

TRANSPORTATION ADVISORY BOARD

MEETING OF THE TECHNICAL ADVISORY COMMITTEE

Wednesday | August 4, 2021
9:00 AM
Webex

AGENDA

I. CALL TO ORDER

II. APPROVAL OF AGENDA

(Agenda is approved without vote unless amended.)

III. APPROVAL OF MINUTES

July 7, 2021 meeting of the TAB Technical Advisory Committee

IV. TAB REPORT

V. COMMITTEE REPORTS

1. Executive Committee (Jon Solberg, Chair)
2. TAC Action Items
No TAC action items.
3. Planning Committee (Emily Jorgensen, Chair)
No action items.
4. Funding & Programming Committee (Michael Thompson, Chair)
No action items.

VI. INFORMATION ITEMS

1. Regional Solicitation: Measures
 - A. Pedestrian Safety Measure in Roadway Applications (Heidi Schallberg, MTS and Jessica Schoner, Toole Design)
 - B. Traffic Counts and Transit Usage (Steve Peterson, MTS)
 - C. Potential Point Changes in Spot Mobility and Safety (Steve Peterson, MTS)
 - D. Crash Modification Factors (Steve Peterson, MTS)
 - E. Equity and Affordable Housing (Amy Vennewitz and Jed Hanson, MTS)
2. Regional Solicitation: Unique Projects Update (Cole Hiniker, MTS)
3. Regional Solicitation: Outlier Adjustments (Joe Barbeau, MTS)
4. Highway Safety Improvement Program (HSIP) Application (Joe Barbeau, MTS)
5. TIP Public Comment Update (Joe Barbeau and Sara Maaske, MTS)

VII. AGENCY REPORTS

VIII. OTHER BUSINESS

IX. ADJOURNMENT

Please notify the Council at 651-602-1000 or 651-291-0904 (TTY) if you require special accommodations to attend this meeting. Upon request, the Council will provide reasonable accommodations to persons with disabilities.

*Transportation Advisory Board
of the Metropolitan Council*

**Minutes of a Meeting of the
TECHNICAL ADVISORY COMMITTEE
Wednesday, July 7, 2021
9:00 A.M.**

Members Present: Jon Solberg, Scott Mareck, Joe MacPherson, Lyndon Robjert, Gina Mitteco, Chad Ellos, Lisa Freese, Emily Jorgensen, Elaine Koutsoukos, Steve Peterson, Michael Larson, Erin Mitchell, Andrew Emanuele, Mehjabeen Rahman, Bridget Rief, Matt Fyten, Danny McCullough, Karl Keel, Ken Ashfeld, Charlie Howley, Paul Oehme, Marc Culver, Robert Ellis, Jim Kosluchar, Ethan Fawley, Jenifer Hager, Jim Voll

1. Call to Order

The meeting was called to order by Chair Solberg at 9:00 a.m. Due to the ongoing COVID-19 pandemic, the meeting was held via video conference.

2. Approval of Agenda

The Committee approved the agenda with no changes. Therefore, no vote was needed.

3. Approval of Minutes

The minutes of the June 2, 2021 meeting were presented to the Committee for consideration. A motion to approve the June minutes was made by Mr. Ashfeld and seconded by Mr. Oehme. Motion carried.

(Meeting minutes for the March 4, 2020, minutes will be presented for approval at a future committee meeting.)

4. TAB Report

TAB Coordinator Ms. Koutsoukos provided a summary of the June 16, 2021 meeting.

5. Committee Reports

1. Executive Committee (Jon Solberg, Chair)

Chair Solberg reported that the Executive Committee met to review the agenda items and did not discuss the bylaws as planned.

2. TAC Action Items

a. 2021-21: Streamlined 2021-2024 TIP Amendment for MnDOT: I-35W Frontage Road Turnback

Joe Barbeau from MTS stated that this streamlined TIP amendment would increase the cost and scope of a turnback project in Bloomington. The cost and change in length require that this item be a scope change request. A motion recommending adoption of the TIP amendment request was made by Mr. MacPherson and seconded by Mr. Keel. Motion carried.

3. Planning Committee (Emily Jorgensen, Chair)

No items.

INFORMATION ITEM

DATE: July 29, 2021
TO: Technical Advisory Committee
PREPARED BY: Joe Barbeau, Senior Planner (651-602-1705)
Steve Peterson, Manager of Highway Planning and TAC/TAB
Process (651-602-1819)
Elaine Koutsoukos, TAB Coordinator (651-602-1717)
SUBJECT: 2022 Regional Solicitation: Potential Roadway Measure Changes

Through the surveys and meeting discussions, partners and applicants had comments on specific scoring measures, particularly new measures. Last month focused on a series of potential measure changes such as those under Risk Assessment. This month staff will recap discussions at various committee levels and then concentrate on any potential changes to the four roadway applications.

1. Pedestrian Safety Measure in Roadway Applications (Strategic Capacity, Modernization, and Spot Mobility and Safety)

In the previous solicitation, three of the Roadway categories (Strategic Capacity, Modernization, and Spot Mobility and Safety) had the following pedestrian safety measure:

“Discuss how the project will improve safety for pedestrians. Safety countermeasures for pedestrians can include those identified by the FHWA as part of its Safe Transportation for Every Pedestrian program or others in its Proven Safety Countermeasures (e.g., pedestrian refuge islands, raised crosswalks, pedestrian hybrid beacons, leading pedestrian intervals). More information about pedestrian safety best practices is also available in MnDOT’s Best Practices for Pedestrian/Bicycle Safety.”

SCORING GUIDANCE (30 Points)

The project that will provide the most improvement to pedestrian safety will receive full points. Remaining projects will receive a share of the full points at the scorer’s discretion.”

The following proposal would replace this existing measure in these three application categories. The first part identifies projects that are largely not intended to benefit pedestrians and assigns a score of zero for the overall worksheet without applicants having to complete the remainder. There are then three sub-measures. The first is centered on how the project’s design will impact pedestrian safety, including specific pedestrian safety countermeasures as well as any added risks and mitigation that is introduced from the project’s design. The other two sub-measures evaluate existing safety risk and exposure factors, based on trends and patterns identified in crash data analysis done as part of the Regional Pedestrian Safety Action Plan.

The included scoring guidance assumes that overall pedestrian safety measure weighting will remain unchanged from the previous application cycle.

Determine if these measures do not apply to your project.

Does the project match either of the following descriptions?

- Project is primarily a freeway (or transitioning to a freeway) **and** does not provide safe and comfortable pedestrian facilities and crossings.
- Existing location lacks any pedestrian facilities (e.g., sidewalks, marked crossings, wide shoulders in rural contexts) **and** project does not add pedestrian elements (e.g., reconstruction of a roadway without sidewalks, that doesn't also add pedestrian crossings and sidewalk or sidepath on one or both sides).

If either of the items above are checked, then **score for entire pedestrian safety measure is zero**. Applicant does not need to respond to the sub-measures and can proceed to the next section.

SUB-MEASURE 1: Project-Based Pedestrian Safety Enhancements and Risk Elements

To receive maximum points in this category, pedestrian safety countermeasures selected for implementation in projects should be, to the greatest extent feasible, consistent with the countermeasure recommendations in the Regional Pedestrian Safety Action Plan and state and national best practices. Links to resources are provided on the Regional Solicitation Resources web page.

Please answer the following two questions with as much detail as possible based on the known attributes of the proposed design. If any aspect referenced in this section is not yet determined, describe the range of options being considered, to the greatest extent available. If there are project elements that may increase pedestrian risk, describe how these risks are being mitigated.

- **Describe how this project will address the safety needs of people crossing the street at signalized intersections, unsignalized intersections, midblock locations, and roundabouts.**
Treatments and countermeasures should be well-matched to the roadway's context (e.g., appropriate for the speed, volume, crossing distance, and other location attributes). Refer to the Regional Solicitation Resources web page for guidance links. (Limit 2,800 characters; approximately 400 words)

Considerations

Is the distance in between signalized intersections increasing (e.g., removing a signal)?

- No
- Yes. If yes, describe what measures are being used to fill the gap between protected crossing opportunities for pedestrians (e.g., adding High-Intensity Activated Crosswalk beacons to help motorists yield and help pedestrians find a suitable gap for crossing, turning signal into a roundabout to slow motorist speed, etc.). (Limit 1,400 characters; approximately 200 words)

-
- Will your design increase the crossing distance or crossing time across any leg of an intersection? (e.g., by adding turn or through lanes, widening lanes, using a multi-phase crossing, prohibiting crossing on any leg of an intersection, pedestrian bridge requiring length detour, etc.). This does not include any increases to crossing distances solely due to the addition of bike lanes (i.e., no other through or turn lanes being added or widened).

- No

- Yes. If yes:

- How many intersections will likely be affected? _____
 - Describe what measures are being used to reduce exposure and delay for pedestrians (e.g., median crossing islands, curb bulb-outs, etc.) (Limit 1,400 characters; approximately 200 words)
-

- If grade separated pedestrian crossings are being added and increasing crossing time, describe any features that are included that will reduce the detour required of pedestrians and make the separated crossing a more appealing option (e.g., shallow tunnel that doesn't require much elevation change instead of pedestrian bridge with numerous switchbacks). (Limit 1,400 characters; approximately 200 words):
-
-

- If mid-block crossings are restricted or blocked, explain why this is necessary and how pedestrian crossing needs and safety are supported in other ways (e.g., nearest protected or enhanced crossing opportunity). (Limit 1,400 characters; approximately 200 words)
-
-

- **Describe how motorist speed will be managed in the project design, both for through traffic and turning movements.** Describe any project-related factors that may affect speed directly or indirectly, even if speed is not the intended outcome (e.g., wider lanes and turning radii to facilitate freight movements, adding turn lanes to alleviate peak hour congestion, etc.). Note any strategies or treatments being considered that are intended to help motorists drive slower (e.g., visual narrowing, narrow lanes, truck aprons to mitigate wide turning radii, etc.) or protect pedestrians if increasing motorist speed (e.g. buffers or other separation from moving vehicles, crossing treatments appropriate for higher speed roadways, etc.). (Limit 2,800 characters; approximately 400 words)

- If known, what are the existing and proposed design, operation, and posted speeds? Is this an increase or decrease from existing conditions? (Limit 1,400 characters; approximately 200 words)
-

SCORING GUIDANCE (X Points)

Projects that will provide the most improvement to pedestrian safety across the two questions will receive full points. Other projects will receive a share of the full points, based on scorer's discretion, considering the following scoring guidance. Weight the responses to each of these questions equally and consider them cumulatively when scoring. If mid-block crossings are not applicable for the project, and the applicant's explanation adequately shows that pedestrian needs are still being safely met, do not penalize the applicant.

See the *FHWA STEP Studio* resource, *FHWA STEP Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations*, *NCHRP Report 926: Guidance to Improving Pedestrian and Bicyclist Safety at Intersections*, and related resources referenced in the application prompt for state-of-practice guidance on pedestrian-oriented safety design and treatments.

Assume that pedestrians may need to travel along and across the entire extent of the project, and evaluate how well the pedestrian safety countermeasures described serve those needs. Projects that serve those needs with the greatest safety and least pedestrian delay, detour, or discomfort should score highest. For example, projects that provide safe at-grade crossings or comfortable tunnels with minimal detour and elevation change should score higher than projects that include pedestrian bridges requiring lengthy detours and elevation change. Projects that provide frequent crossing opportunities or crossing opportunities well-aligned with transit or other likely places with pedestrian crossing needs should score higher than projects that have infrequent or non-existent protected crossings.

Consider how safely, easily, and comfortably children, older adults, and people with disabilities will be able to navigate crossing the street. Score projects more highly if the safety countermeasures selected are designed to be comfortably used by people of all ages and abilities.

Consider pedestrian-oriented safety treatments in context with motor vehicle design elements. If there are motor vehicle design elements that raise concerns about pedestrian safety (e.g., increased speed, increased crossing distance) that are not fully mitigated by the pedestrian safety countermeasures described, consider a lower score. For roadway expansion projects, where all projects *by definition* will be increasing crossing distance, consider how much additional distance is added as well as the types of countermeasures being considered. If the only element causing an increase in crossing distance is the addition of bike lanes or other bike facilities, especially if the project has reduced other elements to help mitigate this impact (e.g., reducing through lane widths), do not penalize the score for the crossing distance attributable to bike lanes.

Regardless of the speed limit, score projects more highly if they include design elements to help motorists drive slowly. For example, narrow lanes, visual narrowing, and elements to help motorists turn slowly, such as tight turning/corner radius or truck aprons, curb extensions, medians/crossing islands, and hardened centerlines.

SUB-MEASURE 2: Existing Location-Based Pedestrian Safety Risk Factors

These factors are based on based on trends and patterns observed in pedestrian crash analysis done for the Regional Pedestrian Safety Action Plan. Check off how many of the following factors are present. Applicants receive more points if more risk factors are present.

- Existing road configuration is **either**:
 - One-way, 3+ through lanes
 - Two-way, 4+ through lanes
- Existing road has a design speed, posted speed limit, or speed study/data showing 85th percentile travel speeds in excess of:
 - 30 MPH or more
- Existing road has AADT of greater than 15,000 vehicles per day (List the AADT _____)

SCORING GUIDANCE (X Points)

Multiply the score from Sub-Measure 1 by the proportion of risk factors indicated to calculate the number of points earned for Sub-Measure 2. Applications where all three factors are present score additional points equal to 100% of their Sub-Measure 1 score. Applications where two of the three factors are present score additional points equal to 2/3 (or 67%) of their Sub-Measure 1 score. And so on. To earn the maximum possible score on Sub-Measure 2, a project would need to earn maximum points on Sub-Measure 1 and also have all 3 risk factors present.

SUB-MEASURE 3: Existing Location-Based Pedestrian Safety Exposure Factors

These factors are based on based on trends and patterns observed in pedestrian crash analysis done for the Regional Pedestrian Safety Action Plan. Check off how many of the following existing location exposure factors are present. Applicants receive more points if more risk factors are present.

- Existing road has transit running on or across it with 1+ transit stops in the project area
- Existing road has High Frequency transit running on or across it and 1+ High Frequency stops in the project area
- Existing road is within 500' of 1+ shopping, dining, or entertainment destinations (e.g., grocery store, restaurant)

If yes, please describe (Limit 1,400 characters; approximately 200 words):

- Existing road is within 500' of other known pedestrian generators (e.g., school, civic/community center, senior housing, multifamily housing, regulatorily designated affordable housing)

If yes, please describe (Limit 1,400 characters; approximately 200 words):

SCORING GUIDANCE (X Points)

Multiply the score from Sub-Measure 1 by the proportion of exposure factors indicated to calculate the number of points earned for Sub-Measure 3. Applications where all four factors are present score additional points equal to 100% of their Sub-Measure 1 score. Applications where two of the four factors are present score additional points equal to 2/4 (or 50%) of their Sub-Measure 1 score. And so on. To earn the maximum possible score on Sub-Measure 3 a project would need to earn maximum points on Sub-Measure 1 and also have all 4 exposure factors present.

Proposed Scoring / Weighting

The current pedestrian safety measure is weighted as 30 points for roadway strategic capacity and roadway reconstruction projects, and 50 points for spot mobility & safety projects. Sub-measures 2 and 3 are scored by multiplying a percentage ranging from 0-100% by the score earned in sub-measure 1, so all three of these elements are effectively weighted equally. If this measure replaces the existing measure and keeps the same number of points, consider weighting each sub-measure equally in the worksheet as follows:

<i>Sub-Measure</i>	<i>Points Distribution – Roadway Strategic Capacity and Roadway Modernization</i>	<i>Points Distribution – Spot Mobility & Safety</i>
<i>SUB-MEASURE 1: Project-Based Pedestrian Safety Enhancements</i>	10	16.67
<i>SUB-MEASURE 2: Existing Location-Based Pedestrian Safety Risk Factors</i>	10	16.67
<i>SUB-MEASURE 3: Existing Location-Based Pedestrian Safety Exposure Factors</i>	10	16.67
TOTAL POINTS	30	50

Funding & Programming Committee Comments

At its July 22, 2021 meeting, members provided the following comments:

- The proposed measure will require a lot of work for few points, along with a lot of scorer interpretation and discretion.

- Basing the measure on easy-to-obtain checkboxes would not address the trend of increasing pedestrian-related crashes.
- New roadways would have a difficult time scoring points in sub-measures 1 and 2.
- Sub-measures 2 and 3 may need simplification. Also:
 - Sub-measure 2 may not lead to very much differentiation since most of the eligible roadways are four lanes with speeds above 35 mph.
 - In sub-measure 3, the Urban Center Thrive community checkbox is redundant with transit checkboxes.
- Overall, members were supportive, but encouraged simplification of the measure. The above draft measure reflects this and other discussion in the following ways:
 - One of the original four questions in sub-measure 1 was removed, while two more were combined.
 - In sub-measure 2, the AADT threshold has been increased from 7,000 to 15,000.
 - In sub-measure 2, the speed threshold was standardized at 30 mph; it had been 30 mph for Urban Center communities and 35 mph for others
 - In sub-measure 3, a checkbox awarding points for inclusion in an Urban Center Thrive community has been removed

2. Traffic Counts and Transit Usage

Usage is a criterion in four of the five roadway applications. Project sponsors are asked to use MnDOT traffic maps and transit ridership data as part of an equation that yields person throughput. Traffic counts are typically completed on roadways once every three years.

Given the dramatic decline in traffic volumes, particularly in 2020, should applicants be able to use an older count? This approach would allow for a fairer comparison between projects, so one project is not using a 2019 count (pre-COVID 19) when traffic counts were normal, while another project is using a 2020 count (during the height of COVID when traffic counts were greatly diminished). Similarly, should applicants use 2019 transit ridership numbers given the dramatic changes in transit ridership in 2020 and 2021? Some of these topics were discussed by the Transit Work Group on July 28. Any feedback from this group will be discussed at TAC.

Usage

This criterion quantifies the project's potential impact by measuring the current daily person throughput and future vehicular traffic that will be served by the project. These roadway users directly benefit from the project improvements.

- A. **MEASURE:** Metropolitan Council staff will calculate the current daily person throughput at one location along the A-minor arterial or non-freeway principal arterial project length using the current average annual daily traffic (AADT) volume and average daily transit ridership. If more than one corridor or location is included in the project, then the applicant should select the corridor where the most investment is being made with the project. The applicant must identify the location along the project length and provide the current AADT volume from the [MnDOT Traffic Mapping Application](#). Due to the potential timing issues with when a traffic count was taken relative to the COVID-19 pandemic (and resulting drop in traffic volumes), applicants may also use a historic AADT volume from the MnDOT Traffic Mapping Application (instructions under the Help Document). Reference the "Transit Connections" map for transit routes along the project. Ridership data will be provided by the Metropolitan Council staff, if public transit is currently provided on the project length. (85 points)
- Current Daily Person Throughput = (current average annual daily traffic volume x 1.30 vehicle occupancy) + average annual daily transit ridership (2019)

RESPONSE:

- Location: _____
- Current AADT volume: _____
- Existing transit routes at the location noted above: _____

Upload the "Transit Connections" map.

Funding & Programming Committee Comments

At its July 22, 2021 meeting, members provided the following comments:

- Similar consideration should be given to transit ridership data, particularly for transit expansion projects meant to improve frequency. It will be difficult to use 2019 data to project future ridership, but it might still be better than using 2020 transit ridership due to the dramatic drop in service. See pages 9 and 10 for proposed changes in response to this discussion.
- Regional Solicitation language should provide clear guidance.

Proposed Edits to Regional Solicitation Scoring – Measures Impacted by Transit

Transit Expansion

Measure 2A – Urban and Suburban Local Routes... (Existing)

Use peer routes that are currently in service to develop a ridership estimate for the third year of service. Applicants must use the most recent annual ridership figures that are available. To select the peer routes, the applicant should identify routes in the same transit market area (as defined in the 2040 Transportation Policy Plan), or routes that serve locations with similar development patterns. Applicants must use the average passengers per service hour of at least three peer routes to apply a rate of ridership for the proposed service project. Additionally, describe how a peer route was selected in the response and any assumptions used.

Measure 2A – Urban and Suburban Local Routes... (Proposed)

Use peer routes that are currently in service to develop a ridership estimate for the third year of service. **To account for impacts of the COVID-19 pandemic while still recognizing the resiliency of certain routes through 2020**, applicants **will use their best judgement to choose** annual ridership figures **from 2019 or 2020. The year chosen should be appropriate to the proposed service.** To select the peer routes, the applicant should identify routes in the same transit market area (as defined in the 2040 Transportation Policy Plan), or routes that serve locations with similar development patterns. Applicants must use the average passengers per service hour of at least three peer routes to apply a rate of ridership for the proposed service project. **The route proposed for expansion and all three routes must use the same year's annual ridership.** Additionally, describe how a peer route was selected in the response and any assumptions used. **The applicant must also explain why they chose a given year for their forecast.**

Transit Modernization

Measure 2B (Existing)

The applicant with the highest existing annual ridership will receive the full points. Remaining projects will receive a proportionate share of the full points equal to the existing ridership of the project being scored divided by the project with the highest existing ridership multiplied by the maximum points available for the measure (325). For example, if the application being scored had ridership of 1,000 riders and the top project had a ridership of 1,500 riders, this applicant would receive $(1,000/1,500)*325$ points or 217 points.

Measure 2B (Proposed)

The applicant with the highest existing annual ridership will receive the full points. **To account for the impacts of the COVID-19 pandemic while still recognizing the resiliency of certain routes through 2020, annual ridership will be based on a weighted average of 2019 and 2020 annual ridership. The weighted average will be based on the following formula:**

$$(2019 \text{ Annual Ridership} \times 0.75) + (2020 \text{ Annual Ridership} \times 0.25)$$

Remaining projects will receive a proportionate share of the full points equal to the existing ridership of the project being scored divided by the project with the highest existing ridership multiplied by the maximum points available for the measure (325). For example, if the application being scored had ridership of 1,000 riders and the top project had a ridership of 1,500 riders, this applicant would receive $(1,000/1,500)*325$ points or 217 points.

Transit Expansion & Modernization

Measure 1B (Existing)

The applicant with route connections having the highest number of weekday trips will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had connecting ridership of 100 trips and the top project had 150 trips, this applicant would receive $(100/150)*35$ points or 23 points.

Measure 1B (Proposed)

The applicant with route connections having the highest number of weekday trips will receive the full points. **To account for the impacts of the COVID-19 pandemic while still recognizing the resiliency of certain routes through 2020, average weekday trips will be based on a weighted average of 2019 and 2020 trips. The weighted average will be based on the following formula: (Average 2019 Weekday Trips x 0.75) + (Average 2020 Weekday Trips x 0.25)**

Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had connecting ~~ridership~~ service of 100 trips and the top project had 150 trips, this applicant would receive $(100/150)*35$ points or 23 points.

3. Potential Point Changes in Spot Mobility and Safety (Pages 13 and 40)

Technical committee members discussed the possibility of increasing the number of Safety points in the Spot Mobility and Safety application category to reflect the increasing number of fatalities on the transportation system relative to past years. One TAC member proposed reallocating the number of points between safety and congestion/air quality by giving 2/3 of the points to safety, and the remaining 1/3 to congestion/air quality (see the Spot Mobility and Safety application cover page for details). This idea will be brought to TAB on July 21st and then any TAB feedback will be brought the following day to this committee. If the concept is generally accepted by TAB, staff requests TAC Funding & Programming feedback on how to allocate the change of points within each criterion (since there are two measures in both Safety and Congestion/Air Quality). As currently shown, the increase in points is applied to the “crashes reduced” measure since the “pedestrian safety” measure will likely be brand new and staff would like to see how it plays out. Points are shown to be removed from the two measures in Congestion/Air Quality in a manner that is proportional to their existing distribution and relative weighting.

Funding & Programming Committee Comments

At its July 22, 2021 meeting, members supported increasing the value for safety, preferring Option 3 for the following reasons:

- While increasing the value of safety was supported, members still value vehicle delay (Option 1) since this is one of the two primary reasons for the Spot Mobility and Safety application category.
- Risk assessment (Option 2) still applies to spot mobility and safety projects, particularly in the case of roundabouts, which tend to necessitate right-of-way acquisition.
- The Truck Corridor Study Tiers measure (Option 3) is not as pertinent to these smaller, at-grade intersection improvement projects as noted in the surveys, so would be a better place for a point reduction.

4. Crash Modification Factors (Pages 14-18)

Proposed new text is shown in roadway measures that states: “As part of the Regional Solicitation Before & After Study, Phase 2 (2021), a list of commonly used crash modification factors was created. Applicants have the option to use these crash modification factors (posted on the Metropolitan Council’s Regional Solicitation website, under Application Resources) or find a more appropriate one on FHWA’s Clearinghouse.”

Funding & Programming Committee Comments

At its July 22, 2021 meeting, members supported this effort. They noted that the list may need to be refreshed before each funding cycle.

5. Equity and Affordable Housing (Pages 19-22)

In previous cycles, the “Equity and Affordable Housing” criterion has been split into one measure from each topic. The attached proposed changes combine them more holistically into one measure containing three measures, along with a fourth for bonus points. The measures are:

1. Equity Population Engagement (30%). This was used for socio-economic equity over the past two cycles and would now apply to housing.
2. Equity Population Benefits and Impacts (40%). This reflects the evolving primary measure used for the socio-economic equity in recent cycles. The ability to deduct points for negative impacts is removed.
3. Affordable Housing Access (30%). This is similar to the new affordable housing access sub-measure established in 2020, though the data will be provided in the mapping tool.

4. Bonus points. This was used in 2020 for the socio-economic measure and will apply to the three above measures, encompassing housing for the first time. Bonus points will be assigned as follows, based on the highest-scoring geography the project contacts:
 - a. ~~25 points to projects within an Area of Concentrated Poverty with 50% or more people of color~~
 - b. ~~20-25~~ points to projects within an Area of Concentrated Poverty
 - c. 15 points to projects within census tracts with the percent of population in poverty or population of color above the regional average percent
 - d. 10 points for all other areas

Several changes are reflected in the above (and attached associated language). The term “elderly” has been changed to “older adults” to reflect current terminology. Regarding the bonus points, Council has discontinued use of the geography titled “Area of Concentrated Poverty where 50% or more of residents are people of color.”

Prior to 2020, housing was entirely scored with the Housing Performance Score (HPS). This was used as a “carrot” to entice applicants to improve affordable housing policy. The Metropolitan Council’s Community Development staff, however, does not think that this is a successful strategy. For 2020, 20% of the housing score was dedicated to a more project-specific qualitative element (Connection to Affordable Housing).

Describe and map any affordable housing developments—planned, under construction or existing, within ½ mile of the proposed project. The applicant should note the development stage, number of units, number of bedrooms per unit, and level of affordability using 2019 affordability limits. Also note whether the affordability is guaranteed through funding restrictions (i.e. LIHTC, 4d) or is unsubsidized, if housing choice vouchers are/will be accepted, and if there is a fair housing marketing plan required or in place.

Describe how the proposed project will improve or impact access for residents of the affordable housing locations within ½ mile of the project. This should include a description of improved access by all modes, automobiles, transit, bicycle and pedestrian access. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements.

Applicants found it difficult to find all the information being requested. This is particularly true for transit projects that have several stops/stations. Similarly, this was difficult for TDM applicants, who tend not to be connected to housing data. As referenced above, this will be addressed by placing data into the maps generated by the application process.

Funding & Programming Committee Comments

At its July 22, 2021 meeting, members supported this effort, adding the following comments:

- Members are interested in training options for applicants.
- Care should be taken that the character limit does not hinder appropriate responses.
- The half-mile housing buffer might not be as appropriate in rural and suburban areas, where projects tend to impact people further away.

Spot Mobility and Safety Scoring Changes Options

Criteria and Measures	Existing		Option 1		Option 2		Option 3	
	Pts	% of Total Pts	Pts	% of Total Pts	Pts	% of Total Pts	Pts	% of Total Pts
1. Role in the Regional Transportation System and Economy	175	16%	175	16%	175	16%	115	10%
Measure A - Congestion within the Project Area, Level of Adjacent Congestion, Principal Arterial Intersection Conversion Study Priorities, or CMSP	100		100		100		70	
Measure B - Regional Truck Corridor	75		75		75		45	
2. Equity and Housing Performance	100	9%	100	9%	100	9%	100	9%
Measure A - Benefits and outreach to disadvantaged	50		50		50		50	
Measure B - Affordable housing connection	50		50		50		50	
3. Congestion Reduction/Air Quality	275	25%	215	20%	275	25%	275	25%
Measure A - Vehicle delay reduced	200		140		200		200	
Measure B - Kg of emissions reduced	75		75		75		75	
4. Safety	275	25%	335	30%	335	30%	335	30%
Measure A - Crashes reduced	225		235		235		235	
Measure B - Pedestrian Crash Reduction	50		100		100		100	
5. Multimodal Elements and Existing Connections	100	9%	100	9%	100	9%	100	9%
Measure A - Transit, bicycle, or pedestrian project elements & connections	100		100		100		100	
6. Risk Assessment	75	7%	75	7%	15	1%	75	7%
Measure A - Risk Assessment Form	75		75		15		75	
7. Cost Effectiveness	100	9%	100	9%	100	9%	100	9%
Measure A - Cost effectiveness	100		100		100		100	
Total	1,100		1,100		1,100		1,100	



MEMORANDUM

Date: December 16th, 2020
To: Derek Leuer, P.E. -MnDOT
From: Ross Tillman, P.E.
 Chloe Weber, EIT
Subject: Regional Solicitation Before and After Study Phase II: HSIP CMF Guide
 Project No.: T41.121214

Depending on staffing at various agencies who may apply for HSIP funds, the level of expertise in terms of safety analysis widely varies. In addition, there are times when two applications for a similar project will utilize different CMFs with varying levels of anticipated crash reductions. Based on these factors, there is a desire to simplify the process as well as consolidate a list of CMFs for use to the extent possible. Certain projects will always require further research and analysis using the Highway Safety Manual or CMF Clearinghouse, but a simple guide could satisfy the needs for most other projects.

Our team began by collecting the 2016 and 2018 HSIP project information. Frequency of CMFs utilized was determined as a starting point to understand which CMFs to include in an overall guide. See **Table 1**.

Table 1: CMFs applied per category, from 2016 and 2018 application data

CMF Applied per Category											
Lighting Improvement or Installation	Frequency	Roundabout Improvement or Construction	Frequency	Signal Improvements or Construction	Frequency	Turn Lane Construction	Frequency	Pedestrian Improvements	Frequency	Roadway Construction	Frequency
578	5	227	3	1414	3	3948	2	175	3	8111	1
192	1	228	3	1419	1	3950	1	4123	3	1967	4
193	1	229	1	1420	6	253	1			6942	1
433	3	207	1	1428	4	255	3			2265	3
		211	1	1485	3	268	2			2276	3
		230	1	2334	2	272	2			2841	2
		206	4	1993	3	287	2			6703	2
		210	1	4140	1	583	1			1516	1
		225	1	4177	3	8431	1				
		4699	1	8790	1						
		4700	2	5272	6						
		4927	1	6858	2						
				7684	3						
				7690	3						
				3072	1						
				8824	2						

Ultimately, the team incorporated all the used CMFs into the guide based on relevancy and overall effort. This information was sorted by CMF to include and compare the details of the CMFs used in those years' HSIP applications. These details include the value of the CMF, the standard error, if it is listed in the HSM, the star rating, crash type, and crash severity. These details differentiate one CMF from the next and allow applicants to find the CMF that best fits the scenario of the project being applied for. From

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there, counterpart CMFs (rural vs. urban, for example) were added from the CMF Clearinghouse to round out the options one might want to consider when choosing a CMF for an HSIP application. The guide was split into two parts to differentiate between CMFs that apply to all/property damage only crashes and those that are focused on injury crashes only.

Lastly, the team developed a simple step by step list for use of the guide and application of CMFs, intended to go along with the guides in future HSIP applications as an attachment. This list walks users through the categories in the guide, as well as highlights specific measures to be aware of when choosing a CMF for a project.

Steps for using the CMF guides and applying CMFs:

1. Look through the project types and sub-types that may be applicable to the project
2. Consider additional qualifiers that may help fit the CMF to the project (often, these are existing conditions of what is to be improved)
3. Choose which area type the project exists in (Urban, Rural, Suburban, etc.)
4. Consider the crash types and crash severities
5. Select a CMF for use that best fit the project as well as context of the area. Some projects may require the use of multiple CMFs to best represent the improvements, although the use of more than two is not recommended for most HSIP projects
6. Ensure you are applying the CMF to the correct crash severities and types. CMFs that cover all severities and types should be used with caution
7. Ensure that the crashes utilized match the timeframe/conditions of the application. Use whole calendar years

See the attached CMF guide information which could be appended to future HSIP solicitation packets.

