#4: INFRASTRUCTURE FOR WALKING & BICYCLING

OPTIONAL METRIC FOR CATEGORY **A**, **B** & **C** COMMUNITIES

Bold, green font indicates metrics that must improve to be recognized at Step 5

METRIC

4.1 Miles of new or reconstructed sidewalks & trails completed in the past year
4.2 % of housing within 1 mile of a bicycle route
4.3a. Walk Score for your city or downtown
4.3 b. Transit Score for your city or downtown
4.3 c. Bike Score for your city or downtown

METRIC DEFINITION

- **Miles of new or reconstructed sidewalks & trails** include lengths of sidewalks added along streets and in parks where previously there were none, lengths of existing sidewalks that were substantially reconstructed (not just patched or repaired) and replaced, and lengths of new and reconstructed walking trails. (Metric 4.1)

- **Bicycle routes** include marked on-road bicycle routes, marked/mode-separated bicycle lanes, and off-road bicycle paths (which include multi-use and unpaved paths). (Metric 4.2)

- **Housing** means residential housing units. (Metric 4.2)

- **Walk/Transit/Bike Scores** attempt to calculate and express with a number between 0 and 100 the degree to which a city (either on average, or in a specific address such as the 'center of downtown') facilitates people to walk/shop in it. It is an imperfect (especially for smaller cities) measure of walkability (existence of sidewalks), public transportation, bikeability, and mixed uses (existence of various commercial/civic destinations that one can walk to). Imperfections include Walk Score's limited ability to factor in the users experience: we know for example that walkers rarely use an unshaded sidewalk closely sandwiched between a busy road and windowless building walls, despite useful commercial destinations close by. Additionally, Walk Score fails to count all businesses (such as home-based businesses, new businesses) and civic/useful destinations (such as family daycares). See details at https://www.walkscore.com/methodology.shtml (Metric 4.3)

- **Alternative metrics**: if you have been gathering different metrics, report those and explain how they differ from these GreenStep metrics and why you feel they are a better fit for your community.

DATA SOURCES

- City/tribal public works/engineering/parks records (Metrics 4.1 and 4.2)
- GIS maps and/or plat maps and census track data (Metric 4.2)
- http://www.walkscore.com (Metric 4.3a-c)
- See the Data Collection Process Guide for more sources and optional methods on:
  - Transit Accessibility
  - Miles of Bike and Trail Infrastructure

METRIC CALCULATION AND PUBLIC REPORTING

- **Count sidewalk and trail lengths added in the year** ending December 31st before the reporting year. While this metric counts non-motorized routes, if including new snowmobiling trails makes sense for your city, report that in the notes section of the GreenStep reporting survey.

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- **Sidewalk miles will be normalized** and reported on the GreenStep web site as annual new miles per 1000 residents. (Metric 4.1)

- **Using a map/GIS system**, draw a boundary (or zones if multiple bike routes) within which street biking (or, as the crow flies) is within 1 mile of a bike route/lane/path. Then calculate the number of residential dwelling units within the boundary or zones. Finally, compare the number of units to total units in the city and express the ratio as a percent, which is a gauge of people's access to a minimum quality biking experience. (Metric 4.2)

- **For smaller communities**, dwelling units in census tracts within a mile of bike routes can provide rough estimations. Or estimation from a city plat map may work fine. (Metric 4.2)

- **At the Walk Score website** either type in your city name and report the resulting score, or type in the street address of what you consider the heart of your city and report that score. Other approaches could be used – for example, averaging the scores resulting from street addresses in the middle of each of your defined neighborhoods or each zoning district. The overall city average number will improve if, for example, a large superblock is split by walkways/streets or if new businesses open. But usually the number will not change much from year to year. Yet the number remains as a reminder that the city can take actions to change the number. (Metric 4.3)

METRIC RATIONALE

These three data points attempt to show the degree to which a city has and is building physical infrastructure – sidewalks, trails and bicycle routes – and mixed used development that allow, facilitate and encourage walking and bicycling to useful retail/commercial destinations. Reasons for city action in this area are many:

1) 40% of Minnesotans do not have a driver's license, cannot afford a car, or are either too young or old or too disabled to drive a car. As stated by Gil Penalosa, proponent of the "8-to-80 city" (http://880cities.org), *If you create a city that's good for an 8-year old and good for an 80-year old, you will create a successful city for everyone.*

2) 40% of U.S. auto trips are less than 2 miles, and 28% are less than 1 mile - a healthful, walkable distance for many people much of the year in Minnesota - yet most of these trips are taken by car.

3) Walking and bicycling options and supportive city infrastructure that allow a household to eliminate one of two cars saves an average of $7,000/yr. which, if applied to a home mortgage or home equity loan, could finance $108,000 (assuming a 30-yr. fixed 5% mortgage).

4) The National Association of Realtor's 2011 Community Preference Survey reveals that most Americans would like to live in walkable communities - where walking is desirable because of shops, restaurants, and local business within an easy walk from their homes - as long as those communities can provide detached single-family homes.

However, not every street and not every part of a city warrants sidewalks and bicycle routes, and streets that do may not warrant them on both sides of the street. So as is often the case, cities must view these metrics within the context-sensitivity of their own city and think more of comparing their own numbers over time, not so much comparing your city to another city.

STEP 5 METRICS

A statewide Bicycle Plan and Pedestrian Plan exists, but at present there are no state-wide metric goals for cities. Therefore individual communities are best equipped to set realistic targets for metric improvement. In some small towns, no new/reconstructed sidewalks nor additional bicycle routes over time may be just fine, as these facilities may already be fully built out. And a low Walk/Transit/Bike Score may simply represent a small town that can economically support only a handful of businesses/civic destinations.

LEED FOR CITIES & COMMUNITIES CRITERIA

https://www.usgbc.org/leed/rating-systems/leed-for-cities-communities

TR Credit: Compact, Mixed Use and Transit Oriented Development
- Option 2. Walk Score and Transit Score
  - Demonstrate that each CCC achieves both a Walk Score and a Transit Score greater than 70.

TR Credit: Safe, Multimodal Accessibility
- Option 2. Pedestrian and Bicycle Infrastructure
  - Achieve a Bike + Walk minimum of 15% for journey to work trips. AND
  - Achieve any one of the following:
    - Increase the mileage of sidewalks, particularly on arterial or collector roads over a period of ten years. Reporting year must be within five years of the certification year.
    - Increase the mileage of striped or buffered bicycle lanes, cycle-tracks, parallel off-streets paths and/or other dedicated non-motorized facilities over a period of ten years. Reporting year must be within five years of the certification year.
    - Provide shade from trees or permanent structures over at least 40% of the total length of existing and planned sidewalks.

NEED HELP? CONTACT

Cole Norgaarden, GreenStep best practice advisor for **mobility options**, Minnesota Department of Transportation, 651-366-5630, cole.norgaarden@state.mn.us

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