Overview of Project Scoring

Central to the development of a long-range transportation plan is the selection of projects. Among the tools the BRTB uses to select projects submitted by member jurisdictions and state agencies is a project scoring system intended to help us prioritize regional investments. The project scoring process begins with the submittal of candidate projects by jurisdictions and state agencies in the Baltimore region. Project submittals are currently scheduled for April through June of 2022. Candidate projects are then given both a policy and a technical score.

Policy Score – Maximum of 40 points

Projects are awarded different point amounts based on how high of a priority the project is for the submitting jurisdiction or agency. High, medium, and low priority projects are awarded 30, 20, and 10 points, respectively. Project sponsors can submit 5 high priority projects, 4 medium priority projects, and an unlimited number of low priority projects. Projects that already have financial support from MDOT receive an additional 10 points.

Technical Score – Maximum of 55 points for Transit Projects; 50 for Highway Projects

Technical scores are based on project consistency with criteria that are drawn directly from goals for the region such as improving accessibility, mobility, and safety. Figure 1 lists the criteria along with the points devoted to each for transit and highway projects. In addition to the criteria listed, a subset of the points for most criteria are devoted to the anticipated impacts of each project on environmental justice (EJ) populations. EJ populations include low-income and minority persons in the Baltimore region. Embedding points for EJ populations within individual criteria allows us to consider the anticipated effects of candidate projects on EJ populations from multiple perspectives (safety, accessibility, environmental impacts, etc.). Criteria marked with an asterisk (*) include points related to project impacts on EJ populations.

Both highway and transit projects are scored for these criteria, though the methodology differs in some cases since the tools for evaluating highway projects may not be appropriate for transit projects and vice versa. For example, the types of features used to improve safety for transit riders on light rail and MARC may be different from the features used to improve safety along roadways for bicyclists, pedestrians, and drivers.

Transit projects are eligible for a maximum of 55 technical scoring points, while highway projects can receive up to 50 technical scoring points. Recent public comments have encouraged the BRTB to focus on improving transit accessibility, reliability, and frequency and to reduce the focus on roadway widening and cars. In an effort to respond to those comments, transit projects are eligible for 5 more points than highway projects. This results in a slight advantage for transit projects in the technical scoring process.

After technical scoring is complete, the policy and technical scores are added together for each project. Highway projects are eligible for a maximum of 90 points (40 policy + 50 technical) and transit projects are eligible for a maximum of 95 points (40 policy + 55 technical). The total score will be used to prioritize projects for inclusion in *Resilience 2050*. The number of projects ultimately included will also depend on the amount of funding available to the region. The financial forecast and project selection will be covered in a future white paper.
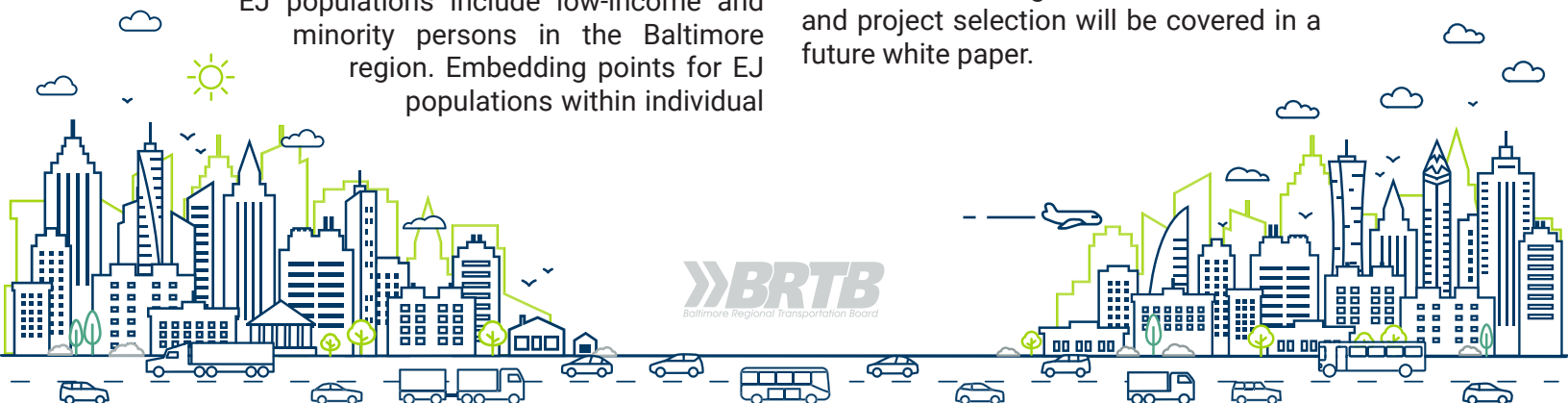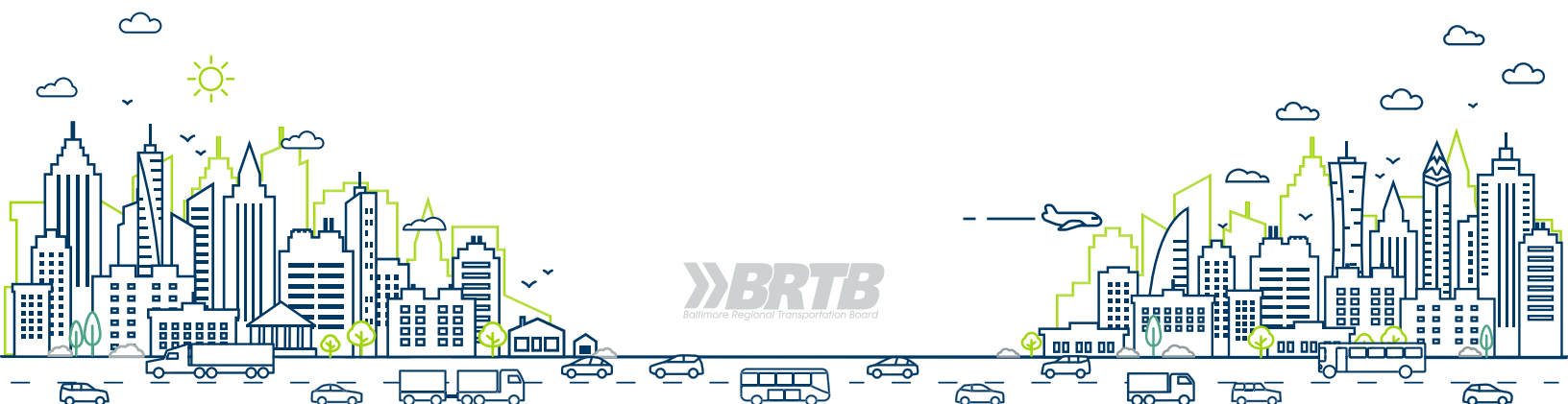
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Figure 1. Technical Scoring Goals, Criteria, and Points

GOAL/CRITERIA	TECHNICAL SCORING POINTS: TRANSIT PROJECTS	TECHNICAL SCORING POINTS: HIGHWAY PROJECTS
Safety*	10	10
Accessibility - Complete Streets*	5	5
Accessibility - Access to Jobs*	10	5
Mobility	10	10
Environmental - Effects on ecologically sensitive lands and culturally significant resources*	5	5
Environmental - Potential for Greenhouse Gas Emissions Reductions	5	5
Security*	5	5
Economic Prosperity	5	5
Total Technical Points	**55**	**50**

Interested in learning more?