CMF Guide (All-Severity and Property Damage Only Crashes)

Project Type	Additional Qualifiers	Area Type	CMF	Value	Adjusted Standard Error	Star Rating	In HSM?	Crash type	Crash Severity
Pedestrian									
Median Construction	Marked, Uncontrolled Pedestrian Crossing	Urban/Suburban	175	0.54	0.48	3	No	Veh/Ped	All
Median Construction	Uncontrolled Pedestrian Crossing, Marked or Unmarked	Urban/Suburban	8800	0.742	NA	4	No	All	All
High Visibility Crosswalk	High Visibility Crosswalk	Urban	4123	0.6	NA	2	No	Veh/Ped	All
Install Shared Path	No Share Path Present	Urban	9250	0.75	NA	3	No	Veh/Bicycle	All
Install Bike Lanes	No Bike Facilities Present	Urban	2159	1.05	NA	3	No	All	All
Install Bike Lanes	No Bike Facilities Present	Urban	4658	0.855	NA	3	No	Veh/Ped	All
Reduced Conflict Intersections*									
RCUT	Previously Signalized or Stop Controlled	All	10382	0.8	NA	4	No	All	All
RCUT	Previously Two Way Stop Controlled	All	10384	0.42	NA	4	No	All	All
J-Turn	Previously Two Way Stop Controlled	Rural	5555	0.652	NA	4	No	All	All
Intersection									
Turn Lane	Install Left Turn Lane	Urban	3950	0.8	NA	3	No	All	PDO
Turn Lane	Install Left Turn Lane	Rural	7853	0.69	NA	2	No	All	All
Turn Lane	Left Turn Lane on One Major Approach	Rural	253	0.56	0.07	4	Yes	All	All
Turn Lane	Left Turn Lane on Both Major Approaches	Rural	268	0.52	0.04	5	Yes	All	All
Turn Lane	Two Way Left Turn Lanes	Rural	583	0.64	0.04	5	No	All	All
Turn Lane	Improve Angle of Channelized Right Turn Lane	Not Specified	8431	0.937	0.397	4	No	Right Turn, Other	All
Single Lane Roundabout	Originally Stop Controlled	All	227	0.56	0.05	5	Yes	All	All
Single Lane Roundabout	Originally Stop Controlled	Rural	229	0.29	0.05	5	Yes	All	All
Single Lane Roundabout	Originally Stop Controlled	Rural	207	0.42	0.13	4	No	All	All
Single Lane Roundabout	Originally Stop Controlled	Urban	206	0.28	0.11	4	No	All	All
Single Lane Roundabout	Originally Signalized, Stop Controlled, and Non-Controlled	Rural	9333	0.48	NA	3	No	Other	All
Single Lane Roundabout	Originally Signalized	All	225	0.52	0.06	4	Yes	All	All
Single Lane Roundabout	High Speed	Rural	4699	0.26	NA	4	No	All	All
Multi-Lane Roundabout	Originally No Control, Yield, TWSC, AWSC, or Signal Control	All	4926	1.062	NA	4	No	All	All
Signal Head	Add Signal (Additional Primary Head)	Urban	1414	0.72	NA	3	No	All	All
Signal Head	Add Signal (Additional Primary Head)	Urban	1419	0.65	NA	2	No	Angle	All
Signal Head	Add Signal (Additional Primary Head)	Urban	1416	0.69	NA	3	No	All	PDO
Signal Head	Convert Signal From Pedestal-Mounted to Mast Arm	Not Specified	1420	0.51	NA	3	No	All	All
Signal Head	Convert Signal From Pedestal-Mounted to Mast Arm	All	1428	0.26	NA	3	No	Angle	All
Signal Head	Add Signal (One Over Each Approach Lane)	Urban	1485	0.54	NA	2	No	Angle	All
Signal Head	Replace 8" Red with 12"	Not Specified	2334	0.97	NA	3	No	All	All
Signal Phasing	Leading Pedestrian Interval	Urban	1993	0.413	NA	3	No	Veh/Ped	All
Intersection Traffic Control	Change Permissive Left to Protected or Protected/Permissive	Urban	4140	0.58	NA	2	No	All	All
Intersection Traffic Control	Change Protected/Permissive to Flashing Yellow Arrow	Urban	4177	0.806	NA	4	No	Left Turn	All
Intersection Traffic Control	Install Pedestrian Countdown Timer	Not Specified	8790	0.912	NA	4	No	All	All
Intersection Traffic Control	Install Pedestrian Countdown Timer	Not Specified	5272	0.3	NA	4	No	Veh/Ped	All
Intersection Traffic Control	Install Adaptive Traffic Signal Control	Urban/Suburban	6858	0.79	NA	4	No	All	All
Intersection Traffic Control	Change from Permissive Only to Flashing Yellow Arrow	Not Specified	7684	0.598	NA	2	No	Left Turn	All
Intersection Traffic Control	Change from Protected Only to Flashing Yellow Arrow	Not Specified	7690	0.901**	NA	4	No	All	All
Intersection Traffic Control	Change Number of Traffic Signal Cycles Per Hour on Arterial with Signal Coordination From X to Y	Urban/Suburban	3072	$e^{-0.0444(Y-X)}$	NA	3	No	Rear End	All
Advanced Technology and ITS	Install Red-Light Indicator Lights	Not Specified	8824	0.713	NA	4	No	Other	All
Access Management	Create Directional Median Openings to Allow Left-Turns and U-Turns	Not Specified	1516	0.49	NA	2	No	All	All
Roadway									
Lighting	Illumination	Not Specified	496	0.69	0.36	3	No	All	PDO
Lighting	Highway Lighting	All	193	0.83	0.07	4	Yes	Nighttime	PDO
Wet-Reflective Pavement Markings	Previously Standard Markings	Not Specified	8111	0.538	NA	4	No	Run Off Road	All
Median	Install Cable Median Barrier (High Tension)	Not Specified	1967	0.04	0.06	3	No	Cross Median, Frontal and Opposing Direction Sideswipe, Head On	All
Install Centerline and Shoulder Rumble Strips	No Existing Rumble Strips	Rural	6942	0.653	NA	4	No	All	All
Improve Pavement Friction	Increase Skid Resistance	All	2265	0.589	0.216	3	No	All	All
Improve Pavement Friction	Increase Skid Resistance	All	2276	0.304	0.086	3	No	Rear End	All
Road Diet	Previously Four Lane Undivided	Suburban	2841	0.53	NA	4	No	All	All
Road Diet	Previously Four Lane Undivided	Urban	5553	0.748	NA	4	No	All	All
Shoulder Treatments									
Widen Shoulder	Previously Narrow Paved Shoulder	Rural	6703	0.67	NA	4	Yes***	Fixed Object, Head on, Run Off Road, Sideswipe	PDO

*Minnesota study underway

**Results in Minnesota have indicated an increase in crashes

***See section 13.4.2.4 in the HSM for additional shoulder CMF information

CMF Guide (Injury Crashes)

Project Type	Additional Qualifiers	Area Type	CMF	Value	Adjusted Standard Error	Star Rating	In HSM?	Crash type	Crash Severity
Pedestrian									
Median Treatment for Ped/Bike Safety	Install Various Treatments Such as Fencing, Planters, Pedestrian Islands	Urban	9121	0.91	NA	4	No	All	K, A, B
Install Sidewalk	No Existing Sidewalk	Urban	9240	0.41	NA	2	No	Veh/Bicycle	K, A
Install Bike Lanes	No Bike Facilities Present	Urban	4660	0.946	NA	3	No	All	K, A, B, C
Reduced Conflict Intersections*									
J-Turn	Previously Two Way Stop Controlled	Rural	5559	0.14	NA	2	No	All	A
Intersection									
Turn Lane	Install Left Turn Lane	Urban	3948	0.79	NA	3	No	All	K, A, B, C
Turn Lane	Install Left Turn Lane	Rural	7852	0.73	NA	3	No	All	K, A, B, C
Turn Lane	Left Turn Lane on One Major Approach	Rural	255	0.45	0.1	4	Yes	All	K, A, B, C
Turn Lane	Left Turn Lane on Both Major Approaches	Rural	272	0.42	0.04	5	Yes	All	K, A, B, C
Turn Lane	Right Turn Lane on One Major Approach	All	287	0.77	0.08	4	Yes	All	K, A, B, C
Lighting	Provide Intersection Illumination	Not Specified	433	0.62	0.13	4	Yes	Nighttime	A, B, C
Single Lane Roundabout	Originally Stop Controlled	All	228	0.18	0.04	5	Yes	All	A, B, C
Single Lane Roundabout	Originally Stop Controlled	Rural	211	0.18	0.16	4	No	All	A, B, C
Single Lane Roundabout	Originally Stop Controlled	Rural	230	0.13	0.04	5	Yes	All	A, B, C
Single Lane Roundabout	Originally Stop Controlled	Urban	210	0.12	0.14	4	No	All	A, B, C
Single Lane Roundabout	High Speed	Rural	4700	0.11	NA	4	No	All	A, B, C
Multi-Lane Roundabout	Originally No Control, Yield, TWSC, AWSC, or Signal Control	All	4927	0.367	NA	4	No	All	K, A, B, C
Single or Multi-Lane Roundabout	Originally TWSC	All	4931	0.65	NA	4	No	All	K, A, B, C
Roundabout	Originally AWSC	All	4933	0.544	NA	3	No	All	K, A, B, C
Low Speed Roundabout	Originally No Control, Yield, TWSC, AWSC, or Signal Control	All	5228	0.473	NA	4	No	All	K, A, B, C
Roadway									
Lighting	Illumination	Urban	578	0.69	0.07	4	No	All	A, B, C
Lighting	Illumination	All	571	0.31	0.36	3	No	All	K
Lighting	Highway Lighting	All	192	0.72	0.06	4	Yes	Nighttime	A, B, C
Median	Install Cable Median Barrier (High Tension)	Rural	8214	0.47	NA	3	No	Other	K, A
Shoulder Treatments									
Widen Shoulder	Previously Narrow Paved Shoulder	Urban	6705	0.74	NA	3	No	Fixed Object, Head on, Run Off Road, Sideswipe	A, B, C

*Minnesota study underway

3. Equity and Affordable Housing (100 Points)

This criterion addresses the [Council's role in advancing equity](#) by examining how a project directly benefits or impacts (positively and negatively) Black, Indigenous, and People of Color (BIPOC) populations, low-income populations, people with disabilities, youth, older adults, and residents of affordable housing. The criterion evaluates whether the applicant engaged these populations to identify transportation needs and potential solutions and how the project will address these identified needs. The criterion also evaluates a community's overall efforts to implement affordable housing and how the project improves multimodal access to affordable housing.

A. **MEASURE:** Engagement (0 to 30 points). This measure is a qualitative scoring measure.

A successful project is the result of active engagement of Black, Indigenous, and People of Color populations, low-income populations, persons with disabilities, youth, older adults, and residents in affordable housing. Engagement should occur prior to and during project development, with the intent to provide direct benefits or solve an expressed transportation issue, while also limiting and mitigating any negative impacts.

- i. Describe any Black, Indigenous, and People of Color populations, low-income populations, disabled populations, youth, or older adults within a ½ mile of the proposed project. Describe how these populations relate to regional context. Location of affordable housing will be addressed in Measure C.
- ii. Describe how Black, Indigenous, and People of Color populations, low-income populations, persons with disabilities, youth, older adults, and residents in affordable housing were engaged, whether through community planning efforts, project needs identification, or during the project development process.
- iii. Describe the progression of engagement activities in this project. A full response should answer these questions:
 1. What engagement methods and tools were used?
 2. How did you engage specific communities and populations likely to be directly impacted by the project?
 3. What techniques did you use to reach populations traditionally not involved in community engagement related to transportation projects?
 4. How were the project's purpose and need identified?
 5. How was the community engaged as the project was developed and designed?
 6. How did you provide multiple opportunities for of Black, Indigenous, and People of Color populations, low-income populations, persons with disabilities, youth, older adults, and residents in affordable housing to engage at different points of project development?
 7. How did engagement influence the project plans or recommendations? How did you share back findings with community and re-engage to assess responsiveness of these changes?
 8. If applicable, how will NEPA or Title VI regulations will guide engagement activities?

(Limit 2,800 characters; approximately 400 words):

SCORING GUIDANCE (0 to 30 Points)

Each application will be qualitatively scored based on the available points and will receive the number of points awarded.

- B. **MEASURE:** Equity Population Benefits and Impacts (0 to 40 points). This measure is a qualitative scoring measure.

Successful projects are designed to provide direct benefits to Black, Indigenous, and People of Color populations, low-income populations, persons with disabilities, youth, older adults. All projects must mitigate potential negative benefits as required under federal law. Projects that are designed to provide benefits go beyond the mitigation requirement to proactively provide transportation benefits and solve transportation issues experienced by Equity populations. Benefits to residents of affordable housing are addressed in Measure C.

Describe the project's benefits to Black, Indigenous, and People of Color populations, low-income populations, children, people with disabilities, youth, and older adults. Benefits could relate to:

- pedestrian and bicycle safety improvements;
- public health benefits;
- direct access improvements for residents or improved access to destinations such as jobs, school, health care, or other;
- travel time improvements;
- gap closures;
- new transportation services or modal options;
- leveraging of other beneficial projects and investments;
- and/or community connection and cohesion improvements.

This is not an exhaustive list. A full response will support the benefits claimed, identify benefits specific to Equity populations residing or engaged in activities near the project area, identify benefits addressing a transportation issue affecting Equity populations specifically identified through engagement, and substantiate benefits with data.

Acknowledge and describe any negative project impacts to Black, Indigenous, and People of Color populations, low-income populations, children, people with disabilities, youth, and older adults. Describe measures to mitigate these impacts. Unidentified or unmitigated negative impacts may result in a reduction in points.

Below is a list of potential negative impacts. This is not an exhaustive list.

- Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.
- Increased speed and/or "cut-through" traffic.
- Removed or diminished safe bicycle access.
- Inclusion of some other barrier to access to jobs and other destinations.

(Limit 2,800 characters; approximately 400 words):

SCORING GUIDANCE (0 to 40 Points)

Each application will be qualitatively scored based on the available points and will receive the number of points awarded.

C. **MEASURE:** Affordable Housing Access (0 to 30 points). This measure is a qualitative scoring measure.

Describe any affordable housing developments—existing, under construction, or planned—within ½ mile of the proposed project. The applicant should note the number of existing subsidized units, which will be provided on the Socio-Economic Conditions map. Applicants can also describe other types of affordable housing (e.g., naturally-occurring affordable housing, manufactured housing) and under construction or planned affordable housing that is within a half mile of the project. If applicable, the applicant can provide self-generated PDF maps to support these additions. Applicants are encouraged to provide a self-generated PDF map describing how a project connects affordable housing residents to destinations (e.g., childcare, grocery stores, schools, places of worship).

Describe the project’s benefits to current and future affordable housing residents within ½ mile of the project. Benefits must relate to affordable housing residents. Examples may include:

- specific direct access improvements for residents
- improved access to destinations such as jobs, school, health care or other;
- new transportation services or modal options;
- and/or community connection and cohesion improvements.

This is not an exhaustive list. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements. A full response will support the benefits claimed, identify benefits specific to residents of affordable housing, identify benefits addressing a transportation issue affecting residents of affordable housing specifically identified through engagement, and substantiate benefits with data.

(Limit 2,800 characters; approximately 400 words):

SCORING GUIDANCE (30 Points)

The project that best provides meaningful improvements to access to affordable housing units will receive the full 30 points. Multiple projects may receive the highest possible score of 30

points based on this assessment. Remaining projects will receive a share of the full points at the scorer's discretion.

- D. **BONUS POINTS (0 TO 25 POINTS ABOVE THE TOTAL CRITERION POINTS):** Those projects that score at least 80% of the maximum total points available through Measures A, B, and C will be awarded bonus points based on the geographic location of the project. These points will be assigned as follows, based on the highest-scoring geography the project contacts:
- 25 points to projects within an Area of Concentrated Poverty
 - 15 points to projects within census tracts with the percent of population in poverty or population of color above the regional average percent
 - 10 points for all other areas

Upload the “Socio-Economic Conditions” map used for this measure.

RESPONSE (Select one, based on the “Socio-Economic Conditions” map):

- Project is located in an Area of Concentrated Poverty:
- Project’s census tracts are above the regional average for population in poverty or population of color:
- Project located in a census tract that is below the regional average for population in poverty or populations of color:

SCORING GUIDANCE (0 to 25 Points)

If the applicant receives at least 80% of the available points in Measures A, B, and C (e.g., 80 points for the Roadway applications) the project will receive Bonus points as described. If an applicant qualifies for Bonus points it may result in an Equity and Affordable Housing score of more than the total points available.

Equity and Housing Score Changes

Current Measures	Traffic Mgmt.	Spot Mobility/ Safety	Strategic Capacity	Roadway Recon/ Mod	Bridges	Transit Expansion	Transit Mod	TDM	Multiuse Trails	Pedestrian	SRTS
Measure A: Socio-Economic Equity	50	50	50	50	50	150	125	100	70	70	70
Sub-measure 1: Equity Population Engagement	20	20	20	20	20	60	50	40	30	30	30
Sub-measure 2: Equity Population Benefits and Impacts	30	30	30	30	30	90	75	60	40	40	40
<i>Bonus Points</i>	25	25	25	25	25	25	25	25	25	25	25
Measure B: Housing	50	50	50	50	50	50	50	50	50	50	50
Housing Performance Score	40	40	40	40	40	40	40	40	40	40	40
Affordable Housing Access	10	10	10	10	10	10	10	10	10	10	10
Total Possible (Excluding Bonus)	100	100	100	100	100	200	175	150	120	120	120

Proposed Measures	Traffic Mgmt.	Spot Mobility/ Safety	Strategic Capacity	Roadway Recon/ Mod	Bridges	Transit Expansion	Transit Mod*	TDM	Multiuse Trails	Pedestrian	SRTS
Measure A: Engagement	30	30	30	30	30	60	50	45	36	36	36
Measure B: Equity Population Benefits and Impacts	40	40	40	40	40	80	75	60	48	48	48
Measure C: Affordable Housing Access	30	30	30	30	30	60	50	45	36	36	36
<i>Bonus</i>	25	25	25	25	25	25	25	25	25	25	25
Total Possible (Excluding Bonus)	100	100	100	100	100	200	175	150	120	120	120

*Proposed points rounded to avoid half-points.

Traffic Management Technologies (Roadway System Management) – Prioritizing Criteria and Measures

September 15, 2021

Definition: An Intelligent Transportation System (ITS) or similar project that primarily benefits roadway users. Traffic Management Technology projects can include project elements along a single corridor, multiple corridors, or within a specific geographic area such as a downtown area. To be eligible, projects must make improvements to at least one A-minor arterial or non-freeway principal arterial. Projects that are more transit-focused must apply in the Transit Modernization application category.

Examples of Traffic Management Technology Projects:

- Flashing yellow arrow traffic signals
- Traffic signal retiming projects
- Integrated corridor signal coordination
- Traffic signal control system upgrades
- New/replacement detectors
- Passive detectors for bicyclists and peds
- Other emerging ITS technologies
- New/replacement traffic mgmt. centers
- New/replacement traffic communication
- New/replacement CCTV cameras
- New/replacement variable message signs & other info improvements
- Incident management coordination
- Vehicle to Infrastructure Technology

Scoring:

Criteria and Measures	Points	% of Total Points
1. Role in the Regional Transportation System and Economy	175	16%
Measure A - Functional classification of project	50	
Measure B - Regional Truck Corridor Study Tiers	50	
Measure C - Integration within existing traffic management systems	50	
Measure D - Coordination with other agencies	25	
2. Usage	125	11%
Measure A - Current daily person throughput	85	
Measure B - Forecast 2040 average daily traffic volume	40	
3. Equity and Housing Performance	100	9%
Measure A - Benefits and outreach to disadvantaged populations	50	
Measure B - Housing Performance Score / affordable housing connection	50	
4. Infrastructure Age	75	7%
Measure A - Upgrades to obsolete equipment	75	
5. Congestion Reduction/Air Quality	200	18%
Measure A - Congested roadway	150	
Measure B - Emissions and congestion benefits of project	50	
6. Safety	200	18%

Traffic Management Technologies

Criteria and Measures	Points	% of Total Points
Measure A - Crashes reduced	50	
Measure B – Safety issues in project area	150	
7. Multimodal Elements and Existing Connections	50	5%
Measure A - Transit, bicycle, or pedestrian project elements and connections	50	
8. Risk Assessment	75	7%
Measure A - Risk Assessment Form	75	
9. Cost Effectiveness	100	9%
Measure A - Cost effectiveness (total points awarded/total project cost)	100	
Total	1,100	

1. *Role in the Regional Transportation System and Economy (175 Points)*

Tying regional policy (Thrive MSP2040) to the Regional Solicitation, this criterion measures the project’s ability to serve a transportation purpose within the regional transportation system and economy based on how well it fulfills its functional classification role, aligns with the Regional Truck Corridor Study, and integrates with existing traffic management systems, and provides coordination across agencies. The project must be located on at least one non-freeway principal arterial or A-minor arterial.

A. **MEASURE:** Reference the functional classification(s) that the project would serve. Investment in a higher functionally classified roadway (i.e., the principal arterial system) serves a more regional purpose and will result in more points.

RESPONSE (Select one):

- The majority of the project funds will be invested on the principal arterial system: (50 points)
- The majority of the project funds will be invested on the A-minor arterial system: (25 points)
- The majority of the project funds will be invested on the collector or local system with some investment either on the principal arterial or A-minor arterial system: (0 points)

SCORING GUIDANCE (50 Points)

The scorer will assign points based on which of the above scores applies. Note that multiple applicants are able to score the maximum point allotment. If no applicant scores 50 points, the 25-point projects will be adjusted to 50 points, while the zero-point projects will remain at zero.

B. **MEASURE:** This criterion relies on the results of the Regional Truck Corridor Study, which prioritized all principal and minor arterials based on truck volume, truck percentage of total traffic, proximity to freight industry clusters, and proximity to regional freight terminals. The truck corridors were grouped into tiers 1, 2, and 3, in order of priority. Use the 2021 Updated Regional Truck Corridors tiers to respond to this measure: 2021 Updated Regional Truck Corridors. (50 points)

Traffic Management Technologies

Use the final study report for this measure:

RESPONSE (Select one for your project, based on the [updated 2021](#) Regional Truck Corridors Study):

- The majority of the project funds will be invested on either a Tier 1, Tier 2, or Tier 3 corridor: (50 Points) Miles (to the nearest 0.1 miles): _____
- A majority of the project funds will NOT be invested on a Tier 1, Tier 2, or Tier 3 corridor, but at least 10 percent of the funds will be invested on these corridors: (25 Points) Miles (to the nearest 0.1 miles) : _____
- No project funds will be invested on a Tier 1, Tier 2, or Tier 3 corridor: (0 Points)

SCORING GUIDANCE (50 Points)

The scorer will assign points based on which of the scores applies. Note that multiple applicants can score the maximum point allotment. If no applicant scores 50 points, the 25-point projects will be adjusted to 50 points, while the zero-point projects will remain at zero.

- C. **MEASURE:** Discuss how the proposed project integrates and/or builds on existing traffic management infrastructure (examples of systems include traffic signal systems, freeway management systems, and incident management systems). (50 Points)

RESPONSE (Limit 2,800 characters; approximately 400 words):

SCORING GUIDANCE (50 Points)

The applicant will describe how the project would build on other infrastructure and management systems. Prioritizing projects that complement existing infrastructure and management methods, the scorer will award the full share of points to the project that best builds on other infrastructure and management systems. Remaining projects will receive a share of the full points at the scorer's discretion. This response is intended to be qualitative.

- D. **MEASURE:** Demonstrate how the project provides or enhances coordination among operational and management systems and/or jurisdictions. (25 points)

RESPONSE (Limit 2,800 characters; approximately 400 words):

SCORING GUIDANCE (25 Points)

The project that best provides or enhances coordination among operational and management systems and/or jurisdictions will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion.

Traffic Management Technologies

2. Usage (125 Points)

This criterion quantifies the project's potential impact by measuring the current daily person throughput and future vehicular traffic that will be served by the project. These roadway users directly benefit from the project improvements.

- A. **MEASURE:** Metropolitan Council staff will calculate the current daily person throughput at one location along the A-minor arterial or non-freeway principal arterial project length using the current average annual daily traffic (AADT) volume and average daily transit ridership. If more than one corridor or location is included in the project, then the applicant should select the corridor where the most investment is being made with the project. The applicant must identify the location along the project length and provide the current AADT volume from the [MnDOT Traffic Mapping Application MnDOT 50-series maps \(select Twin Cities Metro Area Street Series under Traffic Volume \(AADT\)\)](#) Due to the potential timing issues with when a traffic count was taken relative to the COVID-19 pandemic (and resulting drop in traffic volumes), applicants may also use a historic AADT volume from the MnDOT Traffic Mapping Application (instructions under the Help Document). Reference the "Transit Connections" map for transit routes along the project. Ridership data will be provided by the Metropolitan Council staff, if public transit is currently provided on the project length. (85 points)

Commented [PS1]: New text

- Current Daily Person Throughput = (current average annual daily traffic volume x 1.30 vehicle occupancy) + average annual daily transit ridership (2019)

Commented [PS2]: Confirm year

RESPONSE:

- Location: _____
- Current AADT volume: _____
- Existing transit routes at the location noted above: _____

Upload the "Transit Connections" map.

SCORING GUIDANCE (85 Points)

The project with highest current daily person throughput will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a daily person throughput of 1,000 people and the top project had a daily person throughput of 1,500 people, this applicant would receive $(1,000/1,500) * 85$ points or 56 points.

- B. **MEASURE:** Provide the forecast (2040) average daily traffic volume at the same location along the A-minor arterial or non-freeway principal arterial project length, as identified in the previous measure. The applicant may choose to use a county or city travel demand model based on the Metropolitan Council model to identify the forecast (2040) average daily traffic volume or have Metropolitan Council staff determine the forecast volume using the Metropolitan Council model and project location. Respond as appropriate to the use of one type of forecast model. (40 points)

RESPONSE:

- Use Metropolitan Council model to determine forecast (2040) ADT volume
- If checked, METC Staff will provide Forecast (2040) ADT volume

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OR

RESPONSE:

- Identify the approved county or city travel demand model to determine forecast (2040) ADT volume
- Forecast (2040) ADT volume: _____

SCORING GUIDANCE (40 Points)

The applicant with the highest forecast (2040) ADT volume will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a daily forecast of 28,000 vehicles and the top project had a daily forecast of 32,000 vehicles, this applicant would receive $(28,000/32,000) * 40$ points or 35 points.

3. Equity and Housing Performance (100 Points)

This criterion addresses the [Council's role in advancing equity](#) by examining how a project directly provides benefits to, or impacts (positive and negative) low-income populations, people of color, people with disabilities, youth and [the elderly/older adults](#). The criterion evaluates whether the applicant engaged these populations to identify transportation needs and potential solutions and how the project will address these identified needs. The criterion also evaluates a community's overall efforts to implement affordable housing and how the project improves multimodal access to affordable housing residents.

A. **MEASURE:** Socio-Economic Equity

1. **Sub-measure:** Equity Population Engagement (0 to 20 points): A successful project is one that is the result of active engagement of low-income populations, people of color, persons with disabilities, youth and [the elderly/older adults](#). Engagement should occur prior to and during a project's development, with the intent to provide direct benefits to, or solve, an expressed transportation issue, while also limiting and mitigating any negative impacts. Describe and map the location of any low-income populations, people of color, disabled populations, youth or [the elderly/older adults](#) within a ½ mile of the proposed project. Describe how these specific populations were engaged ~~and provided outreach to~~, whether through community planning efforts, project needs identification, or during the project development process. Describe what engagement methods and tools were used and how the input [from these groups](#) is reflected in the project's purpose and need and design. Elements of quality engagement include: outreach and engagement to specific communities and populations that are likely to be directly impacted by the project; techniques to reach out to populations traditionally not involved in community engagement related to transportation projects; feedback from these populations identifying potential positive and negative elements of the proposed project through engagement, study recommendations, or plans that provide feedback from populations that may be impacted by the proposed project. If relevant, describe how NEPA or Title VI regulations will guide engagement activities.

(Limit 1,400 characters; approximately 200 words):

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2. **Sub-measure:** Equity Population Benefits and Impacts (0 to 30 points): A successful project is one that has been designed to provide direct benefits to low-income populations, people of color, persons with disabilities, youth and [the elderly/older adults](#). All projects must mitigate potential negative benefits as required under federal law. Projects that are designed to provide benefits go beyond the mitigation requirement to proactively provide transportation benefits and solve transportation issues experienced by Equity populations.

- a. (0 to 30 points) Describe the project's benefits to low-income populations, people of color, children, people with disabilities, and [the elderly/older adults](#). Benefits could relate to pedestrian and bicycle safety improvements; public health benefits; direct access improvements for residents or improved access to destinations such as jobs, school, health care or other; travel time improvements; gap closures; new transportation services or modal options, leveraging of other beneficial projects and investments; and/or community connection and cohesion improvements. Note that this is not an exhaustive list.

(Limit 2,800 characters; approximately 400 words):

- b. (-10 to 0 points) Describe any negative impacts to low-income populations, people of color, children, people with disabilities, and [the elderly/older adults](#) created by the project, along with measures that will be taken to mitigate them. Negative impacts that are not adequately mitigated can result in a reduction in points.

(Limit 2,800 characters; approximately 400 words):

Below is a list of negative impacts. Note that this is not an exhaustive list.

- Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.
- Increased noise.
- Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.
- Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, etc.
- Increased speed and/or "cut-through" traffic.
- Removed or diminished safe bicycle access.
- Inclusion of some other barrier to access to jobs and other destinations.
- Displacement of residents and businesses.
- Mitigation of temporary construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings.
- Other

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3. **Sub-measure: Bonus Points (0 to 25 points)** Those projects that score at least 80% of the maximum total points available through sub-measures 1 and 2 will be awarded bonus points based on the geographic location of the project. These points will be assigned as follows, based on the highest-scoring geography the project contacts:
- ~~a. 25 points to projects within an Area of Concentrated Poverty with 50% or more people of color~~
 - ~~b-a. 20-25~~ points to projects within an Area of Concentrated Poverty
 - ~~e-b.~~ 15 points to projects within census tracts with the percent of population in poverty or population of color above the regional average percent
 - ~~d-c.~~ 10 points for all other areas

Upload the "Socio-Economic Conditions" map used for this measure.

RESPONSE (Select one, based on the "Socio-Economic Conditions" map):

- ~~• Project is located in an Area of Concentrated Poverty where 50% or more of residents are people of color (ACP50):~~
- Project is located in an Area of Concentrated Poverty:
- Project's census tracts are above the regional average for population in poverty or population of color:
- Project located in a census tract that is below the regional average for population in poverty or populations of color, ~~or includes children, people with disabilities, or the elderly:~~

SCORING GUIDANCE (50 Points)

Each application will be qualitatively scored based on the available points for each measure and will receive the number of points awarded. If the applicant receives at least 80% of the available points, i.e., 40 points for the Roadway applications, the project will receive Bonus points as described under sub-measure 3. If an applicant qualifies for Bonus points it will result in a Socio-Economic Equity score of more than the total points available.

- B. **MEASURE:** Projects will be scored based on two housing measures: 1. the 2019 Housing Performance Score for the city or township in which the project is located (40 points) and 2. the project's connection to affordable housing (10 points) as described below.

Part 1 (40 points): Housing Performance Score

A city or township's housing performance score is calculated annually by the Metropolitan Council using data from four categories: new affordable or mixed-income housing completed in the last ten years; preservation projects completed in the last seven years and/or substantial rehabilitation projects completed in the last three years; housing program participation and production, and housing policies and ordinances; and characteristics of the existing housing stock. Data for the housing performance scores are updated each year by the Council, and the city or township is provided with an opportunity to review and revise the information.

Council staff will use the most current housing score for each city or township. If the project is located in more than one jurisdiction, the points will be awarded based on a weighted average using the percent of total funds to be spent in each jurisdiction. If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewered development), the project will not be

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disadvantaged by this measure and the project's total score will be adjusted during scoring to remove this scoring measure.

RESPONSE:

- City/Township: _____
- Total project cost: _____
- Funds to be spent within each City/Township: _____
- Percent of total funds to be spent within City/Township: _____

Part 2 (10 points): Affordable Housing Access

This measure is a qualitative scoring measure. Describe and map any affordable housing developments—planned, under construction or existing, within ½ mile of the proposed project. The applicant should note the development stage, number of units, number of bedrooms per unit, and level of affordability using 2019 affordability limits. Also note whether the affordability is guaranteed through funding restrictions (i.e. LIHTC, 4d) or is unsubsidized, if housing choice vouchers are/will be accepted, and if there is a fair housing marketing plan required or in place.

Describe how the proposed project will improve or impact access for residents of the affordable housing locations within ½ mile of the project. This should include a description of improved access by all modes, automobiles, transit, bicycle and pedestrian access. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements.

RESPONSE:

(Limit 2,100 characters; approximately 300 words):

SCORING GUIDANCE (50 Points)

Part 1 (40 points): The applicant with the highest 2019 Housing Performance Score will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a Housing Performance Score of 55 and the top project had a Housing Performance Score of 90, this applicant would receive $(55/90) \times 40$ points or 24 points.

Projects will use the city Housing Performance Score based on the project location. If a project is located in more than one jurisdiction, the points will be awarded based on a weighted average of the city or township scores for the project location based on the funds spent in each jurisdiction.

If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewered development), the project's total score will be adjusted as a result. If this is the case, the hold-harmless method will be used: the total points possible in the application will be 960 instead of 1,000. The total points awarded through the rest of the application (900 as a hypothetical example) will be divided by 960, then multiplied by 1,000. Therefore, a project scoring 900 out of 960, will equate to 938 points on a 1,000-point scale. If a portion of the project is located in a city with an affordable housing allocation and the other portion is located in a township with no affordable housing allocation, then a combination of the Housing Performance Score (or weighted average) and the hold-harmless method should be used. This will result in a total score that will be somewhere between 960 and 1,000; then the score will need to be adjusted to fit a 1,000-point scale. NOTE: Any community without a Housing Performance Score

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in 2019 will be awarded the better of its new score in 2020 and the above method. NOTE: in these cases, the raw points from Part 2 will be included in the 960-point total.

Part 2 (10 points): The project that best provides meaningful improvements to access to the affordable housing units will receive the full 10 points. Multiple projects may receive the highest possible score of 10 points based on this assessment. Remaining projects will receive a share of the full points at the scorer's discretion.

Final Score (50 points): The scores in Parts 1 and 2 will be totaled. If no application gets 50 points, the highest-scoring project will be awarded 50 points, with other projects adjusted proportionately.

Note: Metropolitan Council staff will score this measure.

4. Infrastructure Age (75 Points)

This criterion will assess the degree to which functionally obsolete infrastructure elements are being replaced and improved.

A. **MEASURE:** Describe how various equipment will be improved or replaced as part of this project relative to its age and whether it is functionally obsolete.

RESPONSE (Limit 2,800 characters; approximately 400 words):

SCORING GUIDANCE (75 Points)

The project that best provides for stewardship of public funds and resource by replacing functionally obsolete equipment and finding cost-effective solutions to upgrade viable equipment will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion.

5. Congestion Reduction/Air Quality (200 Points)

This criterion measures the project's ability to make improvements in congested corridors using speed data from the Congestion Management Process Plan. The project will also be measured based on its ability to reduce emissions.

