

Chapter 2

Existing Conditions

INTRODUCTION

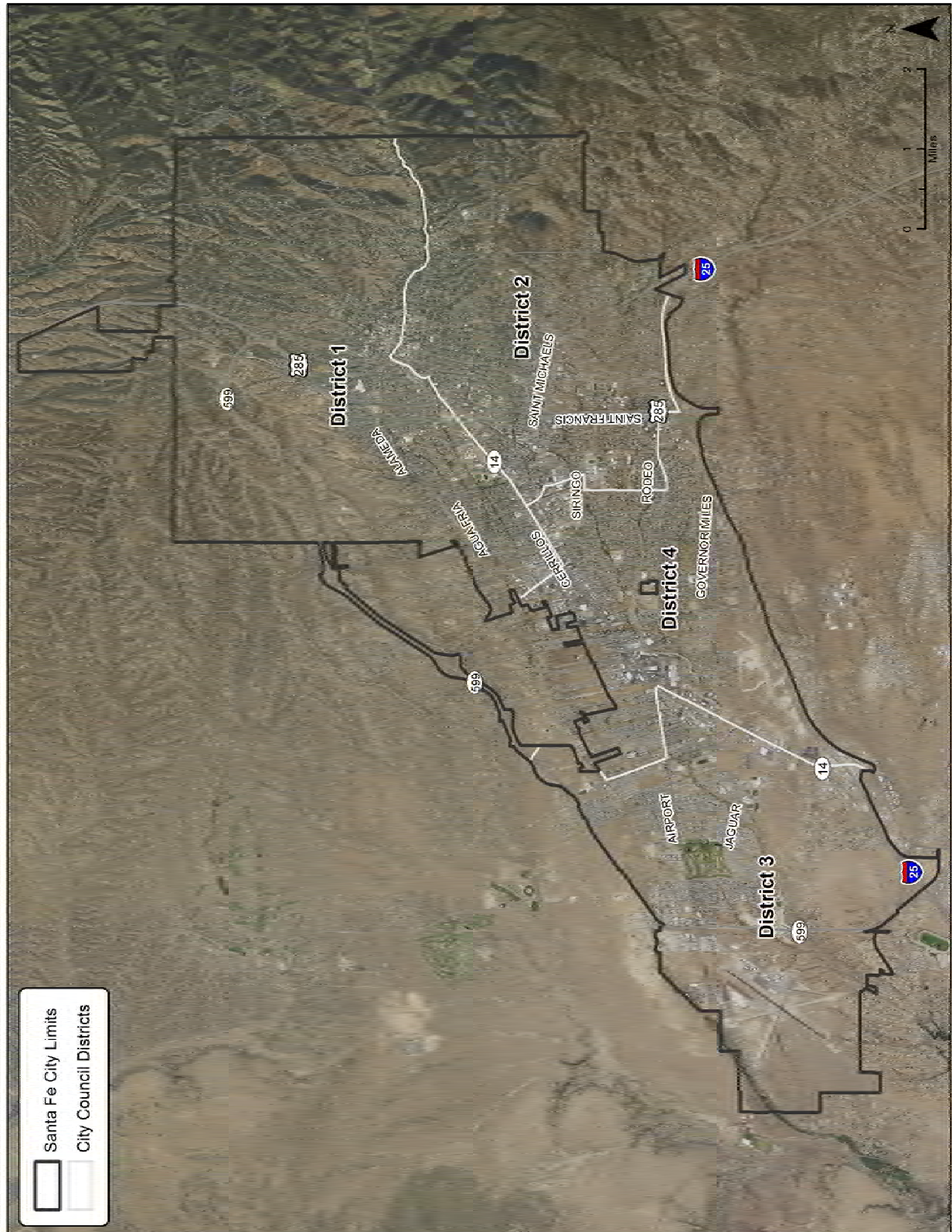
Chapter 2 presents the existing conditions of the City of Santa Fe's pedestrian network. This chapter provides a brief overview of the methodology used during the ADA accessibility field survey, equipment used during the survey, and the database analysis that was conducted as part of the quality assurance and quality control portion of the survey. This chapter also details the existing conditions in the order of curb ramps, intersections, and sidewalks. The associated analysis begins with an overview of the categorical documentation of each element, followed by a categorized break-down of the accessibility condition ranking and a side-by-side comparison of each City Council District.

METHODOLOGY

Within the City of Santa Fe, KFH Group surveyed and evaluated every curb ramp, sidewalk, and intersection along the public right-of-way (PROW) for compliance with ADA requirements. A total of 5,834 curb ramps and 462 miles of pathways (4,810 intersections and 4,686 sidewalk segments) were surveyed and evaluated. The seven-month field survey effort began in early-June 2016 and concluded in mid-January 2017. Over the course of the field survey, fifteen surveyors contributed to the data collection effort. Surveyors worked over 5,000 hours to inventory and assess the city's pedestrian network. The Santa Fe city limits are shown in Figure 2-1.

To aid in identifying each element, the survey effort was divided into two processes. Initially, surveyors were tasked with locating and surveying curb ramps at intersections. Each of the 4,810 intersections was assigned a number. Assignments were generated using a grid system to cover the developed portions of the city. Upon completion of the first phase, priority shifted to pathways (intersections and sidewalks). Pathway assignments were initially created for the long corridor roads in the city (e.g. Cerrillos Road, Agua Fria Road, St. Michaels Drive). Once corridor assignments were complete, small area and neighborhood assignments were made beginning in the downtown area and progressing south. Pathway assignments were cataloged sequentially (e.g. Cerrillos1000, Cerrillos1001) with odd numbers on one side of the street and even on the opposite side. As surveyors assessed pathways they also located and surveyed curb ramps at mid-block crossings and large driveways.