Visit publicinput.com/Resilience2050 to subscribe to updates.

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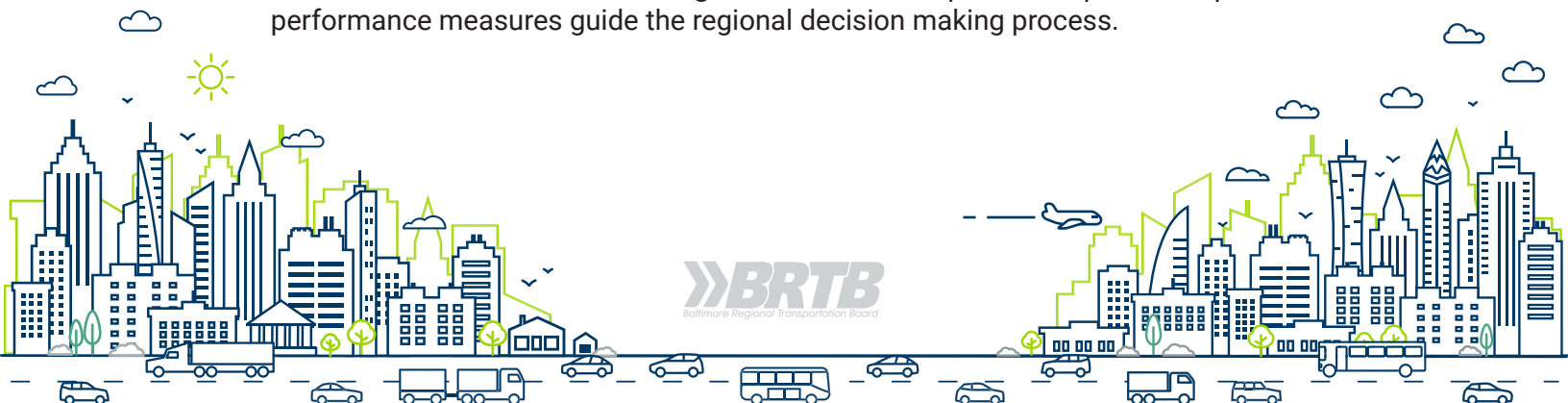# Resilience 2050
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Project Scoring White Paper

This first white paper will cover the project scoring process for *Resilience 2050*. Before getting to that, we need to back up a bit to discuss what we have accomplished so far. In August 2021, the BRTB officially launched the planning process for *Resilience 2050*. You can read more about key steps in the planning process at both Resilience2050.com and publicinput.com/Resilience2050. The public input site provides more detail and will be used to communicate with the public and interested parties while *Resilience 2050* is in development.

In September and October of 2021, the BRTB held a public comment period for the draft goals and strategies for *Resilience 2050*. The goals and strategies establish guiding principles as the region plans and carries out transportation projects and programs. The public comment period resulted in more than 165 comments. Staff and BRTB committees reviewed all of the comments and recommended multiple revisions based on comments received. You can review the comments, the BRTB response, and the revised goals and strategies at Resilience2050.com. The nine goals are:

- **Improve Accessibility**: Identify and support multimodal options and systems that promote equity, are resilient and sustainable, and enable all individuals to reach their destinations safely and seamlessly.

- **Increase Mobility**: Help people and freight to move reliably, equitably, efficiently, and seamlessly.

- **Improve System Safety**: Reduce the number of crashes, injuries, and fatalities experienced by all users of the transportation system toward meeting Zero Deaths Maryland.

- **Improve and Maintain the Existing Infrastructure**: Improve the conditions of existing transportation facilities; systematically maintain and replace transportation assets as needed.

- **Implement Environmentally Responsible Transportation Solutions**: Pass on to future generations the healthiest natural and human environment possible.

- **Improve System Security**: Provide a secure traveling environment for everyone; improve the region's ability to respond to natural and human-caused disasters.

- **Promote Prosperity and Economic Opportunity**: Support the vitality of communities and businesses, opportunities for workers, and the movement of goods and services within and through the region.

- **Foster Participation and Cooperation among All Stakeholders**: Enable all interested and affected parties to participate and cooperate to find workable solutions.

  - **Promote Informed Decision Making**: Ensure that adopted transportation policies and performance measures guide the regional decision making process.

These goals directly inform the project scoring methodology that will be used to prioritize projects submitted for inclusion in *Resilience 2050*.

The project scoring process begins with the submittal of candidate projects by the following jurisdictions and agencies* during the call for projects, scheduled for April through June of 2022:

- City of Annapolis
- Anne Arundel County
- Baltimore City
- Baltimore County
- Carroll County
- Harford County
- Howard County
- Queen Anne's County
- MDOT Maryland Transit Administration

* The MDOT State Highway Administration (MDOT SHA) does not directly submit projects. Local jurisdictions coordinate with MDOT SHA and submit all projects within their jurisdiction, including those on state roadways. The Maryland Transportation Authority (MDTA) will provide a list of major capital projects for the purposes of air quality modeling. Since MDTA does not utilize federal funds those projects are not part of the project scoring process.

Candidate projects will then be given both a policy and a technical score. The maximum policy score is 40 points. The maximum technical score for highway and transit projects is 50 and 55 points, respectively. Thus, the overall maximum score for highway and transit projects is 90 and 95 points, respectively. The BRTB uses the overall score to prioritize candidate projects for inclusion in the preferred alternative.