MEASURE: Council staff will provide travel speed data to compare the peak hour travel speed in the project area to free flow conditions on the "Level of Congestion" map. If more than one corridor or location is included in the project, then the applicant should select the corridor on which the most investment is being made with the project. The applicant must identify the corridor as part of the response. ~~It is anticipated that the Congestion Management Process Plan will be further incorporated into the Regional Solicitation as part of the 2022 Regional Solicitation funding cycle.~~
(150 Points)

RESPONSE:

- Corridor: _____
- Corridor Start and End Points: _____
- Free-Flow Travel Speed: _____
- Peak Hour Travel Speed: _____
- Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow (online calculation): _____

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Upload the "Level of Congestion" map used for this measure.

SCORING GUIDANCE (150 Points)

The applicant with the most congestion (measured by the largest percentage decrease in peak hour travel speeds relative to free flow conditions) will receive the full points for the measure. Remaining projects will receive a proportionate share of the points. For example, if the application being scored showed a 5% decrease of travel speeds in the peak hour relative to free flow conditions and the top project had a 10% reduction, this applicant would receive $(5/10) \times 150$ points, or 75 points.

- B. **MEASURE:** Discuss how the project will reduce emissions and congestion. The applicant should focus on any reduction in CO, NOX, and VOC. Projects on roadways that provide relief to congested, parallel principal arterial roadways should reference the current MnDOT Metro Freeway Congestion Report and discuss the systemwide emissions and congestion impact of the proposed improvements.

RESPONSE: (Limit 2,800 characters; approximately 400 words):

SCORING GUIDANCE (50 Points)

The project that is most likely to reduce emissions and congestion will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion.

6. Safety (200 Points)

This criterion addresses the project's ability to correct deficiencies and improve the overall safety of an existing or future roadway facility. It will assess the project's monetized safety benefits.

- A. **MEASURE:** Calculate the reduction in the total number of crashes due to improvements on the A-minor arterial or non-freeway principal arterial made by the project. The applicant must base the estimate of crash reduction on the methodology consistent with the latest MnDOT Metro District Highway Safety Improvement Program (HSIP) application (www.dot.state.mn.us/stateaid/trafficsafety.html). Applicants should focus on the crash analysis for reactive projects.

Crash data must be obtained for the project length using the MnDOT TIS system average for calendar years ~~2016-2018~~ through ~~2018~~2020. Crash data should include all crash types and severities, including pedestrian and bicycle crashes.

Applicants should request crash data from MnDOT as early as possible. The applicant must then attach a listing of the crashes reduced and the HSIP Benefit/Cost (B/C) worksheet (www.dot.state.mn.us/stateaid/trafficsafety.html) that identifies the resulting benefit associated with the project. As part of the response, please detail and attach the crash modification factor(s) used from FHWA's Crash Modification Factors Clearinghouse: <http://www.cmfclearinghouse.org/>. As part of the Regional Solicitation Before & After Study, Phase 2 (2021), a list of commonly used crash modification factors was created. Applicants have the option to use these crash modification factors (posted on the Metropolitan Council's Regional Solicitation website, under Application Resources) or find a more appropriate one on FHWA's Clearinghouse.

This measure requests the monetized safety benefit of the project. The cost of the project is scored in the Cost Effectiveness criterion.

Commented [PS3]: New text

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RESPONSE:

- Crash Modification Factors Used (Limit 700 characters; approximately 100 words): _____
- Rationale for Crash Modifications Selected (Limit 1,400 characters; approximately 200 words): _____
- Project Benefit (\$) from B/C ratio: _____
- Total Fatal (K) Crashes: _____
- Total Serious Injury (A) Crashes: _____
- Total Non-Motorized Fatal and Serious Injury Crashes: _____
- Total Crashes: _____
- Total Fatal (K) Crashes Reduced by Project: _____
- Total Serious Injury (A) Crashes Reduced by Project: _____
- Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project: _____
- Total Crashes Reduced by Project: _____

Upload Crash Modification Factors and B/C Worksheet.

SCORING GUIDANCE (50 Points)

The applicant with the highest dollar value of benefits will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had safety benefits of \$11,000,000 and the top project had safety benefits of \$16,000,000, this applicant would receive $(11,000,000/16,000,000) * 50$ points or 34 points.

- B. **MEASURE:** Discuss how the project will improve safety issues in the project area. As part of the response, the applicant may want to reference the project relative to County Highway Safety Plan or similar planning documents and what the project will specifically do to improve the safety issue.

RESPONSE (Limit 2,800 characters; approximately 400 words):

SCORING GUIDANCE (150 Points)

The project that will provide the most safety benefits and alleviate identified safety concerns will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion.

Commented [P54]: See information item for proposed new text, which would replace this content.

7. Multimodal Elements and Existing Connections (50 Points)

This criterion measures how the project improves the travel experience, safety, and security for other modes of transportation, and addresses the safe integration of these modes. The Transportation Policy Plan requires that explicit consideration of all users of the transportation system be considered in the planning and scoping phase of roadway projects.

- A. **MEASURE:** Describe how the project positively affects the multimodal system.
- Discuss any bicycle, pedestrian, or transit elements that are included as part of the project and how they improve the travel experience, safety, and security for users of these modes. Applicants should make sure that new multimodal elements described in the response are accounted for as part of the cost estimate form earlier in the application. Applicants should note if there is no transit service in the project area and identify supporting studies or plans that address why a mode may not be incorporated in the project (e.g., a bicycle system plan that locates bikeway facilities on a lower-volume parallel route).

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- Describe how the proposed multimodal improvements positively affect identified alignments in the Regional Bicycle Transportation Network (RBTN) or along a regional trail, if applicable.
- Describe how the proposed multimodal improvements either provide a new, or improve an existing Major River Bicycle Barrier Crossing (MRBBC) as defined in the 2040 Transportation Policy Plan (TPP) or how they provide a new or improved crossing of a Regional Bicycle Barrier with respect to the tiered Regional Bicycle Barrier Crossing Improvement Areas as defined in the TPP and Technical Addendum to the Regional Bicycle Barriers Study (May 2019), if applicable.
- Discuss the existing bicycle, pedestrian, and transit connections and how the project enhances these connections.
- Discuss whether the project implements specific locations identified as being deficient in a completed ADA Transition Plan.

RESPONSE (Limit 2, 800 characters; approximately 400 words)

SCORING GUIDANCE (50 Points)

The project that most positively affects the multimodal system will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion. The project score will be based on the quality of the improvements, as opposed to being based solely on the number of modes addressed. Points can be earned for incorporating multimodal project elements, positively affecting identified alignments in the Regional Bicycle Transportation Network (RBTN) regional trail, Major River Bicycle Barrier Crossing, or Regional Bicycle Barrier, for making connections with existing multimodal systems, or helping to implement an ADA Transition Plan. Projects do not need all of these elements to be awarded all of the points. Multimodal elements for rural roadway projects may include wider shoulders that will be used by bicyclists and pedestrians.

8. Risk Assessment (75 Points)

This criterion measures the number of risks associated with successfully building the project. High-risk applications increase the likelihood that projects will withdraw at a later date. If this happens, the region is forced to reallocate the federal funds in a short amount of time or return them to the US Department of Transportation. These risks are outlined in the checklist in the required Risk Assessment.

MEASURE: Applications involving construction must complete the Risk Assessment. This checklist includes activities completed to-date, as well as an assessment of risks (e.g., right-of-way acquisition, proximity to historic properties, etc.).

RESPONSE (Complete Risk Assessment):

Please check those that apply and fill in anticipated completion dates for all projects, ~~except for~~ New/expanded transit service projects will receive full credit for items 2-5 but must fill out item 1. ~~or~~ Transit vehicle purchases will receive full credit.

1. Public Involvement (20 Percent of Points)

Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other

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options, and the public involvement completed to date on the project. [The focus of this section is on the opportunity for public input as opposed to the quality of input. NOTE: A written response is required and failure to respond will result in zero points.](#)

~~List Dates of most recent meetings and outreach specific to this project:~~

- ~~• Meeting with general public: _____~~
- ~~• Meeting with partner agencies: _____~~
- ~~• Targeted online/mail outreach: _____~~
 - ~~○ Number of respondents: _____~~

100% ~~Multiple types of targeted outreach efforts (such as meetings or online/mail outreach) Meetings~~ specific to this project with the general public and partner agencies have been used to help identify the project need.

75% ~~Targeted outreach specific to this project with the general public and partner agencies have been used to help identify the project need.~~

50% At least one meeting specific to this project with the general public has been used to help identify the project need.

50% At least ~~one meeting online/mail outreach effort~~ specific to this project with ~~the general public, key partner agencies~~ has been used to help identify the project need.

25% No meeting or outreach specific to the project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort.

0% No outreach has led to the selection of this project.

RESPONSE (Limit 2,800 characters; approximately 400 words). [Describe the type\(s\) of outreach selected for this project \(i.e., online or in-person meetings, surveys, demonstration projects\), the method\(s\) used to announce outreach opportunities, and how many people participated. Include any public website links to outreach opportunities.:](#)

2. Layout (25 Percent of Points)

Layout ~~should~~ includes proposed geometrics and existing and proposed right-of-way boundaries. [A basic layout should include a base map \(north arrow; scale; legend;* city and/or county limits; existing ROW, labeled; existing signals;* and bridge numbers*\) and design data \(proposed alignments; bike and/or roadway lane widths; shoulder width;* proposed signals;* and proposed ROW\). An aerial photograph with a line showing the project's termini does not suffice and will be awarded zero points.](#)

[*If applicable](#)

100% Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/~~MnDOT that the project goes through or agencies that maintain the roadway(s)~~). [If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points.- A PDF of the layout must be attached along with letters from each jurisdiction to receive points.](#)

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100% A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid – colleen.brown@state.mn.us.

50% Layout completed but not approved by all jurisdictions. A PDF of the layout must be attached to receive points.

25% Layout has been started but is not complete. A PDF of the layout must be attached to receive points.

0% Layout has not been started

3. Anticipated date or date of completion: _____

4.3. Review of Section 106 Historic Resources (15 Percent of Points)

100% No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge

100% There are historical/archeological properties present but determination of “no historic properties affected” is anticipated.

80% Historic/archeological property impacted; determination of “no adverse effect” anticipated

40% Historic/archeological property impacted; determination of “adverse effect” anticipated

0% Unsure if there are any historic/archaeological properties in the project area.

Project is located on an identified historic bridge:

5.4. Right-of-Way (25 Percent of Points)

100% Right-of-way, permanent or temporary easements, [and MnDOT agreement/limited-use permit](#) either not required or all have been acquired

50% Right-of-way, permanent or temporary easements, [and/or MnDOT agreement/limited-use permit](#) required, [- plat](#), legal descriptions, or official map complete

25% Right-of-way, permanent or temporary easements, [and/or MnDOT agreement/limited-use permit](#) required, [- parcels](#) identified

0% Right-of-way, permanent or temporary easements, [and/or MnDOT agreement/limited-use permit](#) required, [- parcels](#) not all identified

Anticipated date or date of acquisition _____

6.5. Railroad Involvement (15 Percent of Points)

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100% No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable)

50% Railroad Right-of-Way Agreement required; negotiations have begun

0% Railroad Right-of-Way Agreement required; negotiations have not begun.

Anticipated date or date of executed Agreement _____

SCORING GUIDANCE (75 Points)

The applicant with the most points on the Risk Assessment (more points equate to less project risk) will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 40 points and the top project had 70 points, this applicant would receive $(40/70)*75$ points or 43 points.

9. Cost Effectiveness (100 Points)

This criterion will assess the project's cost effectiveness based on the total TAB-eligible project cost (not including noise walls) and total points awarded in the previous 8 criteria.

A. **MEASURE:** Calculate the cost effectiveness of the project. Metropolitan Council staff will divide the number of points awarded in the previous criteria by the TAB-eligible project cost (not including noise walls). If a project has been awarded other outside, competitive funding (e.g., state bonding, Transportation Economic Development Program, Minnesota Highway Freight Program), project sponsors may reduce the total project cost for the purposes of this scoring measure by the amount of the outside funding award.

- Cost effectiveness = total number of points awarded in previous criteria/total TAB-eligible project cost (not including noise walls)

RESPONSE (This measure will be calculated after the scores for the other measures are tabulated by the Scoring Committee):

- Total Project Cost (entered in Project Cost Form): _____ (automatically calculated)
- Enter amount of Noise Walls: _____
- Enter amount of any outside, competitive funding (attach documentation of award): _____
- Points Awarded in Previous Criteria: ____ (entered by Metropolitan Council staff)

SCORING GUIDANCE (100 Points)

The applicant with the most points (i.e., the benefits) per dollar will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the top project received .0005 points per dollar and the application being scored received .00025 points per dollar, this applicant would receive $(.00025/.0005)*100$ points or 50 points.

The scorer for this measure will also complete a reasonableness check of the total project cost that is used for this measure. The scorer may follow up with the applicant to clarify any questions. Up to 50 percent of points awarded for this measure can be deducted if the scorer does not believe that the cost estimate is reasonable.

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TOTAL: 1,100 POINTS

Spot Mobility and Safety

Prioritizing Criteria and Measures

September 15, 2021

Definition: An at-grade intersection or corridor-level intersection improvement project that focuses on mobility and safety (described as a Regional Mobility project under Spot Mobility in the TPP). New interchanges or projects that add new thru lane capacity (e.g., two-lane to four-lane expansions) should apply in the Strategic Capacity application category. Projects that address mobility and safety at multiple intersections on a corridor are encouraged. However, projects that propose to reconstruct the roadway for the length of the corridor should apply in the Roadway Reconstruction/Modernization application category.

Examples of Spot Mobility and Safety Projects:

- New or extended turn lanes at one or more intersections
- New intersection controls such as roundabouts or traffic signals
- Unsignalized or signalized reduced conflict intersections
- Other innovative/alternative intersection designs such as green t-intersections

Scoring:

Criteria and Measures	Points	% of Total Points
1. Role in the Regional Transportation System and Economy	175115	1610%
Measure A - Congestion within the Project Area, Level of Adjacent Congestion, Principal Arterial Intersection Conversion Study Priorities, or Congestion Management Safety Plan Opportunity Areas	40 70	
Measure B - Regional Truck Corridor Study Tiers	75 45	
2. Equity and Housing Performance	100	9%
Measure A - Benefits and outreach to disadvantaged populations	50	
Measure B - Housing Performance Score / affordable housing connection	50	
3. Congestion Reduction/Air Quality	275	25%
Measure A - Vehicle delay reduced	200	
Measure B - Kg of emissions reduced	75	
4. Safety	275335	2530%
Measure A - Crashes reduced	225 235	
Measure B - Pedestrian Crash Reduction (Proactive)	50 100	
5. Multimodal Elements and Existing Connections	100	9%
Measure A - Transit, bicycle, or pedestrian project elements & connections	100	
6. Risk Assessment	75	7%
Measure A - Risk Assessment Form	75	
7. Cost Effectiveness	100	9%
Measure A - Cost effectiveness (total points awarded/total project cost)	100	
Total	1,100	

1. Role in the Regional Transportation System and Economy (175 Points)

Tying regional policy (Thrive MSP2040) to the Regional Solicitation, this criterion measures the project’s ability to serve a transportation purpose within the regional transportation system and economy based on the congestion in the project area, congestion levels along the regional transportation system near the project, how it aligns with the Principal Arterial Intersection Conversion Study, Congestion Management Safety Plan IV, , and the Regional Truck Corridor Study.

- A. **MEASURE:** Identify the level of congestion within the project area. This measure uses speed data as was used as part of the Congestion Management Process (CMP) Plan. It is anticipated that the CMP Plan will be further incorporated into the Regional Solicitation as part of the 2022 Regional Solicitation funding cycle. Also, identify the level of congestion on a parallel route and how the project area is prioritized in the Principal Arterial Intersection Conversion Study and Congestion Management Safety Plan IV. Respond to each of the four sub-sections below. Projects will get the highest score of the four sub-sections.

Congestion within Project Area:

The measure will analyze the level of congestion within the project area. Council staff will provide travel speed data on the “Level of Congestion” map. The analysis will compare the peak hour travel speed within the project area to free-flow conditions.

RESPONSE:

- Free-Flow Travel Speed: _____
- Peak Hour Travel Speed: _____
- Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow (calculation):

Upload the “Level of Congestion” map used for this measure.

Congestion on adjacent Parallel Routes:

The measure will analyze the level of congestion on an adjacent parallel A-minor arterial or principal arterial to determine the importance of the roadway in managing congestion on the Regional Highway System. Council staff will provide travel speed data on an applicant-selected adjacent parallel route that is adjacent to the proposed project on the “Level of Congestion” map. The analysis will compare the peak hour travel speed on an adjacent parallel route to free-flow conditions on this same route to understand congestion levels in the area of the project, which correlates to the role that the project plays in the regional transportation system and economy. The applicant must identify the adjacent parallel corridor as part of the response. The end points of this adjacent parallel corridor must align as closely as possible to the project end points.

RESPONSE:

- Adjacent Parallel Corridor: _____
- Adjacent Parallel Corridor Start and End Points: _____
- Free-Flow Travel Speed: _____
- Peak Hour Travel Speed: _____
- Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow (calculation):

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Upload the “Level of Congestion” map used for this measure.

Principal Arterial Intersection Conversion Study:

The measure relies on the results of the Principal Arterial Intersection Conversion Study, which prioritized non-freeway principal arterial intersections. In addition to interchange projects, other lane expansion projects that make improvements to a low-, medium-, or high-priority intersection can also earn points in this measure.

Use the final study report for this measure: metro council.org/PAICs

RESPONSE (Select one for your project, based on the Principal Arterial Intersection Conversion Study):

- Proposed at-grade project that reduces delay at a High Priority Intersection: (100 Points)
- Proposed at-grade project that reduces delay at a Medium Priority Intersection: (90 Points)
- Proposed at-grade project that reduces delay at a Low Priority Intersection: (80 Points)
- Not listed as a priority in the study: (0 Points)

Congestion Management Safety Plan IV:

The measure relies on the results on MnDOT’s Congestion Management Safety Plan IV (CMSP IV), which prioritized lower cost/high benefit, spot mobility projects on MnDOT-owned roadways. For the Regional Solicitation, only the CMSP opportunity areas on the A-minor arterial or non-freeway principal arterial systems are eligible. Principal arterial projects on the freeway system are not eligible for funding per TAB-adopted rules.

Use the final list of [CMSP IV opportunity area locations](#) as depicted in the 2040 Transportation Policy Plan (2018).

RESPONSE (Select one for your project):

- Proposed at-grade project that reduces delay at a CMSP opportunity area: (100 Points)
- Not listed as a CMSP priority location: (0 Points)

SCORING GUIDANCE (100 Points)

Due to the four scoring methods, more than one project can score the maximum points. In order to be awarded points for this measure the proposed project itself must show some delay reduction in measure 3A. If the project does not reduce delay, then it will score 0 points for this measure.

Congestion within Project Area: The applicant with the most congestion within the project area (measured by the largest percentage decrease in peak hour travel speeds relative to free-flow conditions) will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored showed a 5% decrease of travel speeds in the peak hour relative to free flow conditions and the top project had a 10% reduction, this applicant would receive $(5/10) \times 100$ points, or 50 points. If the project covers more than one segment of speed data, the applicants can use the one that is most beneficial to their score.

Congestion on adjacent Parallel Routes: The applicant with the most congestion on an adjacent parallel route (measured by the largest percentage decrease in peak hour travel speeds relative to free-flow

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conditions) will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored showed a 5% decrease of travel speeds in the peak hour on the adjacent parallel route relative to free flow conditions and the top project had a 10% reduction, this applicant would receive $(5/10)*100$ points, or 50 points. Applicants can use the adjacent parallel route that is most beneficial to their score.

Principal Arterial Intersection Conversion Study: Projects will be scored based on their Principal Arterial Intersection Conversion Study priorities.

Congestion Management and Safety Plan IV: Projects will be scored based on whether their project location is in a Congestion Management and Safety Plan opportunity area.

The scorer will assess if the applicant would score highest with congestion on adjacent parallel routes part of the measure, the Principal Arterial Intersection Conversion Study part of the measure, or the CMSP IV part of the measure and give the applicant the highest of the four scores out of a maximum of 1000 points.

Note: Due to the use of multiple sub-sections, multiple applicants may receive the full 100 points.

- B. **MEASURE:** This criterion relies on the results on the Truck Highway Corridor Study, which prioritized all principal and minor arterials based on truck volume, truck percentage of total traffic, proximity to freight industry clusters, and proximity to regional freight terminals. [The truck corridors were grouped into tiers 1, 2, and 3, in order of priority. Use the 2021 Updated Regional Truck Corridors tiers to respond to this measure: 2021 Updated Regional Truck Corridors.](#) (75 points)

[Use the final study report for this measure:](#)

RESPONSE: (Select one for your project, based on the [updated 2021](#) Regional Truck Corridors Study):

- Along Tier 1: Miles (to the nearest 0.1 miles): _____
- Along Tier 2: Miles (to the nearest 0.1 miles): _____
- Along Tier 3: Miles (to the nearest 0.1 miles) _____
- The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor:
- None of the tiers:

SCORING GUIDANCE (75 Points)

Applicants will be awarded points as assigned in the above tiers:

- Projects along Tier 1: 75 points
- Projects along Tier 2: 65 points
- Projects along Tier 3: 55 points
- Projects that that provide a direct and immediate connection to a corridor: 10 points.
- None of the tiers: 0 points

If no applicant is along Tier 1, the top-scoring application(s) will be adjusted to 75 points, with the others

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adjusted proportionately.

Note: Due to the use of tiered scoring, multiple applications can receive the full points.

2. Equity and Housing Performance (100 Points)

This criterion addresses the [Council's role in advancing equity](#) by examining how a project directly provides benefits to, or impacts (positive and negative) low-income populations, people of color, people with disabilities, youth and ~~the elderly~~older adults. The criterion evaluates whether the applicant engaged these populations to identify transportation needs and potential solutions and how the project will address these identified needs. The criterion also evaluates a community's overall efforts to implement affordable housing and how the project improves multimodal access to affordable housing residents.

A. MEASURE: Socio-Economic Equity

1. **Sub-measure:** Equity Population Engagement (0 to 20 points): A successful project is one that is the result of active engagement of low-income populations, people of color, persons with disabilities, youth and ~~the elderly~~older adults. Engagement should occur prior to and during a project's development, with the intent to provide direct benefits to, or solve, an expressed transportation issue, while also limiting and mitigating any negative impacts. Describe and map the location of any low-income populations, people of color, disabled populations, youth or ~~the elderly~~older adults within a ½ mile of the proposed project. Describe how these specific populations were engaged ~~and provided outreach to~~, whether through community planning efforts, project needs identification, or during the project development process. Describe what engagement methods and tools were used and how the input ~~from these groups~~ is reflected in the project's purpose and need and design. Elements of quality engagement include: outreach and engagement to specific communities and populations that are likely to be directly impacted by the project; techniques to reach out to populations traditionally not involved in community engagement related to transportation projects; feedback from these populations identifying potential positive and negative elements of the proposed project through engagement, study recommendations, or plans that provide feedback from populations that may be impacted by the proposed project. If relevant, describe how NEPA or Title VI regulations will guide engagement activities.

(Limit 1,400 characters; approximately 200 words):

2. **Sub-measure:** Equity Population Benefits and Impacts (0 to 30 points): A successful project is one that has been designed to provide direct benefits to low-income populations, people of color, persons with disabilities, youth and ~~the elderly~~older adults. All projects must mitigate potential negative benefits as required under federal law. Projects that are designed to provide benefits go beyond the mitigation requirement to proactively provide transportation benefits and solve transportation issues experienced by Equity populations.
 - a. (0 to 30 points) Describe the project's benefits to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults. Benefits could relate to pedestrian and bicycle safety improvements; public health benefits; direct access improvements for residents or improved access to destinations such as jobs, school, health care or other; travel time improvements; gap closures; new transportation services or modal

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options, leveraging of other beneficial projects and investments; and/or community connection and cohesion improvements. Note that this is not an exhaustive list.

(Limit 2,800 characters; approximately 400 words):

- b. (-10 to 0 points) Describe any negative impacts to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults created by the project, along with measures that will be taken to mitigate them. Negative impacts that are not adequately mitigated can result in a reduction in points.

(Limit 2,800 characters; approximately 400 words):

Below is a list of negative impacts. Note that this is not an exhaustive list.

- Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.
 - Increased noise.
 - Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.
 - Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, etc.
 - Increased speed and/or “cut-through” traffic.
 - Removed or diminished safe bicycle access.
 - Inclusion of some other barrier to access to jobs and other destinations.
 - Displacement of residents and businesses.
 - Mitigation of temporary construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings.
 - Other
3. **Sub-measure: Bonus Points (0 to 25 points)** Those projects that score at least 80% of the maximum total points available through sub-measures 1 and 2 will be awarded bonus points based on the geographic location of the project. These points will be assigned as follows, based on the highest-scoring geography the project contacts:
- ~~a. 25 points to projects within an Area of Concentrated Poverty with 50% or more people of color~~
 - ~~b. a. 20-25~~ points to projects within an Area of Concentrated Poverty
 - ~~b. 15~~ points to projects within census tracts with the percent of population in poverty or population of color above the regional average percent
 - ~~c. 10~~ points for all other areas

Upload the “Socio-Economic Conditions” map used for this measure.

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RESPONSE (Select one, based on the “Socio-Economic Conditions” map):

- ~~• Project is located in an Area of Concentrated Poverty where 50% or more of residents are people of color (ACP50):~~
- Project is located in an Area of Concentrated Poverty:
- Project’s census tracts are above the regional average for population in poverty or population of color:
- Project located in a census tract that is below the regional average for population in poverty or populations of color, ~~or includes children, people with disabilities, or the elderly:~~

SCORING GUIDANCE (50 Points)

Each application will be qualitatively scored based on the available points for each measure and will receive the number of points awarded. If the applicant receives at least 80% of the available points, i.e., 40 points for the Roadway applications, the project will receive Bonus points as described under sub-measure 3. If an applicant qualifies for Bonus points it will result in a Socio-Economic Equity score of more than the total points available.

- B. **MEASURE:** Projects will be scored based on two housing measures: 1. the 2019 Housing Performance Score for the city or township in which the project is located (40 points) and 2. the project’s connection to affordable housing (10 points) as described below.

Part 1 (40 points): Housing Performance Score

A city or township’s housing performance score is calculated annually by the Metropolitan Council using data from four categories: new affordable or mixed-income housing completed in the last ten years; preservation projects completed in the last seven years and/or substantial rehabilitation projects completed in the last three years; housing program participation and production, and housing policies and ordinances; and characteristics of the existing housing stock. Data for the housing performance scores are updated each year by the Council, and the city or township is provided with an opportunity to review and revise the information

Council staff will use the most current housing score for each city or township. If the project is located in more than one jurisdiction, the points will be awarded based on a weighted average using length or population of the project in each jurisdiction. For stand-alone intersection, bridge, underpass, and interchange projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer. If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewered development), the project will not be disadvantaged by this measure and the project’s total score will be adjusted during scoring to remove this scoring measure.

RESPONSE: (NOTE: The below bullets vary slightly by funding category)

- City/Township: _____
- Total project cost: _____
- Length of Segment (For stand-alone projects, enter population from Regional Economy map) within each City/Township: _____

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- Percent of total funds to be spent within City/Township: _____

Part 2 (10 points): Affordable Housing Access

This measure is a qualitative scoring measure. Describe and map any affordable housing developments—planned, under construction or existing, within ½ mile of the proposed project. The applicant should note the development stage, number of units, number of bedrooms per unit, and level of affordability using 2019 affordability limits. Also note whether the affordability is guaranteed through funding restrictions (i.e. LIHTC, 4d) or is unsubsidized, if housing choice vouchers are/will be accepted, and if there is a fair housing marketing plan required or in place.

Describe how the proposed project will improve or impact access for residents of the affordable housing locations within ½ mile of the project. This should include a description of improved access by all modes, automobiles, transit, bicycle and pedestrian access. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements.

RESPONSE:

(Limit 2,100 characters; approximately 300 words):

SCORING GUIDANCE (50 Points)

Part 1 (40 points): The applicant with the highest 2019 Housing Performance Score will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a Housing Performance Score of 55 and the top project had a Housing Performance Score of 90, this applicant would receive $(55/90) \times 40$ points or 24 points.

Projects will use the city Housing Performance Score based on the project location. If a project is located in more than one jurisdiction, the points will be awarded based on a weighted average of the city or township scores for the project location based on the length of the project in each jurisdiction. For stand-alone roadway (intersection, bridge, underpass, and interchange) projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer.

If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewer development), the project's total score will be adjusted as a result. If this is the case, the hold-harmless method will be used: the total points possible in the application will be 960 instead of 1,000. The total points awarded through the rest of the application (900 as a hypothetical example) will be divided by 960, then multiplied by 1,000. Therefore, a project scoring 900 out of 960, will equate to 938 points on a 1,000-point scale. If a portion of the project is located in a city with an affordable housing allocation and the other portion is located in a township with no affordable housing allocation, then a combination of the Housing Performance Score (or weighted average) and the hold-harmless method should be used. This will result in a total score that will be somewhere between 960 and 1,000; then the score will need to be adjusted to fit a 1,000-point scale. NOTE: Any community without a Housing Performance Score in 2018 will be awarded the better of its new score in 2020 and the above method. NOTE: in these cases, the raw points from Part 2 will be included in the 960-point total.

Part 2 (10 points): The project that best provides meaningful improvements to access to the affordable

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housing units will receive the full 10 points. Multiple projects may receive the highest possible score of 10 points based on this assessment. Remaining projects will receive a share of the full points at the scorer's discretion.

Final Score (50 points): The scores in Parts 1 and 2 will be totaled. If no application gets 50 points, the highest-scoring project will be awarded 50 points, with other projects adjusted proportionately.

Note: Metropolitan Council staff will score this measure.

3. Congestion Reduction/Air Quality (275-190 Points)

This criterion measures the project's ability to reduce intersection delay and emissions during peak hour conditions. In addition, it will address its ability to improve congested intersections operating at unacceptable levels of service during peak hour conditions.

- A. **MEASURE:** Conduct a capacity analysis at one or more of the intersections being improved by the roadway project using existing turning movement counts (collected within the last three years) in the weekday a.m. or p.m. peak hour and Synchro or HCM software. The analysis must include build and no build conditions (with and without the project improvements). The applicant must show the current total peak hour delay at one or more intersections and the reduction in total peak hour intersection delay at these intersections in seconds, due to the project. If more than one intersection is examined, then the delay reduced by each intersection can be added together to determine the total delay reduced by the project.

The applicant should include the appropriate Synchro or HCM full reports (including the Timing Page Report) that support the improvement in total peak hour delay and should conduct the analysis using the following:

- Under the network settings, all defaults should be used for lanes, saturation flow rates, volumes, and simulation
- Use Synchro's automatic optimization to determine cycle, offset and splits (for traffic signals). Use the setting when assessing delay both with and without the project. This methodology will ensure that all applicants start with their signal systems optimized when determining existing delay.
- Project improvements assumed in the build condition should be reflected in the total project cost, such as additional through or turn lanes and protective left-turn phasing
- Roadway lengths for intersection approaches must be the same length for before and after scenarios
- An average weekday should be used for the existing conditions instead of a weekend, peak holiday, or special event time period that is not representative of the corridor for most of the year
- For most projects, the volumes with and without the project should be the same; however, some project types such as new roadways, new ramps, or new interchanges may have different volumes.

Total Peak Hour Delay Reduced (Seconds) = Total Peak Hour Delay Per Vehicle x Vehicles Per Hour

RESPONSE:

- Total Peak Hour Delay/Vehicle without the Project (Seconds/Vehicle): _____
- Total Peak Hour Delay/Vehicle with the Project (Seconds/Vehicle): _____

Commented [PS1]: Points may shift depending on committee feedback.

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- Total Peak Hour Delay/Vehicle Reduced by the Project (Seconds/Vehicle): _____ (automatically calculated)
- Volume without the Project (Vehicles Per Hour): _____
- Volume with the Project (Vehicles Per Hour): _____
- Total Peak Hour Delay Reduced by the Project (Seconds): _____ (automatically calculated)

EXPLANATION of date of last signal retiming for signalized corridors (Limit 1,400 characters; approximately 200 words):

Upload Synchro or HCM Report

SCORING GUIDANCE (200-140 Points)

The applicant with the most peak hour vehicle delay reduced by the project improvement will receive the full points for the measure. Remaining projects will receive a proportionate share of the points. For example, if the application being scored reduced delay by 5,000 seconds and the top project reduced delay by 25,000 seconds, this applicant would receive $(5,000/25,000) * 200-140$ points, or 40-28 points.

B. **MEASURE:** Using the Synchro or HCM analysis completed in the previous measure, identify the total peak hour emissions reduction in kilograms (CO, NOX, VOC) due to the project. The applicant should include the appropriate Synchro or HCM reports (including the Timing Page Report) that support the improvement in total peak hour emissions. If more than one intersection is examined, then the emissions reduced by each intersection can be added together to determine the total emissions reduced by the project.

- Total Peak Hour Emissions Reduced (Kilograms) = Total Peak Hour Emissions without the project – Total Peak Hour Emissions with the Project

RESPONSE (Calculation):

- Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms): _____
- Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms): _____
- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms): _____

EXPLANATION of methodology and assumptions used (Limit 1,400 characters; approximately 200 words):

SCORING GUIDANCE (75-50 Points)

The applicant with the most kilograms reduced by the project improvement will receive the full points for the measure. Remaining projects will receive a proportionate share of the full. For example, if the application being scored reduced emissions by 3 kilograms and the top project reduced emissions by 5 kilograms, this applicant would receive $(3/5) * 75-50$ points or 45-30 points.

4. Safety (275-360 Points)

This criterion addresses the project's ability to correct deficiencies and improve the overall safety of an existing roadway facility. It will assess the project's monetized safety benefits.

Commented [PS2]: Points may shift depending on committee feedback.

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- A. **MEASURE:** Calculate the reduction in the total number of crashes due to improvements on the A-minor arterial or non-freeway principal arterial made by the project. The applicant must base the estimate of crash reduction on the methodology consistent with the latest Highway Safety Improvement Program (HSIP) application (www.dot.state.mn.us/stateaid/trafficsafety.html). Applicants should focus on the crash analysis for reactive projects.

