



Current Conditions Report

Mobility Area 3: Durango Curve

Prepared For



City of Phoenix

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1.0 Introduction

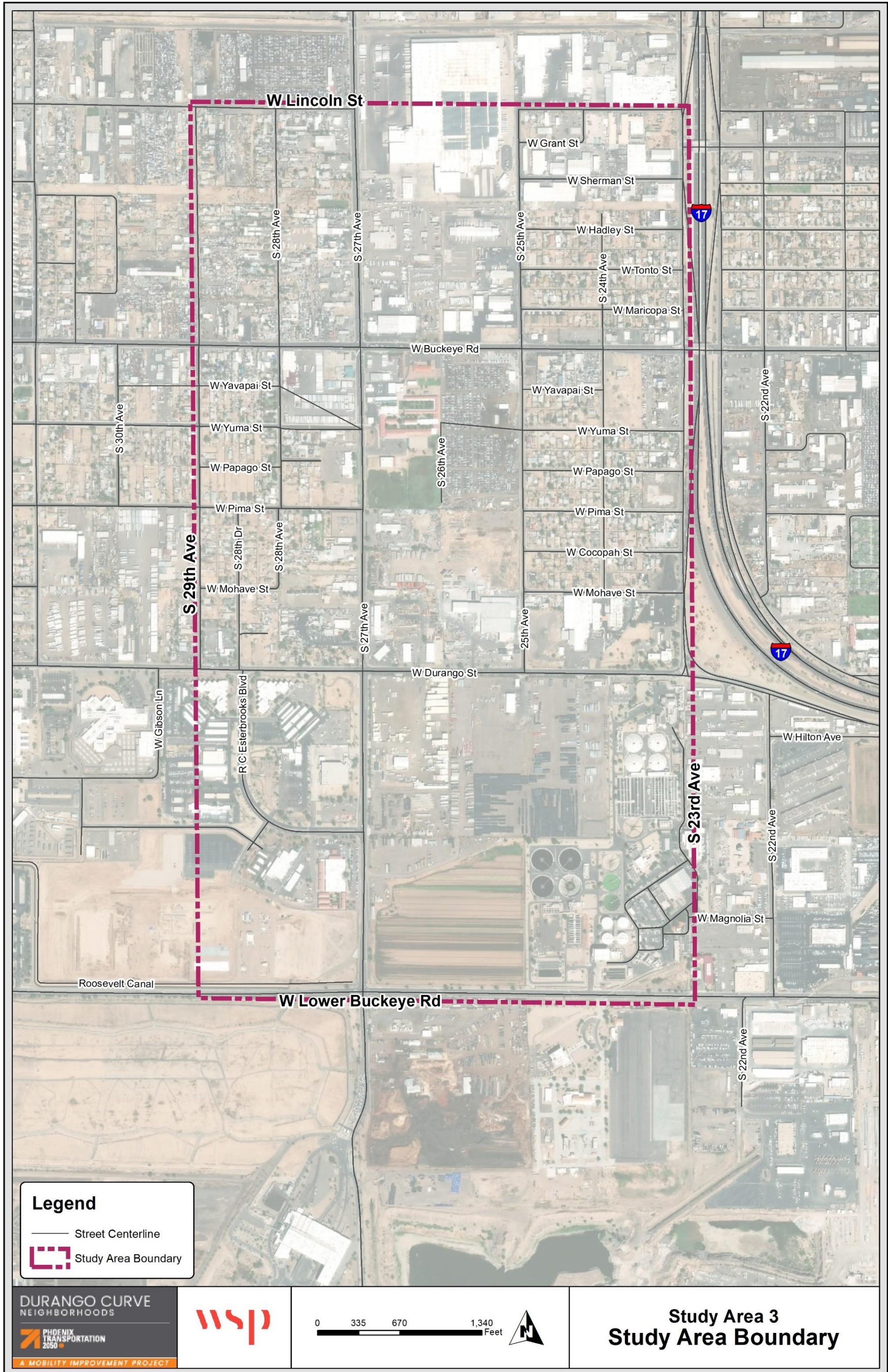
As part of the City of Phoenix Transportation 2050 Plan, the T2050 Mobility Improvements Program was established to conduct mobility assessments in several defined geographic areas of the City of Phoenix with the greatest mobility deficiencies and needs. This program will implement new projects that increase mobility and multi-modal connectivity throughout the area increasing ADA accessibility by way of new and enhanced pedestrian and bike facilities, provide access to transit, and improve supportive streetscape amenities.

