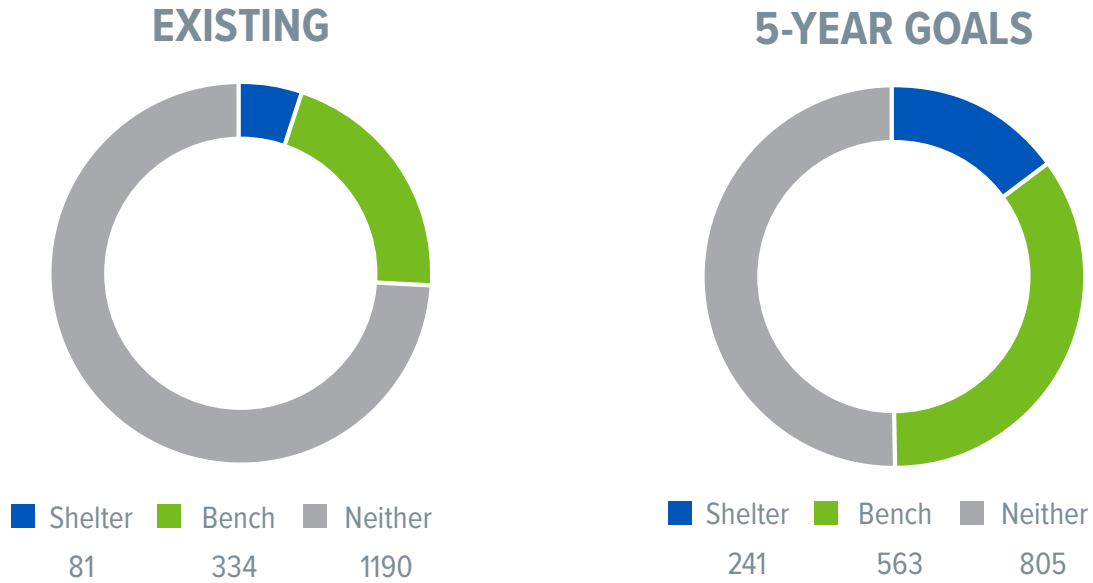


Figure 5: Five-year goals for ETI Installation at the Attainable and Moderate level.

In the Attainable and Moderate scenarios, GRTC’s goal is for 50% of stops to have a shelter or seating by 2027. To meet this goal, we will need to install **160 shelters** and **225 benches** over five years. GRTC will also coordinate with the jurisdictions to improve ADA compliance at bus stops.

ASPIRATIONAL SCENARIO:

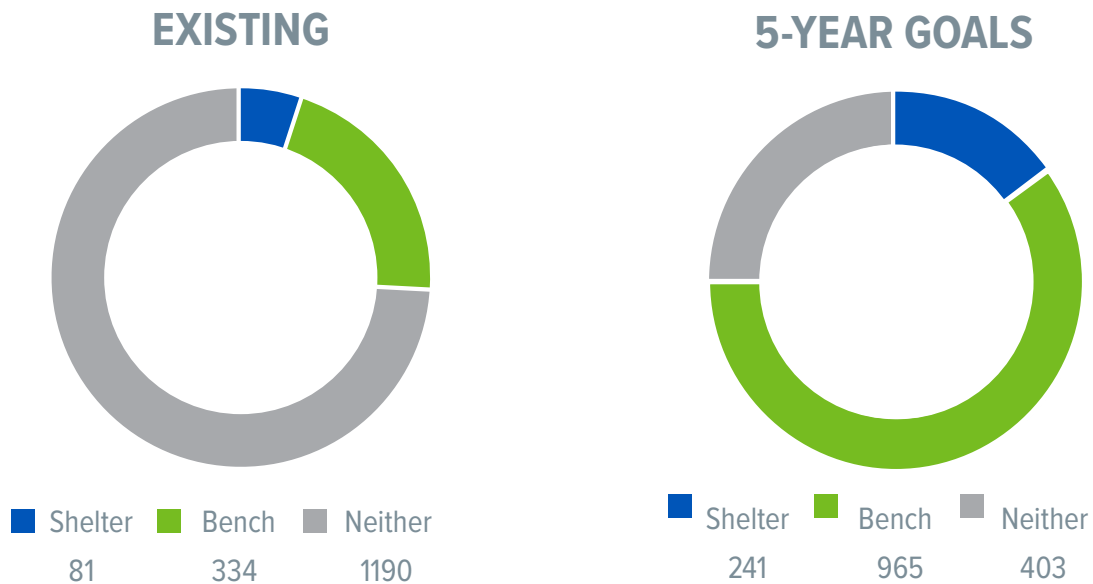


Figure 6: Five-year goals for ETI Installation at the Aspirational level.

In the Aspirational scenario, GRTC’s goal is for 50% of stops to have a shelter or seating by 2027. To meet this goal, we will need to install **160 shelters** and **627 benches** over five years. GRTC will also coordinate with the jurisdictions to improve ADA compliance at bus stops.

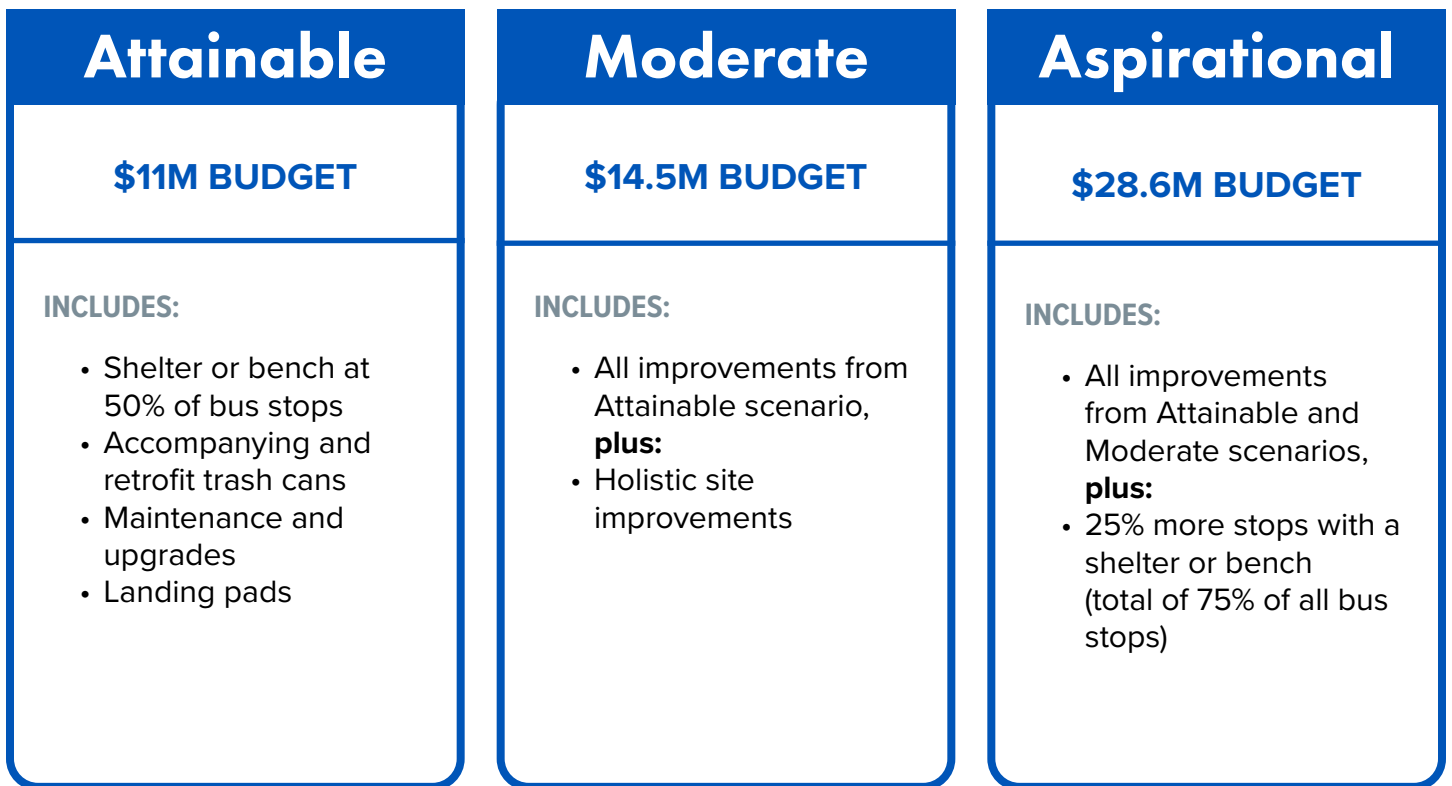


Figure 7: Comparison between the Attainable, Moderate, and Aspirational scenarios at their three funding levels

Implementation Strategy & Projected Costs

ATTAINABLE SCENARIO: \$11M

	BASELINE		FY23		FY24		FY25		FY26		FY27		
	qty	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost		
NEW ETI													
Shelters	81	25	\$522,712	33	\$1,070,879	33	\$1,050,876	34	\$1,354,999	35	\$1,530,661		\$5,530,126
Benches	338	28	\$73,420	51	\$144,786	48	\$154,111	49	\$157,789	49	\$169,187		\$699,293
Trash Cans	432	45	\$90,180	66	\$145,490	66	\$160,039	68	\$181,378	68	\$199,516		\$776,604
ETI Maintenance & Retrofit													
Shelters			\$165,794		\$172,768		\$190,045		\$209,050	0	\$189,498		\$927,155
Benches and Trash Cans			\$7,600		\$53,966	0	\$59,363		\$65,299		\$71,829		\$258,056
ADA Compliance													
Landing Pads (single)		5	\$17,002	10	\$37,404	10	\$41,144	10	\$45,259	10	\$49,785		\$1,90,594
Landing Pads (double)		0		15	\$113,535	15	\$124,888	15	\$137,377	15	\$151,115		\$526,915
ADA Improvements (Tier 1)		0		15	\$75,249	0	\$82,774	0	\$100,156	0	\$110,172		\$368,351
ADA Improvements (Tier 2)		0		0		0		0		0			
Projected Costs (subtotal)			\$876,708		\$1,818,078		\$1,863,240		\$2,251,306		\$2,247,176		\$9,277,093
Contingency (10 - 20%)			\$87,671		\$362,816		\$372,648		\$450,261		\$494,352		\$1,767,748
ANNUAL SUBTOTAL			\$964,379		\$2,176,893		\$2,235,888		\$2,270,156		\$2,966,114		\$11,044,841

Table 1: Attainable Cost Estimate Scenario

This scenario includes ETI installations in sufficient quantities to meet our goals and minimal landing pad improvements.

MODERATE SCENARIO: \$14.5M

	BASELINE		FY23		FY24		FY25		FY26		FY27		
	qty	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost		
NEW ETI													
Shelters	81	25	\$522,712	33	\$1,070,879	33	\$1,050,876	34	\$1,354,999	35	\$1,530,661		\$5,530,126
Benches	338	28	\$73,420	51	\$144,786	48	\$154,111	49	\$157,789	49	\$169,187		\$699,293
Trash Cans	432	45	\$90,180	66	\$145,490	66	\$160,039	68	\$181,387	68	\$199,516		\$776,604
ETI Maintenance & Retrofit													
Shelters			\$165,794		\$172,768		\$190,045		\$209,050		\$189,498		\$927,155
Benches and Trash Cans			\$7,600		\$53,966		\$59,363		\$65,299		\$71,829		\$258,056
ADA Compliance													
Landing Pads (single)		5	\$17,002	10	\$37,404	10	\$41,114	10	\$45,259	10	\$49,785		\$190,634
Landing Pads (double)				15	\$113,535	15	\$124,888	15	\$137,377	15	\$151,115		\$526,975
ADA Improvements (Tier 1)		0		15	\$75,249	15	\$82,774	15	\$100,156	15	\$110,172		\$368,411
ADA Improvements (Tier 2)				25	\$595,238	25	\$654,762	25	\$792,262	25	\$872,488		\$2,913,850
Projected Costs (subtotal)			\$876,708		\$2,409,316		\$2,518,002		\$3,043,568		\$3,343,249		\$12,190,843
Contingency (10 - 20%)			\$87,671		\$481,863		\$503,600		\$608,714		\$668,650		\$2,350,498
ANNUAL SUBTOTAL			\$964,379		\$2,891,179		\$3,021,602		\$3,652,282		\$4,011,899		\$14,541,341

Table 2: Moderate Scenario Cost Estimate

This scenario is the same as the above but includes a much larger investment in accessibility and infrastructure improvements completed in coordination with the jurisdictions.

ASPIRATIONAL SCENARIO: \$28.6M

	BASELINE		FY23		FY24		FY25		FY26		FY27		
	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	
NEW ETI													
Shelters	81	\$522,712	25	\$165,794	33	\$1,070,879	33	\$1,050,876	34	\$1,1354,999	35	\$1,1530,661	\$5,530,126
Benches	338	\$97,530	38	\$7,600	150	\$437,520	150	\$459,797	149	\$480,841	148	\$503,781	\$1,979,469
Trash Cans	432	\$60,120	30	\$17,002	150	\$330,660	150	\$363,726	150	\$400,099	150	\$440,108	\$1,594,713
ETI Maintenance & Retrofit													
Shelters			5	\$165,794		\$172,768		\$190,045		\$209,050		\$189,498	\$927,155
Benches and Trash Cans			6	\$7,600		\$53,966		\$59,363		\$65,299		\$71,829	\$258,056
ADA Compliance													
Landing Pads (single)			5	\$17,002	10	\$37,404	10	\$41,144	10	\$45,259	10	\$49,785	\$364,185
Landing Pads (double)			0		20	\$151,380	20	\$166,518	20	\$183,169	20	\$201,486	\$702,553
ADA Improvements			0		126	\$2,304,662	126	\$2,535,128	126	\$3,067,504	128	\$3,416,459	\$1,220,491
Projected Costs (subtotal)		\$870,758		\$870,758		\$4,559,239		\$4,528,872		\$5,806,220		\$6,403,607	\$22,168,695
Contingency (10 - 20%)		\$87,076		\$87,076		\$1,367,772		\$1,358,662		\$1,741,866		\$1,921,082	\$6,476,457
ANNUAL SUBTOTAL		\$957,837		\$957,837		\$5,927,010		\$5,887,534		\$7,548,086		\$8,324,689	\$28,645,152

Table 3: Aspirational Scenario Cost Estimate

The final scenario includes shelter, bench, and trash can installations in quantities sufficient to meet the 75% installation goal as well as the accompanying site improvements. Costs rise in the final scenario for two reasons: the higher quantities of ETI to be purchased and installed and the more rigorous site improvements required. The lower installation goals of the attainable and moderate scenarios afford some flexibility in stop selection: if funding shortfalls occur, installation can be shifted to stops that require less mitigation to be installation-ready.

To meet the higher goals of the Aspirational scenario, installations need to occur at more stops, including those that need the most improvement.

Cost assumptions built into the Aspirational scenario include:

City/County-controlled-ROW: assumes each stop requires an 8' x 22' pad of 6" reinforced concrete per shelter plus approximately \$23K in site improvement in the immediate vicinity of the pad.

VDOT-controlled-ROW: assumes each stop needs a 19' x 10' pad of 8" - 18" reinforced concrete per shelter plus approximately \$23K in site improvement work in the immediate vicinity of the pad.

The \$33.7M refers to high level planning estimates for landing pad improvements only. Not included in the costs are the more holistic site improvements to the surrounding area, such as storm drains, retaining walls, possible ROW acquisition, etc that will require jurisdictional coordination and additional funds.

Expected Outcomes

Successful implementation of the five-year plan will lead to a significant increase in ETI installations, both system wide and in traditionally underinvested areas (**See Map on page 25**).

Chapter 1: Essential Transit Infrastructure

LANDING PADS

“Landing pad” refers to the paved level surface at bus stops, ideally connected to sidewalk, that provides a safe and stable location for riders to await, board and alight the bus. Landing pads must be at least eight feet (perpendicular to the curb) by five feet (parallel to the curb) to be compliant with federal ADA regulations.

GRTC’s policy, wherever space allows, is to install larger landing pads (eight feet perpendicular to the curb by twenty-six feet parallel to the curb) to allow riders to utilize either the front or rear doors via landing pads.

TRASH CANS

Standard trash cans are placed by GRTC at bus stops in the City of Richmond and Chesterfield County. They are 36-gallon tavern green steel receptacles with a plastic liner and a removable rain bonnet. Henrico County Department of Public Works (DPW) currently installs 36-gallon HDPE trash cans with rain bonnets at bus stops within its jurisdiction.

Trash cans are not present at every stop. They may be stand-alone or paired with other essential infrastructure.

BENCHES

Benches are helpful essential infrastructure that aid in providing comfort and convenience for transit riders waiting for their bus, particularly for those who may have difficulty walking or standing. The standard bench installed by GRTC at bus stops is an all-weather, 6-foot steel bench powder-coated in tavern green. An optional third armrest can be installed at benches upon request by City or County Transportation Appointee(s) (CTAs).



Figure 9: Example of minimal landing pad at GRTC bus stop #1273 (Hull + 24th)



Figure 10: Example of preferred, larger landing pad in Washington, D.C.

Where space is available, and with jurisdictional approval, benches are always paired with trash cans. GRTC is retroactively placing trash cans at stops that previously had only a bench installed.

Many of the local stops which qualify for seating lack sufficient space to install a full-size bench. GRTC plans to launch a pilot program to gauge the efficacy of installing Simme-Seats (or similar pole-attached seating) at stops with limited right-of-way.



Figure 11: Example of standard bench and trashcan at a bus stop

SHELTERS

Bus stop shelters provide protection from the elements for riders waiting for their bus; shelters are especially beneficial to riders of routes with long headways where riders must wait the longest between buses.

GRTC currently installs various iterations of the Brasco Eclipse (or equivalent) bus shelter throughout the service area. Eclipse shelters have powder coated steel frames and roofing, clear tempered glass walls, solar lighting, and various display options. All shelters include either a bench or a lean rail as well as clear space for a wheelchair. Additionally, the Eclipse design can be ordered with three full glass walls (to offer maximum protection from weather or the elements) or with partial or no side walls (for installation at stops with limited right-of-way).



