Walkable Porter Ranch

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Department of Urban Studies and Planning

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Background

Porter Ranch, one of the most recently developed neighborhoods in Los Angeles, is located in the northwest region of the San Fernando Valley. The neighborhood of Porter Ranch is characterized by low-density developments of gated communities containing single-family homes. As the area was planned and developed from a car-centric focus, the idea of creating a walkable and bikeable environment was not considered. Porter Ranch Community School was identified as a vulnerable area affected by lack of planning for this specific group and in need of better community-based urban design.

Purpose

The goal of this research project was to propose guidelines focused on creating a more walkable and bikeable area to accommodate users, especially those of Porter Ranch Community School. An important part of creating this environment was to understand the existing conditions of the site, which can be defined as opportunities and constraints. Opportunities are areas of positive influence or areas already benefiting the site, whereas constraints are areas which could be improved upon. Taking these factors into consideration, recommendations were made to improve the area.

Process

Before any design guidelines, or recommendations could be proposed, it was necessary to conduct research for evidence-based decisions. This included using site analysis topics, such as traffic safety, crosswalk use, and sidewalk accessibility to better understand the study area. Input from the community was also taken into consideration in the form of cognitive mapping and questionnaires. The students of Porter Ranch Community School were asked to identify places which were familiar, problematic, favorable, and/or used for activities to complete the cognitive mapping. Members of the community gave input through the form of questionnaires to better understand their behavior and perception as pedestrians. The outcomes from the site analysis topics and community engagement were then used to create the final design guidelines.
Methodology

Community Input

The cognitive mapping was completed with the middle school students at Porter Ranch Community School. Students identified favorable and problematic places. There were a total of 96 respondents. Questionnaires were completed with pedestrians along: Mason Ave., Rinaldi St., Porter Ranch Dr., and Corbin Ave. with a total of 100 respondents.

Site Analysis

Research was conducted to form evidence-based decisions this included site analysis and community input. Fifteen site analysis topics were conducted that identified opportunities and constraints, such as: Traffic safety, streetscape of roadbeds, and sidewalk accessibility. The topics were then combined into three maps: Safety, Circulation, and Streetscape.
The safety map is composed of two main elements, daytime and nighttime visibility of the sidewalks and traffic accident information. Daytime levels of visibility are from the perspective of the buildings and nighttime levels of visibility are from the perspective of the roads. According to the Transportation Injury Mapping System (TIMS), there are no traffic accidents reported in the immediate area based on data collected from January 1, 2006 to December 31, 2016. The segment on Sesnon Boulevard adjacent to Porter Ranch Community School received the highest score for daytime and nighttime sidewalk visibility creating a safe environment for pedestrians. However, the street segment on Mason Avenue west of Porter Ranch Community School received the lowest score for daytime sidewalk visibility. The blind wall of the school and the lack of housing on the opposite side of the street means there are no eyes on the street, creating a low visibility score. As for nighttime sidewalk visibility, this same street segment scored the highest as ample lighting is provided.
The circulation map is composed of vehicle, pedestrian, and bicycle counts. The counts occurred in a 30 minute time frame, and took place at the start and at the end of the school day. The areas with highest traffic volume were surrounding the school on Mason Ave. and Sesnon Blvd. Sesnon had the highest count at 972, with Mason at 875 vehicles per 30 minutes. This finding overlaps with the questionnaire outcomes in which traffic volume was identified as a worst characteristic surrounding the school. Porter Ranch Dr. although not immediately surrounding the school, also contained high traffic volume with 631 vehicles. Pedestrian crossings (counts) were high at the intersection of Mason and Sesnon. The highest crossings took place from the school crosswalk on Mason Ave. to Sesnon Blvd. at 122. The high crossings are similar to the high vehicle count recorded on Sesnon Blvd.. Mason Ave. had the second highest crossings at 55 from the school side of the sidewalk to the opposite side of the street. It is important to note that on Sesnon Blvd., there were 6 crossings (jaywalking) recorded where there are no crosswalks present (see Streetscape Map). Pedestrians were also observed walking in bicycle lanes. The bicycle counts were the lowest with no more than two bicyclists seen on Mason Ave. and two on Sesnon Blvd. This could be due to pedestrians walking in bicycle lanes causing an unsafe obstruction for cyclists. It is also important to consider that the bicycle count was low near the high traffic volume areas on Mason and Sesnon. The low count of bicyclists could be due to the decreased level of safety and comfort in high traffic volume areas.
The streetscape map is composed of several elements: speed limits, crosswalk quality, number of lanes, urban furniture, and problem areas for both surface quality and cleanliness. There are two different speed limits found at this site. Mason Ave and Sesnon Blvd both have speed limits of 40 mph, though directly near the school is a school zone, where the speed changes to 25 mph. There are several crosswalk areas found, with most being unmarked stop sign crosswalks. The only exception is found at the intersection of Mason Ave and Sesnon. At this corner there are 4 marked signal crosswalks. Two different street layouts are found at the site, with the differences between Mason Ave and Sesnon Blvd. The following shows the differences between these streets: Sesnon Blvd consists of two lanes each direction, though the lanes are more narrow than the lanes on Mason Ave. Streetlights are the only urban furniture found at the site. They are found evenly spaced along the roadways. There are not many problems areas found at the site, though the sidewalk near the school on Mason, has the greatest cleanliness problems. Across the street is where the greatest surface quality problem is found.
Community Input