The primary purpose of these mobility studies is to conduct a complete a mobility gap analysis based on available data and expanding on previous area studies. This study will address mobility issues and potential solutions for improved bicycle and pedestrian facilities and develop connections to existing transit services to improve the safety and connectivity of roadway users. Socioeconomic data, existing plans and documents, key destinations, existing transportation facilities, as well as land-use, infrastructure, and environmental constraints have been assessed to develop this Current Conditions Report. Additionally, stakeholders were identified and stakeholder outreach was conducted to understand public insights and opinions about current conditions. Based on the gap analysis, a prioritized list of mobility improvements will be developed and presented to the public. The public feedback will be used to reprioritize the projects, if necessary, and the team will develop final list of recommended projects, construction schedules and cost estimates. The Current Conditions Report will serve as the guiding document to identify recommended mobility solutions.

1.1 Overview Mobility Area 3 – Durango Curve Neighborhood

Mobility Area 3 – Durango Curve Neighborhood is a one square mile area bounded by Lincoln Street, 29th Avenue, Lower Buckeye Road, and 23rd Avenue (See **Figure 1-1**). The area is west of the Durango Curve and adjacent to Interstate 17 (I-17). The Durango Curve study area is also adjacent to several neighborhoods including Hyde Park and Central City South, as well as Mobility Area 5 Kuban Park Neighborhood. The Durango Curve mobility area consists of mostly industrial uses and government building complexes. Neighborhoods are tucked in between industrial areas and are mainly located north of Durango Street.

Figure 1-1: Study Area





1.2 Purpose

The purpose of the Durango Curve Neighborhood Current Conditions Report is to identify the existing mobility characteristics within the study area.

1.3 Mobility Study Goals

The goal of this mobility study is to improve safety, connectivity, and accessibility for all persons who walk, ride a bicycle, or use transit services to reach their destinations.

1.4 Mobility Study Objectives

The objective of the Current Conditions Report is to identify existing conditions of key mobility facilities. The main facilities include bicycle paths, sidewalks, street lighting, and shade.

1.5 Study Approach

To identify existing mobility conditions of the Durango Curve Neighborhood, Geographic Information System (GIS) data were provided by the City of Phoenix to map existing mobility facilities. Field reviews identified areas of concern and confirmed existing conditions. The data, as well as information collected from stakeholder interviews, have been analyzed to present a full scope of existing mobility conditions within the study area. Gaps in mobility infrastructure were also identified as part of the Current Conditions report. This assessment considers where infrastructure is lacking and where future connections could be made.

2.0 Review of Previous Planning Efforts – Existing Plans

The evaluation of plans and documents provides essential information on existing policies, plans, and projects. Existing plans and documents pertinent to this study were identified and summarized to document previously recommended projects within the mobility area. In addition, these plans and documents will provide a basis for our recommendations. Plans and documents include:

Plan/Document Name	Year
Phoenix: LED Street Light Program Fact Sheet	2018
Maricopa Association of Governments Freight Transportation Plan	2018
Phoenix: Capital Improvement Program 2017 - 2022	2017
FY 2018-2022 Maricopa Association of Governments: Transportation Improvement Program	2017
2018 - 2022 ADOT: State Transportation Improvement Program	2017
Maricopa Association of Governments: 2040 Regional Transportation Plan	2017
Maricopa Association of Governments: Freight Transportation Plan	2017
Phoenix: Complete Streets Policy	2017

Phoenix: Public Transportation Department Annual Report Fiscal Year 2015/2016	2016
Phoenix: Plan PHX 2015 General Plan	2015
Phoenix: TOD Annual Report 2015-2016	2015
Phoenix: Comprehensive Bicycle Master Plan	2014
NACTO: Urban Street Design Guide	2013
Phoenix: Reinvent PHX Gateway District – Health Impact Assessment	2013
Phoenix: Tree and Shade Master Plan	2010
Phoenix: Downtown Phoenix Urban Form Plan	2008

Key takeaways from the review of plans and documents include existing transportation facilities and completed or on-going transportation projects. Pertinent documents include the MAG Freight Transportation Plan which identified Buckeye Road as a critical urban freight corridor.