Figure 2-1: Santa Fe City Limits – Study Area Overview



DATA COLLECTION EQUIPMENT

Teams of surveyors were equipped with Smart levels (6.5 inch and 24 inch), measuring tape, measuring wheel, and Trimble Juno 3B GPS Unit. Evaluation of curb ramps, intersections, and sidewalks was based on technical standards provided within the 2011 ADA Guidelines. Photos were taken of each curb ramp, intersection, and compliance issue to provide further detail for the end user.

DATABASE ANALYSIS

The database of curb ramps, intersections, and sidewalks was maintained and updated daily during the course of the data collection process. Manual edits were necessary to correct GPS logged points and user error while in the field. Analysis was undertaken following completion of data collection. Results were separated into individual databases and analyzed separately based upon ADA standards.

CURB RAMP EVALUATION AND METHODOLOGY

Following setup, extensive fieldwork was undertaken to document the conditions of every curb ramp within the City of Santa Fe. This included the assessment of ramps at intersection crossings, mid-block crossings, and curb ramps at driveway crossings. Figure 2-2 provides the location of the 5,834 curb ramps that were surveyed and evaluated.

The following attributes of curb ramps were surveyed and recorded:

- Type of curb ramp
- Ramp width
- Running slope
- Cross slope
- Flare slope
- Presence of landing
- Landing run slope
- Landing cross slope
- Presence and placement of bottom landing
- Presence of tactile surface
- Barriers or obstructions

To aide in the analysis, categories were developed for each element in accordance with ADA Guidelines. While precise measurements were taken for every curb ramp; these measurements were grouped categorically by best practices, compliance, non-compliance, or severe non-compliance. The curb ramp elements with their associated categories are shown in Table 2-1.