Figure 12: Example of a pole-attached seating, suitable for limited space bus stops

SEATING OPTIONS

BENCH

The standard seating option in the shelter is an aluminum framed bench with HDPE slats. Bench size and placement within the structure always allows room for a wheelchair to wait under cover in addition to the bench.

LEAN RAIL

At the request of CTAs, GRTC may opt to install a lean rail instead of a bench. Lean rails are aluminum framed with an HDPE slat. Lean rail size and placement within the structure always allows room for a wheelchair to wait under cover in addition to the lean rail.

DISPLAY OPTIONS

AD WALL

GRTC may install a 4' x 6' ad wall in the place of one of the side walls in the three-sided Eclipse model. The ad wall has display space facing both the inside and the outside of the shelter.

MAP CASE

For cantilever shelters, or where smaller displays are desired, GRTC may install a 24" x 36" map case. Map cases are single-sided and lockable. Map cases may be installed on a shelter side wall or a rear wall.

NONE

GRTC may opt to forego a shelter-integrated display to enhance visibility and sightlines.

SOLAR LIGHTING

Eclipse shelters may be ordered with an optional LED solar lighting kit. GRTC generally installs these kits at all locations that receive sufficient sunlight to power them.

SHELTER DESIGN ELEMENTS AS ADOPTED BY EACH JURISDICTION

While all Eclipse shelters are structurally similar, slightly different design elements are currently approved by GRTC's member jurisdictions.



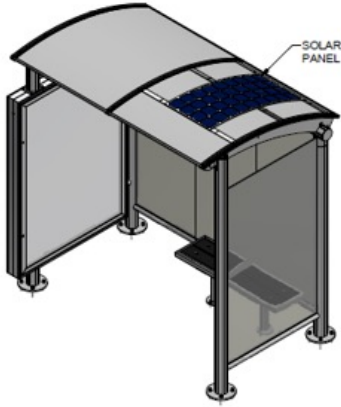
	City of Richmond	Henrico County	Chesterfield County
Shelter style	Slant roof Traffic black	Arched roof Leaf green	Arched roof Traffic black
Display Options	Mapcase Adwall None (where visibility is a concern)	Mapcase	Adwall
			

Table 4: Configuration variations of the Brasco Eclipse, as chosen by each jurisdiction

NOTES ON OLDER SHELTERS

The Eclipse style shelter was adopted as the GRTC standard in 2019. As older, non-Eclipse shelters reach the end of their useful lives, GRTC will replace or remove them.



Figure 13: Examples of older-style shelters installed throughout GRTC Transit System

Chapter 2: ETI Placement Goals & Guidelines

INSTALLATION & IMPROVEMENT OF LANDING PADS

Bus stops with no or insufficient landing pads fall into two broad categories: stops which require minimal site preparation before a landing pad can be installed and stops which will require major site reconstruction before a landing pad can be installed.

GRTC’s policy for the first category is twofold: Firstly, GRTC will retrofit any stop that receives a new bench, trash can or shelter with a full landing pad simultaneous with the ETI installation. Secondly, GRTC anticipates doing several landing pad “blitzes” over the next five years, which will install or upgrade landing pads at multiple stops, batches at time.



Figure 14: Before and After photos of a stop brought into ADA compliance by supplementing existing sidewalk

GRTC’s approach for the second category of stops is to apply (either as an agency or in cooperation with regional partners) for grant funding for larger accessibility projects. These projects will include landing pads but will be more holistic site improvement projects.

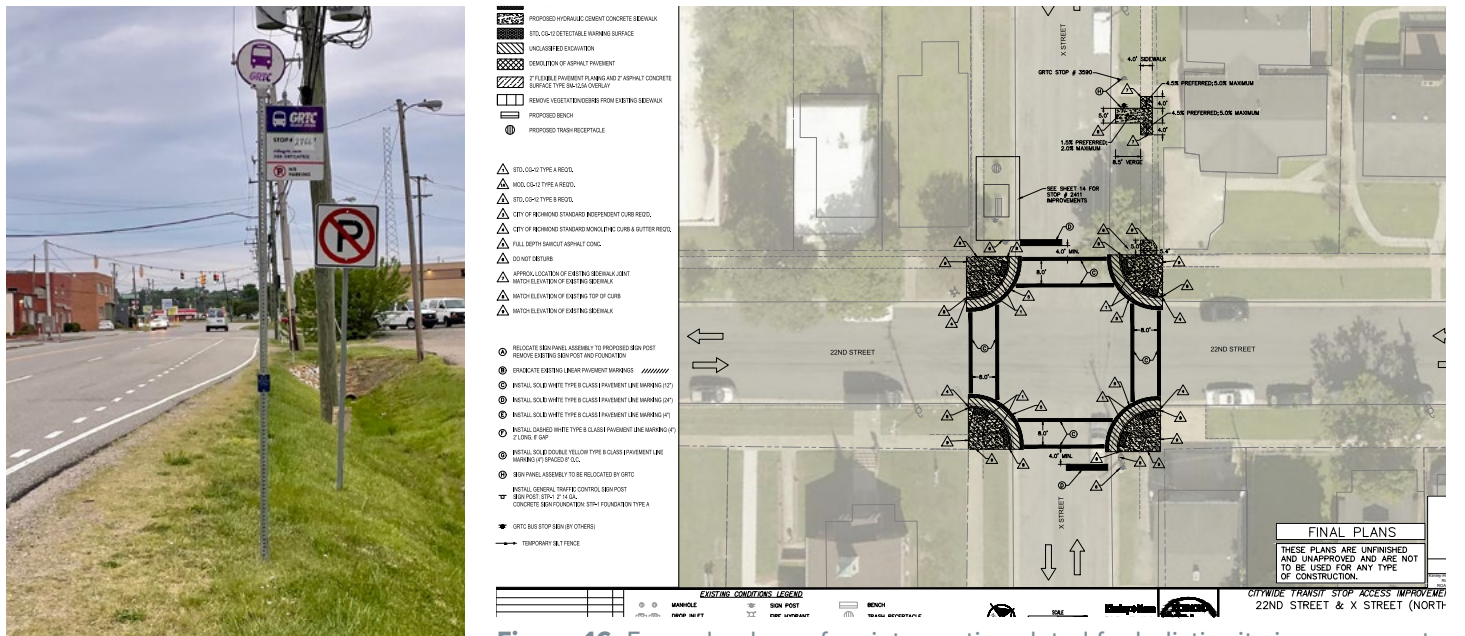


Figure 15: Example of a local stop that could be improved by holistic site improvements on Westwood Ave

Figure 16: Example plans of an intersection slated for holistic site improvements

INSTALLATION OF SHELTERS, BENCHES, & TRASH CANS

GRTC’s initial goal is for 50% of stops to have a shelter or seating by 2027. To meet this goal, GRTC will need to install **160 shelters** and **225 benches** over five years.

ATTAINABLE & MODERATE SCENARIOS:

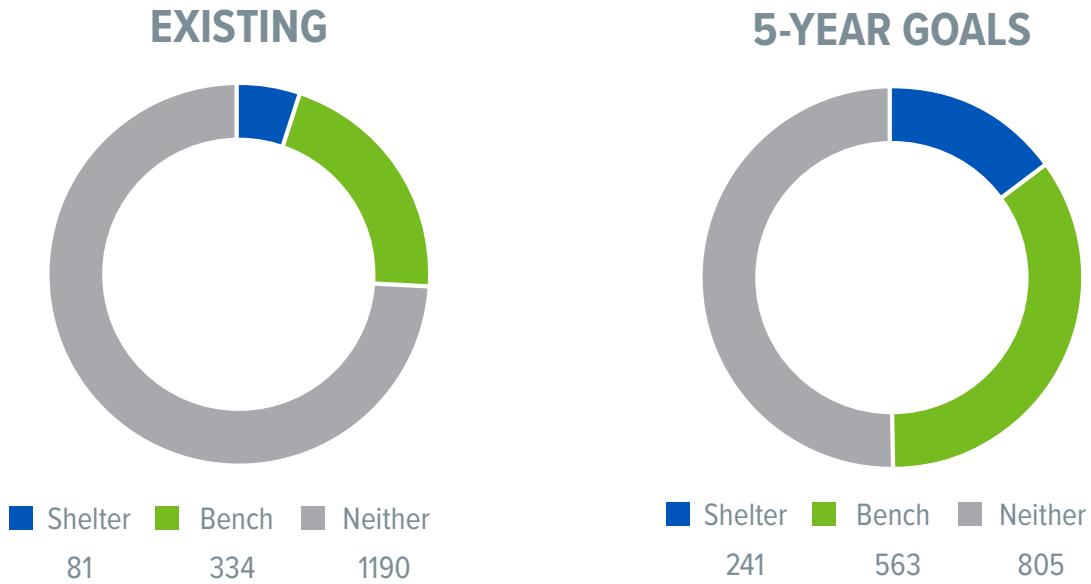


Figure 17: Five-year goals for ETI Installation for Attainable and Moderate scenarios

ASPIRATIONAL SCENARIO:

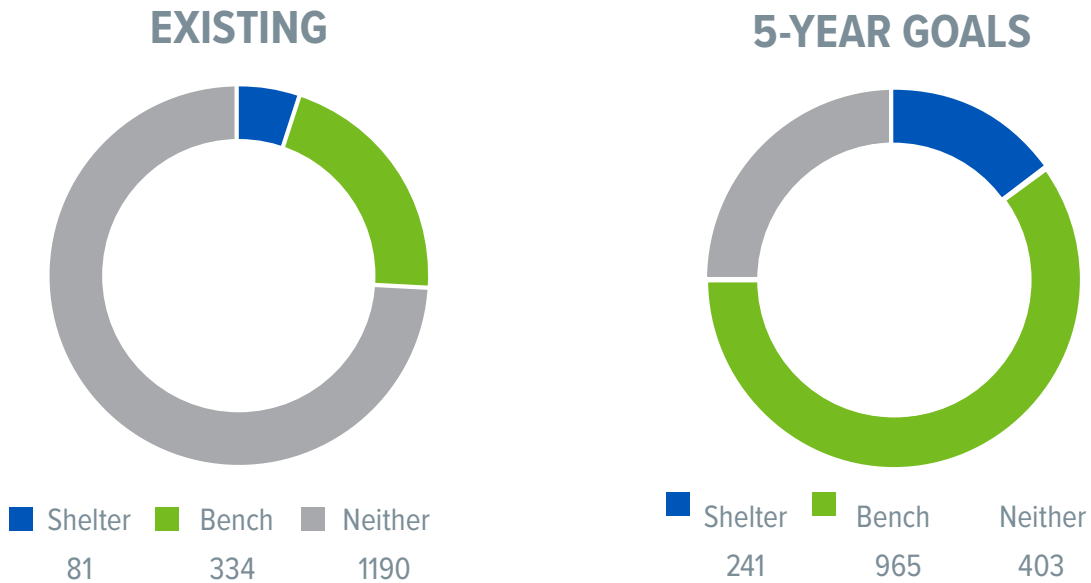


Figure 18: Five-year goals for ETI Installation at the Aspirational level

To this end, GRTC has refined a scoring system (see *ETI Qualification Rubric* section below) which considers both usage and equity to qualify stops for ETI placement over the next five years. Stops which qualify for ETI based on the rubric will be further evaluated for site suitability. Proposed ETI placement requires approval from both GRTC staff and the jurisdictions before installation (See *Bus Stop Improvements Workflow* section below).

ASSUMPTIONS FOR ETI PLACEMENT

It is the intention of GRTC to:

- Acquire utility easements and/or Memorandums of Understanding with public and private property owners to maintain ownership of ETI for maintenance, cleaning, and replacement.
 - Upgrade all stops to full ADA compliance.
-

ETI QUALIFICATION RUBRIC

The rubric considers two numbers for each stop: a **Ridership Score** and an **Equity Score**.

The **Ridership Score** is equal to the Average Daily Boardings (ADB) of each stop. ADBs are calculated annually by GRTC and represent the average number of riders who board the stop every day. ADBs range from 0 to over 500.

The **Equity Score** is a number between 0 and 40. It is calculated by assigning points to each stop based on use, route type, and socioeconomic factors.

Stops receive points based on:

- Number of routes serviced
- Maximum headway
- Headway/Routes ratio
- Adjacency to medical facilities, schools, libraries, or community centers
- Location within a census block group that has a minority, low-income, or LEP population higher than the GRTC service area average

The rubric evaluates the numbers in tandem and determines if a stop is eligible for a shelter or bench.

Note: All stops that qualify for a shelter or bench also qualify for a trash can. (Trash can installations require additional approval from City or County DPW, as cans must be added to DPW pickup routes.)

RIDERSHIP SCORE

- Number between **0** and **500+**
- Equal to Average Daily Boardings (ADB) of each stop

EQUITY SCORE

- Number between **0** and **40**
- Awards points based on use, route type, and socioeconomic factors*

ELIGIBILITY

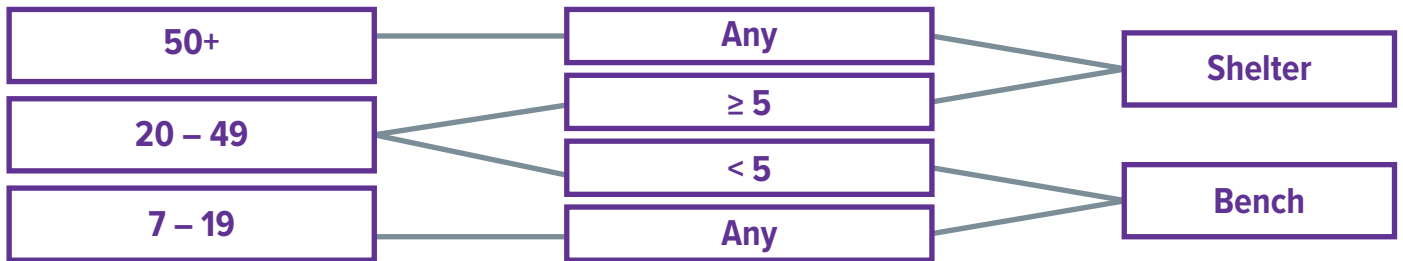


Figure 19: ETI Qualification Rubric for Attainable and Moderate Scenarios

RIDERSHIP SCORE

- Number between **0** and **500+**
- Equal to Average Daily Boardings (ADB) of each stop

EQUITY SCORE

- Number between **0** and **40**
- Awards points based on use, route type, and socioeconomic factors*

ELIGIBILITY

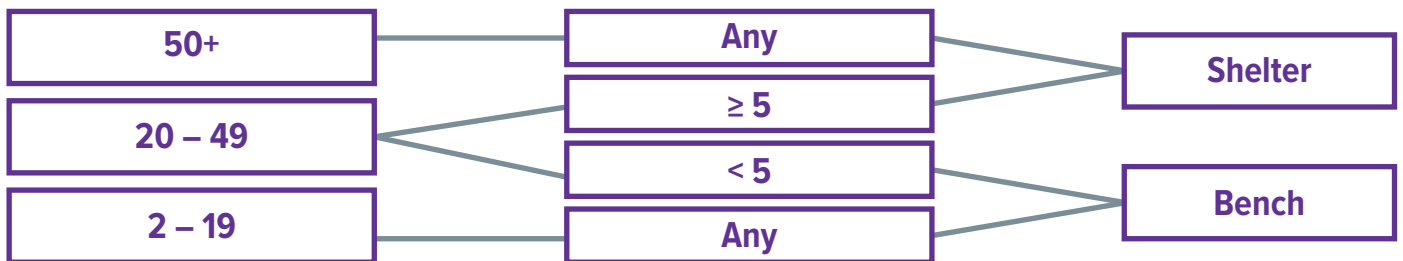


Figure 20: ETI Qualification Rubric for Aspirational Scenario

CURRENT STAGE IN SITE SELECTION PROCESS

By evaluating every stop in the system against the rubric, GRTC has identified 184 stops that qualify for a new or upgraded shelter and 232 stops that qualify for a new bench in the Attainable and Moderate scenarios, and 184 stops that qualify for a new or upgraded shelter and 614 stops that qualify for a new bench in the Aspirational scenario.

The next step in the vetting process is for GRTC staff to perform site visits and evaluate qualified stops for available ROW and site suitability. GRTC expects that not all stops that qualify for new ETI will have adequate space or suitable sites for installation. If we are not able to reach our installation goals with the current batch of eligible stops, GRTC will revisit the selection process to qualify additional stops.