The policy score is worth a maximum of 40 points and is primarily controlled by the jurisdiction or agency submitting the project. Projects are awarded different point amounts based on how high of a priority the project is for the submitting jurisdiction or agency. High, medium, and low priority projects are awarded 30, 20, and 10 points, respectively. To limit the number of projects submitted, project sponsors can only submit 5 high priority projects, 4 medium priority projects, and an unlimited number of low priority projects. Projects are awarded an additional 10 points if they have existing financial support. Existing financial support means that funds have been programmed for the project in the state Consolidated Transportation Program or in the capital budget of a local jurisdiction. Figure 1 demonstrates the number of policy points awarded based on project priority and financial support:
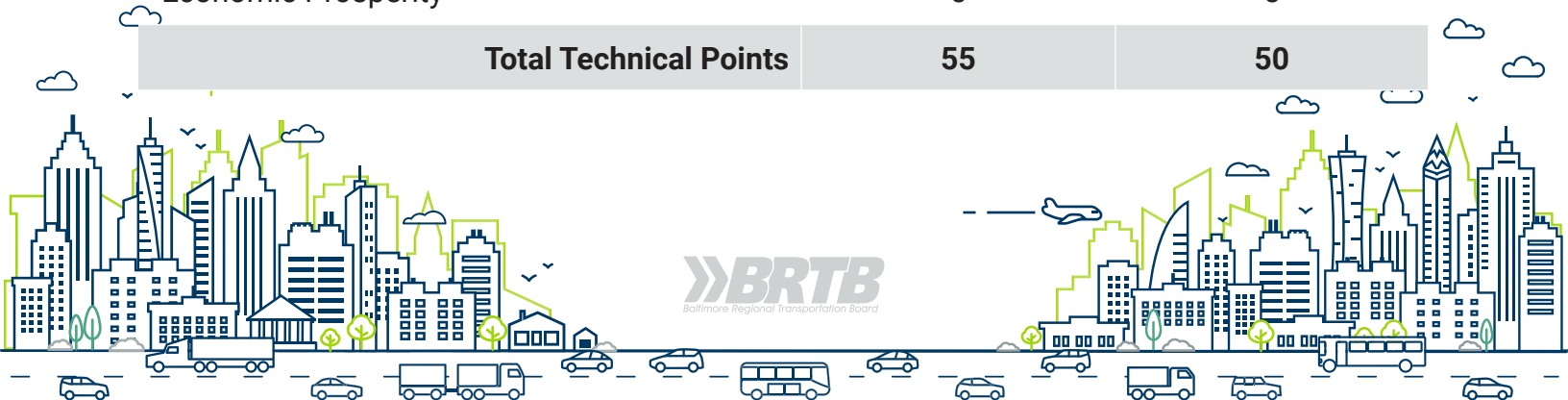
Figure 1. Policy score examples
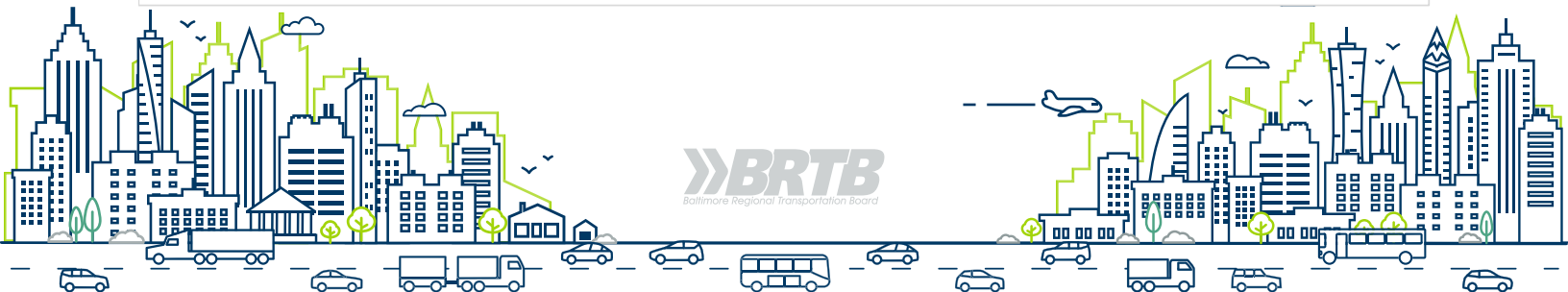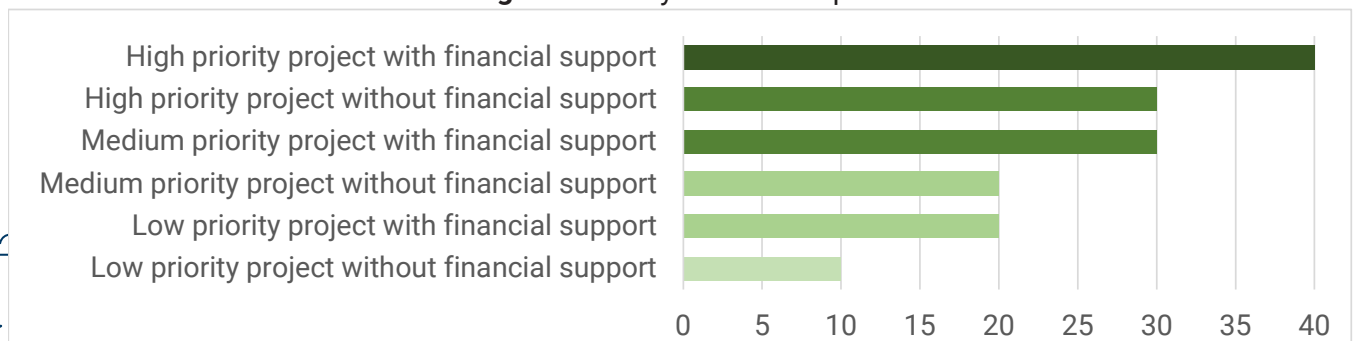
Technical scores are based on project consistency with criteria that are drawn directly from the regional goals and strategies. Figure 2 lists the criteria along with the points devoted to each for transit and highway projects. Note that while equity is not a stand-alone criteria, a subset of the points for most criteria are devoted to the anticipated impacts of each project on environmental justice (EJ) populations. EJ populations include low-income and minority persons in the Baltimore region. Embedding points for EJ populations within individual criteria allows us to consider the potential effects of candidate projects on EJ populations from multiple perspectives (safety, accessibility, environmental impacts, etc.). Criteria marked with an asterisk (*) include points related to project impacts on EJ populations. These are discussed in more detail in the following pages.

Both highway and transit projects are scored for these criteria, though the methodology differs in some cases since the tools for evaluating highway projects may not be appropriate for transit projects and vice versa. For example, the types of features used to improve safety for transit riders on light rail and MARC may be different from the features used to improve safety along roadways for bicyclists, pedestrians, and drivers. Though the methods for scoring highway and transit projects may differ, they will ultimately compete against each other for inclusion in *Resilience 2050*.