Crash data must be obtained for the project length using the MnDOT TIS system average for calendar years 2016 through 2018. Crash data should include all crash types and severities, including pedestrian and bicycle crashes.

Applicants should request crash data from MnDOT as early as possible. The applicant must then attach a listing of the crashes reduced and the HSIP Benefit/Cost (B/C) worksheet (www.dot.state.mn.us/stateaid/trafficsafety.html) that identifies the resulting benefit associated with the project. As part of the response, please detail and attach the crash modification factor(s) used from FHWA's Crash Modification Factors Clearinghouse: <http://www.cmfclearinghouse.org/>. [As part of the Regional Solicitation Before & After Study, Phase 2 \(2021\), a list of commonly used crash modification factors was created. Applicants have the option to use these crash modification factors \(posted on the Metropolitan Council's Regional Solicitation website, under Application Resources\) or find a more appropriate one on FHWA's Clearinghouse.](#)

Commented [PS3]: New text

This measure requests the monetized safety benefit of the project. The cost of the project is scored in the Cost Effectiveness criterion.

RESPONSE:

- Crash Modification Factors Used (Limit 700 characters; approximately 100 words): _____
- Rationale for Crash Modifications Selected (Limit 1,400 characters; approximately 200 words): _____
- Project Benefit (\$) from B/C ratio: _____
- Total Fatal (K) Crashes: _____
- Total Serious Injury (A) Crashes: _____
- Total Non-Motorized Fatal and Serious Injury Crashes: _____
- Total Crashes: _____
- Total Fatal (K) Crashes Reduced by Project: _____
- Total Serious Injury (A) Crashes Reduced by Project: _____
- Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project: _____
- Total Crashes Reduced by Project: _____

Upload Crash Modification Factors and B/C Worksheet.

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SCORING GUIDANCE (225-310 Points)

The applicant with the highest dollar value of benefits will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had safety benefits of \$11,000,000 and the top project had safety benefits of \$16,000,000, this applicant would receive $(11,000,000/16,000,000) * 225-310$ points or 455-213 points.

- B. **MEASURE:** Discuss how the project will improve safety for pedestrians. Safety countermeasures for pedestrians can include those identified by the FHWA as part of its [Safe Transportation for Every Pedestrian program](#) or others in its [Proven Safety Countermeasures](#) (e.g., pedestrian refuge islands, raised crosswalks, pedestrian hybrid beacons, leading pedestrian intervals). More information about pedestrian safety best practices is also available in MnDOT's [Best Practices for Pedestrian/Bicycle Safety](#)

SCORING GUIDANCE (50 Points)

The project that will provide the most improvement to pedestrian safety will receive full points. Remaining projects will receive a share of the full points at the scorer's discretion.

Commented [PS4]: See information item for proposed new text, which would replace this content.

5. Multimodal Elements and Existing Connections (100 Points)

This criterion measures how the project improves the travel experience, safety, and security for other modes of transportation and addresses the safe integration of these modes. The Transportation Policy Plan requires that explicit consideration of all users of the transportation system be considered in the planning and scoping phase of roadway projects.

- A. **MEASURE:** Describe how the project positively affects the multimodal system.
- Discuss any bicycle, pedestrian, or transit elements that are included as part of the project and how they improve the travel experience, safety, and security for users of these modes. Applicants should make sure that new multimodal elements described in the response are accounted for as part of the cost estimate form earlier in the application. Applicants should note if there is no transit service in the project area and identify supporting studies or plans that address why a mode may not be incorporated in the project (e.g., a bicycle system plan that locates bikeway facilities on a lower-volume parallel route).
 - Describe how the proposed multimodal improvements positively affect identified alignments in the Regional Bicycle Transportation Network (RBTN) or along a regional trail, if applicable.
 - Describe how the proposed multimodal improvements either provide a new, or improve an existing Major River Bicycle Barrier Crossing (MRBBC) as defined in the 2040 Transportation Policy Plan (TPP) or how they provide a new or improved crossing of a Regional Bicycle Barrier with respect to the tiered Regional Bicycle Barrier Crossing Improvement Areas as defined in the TPP and Technical Addendum to the Regional Bicycle Barriers Study (May 2019), if applicable.
 - Discuss the existing bicycle, pedestrian, and transit connections and how the project enhances these connections.
 - Discuss whether the project implements specific locations identified as being deficient in a completed ADA Transition Plan.

RESPONSE (Limit 2, 800 characters; approximately 400 words):

SCORING GUIDANCE (100 Points)

The project that most positively affects the multimodal system will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion. The project score will be based on the quality of the improvements, as opposed to being based solely on the number of modes addressed. Points can be earned for incorporating multimodal project elements, positively affecting identified alignments in the Regional Bicycle Transportation Network (RBTN), regional trail, Major River Bicycle Barrier Crossing, or Regional Bicycle Barrier, for making connections with existing multimodal systems, or helping to implement an ADA Transition Plan. Projects do not need all of these elements to be awarded all of the points. Multimodal elements for rural roadway projects may include wider shoulders that will be used by bicyclists and pedestrians.

6. Risk Assessment (75 Points)

This criterion measures the number of risks associated with successfully building the project. High-risk applications increase the likelihood that projects will withdraw at a later date. If this happens, the region is forced to reallocate the federal funds in a short amount of time or return them to the US Department of Transportation. These risks are outlined in the checklist in the required Risk Assessment.

- A. **MEASURE:** Applications involving construction must complete the Risk Assessment. This checklist includes activities completed to-date, as well as an assessment of risks (e.g., right-of-way acquisition, proximity to historic properties, etc.).

RESPONSE (Complete Risk Assessment):

Please check those that apply and fill in anticipated completion dates for all projects. ~~except for~~ New/expanded transit service projects will receive full credit for items 2-5 but must fill out item 1. ~~or~~ Transit vehicle purchases will receive full credit.

1. Public Involvement (20 Percent of Points)

Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other options, and the public involvement completed to date on the project. The focus of this section is on the opportunity for public input as opposed to the quality of input. NOTE: A written response is required and failure to respond will result in zero points.

~~List Dates of most recent meetings and outreach specific to this project:~~

- ~~• Meeting with general public: _____~~
- ~~• Meeting with partner agencies: _____~~
- ~~• Targeted online/mail outreach: _____~~
 - ~~○ Number of respondents: _____~~

100% ~~Multiple types of targeted outreach efforts (such as meetings or online/mail outreach) Meetings~~ specific to this project with the general public and partner agencies have been used to help identify the project need.

75% ~~Targeted outreach specific to this project with the general public and partner agencies have been used to help identify the project need.~~

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50% At least one meeting specific to this project with the general public has been used to help identify the project need.

50% At least ~~one meeting online/mail outreach effort~~ specific to this project with the general public, ~~key partner agencies~~ has been used to help identify the project need.

25% No meeting or outreach specific to the project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort.

0% No outreach has led to the selection of this project.

RESPONSE (Limit 2,800 characters; approximately 400 words). Describe the type(s) of outreach selected for this project (i.e., online or in-person meetings, surveys, demonstration projects), the method(s) used to announce outreach opportunities, and how many people participated. Include any public website links to outreach opportunities.:

2. Layout (25 Percent of Points)

Layout ~~should~~ includes proposed geometrics and existing and proposed right-of-way boundaries. A basic layout should include a base map (north arrow; scale; legend;* city and/or county limits; existing ROW, labeled; existing signals;* and bridge numbers*) and design data (proposed alignments; bike and/or roadway lane widths; shoulder width;* proposed signals;* and proposed ROW). An aerial photograph with a line showing the project's termini does not suffice and will be awarded zero points.

*If applicable

100% Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/MnDOT ~~that the project goes through or agencies that maintain the roadway(s)~~). If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points.- A PDF of the layout must be attached along with letters from each jurisdiction to receive points.

100% A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid – colleen.brown@state.mn.us.

50% Layout completed but not approved by all jurisdictions. **A PDF of the layout must be attached to receive points.**

25% Layout has been started but is not complete. A PDF of the layout must be attached to receive points.

0% Layout has not been started

~~3. Anticipated date or date of completion: _____~~

4.3. Review of Section 106 Historic Resources (15 Percent of Points)

Spot Mobility and Safety

- 100% No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge
- 100% There are historical/archeological properties present but determination of "no historic properties affected" is anticipated.
- 80% Historic/archeological property impacted; determination of "no adverse effect" anticipated
- 40% Historic/archeological property impacted; determination of "adverse effect" anticipated
- 0% Unsure if there are any historic/archaeological properties in the project area.

Project is located on an identified historic bridge:

5.4. Right-of-Way (25 Percent of Points)

100% Right-of-way, permanent or temporary easements, and MnDOT agreement/limited-use permit either not required or all have been acquired

50% Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required, - plat, legal descriptions, or official map complete

25% Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required, - parcels identified

0% Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required, - parcels not all identified

Anticipated date or date of acquisition _____

6.5. Railroad Involvement (15 Percent of Points)

100% No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable)

50% Railroad Right-of-Way Agreement required; negotiations have begun

0% Railroad Right-of-Way Agreement required; negotiations have not begun.

Anticipated date or date of executed Agreement _____

SCORING GUIDANCE (75 Points)

The applicant with the most points on the Risk Assessment (more points equate to less project risk) will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 40 points and the top project had 70 points, this applicant would receive $(40/70) * 75$ points or 43 points.

7. Cost Effectiveness (100 Points)

This criterion will assess the project's cost effectiveness based on the total TAB-eligible project cost (not including noise walls) and total points awarded in the previous 8 criteria. If a project has been awarded other outside, competitive funding (e.g., state bonding, Transportation Economic Development Program, Minnesota Highway Freight Program), project sponsors may reduce the total project cost for the purposes of this scoring measure by the amount of the outside funding award.

A. **MEASURE:** This measure will calculate the cost effectiveness of the project. Metropolitan Council staff will divide the number of points awarded in the previous criteria by the TAB-eligible project cost (not including noise walls).

- Cost effectiveness = total number of points awarded in previous criteria/total TAB-eligible project cost (not including noise walls)

RESPONSE (This measure will be calculated after the scores for the other measures are tabulated by the Scoring Committee):

- Total Project Cost (entered in Project Cost Form): _____ (automatically calculated)
- Enter amount of Noise Walls: _____
- Enter amount of any outside, competitive funding (attach documentation of award): _____
- Points Awarded in Previous Criteria: ____ (entered by Metropolitan Council staff)

SCORING GUIDANCE (100 Points)

The applicant with the most points (i.e., the benefits) per dollar will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the top project received .0005 points per dollar and the application being scored received .00025 points per dollar, this applicant would receive $(.00025/.0005)*100$ points or 50 points.

The scorer for this measure will also complete a reasonableness check of the total project cost that is used for this measure. The scorer may follow up with the applicant to clarify any questions. Up to 50 percent of points awarded for this measure can be deducted if the scorer does not believe that the cost estimate is reasonable.

TOTAL: 1,100 POINTS

Strategic Capacity (Roadway Expansion)

Prioritizing Criteria and Measures

September 15, 2021

Definition: A roadway project that adds thru-lane capacity (described as a Regional Mobility project under Strategic Capacity Enhancements in the TPP). Projects must be located on a non-freeway principal arterial or A-minor arterial functionally classified roadway, consistent with the latest TAB approved functional classification map. However, A-minor connectors cannot be expanded with new thru-lane capacity with these federal funds per regional policy.

Examples of Roadway Expansion Projects:

- New roadways
- Two-lane to four-lane expansions
- Other thru-lane expansions (excludes additions of a continuous center turn lane)
- Four-lane to six-lane expansions
- New interchanges with or without associated frontage roads
- Expanded interchanges with either new ramp movements or added thru lanes
- New bridges, overpasses and underpasses

Scoring:

Criteria and Measures	Points	% of Total Points
1. Role in the Regional Transportation System and Economy	210	19%
Measure A - Congestion within Project Area, Level of Adjacent Congestion, or Principal Arterial Intersection Conversion Study Priorities	80	
Measure B - Connection to Total Jobs, Manufacturing/Distribution Jobs, and Students	50	
Measure C - Regional Truck Corridor Study Tiers	80	
2. Usage	175	16%
Measure A - Current daily person throughput	110	
Measure B - Forecast 2040 average daily traffic volume	65	
3. Equity and Housing Performance	100	9%
Measure A - Benefits and outreach to disadvantaged populations	50	
Measure B - Housing Performance Score/ affordable housing connection	50	
4. Infrastructure Age	40	4%
Measure A - Date of construction	40	
5. Congestion Reduction/Air Quality	150	14%
Measure A - Vehicle delay reduced	100	
Measure B - Kg of emissions reduced	50	
6. Safety	150	14%
Measure A - Crashes reduced	120	
Measure B - Pedestrian Crash Reduction (Proactive)	30	

Strategic Capacity

Criteria and Measures	Points	% of Total Points
7. Multimodal Elements and Existing Connections	110	10%
Measure A - Transit, bicycle, or pedestrian project elements and connections	110	
8. Risk Assessment	75	7%
Measure A – Risk Assessment Form	75	
9. Cost Effectiveness	100	9%
Measure A – Cost effectiveness (total points awarded/total project cost)	100	
Total	1,100	

1. Role in the Regional Transportation System and Economy (210 Points)

Tying regional policy (Thrive MSP2040) to the Regional Solicitation, this criterion measures the project’s ability to serve a transportation purpose within the regional transportation system and economy based on congestion in the project area, congestion levels along the regional transportation system near the project, how it aligns with the Principal Arterial Intersection Conversion Study, how it connects to employment, manufacturing/distribution-related employment, and students, and how it aligns with the Regional Truck Corridor Study.

- A. **MEASURE:** Identify the level of congestion within the project area. This measure uses speed data as was used as part of the Congestion Management Process (CMP) Plan. It is anticipated that the CMP Plan will be further incorporated into the Regional Solicitation as part of the 2022 Regional Solicitation funding cycle. Also, identify the level of congestion on a parallel route and how the project area is prioritized in the Principal Arterial Intersection Conversion Study. Respond to each of the three sub-sections below. Projects will get the highest score of the three sub-sections.

Congestion within Project Area:

The measure will analyze the level of congestion within the project area. Council staff will provide travel speed data on the “Level of Congestion” map. The analysis will compare the peak hour travel speed within the project area to free-flow conditions.

RESPONSE:

- Free-Flow Travel Speed: _____
- Peak Hour Travel Speed: _____
- Percentage Decrease in Travel Speed in Peak Hour compared to Free-Flow (calculation):

Upload the “Level of Congestion” map used for this measure.

Congestion on adjacent Parallel Routes:

The measure will analyze the level of congestion on an adjacent parallel A-minor arterial or principal arterial to determine the importance of the roadway in managing congestion on the Regional Highway System. Council staff will provide travel speed data on an applicant-selected adjacent parallel route that is adjacent to the proposed project on the “Level of Congestion” map. The analysis will compare the peak hour travel speed on an adjacent parallel route to free-flow conditions on this same route to understand congestion levels in the area of the

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project, which correlates to the role that the project plays in the regional transportation system and economy. The applicant must identify the adjacent parallel corridor as part of the response. The end points of this adjacent parallel corridor must align as closely as possible to the project end points.

RESPONSE:

- Adjacent Parallel Corridor: _____
- Adjacent Parallel Corridor Start and End Points: _____
- Free-Flow Travel Speed: _____
- Peak Hour Travel Speed: _____
- Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow (calculation):

Upload the "Level of Congestion" map used for this measure.

Principal Arterial Intersection Conversion Study:

The measure relies on the results of the Principal Arterial Intersection Conversion Study, which prioritized non-freeway principal arterial intersections. In addition to interchange projects, other lane expansion projects that make improvements to a low-, medium-, or high-priority intersection can also earn points in this measure.

Use the final study report for this measure: metro council.org/PAICS

RESPONSE (Select one for your project, based on the Principal Arterial Intersection Conversion Study):

- Proposed interchange or at-grade project that reduces delay at a High Priority Intersection: (80 Points)
- Proposed at-grade project that reduces delay at a Medium Priority Intersection: (60 Points)
- Proposed at-grade project that reduces delay at a Low Priority Intersection: (50 Points)
- Proposed interchange project that reduces delay at a Medium Priority Intersection: (40 Points)
- Proposed interchange project that reduces delay at a Low Priority Intersection: (0 Points)
- Not listed as a priority in the study: (0 Points)

SCORING GUIDANCE (80 Points)

Due to the three scoring methods, more than one project can score the maximum points. In order to be awarded points for this measure the proposed project itself must show some delay reduction in measure 5A. If the project does not reduce delay, then it will score 0 points for this measure.

Congestion within Project Area: The applicant with the most congestion within the project area (measured by the largest percentage decrease in peak hour travel speeds relative to free-flow conditions) will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored showed a 5% decrease of travel speeds in the peak hour relative to free flow conditions and the top project had a 10% reduction, this applicant would receive $(5/10) \times 80$ points, or 40 points. If the project covers more than one segment of speed data, the

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applicants can use the one that is most beneficial to their score.

Congestion on adjacent Parallel Routes: The applicant with the most congestion on an adjacent parallel route (measured by the largest percentage decrease in peak hour travel speeds relative to free-flow conditions) will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored showed a 5% decrease of travel speeds in the peak hour on the adjacent parallel route relative to free flow conditions and the top project had a 10% reduction, this applicant would receive $(5/10) \times 80$ points, or 40 points. Applicants can use the adjacent parallel route that is most beneficial to their score.

Principal Arterial Intersection Conversion Study: Projects will be scored based on their Principal Arterial Intersection Conversion Study priorities.

The scorer will assess if the applicant would score highest with congestion on the adjacent parallel routes part of the measure or the Principal Arterial Intersection Conversion Study part of the measure and give the applicant the highest of the two scores out of a maximum of 80 points. However, all interchange projects must only use the scoring output from the Principal Arterial Intersection Conversion Study.

Note: Due to the use of multiple sub-sections, multiple applicants may receive the full 80 points.

- B. **MEASURE:** Reference the “Regional Economy” map generated at the beginning of the application process. Report the existing employment, manufacturing/distribution-related employment, and post-secondary students enrolled within one mile, as depicted on the “Regional Economy” map.

RESPONSE (Data from the “Regional Economy” map):

- Existing Employment within 1 Mile: _____ (Maximum of 50 points)
- Existing Manufacturing/Distribution-Related Employment within 1 Mile: _____ (Maximum of 50 points)
- Existing Post-Secondary Students within 1 Mile: _____ (Maximum of 30 points)
- Upload the “Regional Economy” map used for this measure.

SCORING GUIDANCE (50 Points)

All Census block groups that are included within or intersect the buffer area around the project will be included.

The applicant with the highest existing total employment will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 1,000 workers within one mile and the top project had 1,500 workers, this applicant would receive $(1,000/1,500) \times 50$ points or 33 points.

The applicant with the highest existing manufacturing/distribution-related employment will receive the full points. Remaining projects will receive a proportionate share of the full points equal to the existing manufacturing/distribution-related employment within one mile of the project being scored divided by the project with the highest manufacturing/distribution-related employment within one mile multiplied by the maximum points available for the measure. For example, if the application being scored had 1,000 manufacturing/distribution-related workers within one mile and the top project had 1,500

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manufacturing/distribution-related workers, this applicant would receive $(1,000/1,500)*50$ points or 33 points.

The applicant with the highest number of post-secondary students will receive 30 points. Remaining projects will receive a proportionate share of the 30 points. For example, if the application being scored had 1,000 students within one mile and the top project had 1,500 students, this applicant would receive $(1,000/1,500)*30$ points or 20 points.

The scorer will assess if the applicant would score highest with the total employment part of the measure, the manufacturing/distribution employment part of the measure, or the education part of the measure and give the applicant the highest of the three scores out of a maximum of 50 points.

Note: Due to the use of multiple sub-measures, two applicants can receive the full 50 points.

- C. **MEASURE:** This criterion relies on the results on the Truck Highway Corridor Study, which prioritized all principal and minor arterials based on truck volume, truck percentage of total traffic, proximity to freight industry clusters, and proximity to regional freight terminals. [The truck corridors were grouped into tiers 1, 2, and 3, in order of priority. Use the 2021 Updated Regional Truck Corridors tiers to respond to this measure: 2021 Updated Regional Truck Corridors.](#) (80 points)

[Use the final study report for this measure:](#)

RESPONSE: (Select one for your project, based on the [2021 updated Regional Truck Corridors Study](#)):

- Along Tier 1: Miles (to the nearest 0.1 miles) : _____
- Along Tier 2: Miles (to the nearest 0.1 miles) : _____
- Along Tier 3: Miles (to the nearest 0.1 miles) : _____
- The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor:
- None of the tiers:

SCORING GUIDANCE (80 Points)

Applicants will be awarded points as assigned in the above tiers:

- Projects along Tier 1: 80 points
- Projects along Tier 2: 60 points
- Projects along Tier 3: 40 points
- Projects that provide a direct and immediate connection to a corridor: 10 points.
- None of the tiers: 0 points

If no applicant is along Tier 1, the top-scoring application(s) will be adjusted to 80 points, with the others adjusted proportionately.

Note: Due to the use of tiered scoring, multiple applications can receive the full points.

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2. Usage (175 Points)

This criterion quantifies the project's potential impact by measuring the current daily person throughput and future vehicular traffic that will be served by the project. These roadway users directly benefit from the project improvements on the A-minor arterial or non-freeway principal arterial.

- A. **MEASURE:** The applicant must identify the location along the project length and provide the current AADT volume from the [MnDOT Traffic Mapping Application MnDOT 50 series maps \(select Twin Cities Metro Area Street Series under Traffic Volume \(AADT\)\)](#) and existing transit routes that travel on the road (reference "Transit Connections" map). [Due to the potential timing issues with when a traffic count was taken relative to the COVID-19 pandemic \(and resulting drop in traffic volumes\), applicants may also use a historic AADT volume from the MnDOT Traffic Mapping Application \(instructions under the Help Document\)](#). Ridership data will be provided by the Metropolitan Council staff, if public transit is currently provided on the project length. Metropolitan Council staff will calculate the current daily person throughput at one location along the A-minor arterial or non-freeway principal arterial project length using the current average annual daily traffic (AADT) volume and average annual ridership.

Commented [PS1]: New text

- Current Daily Person Throughput = (current average annual daily traffic volume x 1.30 vehicle occupancy) + average annual daily transit ridership (2019)
- For new roadways, identify the estimated existing daily traffic volume based on traffic modeling.

Commented [PS2]: Confirm year

RESPONSE:

- Location: _____
- Current AADT volume: _____
- Existing Transit Routes on the Project: _____

Transit routes that will likely be diverted to the new proposed roadway (if applicable): _____ Upload "Transit Connections" map.

SCORING GUIDANCE (110 Points)

The applicant with highest current daily person throughput will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a daily person throughput of 1,000 people and the top project had a daily person throughput of 1,500 people, this applicant would receive $(1,000/1,500) \times 110$ points or 73 points.

- B. **MEASURE:** Provide the forecast (2040) average daily traffic volume at the same location along the A-minor arterial or non-freeway principal arterial project length, as identified in the previous measure. The applicant may choose to use a county or city travel demand model based on the Metropolitan Council model to identify the forecast (2040) average daily traffic volume or have Metropolitan Council staff determine the forecast volume using the Metropolitan Council model and project location. Respond as appropriate to the use of one type of forecast model. (65 Points)

- For new roadways, identify the modeled forecast daily traffic volume

RESPONSE:

- Use Metropolitan Council model to determine forecast (2040) ADT volume

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- If checked, METC Staff will provide Forecast (2040) ADT volume _____

OR

RESPONSE:

- Identify the approved county or city travel demand model to determine forecast (2040) ADT volume: _____
- Forecast (2040) ADT volume: _____

SCORING GUIDANCE (65 Points)

The applicant with the highest forecast (2040) ADT volume will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a daily forecast of 28,000 vehicles and the top project had a daily forecast of 32,000 vehicles, this applicant would receive $(28,000/32,000)*65$ points or 57 points.

3. Equity and Housing Performance (100 Points)

This criterion addresses the [Council's role in advancing equity](#) by examining how a project directly provides benefits to, or impacts (positive and negative) low-income populations, people of color, people with disabilities, youth and ~~the elderly/older adults~~. The criterion evaluates whether the applicant engaged these populations to identify transportation needs and potential solutions and how the project will address these identified needs. The criterion also evaluates a community's overall efforts to implement affordable housing and how the project improves multimodal access to affordable housing residents.

A. MEASURE: Socio-Economic Equity

1. **Sub-measure:** Equity Population Engagement (0 to 20 points): A successful project is one that is the result of active engagement of low-income populations, people of color, persons with disabilities, youth and ~~the elderly/older adults~~. Engagement should occur prior to and during a project's development, with the intent to provide direct benefits to, or solve, an expressed transportation issue, while also limiting and mitigating any negative impacts. Describe and map the location of any low-income populations, people of color, disabled populations, youth or ~~the elderly/older adults~~ within a ½ mile of the proposed project. Describe how these specific populations were engaged ~~and provided outreach to~~, whether through community planning efforts, project needs identification, or during the project development process. Describe what engagement methods and tools were used and how the input ~~from these groups~~ is reflected in the project's purpose and need and design. Elements of quality engagement include: outreach and engagement to specific communities and populations that are likely to be directly impacted by the project; techniques to reach out to populations traditionally not involved in community engagement related to transportation projects; feedback from these populations identifying potential positive and negative elements of the proposed project through engagement, study recommendations, or plans that provide feedback from populations that may be impacted by the proposed project. If relevant, describe how NEPA or Title VI regulations will guide engagement activities.

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(Limit 1,400 characters; approximately 200 words):

2. **Sub-measure:** Equity Population Benefits and Impacts (0 to 30 points): A successful project is one that has been designed to provide direct benefits to low-income populations, people of color, persons with disabilities, youth and ~~the elderly~~older adults. All projects must mitigate potential negative benefits as required under federal law. Projects that are designed to provide benefits go beyond the mitigation requirement to proactively provide transportation benefits and solve transportation issues experienced by Equity populations.
- a. (0 to 30 points) Describe the project's benefits to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults. Benefits could relate to pedestrian and bicycle safety improvements; public health benefits; direct access improvements for residents or improved access to destinations such as jobs, school, health care or other; travel time improvements; gap closures; new transportation services or modal options, leveraging of other beneficial projects and investments; and/or community connection and cohesion improvements. Note that this is not an exhaustive list.

(Limit 2,800 characters; approximately 400 words):

- b. (-10 to 0 points) Describe any negative impacts to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults created by the project, along with measures that will be taken to mitigate them. Negative impacts that are not adequately mitigated can result in a reduction in points.

(Limit 2,800 characters; approximately 400 words):

Below is a list of negative impacts. Note that this is not an exhaustive list.

- Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.
- Increased noise.
- Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.
- Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, etc.
- Increased speed and/or "cut-through" traffic.
- Removed or diminished safe bicycle access.
- Inclusion of some other barrier to access to jobs and other destinations.

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- Displacement of residents and businesses.
 - Mitigation of temporary construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings.
 - Other
3. **Sub-measure: Bonus Points (0 to 25 points)** Those projects that score at least 80% of the maximum total points available through sub-measures 1 and 2 will be awarded bonus points based on the geographic location of the project. These points will be assigned as follows, based on the highest-scoring geography the project contacts:
- ~~a. 25 points to projects within an Area of Concentrated Poverty with 50% or more people of color~~
 - ~~b. a. 20-25~~ points to projects within an Area of Concentrated Poverty
 - ~~e. b.~~ 15 points to projects within census tracts with the percent of population in poverty or population of color above the regional average percent
 - ~~d. c.~~ 10 points for all other areas

Upload the "Socio-Economic Conditions" map used for this measure.

RESPONSE (Select one, based on the "Socio-Economic Conditions" map):

- ~~• Project is located in an Area of Concentrated Poverty where 50% or more of residents are people of color (ACP50):~~
- Project is located in an Area of Concentrated Poverty:
- Project's census tracts are above the regional average for population in poverty or population of color:
- Project located in a census tract that is below the regional average for population in poverty or populations of color, ~~or includes children, people with disabilities, or the elderly:~~

SCORING GUIDANCE (50 Points)

Each application will be qualitatively scored based on the available points for each measure and will receive the number of points awarded. If the applicant receives at least 80% of the available points, i.e., 40 points for the Roadway applications, the project will receive Bonus points as described under sub-measure 3. If an applicant qualifies for Bonus points it will result in a Socio-Economic Equity score of more than the total points available.

- B. **MEASURE:** Projects will be scored based on two housing measures: 1. the 2019 Housing Performance Score for the city or township in which the project is located (40 points) and 2. the project's connection to affordable housing (10 points) as described below.

Part 1 (40 points): Housing Performance Score

A city or township's housing performance score is calculated annually by the Metropolitan Council using data from four categories: new affordable or mixed-income housing completed in the last ten years; preservation projects completed in the last seven years and/or substantial rehabilitation projects completed in the last three years; housing program participation and production, and housing policies and ordinances; and characteristics of the existing housing stock. Data for the housing performance scores are updated each year by the Council, and the city or township is provided with an opportunity to review and revise the information.

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Council staff will use the most current housing score for each city or township. If the project is located in more than one jurisdiction, the points will be awarded based on a weighted average using length or population of the project in each jurisdiction. For stand-alone intersection, bridge, underpass, and interchange projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer. If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewer development), the project will not be disadvantaged by this measure and the project's total score will be adjusted during scoring to remove this scoring measure.

RESPONSE: (NOTE: The below bullets vary slightly by funding category)

- City/Township: _____
- Total project cost: _____
- Length of Segment (For stand-alone projects, enter population from Regional Economy map) within each City/Township: _____
- Percent of total funds to be spent within City/Township: _____

Part 2 (10 points): Affordable Housing Access

This measure is a qualitative scoring measure. Describe and map any affordable housing developments—planned, under construction or existing, within ½ mile of the proposed project. The applicant should note the development stage, number of units, number of bedrooms per unit, and level of affordability using 2019 affordability limits. Also note whether the affordability is guaranteed through funding restrictions (i.e. LIHTC, 4d) or is unsubsidized, if housing choice vouchers are/will be accepted, and if there is a fair housing marketing plan required or in place.

Describe how the proposed project will improve or impact access for residents of the affordable housing locations within ½ mile of the project. This should include a description of improved access by all modes, automobiles, transit, bicycle and pedestrian access. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements.

RESPONSE:

(Limit 2,100 characters; approximately 300 words):

SCORING GUIDANCE (50 Points)

Part 1 (40 points): The applicant with the highest 2019 Housing Performance Score will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a Housing Performance Score of 55 and the top project had a Housing Performance Score of 90, this applicant would receive $(55/90) \times 40$ points or 24 points.

Projects will use the city Housing Performance Score based on the project location. If a project is located in more than one jurisdiction, the points will be awarded based on a weighted average of the city or township scores for the project location based on the length of the project in each jurisdiction. For stand-alone roadway (intersection, bridge, underpass, and interchange) projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points

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will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer.

If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewer development), the project's total score will be adjusted as a result. If this is the case, the hold-harmless method will be used: the total points possible in the application will be 960 instead of 1,000. The total points awarded through the rest of the application (900 as a hypothetical example) will be divided by 960, then multiplied by 1,000. Therefore, a project scoring 900 out of 960, will equate to 938 points on a 1,000-point scale. If a portion of the project is located in a city with an affordable housing allocation and the other portion is located in a township with no affordable housing allocation, then a combination of the Housing Performance Score (or weighted average) and the hold-harmless method should be used. This will result in a total score that will be somewhere between 960 and 1,000; then the score will need to be adjusted to fit a 1,000-point scale. NOTE: Any community without a Housing Performance Score in 2018 will be awarded the better of its new score in 2020 and the above method. NOTE: in these cases, the raw points from Part 2 will be included in the 960-point total.

Part 2 (10 points): The project that best provides meaningful improvements to access to the affordable housing units will receive the full 10 points. Multiple projects may receive the highest possible score of 10 points based on this assessment. Remaining projects will receive a share of the full points at the scorer's discretion.

Final Score (50 points): The scores in Parts 1 and 2 will be totaled. If no application gets 50 points, the highest-scoring project will be awarded 50 points, with other projects adjusted proportionately.

Note: Metropolitan Council staff will score this measure.

4. Infrastructure Age (40 Points)

This criterion will assess the age of the roadway facility being improved. Roadway improvement investments should focus on the higher needs of an aging facility, whereas improvements to a recently reconstructed roadway does not display as efficient use of funds.

- A. **MEASURE:** Identify the year of the roadway's original construction or most recent reconstruction. If the reconstruction date is used for the roadway, a full reconstruction must have been completed during the indicated year. Routine maintenance, such as an overlay or sealcoating project does not constitute a reconstruction and should not be used to determine the infrastructure age.

If construction was completed over several years, enter the segment lengths for each year. The average age will be calculated.

RESPONSE:

- Year of original roadway construction or most recent reconstruction: _____
- Segment length: _____
- Average Age: _____ (online calculation)

SCORING GUIDANCE (40 Points)

The applicant with the oldest roadway will receive full points. Remaining projects will receive a

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proportionate share of the full points. For example, if the application being scored was constructed 41 years ago and the oldest project was constructed 48 years ago, this applicant would receive $(41/48) \times 40$ points or 34 points.

This measure is not applicable to new roadway projects, so the project's total score for new roadways will be adjusted as a result.

If this is the case, then the total points possible in the application will be 960 instead of 1,000. The total points awarded through the rest of the application (900 as a hypothetical example) will be divided by 960, then multiplied by 1,000. Therefore, a project scoring 900 out of 960, will equate to 938 points on a 1,000-point scale.

Note: Because of the reporting of year of construction, it is possible for multiple projects to receive the full allotment of 40 points.

5. Congestion Reduction/Air Quality (150 Points)

This criterion measures the project's ability to reduce intersection delay and emissions during peak hour conditions. In addition, it will address its ability to improve congested intersections operating at unacceptable levels of service during peak hour conditions.