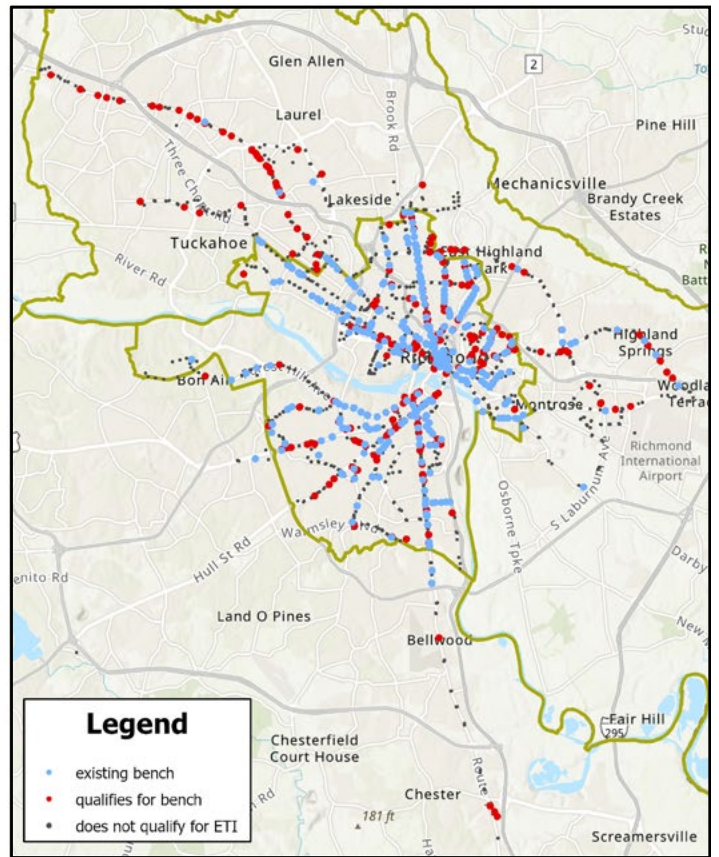
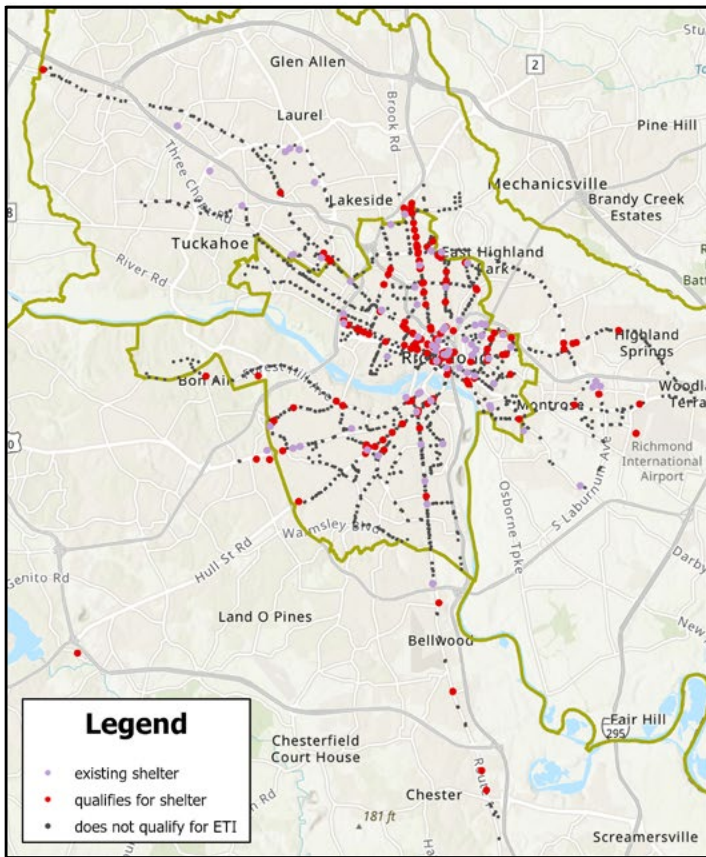


Figure 21: Local Stops that Qualify for ETI Installation for Attainable and Moderate Scenarios

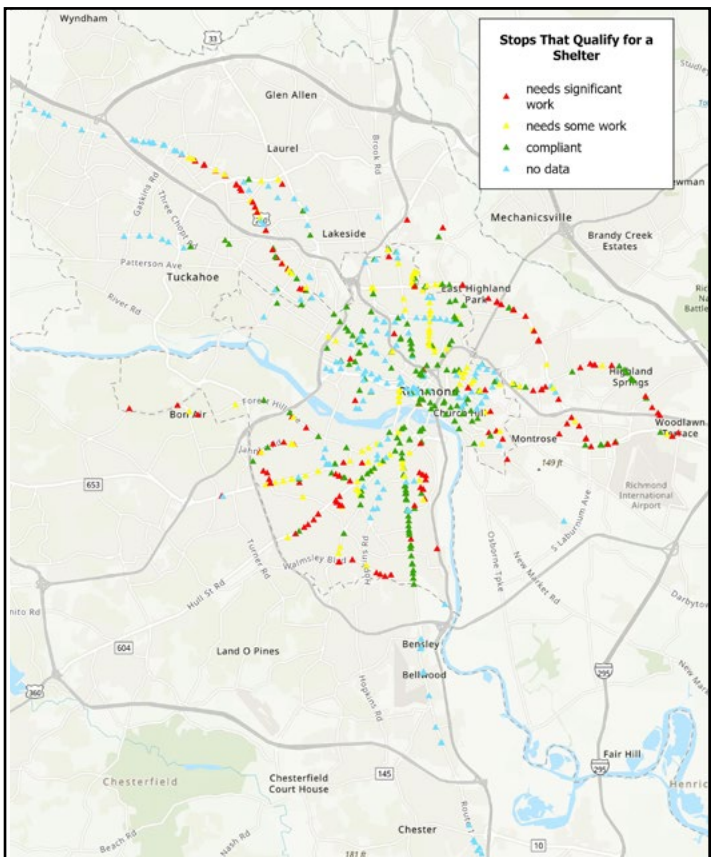
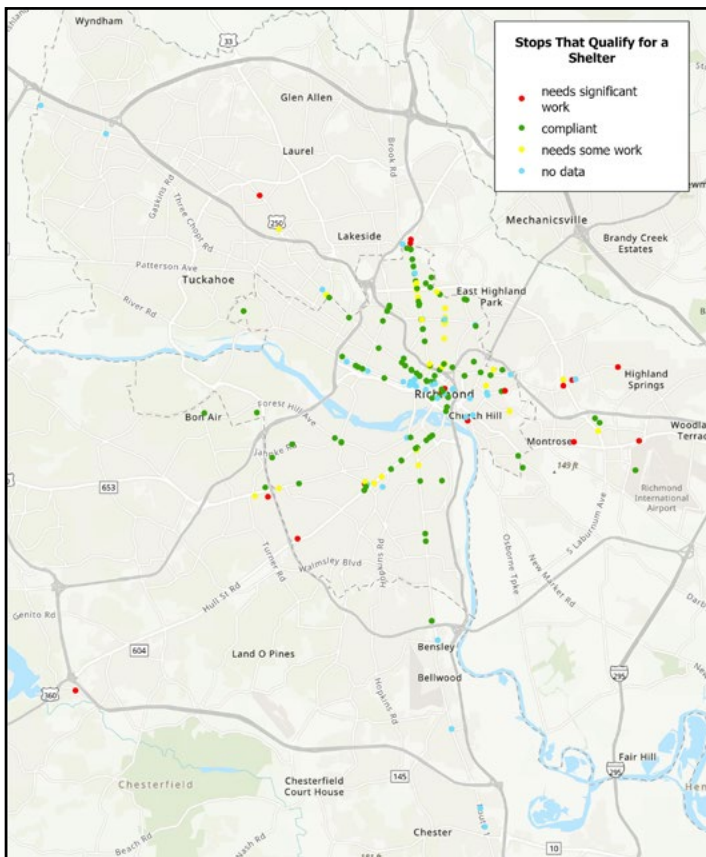


Figure 22: Local Stops that Qualify for ETI Installation for Aspirational Scenario

SPECIAL PROJECTS

GRTC welcomes the opportunity to collaborate with private and regional partners to install shelters, benches, and/or stop improvements. Special projects are generally subject to the guidelines of outside funding sources and do not necessarily need to meet rubric thresholds, though GRTC encourages potential partners to prioritize the installation of ETI at locations that do.

Examples of past and in-progress special projects include: The Bon Secours East End Shelter project, shelter upgrades coincident with jurisdictional sidewalk improvement projects, and jurisdiction-funded shelters purchased with CDBG grant funds.

Chapter 3: Bus Stop Improvements Workflow

STOP SELECTION

GRTC proactively evaluates stops and recommends improvements and/or ETI placement in accordance with our placement goals and guidelines.

Additionally, CTAs, transit riders, stakeholders, and the public at large may request stop evaluation at any time for ETI placement. Requests will be evaluated against the rubric and will be subject to GRTC and jurisdictional approval.

STOP SELECTION & PRELIMINARY REVIEW

SURVEY, DESIGN, & ENGINEERING

AQUIRE EASEMENT (IF NECESSARY)

CONSTRUCTION

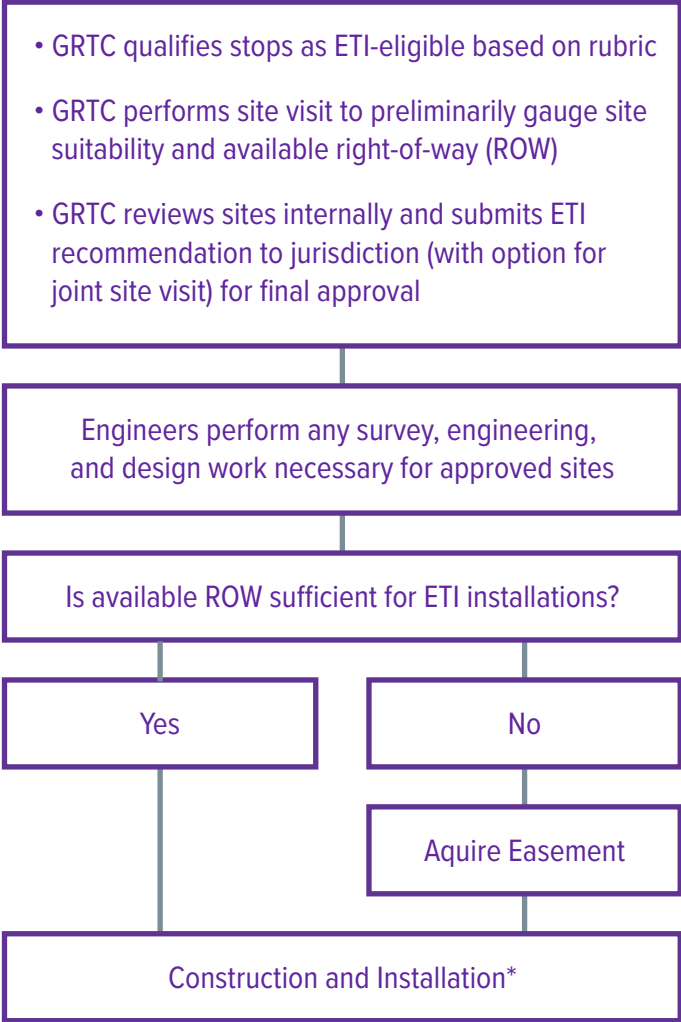


Figure 23: ETI Installation Workflow

Note: Shelters and landing pads installed in VDOT right-of-way are subject to additional VDOT installation requirements. These include:

- Prototype approval of structure from General Services (for shelters)
- Virginia Certificate of Occupancy, to include appropriate inspections of installed shelter by County inspectors (for shelters)
- Approved Plan and Profiles (for landing pads)

REQUESTING A BENCH OR SHELTER

Anyone may request a bench or shelter by contacting GRTC via:

EMAIL

planningcomment@ridegrtc.com

WEBFORM — Scroll to the form in the middle of the page

www.ridegrtc.com/planning-your-trip/new-bus-signs

PHONE

804-358-4782

Chapter 4: Essential Transit Infrastructure Cleaning & Maintenance

The jurisdictions and GRTC partner together to monitor and maintain bus stops and ETI to ensure the safety and comfort of riders and pedestrians.

JURISDICTIONAL RESPONSIBILITIES

After essential infrastructure is installed, maintenance and upkeep of all landing pads, connecting sidewalks, nearby vegetation, trash removal, and snow and ice removal is the responsibility of the jurisdiction.

GRTC RESPONSIBILITIES

GRTC maintains a schedule of regular power washing for all installed shelters and performs graffiti removal on an as-needed basis.

GRTC will coordinate with the jurisdictions regarding additional responsibilities and enforcement issues.

To report a concern regarding the condition of a bus stop (including litter, graffiti, vandalism, etc.) please contact GRTC's Customer Service (804-358-4782), use the Stop Infrastructure Webform (located on GRTC's website), or email GRTC's Planning Comment inbox (planningcomment@ridegrtc.com).

GRTC repairs or replaces damaged benches, shelters, and trash cans. The condition of shelters, benches, and trash cans will be evaluated and ETI replacement will be scheduled in accordance with GRTC's TAM plan.

Chapter 5: Risks & Considerations

CURRENT MANUFACTURING CLIMATE: SUPPLY CHAIN DELAYS & INFLATION

Shelters, benches, and trash can production are experiencing the same supply chain delays plaguing construction and manufacturing sectors nationwide. Higher-than-typical inflation increases continue to affect construction projects.

PROCUREMENT

Various milestones in our timeline are dependent on the completion of contracts and/or procurements currently in-progress (including Engineering Review services and the ETI manufacturing contracts).

FUNDING CHALLENGES

Our more ambitious goals come at a higher cost.

COORDINATION

Our more ambitious ADA improvement goals require a higher level of coordination with jurisdictional projects and funding.

RIGHT-OF-WAY RESTRICTIONS

For locations where adequate right-of-way is not available, GRTC (in cooperation with the jurisdiction) will need to acquire easements, which will add time and expense to the installation process.

Chapter 6: Projected Costs

GRTC has prepared three implementation scenarios for our five-year plan: attainable, moderate, and aspirational scenarios.

ATTAINABLE SCENARIO: \$11M

	BASELINE		FY23		FY24		FY25		FY26		FY27		
	qty	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost		
NEW ETI													
Shelters	81	25	\$522,712	33	\$1,070,879	33	\$1,050,876	34	\$1,354,999	35	\$1,530,661		\$5,530,126
Benches	338	28	\$73,420	51	\$144,786	48	\$154,111	49	\$157,789	49	\$169,187		\$699,293
Trash Cans	432	45	\$90,180	66	\$145,490	66	\$160,039	68	\$181,378	68	\$199,516		\$776,604
ETI Maintenance & Retrofit													
Shelters			\$165,794		\$172,768		\$190,045		\$209,050	0	\$189,498		\$927,155
Benches and Trash Cans			\$7,600		\$53,966	0	\$59,363		\$65,299		\$71,829		\$258,056
ADA Compliance													
Landing Pads (single)		5	\$17,002	10	\$37,404	10	\$41,144	10	\$45,259	10	\$49,785		\$1,90,594
Landing Pads (double)		0		15	\$113,535	15	\$124,888	15	\$137,377	15	\$151,115		\$526,915
ADA Improvements (Tier 1)		0		15	\$75,249	0	\$82,774	0	\$100,156	0	\$110,172		\$368,351
ADA Improvements (Tier 2)		0		0		0		0		0			
Projected Costs (subtotal)			\$876,708		\$1,818,078		\$1,863,240		\$2,251,306		\$2,247,161		\$9,277,093
Contingency (10 - 20%)			\$87,671		\$362,816		\$372,648		\$450,261		\$494,352		\$1,767,748
ANNUAL SUBTOTAL			\$964,379		\$2,176,893		\$2,235,888		\$2,2701,568		\$2,966,114		\$11,044,841

Table 5: Attainable Cost Estimate Scenario

MODERATE SCENARIO: \$14.5M

	BASELINE		FY23		FY24		FY25		FY26		FY27		
	qty	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost		
NEW ETI													
Shelters	81	25	\$522,712	33	\$1,070,879	33	\$1,050,876	34	\$1,1354,999	35	\$1,1530,661		\$5,530,126
Benches	338	28	\$73,420	51	\$144,786	48	\$154,111	49	\$157,789	49	\$169,187		\$699,293
Trash Cans	432	45	\$90,180	66	\$145,490	66	\$160,039	68	\$181,387	68	\$199,516		\$776,604
ETI Maintenance & Retrofit													
Shelters			\$165,794		\$172,768		\$190,045		\$209,050		\$189,498		\$927,155
Benches and Trash Cans			\$7,600		\$53,966		\$59,363		\$65,299		\$71,829		\$258,056
ADA Compliance													
Landing Pads (single)		5	\$17,002	10	\$37,404	10	\$41,114	10	\$45,259	10	\$49,785		\$190,634
Landing Pads (double)				15	\$113,535	15	\$124,888	15	\$137,377	15	\$151,115		\$526,975
ADA Improvements (Tier 1)		0		15	\$75,249	15	\$82,774	15	\$100,156	15	\$110,172		\$368,411
ADA Improvements (Tier 2)				25	\$595,238	25	\$654,762	25	\$792,262	25	\$872,488		\$2,913,850
Projected Costs (subtotal)			\$876,708		\$2,409,316		\$2,518,002		\$3,043,568		\$3,343,249		\$12,190,843
Contingency (10 - 20%)			\$87,671		\$481,863		\$503,600		\$608,714		\$668,650		\$2,350,498
ANNUAL SUBTOTAL			\$964,379		\$2,891,179		\$3,021,602		\$3,652,282		\$4,011,899		\$14,541,341

Table 6: Moderate Scenario Cost Estimate

Both scenarios include shelter, bench, and trash can installations in quantities sufficient to meet the 50% installation goal. Both scenarios include some quantities of landing pad installations, which are the more straightforward installation of concrete pads at sites which already have adequate level space for installation.

The difference in the two scenarios is that the aspirational plan includes “Site Improvement” projects. If GRTC is awarded sufficient grant funds, our wish is to coordinate with our jurisdictional partners to undertake more holistic pedestrian access projects. These will include bringing our bus stops into ADA compliance but may also include items such as site leveling, ROW acquisition, and crosswalk and sidewalk improvement or installation.

ASPIRATIONAL SCENARIO: \$28.6M

	BASELINE		FY23		FY24		FY25		FY26		FY27		
	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	qty	Projected Cost	
NEW ETI													
Shelters	81	25	\$522,712	33	\$1,070,879	33	\$1,050,876	34	\$1,1354,999	35	\$1,1530,661		\$5,530,126
Benches	338	38	\$97,530	150	\$437,520	150	\$459,797	149	\$480,841	148	\$503,781		\$1,979,469
Trash Cans	432	30	\$60,120	150	\$330,660	150	\$363,726	150	\$400,099	150	\$440,108		\$1,594,713
ETI Maintenance & Retrofit													
Shelters		5	\$165,794		\$172,768		\$190,045		\$209,050		\$189,498		\$927,155
Benches and Trash Cans		6	\$7,600		\$53,966		\$59,363		\$65,299		\$71,829		\$258,056
ADA Compliance													
Landing Pads (single)		5	\$17,002	10	\$37,404	10	\$41,144	10	\$45,259	10	\$49,785		\$364,185
Landing Pads (double)		0		20	\$151,380	20	\$166,518	20	\$183,169	20	\$201,486		\$702,553
ADA Improvements		0		126	\$2,304,662	126	\$2,535,128	126	\$3,067,504	128	\$3,416,459		\$1,220,491
Projected Costs (subtotal)			\$870,758		\$4,559,239		\$4,528,872		\$5,806,220		\$8,068,003		\$22,168,695
Contingency (10 - 20%)			\$87,076		\$1,367,772		\$1,358,662		\$1,741,866		\$1,613,601		\$6,476,457
ANNUAL SUBTOTAL			\$957,837		\$5,927,010		\$5,887,534		\$7,548,086		\$9,681,604		\$28,645,152

Table 7: Aspirational Scenario Cost Estimate

The final scenario includes shelter, bench, and trash can installations in quantities sufficient to meet the 75% installation goal as well as the accompanying site improvements. Costs rise in the final scenario for two reasons: the higher quantities of ETI to be purchased and installed and the more rigorous site improvements required. The lower installation goals of the attainable and moderate scenarios afford some flexibility in stop selection: if funding shortfalls occur, installation can be shifted to stops that require less mitigation to be installation-ready. To meet the higher goals of the Aspirational scenario, installation need to occur at more stops, including those that need the most improvement. Because the aspirational scenario necessarily includes the stops that need the most improvement, this scenario will require a higher level of coordination with the jurisdictions.