Figure 2-2: Curb Ramp Assessment Summary

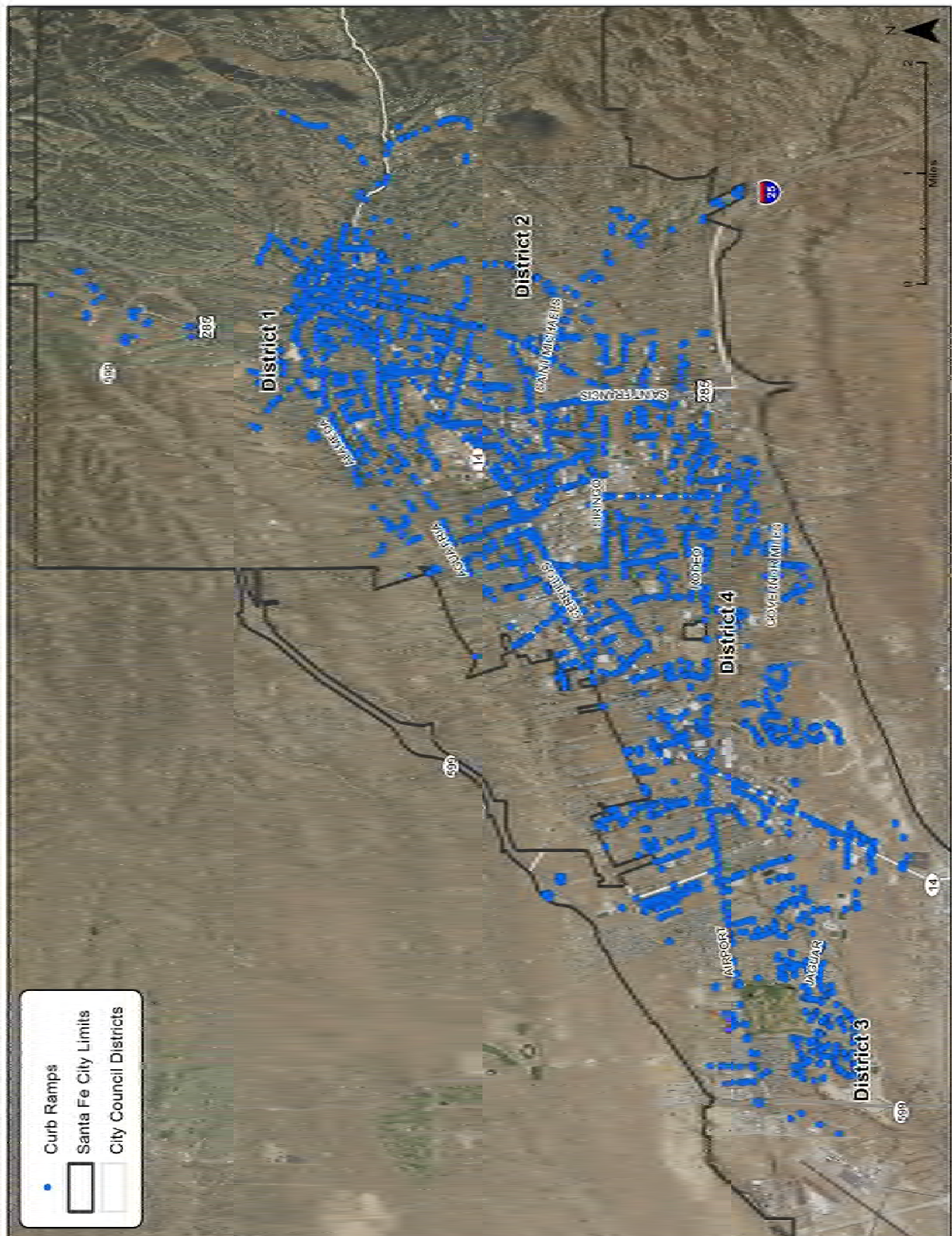


Table 2-1: Curb Ramp Categorical Documentation

Element	Categories	Count	Percent
Ramp Type	Blended Transition	46	0.8%
	Diagonal	1,558	26.7%
	Modified	120	2.1%
	Parallel	2,041	35.0%
	Perpendicular	2,069	35.5%
Sidewalk Connection	Yes (Compliant)	5,764	98.8%
	No (Non-Compliant)	70	1.2%
Tactile Surface	Yes (Compliant)	2,663	45.6%
	No (Non-Compliant)	3,171	54.4%
Tactile Surface Placed Correctly	Yes (Compliant)	2,400	90.1%
<i>If Tactile Surface is Present</i>	No (Non-Compliant)	263	9.9%
Bottom Space <i>In Crosswalk, if Present</i>	>= 48 inches (Compliant)	1,213	20.8%
	< 48 inches (Non-Compliant)	62	1.1%
	No Crosswalk	4,559	78.1%
Obstruction	Yes (Non-Compliant)	335	5.7%
	No (Compliant)	5,499	94.3%
Removable Barrier	Yes (Non-Compliant)	1,592	27.3%
	No (Compliant)	4,242	72.7%
Surface Obstruction	Yes (Non-Compliant)	904	15.5%
	No (Compliant)	4,930	84.5%
Ramp Length	<= 24"	21	0.3%
	24" to 48"	481	6.4%
	> 48"	6993	93.3%
Ramp Width	<36" (Non-Compliant)	234	3.1%
	36" – 47.99" (Non-Compliant)	1920	25.6%
	48" – 59.99" (Compliant)	2707	36.1%
	>= 60" (Compliant)	2634	35.1%
Ramp Running Slope	<= 5% *	2907	38.8%
	5.1% - 8.3% (Compliant)	2762	36.9%
	8.4% - 10% (Non-Compliant)	767	10.2%
	10.1% - 12.5% (Non-Compliant)	603	8.0%
	> 12.5% (Non-Compliant)	456	6.1%
Ramp Cross Slope	<=2% (Compliant)	4629	61.8%
	2.1% - 4% (Non-Compliant)	2017	26.9%
	>4% (Non-Compliant)	849	11.3%

Element	Categories	Count	Percent
Flare Slope	<=8.3% (Compliant)	1487	28.8%
	8.4% - 10% (Compliant)	453	8.8%
	10.1% - 12.5% (Non-Compliant)	737	14.3%
	12.6% - 16.7% (Non-Compliant)	1022	19.8%
	>16.7% (Non-Compliant)	1467	28.4%
Counter Slope	<=5% (Compliant)	5546	95.1%
	5.1% - 10% (Non-Compliant)	254	4.4%
	>10% (Non-Compliant)	33	0.6%
Top Landing Size	None	1816	24.5%
	>= 48"x48" (Compliant)	4474	60.4%
	< 48"x48" – 36"x36" (Non-Compliant)	952	12.9%
	< 36"x36" (Non-Compliant)	161	2.2%
Top Landing Run Slope	<=2% (Compliant)	3201	57.3%
	2.1% - 4% (Non-Compliant)	1598	28.6%
	4.1% - 10% (Non-Compliant)	770	13.8%
	>10% (Non-Compliant)	18	0.3%
Top Landing Cross Slope	<=2% (Compliant)	3081	55.1%
	2.1% - 4% (Non-Compliant)	1936	34.7%
	4.1% - 10% (Non-Compliant)	555	9.9%
	> 10% (Non-Compliant)	15	0.3%
Lower Landing Depth	>= 48" (Compliant)	1929	89.3%
	< 48" (Non-Compliant)	231	10.7%
Lower Landing Width	>= 60" (Compliant)	1443	66.8%
	48" to 59" (Non-Compliant)	629	29.1%
	< 48" (Non-Compliant)	88	4.1%
Lower Landing Run Slope	<=2% (Compliant)	1423	65.9%
	2.1% - 4% (Non-Compliant)	616	28.5%
	4.1% - 10% (Non-Compliant)	119	5.5%
	>10% (Non-Compliant)	2	0.1%
Lower Landing Cross Slope	<=2% (Compliant)	1515	70.1%
	2.1% - 4% (Non-Compliant)	469	21.7%
	4.1% - 10% (Non-Compliant)	174	8.1%
	>10% (Non-Compliant)	2	0.1%
Top Landing Transition	Flush (Compliant)	5350	94.2%
	Not Flush (Non-Compliant)	328	5.8%