- A. **MEASURE:** Conduct a capacity analysis at one or more of the intersections (or rail crossings) being improved by the roadway project using existing turning movement counts (collected within the last three years) in the weekday a.m. or p.m. peak hour and Synchro or HCM software. The analysis must include build and no build conditions (with and without the project improvements). The applicant must show the current total peak hour delay at one or more intersections (or rail crossings) and the reduction in total peak hour intersection delay at these intersections (or rail crossings) in seconds, due to the project. If more than one intersection is examined, then the delay reduced by each intersection (or rail crossing) can be added together to determine the total delay reduced by the project.
- For new roadways, identify the key intersection(s) on any parallel roadway(s) that will experience reduced delay as a result of traffic diverting to the new roadway. If more than one intersection is examined, then the delay reduced by each intersection can be added together.
 - For roadway projects that include a railroad crossing, the applicant should conduct fieldwork during either the weekday a.m. or p.m. peak hour to determine the total peak hour delay reduced by the project. Applicants can also add together intersection delay reduced and railroad delay reduced, if they both will be improved by the project.

The applicant should include the appropriate Synchro or HCM full reports (including the Timing Page Report) that support the improvement in total peak hour delay and should conduct the analysis using the following:

- Under the network settings, all defaults should be used for lanes, saturation flow rates, volumes, and simulation
- Use Synchro's automatic optimization to determine cycle, offset and splits (for traffic signals). Use the setting when assessing delay both with and without the project. This methodology will ensure that all applicants start with their signal systems optimized when determining existing delay.

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- Project improvements assumed in the build condition should be reflected in the total project cost, such as additional through or turn lanes and protective left-turn phasing
- Roadway lengths for intersection approaches must be the same length for before and after scenarios
- An average weekday should be used for the existing conditions instead of a weekend, peak holiday, or special event time period that is not representative of the corridor for most of the year
- For most projects, the volumes with and without the project should be the same; however, some project types such as new roadways, new ramps, or new interchanges may have different volumes.

Total Peak Hour Delay Reduced (Seconds) = Total Peak Hour Delay Per Vehicle x Vehicles Per Hour

RESPONSE:

- Total Peak Hour Delay/Vehicle without the Project (Seconds/Vehicle): _____
- Total Peak Hour Delay/Vehicle with the Project (Seconds/Vehicle): _____
- Total Peak Hour Delay/Vehicle Reduced by the Project (Seconds/Vehicle): _____ (automatically calculated)
- Volume without the Project (Vehicles Per Hour): _____
- Volume with the Project (Vehicles Per Hour): _____
- Total Peak Hour Delay Reduced by the Project (Seconds): _____ (automatically calculated)

EXPLANATION of methodology used to calculate railroad crossing delay, if applicable, or date of last signal retiming for signalized corridors (Limit 1,400 characters; approximately 200 words):

Upload Synchro or HCM Report

SCORING GUIDANCE (100 Points)

The applicant with the most peak hour vehicle delay reduced by the project improvement will receive the full points for the measure. Remaining projects will receive a proportionate share of the points. For example, if the application being scored reduced delay by 5,000 seconds and the top project reduced delay by 25,000 seconds, this applicant would receive $(5,000/25,000) \times 100$ points, or 20 points.

- B. **MEASURE:** Using the Synchro or HCM analysis completed in the previous measure, identify the total peak hour emissions reduction in kilograms (CO, NOX, VOC) due to the project. The applicant should include the appropriate Synchro or HCM reports (including the Timing Page Report) that support the improvement in total peak hour emissions. If more than one intersection is examined, then the emissions reduced by each intersection can be added together to determine the total emissions reduced by the project.

Roadway projects that do not include new roadway segments or railroad grade-separation elements:

- Total Peak Hour Emissions Reduced (Kilograms) = Total Peak Hour Emissions without the project – Total Peak Hour Emissions with the Project

RESPONSE (Calculation):

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- Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms): _____
- Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms): _____
- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms): _____

Roadway projects that are constructing new roadway segments, but do not include railroad grade-separation elements:

For new roadways, identify the key intersection(s) on any parallel roadway(s) that will experience reduced emissions as a result of traffic diverting to the new roadway (using Synchro). If more than one intersection is examined, then the emissions reduced by each intersection can be added together.

However, new roadways will also generate new emissions compared to existing conditions as traffic diverts from the parallel roadways. The applicant needs to estimate four variables to determine the new emissions generated once the project is completed on any major intersections. Those variables include: speed, vehicle mile traveled, delay, and total vehicle stops. The applicant needs to detail any assumptions used for conditions after the project is built. The variables will be used in the exact same equation used Synchro required of the other project types.

The equation below should only be used to estimate the new emissions generated by new roadways.

Enter data for Parallel Roadways and New Roadways.

Parallel Roadways

- Total Peak Hour Emissions Reduced (Kilograms) = Total Peak Hour Emissions without the project – Total Peak Hour Emissions with the Project

RESPONSE:

- Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms): _____ (Applicant inputs number)
- Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms): _____ (Applicant inputs number)
- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms): _____ (Online Calculation)

New Roadway Portion

Enter data for New Roadway.

- Cruise speed in miles per hour with the project: _____ (Applicant inputs number)
- Vehicle miles traveled with the project: _____ (Applicant inputs number)
- Total delay in hours with the project: _____ (Applicant inputs number)
- Total stops in vehicles per hour with the project: _____ (Applicant inputs number)
- Fuel consumption in gallons: _____ (Applicant inputs number)

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- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced or Produced on New Roadway (Kilograms): _____

EXPLANATION of methodology and assumptions used: (Limit 1,400 characters; approximately 200 words)

Speed = cruise speed in miles per hour

Total Travel = vehicle miles traveled

Total Delay = total delay in hours

Stops = total stops in vehicles per hour

$K4 = 0.075283 - 0.0015892 * \text{Speed} + 0.000015066 * \text{Speed}^2$

$K2 = 0.7329$

$K5 = 0.0000061411 * \text{Speed}^2$

F2 = Fuel consumption in gallons

$\text{CO} = F2 * 0.0699 \text{ kg/gallon}$

$\text{NOX} = F2 * 0.0136 \text{ kg/gallon}$

$\text{VOC} = F2 * 0.0162 \text{ kg/gallon}$

Total = Total Peak Hour Emissions reduced on Parallel Roadways – (CO + NOx + VOC)

- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms): _____ (calculated online)

Roadway projects that include railroad grade-separation elements:

For roadway projects that include a railroad crossing, the applicant needs to input four variables before and after the project to determine the change in emissions. Those variables include: speed, vehicle mile traveled, delay, and total vehicle stops. The applicant needs to conduct fieldwork during either the a.m. or p.m. peak hour to determine the existing conditions and then detail any assumptions used for conditions after the project is built. The variables will be used in the exact same equation used within the software program (i.e., Synchro) required of the other project types. Therefore, the approach to calculate the kilograms emissions reduced for railroad grade-separation projects will be comparable to intersection improvement projects.

RESPONSE:

- Cruise speed in miles per hour without the project: _____ (Applicant inputs number)
- Vehicle miles traveled without the project: _____ (Applicant inputs number)
- Total delay in hours without the project: _____ (Applicant inputs number)
- Total stops in vehicles per hour without the project: _____ (Applicant inputs number)
- Cruise speed in miles per hour with the project: _____ (Applicant inputs number)
- Vehicle miles traveled with the project: _____ (Applicant inputs number)
- Total delay in hours with the project: _____ (Applicant inputs number)
- Total stops in vehicles per hour with the project: _____ (Applicant inputs number)
- Fuel consumption in gallons (F1)
- Fuel consumption in gallons (F2)
- Fuel consumption in gallons (F3)

Strategic Capacity

Speed = cruise speed in miles per hour

Total Travel = vehicle miles traveled

Total Delay = total delay in hours

Stops = total stops in vehicles per hour

$K1 = 0.075283 - 0.0015892 * \text{Speed} + 0.000015066 * \text{Speed}^2$

$K2 = 0.7329$

$K3 = 0.0000061411 * \text{Speed}^2$

F1 (or F2 – without the project) = Fuel consumption in gallons

$F1 = \text{Total Travel} * k1 + \text{Total Delay} * k2 + \text{Stops} * k3$

$F2 = \text{Total Travel} * k1 + \text{Total Delay} * k2 + \text{Stops} * k3$

$F3 = F1 - F2$

$CO = F3 * 0.0699 \text{ kg/gallon}$

$NOX = F3 * 0.0136 \text{ kg/gallon}$

$VOC = F3 * 0.0162 \text{ kg/gallon}$

Equation Automatically Provides Emissions Reduced:

- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
_____ (Online Calculation)

EXPLANATION of methodology and assumptions used (Limit 1,400 characters; approximately 200 words):

SCORING GUIDANCE (50 Points)

The applicant with the most kilograms reduced by the project improvement will receive the full points for the measure. Remaining projects will receive a proportionate share of the full. For example, if the application being scored reduced emissions by 3 kilograms and the top project reduced emissions by 5 kilograms, this applicant would receive $(3/5) * 50$ points or 30 points.

6. Safety (150 Points)

This criterion addresses the project's ability to correct deficiencies and improve the overall safety of an existing or future roadway facility. It will assess the project's monetized safety benefits.

- A. **MEASURE:** Respond as appropriate to one of the two project types below.

Roadway projects that do not include railroad grade-separation elements:

Calculate the reduction in the total number of crashes due to improvements on the A-minor arterial or non-freeway principal arterial made by the project. The applicant must base the estimate of crash reduction on the methodology consistent with the latest Highway Safety Improvement Program (HSIP) application (www.dot.state.mn.us/stateaid/trafficsafety.html). Applicants should focus on the crash analysis for reactive projects.

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Crash data must be obtained for the project length using the MnDOT TIS system average for calendar years ~~2016-2018~~ through ~~2018-2020~~. Crash data should include all crash types and severities, including pedestrian and bicycle crashes.

Applicants should request crash data from MnDOT as early as possible. The applicant must then attach a listing of the crashes reduced and the HSIP Benefit/Cost (B/C) worksheet (www.dot.state.mn.us/stateaid/trafficsafety.html) that identifies the resulting benefit associated with the project. As part of the response, please detail and attach the crash modification factor(s) used from FHWA's Crash Modification Factors Clearinghouse: <http://www.cmfclearinghouse.org/>. As part of the Regional Solicitation Before & After Study Phase 2 (2021), a list of commonly used crash modification factors was created. Applicants have the option to use these crash modification factors (posted on the Metropolitan Council's Regional Solicitation website, under Application Resources) or find a more appropriate one on FHWA's Clearinghouse.

Commented [PS3]: New text

This measure requests the monetized safety benefit of the project. The cost of the project is scored in the Cost Effectiveness criterion.

New Roadways:

1. For new roadways, identify the parallel roadway(s) from which traffic will be diverted to the new roadway.
2. Using the crash data for ~~2016-2018-2018-2020~~, calculate the existing crash rate for the parallel roadway(s) identified in Step 1.
3. Identify the daily traffic volume that will be relocated from the parallel roadway(s) to the new roadway.
4. Calculate the number of crashes on the parallel roadway(s) using the existing crash rate from Step 2 and the relocated traffic volume to determine the change in number of crashes due to the relocated traffic volume. For instance, if 5,000 vehicles are expected to relocate from the existing parallel roadway to the new roadway, calculate the number of crashes related to the 5,000 vehicles.
5. Identify the average crash rate for the new roadway using MnDOT's average crash rates by roadway type. Using the average crash rate for the new roadway, calculate the number of crashes related to the relocated traffic (i.e., the 5,000 vehicles).
6. Calculate the crash reduction factor using the existing number of crashes on the existing parallel roadway (Step 4) compared to the estimated crashes calculated for the new roadway (Step 5), due to the relocated traffic volume (i.e., the 5,000 vehicles).
7. The calculated crash reduction factor should be used in the HSIP B/C worksheet.
8. Upload additional documentation materials into the "Other Attachments" Form in the online application.

RESPONSE:

- Crash Modification Factor Used (Limit 700 characters; approximately 100 words): _____
- Rationale for Crash Modifications Selected (Limit 1,400 characters; approximately 200 words): _____
- Project Benefit (\$) from B/C ratio: _____
- Total Fatal (K) Crashes: _____
- Total Serious Injury (A) Crashes: _____
- Total Non-Motorized Fatal and Serious Injury Crashes: _____
- Total Crashes: _____

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- Total Fatal (K) Crashes Reduced by Project: _____
- Total Serious Injury (A) Crashes Reduced by Project: _____
- Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project: _____
- Total Crashes Reduced by Project: _____

Upload Crash Modification Factors and B/C Worksheet.

Roadway projects that include railroad grade-separation elements:

Since the number of observed crashes at an existing at-grade railroad crossing is minor compared to an intersection, this measure will assess crash risk exposure that exists in order to compare projects. As a proactive safety measure, railroad grade-separation projects eliminate the crash risk exposure.

- Crash Risk Exposure Eliminated = current average annual daily traffic volume x average number of daily trains at the at-grade crossing

RESPONSE (Calculation):

- Current AADT volume: _____
- Average daily trains: _____
- Crash Risk Exposure eliminated: (automatically calculated) _____

SCORING GUIDANCE (150 Points)

This measure will be considered separately for projects that do and do not include a railroad grade-separation project. As a result, two projects (one project without a railroad grade-separation project and one with a railroad grade-separation project) may receive the full points.

For projects that do not include a grade-separation project, the applicant with the highest dollar value of benefits will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had safety benefits of \$11,000,000 and the top project had safety benefits of \$16,000,000, this applicant would receive $(11,000,000/16,000,000)*150$ points or 103 points.

For railroad grade-separation projects, the applicant with the highest crash risk exposure eliminated due to the project will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored reduced 11,000 exposures and the top project reduced 16,000 exposures this applicant would receive $(11,000/16,000)*150$ points or 103 points.

- B. **MEASURE:** Discuss how the project will improve safety for pedestrians. Safety countermeasures for pedestrians can include those identified by the FHWA as part of its [Safe Transportation for Every Pedestrian program](#) or others in its [Proven Safety Countermeasures](#) (e.g., pedestrian refuge islands, raised crosswalks, pedestrian hybrid beacons, leading pedestrian intervals). More information about pedestrian safety best practices is also available in MnDOT's [Best Practices for Pedestrian/Bicycle Safety](#).

SCORING GUIDANCE (30 Points)

Strategic Capacity

The project that will provide the most improvement to pedestrian safety will receive full points. Remaining projects will receive a share of the full points at the scorer's discretion.

Commented [PS4]: See information item for proposed new text, which would replace this content.

7. Multimodal Elements and Existing Connections (100 Points)

This criterion measures how the project improves the travel experience, safety, and security for other modes of transportation and addresses the safe integration of these modes. The Transportation Policy Plan requires that explicit consideration of all users of the transportation system be considered in the planning and scoping phase of roadway projects.

- A. **MEASURE:** Describe how the project positively affects the multimodal system.
- Discuss any bicycle, pedestrian, or transit elements that are included as part of the project and how they improve the travel experience, safety, and security for users of these modes. Applicants should make sure that new multimodal elements described in the response are accounted for as part of the cost estimate form earlier in the application. Applicants should note if there is no transit service in the project area and identify supporting studies or plans that address why a mode may not be incorporated in the project (e.g., a bicycle system plan that locates bikeway facilities on a lower-volume parallel route).
 - Describe how the proposed multimodal improvements positively affect identified alignments in the Regional Bicycle Transportation Network (RBTN) or along a regional trail, if applicable.
 - Describe how the proposed multimodal improvements either provide a new, or improve an existing Major River Bicycle Barrier Crossing (MRBBC) as defined in the 2040 Transportation Policy Plan (TPP) or how they provide a new or improved crossing of a Regional Bicycle Barrier with respect to the tiered Regional Bicycle Barrier Crossing Improvement Areas as defined in the TPP and Technical Addendum to the Regional Bicycle Barriers Study (May 2019), if applicable.
 - Discuss the existing bicycle, pedestrian, and transit connections and how the project enhances these connections.
 - Discuss whether the project implements specific locations identified as being deficient in a completed ADA Transition Plan.

RESPONSE (Limit 2,800 characters; approximately 400 words):

SCORING GUIDANCE (100 Points)

The project that most positively affects the multimodal system will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion. The project score will be based on the quality of the improvements, as opposed to being based solely on the number of modes addressed. Points can be earned for incorporating multimodal project elements, positively affecting identified alignments in the Regional Bicycle Transportation Network (RBTN), regional trail, Major River Bicycle Barrier Crossing, or Regional Bicycle Barrier, for making connections with existing multimodal systems, or helping to implement an ADA Transition Plan. Projects do not need all of these elements to be awarded all of the points. Multimodal elements for rural roadway projects may include wider shoulders that will be used by bicyclists and pedestrians.

8. Risk Assessment (75 Points)

This criterion measures the number of risks associated with successfully building the project. High-risk applications increase the likelihood that projects will withdraw at a later date. If this happens, the region is forced to reallocate the federal funds in a short amount of time or return them to the US Department of Transportation. These risks are outlined in the checklist in the required Risk Assessment.

Strategic Capacity

- A. **MEASURE:** Applications involving construction must complete the Risk Assessment. This checklist includes activities completed to-date, as well as an assessment of risks (e.g., right-of-way acquisition, proximity to historic properties, etc.).

RESPONSE (Complete Risk Assessment):

Please check those that apply and fill in anticipated completion dates for all projects; ~~except for~~ New/expanded transit service projects will receive full credit for items 2-5 but must fill out item 1. ~~or~~ Transit vehicle purchases will receive full credit.

1. Public Involvement (20 Percent of Points)

Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other options, and the public involvement completed to date on the project. The focus of this section is on the opportunity for public input as opposed to the quality of input. NOTE: A written response is required and failure to respond will result in zero points.

~~List Dates of most recent meetings and outreach specific to this project:~~

- ~~• Meeting with general public: _____~~
- ~~• Meeting with partner agencies: _____~~
- ~~• Targeted online/mail outreach: _____~~
 - ~~○ Number of respondents: _____~~

100% ~~Multiple types of targeted outreach efforts (such as meetings or online/mail outreach) Meetings~~ specific to this project with the general public and partner agencies have been used to help identify the project need.

75% ~~Targeted outreach specific to this project with the general public and partner agencies have been used to help identify the project need.~~

50% At least one meeting specific to this project with the general public has been used to help identify the project need.

50% At least ~~one meeting online/mail outreach effort~~ specific to this project with the general public ~~key partner agencies~~ has been used to help identify the project need.

25% No meeting or outreach specific to the project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort.

0% No outreach has led to the selection of this project.

RESPONSE (Limit 2,800 characters; approximately 400 words). Describe the type(s) of outreach selected for this project (i.e., online or in-person meetings, surveys, demonstration projects), the method(s) used to announce outreach opportunities, and how many people participated. Include any public website links to outreach opportunities.:

2. Layout (25 Percent of Points)

Strategic Capacity

Layout ~~should~~ includes proposed geometrics and existing and proposed right-of-way boundaries. A basic layout should include a base map (north arrow; scale; legend;* city and/or county limits; existing ROW, labeled; existing signals;* and bridge numbers*) and design data (proposed alignments; bike and/or roadway lane widths; shoulder width;* proposed signals;* and proposed ROW). An aerial photograph with a line showing the project's termini does not suffice and will be awarded zero points.

*If applicable

100% Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/~~MnDOT that the project goes through or agencies that maintain the roadway(s)~~). If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points. - **A PDF of the layout must be attached along with letters from each jurisdiction to receive points.**

100% A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid – colleen.brown@state.mn.us.

50% Layout completed but not approved by all jurisdictions. **A PDF of the layout must be attached to receive points.**

25% Layout has been started but is not complete. A PDF of the layout must be attached to receive points.

0% Layout has not been started

~~3. Anticipated date or date of completion: _____~~

4.3. Review of Section 106 Historic Resources (15 Percent of Points)

100% No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge

100% There are historical/archeological properties present but determination of "no historic properties affected" is anticipated.

80% Historic/archeological property impacted; determination of "no adverse effect" anticipated

40% Historic/archeological property impacted; determination of "adverse effect" anticipated

0% Unsure if there are any historic/archaeological properties in the project area.

Project is located on an identified historic bridge:

5.4. Right-of-Way (25 Percent of Points)

Strategic Capacity

100% Right-of-way, permanent or temporary easements, and MnDOT agreement/limited-use permit either not required or all have been acquired

50% Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required, - plat, legal descriptions, or official map complete

25% Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required, - parcels identified

0% Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required, - parcels not all identified

Anticipated date or date of acquisition _____

6.5. Railroad Involvement (15 Percent of Points)

100% No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable)

50% Railroad Right-of-Way Agreement required; negotiations have begun

0% Railroad Right-of-Way Agreement required; negotiations have not begun.

Anticipated date or date of executed Agreement _____

SCORING GUIDANCE (75 Points)

The applicant with the most points on the Risk Assessment (more points equate to less project risk) will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 40 points and the top project had 70 points, this applicant would receive $(40/70) * 75$ points or 43 points.

9. Cost Effectiveness (100 Points)

This criterion will assess the project's cost effectiveness based on the total TAB-eligible project cost (not including noise walls) and total points awarded in the previous 8 criteria.

- A. **MEASURE:** This measure will calculate the cost effectiveness of the project. Metropolitan Council staff will divide the number of points awarded in the previous criteria by the TAB-eligible project cost (not including noise walls). If a project has been awarded other outside, competitive funding (e.g., state bonding, Transportation Economic Development Program, Minnesota Highway Freight Program), project sponsors may reduce the total project cost for the purposes of this scoring measure by the amount of the outside funding award.

- Cost effectiveness = total number of points awarded in previous criteria/total TAB-eligible project cost (not including noise walls)

RESPONSE (This measure will be calculated after the scores for the other measures are tabulated by the Scoring Committee):

Strategic Capacity

- Total Project Cost (entered in Project Cost Form): _____ (automatically calculated)
- Enter amount of Noise Walls: _____
- Enter amount of any outside, competitive funding (attach documentation of award): _____
- Points Awarded in Previous Criteria: ____ (entered by Metropolitan Council staff)

SCORING GUIDANCE (100 Points)

The applicant with the most points (i.e., the benefits) per dollar will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the top project received .0005 points per dollar and the application being scored received .00025 points per dollar, this applicant would receive $(.00025/.0005)*100$ points or 50 points.

The scorer for this measure will also complete a reasonableness check of the total project cost that is used for this measure. The scorer may follow up with the applicant to clarify any questions. Up to 50 percent of points awarded for this measure can be deducted if the scorer does not believe that the cost estimate is reasonable.

TOTAL: 1,100 POINTS

Roadway Reconstruction/Modernization

Prioritizing Criteria and Measures

September 15, 2021

Definition: A roadway project that does not add thru-lane capacity, but reconstructs, reclaims, and/or modernizes a corridor with improved safety, multimodal, or mobility elements (e.g., new turn lanes, traffic signal, or roundabout). Routine maintenance including mill and overlay projects are not eligible. Projects must be located on a non-freeway principal arterial or A-minor arterial functionally classified roadway, consistent with the latest TAB approved functional classification map.

Examples of Roadway Reconstruction/Modernization Projects:

- ~~• Intersection improvements, including innovative intersection designs~~
- ~~• Alternative intersections such as unsignalized or signalized reduced conflict intersections (one intersection or multiple intersections)~~
- Interchange reconstructions that do not involve new ramp movements or added thru lanes
- ~~• Turn lanes~~
- Two-lane to three-lane conversions (with a continuous center turn lane)
- Four-lane to three-lane conversions
- ~~• Roundabouts~~
- ~~• Addition or replacement of traffic signals~~
- Shoulder improvements
- Strengthening a non-10-ton roadway
- Raised medians, frontage roads, access modifications, or other access management
- Roadway improvements with the addition of multimodal elements
- Roadway improvements that add safety elements
- New alignments that replace an existing alignment and do not expand the number of lanes

Scoring:

Criteria and Measures	Points	% of Total Points
1. Role in the Regional Transportation System and Economy	105	10%
Measure A - Connection to Total Jobs and Manufacturing/ Distribution Jobs	65	
Measure B - Regional Truck Corridor Study Tiers	40	
2. Usage	175	16%
Measure A - Current daily person throughput	110	
Measure B - Forecast 2040 average daily traffic volume	65	
3. Equity and Housing Performance	100	9%
Measure A - Benefits and outreach to disadvantaged populations	50	
Measure B - Housing Performance Score/ affordable housing connection	50	
4. Infrastructure Age/Condition	175	16%
Measure A - Date of construction	50	
Measure B - Geometric, structural, or infrastructure deficiencies	125	
5. Congestion Reduction/Air Quality	80	7%

Roadway Reconstruction/Modernization

Criteria and Measures	Points	% of Total Points
Measure A - Vehicle delay reduced	50	
Measure B - Kg of emissions reduced	30	
6. Safety	180	16%
Measure A - Crashes reduced	150	
Measure B – Pedestrian Crash Reduction (Proactive)	30	
7. Multimodal Elements and Existing Connections	110	10%
Measure A - Transit, bicycle, or pedestrian project elements and connections	110	
8. Risk Assessment	75	7%
Measure A – Risk Assessment Form	75	
9. Cost Effectiveness	100	9%
Measure A – Cost effectiveness (total points awarded/total project cost)	100	
Total	1,100	

Role in the Regional Transportation System and Economy (170 Points)

Tying regional policy (Thrive MSP2040) to the Regional Solicitation, this criterion measures the project’s ability to serve a transportation purpose within the regional transportation system and economy based on how it connects to employment, manufacturing/distribution-related employment, and post-secondary students; and how it aligns with the Regional Truck Corridor Study.

- A. **MEASURE:** Reference the “Regional Economy” map generated at the beginning of the application process. Report the existing employment and manufacturing/distribution-related employment, and post-secondary students enrolled within one mile, as depicted on the “Regional Economy” map.

RESPONSE (Data from the “Regional Economy” map):

- Existing Employment within 1 Mile: _____ (Maximum of 65 points)
- Existing Manufacturing/Distribution-Related Employment within 1 Mile: _____ (Maximum of 65 points)
- Existing Post-Secondary Students within 1 Mile: _____ (Maximum of 40 points)

Upload the “Regional Economy” map used for this measure.

SCORING GUIDANCE (65 Points)

All Census block groups that are included within or intersect the buffer area around the project will be included.

The applicant with the highest existing total employment will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 1,000 workers within one mile and the top project had 1,500 workers, this applicant would receive $(1,000/1,500)*65$ points or 43 points.

The applicant with the highest existing manufacturing/distribution-related employment will receive the

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full points. Remaining projects will receive a proportionate share of the full points equal to the existing manufacturing/distribution-related employment within one mile of the project being scored divided by the project with the highest manufacturing/distribution-related employment within one mile multiplied by the maximum points available for the measure (30). For example, if the application being scored had 1,000 manufacturing/distribution-related workers within one mile and the top project had 1,500 manufacturing/distribution-related workers, this applicant would receive $(1,000/1,500)*65$ points or 43 points.

The applicant with the highest number of post-secondary students will receive 40 points. Remaining projects will receive a proportionate share of the 40 points. For example, if the application being scored had 1,000 students within one mile and the top project had 1,500 students, this applicant would receive $(1,000/1,500)*40$ points or 27 points.

The scorer will assess if the applicant would score highest with the total employment part of the measure, the manufacturing/distribution employment part of the measure, or the education part of the measure and give the applicant the highest of the three scores out of a maximum of 65 points.

Note: Due to the use of multiple sub-measures, two applicants can receive the full 65 points.

- B. **MEASURE:** This criterion relies on the results on the Regional Truck Corridor Study, which prioritized all principal and minor arterials based on truck volume, truck percentage of total traffic, proximity to freight industry clusters, and proximity to regional freight terminals. [The truck corridors were grouped into tiers 1, 2, and 3, in order of priority. Use the 2021 Updated Regional Truck Corridors tiers to respond to this measure: 2021 Updated Regional Truck Corridors.](#) (40 points)

Use the final study report for this measure:

RESPONSE: (Select one for your project, based on the [updated 2021](#) Regional Truck Corridors Study):

- Along Tier 1: Miles (to the nearest 0.1 miles) : _____
- Along Tier 2: Miles (to the nearest 0.1 miles) : _____
- Along Tier 3: Miles (to the nearest 0.1 miles) : _____
- The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor:
- None of the tiers:

SCORING GUIDANCE (40 Points)

Applicants will be awarded points as assigned in the above tiers:

- Projects along Tier 1: 40 points
- Projects along Tier 2: 30 points
- Projects along Tier 3: 20 points
- Projects that that provide a direct and immediate connection to a corridor: 10 points.
- None of the tiers: 0 points

If no applicant is along Tier 1, the top-scoring application(s) will be adjusted to 40 points, with the others

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adjusted proportionately.

Note: Due to the use of tiered scoring, multiple applications can receive the full points.

2. Usage (175 Points)

This criterion quantifies the project's potential impact by measuring the current daily person throughput and future vehicular traffic that will be served by the project. These roadway users directly benefit from the project improvements on the A-minor arterial or non-freeway principal arterial. For interchange reconstruction projects, the cross-street traffic volumes should be used instead of the mainline volumes.

- A. **MEASURE:** The applicant must identify the location along the project length and provide the current AADT volume from the [MnDOT Traffic Mapping Application MnDOT 50-series maps \(select Twin Cities Metro Area Street Series under Traffic Volume \(AADT\)\)](#) and existing transit routes that travel on the road (reference "Transit Connections" map). [Due to the potential timing issues with when a traffic count was taken relative to the COVID-19 pandemic \(and resulting drop in traffic volumes\), applicants may also use a historic AADT volume from the MnDOT Traffic Mapping Application \(instructions under the Help Document\).](#) Ridership data will be provided by the Metropolitan Council staff, if public transit is currently provided on the project length. Metropolitan Council staff will calculate the current daily person throughput at one location along the A-minor arterial or non-freeway principal arterial project length using the current average annual daily traffic (AADT) volume and average annual ridership.

- Current Daily Person Throughput = (current average annual daily traffic volume x 1.30 vehicle occupancy) + average annual daily transit ridership (2019)

RESPONSE:

- Location: _____
- Current AADT volume: _____
- Existing Transit Routes on the Project: _____

Upload "Transit Connections" map.

SCORING GUIDANCE (110 Points)

The applicant with highest current daily person throughput will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a daily person throughput of 1,000 people and the top project had a daily person throughput of 1,500 people, this applicant would receive $(1,000/1,500) \times 110$ points or 73 points.

- B. **MEASURE:** Provide the forecast (2040) average daily traffic volume at the same location along the A-minor arterial or non-freeway principal arterial project length, as identified in the previous measure. The applicant may choose to use a county or city travel demand model based on the Metropolitan Council model to identify the forecast (2040) average daily traffic volume or have Metropolitan Council staff determine the forecast volume using the Metropolitan Council model and project location. Respond as appropriate to the use of one type of forecast model.

Commented [PS1]: New text

Commented [PS2]: Confirm year with F&P

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RESPONSE:

- Use Metropolitan Council model to determine forecast (2040) ADT volume
- If checked, METC Staff will provide Forecast (2040) ADT volume

OR

RESPONSE:

- Identify the approved county or city travel demand model to determine forecast (2040) ADT volume: _____
- Forecast (2040) ADT volume : _____

SCORING GUIDANCE (65 Points)

The applicant with the highest forecast (2040) ADT volume will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a daily forecast of 28,000 vehicles and the top project had a daily forecast of 32,000 vehicles, this applicant would receive $(28,000/32,000)*65$ points or 57 points.

3. Equity and Housing Performance (100 Points)

This criterion addresses the [Council's role in advancing equity](#) by examining how a project directly provides benefits to, or impacts (positive and negative) low-income populations, people of color, people with disabilities, youth and [the elderly/older adults](#). The criterion evaluates whether the applicant engaged these populations to identify transportation needs and potential solutions and how the project will address these identified needs. The criterion also evaluates a community's overall efforts to implement affordable housing and how the project improves multimodal access to affordable housing residents.

A. MEASURE: Socio-Economic Equity

1. **Sub-measure:** Equity Population Engagement (0 to 20 points): A successful project is one that is the result of active engagement of low-income populations, people of color, persons with disabilities, youth and [the elderly/older adults](#). Engagement should occur prior to and during a project's development, with the intent to provide direct benefits to, or solve, an expressed transportation issue, while also limiting and mitigating any negative impacts. Describe and map the location of any low-income populations, people of color, disabled populations, youth or [the elderly/older adults](#) within a ½ mile of the proposed project. Describe how these specific populations were engaged ~~and provided outreach to~~, whether through community planning efforts, project needs identification, or during the project development process. Describe what engagement methods and tools were used and how the input [from these groups](#) is reflected in the project's purpose and need and design. Elements of quality engagement include: outreach and engagement to specific communities and populations that are likely to be directly impacted by the project; techniques to reach out to populations traditionally not involved in community engagement related to transportation projects; feedback from these populations identifying potential positive and negative elements of the proposed project through engagement, study recommendations, or plans that provide feedback from populations that may be impacted by the proposed project. If relevant, describe how NEPA or Title VI regulations will guide engagement activities.

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(Limit 1,400 characters; approximately 200 words):

2. **Sub-measure:** Equity Population Benefits and Impacts (0 to 30 points): A successful project is one that has been designed to provide direct benefits to low-income populations, people of color, persons with disabilities, youth and [the elderly/older adults](#). All projects must mitigate potential negative benefits as required under federal law. Projects that are designed to provide benefits go beyond the mitigation requirement to proactively provide transportation benefits and solve transportation issues experienced by Equity populations.
- a. (0 to 30 points) Describe the project's benefits to low-income populations, people of color, children, people with disabilities, and [the elderly/older adults](#). Benefits could relate to pedestrian and bicycle safety improvements; public health benefits; direct access improvements for residents or improved access to destinations such as jobs, school, health care or other; travel time improvements; gap closures; new transportation services or modal options, leveraging of other beneficial projects and investments; and/or community connection and cohesion improvements. Note that this is not an exhaustive list.

(Limit 2,800 characters; approximately 400 words):

- b. (-10 to 0 points) Describe any negative impacts to low-income populations, people of color, children, people with disabilities, and [the elderly/older adults](#) created by the project, along with measures that will be taken to mitigate them. Negative impacts that are not adequately mitigated can result in a reduction in points.

(Limit 2,800 characters; approximately 400 words):

Below is a list of negative impacts. Note that this is not an exhaustive list.

- Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.
- Increased noise.
- Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.
- Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, etc.
- Increased speed and/or "cut-through" traffic.
- Removed or diminished safe bicycle access.
- Inclusion of some other barrier to access to jobs and other destinations.