Chapter 7: Funding Sources

Currently awarded grant funds will cover all projected costs for FY23.

Grant		Awarded	Executed	Match Split	FTA Activity
VA2017-022	\$187,701	X	X	80/20% federal/local	119202 - Shelters
VA2020-009	\$37,159	X	X	80/20% federal/local	119202 - Shelters and 119205 - Pedestrian Access/Walkways
GRANT 1	\$150,000	X		80/16/4% federal/state/local	119202 - Shelters
GRANT 2	\$506,000	X		80/16/4% federal/state/local	119202 - Shelters
	\$880,860				

Table 8: FY23 Funding Sources

To fund the outyears of our five-year program, GRTC will apply for additional grants. Potential funding sources include:

- Congressional Designated Spending Program
- Infrastructure Investment and Jobs Act (IIJA)
- FTA Section 5307 grant funds
- CMAQ
- SmartScale
- VDOT Transportation Alternatives
- DRPT MERIT grant funds
- Private discretionary funding/partnerships

Chapter 8: Expected Outcomes

Successful implementation of the five-year plan will lead to a significant increase in ETI installations, both system wide and in traditionally underinvested areas.

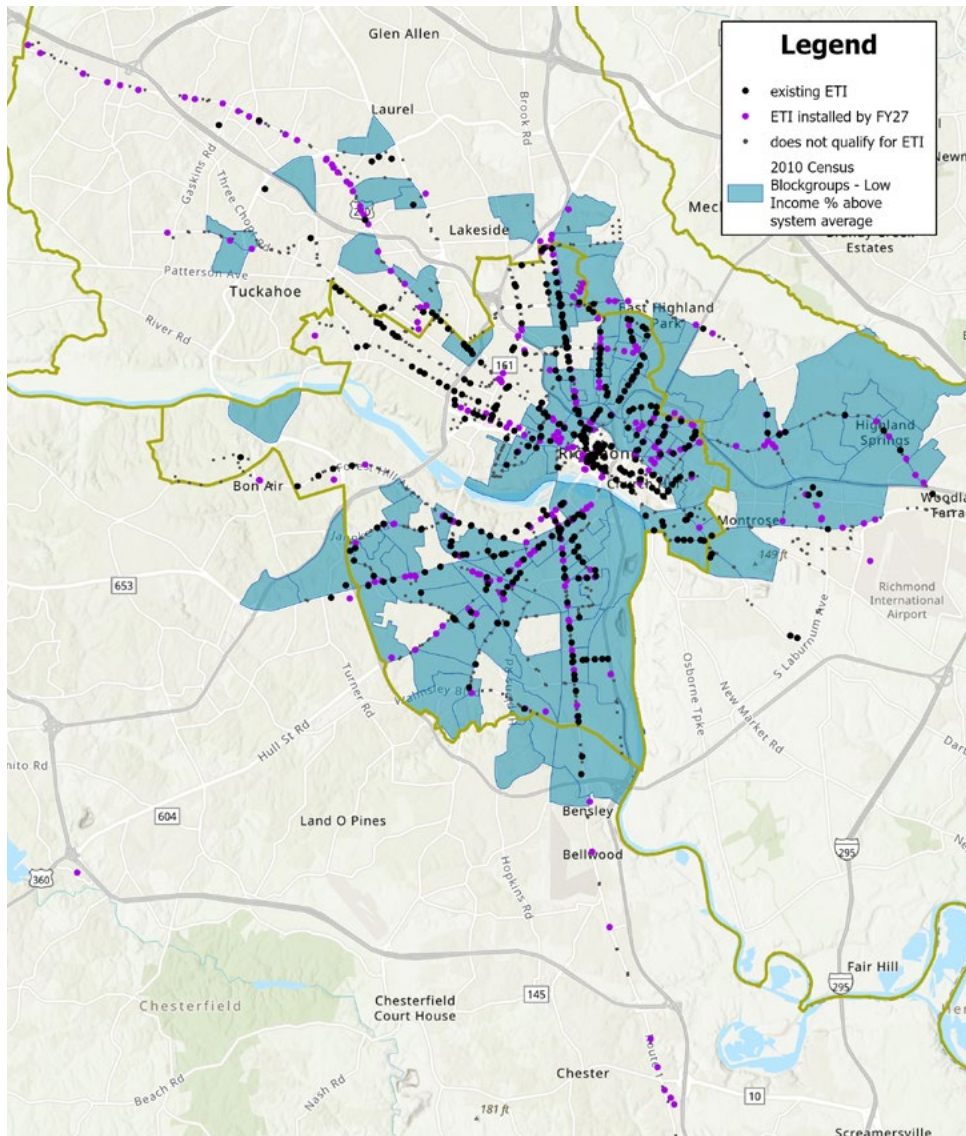


Figure 24: Expected Outcomes

Appendix A – Currently Installed ETI

Stop	Location	Shelter	Bench	Trash Can
7	14th + Franklin		X	X
14	16th + Dinwiddie		X	
17	16th + Maury		X	X
21	18th + Dinwiddie		X	
26	18th + Fairfax		X	X
30	18th + Halifax		X	X
43	1st + Front			X
44	1st + Milton		X	
46	1st + Baker		X	X
47	1st + Baker			X
48	1st + Clay		X	X
49	1st + Duval			X
51	1st + Hill	X	X	X
52	1st + Hospital		X	
53	1st + Leigh			X
54	1st + Marshall	X		X
55	1st + Federal	X		
58	20th + Stonewall	X		X
61	21st + Broad		X	X
62	21st + Fairfield		X	
63	21st + Marshall	X		X
64	21st + Phaup		X	X
68	22nd + Fairmount			X
69	22nd + Fairmount			X
76	22nd + U		X	X
79	22nd + W		X	X
92	25th + R	X		X
93	25th + R			X
97	25th + Grace			X
103	25th + Venable			X
105	28th + U		X	X
116	2nd + Leigh	X		X
117	2nd + Marshall		X	X
138	4th + Chestnut		X	X
141	4th + Cypress			X

Stop	Location	Shelter	Bench	Trash Can
142	4th + Cypress		X	X
143	4th + Juniper			X
144	4th + Juniper		X	
145	4th + Magnolia		X	
146	4th + Magnolia		X	X
147	4th + Rowen	X		X
148	4th + Spruce		X	X
149	4th + Spruce		X	
151	4th + Trigg		X	
152	4th + Victor		X	X
158	5th + Grace		X	
159	5th + Hospital			X
160	5th + Hospital		X	X
164	7th + Marshall		X	X
166	7th + Clay		X	X
167	7th + Franklin		X	X
169	7th + Main	X		
172	8th + Cary		X	
173	8th + Clay		X	X
177	8th + Marshall	X		X
178	Hioaks + CJW Medical Center		X	X
181	9th + Franklin		X	X
190	Admiral Gravelly + Government		X	
191	Admiral Gravelly + Government		X	X
195	Admiral Gravelly + Williamsburg			X
206	Azalea + W Seminary		X	X
209	Chippenham Mall Parking Lot			X
217	Spring Rock Green	X		X
247	Belt Boulevard at 141			X
256	Belt + Stockton			X
257	Belt at Wells Fargo Bank		X	X
258	Belvidere + Byrd			X
260	Belvidere + Virginia War Memorial		X	
262	Belvidere + Idlewood			X
288	Arthur Ashe Blvd + Greyhound Bus Station		X	X
291	Arthur Ashe Blvd at The Diamond		X	
292	Arthur Ashe Blvd + Westwood			X
300	Bremo + Monument	X		X

Stop	Location	Shelter	Bench	Trash Can
302	Southwood + Treehaven		X	
309	Broad Rock + Walmsley		X	
314	Broad Rock + 34th		X	X
315	Broad Rock + 36th		X	X
316	Broad Rock + Kinsley		X	X
317	Broad Rock + Belt	X		X
326	Broad Rock + Epperson			X
327	Broad Rock + Ferguson		X	X
329	Broad Rock + Holly Springs		X	X
335	Broad Rock + McGuire		X	X
341	Broad Rock + S Kinsley		X	X
342	Broad Rock + Snead			X
352	Broad + 11th		X	X
354	Broad + 12th		X	X
358	Broad + 17th	X		X
359	Broad + 18th		X	X
361	Broad + 19th		X	X
362	Broad + 19th		X	X
370	Broad + 4th	X		X
371	Broad + 4th	X	X	X
383	Broad + 9th			X
384	Broad + 9th		X	X
385	Broad + Adams		X	X
398	Broad + Arthur Ashe Blvd			X
399	Broad + Arthur Ashe Blvd			X
400	Broad + Bowe		X	X
411	Broad + Chantilly		X	
420	Broad + Emerywood		X	X
428	Broad + Gilmer	X		
431	Broad + Hamilton		X	
434	Broad + Henry			X
435	Broad + Henry		X	X
438	Broad + Hungary Spring			X
440	Broad + Adams		X	X
441	Broad + Kent		X	
442	Broad + Lafayette		X	
443	Broad + Lafayette		X	
446	Broad + Laurel		X	X

Stop	Location	Shelter	Bench	Trash Can
451	Broad + Malvern	X		X
459	Broad + Robinson		X	X
460	Broad + Robinson	X		X
461	Broad + Roseneath		X	X
463	Broad + Ryland		X	X
464	Broad + Ryland		X	X
469	Broad + Sheppard			X
474	Broad + Staples Mill		X	X
487	Broad + Tilden			X
492	Broad + Westmoreland		X	X
494	Broad + Westwood		X	
499	Broad at Willow Lawn Shopping Center		X	X
503	Brook + Bellevue		X	X
505	Brook + Azalea	X		X
510	Brook + Claremont		X	
518	Brook + Lombardy	X		X
524	Brook + Chamberlayne Overpass		X	X
530	Brook + Sherwood	X		X
543	Brookland Park + 4th		X	X
547	Brookland Park Boulevard + Chamberlayne		X	X
548	Brookland Park Boulevard + Chamberlayne		X	X
555	Brookland Park Boulevard + Hanes			X
556	Brookland Park + Hanes			X
561	Brookland Park Boulevard + Montrose			X
562	Brookland Park Boulevard + Montrose			X
568	Brookland Park Boulevard + North		X	X
569	Brookland Park Boulevard + North			X
603	Carnation + Midlothian			X
604	Carnation + Midlothian			X
607	Carnation + Warwick		X	
608	Cary + 10th		X	X
616	Cary + Belmont		X	X
617	Cary + Belvidere			X
619	Cary + Arthur Ashe Blvd		X	X
626	Cary + Freeman			X
629	Cary + Harrison			X
632	Cary + Laurel		X	
641	Cary + McCloy			X

Stop	Location	Shelter	Bench	Trash Can
643	Cary + Nansemond	X		X
645	Cary + Randolph		X	X
649	Cary + Rowland			X
650	Cary + Sheppard		X	X
675	Chamberlayne approx 50 feet south of Edgehill		X	X
677	Chamberlayne + Baker		X	X
678	Chamberlayne + Bellevue		X	X
679	Chamberlayne + Brookland Park			X
680	Chamberlayne + Brookland Park		X	X
681	Chamberlayne + Calhoun		X	
683	Chamberlayne + Claremont		X	
685	Chamberlayne + Edgehill		X	X
686	Chamberlayne + Fells			X
688	Chamberlayne + Fritz		X	X
690	Chamberlayne + Hammond			X
691	Chamberlayne + Hammond		X	X
693	Chamberlayne + Laburnum		X	X
694	Chamberlayne + Laburnum		X	X
695	Chamberlayne + Ladies Mile		X	
696	Chamberlayne + Ladies Mile		X	X
698	Chamberlayne + Melrose	X		X
699	Chamberlayne + Mitchell			X
700	Chamberlayne + Ordway		X	X
701	Chamberlayne + Ordway		X	X
702	Chamberlayne + Overbrook			X
703	Chamberlayne + Overbrook		X	X
706	Chamberlayne + Rennie		X	
708	Chamberlayne + School			X
709	Chamberlayne + Sledd			X
710	Chamberlayne + Sledd		X	
713	Chamberlayne + Walton		X	
714	Chamberlayne + Walton		X	X
715	Chamberlayne + Watkins			X
716	Chamberlayne + Westbrook		X	X
717	Chamberlayne + Westminster		X	X
718	Chamberlayne + Westwood		X	X
719	Chamberlayne + Westwood		X	X
722	Chambers + Bowen			X

Stop	Location	Shelter	Bench	Trash Can
724	Harwood + Bowen		X	X
725	Chambers + Minefee			X
736	Chimborazo + Leigh		X	
737	Chimborazo + Leigh	X		X
740	Chimborazo + N		X	X
741	Chimborazo + P		X	X
760	Clarkson + Warwick		X	
769	Coalter + Redd	X		X
772	Colorado + Colorado Manor		X	X
778	Commerce + Hull		X	X
790	Corbin + North			X
792	Cowardin + Bainbridge		X	
794	Cowardin + Hull		X	X
798	Cowardin + Wall		X	
800	Creighton at Community Center	X		X
801	Creighton + Kane		X	
802	Creighton + Nine Mile		X	
814	Crutchfield + Charnwood Apartments		X	X
815	Crutchfield + Norcroft	X		X
816	Crutchfield + Roanoke			X
839	Hioaks + Marlowe			X
849	Route 1 + Cogbill		X	X
855	Vinton + Henrico Arms	X		X
860	Ellwood + Belmont			X
863	Ellwood + Dooley			X
864	Ellwood + Nansemond		X	X
880	Fairfield Way at City Jail	X		X
906	Ford + Mechanicsville	X		X
907	Ford + Sussex			X
908	Forest at Henrico Doctors' Hospital	X		X
913	Forest Hill at Stony Point Medical Center		X	X
915	Forest Hill + 41st		X	X
916	Forest Hill + 41st			X
919	Forest Hill + 44th		X	X
922	Forest Hill + 47th		X	X
925	Forest Hill + Cherokee		X	X
945	Forest Hill at Stony Point Shopping Center			X
949	Forest Hill + Hathaway			X

Stop	Location	Shelter	Bench	Trash Can
951	Forest Hill at Huguenot School		X	
952	Forest Hill + Jahnke		X	X
954	Forest Hill + Kenmore		X	
962	Forest Hill + Melborne			X
971	Forest Hill + Prince Arthur			X
977	Forest Hill + Roanoke		X	X
978	Forest Hill + Roanoke		X	X
979	Forest Hill + Sheila Lane		X	X
982	Forest Hill + Taylor		X	X
986	Forest Hill + Westover Hills			X
1081	Grove + Belmont		X	
1083	Grove + Arthur Ashe Blvd			X
1084	Grove + Arthur Ashe Blvd			X
1087	Grove + Commonwealth		X	X
1095	Grove + Hamilton		X	
1104	Grove + Libbie			X
1108	Grove + Malvern		X	
1110	Grove + Maple		X	X
1116	Grove + Nansemond		X	X
1123	Grove + Robinson		X	
1139	Grove + Thompson	X		X
1141	Grove + Three Chopt		X	X
1147	Grove + W Lock		X	
1148	Grove + Westmoreland		X	
1171	Harrison + Broad		X	X
1172	Harrison + Cary			X
1177	Harrison + Grayland		X	
1178	Harrison + Grove		X	
1181	Harrison + Main		X	X
1182	Harrison + Main		X	
1183	Harrison + Park			X
1186	Harwood + 21st			X
1191	Henrico Arms Place		X	
1196	Hermitage + Bellevue		X	X
1197	Hermitage + Bellevue		X	X
1207	Hermitage + Laburnum		X	X
1216	Hermitage + Oakdale		X	X
1230	Highland + Carolina		X	X

Stop	Location	Shelter	Bench	Trash Can
1232	Highland + Enslow		X	X
1235	Highland + Missouri	X		X
1236	Hildreth + Ford			X
1244	Hioaks + Carnation		X	X
1245	Hioaks + Carnation			X
1259	Hull + 11th		X	X
1260	Hull + 11th		X	X
1261	Hull + 12th			X
1262	Hull + 12th			X
1263	Hull + 14th		X	X
1264	Hull + 14th		X	X
1266	Hull + 15th		X	X
1267	Hull + 17th		X	X
1270	Hull + 21st		X	X
1274	Hull + 25th		X	
1280	Hull + 35th		X	
1282	Hull + 3rd			X
1285	Hull + 7th			X
1286	Hull + 7th			X
1287	Hull + 9th	X		X
1288	Hull + 9th		X	X
1292	Hull + Blake			X
1295	Hull + Evans		X	X
1296	Hull + Cowardin		X	X
1297	Hull + Cowardin	X		X
1299	Hull + Derwent			X
1304	Hull + Evans		X	X
1307	Hull + Orcutt			X
1312	Hull + Playn		X	X
1316	Hull + Swansboro			X
1320	Hull + Warwick		X	X
1327	Hull at Southside Plaza		X	X
1328	Henrico Human Services	X		X
1334	Idlewood + Randolph		X	X
1365	Jahnke at Entrance to Shopping Center		X	
1366	Jahnke + Forest Hill			X
1368	Jahnke + Irby		X	
1370	Jahnke + Newell			X