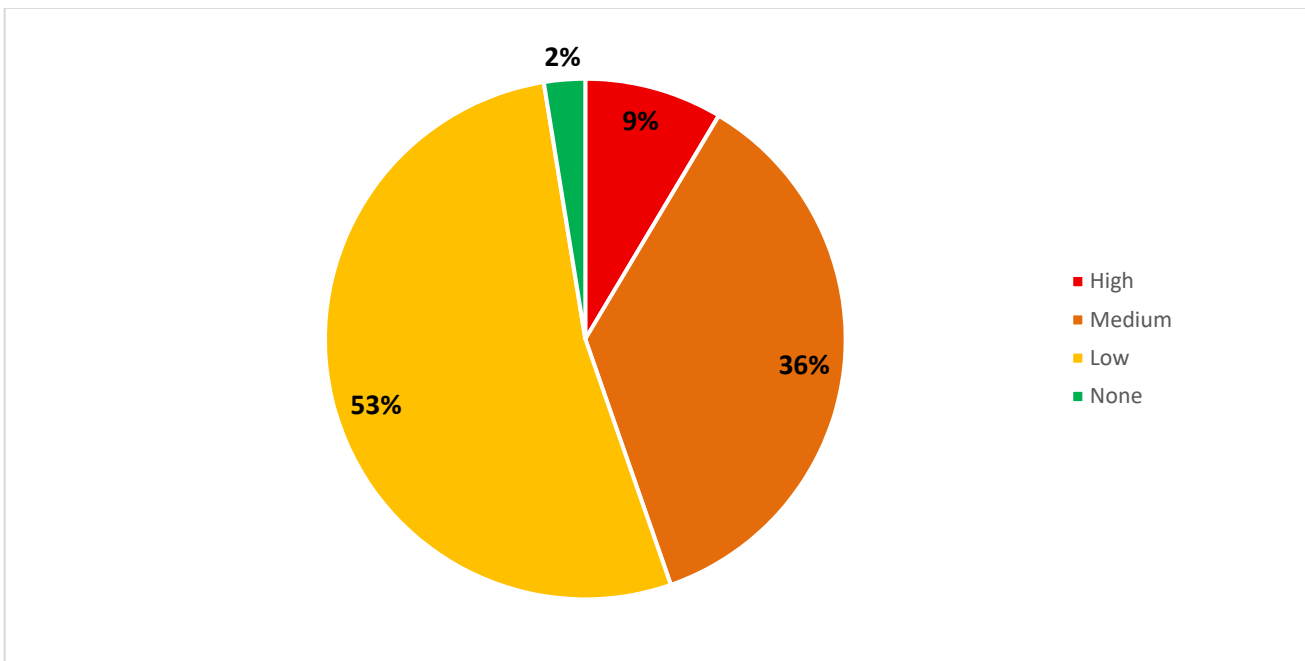
Element	Categories	Count	Percent
Top Landing Perpendicular	Yes (Compliant)	5483	96.6%
	No (Non-Compliant)	195	3.4%
Lower Landing Transition	Flush (Compliant)	3702	99.3%
	Not Flush (Non-Compliant)	27	0.7%
Lower Landing Perpendicular	Yes (Compliant)	3579	95.9%
	No (Non-Compliant)	154	4.1%
Street Transition	Flush (Compliant)	4554	78.2%
	Not Flush (Non-Compliant)	1268	21.8%
Street Perpendicular	Yes (Compliant)	4940	84.8%
	No (Compliant)	885	15.2%

*10 of 46 Blended Transitions did not meet the running slope guideline (5% or less)

Curb Ramp Rating

For the purposes of this report, the study team developed a three-tier rating system for curb ramps in need of repair or modification to meet ADA guidelines. Curb ramps found not to be compliant were designated as either “High,” “Medium,” or “Low.” Figure 2-3 shows the overall results of the curb ramp rating process. This tiered system is meant to demonstrate the level of non-compliance for each curb ramp. More information on the rating system can be found in Appendix C.

Figure 2-3: Curb Ramp Deficiency Rating



High Priority Deficiency

The categorical rating of high represents the curb ramps that are not compliant with ADA guidelines and not functional for a user with disabilities. Curb ramps that fall into this categorization should be a top priority for maintenance and repair. Contributing attributes include obstructions rendering the curb ramp difficult or impossible to use or a ramp with a width less than 36 inches which renders the curb ramp non-functional for wheelchair users. From a total of 5,834 curb ramps, 500 are high priority. This represents 8.6% of all curb ramps surveyed. Table 2-2 shows the breakdown of high priority curb ramps by city council district.

Table 2-2: High Priority Deficiency Breakdown by Council District

City Council District	Total Curb Ramps	High Priority Ramps	High Priority Percentage
District 1	1498	210	14.0%
District 2	1653	199	12.0%
District 3	1006	18	1.8%
District 4	1677	73	4.4%
Totals	5,834	500	8.6%

Obstructed Curb Ramps

Curb ramp obstructions largely consist of light poles, street sign poles, utility poles, and fire hydrants. The category “other” mostly represents fences, walls, and traffic bollards. Figure 2-4 illustrates the most common curb ramp obstruction types. As the chart shows, light poles make up the largest share of curb ramp obstructions (29%) and street sign poles were the second most common (25%) obstruction. Figure 2-5 provides examples of common curb ramp obstructions.

Figure 2-4: Curb Ramp Obstruction Type

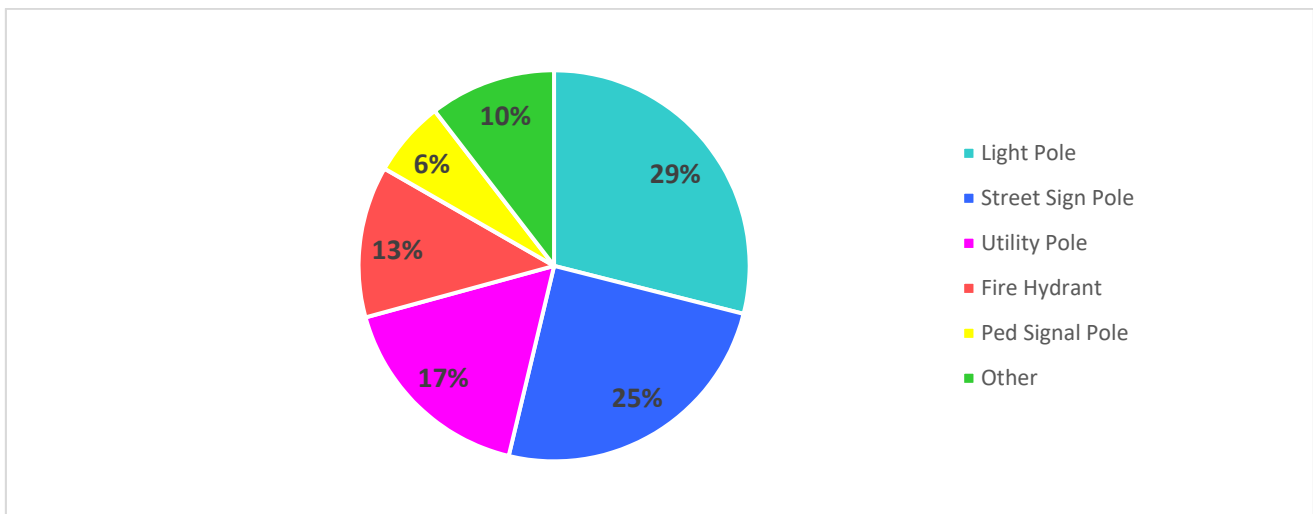


Figure 2-5: Common Curb Ramp Obstructions

Ramp Width Less than 36 Inches

A curb ramp with a width of less than 36 inches is non-compliant under ADA guidelines (ADA requires a width of no less than 48 inches), and inaccessible for a wheelchair user. As seen in Figure 2-6, only 3% of curb ramps surveyed are less than 36 inches wide. Figure 2-7 shows curb ramps with a ramp width below 36 inches.

