Sidewalk Priority Methodology

The Fresno Active Transportation Plan (ATP) Update developed a comprehensive scoring methodology to identify priority locations for sidewalk improvements. This data-driven approach evaluated each proposed sidewalk segment based on three key criteria that reflect community needs, pedestrian activity levels, and safety concerns.

Scoring Criteria

Criteria 1: Underserved Neighborhoods and Areas

This criterion identifies areas with limited exposures, environmental effects, sensitive populations, and socioeconomic factors using CalEnviroScreen 4.0[1] scores. CalEnviroScreen combines pollution burden and population characteristics to identify California communities disproportionately burdened by multiple sources of pollution. For each census block group in Fresno, sidewalk segments receive points based on the following:

Block groups with CalEnviroScreen percentile scores below 75 receive zero points, indicating areas that are not considered disadvantaged under this measure.

- Block groups scoring between 75-85 percentiles receive 5 points, representing moderately disadvantaged areas.
- Block groups scoring between 85-95 percentiles receive 10 points, indicating significantly disadvantaged areas.
- Block groups scoring above 95 percentile receive 15 points, representing the most disadvantaged communities in Fresno.

Criteria 2: Pedestrian Activity Areas

This criterion evaluates the pedestrian-generating potential of different land uses throughout the City. The methodology assigns point values based on the expected level of pedestrian activity associated with specific land use types. Each land use point influences all sidewalk segments within a quarter-mile radius, recognizing that pedestrians typically walk this distance to access destinations. The table below denotes the pedestrian activity point system for different land uses. The land uses not mentioned in this table were given zero points as those land uses are expected to generate minimal pedestrian trips.

Pedestrian Activity Level	Points	Examples of Land Uses
Special Zone	20	Colleges, elementary schools, high schools, middle schools, combined elementary and high schools, schools with parks.

Pedestrian Activity Level	Points	Examples of Land Uses
High Pedestrian Activity	15	Commercial and mixed-use central areas, corridor center mixed-use developments, regional mixed-use areas, neighborhood centers, commercial and recreational facilities, hospitals, medical centers.
Medium Pedestrian Activity	10	Special schools, community commercial areas, convention centers, community activity centers, neighborhood commercial areas, regional commercial areas, open space and community parks, open space and neighborhood parks, open space and regional parks, fairgrounds.
Low to Moderate Pedestrian Activity	5	Neighborhood commercial areas with limited scope, office commercial areas, recreational parks, public facilities, quasi-public facilities, high-speed rail stations, planned trails, government offices, professional services, public facilities in central areas.

Criteria 3: Pedestrian Safety Enhancement

This criterion addresses pedestrian safety concerns by analyzing injury collision data from 2018 to 2023. For each census block group within Fresno, the methodology evaluates the number of pedestrian injury collisions and assigns points to all sidewalk segments within that block group. Pedestrian safety enhancements received points based on the following:

- Block groups with more than 20 pedestrian injury collisions receive 15 points, reflecting areas with significant safety concerns.
- Block groups with 11-20 collisions receive 10 points, indicating moderate safety concerns.
- Block groups with fewer than 10 collisions receive 5 points, representing lower levels of safety concerns.
- Block groups with zero pedestrian collisions receive zero points.

Priority Classification

The final priority score for each sidewalk segment represents the sum of points from all three criteria.

- Sidewalk segments scoring above 30 points are classified as high priority, representing locations with the greatest need for improvements based on disadvantaged community status, high pedestrian activity, and safety concerns.
- Segments scoring between 16-30 points are classified as medium priority, indicating moderate need across the evaluation criteria.
- Segments scoring between 1-15 points are classified as low priority, representing areas that complete the network but have lower immediate need.

Geographic Information System (GIS) Analysis

This prioritization analysis of pedestrian facilities was conducted using GIS software to ensure accurate spatial relationships between sidewalk segments, land uses, census data, and collision locations. The methodology applied consistent criteria across the entire City to ensure equitable evaluation of all proposed sidewalk improvements.

The resulting analysis identified 75 miles of high-priority sidewalk improvements, 281 miles of medium-priority improvements, and 280 miles of lower-priority improvements, providing a clear framework for implementation decisions and resource allocation.