Stop	Location	Shelter	Bench	Trash Can
1371	Jahnke + Oakhurst			X
1377	Jefferson + 23rd			X
1378	Jefferson + 23rd		X	X
1379	Jefferson + Marshall			X
1386	Richmond Highway + Alexander		X	X
1387	Richmond Highway + Atwell		X	X
1388	Richmond Highway + Atwell	X		
1389	Route 1 + Bellmeade			X
1391	Richmond Highway + Bells		X	X
1393	Richmond Highway + Boston		X	
1394	Richmond Highway + Boston			X
1399	Richmond Highway + Calverton		X	
1402	Richmond Highway + Courtland		X	X
1403	Richmond Highway + Dale			X
1405	Cowardin + Hull			X
1408	Richmond Highway + Fairfax		X	
1413	Richmond Highway + Halifax	X		X
1414	Richmond Highway + Hopkins		X	X
1419	Richmond Highway + Lumpkin		X	
1422	Richmond Highway + Maury			X
1423	Richmond Highway + Mimosa			X
1425	Richmond Highway + Oakland		X	X
1426	Richmond Highway + Ruffin	X		X
1427	Richmond Highway + Ruffin		X	
1430	Richmond Highway + Stockton			X
1431	Richmond Highway + Stockton		X	
1432	Richmond Highway + Summer Hill		X	
1435	Route 1 + Terminal			X
1436	Route 1 + Walmsley		X	X
1441	Richmond Highway + Webber			X
1445	Jennie Scher + Accomac		X	
1452	Kane + 29th		X	X
1455	Route 1 + Food Lion	X	X	X
1460	Laburnum + Alma	X		X
1470	Laburnum + Jan	X		
1529	Leigh + 1st		X	X
1530	Leigh + 1st		X	
1575	Lombardy + Claiborne	X		X

Stop	Location	Shelter	Bench	Trash Can
1576	Lone + Bruce		X	X
1578	Lone + Harwood	X		X
1586	Lynhaven + Bellmeade		X	
1597	M + 27th		X	
1598	M + 27th		X	
1600	M + 30th		X	X
1606	Main + 10th		X	X
1607	Main + 11th		X	
1608	Main + 13th	X		
1609	Main + 13th		X	
1610	Main + 14th		X	X
1612	Main + 15th			X
1616	Main + 18th		X	
1617	Main + 18th			X
1618	Main + 1st			X
1621	Main + 21st		X	X
1627	Main + 25th		X	X
1631	Main + 8th		X	
1636	Main + Arthur Ashe Blvd			X
1639	Main + Harrison		X	
1646	Main + Plum			X
1647	Robinson + Main		X	X
1649	Main + Stafford			X
1659	Marshall + 22nd			X
1661	Marshall + 24th		X	X
1663	Marshall + 25th	X		X
1665	Marshall + 27th			X
1666	Marshall + 29th			X
1667	Marshall + 29th		X	X
1669	Marshall + 31st			X
1670	Marshall + 31st		X	X
1672	Marshall + 33rd			X
1673	Marshall + 3rd	X	X	X
1675	Marshall + 7th		X	X
1677	Marshall + Chimborazo			X
1678	Marshall + Chimborazo		X	X
1683	Maury + 15th		X	
1684	Maury + 15th		X	

Stop	Location	Shelter	Bench	Trash Can
1689	McCloy + Idlewood		X	X
1692	Meadow + Amelia			X
1696	Meadow + Colorado			X
1707	Meadow + Powhatan			X
1708	Meadow + Rosewood		X	X
1711	Meadowbridge + 2nd			X
1712	Meadowbridge + Arnold			X
1716	Meadowbridge + Gladstone		X	
1718	Meadowbridge + Highlandview			X
1719	Meadowbridge + Milton			X
1720	Meadowbridge + Northside		X	X
1721	Meadowbridge + Pollock		X	
1722	Mechanicsville + Brauers			X
1725	Mechanicsville + Littlepage	X		X
1726	Mechanicsville + Phaup		X	
1729	Mecklenburg + Wood		X	
1736	Midlothian + 33rd		X	X
1737	Midlothian + 34th		X	X
1739	Midlothian + 37th		X	X
1751	Midlothian + Covington		X	
1755	Midlothian + Dundee			X
1763	Midlothian at Goodwill	X		X
1764	Midlothian + Beaufont Hills			X
1765	Midlothian + Arcadia		X	X
1769	Midlothian Pike + Erich		X	X
1776	Midlothian + Warwick	X		X
1778	Midlothian + W Blake			X
1784	Monteiro + Fells		X	
1785	Monteiro + Minor			X
1786	Monteiro + Wellford		X	
1832	Mosby + P	X		X
1833	Mosby + P	X		X
1838	Mosby + Venable		X	
1840	Moss Side + Akron			X
1866	Nine Mile + Kenway		X	X
1867	Nine Mile + 30th		X	
1875	Nine Mile + Barker		X	X
1881	Nine Mile + Bunche			X

Stop	Location	Shelter	Bench	Trash Can
1901	Nine Mile + Holly		X	
1913	Nine Mile + Naglee		X	
1921	Nine Mile + Quince		X	X
1929	North + Ladies Mile			X
1931	North + Brookland Park			X
1932	North + Essex	X		X
1934	North + Crawford			X
1935	North + E Lancaster			X
1936	North + Essex			X
1937	North + Fendall		X	X
1938	North + Gladstone			X
1939	North + Gladstone			X
1940	North + Graham			X
1941	North + Henrico		X	X
1943	North + Hooper		X	X
1945	North + Ladies Mile			X
1947	North + Meredith		X	X
1949	North + Montrose	X		X
1953	North + Norwood		X	X
1955	North + Overbrook		X	X
1959	North + Roberts			X
1960	North + Wickham		X	X
1965	Oakwood + Q		X	X
1966	Oakwood + Canepa		X	
1976	Overbrook + Brook		X	
2006	Parker + Williamsburg		X	X
2010	Gaskins + Mayland (Parking Lot)	X		X
2012	Patrick + Meadowbridge		X	X
2014	Patterson + Willow Lawn		X	X
2027	Patterson + Granite		X	X
2041	Patterson + Libbie		X	X
2042	Patterson + Libbie		X	
2048	Patterson + Matoaka		X	
2054	Patterson + Ripley		X	X
2055	Patterson + Ripley		X	
2056	Patterson + Roseneath		X	
2061	Patterson + Thompson		X	
2066	Patterson + Willow Lawn		X	

Stop	Location	Shelter	Bench	Trash Can
2068	Patterson + Three Chopt		X	X
2081	Plaza + Belt			X
2082	Plaza + Southside Community Service Center	X		X
2083	Poe + Lamb		X	
2086	Poe + North			X
2097	Idlewood + Randolph		X	
2113	Robinson + Broad		X	X
2114	Robinson + Broad		X	X
2115	Robinson + Cary		X	X
2121	Robinson + Grove		X	
2122	Robinson + Grove			X
2123	Robinson + Hanover		X	
2124	Robinson + Hanover		X	X
2127	Robinson + Main		X	X
2150	Ruffin + Commerce		X	
2151	Ruffin + Davee		X	
2153	Ruffin + Frank		X	
2157	Ruffin + Lynhaven		X	
2159	Ruffin + Ruffin Apartments		X	X
2168	Semmes + 10th	X		X
2169	Semmes + 12th		X	
2174	Semmes + 26th		X	
2175	Semmes + 27th			X
2178	Semmes + 30th		X	
2182	Semmes + 34th		X	X
2183	Semmes + 34th			X
2186	Semmes + 12th	X		X
2274	Venable + 22nd			X
2275	Venable + 22nd			X
2298	Walmsley + Shackelford Rd.		X	X
2313	Westbrook + Crestwood	X		X
2321	Westover Hills + Bassett		X	X
2323	Westover Hills at Brentwood South Apts		X	
2325	Westover Hills + Crutchfield		X	X
2330	Whitcomb + De Forrest	X		X
2331	Whitcomb + Lebanon		X	
2332	Whitcomb + Mechanicsville	X		X
2333	Whitcomb + Redwood	X		X

Stop	Location	Shelter	Bench	Trash Can
2336	Williamsburg + Nicholson	X		
2343	Williamsburg + Allenshaw		X	
2344	Williamsburg + Arcadia			X
2363	Williamsburg + Northhampton		X	X
2370	Williamsburg + Salem		X	X
2375	Williamsburg + Tompkins		X	X
2377	Williamsburg + Waverly		X	X
2378	Willow Lawn + Shelter	X		X
2411	X + 22nd		X	X
2423	Chamberlayne + Price		X	X
2424	8th + Byrd			X
2427	Admiral Gravely + Williamsburg	X		X
2431	14th + Dock			X
2459	Forest Hill Wal-Mart			X
2464	Hull + 33rd			X
2475	Warwick Village + Biggs		X	
2487	Broad + Hancock			X
2500	Forest Hill at Dialysis Center		X	X
2522	9th + Marshall (Mid-block between Marshall + Broad)			X
2733	Jahnke + Irby		X	X
2745	E Laburnum + Harris		X	
2758	W Laburnum + Chamberlayne		X	
2791	Chippenham Hospital Parking Lot	X		
2999	Broad + 7th			X
3051	Chamberlayne + Wilmer			X
3056	Warwick + Hull		X	
3061	Jahnke + Shopping Center			X
3062	Jahnke + German School		X	X
3063	Jahnke + St Johns Woods			X
3077	E. Belt Blvd. + Chalfont		X	
3079	Eastern Henrico Government Center			X
3200	Chamberlayne + Azalea		X	X
3258	Laburnum Ave + Kingsridge		X	
3259	Laburnum Ave at Seven Gables (Sec. A)		X	
3302	8th + Grace		X	X
3338	White Oak Village at Sam's Club	X		X
3339	White Oak Village at Office Max	X		X
3343	Chippenham Square Shopping Center		X	X

Stop	Location	Shelter	Bench	Trash Can
3344	8th + Main		X	
3360	Cary + Granby		X	X
3362	Overbrook + Langston			X
3387	Meadow + Grayland			X
3395	Commerce + Decatur		X	
3467	Nine Mile + Cedar Fork		X	X
3479	Hopkins + McGuire Dr			X
3484	25th + S	X		X
3529	Broad + Springfield		X	
3585	Fareva Parking Lot West	X		X
3586	Fareva Parking Lot East		X	
3593	23rd + Franklin		X	X
3594	Phaup + 25th	X		X
3601	2nd + Broad		X	X
3610	3rd + Dill		X	X
3611	3rd + Marshall		X	
3628	Broad + 50th			X
3635	Cary + Addison		X	X
3649	Crutchfield + Roanoke		X	X
3651	DMV Drive + Broad			X
3656	Harwood + Keswick		X	X
3657	Harwood + Overlook			X
3661	Hermitage + Sherwood		X	
3675	Lombardy + Broad		X	X
3676	Main + Rowland			X
3678	Main at East Riverfront		X	
3682	Meadow + Idlewood			X
3684	North + Culpepper			X
3687	Orleans + Main		X	
3693	Semmes + 20th		X	X
3701	St. Mary's Hospital at Monument	X		X
3704	Venable + Pink			X
3723	North + Brookland Park		X	X
3809	Prince Henry at Administration Building	X		
3810	Prince Henry at Henrico Government Center	X		
3822	Williamsburg + Creedmore, WB		X	
3823	Leigh + 11th, EB		X	
3824	Leigh + 11th, WB		X	