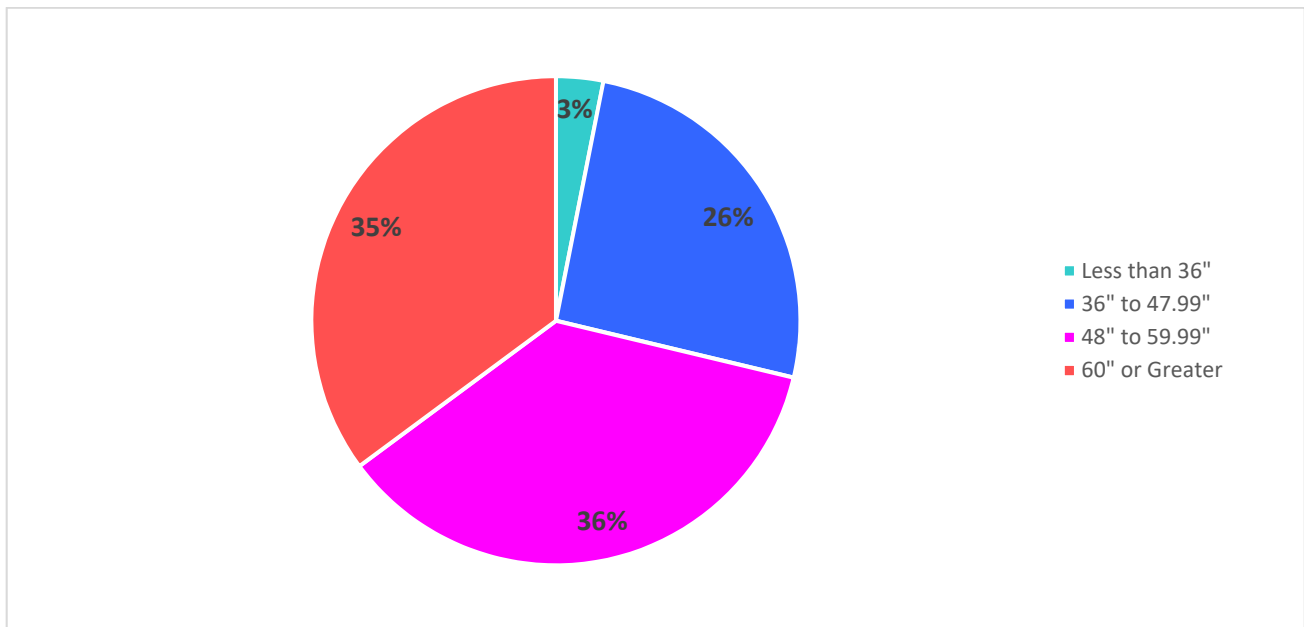
Figure 2-6: Curb Ramp Width

Figure 2-7: Curb Ramps Less Than 36 Inches in Width**Medium Priority Deficiency**

The medium priority category includes curb ramps that do not meet many ADA guidelines, including ramps that are less than 48 inches in width, have severe cross slope or running slope issues, and other potential issues.

Medium priority represents 2,106 of the 5,834 curb ramps or 36.1% of the total. Table 2-3 shows the breakdown of high priority curb ramps by city council district.

Table 2-3: Medium Priority Deficiency Breakdown by Council District

City Council District	Total Curb Ramps	Medium Priority Ramps	Medium Priority Percentage
District 1	1498	473	31.6%
District 2	1653	671	40.6%
District 3	1006	320	31.8%
District 4	1677	642	38.3%
Totals	5,834	2,106	36.1%

Low Priority Deficiency

The low priority category represents curb ramps that do not meet one or more of the ADA guidelines, but remain functional or accessible. These curb ramps may seem compliant to the casual observer as their non-compliance typically stems from slight slope issues. Additionally, many of the curb ramps in this category are missing a required tactile surface.

Low priority represents 3,079 of the 5,834 curb ramps or 52.8% of the total. Table 2-4 provides the breakdown of low priority curb ramps by city council district.

Table 2-4: Low Priority Deficiency Breakdown by Council District

City Council District	Total Curb Ramps	Low Priority Ramps	Low Priority Percentage
District 1	1498	763	50.9%
District 2	1653	754	45.6%
District 3	1006	639	63.5%
District 4	1677	923	55.0%
Totals	5,834	3,079	52.8%

Fully Compliant Curb Ramps

Fully compliant curb ramps meet each of the ADA design guidelines. The City of Santa Fe contains 149 compliant curb ramps, or approximately 2.6% of all curb ramps. Table 2-5 provides the breakdown of compliant curb ramps by city council district.

Table 2-5: Fully Compliant Breakdown by Council District

City Council District	Total Curb Ramps	Compliant Ramps	Percentage
District 1	1498	52	3.5%
District 2	1653	29	1.8%
District 3	1006	29	2.9%
District 4	1677	39	2.3%
Totals	5,834	149	2.6%

Under the fully compliant category some exceptions are included where curb ramps are compliant in their functional components. This means if a curb ramp has a level landing that provides sufficient room to maneuver, the slope of the flares becomes irrelevant due to the compliance of the functional components. The situation is reversed if a top landing is less than 48 inches by 48 inches. These scenarios are broken down and explained in the following sub-sections.

