To: Erick Aune, Santa Fe Metropolitan Planning Organization
From: Rosie Dudley, Sites Southwest
Subject: Pedestrian Improvement Project Summary
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Overview of Project

In December of 2018, Santa Fe Metropolitan Planning Organization (SFMPO) and the City of Santa Fe (City) hired Sites Southwest to help prioritize the pedestrian improvement projects identified in three of Santa Fe's previous planning efforts. The Sites Southwest team's tasks included:

1. Develop scoring criteria and evaluation matrix based on improvements identified in
   a. City of Santa Fe: Transition Public Right-of-Way Update (PROW), September 2017
   b. Santa Fe Metropolitan Bus Stop and Sidewalk Connectivity Assessment, June 2016
   c. Santa Fe Metropolitan Pedestrian Master Plan (PMP) 2015-2040, August 2015
2. Using the evaluation results, identify highest priority pedestrian safety improvements using GIS mapping
3. Prepare cost estimates for the components of pedestrian improvements
4. Recommend additional safety measures that would improve overall pedestrian safety throughout the metropolitan area

This memo describes the rationale used in each task and how to use these tools going forward.

Description of Tasks

Scoring Criteria and Matrix

We have compiled a simple, yet comprehensive scoring system for all the pedestrian improvement projects with associated geo-coordinates identified in the PROW and PMP using the GIS data from the two plans. The Bus Stop and Connectivity Assessment did not have GIS data that could be integrated into the analysis; however, because bus stops were studied in the other two plans bus stop improvements are embedded in the scoring process. The result is the SFMPO Pedestrian Improvement Scoring Matrix that includes all projects identified in the two plans, including projects outside of the City Boundary within the SFMPO boundary.

The Scoring Matrix scores each type of improvement identified in the two plans, including:

- Bus stops
- Curb ramps
- Sidewalks
- Intersections

Taking Plans' Data at Face Value

The scope of this project did not include new analysis; it was dependent upon the findings from the previously referenced plans. Some of the data from the previous plans did not include explanations or justifications, thus this project had to take the analyses from those plans at face value. For example, in the case of the areas that have a high number of seniors, the PMP data did not specify what percentage of people were over 65 years old. The same is true of the areas that have high numbers of people younger than 18-years old and how schools' walk zones and hazard zones were determined.

The PROW only assessed *existing* curb ramps, so this study assumes that intersections that don't have curb ramps are identified as needed curb ramps in the intersection improvement data. The PROW also noted that facilities built or altered prior to 2012 were subject to the original 1991 ADA requirements, but does not take into account the "safe harbor" provision of the 2010 standards, which state that facilities that upgraded to the 1991 standards prior to 2012 would not be required to upgrade again to meet any new requirements that might supersede the 1991 guidelines. Some improvements may be prioritized despite having met the 1991 standards.

Criteria

Each improvement was scored according to the following criteria that were used to document the need for projects in the two plans:

1. A simplified ranking from the plan in which it was identified, described in Table 1. This simplified ranking is referred to as the "simplified priority score" and abbreviated as "SIMP_PRIO_SCORE" in GIS.
2. Whether the improvement is in an area with high percentage of residents older than 65years or under 18years (data from PMP), described in Table 2. These are residents least likely to drive.
3. Whether the improvement is in a school's "walk zone" or "hazard zone" (data from PMP), described in Table 2. Improvements within a school walk zone make it easier and safer for children to walk to school, and those in a hazard zone have the greatest impact on pedestrian safety.
4. Whether the improvement is in a densely populated area (data from PMP), described in Table 2. Compact areas with a concentrated population have the highest potential for pedestrian activity.
5. Whether the improvement is in a predominantly low-income area (data from PMP), described in Table 2. As with seniors and children, low-income families are less likely to own cars or may have only one car for the family.
6. Whether the improvement is within ¼-mile radius of a bus stop, described in Table 2. Pedestrian improvements within walking distance of a bus stop make it easier for residents to use transit.

The first sheet of the SFMPO Pedestrian Improvements Scoring Matrix includes an "Overview Sheet" that explains how to use the matrix, how each criterion was used, and what scores were assigned to each criterion. You can see the full list of each type of improvement by clicking on the associated yellow tab of each type of improvement. The yellow columns are the scoring criteria used in this process. We have hidden many columns of data from the previous plans which you can "unhide" if you'd like to see more info from the plans. This matrix was exported from GIS so includes all the GIS coordinate and location information.

Process

We simplified the scoring values given for each improvement as explained in Table 1 and rated each improvement depending on its location according to the criterion listed in Table 2.

Table 1: Scoring Process for Simplified Ranking of Each Type of Improvement

IMPROVEMENTS	SOURCE	NOTES
BUS STOPS	PROW	The PROW scored bus stops from 1-50; all projects within their highest range of 26-50 received a score of 3, scores of 11-25 received 2, scores of 1-10 received 1, scores of 0 received 0.
CURB RAMPS	PROW	The PROW scored curb ramps from 1-100; all projects within their highest ranges of 26-50 and 51-100 received a score of 3 and 4, respectively, scores of 11-25 received 2, scores of 1-10 received 1, 0 received 0.
SIDEWALKS	PROW	The PROW scored sidewalks from 1-100; all projects within their highest ranges of 26-50 and 51-100 received a score of 3 and 4, respectively, scores of 11-25 received 2, scores of 1-10 received 1, 0 received 0.
PMP SIDEWALKS	PMP	The PMP scored sidewalks as new, good, fair, or poor; all projects scored as fair and poor received a score of 3 and 4, respectively; new and good received 1 and 2, respectively, uncategorized received 0.
INTERSECTIONS	PROW	The PROW scored intersections from 1-100; all projects within their highest ranges of 26-50 and 51-100 received a score of 3 and 4, respectively, scores of 11-25 received 2, scores of 1-10 received 1, 0 received 0.