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- Displacement of residents and businesses.
 - Mitigation of temporary construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings.
 - Other
3. **Sub-measure: Bonus Points (0 to 25 points)** Those projects that score at least 80% of the maximum total points available through sub-measures 1 and 2 will be awarded bonus points based on the geographic location of the project. These points will be assigned as follows, based on the highest-scoring geography the project contacts:
- ~~a. 25 points to projects within an Area of Concentrated Poverty with 50% or more people of color~~
 - ~~b. a. 20-25~~ 20-25 points to projects within an Area of Concentrated Poverty
 - ~~b. 15~~ 15 points to projects within census tracts with the percent of population in poverty or population of color above the regional average percent
 - ~~c. 10~~ 10 points for all other areas

Upload the "Socio-Economic Conditions" map used for this measure.

RESPONSE (Select one, based on the "Socio-Economic Conditions" map):

- ~~• Project is located in an Area of Concentrated Poverty where 50% or more of residents are people of color (ACP50):~~
- Project is located in an Area of Concentrated Poverty:
- Project's census tracts are above the regional average for population in poverty or population of color:
- Project located in a census tract that is below the regional average for population in poverty or populations of color, ~~or includes children, people with disabilities, or the elderly:~~

SCORING GUIDANCE (50 Points)

Each application will be qualitatively scored based on the available points for each measure and will receive the number of points awarded. If the applicant receives at least 80% of the available points, i.e., 40 points for the Roadway applications, the project will receive Bonus points as described under sub-measure 3. If an applicant qualifies for Bonus points it will result in a Socio-Economic Equity score of more than the total points available.

- B. **MEASURE:** Projects will be scored based on two housing measures: 1. the 2019 Housing Performance Score for the city or township in which the project is located (40 points) and 2. the project's connection to affordable housing (10 points) as described below.

Part 1 (40 points): Housing Performance Score

A city or township's housing performance score is calculated annually by the Metropolitan Council using data from four categories: new affordable or mixed-income housing completed in the last ten years; preservation projects completed in the last seven years and/or substantial rehabilitation projects completed in the last three years; housing program participation and production, and housing policies and ordinances; and characteristics of the existing housing stock. Data for the housing performance scores are updated each year by the Council, and the city or township is provided with an opportunity to review and revise the information.

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Council staff will use the most current housing score for each city or township. If the project is located in more than one jurisdiction, the points will be awarded based on a weighted average using length or population of the project in each jurisdiction. For stand-alone intersection, bridge, underpass, and interchange projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer. If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewer development), the project will not be disadvantaged by this measure and the project's total score will be adjusted during scoring to remove this scoring measure.

RESPONSE: (NOTE: The below bullets vary slightly by funding category)

- City/Township: _____
- Total project cost: _____
- Length of Segment (For stand-alone projects, enter population from Regional Economy map) within each City/Township: _____
- Percent of total funds to be spent within City/Township: _____

Part 2 (10 points): Affordable Housing Access

This measure is a qualitative scoring measure. Describe and map any affordable housing developments—planned, under construction or existing, within ½ mile of the proposed project. The applicant should note the development stage, number of units, number of bedrooms per unit, and level of affordability using 2019 affordability limits. Also note whether the affordability is guaranteed through funding restrictions (i.e. LIHTC, 4d) or is unsubsidized, if housing choice vouchers are/will be accepted, and if there is a fair housing marketing plan required or in place.

Describe how the proposed project will improve or impact access for residents of the affordable housing locations within ½ mile of the project. This should include a description of improved access by all modes, automobiles, transit, bicycle and pedestrian access. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements.

RESPONSE:

(Limit 2,100 characters; approximately 300 words):

SCORING GUIDANCE (50 Points)

Part 1 (40 points): The applicant with the highest 2019 Housing Performance Score will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a Housing Performance Score of 55 and the top project had a Housing Performance Score of 90, this applicant would receive $(55/90) \times 40$ points or 24 points.

Projects will use the city Housing Performance Score based on the project location. If a project is located in more than one jurisdiction, the points will be awarded based on a weighted average of the city or township scores for the project location based on the length of the project in each jurisdiction. For stand-alone roadway (intersection, bridge, underpass, and interchange) projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points

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will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer.

If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewer development), the project's total score will be adjusted as a result. If this is the case, the hold-harmless method will be used: the total points possible in the application will be 960 instead of 1,000. The total points awarded through the rest of the application (900 as a hypothetical example) will be divided by 960, then multiplied by 1,000. Therefore, a project scoring 900 out of 960, will equate to 938 points on a 1,000-point scale. If a portion of the project is located in a city with an affordable housing allocation and the other portion is located in a township with no affordable housing allocation, then a combination of the Housing Performance Score (or weighted average) and the hold-harmless method should be used. This will result in a total score that will be somewhere between 960 and 1,000; then the score will need to be adjusted to fit a 1,000-point scale. NOTE: Any community without a Housing Performance Score in 2018 will be awarded the better of its new score in 2020 and the above method. NOTE: in these cases, the raw points from Part 2 will be included in the 960-point total.

Part 2 (10 points): The project that best provides meaningful improvements to access to the affordable housing units will receive the full 10 points. Multiple projects may receive the highest possible score of 10 points based on this assessment. Remaining projects will receive a share of the full points at the scorer's discretion.

Final Score (50 points): The scores in Parts 1 and 2 will be totaled. If no application gets 50 points, the highest-scoring project will be awarded 50 points, with other projects adjusted proportionately.

Note: Metropolitan Council staff will score this measure.

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4. Infrastructure Age/Condition (175 Points)

This criterion will assess the age of the roadway facility being improved. Roadway improvement investments should focus on the higher needs of an aging facility, whereas, improvements to a recently reconstructed roadway does not display an efficient use of funds.

- A. **MEASURE:** Identify the year of the roadway's original construction or most recent reconstruction. If the reconstruction date is used for the roadway, a full reconstruction must have been completed during the indicated year. Routine maintenance, such as an overlay or sealcoating project does not constitute a reconstruction and should not be used to determine the infrastructure age.

If construction was completed over several years, enter the segment lengths for each year. The average age will be calculated.

RESPONSE:

- Year of original roadway construction or most recent reconstruction: _____
- Location(s) used: _____

SCORING GUIDANCE (50 Points)

The applicant with the oldest roadway will receive full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored was constructed 41 years ago and the oldest project was constructed 48 years ago, this applicant would receive $(41/48) * 50$ points or 43 points.

Note: Because of the reporting of year of construction, it is possible for multiple projects to receive the full allotment of 50 points.

- B. **MEASURE:** Select the geometric, structural, or infrastructure deficiencies listed below that will be improved as part of this project, as reflected in the project cost estimate. (125 Points)

RESPONSE (Select all that apply. Please identify the proposed improvement):

- Improved roadway to better accommodate freight movements: 0-15 pts
 - *RESPONSE (Limit 700 characters; approximately 100 words):*
- Improved clear zones or sight lines: 0-10 pts
 - *RESPONSE (Limit 700 characters; approximately 100 words)*
- Improved roadway geometrics: 0-15 pts
 - *RESPONSE (Limit 700 characters; approximately 100 words)*
- Access management enhancements: 0-20 pts
 - *RESPONSE (Limit 700 characters; approximately 100 words)*
- Vertical/horizontal alignment improvements: 0-10 pts
 - *RESPONSE (Limit 700 characters; approximately 100 words)*
- Improved stormwater mitigation: 0-10 pts
 - *RESPONSE (Limit 700 characters; approximately 100 words)*
- Signals/lighting upgrades: 0-10 pts
 - *RESPONSE (Limit 700 characters; approximately 100 words)*
- Other Improvements: 0-10 pts

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- *RESPONSE (Limit 700 characters; approximately 100 words)*

SCORING GUIDANCE (125 Points)

Within each improvement sub-measure, the answer most responsive to the need will receive full points (e.g., the top project that improves clear zones or sight lines will receive 10 points), with each remaining project receiving a share of the full points at the scorer's discretion. It is possible for more than one project to receive maximum points for a sub-measure.

The highest-scoring application for this measure will be adjusted to receive the full 125 points. Remaining projects will receive a proportionate share of the full points equal to the points for the project being scored divided by the points assigned to the highest-scoring project multiplied by the maximum points available for the measure (100). For example, if the application being scored had 25 points and the top project had 50 points, this applicant would receive $(25/50) \times 125$ points or 63 points.

5. Congestion Reduction/Air Quality (80 Points)

This criterion measures the project's ability to reduce congestion. In addition, it will address its ability to improve congested intersections operating at unacceptable levels of service during peak hour conditions. The project will also be measured based on its ability to reduce emissions.

- A. **MEASURE:** Conduct a capacity analysis at one or more of the intersections (or rail crossings) being improved by the roadway project using existing turning movement counts (collected within the last three years) in the weekday a.m. or p.m. peak hour and the Synchro or HCM software. The applicant must show the current total peak hour delay at one or more intersections (or rail crossings) and the reduction in total peak hour intersection delay at these intersections (or rail crossings) in seconds due to the project. If more than one intersection (or rail crossing) is examined, then the delay reduced by each intersection can be added together to determine the total delay reduced by the project.
- For roadway projects that include a railroad crossing, the applicant should conduct fieldwork during either the weekday a.m. or p.m. peak hour to determine the total peak hour delay reduced by the project. Applicants can also add together intersection delay reduced and railroad delay reduced, if they both will be improved by the project.
 - The applicant should include the appropriate Synchro or HCM full reports (including the Timing Page Report) that support the improvement in total peak hour delay and should conduct the analysis using the following:
 - Under the network settings, all defaults should be used for lanes, saturation flow rates, volumes, and simulation
 - Use Synchro's automatic optimization to determine cycle, offset and splits (for traffic signals). Use the setting when assessing delay both with and without the project. This methodology will ensure that all applicants start with their signal systems optimized when determining existing delay.
 - Project improvements assumed in the build condition should be reflected in the total project cost, such as additional through or turn lanes and protective left-turn phasing
 - Roadway lengths for intersection approaches must be the same length for before and after scenarios
 - An average weekday should be used for the existing conditions instead of a weekend, peak holiday, or special event time period that is not representative of the corridor for most of the year

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Total Peak Hour Delay Reduced (Seconds) = Total Peak Hour Delay/Vehicle x Vehicles Per Hour

RESPONSE:

- Total Peak Hour Delay/Vehicle without the Project (Seconds/Vehicle): _____
- Total Peak Hour Delay/Vehicle with the Project (Seconds/Vehicle): _____
- Total Peak Hour Delay/Vehicle Reduced by the Project (Seconds/Vehicle): _____ (automatically calculated)
- Volume (Vehicles Per Hour): _____
- Total Peak Hour Delay Reduced by the Project (Seconds): _____ (automatically calculated)

EXPLANATION of methodology used to calculate railroad crossing delay, if applicable (Limit 1,400 characters; approximately 200 words):

SCORING GUIDANCE (50 Points)

The applicant with the most peak hour vehicle delay reduced by the project improvement will receive the full points for the measure. Remaining projects will receive a proportionate share of the points. For example, if the application being scored reduced delay by 5,000 seconds and the top project reduced delay by 25,000 seconds, this applicant would receive $(5,000/25,000)*50$ points, or 10 points.

- B. **MEASURE:** Using the Synchro or HCM analysis completed in the previous measure, identify the total peak hour emissions reduction in kilograms (CO, NOX, VOC) due to the project. The applicant should include the appropriate Synchro or full HCM reports (including the Timing Page Report) that support the improvement in total peak hour emissions. If more than one intersection is examined, then the emissions reduced by each intersection can be added together to determine the total emissions reduced by the project.

Roadway projects that do not include railroad grade-separation elements:

- Total Peak Hour Emissions Reduced (Kilograms)= Total Peak Hour Emissions without the project – Total Peak Hour Emissions with the Project

RESPONSE:

- Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms): _____
- Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms): _____
- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms): _____ (calculated online)

If more than one intersection is examined, the response should include a total of all emissions reduced.

Roadway projects that include railroad grade-separation elements:

- For roadway projects that include a railroad crossing, the applicant needs to input four variables before and after the project to determine the change in emissions. Those variables include: speed, vehicle mile traveled, delay, and total vehicle stops. The applicant needs to conduct fieldwork during either the a.m. or p.m. peak hour to determine the existing

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conditions and then detail any assumptions used for conditions after the project is built. The variables will be used in the exact same equation used within the software program (i.e., Synchro) required of the other project types. Therefore, the approach to calculate the kilograms emissions reduced for railroad grade-separation projects will be comparable to intersection improvement projects.

RESPONSE:

- Cruise speed in miles per hour without the project: _____ (Applicant inputs number)
- Vehicle miles traveled without the project: _____ (Applicant inputs number)
- Total delay in hours without the project: _____ (Applicant inputs number)
- Total stops in vehicles per hour without the project: _____ (Applicant inputs number)
- Cruise speed in miles per hour with the project: _____ (Applicant inputs number)
- Vehicle miles traveled with the project: _____ (Applicant inputs number)
- Total delay in hours with the project: _____ (Applicant inputs number)
- Total stops in vehicles per hour with the project: _____ (Applicant inputs number)
- Fuel consumption in gallons (F1)
- Fuel consumption in gallons (F2)
- Fuel consumption in gallons (F3)

Speed = cruise speed in miles per hour

Total Travel = vehicle miles traveled

Total Delay = total delay in hours

Stops = total stops in vehicles per hour

$K1 = 0.075283 - 0.0015892 * \text{Speed} + 0.000015066 * \text{Speed}^2$

$K2 = 0.7329$

$K3 = 0.0000061411 * \text{Speed}^2$

F1 (or F2 – without the project) = Fuel consumption in gallons

$F1 = \text{Total Travel} * k1 + \text{Total Delay} * k2 + \text{Stops} * k3$

$F2 = \text{Total Travel} * k1 + \text{Total Delay} * k2 + \text{Stops} * k3$

$F3 = F1 - F2$

$CO = F3 * 0.0699 \text{ kg/gallon}$

$NOX = F3 * 0.0136 \text{ kg/gallon}$

$VOC = F3 * 0.0162 \text{ kg/gallon}$

Equation Automatically Provides Emissions Reduced:

- Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
_____ (Online Calculation)

EXPLANATION of methodology and assumptions used (Limit 1,400 characters; approximately 200 words):

SCORING GUIDANCE (30 Points)

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The applicant with the most kilograms reduced by the project improvement will receive the full points for the measure. Remaining projects will receive a proportionate share of the full. For example, if the application being scored reduced emissions by 3 kilograms and the top project reduced emissions by 5 kilograms, this applicant would receive $(3/5) \times 30$ points or 18 points.

6. Safety (180 Points)

This criterion addresses the project's ability to correct deficiencies and improve the overall safety of a roadway facility. It will assess the project's monetized safety benefits.

A. **MEASURE:** Respond as appropriate to one of the two project types below. (175 Points)

Roadway projects that do not include railroad grade-separation elements:

Calculate the reduction in the total number of crashes due to improvements on the A-minor arterial or non-freeway principal arterial made by the project. The applicant must base the estimate of crash reduction on the methodology consistent with the latest Highway Safety Improvement Program (HSIP) application (www.dot.state.mn.us/stateaid/trafficsafety.html). Applicants should focus on the crash analysis for reactive projects.

Crash data must be obtained for the project length using the MnDOT TIS system average for calendar years ~~2016-2018~~ through ~~2018~~2020. Crash data should include all crash types and severities, including pedestrian and bicycle crashes.

Applicants should request crash data from MnDOT as early as possible. The applicant must then attach a listing of the crashes reduced and the HSIP Benefit/Cost (B/C) worksheet (www.dot.state.mn.us/stateaid/trafficsafety.html) that identifies the resulting benefit associated with the project. As part of the response, please detail and attach the crash modification factor(s) used from FHWA's Crash Modification Factors Clearinghouse: <http://www.cmfclearinghouse.org/>. As part of the Regional Solicitation Before & After Study, Phase 2 (2021), a list of commonly used crash modification factors was created. Applicants have the option to use these crash modification factors (posted on the Metropolitan Council's Regional Solicitation website, under Application Resources) or find a more appropriate one on FHWA's Clearinghouse.

This measure requests the monetized safety benefit of the project. The cost of the project is scored in the Cost Effectiveness criterion.

RESPONSE:

- Crash Modification Factors Used (Limit 700 characters; approximately 100 words): _____
- Rationale for Crash Modifications Selected (Limit 1,400 characters; approximately 200 words): _____
- Project Benefit (\$) from B/C ratio: _____
- Total Fatal (K) Crashes: _____
- Total Serious Injury (A) Crashes: _____
- Total Non-Motorized Fatal and Serious Injury Crashes: _____
- Total Crashes: _____
- Total Fatal (K) Crashes Reduced by Project: _____
- Total Serious Injury (A) Crashes Reduced by Project: _____
- Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project: _____
- Total Crashes Reduced by Project: _____

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Upload Crash Modification Factors and B/C Worksheet.

Roadway projects that include railroad grade-separation elements:

Since the number of observed crashes at an existing at-grade railroad crossing is minor compared to an intersection, this measure will assess crash risk exposure that exists in order to compare projects. As a proactive safety measure, railroad grade-separation projects eliminate the crash risk exposure.

Crash Risk Exposure Eliminated = current average annual daily traffic volume x average number of daily trains at the at-grade crossing

RESPONSE:

- Current AADT volume: _____
- Average daily trains: _____
- Crash Risk Exposure eliminated: _____

SCORING GUIDANCE (175 Points)

This measure will be considered separately for projects that do and do not include a railroad grade-separation project. As a result, two projects (one without a railroad grade-separation project and one with a railroad grade-separation) may receive the full points.

For projects that do not include a grade-separation project, the applicant with the highest dollar value of benefits will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had safety benefits of \$11,000,000 and the top project had safety benefits of \$16,000,000, this applicant would receive $(11,000,000/16,000,000)*175$ points or 120 points.

For railroad grade-separation projects, the applicant with the highest crash risk exposure eliminated due to the project will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored reduced 11,000 exposures and the top project reduced 16,000, this applicant would receive $(11,000 /16,000)*175$ points or 120 points.

- B. **MEASURE:** Discuss how the project will improve safety for pedestrians. Safety countermeasures for pedestrians can include those identified by the FHWA as part of its [Safe Transportation for Every Pedestrian program](#) or others in its [Proven Safety Countermeasures](#) (e.g., pedestrian refuge islands, raised crosswalks, pedestrian hybrid beacons, leading pedestrian intervals). More information about pedestrian safety best practices is also available in MnDOT's [Best Practices for Pedestrian/Bicycle Safety](#).

SCORING GUIDANCE (30 Points)

The project that will provide the most improvement to pedestrian safety will receive full points. Remaining projects will receive a share of the full points at the scorer's discretion.

Commented [PS4]: See information item for proposed new text, which would replace this content.

Roadway Reconstruction/Modernization

7. Multimodal Elements and Existing Connections (110 Points)

This criterion measures how the project improves the travel experience, safety, and security for other modes of transportation and addresses the safe integration of these modes. The Transportation Policy Plan requires that explicit consideration of all users of the transportation system be considered in the planning and scoping phase of roadway projects.

- A. **MEASURE:** Describe how the project positively affects the multimodal system.
- Discuss any bicycle, pedestrian, or transit elements that are included as part of the project and how they improve the travel experience, safety, and security for users of these modes. Applicants should make sure that new multimodal elements described in the response are accounted for as part of the cost estimate form earlier in the application. Applicants should note if there is no transit service in the project area and identify supporting studies or plans that address why a mode may not be incorporated in the project (e.g., a bicycle system plan that locates bikeway facilities on a lower-volume parallel route).
 - Describe how the proposed multimodal improvements positively affect identified alignments in the Regional Bicycle Transportation Network (RBTN) or along a regional trail, if applicable.
 - Describe how the proposed multimodal improvements either provide a new, or improve an existing Major River Bicycle Barrier Crossing (MRBBC) as defined in the 2040 Transportation Policy Plan (TPP) or how they provide a new or improved crossing of a Regional Bicycle Barrier with respect to the tiered Regional Bicycle Barrier Crossing Improvement Areas as defined in the TPP and Technical Addendum to the Regional Bicycle Barriers Study (May 2019), if applicable.
 - Discuss the existing bicycle, pedestrian, and transit connections and how the project enhances these connections.
 - Discuss whether the project implements specific locations identified as being deficient in a completed ADA Transition Plan.

RESPONSE (Limit 2,800 characters; approximately 400 words):

SCORING GUIDANCE (110 Points)

The project that most positively affects the multimodal elements system will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion. The project score will be based on the quality of the improvements, as opposed to being based solely on the number of modes addressed. Points can be earned for incorporating multimodal project elements, positively affecting identified alignments in the Regional Bicycle Transportation Network (RBTN), regional trail, Major River Bicycle Barrier Crossing, or Regional Bicycle Barrier, or for making connections with existing multimodal systems or helping to implement an ADA Transition Plan. Projects do not need all of these elements to be awarded all of the points. Multimodal elements for rural roadway projects may include wider shoulders that will be used by bicyclists and pedestrians.

8. Risk Assessment (75 Points)

This criterion measures the number of risks associated with successfully building the project. High-risk applications increase the likelihood that projects will withdraw at a later date. If this happens, the region is forced to reallocate the federal funds in a short amount of time or return them to the US Department of Transportation. These risks are outlined in the checklist in the required Risk Assessment.

Roadway Reconstruction/Modernization

- A. **MEASURE:** Applications involving construction must complete the Risk Assessment. This checklist includes activities completed to-date, as well as an assessment of risks (e.g., right-of-way acquisition, proximity to historic properties, etc.).

RESPONSE (Complete Risk Assessment):

Please check those that apply and fill in anticipated completion dates for all projects, ~~except for~~ New/expanded transit service projects will receive full credit for items 2-5 but must fill out item 1. ~~or~~ Transit vehicle purchases will receive full credit.

1. Public Involvement (20 Percent of Points)

Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other options, and the public involvement completed to date on the project. The focus of this section is on the opportunity for public input as opposed to the quality of input. NOTE: A written response is required and failure to respond will result in zero points.

List Dates of most recent meetings and outreach specific to this project:

- ~~Meeting with general public:~~ _____
- ~~Meeting with partner agencies:~~ _____
- ~~Targeted online/mail outreach:~~ _____
 - ~~Number of respondents:~~ _____

100% ~~Multiple types of targeted outreach efforts (such as meetings or online/mail outreach) Meetings~~ specific to this project with the general public and partner agencies have been used to help identify the project need.

75% ~~Targeted outreach specific to this project with the general public and partner agencies have been used to help identify the project need.~~

50% At least one meeting specific to this project with the general public has been used to help identify the project need.

50% At least ~~one meeting online/mail outreach effort~~ specific to this project with the general public ~~key partner agencies~~ has been used to help identify the project need.

25% No meeting or outreach specific to the project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort.

0% No outreach has led to the selection of this project.

RESPONSE (Limit 2,800 characters; approximately 400 words). Describe the type(s) of outreach selected for this project (i.e., online or in-person meetings, surveys, demonstration projects), the method(s) used to announce outreach opportunities, and how many people participated. Include any public website links to outreach opportunities.

2. Layout (25 Percent of Points)

Roadway Reconstruction/Modernization

Layout ~~should~~ includes proposed geometrics and existing and proposed right-of-way boundaries. A basic layout should include a base map (north arrow; scale; legend;* city and/or county limits; existing ROW, labeled; existing signals;* and bridge numbers*) and design data (proposed alignments; bike and/or roadway lane widths; shoulder width;* proposed signals;* and proposed ROW). An aerial photograph with a line showing the project's termini does not suffice and will be awarded zero points.

*If applicable

100% Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/~~MnDOT that the project goes through or agencies that maintain the roadway(s)~~). If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points. - **A PDF of the layout must be attached along with letters from each jurisdiction to receive points.**

100% A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid – colleen.brown@state.mn.us.

50% Layout completed but not approved by all jurisdictions. **A PDF of the layout must be attached to receive points.**

25% Layout has been started but is not complete. A PDF of the layout must be attached to receive points.

0% Layout has not been started

~~3. Anticipated date or date of completion: _____~~

4.3. Review of Section 106 Historic Resources (15 Percent of Points)

- 100% No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge
- 100% There are historical/archeological properties present but determination of "no historic properties affected" is anticipated.
- 80% Historic/archeological property impacted; determination of "no adverse effect" anticipated
- 40% Historic/archeological property impacted; determination of "adverse effect" anticipated
- 0% Unsure if there are any historic/archaeological properties in the project area.

Project is located on an identified historic bridge:

5.4. Right-of-Way (25 Percent of Points)

Roadway Reconstruction/Modernization

100% Right-of-way, permanent or temporary easements, [and MnDOT agreement/limited-use permit](#) either not required or all have been acquired

50% Right-of-way, permanent or temporary easements, [and/or MnDOT agreement/limited-use permit](#) required, [-](#) plat, legal descriptions, or official map complete

25% Right-of-way, permanent or temporary easements, [and/or MnDOT agreement/limited-use permit](#) required, [-](#) parcels identified

0% Right-of-way, permanent or temporary easements, [and/or MnDOT agreement/limited-use permit](#) required, [-](#) parcels not all identified

Anticipated date or date of acquisition _____

6.5. Railroad Involvement (15 Percent of Points)

100% No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable)

50% Railroad Right-of-Way Agreement required; negotiations have begun

0% Railroad Right-of-Way Agreement required; negotiations have not begun.

Anticipated date or date of executed Agreement _____

SCORING GUIDANCE (75 Points)

The applicant with the most points on the Risk Assessment (more points equate to less project risk) will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 40 points and the top project had 70 points, this applicant would receive $(40/70) * 75$ points or 43 points.

9. Cost Effectiveness (100 Points)

This criterion will assess the project's cost effectiveness based on the total TAB-eligible project cost (not including noise walls) and total points awarded in the previous criteria.

- A. **MEASURE:** This measure will calculate the cost effectiveness of the project. Metropolitan Council staff will divide the number of points awarded in the previous criteria by the TAB-eligible project cost (not including noise walls). If a project has been awarded other outside, competitive funding (e.g., state bonding, Transportation Economic Development Program, Minnesota Highway Freight Program), project sponsors may reduce the total project cost for the purposes of this scoring measure by the amount of the outside funding award.

- Cost- effectiveness = total number of points awarded in previous criteria/total TAB-eligible project cost

RESPONSE (This measure will be calculated after the scores for the other measures are tabulated by the Scoring Committee):

Roadway Reconstruction/Modernization

- Total Project Cost (entered in Project Cost Form): _____ (automatically calculated)
- Enter amount of Noise Walls: _____
- Enter amount of any outside, competitive funding (attach documentation of award): _____
- Points Awarded in Previous Criteria: ____ (entered by Metropolitan Council staff)

SCORING GUIDANCE (100 Points)

The applicant with the most points (i.e., the benefits) per dollar will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the top project received .0005 points per dollar and the application being scored received .00025 points per dollar, this applicant would receive $(.0005/.00025) * 100$ points for 50 points.

The scorer for this measure will also complete a reasonableness check of the total project cost that is used for this measure. The scorer may follow up with the applicant to clarify any questions. Up to 50 percent of points awarded for this measure can be deducted if the scorer does not believe that the cost estimate is reasonable.

TOTAL: 1,100 POINTS

Bridges

Prioritizing Criteria and Measures

September 15, 2021

Definition: A bridge rehabilitation or replacement project located on a non-freeway principal arterial or A-minor arterial functionally classified roadway, consistent with the latest TAB-approved functional classification map. Bridge structures that have a separate span for each direction of travel can apply for both spans as part of one application.

The bridge must carry vehicular traffic but may also include accommodations for other modes. Bridges that are **exclusively** for bicycle or pedestrian traffic must apply under one of the Bicycle and Pedestrian Facilities application categories. Rail-only bridges are not eligible for funding. Completely new bridges, interchanges, or overpasses should apply in the Roadway Expansion application category.

Examples of Bridge Rehabilitation/Replacement Projects:

- Bridge rehabilitation of 20 or more feet with a National Bridge Inventory Condition rating of 6 or less.
- Bridge replacement of 20 or more feet with a National Bridge Inventory Condition rating of 4 or less.

Scoring:

Criteria and Measures	Points	% of Total Points
1. Role in the Regional Transportation System and Economy	195	18%
Measure A - Distance to the nearest parallel bridge	100	
Measure B - Connection to Total Jobs, Manufacturing/Distribution Jobs, and post-secondary students	30	
Measure C - Regional Truck Corridor Study tiers	65	
2. Usage	130	12%
Measure A - Current daily person throughput	100	
Measure B - Forecast 2040 average daily traffic volume	30	
3. Equity and Housing Performance	100	9%
Measure A - Benefits and outreach to disadvantaged populations	50	
Measure B - Housing Performance Score/ affordable housing connection	50	
4. Infrastructure Condition	400	36%
Measure A – National Bridge Inventory Condition Rating	300	
Measure B – Load-Posting	100	
5. Multimodal Elements and Existing Connections	100	9%
Measure A - Transit, bicycle, or pedestrian project elements & connections	100	
6. Risk Assessment	75	7%
Measure A - Risk Assessment Form	75	

Bridge Rehabilitation/Replacement

Criteria and Measures	Points	% of Total Points
7. Cost Effectiveness	100	9%
Measure A - Cost effectiveness (total points awarded/total project cost)	100	
Total	1,100	

Role in the Regional Transportation System and Economy (195 Points)

Tying regional policy (Thrive MSP2040) to the Regional Solicitation, this criterion measures the project's ability to serve a transportation purpose within the regional transportation system and economy based on how well it fulfills its functional classification role, connects to employment, post-secondary students, and manufacturing/distribution-related employment, and aligns with the Regional Truck Corridor Study tiers.

- A. **MEASURE:** Address how the project route fulfills its role in the regional transportation system by measuring the diversion to the nearest parallel crossing (must be an A-minor arterial or principal arterial) if the proposed project is closed. The project itself must be located on a non-freeway principal arterial or an A-minor arterial.

RESPONSE:

- Location of nearest parallel crossing: _____
- Explanation (*Limit 2,800 characters; approximately 400 words*): _____
- Distance from one end of proposed project to nearest parallel crossing (that is an A-minor arterial or principal arterial) and then back to the other side of the proposed project using non-local functionally-classified roadways: _____ (calculated by Council Staff)

SCORING GUIDANCE (100 Points)

The applicant with the furthest distance from the closest parallel A-minor arterial or principal arterial bridge will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the project being scored had a distance of 8 miles and the top project was had a distance of 10 miles, this applicant would receive $(8/10) * 100$ points or 80 points.

- B. **MEASURE:** Reference the "Regional Economy" map generated at the beginning of the application process. Report the employment, manufacturing/distribution-related employment, and post-secondary students enrolled within one mile, as depicted on the "Regional Economy" map.

RESPONSE: (Data from the "Regional Economy" map):

- Existing Employment within 1 Mile: _____ (Maximum of 30 points)
- Existing Manufacturing/Distribution-Related Employment within 1 Mile: _____ (Maximum of 30 points)
- Existing Post-Secondary Students within 1 Mile: _____ (Maximum of 18 points)

Upload the "Regional Economy" map used for this measure.

Bridge Rehabilitation/Replacement

SCORING GUIDANCE (30 Points)

All Census block groups that are included within or intersect the buffer area around the project will be included.

The applicant with the highest existing total employment will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 1,000 workers within one mile and the top project had 1,500 workers, this applicant would receive $(1,000/1,500)*30$ points or 20 points.

The applicant with the highest existing manufacturing/distribution-related employment will receive the full points. Remaining projects will receive a proportionate share of the full points equal to the existing manufacturing/distribution-related employment within one mile of the project being scored divided by the project with the highest manufacturing/distribution-related employment within one mile multiplied by the maximum points available for the measure (20). For example, if the application being scored had 1,000 manufacturing/distribution-related workers within one mile and the top project had 1,500 manufacturing/distribution-related workers, this applicant would receive $(1,000/1,500)*30$ points or 20 points.

The applicant with the highest number of post-secondary students will receive 18 points. Remaining projects will receive a proportionate share of the 18 points. For example, if the application being scored had 1,000 students within one mile and the top project had 1,500 students, this applicant would receive $(1,000/1,500)*18$ points or 12 points.

The scorer will assess if the applicant would score highest with the total employment part of the measure, the manufacturing/distribution employment part of the measure, or the education part of the measure and give the applicant the highest of the three scores out of a maximum of 30 points.

Note: Due to the use of multiple sub-measures, two applicants can receive the full 30 points.

- C. MEASURE: This measure relies on the results in the Regional Truck Corridor Study, which prioritized all principal and minor arterials based on truck volume, truck percentage of total traffic, proximity to freight industry clusters, and proximity to regional freight terminals. [The truck corridors were grouped into tiers 1, 2, and 3, in order of priority. Use the 2021 Updated Regional Truck Corridors tiers to respond to this measure: 2021 Updated Regional Truck Corridors.](#) (65 points)

[Use the final study report for this measure:](#)

RESPONSE (Select one for your project, based on the [updated 2021](#) Regional Truck Corridors Study):

- [Along Tier 1: Miles \(to the nearest 0.1 miles\): _____ \(65 points\)](#)
- [Along Tier 2: Miles \(to the nearest 0.1 miles\): _____ \(55 points\)](#)
- [Along Tier 3: Miles \(to the nearest 0.1 miles\) _____ \(45 points\)](#)
- [The project is located on either a Tier 1, Tier 2, or Tier 3 corridor: \(65 Points\) Miles \(to the nearest 0.1 miles\): _____](#)

Commented [PS1]: New text.

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- The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor: (10 Points)
- The project is not located on a Tier 1, Tier 2, or Tier 3 corridor: (0 Points)

SCORING GUIDANCE (65 Points)

The scorer will assign points based on which of the scores applies.

[If no applicant is along Tier 1, the top-scoring application\(s\) will be adjusted to 65 points, with the others adjusted proportionately.](#)

Note that multiple applicants can score the maximum point allotment.

2. Usage (130 Points)

This criterion quantifies the project's potential impact by measuring the current daily person throughput and future vehicular traffic that will be served by the project. These roadway users directly benefit from the project improvements on the A-minor arterial or non-freeway principal arterial.