Flare Exception

The flare exception isolates curb ramps that do not have functional flares. The exception includes curb ramps that meet all other ADA guidelines but have flare slopes that exceed 10% slope. A curb ramp with non-functional flares can be seen in Figure 2-8.

Figure 2-8: Curb Ramp with Non-Functional Flares



Top Landing Exception

The second functional exception is the top landing exception. These curb ramps either do not have a top landing or have a top landing that is less than 48 inches by 48 inches. As seen in Figure 2-9, the curb ramp does not have a top landing but provides a suitable surface for transitioning to the sidewalk.

Figure 2-9: Curb Ramp without a Top Landing

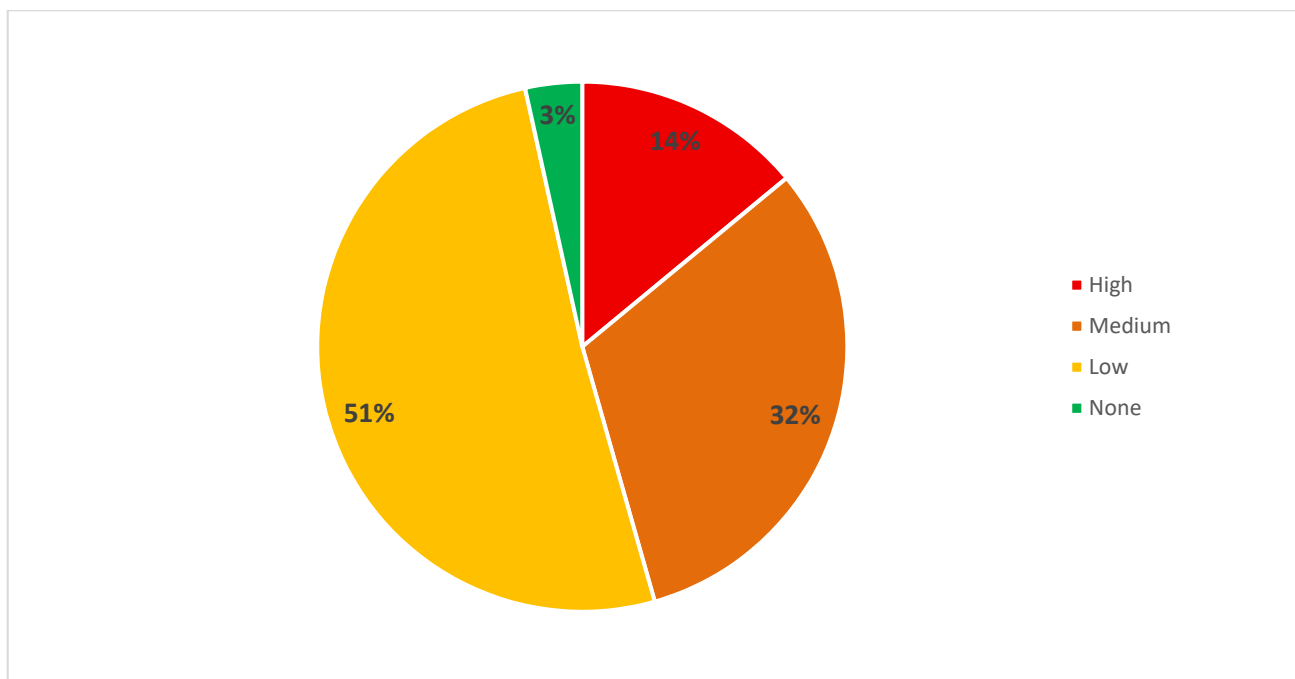


Curb Ramp Results Overview

City Council District 1

District 1 is located in the northern most region of the City of Santa Fe. District 1 is home to the downtown plaza area and the neighborhoods along Alameda and Agua Fria to the intersections of Siler Road. As seen in Figure 2-10, the overall condition of curb ramps in District 1 is good. Figure 2-11 displays the location of curb ramps in District 1 and their priority level.