Table 2: Scoring Process for Criterion 2-6

CRITERIA	SOURCE	NOTES
Areas with Elderly (>65) and Youth (<18)	PMP	The PMP identified areas with high percentage of youth or seniors; they given a value of 5.
Public School Walk (W) and Hazard (H) Zones	PMP	The PMP identified areas for each public Elementary, Middle, and High School; walk zones were given value of 4; hazard zones were given value of 5. If a school fell into two zones, it was given the value of 5.
Areas with High Population Density	PMP	The PMP identified the population density of each part of the city; each area was given a value of 1-5 (1 being the least dense with a density range of 0-2.71; 5 being the densest with density range of 27.42-73).
Areas with Low-Income Density	PMP	The PMP identified the low-income density of each part of the city; each area was given a value of 1-5 (1 being the least dense with low-income households with a density range of 0-0.08; 5 being the highest density of low-income households with a density range of 1.43-2.49).
Areas within 1/4-mile of a Bus Stop	PROW	Using the PROW bus stop GIS layer, we created a 1/4-mile radius around each; improvements within the ¼ mile radius were given a value of 5; areas outside of the 1/4-mile were given a value of 0.

Total Scores

Each of the categories of projects' scores were totaled and described in the SFMPO Pedestrian Improvement Scoring Matrix's Overview sheet. All project types could have a highest possible score of 29, except for Bus Stops, which had the highest possible score of 28. The total scores were as follows:

- Bus Stops: Most bus stop projects scored 24 or below. Projects scored between 27 and 7. One scored 27, two scored 26 and five scored 25. None scored the possible high score of 28.
- Curb Ramps: Most curb ramps scored 26 or below. Projects scored between 28 and 2. Three scored 28 and five scored 27. None scored the possible high score of 29.
- Sidewalks: Most projects scored below 25. Projects scored between 28 and 2. Three sidewalks scored 28, 33 scored 26, and 51 scored 25. None scored the possible high score of 29.
- PMP Sidewalks: Most projects scored below 25. Projects scored between 26 and 2. Four scored 26 and 35 scored 25. None scored the possible high score of 29.
- Intersections: Most projects scored below 27. Projects scored between 28 and 2. Five scored 28 and nine scored 27. None scored the possible high score of 29.

Next Steps

The matrix should be updated with new projects as they are identified. As the MPO and City move forward with planning efforts to identify new projects, the projects should be added to the GIS data and exported to the matrix. Their scores should be tallied, and priority level determined.

Map of Highest Priority Pedestrian Improvements Projects

Based on the results of the scoring criteria and matrix created in the previous phase, Sites Southwest developed a color-coded identification scheme and prepared GIS data and the Highest Priority Projects Map identifying site locations for prioritized pedestrian safety improvements. The map includes the highest priority projects within each type of improvement; highest priority projects are all projects that scored 25 or higher.

Next Steps

As more pedestrian improvement projects are identified they should be added to the GIS data, which then can be used to rate them based on the same criteria identified in the previous task. The map can then be updated to reflect any new or completed projects. This step is essential in determining which requested projects should be prioritized first for funding and implementation. Review the highest priority projects with member governments and then work with them to get into the Capital Improvement Plan (CIP). Look for funding to address the priorities. Based on concentrations of high priority projects, designate high priority pedestrian improvement zones to complete improvements by geographic area.

Cost Estimates

Sites Southwest and Souder Miller & Associates prepared cost estimates for each type of improvement identified in the reviewed plans referenced earlier. The estimates include typical costs for pedestrian infrastructure and safety improvements, such as new and improved sidewalks, lighting, bus stops, bulb-outs, improved crosswalks, curb ramps, removal of pedestrian impediments, and sidewalk amenities, such as seating, street trees, landscaping, bike racks, and trash receptacles. The cost estimates are in the Santa Fe MPO Pedestrian Improvements Cost Estimates spreadsheet that lists the unit costs of each component of each improvement on the

main sheet; there are separate sheets (or tabs) that describe the complex components and provide more explanation of the assumptions.

Next Steps

The City and MPO can use these cost estimates to determine the cost of all components of any pedestrian improvement project. By identifying each pedestrian infrastructure or amenity needed and tallying up the cost of each, the City and MPO can have a full picture of the total budget needed to complete the project.

Other Safety Measures

Sites Southwest prepared a separate SFMPO Pedestrian Improvement Memo describing additional safety measures that the City and MPO can use to improve overall pedestrian safety. These include public education, technology, policies, and enforcement to improve overall pedestrian safety throughout the metropolitan area.

Next Steps

The City and MPO can evaluate these safety measures to determine which of these recommendations to pursue in combination with the highest priority projects to have the biggest impact on pedestrian safety improvements in Santa Fe. Consider conducting a pilot program in the highest priority pedestrian improvement zone.