

DRAFT

System Planning

The approach to the needs analysis is as follows:

1. Establish criteria for measuring transportation needs by mode. Two types of criteria are needed – (1) primary elements that identify the facilities needed by mode on the street system and (2) secondary elements that describe operational performance, where the desired level of operations informs the need for facilities.
2. Determine needs by mode on a citywide basis. This step establish needs by mode on a system basis and on a corridor and a district basis
3. Integrate the needs by mode on a corridor basis and prioritize among modes to establish recommendations for meeting needs and making trade-offs on a corridor-by-corridor basis.

Needs Analysis for Pedestrians and Bicycles

Typically, measures used to define pedestrian conditions are related to the absence or presence of sidewalks, the size of the walks, how circuitous the pedestrian trip is in relation to the straight line distance, and the character of the environment through which the pedestrian walks. From the planning perspective, continuity and directness are measures that can be used at the systems level. Measures related to the character of the environment tend to be too detailed to be of use at a system level and usually enter into the design process.

The measures used to determine directness are based on network type and presume some variation is present in either type of network or density of streets. In general, the more direct the pedestrian trip, the better the network performs. When this approach is used in Minneapolis, there is almost no variation in directness over much of the city, since the street network is almost entirely a grid with a very limited number of areas where curvilinear network is present. As a consequence, directness as a measure of pedestrian performance is diminished when network differential is lost. Directness is not recommended as a measure to be used in Minneapolis. The suggested measure for pedestrian conditions is the presence of continuous sidewalk connections as the minimum threshold.

The size of walks and relationship to the street (whether a planting strip is present) become questions for design criteria rather than planning criteria. The approach used to establish pedestrian needs identifies gaps in the sidewalk system and barriers that inhibit connectivity.

The system level measure used for bicycles is based on coverage and network completeness and relies upon goals previously defined in the Minneapolis Bike Plan. The Minneapolis Bike Plan integrates with Hennepin County's Bicycle Plan for regional connectivity. The approach used for bicycle needs reflects district to district connectivity needs and looks at two levels of facilities - bike lanes and off street paths/trails. As with the pedestrian measures, barriers and gaps are identified.

The gap analyses for pedestrians and bicycles are summarized on the attached maps and in the following sections.

Bicycle Gap Analysis

In order to identify breaks or gaps in the City of Minneapolis bicycle network, existing 2005 and proposed 2010 on-street and off-street bikeways, as defined in the City of Minneapolis Bike Plan, were mapped (see attached Bikeway Gap Analysis maps). Existing facilities are shown in solid lines and proposed facilities are shown in dashed lines. Most of the proposed facilities are identified in the Capital Improvement Plan (CIP) and are planned to be completed from 2006 through 2010. However, there are some facilities for which funding has yet to be identified. These include the following:

(Awaiting list from Don Pflaum, City of Minneapolis)

The basic premise for the identification of a gap is based on network completeness. The goal is to develop a bikeway system that has a spacing of two miles for off-street facilities and one mile for on-street facilities. The gaps are identified with a unique number, are listed below, and are shown in the attached maps. When identifying a gap, the intent was to avoid duplication of on-street and off-street facilities, i.e., there will not be a parallel off-street trail alongside an on-street bike-lane (Gap #18 and #24 identify the need for a north-south bicycle facility and decision on the type of facility is yet to be made). Signed bike routes were also included in the on-street facilities, but are shown in a different color on the maps so as to distinguish streets with bike lanes from shared facilities.

Gaps in Off-Street Facilities

1. 49th Avenue Trail Corridor
2. Osseo Road Trail Corridor
3. Ryan Lake Trail Corridor
4. Upper River Trail Corridor
5. Upper River Trail Corridor
6. 27th Avenue NE Trail Corridor
7. Upper River Trail Corridor
8. University Avenue Trail Corridor
9. Central Avenue Trail Corridor
10. St. Anthony Parkway Trail Corridor
11. Stinson Parkway Trail Corridor
12. East River Parkway Trail Corridor
13. NE Cedar Lake Trail Corridor
14. East River Parkway Trail Corridor
15. Oak Street Trail Corridor
16. Chicago Avenue Corridor
17. Dunwoody Trail Corridor
18. Emerson/Fremont Trail Corridor

Gaps in On-Street Facilities

19. 37th Avenue On-Street Corridor
20. Marshall On-Street Corridor
21. Fillmore Street NE On-Street Corridor
22. Lowry Ave NE On-Street Corridor
23. Como On-Street Corridor
24. Emerson/Fremont On-Street Corridor
25. Glenwood Avenue On-Street Corridor\
26. 10th Ave On-Street Corridor
27. Riverside Ave On-Street Corridor
28. 24th Street On-Street Corridor
29. Minnehaha On-Street Corridor
30. 32nd Street On-Street Corridor
31. Nicollet Avenue On-Street Corridor
32. Hennepin Avenue On-Street Corridor
33. Upton/Sheridan Avenue On-Street Corridor
34. France Avenue On-Street Corridor
35. Bryant Avenue On-Street Corridor
36. Diamond Lake Road On-Street Corridor
37. Portland Avenue On-Street Corridor
38. Bloomington Avenue On-Street Corridor

Pedestrian Gap Analysis

Similarly, a gap analysis was conducted for pedestrian facilities. The attached sidewalks map shows where walks are present and where gaps exist. The identification of gaps was based on the absence of sidewalks. Conversations with City Staff indicated that gaps in sidewalks can be present due to various reasons as follow:

- Discontinuities in the sidewalks occur at railroad crossings where it is the responsibility of the railroad to provide pedestrian crossing facilities
- Streets in industrial areas might not have sidewalks due to the nature of the land use of the area
- Gaps in sidewalks can be present due to the physical characteristics of the street like low ground, presence of mature trees, etc.
- Minnesota State Statues do not allow sidewalks around the perimeter of cemeteries.

Jurisdictional considerations also affect the completeness of the sidewalk system as follows:

- There might be gaps in the sidewalks adjacent to Park Board properties (streets along the perimeter of parks) where sidewalks are the responsibility of the Park Board (the off-street trail system shows these facilities)
- Sidewalks can be absent on streets which have been vacated or taken off the city street system. These facilities may become private or in the case of Beacon Street in the University of Minnesota campus, they become part of the University's pedestrian system
- Gaps in the sidewalk system are also present in areas which are designated for future redevelopment and sidewalk construction is included as part of the redevelopment project (that has not yet occurred)
- Sidewalks that are waiting for approval by the City

Gaps in sidewalk are shown in the attached map (Sidewalk Gap Analysis). The rationale for each gap is provided below:

1. Cemetery
2. Awaiting City approval
3. Awaiting City approval
4. Awaiting City approval
5. Awaiting City approval
6. Awaiting City approval
7. Near industrial area – some new sidewalk going in; Awaiting City approval
8. Substandard street, limited width available for walks
9. Dead-end street, limited circulation potential
10. Curb and gutter not present; asphalt parking lot at same grade as road; not fully developed
11. North side of 18th Ave NE; Awaiting City approval
12. Cemetery
13. East side of Clinton Avenue South
14. Awaiting City approval
15. Warehouse district; Awaiting City approval, will be linked to repairing streets