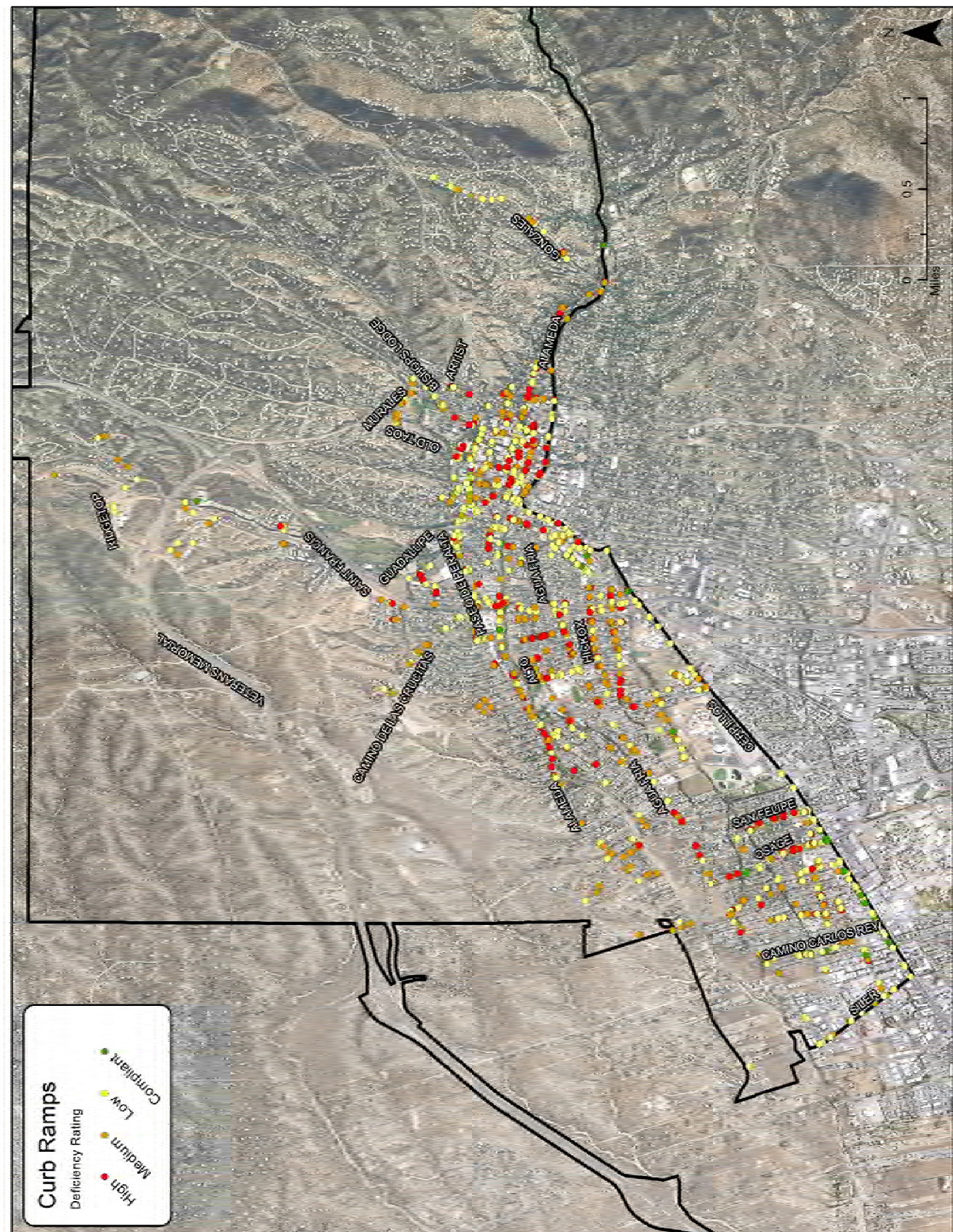
Figure 2-10: District 1 Curb Ramp Deficiency Rating



District 1 has the largest percentage of high priority curb ramps when compared to the other districts (14.0%). High priority curb ramps are fairly dispersed throughout the downtown area and northern residential areas; however, some concentrations exist along Agua Fria Street, W. Alameda Street, and Paseo de Peralta.

Medium priority curb ramps are also dispersed throughout the district. Areas of heavy concentration include the northwestern neighborhoods along Agua Fria Street, Camino Sierra Vista, and Rosina Street.

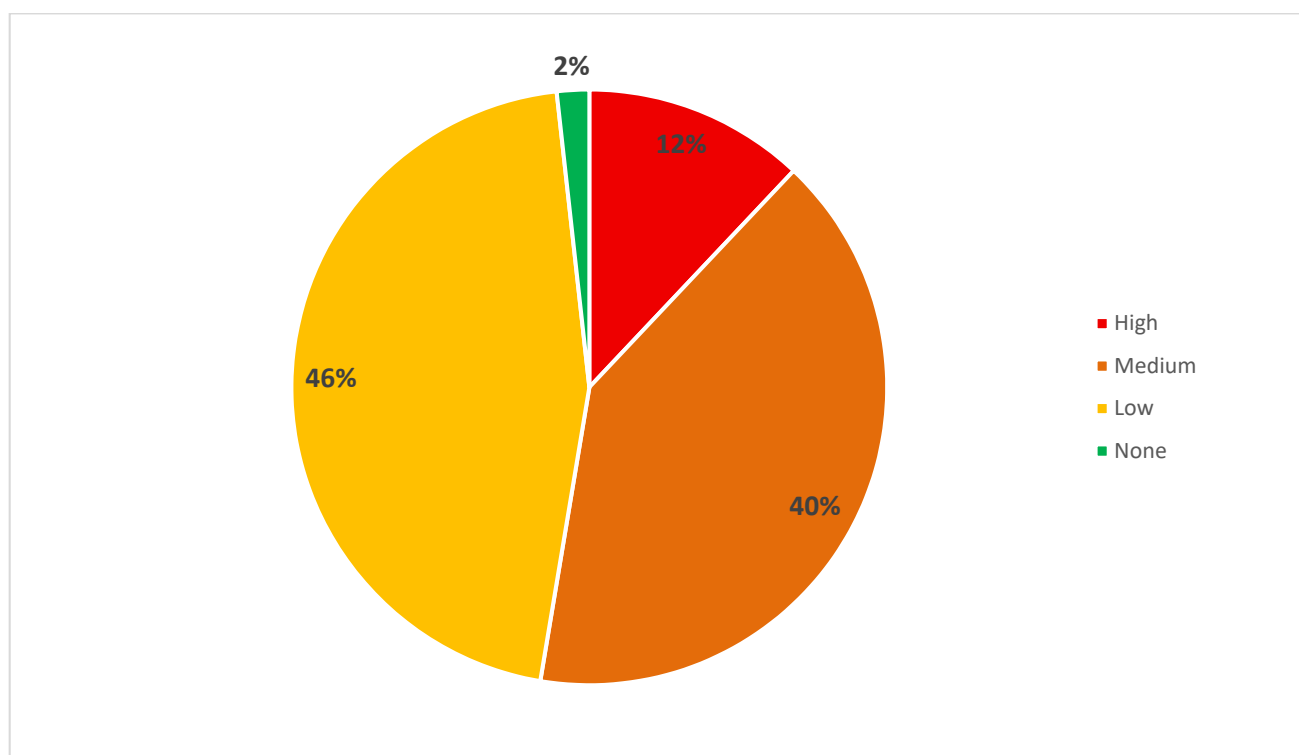
Low priority curb ramps make up the majority of ramps in District 1 at 50.9%. These curb ramps are heavily dispersed with relative concentrations through the downtown areas.