Appendix B – Stops Eligible for a Bench or Shelter

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
8	14th + Dock	Richmond	11	23	Install bench	X	X
9	14th + Main	Richmond	43	18	Install shelter	X	X
16	16th + Maury	Richmond	2	33	Install bench		X
19	17th + Marshall	Richmond	5	10	Install bench		X
35	18th + Joplin	Richmond	3	23	Install bench		X
43	1st + Front	Richmond	2	13	Install bench		X
47	1st + Baker	Richmond	45	28	Install shelter	X	X
49	1st + Duval	Richmond	11	23	Install bench	X	X
50	1st + Federal	Richmond	10	20	Install bench	X	X
51	1st + Hill	Richmond	52	28	Replace shelter	X	X
52	1st + Hospital	Richmond	34	28	Install shelter	X	X
53	1st + Leigh	Richmond	6	23	Install bench		X
54	1st + Marshall	Richmond	33	28	Replace shelter	X	X
55	1st + Federal	Richmond	31	18	Replace shelter	X	X
58	20th + Stonewall	Richmond	8	8	Install bench	X	X
62	21st + Fairfield	Richmond	41	13	Install shelter	X	X
63	21st + Marshall	Richmond	5	13	Install bench		X
64	21st + Phaup	Richmond	38	18	Install shelter	X	X
68	22nd + Fairmount	Richmond	7	18	Install bench	X	X
69	22nd + Fairmount	Richmond	18	20	Install bench	X	X
75	22nd + U	Richmond	9	13	Install bench	X	X
76	22nd + U	Richmond	25	13	Install shelter	X	X
80	22nd + W	Richmond	2	13	Install bench		X
91	25th + Q	Richmond	8	33	Install bench	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
96	25th + Broad	Richmond	25	15	Install shelter	X	X
98	25th + Cedar	Richmond	5	28	Install bench		X
99	25th + Leigh	Richmond	2	8	Install bench		X
103	25th + Venable	Richmond	11	23	Install bench	X	X
116	2nd + Leigh	Richmond	8	23	Install bench	X	X
117	2nd + Marshall	Richmond	115	28	Install shelter	X	X
125	35th + Canepa	Richmond	24	15	Install shelter	X	X
132	3rd + Leigh	Richmond	4	13	Install bench		X
137	4th + Chestnut	Richmond	4	15	Install bench		X
141	4th + Cypress	Richmond	2	15	Install bench		X
143	4th + Juniper	Richmond	3	13	Install bench		X
147	4th + Rowen	Richmond	18	13	Install bench	X	X
154	4th + Franklin	Richmond	5	15	Install bench		X
159	5th + Hospital	Richmond	15	13	Install bench	X	X
160	5th + Hospital	Richmond	34	15	Install shelter	X	X
164	7th + Marshall	Richmond	47	28	Install shelter	X	X
169	7th + Main	Richmond	0	15	Evaluate existing shelter		X
173	8th + Clay	Richmond	22	15	Install shelter	X	X
177	8th + Marshall	Richmond	76	15	Replace shelter	X	X
179	9th + Byrd	Richmond	16	20	Install bench	X	X
180	9th + Cary	Richmond	18	20	Install bench	X	X
185	Accomodation + Gay	Richmond	12	13	Install bench	X	X
188	Chamberlayne + Price	Richmond	9	23	Install bench	X	X
192	Admiral Gravely + Gilliam	Richmond	4	13	Install bench		X
209	Chippenham Mall Parking Lot	Richmond	58	30	Install shelter	X	X
212	Banton + Dupont	Richmond	7	25	Install bench	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
217	Spring Rock Green	Chesterfield	69	25	Replace shelter	X	X
227	Belmont + Ellwood	Richmond	3	15	Install bench		X
247	Belt Boulevard at 141	Richmond	2	25	Install bench		X
248	Belt Boulevard at 185	Richmond	8	33	Install bench	X	X
249	Belt Boulevard + Berkeley	Richmond	3	33	Install bench		X
250	Belt + Brandon	Richmond	2	25	Install bench		X
251	Belt at GRTC Administration Building	Richmond	18	30	Install bench	X	X
253	Belt + Merry Oaks	Richmond	13	33	Install bench	X	X
254	Westover Hills + Crutchfield	Richmond	2	20	Install bench		X
256	Belt + Stockton	Richmond	4	25	Install bench		X
257	Belt at Wells Fargo Bank	Richmond	88	30	Install shelter	X	X
258	Belvidere + Byrd	Richmond	2	10	Install bench		X
259	Belvidere + Spring	Richmond	2	13	Install bench		X
261	Belvidere + Holly	Richmond	6	13	Install bench		X
262	Belvidere + Idlewood	Richmond	5	10	Install bench		X
263	Belvidere + Spring	Richmond	3	15	Install bench		X
279	Arthur Ashe Blvd + Leigh	Richmond	4	23	Install bench		X
283	Arthur Ashe Blvd + Broad	Richmond	12	15	Install bench	X	X
284	Arthur Ashe Blvd + Brookland Parkway	Richmond	23	5	Install shelter	X	X
285	Arthur Ashe Blvd + Clay	Richmond	9	23	Install bench	X	X
287	Arthur Ashe Blvd + Arlington	Richmond	52	10	Install shelter	X	X
288	Arthur Ashe Blvd + Greyhound Bus Station	Richmond	38	23	Install shelter	X	X
289	Arthur Ashe Blvd + Moore	Richmond	2	23	Install bench		X
290	Arthur Ashe Blvd + Robin Hood	Richmond	6	10	Install bench		X
292	Arthur Ashe Blvd + Westwood	Richmond	74	5	Install shelter	X	X
300	Bremo + Monument	Henrico	19	23	Install bench	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
301	Southwood + Clarkson	Richmond	14	20	Install bench	X	X
303	Southwood + Clarkson	Richmond	4	20	Install bench		X
311	Broad Rock + Southall	Richmond	2	33	Install bench		X
317	Broad Rock + Belt	Richmond	14	25	Install bench	X	X
318	Broad Rock + Belt	Richmond	2	25	Install bench		X
326	Broad Rock + Epperson	Richmond	4	25	Install bench		X
330	Broad Rock + Horner	Richmond	3	33	Install bench		X
332	Broad Rock + Jervie	Richmond	5	33	Install bench		X
336	McGuire Hospital Shelter	Richmond	7	25	Install bench	X	X
337	Broad Rock + McGuire	Richmond	3	25	Install bench		X
346	Broad Rock + Warwick	Richmond	4	25	Install bench		X
352	Broad + 11th	Richmond	433	20	Install shelter	X	X
354	Broad + 12th	Richmond	95	20	Install shelter	X	X
356	Broad at Home Depot	Henrico	6	20	Install bench		X
358	Broad + 17th	Richmond	18	13	Install bench	X	X
369	Belt at Southside Plaza	Richmond	18	30	Install bench	X	X
376	Broad + 6020 West Broad	Henrico	4	20	Install bench		X
378	Broad Street + W Club	Henrico	3	10	Install bench		X
383	Broad + 9th	Richmond	9	13	Install bench	X	X
384	Broad + 9th	Richmond	37	18	Install shelter	X	X
385	Broad + Adams	Richmond	42	23	Install shelter	X	X
391	Broad + Allison	Richmond	5	8	Install bench		X
393	Broad + Belmont	Richmond	3	10	Install bench		X
394	Broad + Bethlehem	Henrico	7	20	Install bench	X	X
398	Broad + Arthur Ashe Blvd	Richmond	16	10	Install bench	X	X
399	Broad + Arthur Ashe Blvd	Richmond	8	13	Install bench	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
400	Broad + Bowe	Richmond	26	13	Install shelter	X	X
401	Broad + Bremo	Henrico	4	8	Install bench		X
402	Broad + Bremo	Henrico	10	25	Install bench	X	X
404	Broad + Brookfield	Henrico	4	15	Install bench		X
405	Broad + Willow Lawn	Henrico	5	13	Install bench		X
408	Broad + Cardinal	Henrico	18	15	Install bench	X	X
409	Broad + Carousel	Henrico	11	10	Install bench	X	X
410	Broad + Carousel	Henrico	8	13	Install bench	X	X
416	Broad + Crestwood	Henrico	2	8	Install bench		X
417	Broad + Crestwood	Henrico	3	23	Install bench		X
420	Broad + Emerywood	Henrico	42	8	Install shelter	X	X
422	Broad + Enterprise	Henrico	25	8	Install shelter	X	X
424	Broad + Forest	Henrico	14	18	Install bench	X	X
426	Broad at Fountain Square	Henrico	9	15	Install bench	X	X
428	Broad + Gilmer	Richmond	26	30	Replace shelter	X	X
429	Broad + Glenside	Henrico	17	13	Install bench	X	X
430	Broad + Hamilton	Richmond	4	15	Install bench		X
432	Broad + Shafer	Richmond	42	18	Install shelter	X	X
434	Broad + Henry	Richmond	55	28	Install shelter	X	X
435	Broad + Henry	Richmond	40	33	Install shelter	X	X
436	Broad + Homeview	Henrico	10	10	Install bench	X	X
437	Broad + Homeview	Henrico	2	8	Install bench		X
438	Broad + Hungary Spring	Henrico	18	8	Install bench	X	X
440	Broad + Adams	Richmond	208	18	Install shelter	X	X
444	Broad + Lake	Henrico	6	15	Install bench		X
447	Broad + Lombardy	Richmond	6	15	Install bench		X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
451	Broad + Malvern	Richmond	28	18	Replace shelter	X	X
453	Broad + Meadow	Richmond	3	13	Install bench		X
456	Broad + Morningside	Henrico	12	5	Install bench	X	X
460	Broad + Robinson	Richmond	18	13	Install bench	X	X
462	Broad + Roseneath	Richmond	2	15	Install bench		X
463	Broad + Ryland	Richmond	28	15	Install shelter	X	X
471	Broad + Skipwith	Henrico	2	10	Install bench		X
472	Broad + Skipwith	Henrico	6	8	Install bench		X
474	Broad + Staples Mill	Richmond	30	10	Install shelter	X	X
478	Broad + Sundance	Henrico	6	8	Install bench		X
479	Broad + Sundance	Henrico	3	10	Install bench		X
480	Broad + Sunnybrook	Henrico	6	8	Install bench		X
481	Broad + Sunnybrook	Henrico	4	18	Install bench		X
482	Broad + Tanelorn	Henrico	12	15	Install bench	X	X
487	Broad + Tilden	Richmond	2	8	Install bench		X
488	Broad + Tuckernuck	Henrico	3	15	Install bench		X
489	Broad + Tuckernuck	Henrico	17	15	Install bench	X	X
491	Broad at Westland Shopping Center	Henrico	15	10	Install bench	X	X
496	Broad + Wistar	Henrico	12	13	Install bench	X	X
499	Broad at Willow Lawn Shopping Center	Henrico	112	13	Install shelter	X	X
505	Brook + Azalea	Richmond	9	28	Install bench	X	X
508	Brook + Brookland Park	Richmond	2	28	Install bench		X
517	Brook + Lombardy	Richmond	4	15	Install bench		X
518	Brook + Lombardy	Richmond	9	13	Install bench	X	X
530	Brook + Sherwood	Richmond	1	20	Evaluate existing shelter		X
543	Brookland Park + 4th	Richmond	111	15	Install shelter	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
544	Brookland Park + 4th	Richmond	19	15	Install bench	X	X
547	Brookland Park Blvd + Chamberlayne	Richmond	23	18	Install shelter	X	X
556	Brookland Park + Hanes	Richmond	5	18	Install bench		X
557	Brookland Park Boulevard + Lamb	Richmond	2	23	Install bench		X
558	Brookland Park Blvd + Lamb	Richmond	7	23	Install bench	X	X
562	Brookland Park Boulevard + Montrose	Richmond	4	28	Install bench		X
565	Brookland Park Boulevard + Napoleon	Richmond	15	23	Install bench	X	X
569	Brookland Park Boulevard + North	Richmond	20	33	Install shelter	X	X
572	Brookland Park Boulevard + Seminary	Richmond	3	20	Install bench		X
576	Brookland Park Boulevard + Woodcliff	Richmond	16	33	Install bench	X	X
579	Bruce + 18th St	Richmond	9	23	Install bench	X	X
582	Byrd + Old Richmond	Henrico	3	13	Install bench		X
600	Carnation + Atmore	Richmond	3	20	Install bench		X
601	Carnation at Beaufont Oaks	Richmond	2	20	Install bench		X
603	Carnation + Midlothain	Richmond	2	28	Install bench		X
604	Carnation + Midlothian	Richmond	9	18	Install bench	X	X
605	Carnation at Newport Manor	Richmond	2	28	Install bench		X
610	Cary + 3rd	Richmond	3	15	Install bench		X
616	Cary + Belmont	Richmond	24	13	Install shelter	X	X
617	Cary + Belvidere	Richmond	29	15	Install shelter	X	X
619	Cary + Arthur Ashe Blvd	Richmond	27	18	Install shelter	X	X
625	Cary + Foushee	Richmond	7	18	Install bench	X	X
626	Cary + Freeman	Richmond	21	13	Install shelter	X	X
629	Cary + Harrison	Richmond	15	8	Install bench	X	X
632	Cary + Laurel	Richmond	21	8	Install shelter	X	X
639	Cary + Lombardy	Richmond	15	23	Install bench	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
641	Cary + McCloy	Richmond	12	13	Install bench	X	X
649	Cary + Rowland	Richmond	13	10	Install bench	X	X
650	Cary + Sheppard	Richmond	36	15	Install shelter	X	X
675	Chamberlayne approx 50 feet south of Edgehill	Richmond	22	28	Install shelter	X	X
676	Chamberlayne + Bacon	Richmond	9	25	Install bench	X	X
677	Chamberlayne + Baker	Richmond	50	25	Install shelter	X	X
678	Chamberlayne + Bellevue	Richmond	44	25	Install shelter	X	X
679	Chamberlayne + Brookland Park	Richmond	54	18	Install shelter	X	X
680	Chamberlayne + Brookland Park	Richmond	41	18	Install shelter	X	X
681	Chamberlayne + Calhoun	Richmond	37	25	Install shelter	X	X
682	Chamberlayne Pkwy + Charity	Richmond	22	33	Install shelter	X	X
683	Chamberlayne + Claremont	Richmond	29	23	Install shelter	X	X
685	Chamberlayne + Edgehill	Richmond	28	28	Install shelter	X	X
686	Chamberlayne + Fells	Richmond	9	20	Install bench	X	X
690	Chamberlayne + Hammond	Richmond	8	28	Install bench	X	X
693	Chamberlayne + Laburnum	Richmond	33	23	Install shelter	X	X
694	Chamberlayne + Laburnum	Richmond	73	25	Install shelter	X	X
697	Chamberlayne + Melrose	Richmond	6	18	Install bench		X
698	Chamberlayne + Melrose	Richmond	29	18	Replace shelter	X	X
699	Chamberlayne + Mitchell	Richmond	11	23	Install bench	X	X
700	Chamberlayne + Ordway	Richmond	22	23	Install shelter	X	X
701	Chamberlayne + Ordway	Richmond	28	25	Install shelter	X	X
702	Chamberlayne + Overbrook	Richmond	8	18	Install bench	X	X
705	Chamberlayne + Rennie	Richmond	3	28	Install bench		X
708	Chamberlayne + School	Richmond	17	28	Install bench	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
709	Chamberlayne + Sledd	Richmond	14	28	Install bench	X	X
710	Chamberlayne + Sledd	Richmond	26	18	Install shelter	X	X
711	Chamberlayne + Tazewell	Richmond	3	28	Install bench		X
712	Chamberlayne + Tazewell	Richmond	4	20	Install bench		X
714	Chamberlayne + Walton	Richmond	27	28	Install shelter	X	X
715	Chamberlayne + Watkins	Richmond	13	28	Install bench	X	X
716	Chamberlayne + Westbrook	Richmond	21	20	Install shelter	X	X
717	Chamberlayne + Westminster	Richmond	23	25	Install shelter	X	X
718	Chamberlayne + Westwood	Richmond	23	13	Install shelter	X	X
719	Chamberlayne + Westwood	Richmond	26	28	Install shelter	X	X
722	Chambers + Bowen	Richmond	2	20	Install bench		X
725	Chambers + Minefee	Richmond	3	20	Install bench		X
726	Chambers + Minefee	Richmond	4	18	Install bench		X
737	Chimborazo + Leigh	Richmond	17	15	Install bench	X	X
758	Clarkson + Southwood	Richmond	3	28	Install bench		X
770	Coalter + Richmond	Richmond	12	15	Install bench	X	X
780	Commerce + Maury	Richmond	6	28	Install bench		X
788	Corbin + Cheatwood	Richmond	5	20	Install bench		X
789	Corbin + Maggie Walker	Richmond	2	18	Install bench		X
790	Corbin + North	Richmond	26	28	Install shelter	X	X
791	Corbin + Rex	Richmond	2	28	Install bench		X
793	Cowardin + Bainbridge	Richmond	13	13	Install bench	X	X
794	Cowardin + Hull	Richmond	105	20	Install shelter	X	X
796	Cowardin + Perry	Richmond	17	18	Install bench	X	X
800	Creighton at Community Center	Richmond	5	20	Install bench		X
811	Westbrook and Crestwood	Richmond	2	5	Install bench		X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
813	Crutchfield at George Wythe High School Track	Richmond	4	33	Install bench		X
815	Crutchfield + Norcroft	Richmond	8	23	Install bench	X	X
816	Crutchfield + Roanoke	Richmond	3	28	Install bench		X
829	Darbytown + Geffert	Henrico	5	23	Install bench		X
839	Hioaks + Marlowe	Richmond	30	33	Install shelter	X	X
853	Duryea at United Methodist Church	Richmond	5	8	Install bench		X
854	Duval + 1st	Richmond	8	13	Install bench	X	X
855	Vinton + Henrico Arms	Henrico	34	13	Replace shelter	X	X
860	Ellwood + Belmont	Richmond	5	23	Install bench		X
864	Ellwood + Nansemond	Richmond	22	13	Install shelter	X	X
880	Fairfield Way at City Jail	Richmond	20	13	Replace shelter	X	X
904	Fluvanna + Walmsley	Richmond	2	25	Install bench		X
906	Ford + Mechanicsville	Richmond	67	13	Replace shelter	X	X
907	Ford + Sussex	Richmond	4	15	Install bench		X
908	Forest at Henrico Doctors' Hospital	Henrico	8	20	Install bench	X	X
916	Forest Hill + 41st	Richmond	3	18	Install bench		X
929	Forest Hill + Anwell	Chesterfield	2	8	Install bench		X
940	Forest Hill at Chippenham Village	Richmond	6	18	Install bench		X
945	Forest Hill at Stony Point Shopping Center	Richmond	4	18	Install bench		X
948	Forest Hill + Fairlee	Richmond	3	8	Install bench		X
949	Forest Hill + Hathaway	Richmond	17	23	Install bench	X	X
960	Forest Hill + Leicester	Richmond	2	8	Install bench		X
969	Forest Hill + Pineway	Richmond	3	10	Install bench		X
971	Forest Hill + Prince Arthur	Richmond	24	28	Install shelter	X	X
985	Forest Hill + Westover Hills	Richmond	22	23	Install shelter	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
986	Forest Hill + Westover Hills	Richmond	30	13	Install shelter	X	X
988	Forest Hill + Willow Oaks	Richmond	3	18	Install bench		X
1046	Government at 1334	Richmond	3	28	Install bench		X
1048	Government at 1334	Richmond	3	18	Install bench		X
1083	Grove + Arthur Ashe Blvd	Richmond	3	18	Install bench		X
1111	Grove + Maple	Richmond	5	15	Install bench		X
1139	Grove + Thompson	Richmond	1	23	Evaluate existing shelter		X
1140	Grove + Thompson	Richmond	2	13	Install bench		X
1155	Gunn + Royall	Richmond	3	28	Install bench		X
1176	Harrison + Grace	Richmond	2	13	Install bench		X
1186	Harwood + 21st	Richmond	16	25	Install bench	X	X
1206	Hermitage + Laburnum	Richmond	2	8	Install bench		X
1211	Hermitage + Maple Shade	Richmond	3	10	Install bench		X
1223	Hermitage + Westbrook	Richmond	5	5	Install bench		X
1229	Highland + 1st	Richmond	4	20	Install bench		X
1231	Highland + Delaware	Richmond	3	15	Install bench		X
1235	Highland + Missouri	Richmond	75	15	Replace shelter	X	X
1236	Hildreth + Ford	Richmond	13	13	Install bench	X	X
1246	Henrico Juvenile and Domestic Relation Courts	Henrico	2	33	Install bench		X
1251	Hull + Spaine	Richmond	6	25	Install bench		X
1259	Hull + 11th	Richmond	21	23	Install shelter	X	X
1261	Hull + 12th	Richmond	13	25	Install bench	X	X
1262	Hull + 12th	Richmond	8	23	Install bench	X	X
1266	Hull + 15th	Richmond	44	25	Install shelter	X	X
1267	Hull + 17th	Richmond	43	23	Install shelter	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
1272	Hull + 21st	Richmond	12	28	Install bench	X	X
1273	Hull + 24th	Richmond	5	28	Install bench		X
1275	Hull + 28th	Richmond	10	18	Install bench	X	X
1276	Hull + 28th	Richmond	7	20	Install bench	X	X
1279	Hull + 33rd	Richmond	4	28	Install bench		X
1281	Hull + 37th	Richmond	3	20	Install bench		X
1282	Hull + 3rd	Richmond	9	28	Install bench	X	X
1283	Hull + 5th	Richmond	17	18	Install bench	X	X
1284	Hull + 5th	Richmond	8	18	Install bench	X	X
1285	Hull Street + 7th	Richmond	50	28	Install shelter	X	X
1287	Hull + 9th	Richmond	26	28	Replace shelter	X	X
1288	Hull + 9th	Richmond	23	28	Install shelter	X	X
1290	Hull + Berrywood	Richmond	2	33	Install bench		X
1292	Hull + Blake	Richmond	4	28	Install bench		X
1293	Hull + 3rd	Richmond	2	20	Install bench		X
1294	Hull + Chesterfield	Richmond	11	23	Install bench	X	X
1295	Hull + Evans	Richmond	22	18	Install shelter	X	X
1296	Hull + Cowardin	Richmond	24	33	Install shelter	X	X
1297	Hull + Cowardin	Richmond	74	33	Replace shelter	X	X
1301	Hull + Dixon	Richmond	3	23	Install bench		X
1302	Hull + Elkhart School	Richmond	4	25	Install bench		X
1304	Hull + Evans	Richmond	36	20	Install shelter	X	X
1306	Hull + Hey	Richmond	4	28	Install bench		X
1307	Hull + Orcutt	Richmond	18	23	Install bench	X	X
1310	Hull + Pinebrook Apts	Richmond	12	33	Install bench	X	X
1311	Hull + Pinebrook Apts	Richmond	3	28	Install bench		X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
1312	Hull + Playn	Richmond	20	20	Install shelter	X	X
1314	Hull + Silverwood	Richmond	2	25	Install bench		X
1316	Hull + Swansboro	Richmond	11	18	Install bench	X	X
1318	Hull + Tynick	Richmond	8	20	Install bench	X	X
1319	Hull + Tynick	Richmond	4	18	Install bench		X
1327	Hull at Southside Plaza	Richmond	202	30	Install shelter	X	X
1328	Henrico Human Services	Henrico	13	23	Install bench	X	X
1355	Jahnke + Newell	Richmond	7	23	Install bench	X	X
1358	Jahnke at 5743	Richmond	6	30	Install bench		X
1366	Jahnke + Forest Hill	Richmond	7	18	Install bench	X	X
1367	Jahnke + German School	Richmond	2	15	Install bench		X
1369	Jahnke + Marlowe	Richmond	2	13	Install bench		X
1370	Jahnke + Newell	Richmond	14	28	Install bench	X	X
1371	Jahnke + Oakhurst	Richmond	3	15	Install bench		X
1373	Jahnke + Spruance	Richmond	3	33	Install bench		X
1377	Jefferson + 23rd	Richmond	3	18	Install bench		X
1382	Richmond Highway + 1500	Richmond	2	13	Install bench		X
1385	Richmond Highway + Alexander	Richmond	4	28	Install bench		X
1388	Richmond Highway + Atwell	Richmond	13	18	Install bench	X	X
1389	Route 1 + Bellmeade	Richmond	12	18	Install bench	X	X
1390	Richmond Highway + Bellmeade	Richmond	7	20	Install bench	X	X
1392	Richmond Highway + Bells	Richmond	2	15	Install bench		X
1393	Richmond Highway + Boston	Richmond	21	15	Install shelter	X	X
1394	Richmond Highway + Boston	Richmond	6	15	Install bench		X
1395	Richmond Highway + Bridge	Richmond	7	13	Install bench	X	X
1398	Richmond Highway + Calverton	Richmond	7	13	Install bench	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
1403	Richmond Highway + Dale	Richmond	14	13	Install bench	X	X
1404	Richmond Highway + Dale	Richmond	2	15	Install bench		X
1405	Cowardin + Hull	Richmond	50	18	Install shelter	X	X
1406	Richmond Highway + Dinwiddie	Richmond	16	15	Install bench	X	X
1407	Richmond Highway + Dinwiddie	Richmond	5	15	Install bench		X
1409	Richmond Highway + Fairfax	Richmond	3	15	Install bench		X
1412	Richmond Highway + Gordon	Richmond	4	15	Install bench		X
1413	Richmond Highway + Halifax	Richmond	59	15	Replace shelter	X	X
1415	Richmond Highway + Lambert	Richmond	3	30	Install bench		X
1416	Richmond Highway + Lambert	Richmond	12	38	Install bench	X	X
1418	Richmond Highway + Lockhaven	Richmond	2	18	Install bench		X
1420	Richmond Highway + Lumpkin	Richmond	2	18	Install bench		X
1421	Richmond Highway + Maury	Richmond	12	15	Install bench	X	X
1422	Richmond Highway + Maury	Richmond	5	15	Install bench		X
1423	Richmond Highway + Mimosa	Richmond	4	20	Install bench		X
1424	Richmond Highway + Mimosa	Richmond	5	20	Install bench		X
1426	Richmond Highway + Ruffin	Richmond	40	23	Replace shelter	X	X
1428	Richmond Highway + Sisco	Richmond	4	13	Install bench		X
1429	Richmond Highway + Sisco	Richmond	4	15	Install bench		X
1430	Richmond Highway + Stockton	Richmond	16	20	Install bench	X	X
1433	Richmond Highway + Summer Hill	Richmond	2	18	Install bench		X
1434	Richmond Highway + Terminal	Richmond	3	20	Install bench		X
1435	Route 1 + Terminal	Richmond	21	18	Install shelter	X	X
1437	Richmond Highway + Walmsley	Richmond	2	15	Install bench		X
1440	Richmond Highway + Webber	Richmond	2	18	Install bench		X
1441	Richmond Highway + Webber	Richmond	8	20	Install bench	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
1442	Richmond Highway at 1319	Richmond	3	15	Install bench		X
1443	Richmond Highway + Yorktown	Richmond	2	20	Install bench		X
1447	Jennie Scher + Central	Richmond	4	15	Install bench		X
1455	Route 1 + Food Lion	Chesterfield	60	20	Replace shelter	X	X
1460	Laburnum + Alma	Henrico	19	18	Install bench	X	X
1461	Laburnum + Colwyck	Henrico	13	33	Install bench	X	X
1462	Laburnum + Colwyck	Henrico	11	23	Install bench	X	X
1464	Laburnum + Finley	Henrico	10	33	Install bench	X	X
1465	Laburnum + Gay	Henrico	3	23	Install bench		X
1467	Laburnum + Glensprings	Henrico	2	20	Install bench		X
1472	Laburnum at Laburnum Square	Henrico	11	33	Install bench	X	X
1474	Laburnum at Sheraton Hotel	Henrico	3	20	Install bench		X
1478	Laburnum + Thornhurst	Henrico	3	25	Install bench		X
1483	Ladies Mile + Hazelhurst	Richmond	5	23	Install bench		X
1530	Leigh + 1st	Richmond	20	23	Install shelter	X	X
1575	Lombardy + Claiborne	Richmond	5	20	Install bench		X
1577	Lone + Bruce	Richmond	2	25	Install bench		X
1578	Lone + Harwood	Richmond	89	23	Replace shelter	X	X
1579	Lone + Harwood	Richmond	10	23	Install bench	X	X
1583	Luray + Newman	Richmond	4	15	Install bench		X
1585	Lynhaven + Afton	Richmond	5	28	Install bench		X
1590	Lynhaven + Warwick	Richmond	2	33	Install bench		X
1599	M + 29th	Richmond	6	15	Install bench		X
1608	Main + 13th	Richmond	10	28	Install bench	X	X
1613	Main + 15th	Richmond	5	10	Install bench		X
1618	Main + 1st	Richmond	26	13	Install shelter	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
1622	Main + 21st	Richmond	5	10	Install bench		X
1627	Main + 25th	Richmond	68	8	Install shelter	X	X
1628	Main + 26th	Richmond	3	10	Install bench		X
1634	Main + Allen	Richmond	8	23	Install bench	X	X
1635	Main + Laurel	Richmond	63	23	Install shelter	X	X
1636	Main + Arthur Ashe Blvd	Richmond	8	10	Install bench	X	X
1639	Main + Harrison	Richmond	29	23	Install shelter	X	X
1644	Main + Monroe	Richmond	18	15	Install bench	X	X
1646	Main + Plum	Richmond	6	28	Install bench		X
1649	Main + Stafford	Richmond	5	10	Install bench		X
1657	Markel + Byrd	Henrico	8	15	Install bench	X	X
1665	Marshall + 27th	Richmond	2	28	Install bench		X
1672	Marshall + 33rd	Richmond	4	23	Install bench		X
1685	Maury + 9th	Richmond	2	28	Install bench		X
1686	Maxxim Medical	Richmond	5	18	Install bench		X