- A. **MEASURE:** Metropolitan Council staff will calculate the current daily person throughput at one location on the A-minor arterial or non-freeway principal arterial bridge using the current average annual daily traffic (AADT) volume and average annual ridership. The applicant must identify the location along the project length and provide the current AADT volume from the [MnDOT 50-series maps](#) (select Twin Cities Metro Area Street Series under Traffic Volume (AADT)). [Due to the potential timing issues with when a traffic count was taken relative to the COVID-19 pandemic \(and resulting drop in traffic volumes\), applicants may also use a historic AADT volume or take their own count, assuming the methodology is consistent with MnDOT's methodology.](#) Reference the "Transit Connections" map for transit routes along the project. Ridership data will be provided by the Metropolitan Council staff, if public transit is currently provided on the project length.

- Current Daily Person Throughput = (current average annual daily traffic volume x 1.30 vehicle occupancy) + average annual daily transit ridership (2019)

RESPONSE:

- Location: _____
- Current AADT volume: _____
- Existing Transit Routes on the Project: _____
- Upload the "Transit Connections" map.

SCORING GUIDANCE (100 Points)

The applicant with highest current daily person throughput will receive the full points for the measure. Remaining projects will receive a proportionate share of the full. For example, if the application being scored had a daily person throughput of 1,000 people and the top project had a daily person throughput of 1,500 people, this applicant would receive $(1,000/1,500) \times 100$ points or 67 points.

- B. **MEASURE:** Provide the forecast (2040) average daily traffic volume at the same location on the A-minor arterial or non-freeway principal arterial bridge, as identified in the previous measure. The applicant may choose to use a county or city travel demand model based on the

Commented [PS2]: New text

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Metropolitan Council model to identify the forecast (2040) average daily traffic volume or have Metropolitan Council staff determine the forecast volume using the Metropolitan Council model and project location. Respond as appropriate to the use of one type of forecast model. (30 points)

RESPONSE:

- Use Metropolitan Council model to determine forecast (2040) ADT volume
- METC Staff-Forecast (2040) ADT volume

OR

RESPONSE:

- Identify the approved county or city travel demand model to determine forecast (2040) ADT volume
- Forecast (2040) ADT volume : _____

SCORING GUIDANCE (30 Points)

The applicant with the highest forecast (2040) ADT volume will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a daily forecast of 28,000 vehicles and the top project had a daily forecast of 32,000 vehicles, this applicant would receive $(28,000/32,000)*30$ points or 26 points.

3. Equity and Housing Performance (100 Points)

This criterion addresses the [Council's role in advancing equity](#) by examining how a project directly provides benefits to, or impacts (positive and negative) low-income populations, people of color, people with disabilities, youth and ~~the elderly~~ [older adults](#). The criterion evaluates whether the applicant engaged these populations to identify transportation needs and potential solutions and how the project will address these identified needs. The criterion also evaluates a community's overall efforts to implement affordable housing and how the project improves multimodal access to affordable housing residents.

A. MEASURE: Socio-Economic Equity

1. **Sub-measure:** Equity Population Engagement (0 to 20 points): A successful project is one that is the result of active engagement of low-income populations, people of color, persons with disabilities, youth and ~~the elderly~~ [older adults](#). Engagement should occur prior to and during a project's development, with the intent to provide direct benefits to, or solve, an expressed transportation issue, while also limiting and mitigating any negative impacts. Describe and map the location of any low-income populations, people of color, disabled populations, youth or ~~the elderly~~ [older adults](#) within a ½ mile of the proposed project. Describe how these specific populations were engaged and ~~provided outreach to~~, whether through community planning efforts, project needs identification, or during the project development process. Describe what engagement methods and tools were used and how the input [from these groups](#) is reflected in the project's purpose and need and design. Elements of quality engagement include: outreach and engagement to specific communities and populations that are likely to be directly impacted by the project; techniques to reach out to populations traditionally not involved in community engagement related to transportation projects; feedback from these populations identifying potential positive and negative elements of the proposed project through engagement, study

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recommendations, or plans that provide feedback from populations that may be impacted by the proposed project. If relevant, describe how NEPA or Title VI regulations will guide engagement activities.

(Limit 1,400 characters; approximately 200 words):

2. **Sub-measure:** Equity Population Benefits and Impacts (0 to 30 points): A successful project is one that has been designed to provide direct benefits to low-income populations, people of color, persons with disabilities, youth and ~~the elderly~~older adults. All projects must mitigate potential negative benefits as required under federal law. Projects that are designed to provide benefits go beyond the mitigation requirement to proactively provide transportation benefits and solve transportation issues experienced by Equity populations.

- a. (0 to 30 points) Describe the project's benefits to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults. Benefits could relate to pedestrian and bicycle safety improvements; public health benefits; direct access improvements for residents or improved access to destinations such as jobs, school, health care or other; travel time improvements; gap closures; new transportation services or modal options, leveraging of other beneficial projects and investments; and/or community connection and cohesion improvements. Note that this is not an exhaustive list.

(Limit 2,800 characters; approximately 400 words):

- b. (-10 to 0 points) Describe any negative impacts to low-income populations, people of color, children, people with disabilities, and ~~the elderly~~older adults created by the project, along with measures that will be taken to mitigate them. Negative impacts that are not adequately mitigated can result in a reduction in points.

(Limit 2,800 characters; approximately 400 words):

Below is a list of negative impacts. Note that this is not an exhaustive list.

- Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.
- Increased noise.
- Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.

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- Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, etc.
 - Increased speed and/or "cut-through" traffic.
 - Removed or diminished safe bicycle access.
 - Inclusion of some other barrier to access to jobs and other destinations.
 - Displacement of residents and businesses.
 - Mitigation of temporary construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings.
 - Other
3. **Sub-measure: Bonus Points (0 to 25 points)** Those projects that score at least 80% of the maximum total points available through sub-measures 1 and 2 will be awarded bonus points based on the geographic location of the project. These points will be assigned as follows, based on the highest-scoring geography the project contacts:
- ~~a. 25 points to projects within an Area of Concentrated Poverty with 50% or more people of color~~
 - ~~b-a. 20-25~~ 20-25 points to projects within an Area of Concentrated Poverty
 - ~~e-b.~~ 15 points to projects within census tracts with the percent of population in poverty or population of color above the regional average percent
 - ~~d-c.~~ 10 points for all other areas

Upload the "Socio-Economic Conditions" map used for this measure.

RESPONSE (Select one, based on the "Socio-Economic Conditions" map):

- ~~• Project is located in an Area of Concentrated Poverty where 50% or more of residents are people of color (ACP50):~~
- Project is located in an Area of Concentrated Poverty:
- Project's census tracts are above the regional average for population in poverty or population of color:
- Project located in a census tract that is below the regional average for population in poverty or populations of color, ~~or includes children, people with disabilities, or the elderly:~~

SCORING GUIDANCE (50 Points)

Each application will be qualitatively scored based on the available points for each measure and will receive the number of points awarded. If the applicant receives at least 80% of the available points, i.e., 40 points for the Roadway applications, the project will receive Bonus points as described under sub-measure 3. If an applicant qualifies for Bonus points it will result in a Socio-Economic Equity score of more than the total points available.

- B. **MEASURE:** Projects will be scored based on two housing measures: 1. the 2019 Housing Performance Score for the city or township in which the project is located (40 points) and 2. the project's connection to affordable housing (10 points) as described below.

Part 1 (40 points): Housing Performance Score

Bridge Rehabilitation/Replacement

A city or township's housing performance score is calculated annually by the Metropolitan Council using data from four categories: new affordable or mixed-income housing completed in the last ten years; preservation projects completed in the last seven years and/or substantial rehabilitation projects completed in the last three years; housing program participation and production, and housing policies and ordinances; and characteristics of the existing housing stock. Data for the housing performance scores are updated each year by the Council, and the city or township is provided with an opportunity to review and revise the information

Council staff will use the most current housing score for each city or township. If the project is located in more than one jurisdiction, the points will be awarded based on a weighted average using length or population of the project in each jurisdiction. For stand-alone intersection, bridge, underpass, and interchange projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer. If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewered development), the project will not be disadvantaged by this measure and the project's total score will be adjusted during scoring to remove this scoring measure.

RESPONSE:

- City/Township: _____
- Length of Segment (For stand-alone projects, enter population from Regional Economy map) within each City/Township: _____
- Percent of segments within each City/Township: _____

Part 2 (10 points): Affordable Housing Access

This measure is a qualitative scoring measure. Describe and map any affordable housing developments—planned, under construction or existing, within ½ mile of the proposed project. The applicant should note the development stage, number of units, number of bedrooms per unit, and level of affordability using 2019 affordability limits. Also note whether the affordability is guaranteed through funding restrictions (i.e. LIHTC, 4d) or is unsubsidized, if housing choice vouchers are/will be accepted, and if there is a fair housing marketing plan required or in place.

Describe how the proposed project will improve or impact access for residents of the affordable housing locations within ½ mile of the project. This should include a description of improved access by all modes, automobiles, transit, bicycle and pedestrian access. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements.

RESPONSE:

(Limit 2,100 characters; approximately 300 words):

SCORING GUIDANCE (50 Points)

Part 1 (40 points): The applicant with the highest 2019 Housing Performance Score will receive the full points. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had a Housing Performance Score of 55 and the top project had a Housing

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Performance Score of 90, this applicant would receive $(55/90) \times 40$ points or 24 points.

Projects will use the city Housing Performance Score based on the project location. If a project is located in more than one jurisdiction, the points will be awarded based on a weighted average of the city or township scores for the project location based on the length of the project in each jurisdiction. For stand-alone roadway (intersection, bridge, underpass, and interchange) projects, a one-mile radius-buffer will be drawn around the project. If the radius-buffer enters more than one jurisdiction, the points will be awarded based on the proportionate population of the Census blocks in each jurisdiction that are all or partially located in the area within the one-mile radius-buffer.

If a project is located in a city or township with no allocation of affordable housing need (either there is no forecasted household growth or the area does not have land to support sewer development), the project's total score will be adjusted as a result. If this is the case, the hold-harmless method will be used: the total points possible in the application will be 960 instead of 1,000. The total points awarded through the rest of the application (900 as a hypothetical example) will be divided by 960, then multiplied by 1,000. Therefore, a project scoring 900 out of 960, will equate to 938 points on a 1,000-point scale. If a portion of the project is located in a city with an affordable housing allocation and the other portion is located in a township with no affordable housing allocation, then a combination of the Housing Performance Score (or weighted average) and the hold-harmless method should be used. This will result in a total score that will be somewhere between 960 and 1,000; then the score will need to be adjusted to fit a 1,000-point scale. NOTE: Any community without a Housing Performance Score in 2018 will be awarded the better of its new score in 2020 and the above method. NOTE: in these cases, the raw points from Part 2 will be included in the 960-point total.

Part 2 (10 points): The project that best provides meaningful improvements to access to the affordable housing units will receive the full 10 points. Multiple projects may receive the highest possible score of 10 points based on this assessment. Remaining projects will receive a share of the full points at the scorer's discretion.

Final Score (50 points): The scores in Parts 1 and 2 will be totaled. If no application gets 50 points, the highest-scoring project will be awarded 50 points, with other projects adjusted proportionately.

Note: Metropolitan Council staff will score this measure.

4. Infrastructure Condition (400 Points)

This criterion will assess the age and condition of the bridge facility being improved. Bridge improvement investments should focus on the higher needs of unsafe facilities. If there are two separate spans, then the applicant should take the average bridge inventory condition rating of the two spans.

- A. **MEASURE:** Identify the lowest National Bridge Inventory condition rating among Deck, Superstructure, and Substructure from the most recent Structure Inventory Report. Attach the report to the application.

RESPONSE:

- Lowest National Bridge Inventory Condition Rating: ____
 - Deck Rating: ____
 - Superstructure Rating: ____
 - Substructure Rating: ____

Bridge Rehabilitation/Replacement

- Channel Rating: _____
- Culvert Rating: _____

Upload Structure Inventory Report.

SCORING GUIDANCE (300 Points)

The lowest National Bridge Inventory (NBI) Condition Rating among Deck, Superstructure, and Substructure will be used as the NBI rating. The ratings will be scored as follows:

- Rating of 3 or lower: 300 points
- Rating of 4: 250 points
- Rating of 5: 150 points
- Rating of 6: 100 points

B. **MEASURE:** Identify whether the bridge is posted for load restrictions.

RESPONSE: (Check box if the bridge is load-posted):

- Load-Posted (Check box if the bridge is load-posted):

SCORING GUIDANCE (100 Points)

Applicants will receive the points shown depending on whether the bridge is load-posted. The applicant can only score 0 or 100 points for this measure.

5. Multimodal Elements and Connections (100 Points)

This criterion measures how the project improves the travel experience, safety, and security for other modes of transportation and addresses the safe integration of these modes. The Transportation Policy Plan requires that explicit consideration of all users of the transportation system be considered in the planning and scoping phase of roadway projects.

A. **MEASURE:** Describe how the project positively affects the multimodal system.

- Discuss any bicycle, pedestrian, or transit elements that are included as part of the project and how they improve the travel experience, safety, and security for users of these modes. Applicants should make sure that new multimodal elements described in the response are accounted for as part of the cost estimate form earlier in the application. Applicants should note if there is no transit service in the project area and identify supporting studies or plans that address why a mode may not be incorporated in the project (e.g., a bicycle system plan that locates bikeway facilities on a lower-volume parallel route).
- Describe how the proposed multimodal improvements positively affect identified alignments in the Regional Bicycle Transportation Network (RBTN) or along a regional trail, if applicable.
- Describe how the proposed multimodal improvements either provide a new, or improve an existing Major River Bicycle Barrier Crossing (MRBBC) as defined in the 2040 Transportation Policy Plan (TPP) or how they provide a new or improved crossing of a Regional Bicycle Barrier with respect to the tiered Regional Bicycle Barrier Crossing

Bridge Rehabilitation/Replacement

Improvement Areas as defined in the TPP and Technical Addendum to the Regional Bicycle Barriers Study (May 2019), if applicable.

- Discuss the existing bicycle, pedestrian, and transit connections and how the project enhances these connections.
- Discuss whether the project implements specific locations identified as being deficient in a completed ADA Transition Plan.

RESPONSE: (Limit 2,800 characters; approximately 400 words):

SCORING GUIDANCE (100 Points)

The project that most positively affects the multimodal will receive the full points. Remaining projects will receive a share of the full points at the scorer's discretion. The project score will be based on the quality of the improvements, as opposed to being based solely on the number of modes addressed. Points can be earned for incorporating multimodal project elements, positively affecting identified alignments in the Regional Bicycle Transportation Network (RBTN), regional trail, Major River Bicycle Barrier Crossing, or Regional Bicycle Barrier, or for making connections with existing multimodal systems, or helping to implement an ADA Transition Plan. Projects do not need all of these elements to be awarded all of the points. Multimodal elements for rural roadway projects may include wider shoulders that will be used by bicyclists and pedestrians.

6. Risk Assessment (75 Points)

This criterion measures the number of risks associated with successfully building the project. High-risk applications increase the likelihood that projects will withdraw at a later date. If this happens, the region is forced to reallocate the federal funds in a short amount of time or return them to the US Department of Transportation. These risks are outlined in the checklist in the required Risk Assessment.

- A. **MEASURE:** Applications involving construction must complete the Risk Assessment. This checklist includes activities completed to-date, as well as an assessment of risks (e.g., right-of-way acquisition, proximity to historic properties, etc.).

RESPONSE: (Complete Risk Assessment):

Please check those that apply and fill in anticipated completion dates for all projects, ~~except for~~ New/expanded transit service projects will receive full credit for items 2-5 but must fill out item 1. ~~or~~ Transit vehicle purchases will receive full credit.

1. Public Involvement (20 Percent of Points)

Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other options, and the public involvement completed to date on the project. The focus of this section is on the opportunity for public input as opposed to the quality of input. NOTE: A written response is required and failure to respond will result in zero points.

List Dates of most recent meetings and outreach specific to this project:

Bridge Rehabilitation/Replacement

- Meeting with general public: _____
- Meeting with partner agencies: _____
- Targeted online/mail outreach: _____
 - Number of respondents: _____

100% Multiple types of targeted outreach efforts (such as meetings or online/mail outreach) Meetings specific to this project with the general public and partner agencies have been used to help identify the project need.

75% Targeted outreach specific to this project with the general public and partner agencies have been used to help identify the project need.

50% At least one meeting specific to this project with the general public has been used to help identify the project need.

50% At least one meeting online/mail outreach effort specific to this project with the general public key partner agencies has been used to help identify the project need.

25% No meeting or outreach specific to the project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort.

0% No outreach has led to the selection of this project.

RESPONSE (Limit 2,800 characters; approximately 400 words). Describe the type(s) of outreach selected for this project (i.e., online or in-person meetings, surveys, demonstration projects), the method(s) used to announce outreach opportunities, and how many people participated. Include any public website links to outreach opportunities.:

2. Layout (25 Percent of Points)

Layout ~~should~~ includes proposed geometrics and existing and proposed right-of-way boundaries. A basic layout should include a base map (north arrow; scale; legend;* city and/or county limits; existing ROW, labeled; existing signals;* and bridge numbers*) and design data (proposed alignments; bike and/or roadway lane widths; shoulder width;* proposed signals;* and proposed ROW). An aerial photograph with a line showing the project's termini does not suffice and will be awarded zero points.

*If applicable

100% Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/MnDOT that the project goes through or agencies that maintain the roadway(s)). If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points. - A PDF of the layout must be attached along with letters from each jurisdiction to receive points.

100% A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid – colleen.brown@state.mn.us.

Bridge Rehabilitation/Replacement

50% Layout completed but not approved by all jurisdictions. **A PDF of the layout must be attached to receive points.**

25% Layout has been started but is not complete. A PDF of the layout must be attached to receive points.

0% Layout has not been started

3. Anticipated date or date of completion: _____

4.3. Review of Section 106 Historic Resources (15 Percent of Points)

100% No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge

100% There are historical/archeological properties present but determination of "no historic properties affected" is anticipated.

80% Historic/archeological property impacted; determination of "no adverse effect" anticipated

40% Historic/archeological property impacted; determination of "adverse effect" anticipated

0% Unsure if there are any historic/archaeological properties in the project area.

Project is located on an identified historic bridge:

5.4. Right-of-Way (25 Percent of Points)

100% Right-of-way, permanent or temporary easements, and MnDOT agreement/limited-use permit either not required or all have been acquired

50% Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required, - plat, legal descriptions, or official map complete

25% Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required, - parcels identified

0% Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required, - parcels not all identified

Anticipated date or date of acquisition _____

6.5. Railroad Involvement (15 Percent of Points)

100% No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable)

50% Railroad Right-of-Way Agreement required; negotiations have begun

Bridge Rehabilitation/Replacement

0% Railroad Right-of-Way Agreement required; negotiations have not begun.

Anticipated date or date of executed Agreement _____

SCORING GUIDANCE (75 Points)

The applicant with the most points on the Risk Assessment (more points equate to less project risk) will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the application being scored had 40 points and the top project had 70 points, this applicant would receive $(40/70)*75$ points or 43 points.

7. Cost Effectiveness (100 Points)

This criterion will assess the project's cost effectiveness based on the TAB-eligible project cost (not including noise walls) and total points awarded in the previous six criteria. If a project has been awarded other outside, competitive funding (e.g., state bonding, Transportation Economic Development Program, Minnesota Highway Freight Program), project sponsors may reduce the total project cost for the purposes of this scoring measure by the amount of the outside funding award.

A. **MEASURE:** This measure will calculate the cost effectiveness of the project. Metropolitan Council staff will divide the number of points awarded in the previous criteria by the TAB-eligible project cost (not including noise walls).

- Cost effectiveness = total number of points awarded in previous criteria/total TAB-eligible project cost (not including noise walls)

RESPONSE (This measure will be calculated after the scores for the other measures are tabulated by the Scoring Committee):

- Total Project Cost (entered in Project Cost Form): _____ (automatically calculated)
- Enter amount of Noise Walls: _____
- Enter amount of any outside, competitive funding (attach documentation of award): _____
- Points Awarded in Previous Criteria: ____ (entered by Metropolitan Council staff)

SCORING GUIDANCE (100 Points)

The applicant with the most points (i.e., the benefits) per dollar will receive the full points for the measure. Remaining projects will receive a proportionate share of the full points. For example, if the top project received .0005 points per dollar and the application being scored received .00025 points per dollar, this applicant would receive $(.00025/.0005)*100$ points or 50 points.

The scorer for this measure will also complete a reasonableness check of the total project cost that is used for this measure. The scorer may follow up with the applicant to clarify any questions. Up to 50 percent of points awarded for this measure can be deducted if the scorer does not believe that the cost estimate is reasonable.

TOTAL: 1,100 POINTS

INFORMATION ITEM

DATE: July 28, 2021
TO: Technical Advisory Committee
PREPARED BY: Joe Barbeau, Senior Planner (651-602-1705)
Steve Peterson, Manager of Highway Planning and TAC/TAB
Process (651-602-1819)
Elaine Koutsoukos, TAB Coordinator (651-602-1717)
SUBJECT: 2022 Regional Solicitation: Outlier Adjustments

At the June 17 Funding & Programming Committee meeting, members discussed the topic of outlier adjustments at length. While no votes or “official” stances were taken, members tended to agree on the following points:

- An outlier can cause a scoring measure to lose its value by providing minimal differentiation between most applications.
- An adjustment can help to create differentiation between applications.
- Adjustments will diminish the advantage for the top-scoring project, and it is worth exploring mitigating that impact.
- A reasonable interpretation of when an outlier adjustment may be needed is when no application scores even 50% of the top-scoring application.
 - While there was dissent, most members thought scoring committees should use their judgment on whether it makes sense to make an adjustment.
- A reasonable outlier adjustment would be to move the second-place application to a percentage of the top application (e.g., 50% or 75%) at the discretion of the committee members.
- Not every adjustment that has been made has been successful. Committees should use care when making an adjustment.
- An outlier should be a “last resort.”

At this point, the Committee will consider providing a recommendation for how to address outliers. Some options include:

1. Do not make any changes. This will result in scoring committees continue to use the “we know it when we see it” approach to addressing outliers.
2. Disallow outlier adjustments
3. Set prescriptive parameters for a) when to adjust for an outlier and b) how to adjust.
 - When to adjust:
 - When no application scores even half of the full points scored by the top-scoring application.
 - A different approach?
 - Should a minimum number of applications be required for an outlier to be adjusted for?
 - How to adjust:
 - Allow committees to set the second-ranked application at 50% to 75% of the top-scoring project.
 - A different approach?

- Following adjustments, committees should closely examine whether the adjustment is effective. The example on page 3 shows an actual adjustment (setting the second-ranked project at the same value as the top-ranked project) and how that adjustment would have performed setting the second-ranked project at 50%.

Assuming outliers are allowed with scoring committee discretion, consideration could be given to not allowing this decision to be subject to a scoring challenge. A challenge was made in 2020, with an applicant suggesting that an outlier adjustment should have occurred on a measure.¹

Funding & Programming Committee Comments

At its July 22, 2021 meeting, members shared the following thoughts:

- Assurance needs to be made that the top-rated project benefits after any adjustment is made.
- Guidance should be provided to the scoring committee that the use of outliers should be rare.
- Council staff, the TAB Coordinator, and the TAC F&P Chair should vet the use of an outlier as part the scoring process if proposed by a scorer/scoring committee.

¹ The score was not changed, as Funding & Programming determined that the scorer and scoring committee did not have an obligation to adjust for an outlier since there are no standards.

Example of Unsuccessful Adjustment that Meets Parameters Suggested at 6/17/2021 Funding and Programming Committee Meeting

Regional Solicitation: 2018

Funding Category: Roadway Strategic Capacity

Scoring Measure: 1B Connection to Total Jobs, Manufacturing/Distribution Jobs, and Students (Connection to Total Jobs Component) NOTE: this adjustment set the second-ranked project at the full score of the first project. Shown in parentheses is the result had the second-ranked project been set at 50% of the top-ranked project, as has been suggested in recent meetings.

Employment w/i 1 mile	Score (Max 50) - Per Scoring Guidance	Final Score - Per Removal of High Scoring Outlier	Change in Gap Over Below Score	Change in Gap vs. Top
72,624	50	50 (50)	-40 (-15)	N/A (N/A)
13,974	10	50 (25)	+10 (+4)	-40 (-15)
10,291	7	37 (18)	+2 (+1)	-30 (-11)
9,813	7	35 (18)	0 (0)	-28 (-11)
9,373	6	34 (17)	+6 (+2)	-28 (-11)
7,705	5	28 (14)	+1 (0)	-23 (-9)
7,546	5	27 (14)	+3 (+2)	-22 (-9)
6,585	5	24 (12)	+1 (0)	-19 (-7)
6,172	4	22 (11)	+2 (+1)	-18 (-7)
5,460	4	20 (10)	+2 (0)	-16 (-6)
5,044	3	18 (9)	0 (0)	-15 (-6)
5,001	3	18 (9)	+8 (+3)	-15 (-6)
2,609	2	9 (5)	+4 (+2)	-7 (-3)
1,064	1	4 (2)	+1 (0)	-3 (-1)
787	1	3 (1)	+1 (0)	-2 (-1)
440	0	2 (1)	+1 (0)	-2 (-1)
276	0	1 (0)	N/A (N/A)	-1 (0)

The original scoring spread resulted in one application scoring 50 points while 16 applications scored 0 to 10 points, providing almost no differentiation among the applications not ranked first. The adjustment in the third column was meant to address this, though the change in scoring gap was marginal, primarily impacting the advantage of the top-performing application. This is shown in the far-right column, which shows the loss of margin between each project and the top-rated project. An adjustment of the second-ranked project to 50% of the top-ranked application shows a similar trend, though the gaps on the lower-ranked applications are impacted even less, as is the disadvantageous impact on the top-ranked application.

Overall, either adjustment is most beneficial to the second-ranked application and most damaging to the top-ranked application.

INFORMATION ITEM

DATE: July 28, 2021
TO: Technical Advisory Committee
PREPARED BY: Joe Barbeau, Senior Planner (651-602-1705)
Steve Peterson, Manager of Highway Planning and TAC/TAB
Process (651-602-1819)
Elaine Koutsoukos, TAB Coordinator (651-602-1717)
SUBJECT: 2022 Highway Safety Improvement Program Draft Solicitation

Attached is the 2020 Highway Safety Improvement Program (HSIP) Solicitation. Several changes were made prior to that Solicitation, and the attached shows no changes for 2022. At this point, the only change being explored is incorporation of the pedestrian safety discussed earlier at this meeting. The pedestrian safety measure being considered for the Regional Solicitation may also be considered for HSIP.

Funding & Programming Committee Comments

At its July 22, 2021 meeting, one member asked about the pedestrian safety measure. There is a pedestrian safety measure in the proactive sub-category and this may be amended to the proposed new Regional Solicitation pedestrian safety measure if approved.

HSIP

Highway Safety Improvement Program

For State Fiscal Years 2024 and 2025

Metro District Program Criteria

Minnesota Department of Transportation
Metro District Traffic Engineering
February 2020

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Appendix:

A - MnDOT Metro District Traffic Engineering Program Support Contacts

B - HSIP Metro District Process Timeline

C - Traffic Signals

D - Guidelines for HSIP-funded narrow shoulder paving in conjunction with resurfacing projects

E - Sample HSIP Benefit / Cost Worksheet

F - Recommended Service Life Criteria

HSIP Application (Form 1)

Project Information Sheet (Form 2)

Introduction

This document explains the requirements, and gives guidance for the Highway Safety Improvement Program (HSIP) to applicants desiring to obtain federal funds under the Federal FAST Act legislation. In FAST Act, the purpose of HSIP is to achieve a significant *reduction in traffic fatalities and serious injuries* on all public roads. Projects submitted should have the greatest potential of achieving this objective. See Appendix B for a timeline flowchart of the HSIP solicitation, application and evaluation process.

General Policies:

1. HSIP funds are available to MnDOT; the counties of Anoka, Carver, Chisago, Dakota, Hennepin, Ramsey, Scott, and Washington; and the State Aid eligible cities and towns within those counties. Applicants that are not State Aid cities or counties in the eight-county metro area with populations over 5,000 must contact the MnDOT Metro State Aid Office prior to submitting their application to determine if a public agency sponsor is required.
2. The maximum HSIP federal award is \$2,000,000 per project. A minimum local match of 10% of the total project cost is required. The match must be in “hard dollars.” Soft matches (i.e.; volunteer labor, donated materials, professional services) cannot be included in the match.
3. HSIP funding cannot be used as a “payback” source of funding, whereby local agencies construct a project and anticipate future reimbursement monies from HSIP funds.
4. This solicitation is for both “Proactive” and “Reactive” projects. Distribution of funds between these two project types will depend on a number of factors including the dollar amount and number of projects submitted in each category, types of projects submitted and geographic balance of projects throughout the Metro District.
5. Funding is for roadway construction and reconstruction projects designed to decrease the frequency and/or severity of crashes. These crashes can involve pedestrians, bicycles, and other non-motorized vehicles. The project must be a permanent improvement. Right-of-way, design, and construction engineering costs are not fundable and shall not be included in the project cost. Please refer to <https://safety.fhwa.dot.gov/hsip/>
6. The amount of federal funds awarded is based upon the original submission. Any increase in scope or costs will be the responsibility of the applicant.

7. Projects awarded funding through the regional HSIP solicitation are subject to the Region's "Program Year Policy" and "Scope Change Policy" available at <https://metro council.org/Transportation/Planning-2/Transportation-Planning-Process.aspx?source=child>
8. Projects may apply for both the Regional Solicitation and the Highway Safety Improvement Program (HSIP), but projects can only be awarded funds from one of the two programs.
9. The amount of funding available for this 2020 Metro District solicitation for State Fiscal Years 2024 and 2025 is approximately **\$23 million** for the two-year period. Additional funding may be available in State Fiscal Year 2022.

Qualifying Criteria

The objective of the Highway Safety Improvement Program (HSIP) is to identify, evaluate, and implement cost effective construction safety projects with a primary goal of **reducing and preventing fatal and serious injury crashes on all public roads.**

Priority will be given to smaller stand-alone, low-cost / high-benefit projects. Applicants should submit focused safety projects and not asset replacement projects unless the replacement project by itself increases safety. See Appendix C for additional traffic signal requirements. Safety features, such as guardrails, that are routinely provided as part of a broader project should be funded from the same source as the broader project. In some instances, narrow shoulder paving in conjunction with resurfacing projects may be allowed. See Appendix D for this exception.

FOR PROACTIVE PROJECTS:

For MnDOT Metro District and the Metro counties, their road safety plans should be the starting point for selecting projects for this solicitation. For state and county roads, projects that originate from a road safety plan will be given priority. For local streets, a city may propose strategies similar to what is in their county's safety plan if applicable.

The following crash data is provided to assist cities in focusing on the types of projects to submit. On local roads (MSAS and city streets) in the Metro District over the latest 5 year period available (2014-2018) there have been 1,315 fatal and serious injury crashes: 458 (35%) involved two or more vehicles colliding

- 339 (26%) involved a pedestrian
- 118 (9%) involved a bicyclist
- 96 (7%) involved hitting a tree or shrub

Seventy-five percent of the fatal and serious injury crashes fall into these four categories listed above, so the focus should be on low-cost solutions that are geared toward impacting those types of crashes.

Reactive projects should propose safety improvements that directly address the types of crashes experienced within the project area.

Priority will be given to applications that are making cost effective impacts throughout the network (at multiple locations) or via a corridor-based approach.

Signalized intersections in urban areas tend to involve more risk than other types of intersections. A focus on signalized intersections, such as countdown timers, signal retiming, enforcement lights, curb extensions, etc. would have an impact on these target crashes.

The following is a list of example projects that would be considered for proactive funding with this program:

Reduced-conflict intersections (RCI's)	Construct ped refuge islands & raised medians
Rumble strips	Enforcement lights on signals
Rumble stripEs	Turn lanes
Wider striping (6")	New guardrail (not replacement)
Embedded wet reflective striping	Frontage roads (with access removals)
Delineation for sharp curves (chevrons)	Sidewalks or trails
Cable median barrier	Narrow shoulder paving (see Appendix D)
Crosswalk enhancements (ex. RRFB's)	Signal coordination (interconnect)
Intersection lighting	Pavement messages
Corridor lighting (Freeways & Expressways)	Roundabouts
Curb extensions (bump-outs)	Stop bars
Sight distance improvements	Safety edge
Remove hazards in clear zones	Friction treatments
Pedestrian countdown timers	Road diets

FOR REACTIVE PROJECTS:

For this solicitation, proposed projects qualify for the HSIP program by having a benefit/cost (B/C) ratio of 1.0 or greater*. (Note: The B/C ratio shall exclude right-of-way costs. The cost used should be the total project cost, not the amount of requested HSIP dollars.)

*Only crashes contained within the Minnesota Department of Public Safety's database can be used to determine the B/C for project submittals. Crash data must be obtained from MnDOT. MnDOT Metro District Traffic Office will provide a crash listing, upon request.

(See Appendix A)

Prioritization Criteria

The HSIP project evaluation committee will determine if the submitted projects have met the intent of the qualifying criteria and HSIP.

Pedestrian and bicycle crashes are a focus area in the Minnesota Strategic Highway Safety Plan. Additional consideration will be given to projects which address pedestrian and bicycle safety. To account for the greater proportion of severe injuries of bike and pedestrian crashes each bike and pedestrian crash should be enter as two on the B/C worksheet.

FOR PROACTIVE PROJECTS:

For Proactive projects, priority will be given to projects identified in road safety plans, and projects that have the highest possibility of reducing the chance of fatal and serious injury crashes. The following criteria will be used in ranking proactive projects:

- Connection to the 2014-2019 Minnesota Strategic Highway Safety Plan (SHSP). This Plan can be found at the following link:
http://www.dot.state.mn.us/trafficeng/safety/shsp/Minnesota_SHSP_2014.pdf
- Cost per user exposure
- Correctable fatal and serious injury crashes (10 years, 2009 - 2018)
- Crash reduction factor for the specific strategy
- Part of a plan (safety plan or road safety audit recommendations) – include a link to or an excerpt from the existing plan
- Pedestrian and bicycle safety elements

FOR REACTIVE PROJECTS:

The reactive projects will be prioritized by:

- Highest B/C ratio
- The scoring committee will review the projects to determine how well they meet the qualifying criteria and intent of the HSIP program, to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. In addition to crash history the existence of risk factors and experience with crash types that are risk factors for more severe crashes are relevant here.
- Correctable fatal and serious injury crashes (10 years, 2009 - 2018)
- Pedestrian and bicycle safety elements

EVALUATION PROCESS:

Project proposals will be reviewed by MnDOT's Metro District Traffic Engineering unit initially to determine if they meet the qualifying criteria. The HSIP committee will finalize a prioritized list of projects to be funded.