Figure 2. Technical Scoring Goals, Criteria, and Points

GOAL/CRITERIA	TECHNICAL SCORING POINTS: TRANSIT PROJECTS	TECHNICAL SCORING POINTS: HIGHWAY PROJECTS
Safety*	10	10
Accessibility - Complete Streets*	5	5
Accessibility - Access to Jobs*	10	5
Mobility	10	10
Environmental - Effects on ecologically sensitive lands and culturally significant resources*	5	5
Environmental - Potential for Greenhouse Gas Emissions Reductions	5	5
Security*	5	5
Economic Prosperity	5	5
Total Technical Points	**55**	**50**

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You may have wondered why transit projects are eligible for a maximum of 55 technical scoring points as opposed to a maximum of 50 points for highway projects. Many of the comments received during the public comment period for the regional goals

> **Technical scores are based on project consistency with criteria drawn from the regional goals and strategies such as improving accessibility, mobility, and safety**

and strategies focused on improving transit accessibility, reliability, and frequency and reducing the focus on roadway widening and cars. In an effort to respond to those comments, staff recommended leaving the technical scores as is, with transit receiving a maximum of 55 points and highway receiving a maximum of 50 points. This results in a slight advantage for transit projects in the technical scoring process.

After technical scoring is complete, the policy and technical scores are added together for each project. Highway projects are eligible for a maximum of 90 points (40 policy + 50 technical) and transit projects are eligible for a maximum of 95 points (40 policy + 55 technical). The total score will be used to prioritize projects for inclusion in *Resilience 2050*. The number of projects ultimately included will also depend on the amount of funding available to the region. The financial forecast and project selection will be covered in a future white paper.

Below is a detailed discussion of the technical scoring methodology for transit and highway projects:

Safety Technical Scoring Criteria

Transit: 10 points maximum

Transit safety includes two criteria, each eligible for a maximum of 5 points. Points are awarded as follows:

Transit safety (5 points): The first criteria focuses on transit safety in the context of reducing crashes and the fatalities and injuries resulting from them. Points are awarded based on the degree to which the project includes features that improve transit safety such as:

- Rehabilitation of facilities, infrastructure, and vehicles to improve safety. This includes improving safety where pedestrians cross transit tracks such as the light rail in downtown Baltimore.
- Adding features that make transit stations and stops more accessible to persons with disabilities
- Helping pedestrians and bicyclists to access transit more safely with features including new or improved sidewalks or protected bicycle lanes
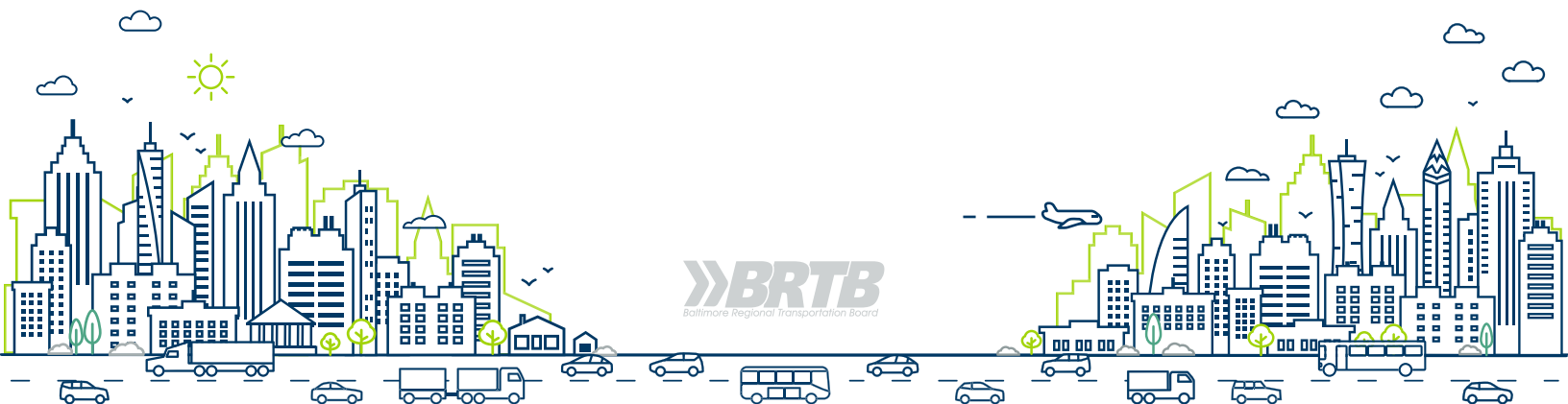
Projects specifically designed to improve transit safety will receive the maximum of 5 points while projects not anticipated to improve safety will receive 0 points. Projects in the middle will receive 3 points. Projects are also eligible for an additional point if they are anticipated to improve transit safety for low-income and minority populations.

Transit security (5 points): The second transit safety criteria focuses on the personal security of transit riders. Points are awarded based on the degree to which the project includes features such as the installation of security features at stations and on vehicles, lighting improvements, and other design improvements focused on crime prevention on transit. Projects specifically designed to improve the security of transit riders will receive the maximum of 5 points while projects not anticipated to impact security will receive 0 points. Projects in the middle will receive 3 points.

Highway: 10 points maximum

Highway safety must account for more than just drivers. Projects must also include design features that protect non-motorists such as bicyclists, pedestrians, and people accessing transit. Points are awarded as follows:

- 2 points: The state is required to adopt a plan for improving highway safety known as a Strategic Highway Safety Plan (SHSP). Local jurisdictions in the Baltimore region are also working to adopt local versions of an SHSP focusing on specific safety issues within their jurisdiction. Each SHSP identifies certain emphasis areas that are the primary causes of safety issues within their jurisdiction. Examples might include speeding or distracted driving. Projects will receive two points for identifying the specific emphasis areas that the project will address.

- 6 points: Three issues are consistently among the top issues affecting safety in both Maryland and the Baltimore region. The issues and the point totals were selected based on data indicating that they are the most common causes of injuries and fatalities:

  - Non-motorist safety: Projects that improve the safety of non-motorists such as bicyclists, pedestrians, and wheelchair users will receive the maximum of 6 points.

  - Speeding: Projects that reduce excessive travel speeds to promote safer driving will receive 4 points.

  - Impaired or Distracted Driving: Projects that reduce the likelihood that a driver will leave their lane or the roadway will receive 2 points.

- 2 points: Projects anticipated to improve safety for low-income and minority populations will receive an additional 2 points.