1697	Meadow + Colorado	Richmond	2	33	Install bench		X
1709	Meadow + Walker	Richmond	5	33	Install bench		X
1711	Meadowbridge + 2nd	Richmond	5	20	Install bench		X
1712	Meadowbridge + Arnold	Richmond	12	18	Install bench	X	X
1718	Meadowbridge + Highlandview	Richmond	11	20	Install bench	X	X
1719	Meadowbridge + Milton	Richmond	8	13	Install bench	X	X
1722	Mechanicsville + Brauers	Richmond	5	15	Install bench		X
1723	Mechanicsville + Carver	Richmond	8	15	Install bench	X	X
1724	Mechanicsville + Fairfield	Richmond	3	15	Install bench		X
1731	Midlothian + Arcadia	Richmond	8	28	Install bench	X	X
1735	Midlothian + 29th, WB	Richmond	2	20	Install bench		X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
1750	Midlothian + Clopton, WB	Richmond	7	28	Install bench	X	X
1752	Midlothian + Covington	Richmond	2	23	Install bench		X
1755	Midlothian + Dundee	Richmond	2	33	Install bench		X
1756	Midlothian + E Blake	Richmond	6	25	Install bench		X
1757	Midlothian + Erich	Richmond	4	23	Install bench		X
1763	Midlothian at Goodwill	Richmond	29	28	Replace shelter	X	X
1764	Midlothian + Beaufont Hills	Richmond	3	33	Install bench		X
1765	Midlothian + Arcadia	Richmond	42	33	Install shelter	X	X
1774	Midlothian at Southgate Shopping Center	Richmond	15	25	Install bench	X	X
1777	Midlothian + Warwick	Richmond	7	33	Install bench	X	X
1778	Midlothian + W Blake	Richmond	4	23	Install bench		X
1780	Minefee + Gunn	Richmond	3	33	Install bench		X
1783	Monteiro + Fells	Richmond	2	20	Install bench		X
1785	Monteiro + Minor	Richmond	4	28	Install bench		X
1805	Monument + Westlyn	Henrico	12	18	Install bench	X	X
1830	Mosby + Fairmount	Richmond	15	18	Install bench	X	X
1832	Mosby + P	Richmond	12	18	Install bench	X	X
1838	Mosby + Venable	Richmond	28	15	Install shelter	X	X
1840	Moss Side + Akron	Richmond	39	20	Install shelter	X	X
1842	Moss Side + Lincoln	Richmond	9	20	Install bench	X	X
1844	Moss Side + North	Richmond	4	28	Install bench		X
1845	Moss Side + Rex	Richmond	7	20	Install bench	X	X
1857	Nine Mile + Masonic	Henrico	2	28	Install bench		X
1862	Nine Mile + 27th	Richmond	11	33	Install bench	X	X
1863	Nine Mile + 27th	Richmond	3	25	Install bench		X
1864	Nine Mile + 29th	Richmond	4	20	Install bench		X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
1865	Nine Mile + 29th	Richmond	20	33	Install shelter	X	X
1867	Nine Mile + 30th	Richmond	27	20	Install shelter	X	X
1868	Nine Mile + 31st	Richmond	39	18	Install shelter	X	X
1869	Nine Mile + A P Hill	Henrico	3	20	Install bench		X
1872	Nine Mile + Airport	Henrico	5	33	Install bench		X
1873	Nine Mile + Airport	Henrico	9	28	Install bench	X	X
1875	Nine Mile + Barker	Henrico	31	33	Install shelter	X	X
1877	Nine Mile + Bunche	Richmond	9	33	Install bench	X	X
1879	Nine mile + Beech	Henrico	8	23	Install bench	X	X
1881	Nine Mile + Bunche	Richmond	12	33	Install bench	X	X
1886	Nine Mile + E Richmond	Henrico	5	28	Install bench		X
1887	Nine Mile + Echo	Henrico	4	28	Install bench		X
1888	Nine Mile + Echo	Henrico	6	28	Install bench		X
1890	Nine Mile + Elm	Henrico	4	13	Install bench		X
1896	Nine Mile + Gordon	Henrico	3	28	Install bench		X
1897	Nine Mile + Gordon	Henrico	6	18	Install bench		X
1898	Nine Mile + Hanover	Henrico	10	20	Install bench	X	X
1899	Nine Mile + Hart	Henrico	8	33	Install bench	X	X
1900	Nine Mile + Holly	Henrico	3	33	Install bench		X
1902	Nine Mile + Kalmia	Henrico	8	28	Install bench	X	X
1904	Nine Mile + Lee	Henrico	2	28	Install bench		X
1905	Nine Mile + Lowell	Henrico	2	25	Install bench		X
1906	Nine Mile + Lumber	Henrico	6	18	Install bench		X
1907	Nine Mile + Marlin	Henrico	2	28	Install bench		X
1909	Nine Mile + Meadowspring	Henrico	9	33	Install bench	X	X
1910	Nine Mile + Watson	Henrico	40	33	Install shelter	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
1914	Nine Mile + Newbridge	Henrico	9	25	Install bench	X	X
1917	Nine Mile + Orams	Henrico	4	20	Install bench		X
1923	Nine Mile + Virginia	Henrico	3	33	Install bench		X
1924	Nine Mile + Westover	Henrico	2	20	Install bench		X
1926	Nine Mile + Kalmia	Henrico	3	33	Install bench		X
1930	North + Alma	Richmond	2	28	Install bench		X
1931	North + Brookland Park	Richmond	24	33	Install shelter	X	X
1932	North + Essex	Richmond	80	33	Replace shelter	X	X
1933	North + Crawford	Richmond	3	33	Install bench		X
1934	North + Crawford	Richmond	22	23	Install shelter	X	X
1935	North + E Lancaster	Richmond	2	33	Install bench		X
1936	North + Essex	Richmond	6	33	Install bench		X
1937	North + Fendall	Richmond	28	28	Install shelter	X	X
1938	North + Gladstone	Richmond	2	23	Install bench		X
1939	North + Gladstone	Richmond	8	33	Install bench	X	X
1940	North + Graham	Richmond	5	33	Install bench		X
1941	North + Henrico	Richmond	25	18	Install shelter	X	X
1945	North + Ladies Mile	Richmond	2	20	Install bench		X
1947	North + Meredith	Richmond	20	20	Install shelter	X	X
1948	North + Montrose	Richmond	2	28	Install bench		X
1949	North + Montrose	Richmond	71	28	Replace shelter	X	X
1951	North + Moss Side	Richmond	3	28	Install bench		X
1952	North + Norwood	Richmond	2	25	Install bench		X
1958	North + Roberts	Richmond	6	25	Install bench		X
1959	North + Roberts	Richmond	9	33	Install bench	X	X
1960	North + Wickham	Richmond	21	33	Install shelter	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
1987	P + 35th	Richmond	5	15	Install bench		X
1993	Parham + Health South Hospital	Henrico	2	33	Install bench		X
1996	Parham + Hungary Spring	Henrico	3	33	Install bench		X
2001	Park + Sheppard	Richmond	2	18	Install bench		X
2006	Parker + Williamsburg	Richmond	23	18	Install shelter	X	X
2012	Patrick + Meadowbridge	Richmond	23	15	Install shelter	X	X
2015	Patterson + Nansemond	Richmond	4	23	Install bench		X
2028	Patterson + Granite	Richmond	3	23	Install bench		X
2032	Patterson + Hamilton	Richmond	4	23	Install bench		X
2069	Pennsylvania + Carter	Richmond	2	18	Install bench		X
2074	Pilots Lane + Laburnum	Henrico	5	18	Install bench		X
2081	Plaza + Belt	Richmond	181	38	Install shelter	X	X
2082	Plaza + Southside Community Service Center	Richmond	234	38	Replace shelter	X	X
2085	Poe + Lamb	Richmond	7	20	Install bench	X	X
2086	Poe + North	Richmond	7	20	Install bench	X	X
2094	R + 36th	Richmond	3	13	Install bench		X
2114	Robinson + Broad	Richmond	29	18	Install shelter	X	X
2122	Robinson + Grove	Richmond	5	23	Install bench		X
2125	Robinson + Kensington	Richmond	2	13	Install bench		X
2126	Robinson + Kensington	Richmond	4	23	Install bench		X
2143	Royall + Gunn	Richmond	2	23	Install bench		X
2156	Ruffin + Richmond Highway	Richmond	3	33	Install bench		X
2167	Semmes + 10th	Richmond	10	28	Install bench	X	X
2168	Semmes + 10th	Richmond	5	18	Install bench		X
2175	Semmes + 27th	Richmond	4	18	Install bench		X
2179	Semmes + 31st	Richmond	5	18	Install bench		X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
2183	Semmes + 34th	Richmond	3	18	Install bench		X
2184	Semmes + 14th	Richmond	8	10	Install bench	X	X
2186	Semmes + 12th	Richmond	7	18	Install bench	X	X
2197	Skipwith + School Building	Henrico	5	23	Install bench		X
2202	Staples Mill + Amtrak	Henrico	4	38	Install bench		X
2215	Staples Mill + Radford	Richmond	3	18	Install bench		X
2219	Staples Mill + Talley	Henrico	3	28	Install bench		X
2222	Staples Mill + Townhouse	Henrico	3	23	Install bench		X
2231	Stony Run at 1506	Richmond	5	15	Install bench		X
2235	Stony Run + Government	Richmond	6	15	Install bench		X
2244	RIC Airport	Henrico	65	18	Install shelter	X	X
2250	Three Chopt at Freeman High School	Henrico	3	18	Install bench		X
2274	Venable + 22nd	Richmond	3	8	Install bench		X
2275	Venable + 22nd	Richmond	6	15	Install bench		X
2301	Walmsley + Olive	Richmond	3	28	Install bench		X
2302	Walmsley + Shackleford	Richmond	11	33	Install bench	X	X
2303	Walmsley + Southall	Richmond	9	33	Install bench	X	X
2304	Walmsley + Susan	Richmond	5	33	Install bench		X
2312	West + Nine Mile	Henrico	5	10	Install bench		X
2313	Westbrook + Crestwood	Richmond	10	5	Install bench	X	X
2333	Whitcomb + Redwood	Richmond	27	20	Replace shelter	X	X
2335	Williamsburg at Motel 6	Henrico	16	28	Install shelter	X	X
2336	Williamsburg + Nicholson	Richmond	1	15	Evaluate existing shelter		X
2342	Williamsburg + Airport Square	Henrico	5	28	Install bench		X
2353	Williamsburg + Lea	Henrico	14	28	Install bench	X	X
2354	Williamsburg + Lewis	Henrico	2	18	Install bench		X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
2355	Williamsburg + Main	Richmond	2	15	Install bench		X
2358	Williamsburg + SSA	Henrico	2	18	Install bench		X
2360	Williamsburg + Naglee	Henrico	2	23	Install bench		X
2364	Williamsburg + Oakleys	Henrico	2	18	Install bench		X
2368	Williamsburg + Robins	Henrico	5	23	Install bench		X
2372	Williamsburg + Sanborn	Henrico	10	28	Install bench	X	X
2373	Williamsburg + Sanborn	Henrico	4	18	Install bench		X
2379	Willow Lawn + Markel	Henrico	6	23	Install bench		X
2385	Woodhaven + Hull	Richmond	8	28	Install bench	X	X
2424	8th + Byrd	Richmond	14	15	Install bench	X	X
2427	Admiral Gravely + Williamsburg	Richmond	3	15	Install bench		X
2431	14th + Dock	Richmond	22	23	Install shelter	X	X
2432	Mosby + Leigh	Richmond	13	15	Install bench	X	X
2455	Broad + Pemberton	Henrico	10	13	Install bench	X	X
2459	Forest Hill Wal-Mart	Richmond	63	28	Install shelter	X	X
2464	Hull + 33rd	Richmond	26	20	Install shelter	X	X
2465	Hull + E Blake	Richmond	9	28	Install bench	X	X
2466	Hull + McGuire	Richmond	51	33	Install shelter	X	X
2472	Southwood + Tifton	Richmond	18	28	Install bench	X	X
2473	Giant + Midlothian	Richmond	7	25	Install bench	X	X
2474	Giant at 110	Richmond	3	33	Install bench		X
2476	Warwick Village + Warwick	Richmond	2	33	Install bench		X
2487	Broad + Hancock	Richmond	41	33	Install shelter	X	X
2493	Midlothian at Overland Transportation	Richmond	3	28	Install bench		X
2501	Cary + 8th	Richmond	18	15	Install bench	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
2522	9th + Marshall (Mid-block between Marshall + Broad)	Richmond	11	28	Install bench	X	X
2600	Nine Mile + Kenway	Henrico	44	28	Install shelter	X	X
2631	Westwood + W Broad	Richmond	6	28	Install bench		X
2633	Westwood + Loumour	Henrico	3	23	Install bench		X
2637	W Laburnum + Hermitage	Richmond	4	23	Install bench		X
2641	W Laburnum + Chamberlayne	Richmond	32	33	Install shelter	X	X
2643	W Laburnum + Montrose	Richmond	10	20	Install bench	X	X
2644	E Laburnum + Delmont	Henrico	11	33	Install bench	X	X
2646	E Laburnum + Meadowbridge	Henrico	9	20	Install bench	X	X
2648	E Laburnum + Carolina	Henrico	2	23	Install bench		X
2652	E Laburnum + Ronnie	Henrico	3	33	Install bench		X
2653	Laburnum + Harris	Henrico	2	28	Install bench		X
2654	Laburnum + Bolling	Henrico	4	15	Install bench		X
2658	E Laburnum + Watts	Henrico	3	23	Install bench		X
2659	E Laburnum + Creighton	Henrico	3	33	Install bench		X
2739	E Laburnum + Creighton	Henrico	4	28	Install bench		X
2740	E Laburnum + Watts	Henrico	3	23	Install bench		X
2742	E Laburnum + Harvie	Henrico	2	28	Install bench		X
2743	E Laburnum + Montclair	Henrico	3	23	Install bench		X
2744	E Laburnum + Bolling	Henrico	8	23	Install bench	X	X
2746	E Laburnum + Adams	Henrico	11	28	Install bench	X	X
2747	E Laburnum + Austin	Henrico	3	28	Install bench		X
2750	E Laburnum + Carolina	Henrico	4	23	Install bench		X
2753	E Laburnum Ave + Waddey	Henrico	4	33	Install bench		X
2754	E Laburnum + Delmont	Henrico	11	28	Install bench	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
2756	W Laburnum + Montrose	Richmond	12	28	Install bench	X	X
2761	W Laburnum + Hermitage	Richmond	2	23	Install bench		X
2768	Brook + Azalea	Richmond	18	15	Install bench	X	X
2791	Chippenham Hospital Parking Lot	Richmond	7	33	Install bench	X	X
2805	Nine Mile + E Cedar Fork	Henrico	6	33	Install bench		X
2810	Lombardy + Admiral	Richmond	4	15	Install bench		X
2811	Lombardy at Maggie Walker High School	Richmond	3	10	Install bench		X
2815	Lombardy at Kroger	Richmond	22	10	Install shelter	X	X
2816	Lombardy + W Moore	Richmond	3	10	Install bench		X
2999	Broad + 7th	Richmond	150	15	Install shelter	X	X
3012	Pony Farm + Kirkland	Henrico	4	13	Install bench		X
3037	Pony Farm + Queens Thorpe	Henrico	2	23	Install bench		X
3049	Grammarcy + Kirkstone	Henrico	8	20	Install bench	X	X
3051	Chamberlayne + Wilmer	Henrico	164	10	Install shelter	X	X
3052	Chamberlayne at Brook Hill Azalea Shopping Center	Henrico	41	18	Install shelter	X	X
3053	Azalea + Seminary	Richmond	40	28	Install shelter	X	X
3057	Southwood at 4606	Richmond	9	28	Install bench	X	X
3061	Jahnke + Shopping Center	Richmond	22	38	Install shelter	X	X
3063	Jahnke + St Johns Woods	Richmond	4	28	Install bench		X
3065	Jahnke + Marlowe	Richmond	2	28	Install bench		X
3079	Eastern Henrico Government Center	Henrico	19	28	Install bench	X	X
3086	Commonwealth 20	Chesterfield	25	10	Install shelter	X	X
3200	Chamberlayne + Azalea	Richmond	145	20	Install shelter	X	X
3211	Southwood + Hull St	Richmond	3	28	Install bench		X
3250	Williamsburg + Finlay	Henrico	4	33	Install bench		X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
3253	Miller's Lane + Bedford	Henrico	21	28	Install shelter	X	X
3254	Millers + Miller Glen	Henrico	3	20	Install bench		X
3255	Gay + Dodd's Creek	Henrico	4	33	Install bench		X
3259	Laburnum Ave at Seven Gables (Sec. A)	Henrico	20	33	Install shelter	X	X
3287	Laburnum + Reynolds	Henrico	4	23	Install bench		X
3288	E Laburnum + Kingsridge	Henrico	9	28	Install bench	X	X
3295	Philip Morris Manufacturing Center Entrance	Richmond	10	33	Install bench	X	X
3302	8th + Grace	Richmond	115	28	Install shelter	X	X
3303	Chamberlayne + Westminster	Richmond	7	28	Install bench	X	X
3310	Cool + 23rd	Henrico	15	20	Install bench	X	X
3334	Overbrook + 1400 Overbrook	Richmond	3	10	Install bench		X
3338	White Oak Village at Sam's Club	Henrico	29	20	Replace shelter	X	X
3339	White Oak Village at Office Max	Henrico	30	28	Replace shelter	X	X
3341	Choctaw + Forest Hill	Chesterfield	9	10	Install bench	X	X
3342	Choctaw + Forest Hill	Chesterfield	0	18	Install shelter	X	X
3343	Chippenham Square Shopping Center	Chesterfield	35	20	Install shelter	X	X
3344	8th + Main	Richmond	82	20	Install shelter	X	X
3347	Cary + 6th	Richmond	22	15	Install shelter	X	X
3355	Walmsley + Angus	Richmond	2	23	Install bench		X
3359	Westover Hills and Chateau de Ville	Richmond	12	28	Install bench	X	X
3360	Cary + Granby	Richmond	47	15	Install shelter	X	X
3362	Overbrook + Langston	Richmond	7	15	Install bench	X	X
3371	Laburnum + Audubon	Henrico	14	20	Install shelter	X	X
3374	Richmond Way at UR Student Commons	Richmond	21	10	Install shelter	X	X
3385	25th + Phaup	Henrico	23	18	Install shelter	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
3387	Meadow + Grayland	Richmond	2	23	Install bench		X
3390	Cowardin + Semmes	Richmond	24	18	Install shelter	X	X
3391	25th + Leigh	Richmond	4	3	Install bench		X
3392	E Belt + Lordley	Richmond	7	38	Install bench	X	X
3394	Petersburg Station	Petersburg	24	5	Install shelter	X	X
3397	Laburnum + Best Buy Station	Henrico	14	33	Install bench	X	X
3399	Kroger-Stonebridge	Chesterfield	63	28	Install shelter	X	X
3408	Williamsburg + SSA	Henrico	2	15	Install bench		X
3427	Oliver Hill + Hospital	Richmond	3	15	Install bench		X
3431	Brook + Westbrook	Richmond	2	23	Install bench		X
3440	Centura College Parking Lot	Chesterfield	2	33	Install bench		X
3464	Brook + Walmart Neighborhood Market	Henrico	101	23	Install shelter	X	X
3467	Nine Mile + Cedar Fork	Henrico	21	33	Install shelter	X	X
3477	Holly Springs + Caulder	Richmond	4	20	Install bench		X
3478	Holly Springs + Hopkins	Richmond	2	28	Install bench		X
3479	Hopkins + McGuire Dr	Richmond	6	33	Install bench		X
3481	Hopkins + Cofer	Richmond	2	33	Install bench		X
3482	Hopkins + Shaw	Richmond	3	33	Install bench		X
3486	Chamberlayne + Bellevue	Richmond	28	33	Install shelter	X	X
3487	Chamberlayne + Westbrook	Richmond	6	28	Install bench		X
3488	Chamberlayne + Watkins	Richmond	2	28	Install bench		X
3491	Government + Rawlings	Richmond	2	28	Install bench		X
3527	Broad + Deep Run	Henrico	9	13	Install bench	X	X
3528	Broad + Bethlehem	Henrico	13	10	Install bench	X	X
3582	25th + S	Richmond	45	33	Install shelter	X	X
3583	Atlantic at Brook Run Apartments	Henrico	3	28	Install bench		X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
3585	Fareva Parking Lot West	Henrico	3	23	Install bench		X
3587	Lombardy + Lakeview	Richmond	11	33	Install bench	X	X
3588	Pennsylvania + Georgia	Richmond	2	28	Install bench		X
3589	Creighton + Nine Mile	Richmond	7	18	Install bench	X	X
3590	X + 22nd	Richmond	3	15	Install bench		X
3591	21st + Fairfield	Richmond	8	15	Install bench	X	X
3592	21st + Phaup	Richmond	7	20	Install bench	X	X
3593	23rd + Franklin	Richmond	379	8	Install shelter	X	X
3594	Phaup + 25th	Richmond	11	20	Install bench	X	X
3595	26th + McDonough	Richmond	7	23	Install bench	X	X
3598	2nd + Franklin	Richmond	2	28	Install bench		X
3601	2nd + Broad	Richmond	503	28	Install shelter	X	X
3602	31st + O	Richmond	2	20	Install bench		X
3603	31st + O	Richmond	3	20	Install bench		X
3604	31st + R	Richmond	2	15	Install bench		X
3605	31st + R	Richmond	6	15	Install bench		X
3606	31st + U	Richmond	4	20	Install bench		X
3607	U + 31st	Richmond	4	18	Install bench		X
3608	3rd + Canal	Richmond	3	28	Install bench		X
3609	3rd + Franklin	Richmond	4	20	Install bench		X
3610	3rd + Dill	Richmond	46	28	Install shelter	X	X
3611	3rd + Marshall	Richmond	219	28	Install shelter	X	X
3613	Bainbridge + 29th	Richmond	8	28	Install bench	X	X
3623	Belvidere + Cary	Richmond	20	10	Install shelter	X	X
3624	Belvidere + Cary	Richmond	9	15	Install bench	X	X
3625	Belvidere + Franklin	Richmond	14	20	Install bench	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
3626	Belvidere + Franklin	Richmond	82	28	Install shelter	X	X
3628	Broad + 50th	Henrico	176	38	Install shelter	X	X
3631	Brookland Park + Richmond Henrico Turnpike	Richmond	5	33	Install bench		X
3636	Cary + Robinson	Richmond	21	18	Install shelter	X	X
3641	Cofer + Gross	Richmond	2	28	Install bench		X
3644	Colorado + Maymont Village Apts	Richmond	6	33	Install bench		X
3645	Cool + 23rd	Henrico	6	20	Install bench		X
3646	Creighton + Walcott	Richmond	6	20	Install bench		X
3647	Creighton at Community Center	Richmond	9	20	Install bench	X	X
3648	Crutchfield + Norcroft	Richmond	13	25	Install bench	X	X
3650	Crutchfield at GWHS Track	Richmond	5	33	Install bench		X
3651	DMV Drive + Broad	Richmond	6	23	Install bench		X
3655	Freeman + Maplewood	Richmond	3	18	Install bench		X
3657	Harwood + Overlook	Richmond	2	20	Install bench		X
3658	Hermitage + Rhoadmiller	Richmond	2	10	Install bench		X
3660	Hermitage + Sherwood	Richmond	14	23	Install bench	X	X
3664	Hopkins + McGuire	Richmond	2	33	Install bench		X
3666	Kane + Fairfield	Richmond	23	20	Install shelter	X	X
3667	Kane + Fairfield	Richmond	10	20	Install bench	X	X
3669	Willow Lawn + Grace	Henrico	8	18	Install bench	X	X
3675	Lombardy + Broad	Richmond	58	10	Install shelter	X	X
3676	Main + Rowland	Richmond	15	18	Install bench	X	X
3677	Main + 5th	Richmond	15	15	Install bench	X	X
3680	Maplewood + McCloy	Richmond	2	23	Install bench		X
3682	Meadow + Idlewood	Richmond	6	23	Install bench		X
3684	North + Culpepper	Richmond	14	28	Install bench	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
3690	Prince Hall + E Broad Rock	Richmond	40	33	Install shelter	X	X
3692	Rawlings + Government	Richmond	8	15	Install bench	X	X
3693	Semmes + 20th	Richmond	38	18	Install shelter	X	X
3694	Semmes + 22nd	Richmond	7	18	Install bench	X	X
3695	Sheppard + Grayland	Richmond	2	23	Install bench		X
3696	Sheppard + Grayland	Richmond	2	23	Install bench		X
3697	Sherwood at driveway	Richmond	3	28	Install bench		X
3698	Sherwood at first entrance to PET Dairy	Richmond	2	15	Install bench		X
3699	Sherwood + Hardy	Richmond	2	23	Install bench		X
3700	Sherwood at Pfizer entrance	Richmond	2	23	Install bench		X
3701	St. Mary's Hospital at Monument	Henrico	4	23	Install bench		X
3702	U + 28th	Richmond	10	18	Install bench	X	X
3703	Venable + Pink	Richmond	19	20	Install bench	X	X
3704	Venable + Pink	Richmond	5	20	Install bench		X
3711	Westover Hills at Reedy	Richmond	2	18	Install bench		X
3717	3rd + Jackson	Richmond	19	10	Install bench	X	X
3718	Belt at Circle Shopping Center	Richmond	45	38	Install shelter	X	X
3723	North + Brookland Park	Richmond	21	25	Install shelter	X	X
3735	Midlothian at 7901	Chesterfield	3	23	Install bench		X
3736	Bellemeade + Richmond Highway	Richmond	2	28	Install bench		X
3737	Bellemeade + Richmond Highway	Richmond	4	33	Install bench		X
3739	Quioccasin + Gayton	Henrico	16	18	Install bench	X	X
3744	Quioccasin + Farmington	Henrico	2	23	Install bench		X
3745	Quioccasin + Shane	Henrico	2	23	Install bench		X
3746	Quioccasin + Blue Jay	Henrico	5	18	Install bench		X
3749	Quioccasin + Starling	Henrico	9	23	Install bench	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
3750	Eastridge + Three Chopt	Henrico	11	18	Install bench	X	X
3763	Broad + Springfield	Henrico	3	10	Install bench		X
3764	Broad + Stillman	Henrico	4	15	Install bench		X
3765	Broad + Deep Rock	Henrico	4	10	Install bench		X
3766	Broad + Gaelic	Henrico	2	10	Install bench		X
3767	Broad + Innesbrook	Henrico	2	10	Install bench		X
3768	Broad + Dominion	Henrico	4	20	Install bench		X
3773	Harwood + Richmond Highway	Richmond	8	15	Install bench	X	X
3779	Bon Secours Parking Lot + Robert Atack Way	Henrico	4	8	Install bench		X
3781	Aldi + Bon Secours Pkway	Henrico	29	8	Install shelter	X	X
3783	Broad + Hayden	Henrico	5	10	Install bench		X
3784	Broad + Gayton	Henrico	5	5	Install bench		X
3785	Maywill at Vital Records and Health Statistics	Henrico	3	5	Install bench		X
3786	Broad + Lauderdale	Henrico	18	5	Install bench	X	X
3787	Broad + Cabela, EB	Henrico	15	10	Install bench	X	X
3788	Broad + Spring Oak	Henrico	16	10	Install bench	X	X
3789	Broad + Pump	Henrico	29	10	Install shelter	X	X
3791	Broad + Brownstone	Henrico	19	5	Install bench	X	X
3792	Broad + Dominion	Henrico	11	20	Install bench	X	X
3793	Broad + Cox	Henrico	13	20	Install bench	X	X
3794	Broad + Gaelic	Henrico	4	20	Install bench		X
3795	Broad + Deep Rock	Henrico	7	20	Install bench	X	X
3796	Broad + Stillman	Henrico	16	20	Install bench	X	X
3797	Libbie Lake South at Libbie Mill Library	Henrico	2	33	Install bench		X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
3798	Libbie Lake South at Libbie Mill Library	Henrico	2	33	Install bench		X
3801	Wistar + Staples Mill	Henrico	2	25	Install bench		X
3804	Shrader + Enterprise	Henrico	2	28	Install bench		X
3806	Wistar + Wistar Village	Henrico	3	33	Install bench		X
3810	Prince Henry at Henrico Government Center	Henrico	3	33	Install bench		X
3811	Shrader + Carousel	Henrico	2	20	Install bench		X
3813	Staples Mill + Amtrak Richmond Station	Henrico	8	28	Install bench	X	X
3816	Crutchfield + George Wythe parking lot	Richmond	10	33	Install bench	X	X
3817	Crutchfield + Westover Hills	Richmond	8	33	Install bench	X	X
3820	Midlothian + Giant, WB	Richmond	2	25	Install bench		X
3823	Leigh + 11th, EB	Richmond	105	13	Install shelter	X	X
3824	Leigh + 11th, WB	Richmond	35	13	Install shelter	X	X
3832	25th + Jefferson	Richmond	8	15	Install bench	X	X
3834	Fairmount + 24th	Richmond	20	20	Install shelter	X	X
3838	24th + Fairmount	Richmond	6	20	Install bench		X
3841	Route 1 + Marina Dr, SB	Chesterfield	2	15	Install bench		X
3842	Route 1 btwn Sherbourne and Swineford, SB	Chesterfield	5	5	Install bench		X
3843	Route 1 btwn Bensley Commons and Alcott, SB	Chesterfield	4	5	Install bench		X
3845	Route 1 + Willis, SB	Chesterfield	3	5	Install bench		X
3846	Route 1 + Galena, SB	Chesterfield	5	5	Install bench		X
3850	Route 1 + Crestway Dr, SB	Chesterfield	2	5	Install bench		X
3851	Route 1 at Breckenridge Shopping Ctr, SB	Chesterfield	6	10	Install bench		X
3852	Weir + Briggs, EB	Chesterfield	7	5	Install bench	X	X
3853	Weir at Brightpoint	Chesterfield	28	3	Install bench	X	X