The HSIP committee will consist of:

- MnDOT Metro District Traffic Engineer - Program Support
- MnDOT Metro Traffic Safety Specialist
- MnDOT State Traffic Safety Engineer
- Two County/City Engineers
- Metropolitan Council Regional Highway Planner

Required Material and Special Instructions

Following is a list of materials required to be submitted per project. Failure to provide this information may exclude the submission from consideration:

- HSIP application (Form 1) (See appendix for Form 1)
- Project information sheet (Form 2) (See appendix for Form 2)
- Location map
- A photograph showing the existing conditions within the project area. If awarded funds, this photograph will be utilized in the Metropolitan Council's online mapping tool to show a before-and-after comparison of the improvement. By submitting the application, the applicant is agreeing to allow the Metropolitan Council to use this photograph.
- Project plan or preliminary layout/scope of work proposed.
- Provide the AADT or an average AADT for your project area. If an intersection project, provide the AADT for the minor road too.
- For intersection projects only, provide collision diagrams. Include crash listing obtained from MnDOT. MnDOT will not provide collision diagrams.
- The applicant must include a letter of support from the agency that owns/operates the facility (if different from the applicant) indicating that it is aware of and understands the project being submitted, and that it commits to operate and maintain the facility for its design life.
- The project applicant must send written notification regarding the proposed project to all affected state and local units of government prior to submitting the application.
- Projects on MSAS and CSAH roadways must meet state aid standards.
- The project must comply with the Americans with Disabilities Act (ADA).
- In order for a selected project to be included in the Transportation Improvement Program (TIP) and approved by USDOT, the public agency sponsor must either have a current Americans with Disabilities Act (ADA) self-evaluation or transition plan that covers the public right of way/transportation, as required under Title II of the ADA. The plan must

be adopted by the local agency before the application deadline. For the 2022 funding cycle, this requirement may include that the plan is updated within the past five years. Please document which of these apply:

- The applicant is a public agency that employs 50 or more people and has an adopted ADA transition plan that covers the public right of way/transportation. Date plan adopted by governing body and link to plan: _____
- The applicant is a public agency that employs 50 or more people and does not have an adopted ADA transition plan that covers the public right of way/transportation.
- The applicant is a public agency that employs fewer than 50 people and has a completed ADA self-evaluation that covers the public rights of way/transportation. Date self-evaluation completed and link to plan: _____
- The applicant is a public agency that employs fewer than 50 people and does not have a completed ADA self-evaluation that covers the public rights of way/transportation.

FOR PROACTIVE PROJECTS:

- Provide total miles of strategy deployment.
- Provide a reasonable Crash Reduction Factor (CRF) from the FHWA’s CMF Clearinghouse (MUST include a printout of the CRF reference page) <http://www.cmfclearinghouse.org/>
- For all applications, the applicant is required to write a brief logical explanation on why they chose a particular CRF.
- Number of fatal and serious injuries in the past 10 years (2009-2018) that have occurred where you propose to implement an HSIP project. MnDOT will provide this crash data upon request. (Projects may be eligible for HSIP even if no fatal or severe injuries have occurred in your implementation area.)
- Collision diagrams may be submitted but are not required.
- Crash data shall include crashes from calendar years **2016-2018**. Only crashes contained within the Minnesota Department of Public Safety’s database can be shown. This is to ensure that all project proposals can be equally compared. A crash listing can be obtained from MnDOT upon request (see Appendix A for contact information). Crash data should include all crash types and severities, including pedestrian and bicycle crashes.

- If on a trunk highway, provide signed Intersection Control Evaluation (ICE) report for proposed intersection traffic control changes.
- MnDOT and counties, please attach copy of the appropriate page(s) from your highway safety plan for projects submitted that are referenced in your Plan.
- Discuss how the project will improve safety for pedestrians and bicyclists. Safety countermeasures for pedestrians and bicyclists can include those identified by the FHWA as part of its Safe Transportation for Every Pedestrian program or others in its Proven Safety Countermeasures (e.g., pedestrian refuge islands, raised crosswalks, pedestrian hybrid beacons, leading pedestrian intervals). More information about pedestrian and bicycle safety best practices is also available in MnDOT's Best Practices for Pedestrian/Bicycle Safety.

FOR REACTIVE PROJECTS:

- Provide a reasonable Crash Reduction Factor (CRF) from the FHWA's CMF Clearinghouse (MUST include a printout of the CRF reference page) <http://www.cmfclearinghouse.org/>
For all applications, the applicant is required to write a brief logical explanation on why they chose a particular CRF.
- The crash data shall include crashes from calendar years **2016-2018**. Only crashes contained within the Minnesota Department of Public Safety's database can be shown. This is to ensure that all project proposals can be equally compared. A crash listing can be obtained from MnDOT upon request (see Appendix A for contact information). Crash data should include all crash types and severities, including pedestrian and bicycle crashes.

If an individual crash is not in the DPS crash database, it cannot be included in the analysis or the submittal, unless the agency provides acceptable proof of the existence of the crash. Acceptable proof is a copy of the police or citizen accident report. If a crash report was not written, the crash may not be included. If the crash had no injuries and the minimum dollar amount was not met ("N" in the "\$min" box on a police report), the crash cannot be included.

Crash data requests to MnDOT should be made as soon as possible but before March 1, 2020. Requests made after March 1st may be significantly delayed due to limited resources. MnDOT will not provide collision diagrams.

- Number of fatal and serious injuries in the past 10 years (2009-2018) that have occurred where you propose to implement a HSIP project. MnDOT will provide this crash data upon request. (Projects may be eligible for HSIP even if no fatal or severe) injuries have occurred in your implementation area.)
- HSIP B/C Worksheet – A sample HSIP B/C worksheet is included in Appendix E. Refer to Appendix F for recommended service life criteria.

You can find an Excel version of a [HSIP Benefit Cost Worksheet](#) on this web page.

- If on a trunk highway, provide signed Intersection Control Evaluation (ICE) report for proposed intersection traffic control changes.
- Description of how the project meets the intent of the HSIP program (i.e. reduce fatal and serious injury crashes within the proposed project area)
- Proposed roundabouts must address mini-roundabouts as an option
- Discuss how the project will improve safety for pedestrians and bicyclists. Safety countermeasures for pedestrians and bicyclists can include those identified by the FHWA as part of its Safe Transportation for Every Pedestrian program or others in its Proven Safety Countermeasures (e.g., pedestrian refuge islands, raised crosswalks, pedestrian hybrid beacons, leading pedestrian intervals). More information about pedestrian and bicycle safety best practices is also available in MnDOT’s Best Practices for Pedestrian/Bicycle Safety.

SUBMISSION OF APPLICATION:

Applicants must send two paper copies of each project submittal along with an electronic submittal.

Paper copies to:

MnDOT, Traffic Engineering
 Attn: Lars Impola
 1500 West County Road B2
 Roseville, MN 55113

Electronic submittal to: Lars.Impola@state.mn.us

Crash Reduction Factors

A Crash Reduction Factor (CRF) is the percentage crash reduction that may be expected after implementing a given countermeasure. A CRF should be regarded as a generic estimate of the effectiveness of a countermeasure. The estimate is a useful guide, but it remains necessary to apply engineering judgment and to consider site-specific environmental, traffic volume, traffic mix, geometric, and operational conditions, which will affect the safety impact of a countermeasure.

The proposal should reference the FHWA Crash Modification Factors (CMF) Clearinghouse, which can be found at the following website <http://www.cmfclearinghouse.org/>.

For all applications, the applicant is required to write a brief logical explanation on why they chose a particular CRF.

In lieu of relying on crash reduction tables, proposals may contain an estimate of crash reductions based upon logical assumptions. The proposal will have to thoroughly demonstrate in a logical fashion how each improvement will impact each type of crash. The HSIP Committee will review the documentation for accuracy and concurrence with logic.

Some examples of acceptable estimates are listed below:

Example 1: A project is proposing closure of a median at an intersection. Logically, all left turning and cross street right angle crashes will be eliminated. (100% reduction in these types of crashes).

Example 2: A project is proposing a traffic signal revision including creating a protected left turning phase for the minor leg of the intersection. This project should reduce the amount of minor leg left turn crashes significantly (90% reduction). Additionally, any significant improvement in capacity would reduce rear end collisions slightly (10% reduction for minor capacity improvements, 20% for significant improvements).

Example 3: A project is proposing a traffic signal revision including adding left and right turn lanes. Adding turn lanes should reduce rear end collisions and some turning collisions depending on proposed versus existing phasing. (20% reduction in impacted rear end collisions is reasonable).

The project initiator may contact a member of the MnDOT review team (see Appendix A) to discuss crash reduction assumptions for each improvement project prior to submittal.

If only one improvement is included in the proposed project, the crash reduction factors from the FHWA CMF Clearinghouse, or a percentage reduction based on an estimated procedure

described above can be entered directly into the benefit/cost (B/C) worksheet. If two improvements are included in the proposed project, the overall crash reduction factor should be determined using the “multiple safety improvement crash reduction formula” described below.

Multiple Safety Improvement Crash Reduction Formula:

- **$CRF = 1 - [(1 - CRF1) \times (1 - CRF2)]$**

CRF is the overall crash reduction factor expressed as a decimal (to two significant digits) to be used on the B/C worksheet

CRF1 is the crash reduction factor for the first improvement expressed as a decimal

CRF2 is the crash reduction factor for the second improvement expressed as a decimal.

- **Each crash may only be used on one B/C worksheet.**
- **Use the total cost of the project in the denominator on the B/C worksheet(s).**
- **All individual B/C worksheets must be submitted, and the application must include an overall B/C calculation.**
- **If using multiple CRF's providing your calculation is required.**
- **No more than two CRF's per crash type and location will be allowed.**

Use of Fatal Crashes

Type of Crash	Crash Severity	Cost per Crash
Fatal (F)	1 Fatal Crash	\$12,300,000
Personal Injury (PI)	2 Serious Injury	\$680,000
Personal Injury (PI)	3 Minor Injury	\$210,000
Personal Injury (PI)	4 Possible Injury	\$110,000
Property Damage (PD)	5 Property Damage Only	\$12,000

Since fatal crashes are often randomly located, there is considerable debate as to whether they should be treated as personal injury crashes or as fatalities. Furthermore, the value assigned is subject to many considerations. With the above in mind, the following criteria shall be used when computing expected crash reduction benefits:

1. The cost assigned to a fatal crash may be used if there are two or more “correctable” fatal crashes within a three-year period (correctable is defined as the type of crash that the improvement is designed to correct).

OR

2. The cost per fatal crash may be used when there is at least one correctable fatal crash **and** two or more type “serious injury” crashes within a three-year period.

If the above criteria are not satisfied, the correctable fatal crash shall be treated as two “Serious Injury” type crashes (Fatal Crash = 2 x Serious Injury) when computing the benefit-cost ratio. To do this, enter the correctable fatal crash as two “Serious Injury” crashes in the “2” category on the HSIP B/C worksheet.

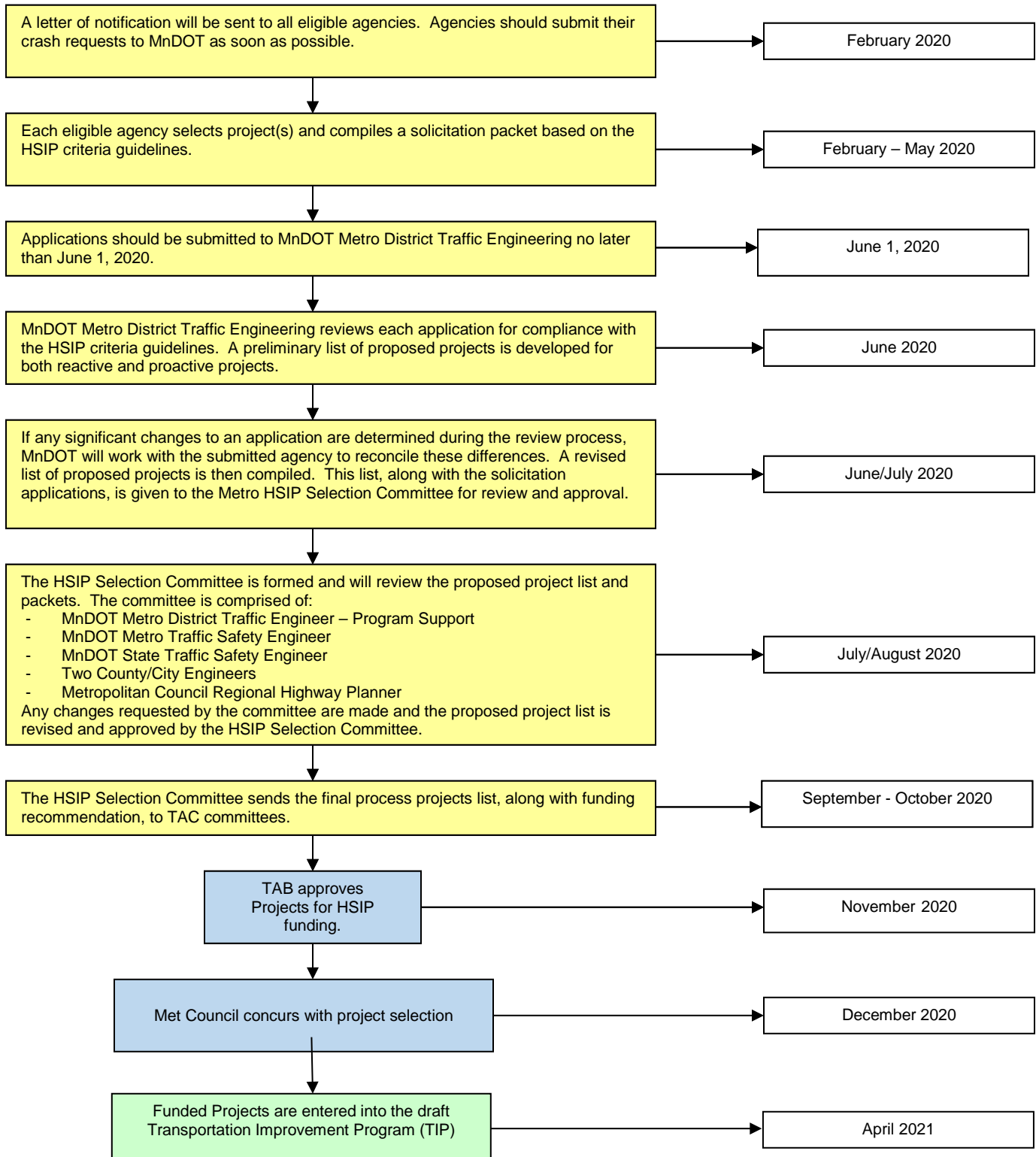
Appendix A

MnDOT Metro District Traffic Engineering Program Support Contacts

<u>Information</u>	<u>Contact</u>	<u>E-Mail</u>	<u>Phone Number</u>
Proposal Content	Kaare Festvog	kaare.festvog@state.mn.us	651/234-7814
Proposal Content	Lars Impola	lars.impola@state.mn.us	651/234-7820
Crash Information	Cherzon Riley	cherzon.riley@state.mn.us	651/234-7836

Appendix B

Highway Safety Improvement Program (HSIP) Metro District Process Timeline (2020)



Appendix C

Traffic Signals:

In most cases, traffic signals are not safety control devices. They assign right of way for vehicles and are necessary for operational purposes. However, in some cases they can improve safety. The objective for the Highway Safety Improvement Program is to reduce the occurrence of and the potential for fatalities and serious injuries resulting from crashes on all public roads” (23 CRF 924.5). Signal projects will be considered for funding provided they meet the following criteria.

1. New Signals:

- Warrant 7, Crash Experience from the Minnesota Manual on Uniform Traffic Control Devices (MMUTCD) must be met. FHWA’s Interim Approval for Optional Use of an Alternative Signal Warrant 7 – Crash Experience (IA-19) should be followed. Exceptions to meeting this warrant may be made if an adequate case is made on how the new signal will “reduce the number of, or potential for, fatalities and serious injuries” as required by FAST Act.
- All new signals on a trunk highway shall meet current MnDOT design standards. If exceptions to incorporating these standards are necessary due to site-specific conditions, explanation should be included with the application.
- Installation of red light running (enforcement) lights is strongly encouraged. Installation costs are low when installed with new signals and they provide the benefit of red light running enforcement to be accomplished by one law enforcement officer, instead of two.
- Documentation should be provided confirming that other intersection types were considered but are not feasible. Those considered should include intersection types that reduce the probability of severe right-angle crashes. Roundabouts, reduced conflict intersections (RCI) and some alternative intersection types fall into this category.

2. Existing Signals:

- Rebuilding an existing signal system may be eligible for HSIP funding if it is necessary for implementation of a geometric improvement, where the signal system cost is incidental to the primary geometric safety improvement on the project.
- Rebuilding an existing signal system without geometric improvements may be eligible for HSIP funding if additional safety devices are included, such as: adding mast arms, adding signal heads, interconnect with other signals, etc.

3. Retiming of Signal Systems:

- The development and implementation of new signal timing plans for a series of signals, a corridor, or the entire system are not eligible for HSIP funds.

Appendix D

Guidelines for HSIP-funded narrow shoulder paving in conjunction with resurfacing projects:

If narrow shoulder paving projects are funded through HSIP, it makes sense under certain circumstances to do the work in conjunction with a resurfacing project, rather than as a separate, stand-alone project. Work involving the paving of existing aggregate or turf shoulders with 1 to 2 feet of pavement may be allowed within the following guidelines:

- Narrow shoulder paving can be done in conjunction with resurfacing if the project is along one of the segments specifically identified in the County Road Safety Plan for this type of work.
- The project can be at a different location than those identified in the CRSP if it is along a higher-risk segment, as identified in the CRSP. The CRSP assigns a risk rating to highway segments based on the following criteria: traffic volume, rate and density of road departure crashes, curve density and edge assessment. The risk rating ranges from 0 (lower risk) to 5 (higher risk). **If the proposed project is along a highway segment with a rating of 4 or 5, then it can be done in conjunction with a resurfacing project.** This process ensures that narrow shoulder paving is being done at locations of higher risk rather than being driven by the schedule of pavement rehabilitation projects.
- The shoulder paving must include a safety edge and either shoulder or edgeline rumble or mumble strips.
- If a project is required to construct more than 2 foot shoulders per State Aid standards, or if the applicant plans for more than 2 foot shoulders, HSIP funding cannot be used for any additional width beyond 2 feet (local funds may be used for the additional width).
- The applicant should use regular construction dollars to upgrade guardrail and other safety hardware as part of the resurfacing project.

Appendix E

B/C Worksheet example see following 2 pages

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project



A. Roadway Description

Route _____	District _____	County _____
Begin RP _____	End RP _____	Miles _____
Location _____		

B. Project Description

Proposed Work _____		
Project Cost* _____	Installation Year _____	
Project Service Life _____	Traffic Growth Factor _____	

** exclude Right of Way from Project Cost*

C. Crash Modification Factor

_____ Fatal (K) Crashes	Reference _____
_____ Serious Injury (A) Crashes	
_____ Moderate Injury (B) Crashes	Crash Type _____
_____ Possible Injury (C) Crashes	
_____ Property Damage Only Crashes	www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

_____ Fatal (K) Crashes	Reference _____
_____ Serious Injury (A) Crashes	
_____ Moderate Injury (B) Crashes	Crash Type _____
_____ Possible Injury (C) Crashes	
_____ Property Damage Only Crashes	www.CMFclearinghouse.org

E. Crash Data

Begin Date _____	End Date _____	_____ o years
Data Source _____		
Crash Severity	< enter target crashes >	< optional 2nd CMF >
K crashes		
A crashes		
B crashes		
C crashes		
PDO crashes		

F. Benefit-Cost Calculation

\$0	Benefit (present value)	B/C Ratio = N/A
\$0	Cost	

F. Analysis Assumptions

Crash Severity	Crash Cost
K crashes	\$1,360,000
A crashes	\$680,000
B crashes	\$210,000
C crashes	\$110,000
PDO crashes	\$12,000

Link: mndot.gov/planning/program/appendix_a.html

Real Discount Rate 1.2%
Traffic Growth Rate 0.5%
Project Service Life 10 years

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.00	#DIV/o!	#DIV/o!
A crashes	0.00	#DIV/o!	#DIV/o!
B crashes	0.00	#DIV/o!	#DIV/o!
C crashes	0.00	#DIV/o!	#DIV/o!
PDO crashes	0.00	#DIV/o!	#DIV/o!

\$0

H. Amortized Benefit

<u>Year</u>	<u>Crash Benefits</u>	<u>Present Value</u>	
0	\$0	\$0	Total = \$0
0	\$0	\$0	
0	\$0	\$0	
0	\$0	\$0	
0	\$0	\$0	
0	\$0	\$0	
0	\$0	\$0	
0	\$0	\$0	
0	\$0	\$0	
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0	\$0	\$0	
0	\$0	\$0	
0	\$0	\$0	
0	\$0	\$0	
0	\$0	\$0	
0	\$0	\$0	
0	\$0	\$0	
0	\$0	\$0	
0	\$0	\$0	

Appendix F

Recommended Service Life Criteria

<u>Description</u>	<u>Service Life</u> <u>(years)</u>	<u>Description</u>	<u>Service Life</u> <u>(years)</u>
<u>Intersection & Traffic Control</u>		<u>Roadway & Roadside</u>	
Construct Turning Lanes	20	Widen Traveled Way (no lanes added)	20
Provide Traffic Channelization	20	Add Lane(s) to Traveled Way	20
Improve Sight Distance	20	Construct Median for Traffic Separation	20
Install Traffic Signs	10	Wide or Improve Shoulder	20
Install Pavement Marking	2	Realign Roadway (except at railroads)	20
Install Delineators	10	Overlay for Skid Treatment	10
Install Illumination	20	Groove Pavement for Skid Treatment	10
Upgrade Traffic Signals	20	Install Breakaway Sign Supports	10
Install New Traffic Signals	20	Install Breakaway Utility Poles	10
Retime Coordinated System	5	Relocate Utility Poles	20
Construct Roundabout	20	Install Guardrail End Treatment	10
		Upgrade Guardrail	10
		Upgrade or Install Concrete Median Barrier	20
<u>Pedestrian & Bicycle Safety</u>		Upgrade or Install Cable Median Barrier	10
Construct Sidewalk	20	Install Impact Attenuators	10
Construct Pedestrian & Bicycle		Flatten or Re-grade Side Slopes	20
Overpass/Underpass	30	Install Bridge Approach Guardrail	
Install Fencing & Pedestrian Barrier	10	Transition	10
Construct Bikeway	20		
Curb extensions and medians	20		
		Remove Obstacles	20
<u>Structures</u>		Install Edge Treatments	7
Widen or Modify Bridge for Safety	20	Install Centerline Rumble Strips	7
Replace Bridge for Safety	30		
Construct New Bridge for Safety	30		
Replace/Improve Minor Structure for Safety	20		
Upgrade Bridge Rail	20		

Source: Federal Highway Administration (FHWA)

Federal HSIP Funding Application (Form 1)

INSTRUCTIONS: Complete and return completed application to Lars Impola, MnDOT, Metro District, 1500 West County Road B2, Roseville, Minnesota 55113. (651) 234-7820. **Applications must be received by 4:30 pm or postmarked on June 1, 2020.*Be sure to complete and attach the Project Information form. (Form 2)**

I. GENERAL INFORMATION

1. APPLICANT:

2. JURISDICTIONAL AGENCY (IF DIFFERENT):

3. MAILING ADDRESS:

CITY:

STATE:

ZIP CODE:

4. COUNTY:

5. CONTACT PERSON:

TITLE:

PHONE NO.
()

CONTACT E-MAIL ADDRESS:

II. PROJECT INFORMATION

6. PROJECT NAME:

7. BRIEF PROJECT DESCRIPTION - Include location, road name, type of improvement, etc... (A complete description can be submitted separately):

8. HSIP PROJECT CATEGORY – Circle which project grouping in which you wish your project to be scored.

Proactive

Reactive

III. PROJECT FUNDING

9. Are you applying or have you applied for funds from another source(s) to fund this project? Yes No
If yes, please identify the source(s):

10. FEDERAL AMOUNT*: \$

13. MATCH % OF PROJECT TOTAL:

11. MATCH AMOUNT: \$

14. SOURCE OF MATCH FUNDS:

12. PROJECT TOTAL: \$

15. REQUESTED PROGRAM YEAR(S) : SEE NOTE BELOW**

2024 2025 Either year

16. SIGNATURE:

17. TITLE:

***Would you accept a federal award that covers 80% of the total project cost if non-HSIP federal funds were awarded? _____**

****NOTE: If funding becomes available in 2022 or 2023 would this project be able to be advanced to meet this schedule? _____ Which years would work? _____**

PROJECT INFORMATION (Form 2)

(To be used to assign State Project Number after project is selected)

Please fill in the following information as it pertains to your proposed project. Items that do not apply to your project, please label N/A. **Do not send this form to the State Aid Office. For project solicitation package only.**

COUNTY, CITY, or LEAD AGENCY _____

FUNCTIONAL CLASS OF ROAD _____

ROAD SYSTEM _____ (TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET)

NAME OF ROAD _____ (Example: 1st Street, Main Avenue)

ZIP CODE WHERE MAJORITY OF WORK IS BEING PERFORMED _____

APPROXIMATE BEGIN CONSTRUCTION DATE (MO/YR) _____

APPROXIMATE END CONSTRUCTION DATE (MO/YR) _____

LOCATION: From: _____

To: _____

(DO NOT INCLUDE LEGAL DESCRIPTION)

TYPE OF WORK _____

(Examples: GRADE, AGG BASE, BIT BASE, BIT SURF, SIDEWALK, CURB AND GUTTER, STORM SEWER, SIGNALS, LIGHTING, GUARDRAIL, BIKE PATH, PED RAMPS, BRIDGE, PARK AND RIDE, ETC)

4. Funding and Programming Committee (Michael Thompson, Chair)

No items.

6. Information Items

1. Twin Cities Highway Mobility Needs Study

Mr. Peterson presented this item along with Paul Czech from MnDOT. On this study, MnDOT and the Metropolitan Council set a highway mobility target for the Minnesota State Highway Investment Plan (MnSHIP). This effort will inform several other efforts including an equity study, regional transportation and climate change study, electric vehicle planning study, Principal Arterial Intersection Conversion Study, and TPP goals.

Mr. Keel asked how the goal of 40 annual hours of delay per person compares to other regions. Paul Morris from SRF said that the Twin Cities rates roughly in the middle among peer regions Denver, Seattle, San Diego, and Tampa. Mr. Keel asked whether transit and transit advantages were considered, to which Mr. Morris said that the delay only considers the highway mode, though those on other modes could experience the same change. He added that transit experiences similar benefits to highways and that mode-shift is a contributor.

Mr. Robjent asked why the total vehicle miles traveled (VMT) flattened, to which Mr. Morris said that a fixed land use distribution was assumed so elasticity was not considered. Ms. Hager asked how the target aligns with the VMT reduction target and greenhouse gas emission reduction target. Mr. Czech said that the studies occurred simultaneously, which limited the opportunity to assess how much those targets will be addressed. Cole Hinker, from the MTS asked whether any city has reduced its delay per capita, to which Mr. Czech said that a researcher told him that this happened in Houston in the early 1970s. Mr. Peterson added that per capita delay is used because regions are growing.

2. Transit Background from the 2020 Regional Solicitation

Mr. Peterson summarized the process that led to the establishment of a dedicated bus rapid transit project, along with which came a limitation to total bus rapid transit funding a guarantee of funding in a suburban transit market. The limitation led to skipping of some higher-scoring projects.

Mr. Hiniker said that the pros and cons table is staff's qualitative assessment and members should provide feedback prior to the upcoming TAB meeting.

3. Regional Solicitation: Application Category Purpose Statement

Mr. Peterson shared updated purpose statements to the funding categories, which come from a recommendation in the Before and After Study. This could serve as a starting point to the next Regional Solicitation overhaul in two cycles.

4. Regional Solicitation: Application Category Criteria and Weighting

Mr. Barbeau said that the TIP public comment resulted in 146 comments. He shared the draft criteria weighting, which showed no changes since 2020. He said that the Funding & Programming Committee had concerns that projects performing well in Safety and Congestion/Air Quality were not scoring well overall and could be worth more points overall and that safety could also be weighed more heavily than Congestion/Air Quality.

Mr. Mareck said that he would need more information on how they related to the regional outcomes at the system level before he could provide feedback on weighting.

Ms. Hager said that the suggestion to increase safety weight is related to conversations about Toward Zero Deaths.

Ms. Mitteco said that the weight given to multimodal facilities seems high in the Pedestrian Facilities Category, given that the measure was designed to assure that roadways address other modes. She added that Pedestrian Facilities projects are small, so 14% is a high weight to provide that criterion in that category. Mr. Barbeau said that this measure can incorporate bikes. He added that the higher percentage could be related to a smaller number of measures in the category. Ms. Koutsoukos said that TAB weighted each measure within each category based on priorities.

Mr. Mareck said that there should be a broader discussion about these investments in relation to the over-investment strategy for the region, which should occur in development of the Transportation Policy Plan (TPP).

Ms. Hager commented on the Spot Mobility and Safety category, recommending that safety and congestion points, which are evenly split, should be two-thirds to safety and one-third to congestion because pedestrian fatality trends are worsening. Mr. Ellos echoed Ms. Hager's comment and said Hennepin County is supportive of that approach. Ms. Mitteco and Chair Solberg expressed support. Mr. Culver expressed concern with recommending specific targets to TAB. Chair Solberg asked whether the recommendation to shift points towards safety without a specific proportion being named, with which Ms. Hager was agreeable.

5. Regional Solicitation: Funding Guarantees and Limitations

Mr. Barbeau reminded members of the guaranteed funding for each roadway functional classification, the arterial bus rapid transit project, the \$32M ABRT/BRT maximum total award, the transit new market guarantee, and the \$10 M bridge target. Mr. Barbeau said that in 2014 only one bridge project was funded, which made some TAB members unhappy. The target allows for two projects to likely be funded, while maintaining flexibility.

6. Regional Solicitation: Scoring Measure Changes

Mr. Barbeau said that staff is targeting scoring measures that presented problems for applicants or scorers. The risk assessment measure confused some with its definition of layouts and rights-of-way, as well as scoring public involvement. Proposed changes showed a clearer definition of a layout and broadened the scoring range. For right-of-way, staff suggested adding language involving MnDOT agreements and limited use agreements. A simplification and clarification of the public involvement measure is also needed. Staff clarified that this sub-measure is about opportunity for involvement as opposed to quality of feedback. Staff also drafted language focusing less on meetings to better acknowledge other outreach methods.

Mr. Kosluchar asked about the use of the phrase "project need" as opposed to "project outcomes" or "performance," to which Mr. Barbeau replied that it is meant to applicants determine project need. Ms. Koutsoukos said that projects have been withdrawn in the past because of public backlash. Mr. Kosluchar said that many needs are identified in planning documents that the public may not understand in short notice and expressed uncertainty about the appropriateness of the word "need."

Ms. Hager asked whether connecting with key partner agencies is captured elsewhere in the Regional Solicitation. Mr. Barbeau replied that this phrase is not included elsewhere. Ms. Koutsoukos said that points from the partner agencies are awarded via the layout. Ms. Hager said that this is a larger issue than layouts and that it is important to have early coordination. Mr. Barbeau said that letters of support

could cover this and that the removal of the phrase was related to simplifying the measure. Ms. Koutsoukos said that in the previous cycle a county project resulted in a letter opposing the project from a city and suggested that partners be listed. Chair Solberg said that it is not only adjacent agencies but any potentially impacted agency that should be consulted. Ms. Jorgensen said that transit operations-only applicants do not fill out the risk assessment, and that this should be re-considered to include engagement in the risk assessment. Mr. Barbeau replied that this was overlooked in the last cycle and every applicant could be required to fill out the public involvement piece.

Mr. Barbeau said that staff is working with Community Development on making the affordable housing measure easier. If it cannot be done, the Housing Performance Score is likely to be maintained.

7. Regional Solicitation: Scoring Measure Outlier Adjustments

Mr. Barbeau shared the history of adjusting for outliers in proportionate scoring measures. The question now is how to define and adjust for outliers. He said that the Funding & Programming Committee settled on adjusting a second-ranked project to a proportion of the top-ranked project. Mr. Barbeau pointed to an example of an adjustment that would meet a) the general impression of an outlier and b) a standard adjustment that did not effectively impact overall spread but was particularly impactful in diminishing the advantage of the top-rated project.

Mr. Kosluchar said that the complexity shows the potential for unwanted outcomes through application of a structured rule, which shows that experienced professionals should review projects on a case-by-case basis.

8. Regional Solicitation: Potential Options for Geographic Balance

Mr. Peterson and Jed Hanson from MTS presented this information item. Mr. Peterson said that a key question is whether anything in the Regional Solicitation should be included in the application language to address geographic balance. Mr. Hanson shared graphics that showed an even distribution, by county, over the past four cycles. He also showed the location of several projects that indicated a large spread of users. Mr. Peterson said that feedback from the Funding & Programming Committee was to look at geographic balance over time and not to codify language. Chair Solberg added that historically, there has been direction not to skip higher-scoring projects. Ms. Hager expressed agreement with the Funding & Programming Committee. Ms. Mitteco said the discussion should be broader than “every county gets a project.”

7. Agency Updates

Chair Solberg announced that INFRA grant applications are due on July 12 and that MnDOT Metro District received a \$60M award for I-494.

Ms. Rief said that MAC Committee and Commission meetings are going to be in-person starting with the commission meeting on July 21.

8. Other Business and Adjournment

The meeting adjourned at 11:04 a.m.

Prepared by:

Joe Barbeau