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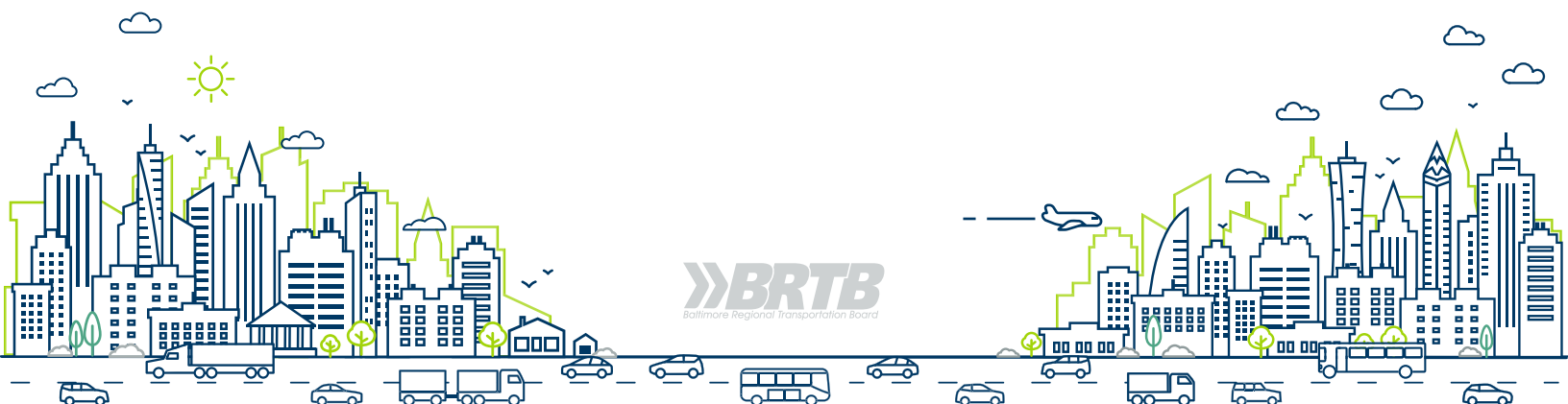
Accessibility – Complete Streets Technical Scoring Criteria

Highway and Transit: 5 points maximum

Highway and transit projects are evaluated for complete streets features using the same methodology. Projects are eligible for a maximum of 5 points.

Accessibility is how many places you can get to in a given timeframe regardless of how you get there. You can think of accessibility as a measure of how connected the transportation network and land uses in a region are. Good accessibility means you can get where you need to be quickly and easily. Complete streets features can have a big impact on accessibility. Complete streets refers to a transportation system that includes features ensuring the safety, security, comfort, access, and convenience of all users of the street including pedestrians, bicyclists, transit riders, and shared mobility users. Many jurisdictions in the Baltimore region have adopted policies requiring transportation projects to incorporate complete streets features.
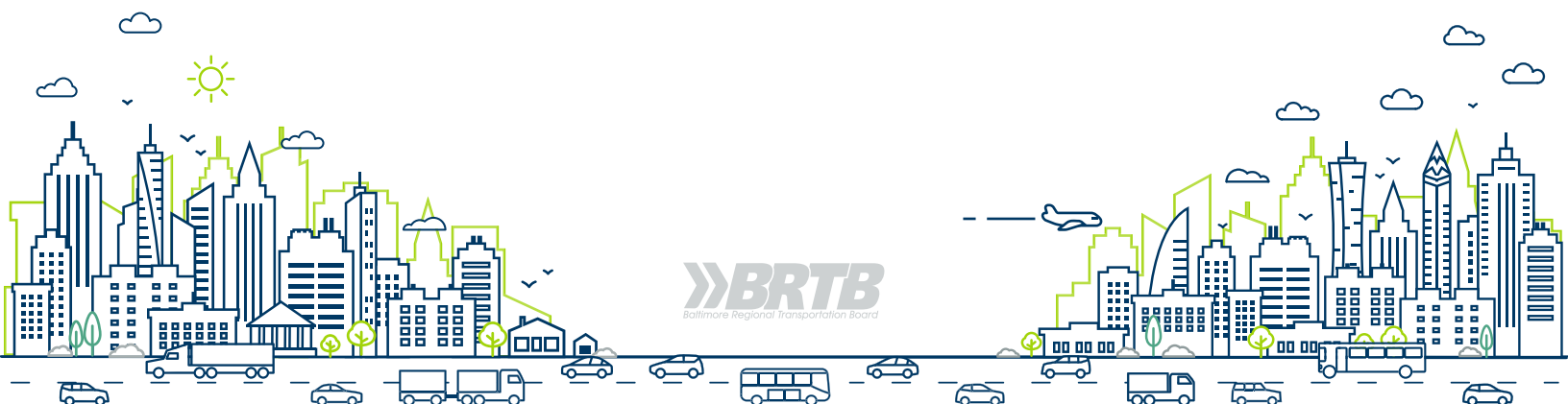
Highway and transit projects are awarded points as follows:

- 4 points: Projects will be evaluated based on the degree to which the project includes complete streets features. Projects with significant features will receive the maximum of 4 points, while projects with no features will receive 0 points. Projects with moderate features will receive 2 points. Examples of complete streets features include:
    - Bicycle facilities such as protected bicycle lanes and shared use paths
    - Pedestrian facilities such as new or improved sidewalks and crosswalks
    - Transit facilities such as bus pull out areas and dedicated roadway lanes for buses
    - Traffic safety features such as features that reduce vehicle speeds
- 1 point: Projects that are anticipated to improve complete streets accessibility for low-income and minority populations will receive an additional point.

Accessibility – Access to Jobs Technical Scoring Criteria

When people think about transportation, they often think about how they commute to work. Of course, people also use the transportation system to access a variety of destinations outside of work. The access

to jobs score is meant to capture improvements in accessibility by focusing on the number of jobs that people are able to access from where they live.

Highway and transit projects utilize a similar methodology. Access to jobs via transit receives a higher maximum number of points to reflect the increased importance of accessing jobs for transit dependent populations. In addition, you can already get to more jobs in the Baltimore region by driving than by transit for any given travel time (i.e. you can get to more jobs by driving for 30 minutes than you can by riding transit for 30 minutes).

For both highway and transit projects, we will use a tool called a travel demand model to calculate how much each project improves access to jobs for workers. The travel demand model is a tool that is used to predict travel behavior and to calculate how long it takes to travel places. You can use it to simulate how new transportation projects such as a new transit line or a new roadway might affect travel times. Comparing the number of jobs drivers and transit riders can access with all potential LRTP projects implemented to the number of jobs accessible without these projects allows us to calculate the impact that each project has on access to jobs.

Highway: 5 points maximum

Highway projects are awarded points as follows:

- 4 points: Projects will be evaluated based on the degree to which the project improves access to jobs for workers within a 30-minute travel time. The projects that improve access to jobs the most will receive 4 points, while the projects that improve access to jobs the least will receive 0 points. Projects in the middle will receive 2 points.

- 1 point: Projects that improve access to jobs for low-income and minority populations the most will receive an additional point.