Cognitive Mapping

One form of community outreach was through a cognitive mapping exercise with students at Porter Ranch Community School. The mapping exercise was conducted to better understand the student’s perceptions of conditions around their school for pedestrian, bicycle, and traffic circulation. The cognitive mapping exercise instructed students to identify familiar areas with circles, and areas they walk/run/bike with lines. Problematic areas were identified with crosses, and liked areas with stars, both had brief explanations as to why. In total, there were 96 student respondents.

![PERCENTAGE OF REASONS FOR FAVORABLE PLACES](N=96)

<table>
<thead>
<tr>
<th>Location</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dining and shopping</td>
<td>10%</td>
</tr>
<tr>
<td>Play, run, exercise</td>
<td>7%</td>
</tr>
<tr>
<td>Friends home</td>
<td>6%</td>
</tr>
<tr>
<td>School</td>
<td>6%</td>
</tr>
<tr>
<td>Calm</td>
<td>4%</td>
</tr>
<tr>
<td>Park</td>
<td>3%</td>
</tr>
</tbody>
</table>

Figure 1: Favorable places for students – Mapping Outcomes

The outcomes for the favorable places seen in figure 1, are based on percentages out of 187 marked stars identified by the 96 respondents. The more favorable location identified by students were places for dining and shopping at 10%. With play, run, exercise being the second most favorable locations at 7%. The places identified on the cognitive map by students of where they walk, run, or bike were by the school, park, and town center. These locations were also those identified as most familiar.
**Community Input**

**Pedestrian Questionnaire**

Our second form of community outreach was through questionnaires. The questionnaires differ from the cognitive mapping as they were conducted with members of the community rather than students. Through this, we aimed to better understand pedestrian behaviors and perceptions of sidewalks and crosswalks in Porter Ranch. In total there were 100 respondents. The questionnaires were conducted along four street segments: Rinaldi Street between and on Mason Avenue/Corbin Avenue, and Porter Ranch Drive. Respondents were asked 6 questions about whether they lived or worked in Porter Ranch, the best and worst characteristics of sidewalks and crosswalks, and how frequently they walked/rode a bike/skateboarded/or took public transit to and from Porter Ranch.

![Figure 3: Best characteristics of sidewalks identified by pedestrians – Questionnaire Outcomes](image)

The outcomes for best characteristics of sidewalks and crosswalks seen in figure 3, are based on percentages out of 198 characteristics that were identified by 100 respondents. Cleanliness was the best characteristic identified at 20%. Biking and crosswalks were identified in the lower range on the list of best characteristics at 6% for crosswalks and 4% for biking.
The outcomes for the problematic places seen in figure 2, are based on percentages out of 154 crosses identified by the 96 respondents. The results are based on topics that fall within the categories of traffic safety and traffic concerns. Illegal U-turns was the highest reason at 19%, this also included reasons stated as only “U-turns.” As identified in the streetscape map there are no U-turn lanes near Porter Ranch Community School. Double parking was the second highest reason at 15%, with jaywalking also identified as a problem at 7%. The jaywalking can also be identified in the circulation map where jaywalkers were observed on Sesnon Blvd.
The results for worst characteristics of the sidewalk and crosswalks seen in Figure 4, were based on percentages out of 139 characteristics that were identified by 100 respondents. In conflict with the best characteristics identified in Figure 3, walkability was identified as the worst characteristic at 21%. Walkability includes topics such as land-use, accessibility, and visibility. Visibility concerns are also identified on the safety map. Biking and crosswalks were identified to be worst characteristics for pedestrians, both at 11%.
Recommendations

1. Implement a pick-up/drop-off lane on Mason Ave

2. Enhance crosswalks to be visible through continental markings and add midblock crosswalks on Mason Ave. and Sesnon Blvd

3. Extend median through movable planters and paint near Porter Ranch Community School
Recommendations

Extended Median

Existing and Proposed
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