Stop	Location	Jurisdiction	Ridership Score	Equity Score	Task	Attainable/Moderate Scenario	Aspirational Scenario
3854	Route 1 + Weir, NB	Chesterfield	3	5	Install bench		X
3855	Route 1 at Bermuda Square, NB	Chesterfield	14	10	Install bench	X	X
3856	Route 1 + Redwater Ridge, NB	Chesterfield	8	5	Install shelter	X	X
3857	Route 1 + Osborne, NB	Chesterfield	9	3	Install shelter	X	X
3859	Route 1 + Galena, NB	Chesterfield	4	5	Install bench		X
3860	Route 1 + Willis, NB	Chesterfield	10	5	Install shelter	X	X
3861	Route 1 + Gettings, NB	Chesterfield	5	5	Install bench		X
3862	Route 1 btwn Alcott and Elliham, NB	Chesterfield	8	5	Install bench	X	X
3863	Route 1 btwn Alfalfa and Sherbourne, NB	Chesterfield	6	5	Install bench		X
3864	Route 1 + Marina Dr, NB	Chesterfield	8	5	Install shelter	X	X

Appendix C – Dimensional Standards for ETI

SHELTERS

Size & layout	Minimum concrete pad size (attached landing pad)	Minimum concrete pad size (separate landing pad)	Minimum concrete pad size (in VDOT ROW)
5' x 8' three-sided	8' x 14'	8' x 12'	10' x 19'
5' x 8' partial side wall	8' x 14'	6.5' x 12'	
5' x 8' cantilever	8' x 14'	6' x 12'	
5' x 10' three-sided	8' x 16'	8' x 14'	
5' x 10' partial side wall	8' x 16'	6.5' x 14'	
5' x 10' cantilever	8' x 16'	6' x 14'	
5' x 12' three-sided	8' x 18'	8' x 16'	
5' x 12' partial side wall	8' x 18'	6.5' x 16'	
5' x 12' cantilever	8' x 18'	6' x 16'	
7' x 16' three-sided	8' x 21.5'	8' x 19.5'	

BENCHES & TRASH CANS

ETI Type	Minimum concrete pad size (separate landing pad, maintain 36" traversable path)
Bench	4' x 6.5'
Trash Can	3' x 3'