Transit: 10 points maximum

Transit projects are awarded points as follows:

- 8 points: Projects will be evaluated based on the degree to which the project improves access to jobs for workers within a 45-minute travel time. The projects that improve access to jobs the most will receive 8 points, while the projects that improve access to jobs the least will receive 0 points. Projects in the middle will receive 4 points.

- 2 points: Projects that improve access to jobs for low-income and minority populations the most will receive 2 additional points.

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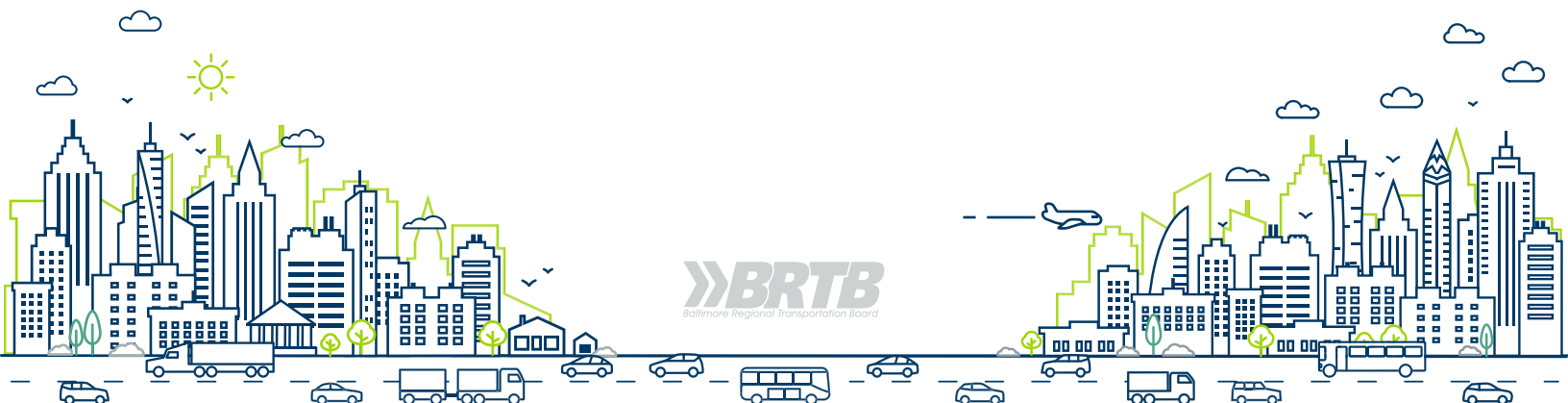
Mobility Technical Scoring Criteria

Mobility refers to how far someone can go in a given amount of time. Traffic or transit delays are central to this concept. Delays for cars and trucks on our highways can be caused by traffic congestion or incidents such as crashes or weather events. Transit mobility can be affected by reliability issues, the number of transfers required, the frequency of service or the span of service. Since different issues affect highway and transit mobility, the methodology for scoring highway and transit projects for mobility differs.
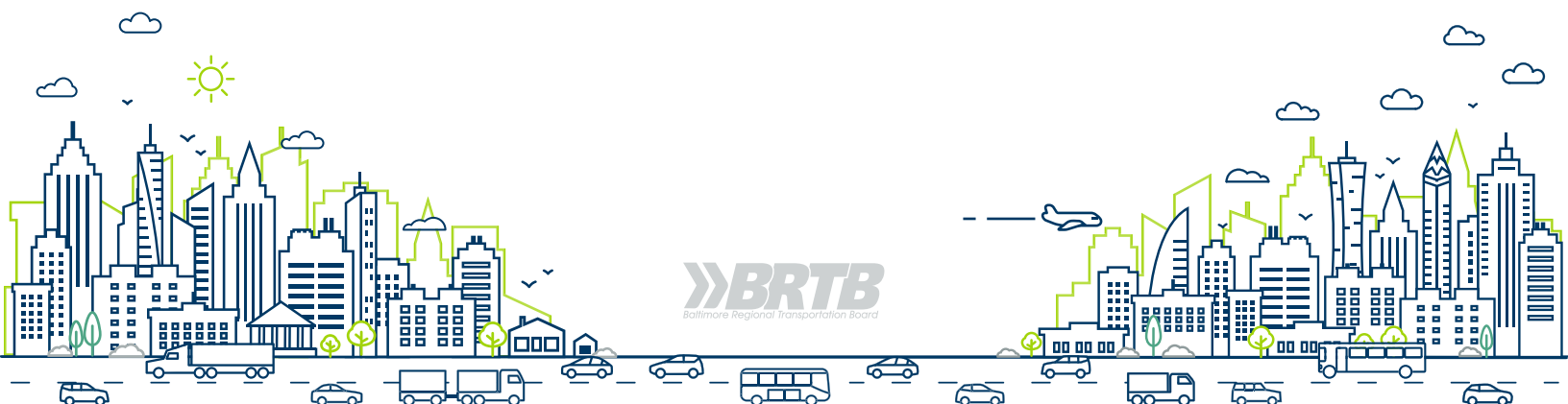
Highway: 10 points maximum

Highway mobility will be calculated and scored based on anticipated congestion levels in 2050. Anticipated congestion levels will be calculated with the travel demand model, based on projects that are already built or will be built because they are fully funded. These projects can be thought of as the transportation network that will exist without any additional projects beyond those that are already funded.

Projects on highways that cause more hours of delay (more congested) will be prioritized over projects on highways that cause less hours of delay (less congested), and thus will receive more points. This incentivizes the implementation of projects anticipated to improve congestion on roadways that are the most congested.

Different kinds of vehicles experience delay differently. Passenger vehicles often encounter the most delay during the morning and afternoon rush hours. Commercial vehicles may be more likely to encounter potential delays mid-day. The scoring methodology for highway mobility accounts for three different kinds of vehicles. Highway projects are awarded points as follows:

- Passenger Vehicle hours of delay (4 points): Projects will be evaluated based on passenger vehicle hours of delay during the morning and afternoon rush hours. Projects on roadways with the most delay will receive 4 points and projects on roadways with the least delay will receive 2 points. Projects in the middle will receive 3 points.

- Commercial Vehicle hours of delay (3 points): Projects will be evaluated based on commercial vehicle hours of delay in the middle of the day. Projects on roadways with the most delay will receive 3 points and projects on roadways with the least delay will receive 1 point. Projects in the middle will receive 2 points.

- Truck Vehicle hours of delay (3 points): Projects will be evaluated based on truck vehicle hours of delay overnight. Projects on roadways with the most delay will receive 3 points and projects on roadways with the least delay will receive 1 point. Projects in the middle will receive 2 points.