City Council District 2

City Council District 2 is located in the eastern portion of the city. District 2 includes the downtown area south of Alameda Street which includes state government offices, including the capital building. Other noteworthy areas include St. Vincent Medical Center and surrounding medical offices, cultural attractions of Museum Hill, and St. John's College. As seen in Figure 2-12, the overall condition of curb ramps in District 2 is average. Figure 2-13 displays the location of curb ramps with District 2 and priority level.

Figure 2-12: District 2 Curb Ramp Deficiency Rating



District 2 has the second highest concentration of high priority curb ramps, after District 1. This designation is largely due to curb ramps downtown and in the neighborhood bound by Cerrillos Road to the west, Saint Michael's Drive to the south, and the Rail Runner tracks to the east.

District 2 has the highest concentration of medium priority curb ramps with 40.6%. While these curb ramps are located throughout the district, concentrations exist along Calle Espejo, Galisteo Street, and Pacheco Street.

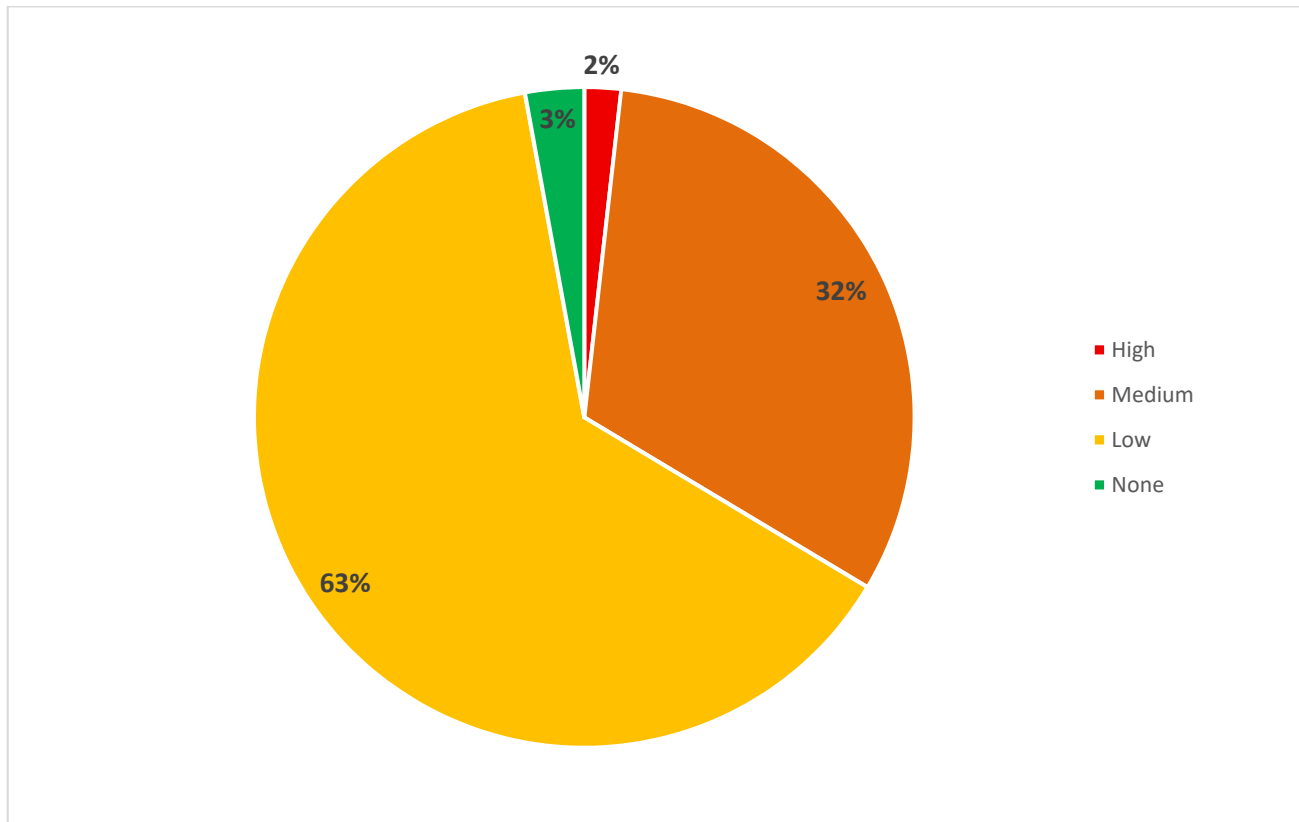
Low priority ramps make up 45.6% of District 2's curb ramps. Low priority ramps are evenly distributed across the district.



City Council District 3

District 3 is located in the southwest area of the city. The district is home to the Santa Fe Airport, city government offices, major retail destinations, and a number of residential areas. As seen in Figure 2-14, the overall condition of curb ramps in District 3 is very good with approximately 67% of curb ramps a low priority or ADA compliant. Figure 2-15 displays the location of curb ramps with District 3 and priority level.

Figure 2-14: District 3 Curb Ramp Deficiency Rating



District 3 has the lowest concentration of high priority curb ramps with 1.8%. High priority ramps are mostly found along Airport Road with a few others located throughout the surrounding neighborhoods.

Medium priority ramps represent 31.8% of the curb ramps in District 3. While medium priority ramps are spread across the district, relative concentrations exist in the residential neighborhoods along Paseo del Sol and Paseo del Sol West.

District 3 has the highest concentration of low priority curb ramps with 63.5%. These ramps are located throughout the district; however, there is a large cluster of low priority ramps in the neighborhoods along South Meadows Road between Agua Fria Street, and Airport Road.