Transit: 10 points maximum

The mobility criteria for transit focus on how each proposed project helps to contribute to creating a complete transit system. There are multiple factors at play when considering how complete a transit system is, including the transit options available and how long transit trips are for those options, the number of people that can access and ride transit, and the number of transfers required for a transit trip. The mobility criteria for transit evaluate each of these factors. Transit projects are awarded points as follows:

- Transit Options (3 points): Projects will be evaluated based on how much the project increases the number of workers with high quality transit options. High quality transit options are defined as transit trips of 45 minutes or less. Projects that increase the number of workers with high quality transit options the most will receive 3 points while those with the smallest increases will receive 1 point. Projects in the middle will receive 2 points.

- Transit Ridership (5 points): Projects will be evaluated based on the impact the project has on the number of transit riders. Transit riders access transit in different ways. Some walk to transit while others may drive to a transit station. The transit ridership criteria evaluates these separately, since some transit riders may not have access to a car:

    - Walk access (3 points): Projects that increase transit ridership the most for those that walk to transit will receive 3 points while those with the least impact will receive 1 point. Projects in the middle will receive 2 points.

    - Drive access (2 points): Projects that increase transit ridership the most for those driving to transit will receive two points while those with the least impact will receive 1 point.

- Transit Connectivity (2 points): Transit trips with many transfers can make transit mobility more difficult. A lower number of transfers reduces time waiting for the next transit vehicle while providing a more direct connection to your destination. This criteria measures transit connectivity based on how much the transit project reduces the number of transfers required for transit trips. Projects reducing the number of transfers the most will receive 2 points while those with the least impact will receive 1 point.
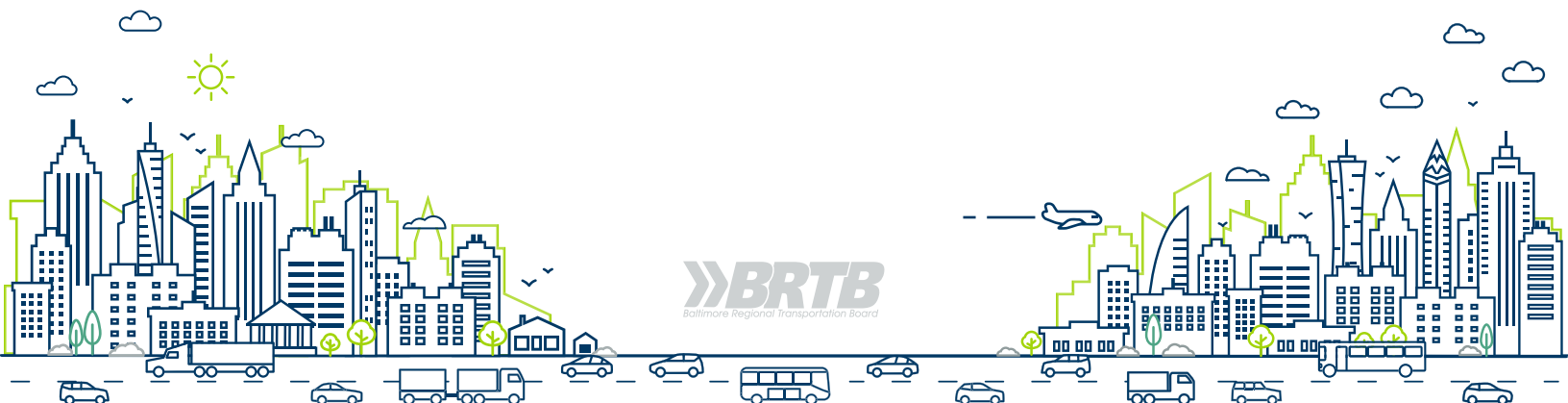
Environmental Conservation - Effects on Ecologically Sensitive Lands and Culturally Significant Resources Technical Scoring Criteria

Highway and Transit: 5 points maximum

Highway and transit projects are evaluated for their anticipated effects on ecologically sensitive lands and culturally significant resources using the same methodology. Projects are eligible for a maximum of 5 points.

One of the BRTB's goals is to pass on to future generations the healthiest natural and human environments possible. This criteria is intended to evaluate the potential environmental impacts associated with each project. Staff will evaluate potential impacts on a wide variety of resources including wetlands, sensitive species, state and local protected lands, properties with conservation easements, and corridors with existing green infrastructure (including forests and plants, wetlands, streams, and other areas with important animal and plant habitats). The analysis will also include culturally significant properties such as those on Maryland's Inventory of Historic Properties.

Points for this criteria will be awarded as follows:

- 5 points: Projects will be evaluated based on their proximity to the lands and resources listed above. Projects that are not near any of these resources will receive the maximum of 5 points. Projects that intersect these resources, and thus are likely to negatively affect them, will receive 1 point. Projects that are near to but do not intersect these resources will receive 3 points.

- 1 point (+/-): Projects that are anticipated to negatively impact environmental resources for low-income and minority populations will have their scores reduced by 1 point. Projects that are anticipated to benefit environmental resources for low-income and minority populations will receive an additional point.

Environmental Conservation - Potential for Greenhouse Gas Emissions Reductions Technical Scoring Criteria

Highway and Transit: 5 points maximum

Highway and transit projects are evaluated for their potential for Greenhouse Gas (GHG) emissions reductions using the same methodology. Projects are eligible for a maximum of 5 points.
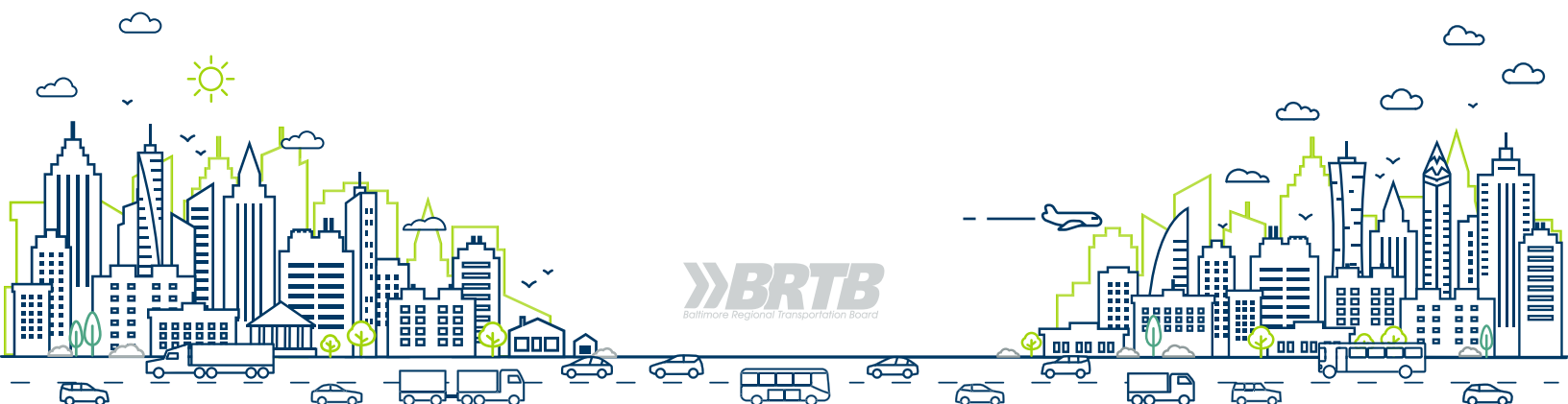
Fossil fuels release GHG emissions, causing dangerous effects such as rising temperatures, warming oceans and rising sea levels, and extreme weather events. Projects can include features that can help to reduce GHG emissions such as new sidewalks, trails, bicycle lanes, new transit lines, land preservation, tree planting, and increasing the fuel efficiency of vehicles.

Projects will receive the maximum of 5 points if they include ONLY components that will reduce GHG emissions down to as few as 0 points for projects that include no emissions reducing components. Projects can also receive 1, 2, 3, or 4 points based on the degree to which the project is anticipated to impact GHG emissions.

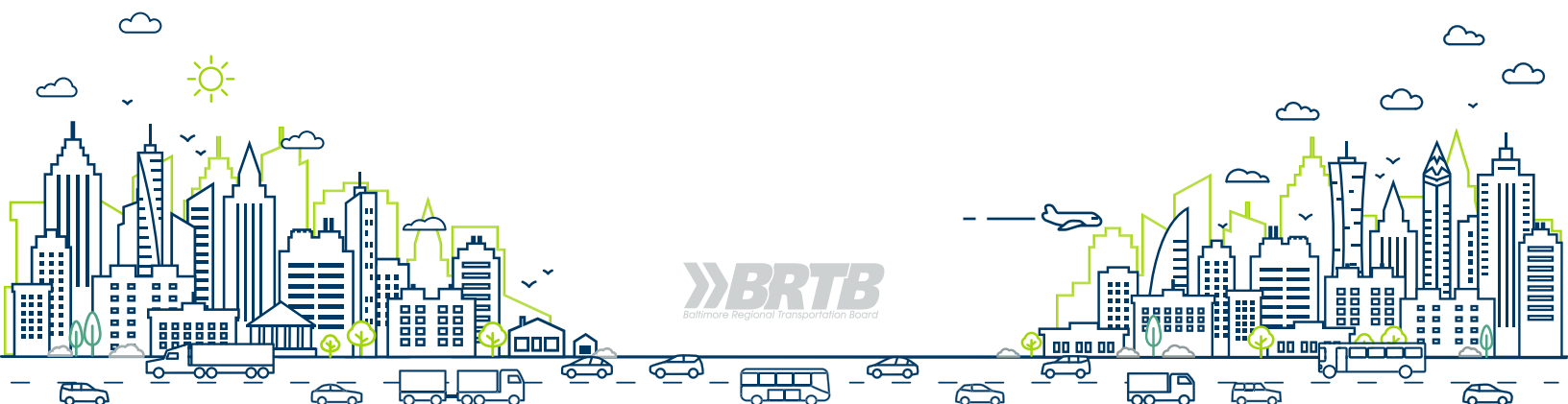## Security Technical Scoring Criteria

Highway and Transit: 5 points maximum

The scoring criteria for security focuses on how well a project will help people to evacuate in the case of a natural or human-caused disaster. Scoring focuses on how well a project will help people to evacuate, with a focus on multimodal evacuation for vulnerable populations. The locations of evacuation routes are based on routes previously identified by local and state agencies as important in the case of an evacuation.

A multimodal focus is important. In the case of an evacuation, some people may need to evacuate using modes other than personal automobiles. This is particularly the case for transit dependent and carless populations. A focus on multimodal evacuation means that we are taking account of people that use multiple modes of transportation, including transit.

The scores are also based on how well a project is anticipated to assist vulnerable populations in an evacuation. BMC maintains a Vulnerable Populations Index (VPI) identifying where vulnerable populations live in the Baltimore region. These populations include low-income persons, minorities, those with limited English proficiency, the disabled, the elderly, and the carless. Some of these vulnerable populations may need additional help in case of an evacuation. The VPI ranges from 0 to 14 for Census Tracts in the Baltimore region. Higher scores indicate either more vulnerable populations are present or there are higher shares of vulnerable populations in that Census Tract.

Highway and transit projects will be awarded points using the same methodology. Projects that fall on an existing evacuation route or help people to access an existing evacuation route that are also in areas with a higher VPI score (6+) will receive the maximum of 5 points. Projects that aid evacuation in an area with a VPI score of 4 or 5 will receive 3 points while projects aiding evacuation in an area with a VPI of 2 or 3 will receive 1 point. All other projects will receive 0 points.

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Economic Prosperity Technical Scoring Criteria

Highway and Transit: 5 points maximum

The scoring methodology for economic prosperity awards points to highway and transit projects that revitalize or improve existing or planned communities in the Baltimore region. It does so by evaluating which projects support transportation assets in communities prioritized through several state or federal programs. These programs include:

- Priority Funding Areas: Maryland's Priority Funding Areas are existing communities and places where local governments want State investment to support future growth.
- Sustainable Communities: Maryland's Sustainable Communities program offers resources intended to support strategies for community development, revitalization and sustainability. Goals include development of a healthy local economy, protection and appreciation of historical and cultural resources, a mix of land uses, affordable and sustainable housing, employment options, and growth and development practices that protect the environment and conserve natural resources.
- Opportunity Zones: The Opportunity Zone program is a nationwide initiative of the federal government. It provides tax incentives for investment in distressed communities over the next 10 years, with the goal of helping to redevelop underserved communities.

The state of Maryland maintains a map of the areas that fall under each of these programs.

Highway and transit projects that fall within an area identified under all three programs will receive the maximum of 5 points. Projects that are only within an area identified as a Priority Funding Area or a Sustainable Community will receive 3 points. Projects that fall outside of all three areas will receive 0 points.

What's next?

Project scoring will get started in late June 2022 after jurisdictions and state agencies finish submitting candidate projects. Future white papers will discuss the results of project scoring and the list of projects proposed for inclusion in *Resilience 2050*.

Check publicinput.com/resilience2050whitepapers over the coming months for more white papers on these and other topics!

Let us Know What You Think About This Paper!
publicinput.com/Resilience2050whitepapers

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