Appendix A provides more details on pertinent information on existing plans and documents.

3.0 Socioeconomic Characteristics

Socioeconomic information was obtained from the American Community Survey Census 2012-2016, 5-Year Estimates. Socioeconomic cohort reviews included: Ages 17 and Younger, Ages 65 and Older, Low-Income, Transit-Dependent Households, Population Density, Population Taking Public Transportation to Work, Population Bicycling to Work, and Population Walking to Work. Socioeconomic data were displayed using block group data within and adjacent to the Durango Curve area. These characteristics were reviewed to show the socioeconomic makeup of the study area.

Population Ages 17 and Younger

Populations Ages 17 and Younger were identified to determine the concentration of young persons within the study area. Most of the study area contains 20 to 30 percent of persons’ ages 17 and younger. Young people are concentrated north of Buckeye Road in residential neighborhoods and near Garcia Elementary School. Adjacent to the study area across the I-17 is the highest percentage of persons’ 17 and younger (See **Figure 3-1**).

Population Ages 65 and Older

Populations Ages 65 and Older identified concentrations of elderly populations. Areas along the north and east sides, particularly north of Buckeye Road and east of 27th Avenue, have a concentration of 5 to 10 percent of the population aged 65 and older, while the southwest section contains less than 1 percent. (See **Figure 3-2**).

Low-Income Households

The Low-Income Households category identified where households fall below the poverty line. Most of the study area block groups show 30 to 60 percent of households below the poverty line. These areas are highly concentration in neighborhoods north of Durango Street and industrial areas. East of the I-17, outside of the study boundary, one block group has 80 percent of the population is below the poverty line (See **Figure 3-3**).

Transit-Dependent Households

Transit-Dependent Households are households without access to a vehicle. Along the north and east of the study area, transit dependency ranges between 10-30 percent, while in the south and west sides of the study area it is between 0-10 percent. The area adjacent to the study area, east of the I-17, has the highest percentage of transit dependent households with 51 – 60 percent (See **Figure 3-4**).

Population Density

Populations Density identified the total population per square mile. Areas along Durango Street and Buckeye Road have the highest concentrations of population ranging from 4,001 to 6,375 people per square mile. The high population density is located near the County Jail along Durango Street and neighborhoods in the northeast corner of the study area (See **Figure 3-5**). In addition, areas south of Durango Street have a very low density due to the high concentration of government facilities and industrial areas.

Population Taking Public Transportation to Work

This analysis studied the population that utilizes some form a public transportation to travel to work. For most the study area, 3.5 to 4.5 percent of the population uses public transportation to get to work. Areas with the highest transit use are located along the west side of the study area located near industrial facilities and government complexes (See **Figure 3-6**).

Population Bicycling to Work

Population Bicycling to Work looked at the total population that utilizes a bicycle to travel to work. The highest concentrations of persons bicycling to work are along Buckeye Road with 1.1 – 1.8 percent. These areas consist of mostly residential neighborhoods (See **Figure 3-7**).

Population Walking to Work

Population Walking to Work studied the population that walks to their work destination. Most of the study area shows walking to work at 1.1 – 2.0 percent. Areas near County, State and City government complexes have the highest concentration of the population walking to work at 2.1 to 2.6 percent (See **Figure 3-8**).

Table 3-1 compares the study area to the City of Phoenix in all socioeconomic characteristics to determine similarities or major differences. This study area has 1,707 persons per square mile, which is lower than the City of Phoenix’s 3,008 people per square mile. As **Table 3-1** shows, the concentrations of “Persons’ Ages 17 and Younger” and “Persons’ Ages 65 and Older” are lower in this area compared to Phoenix while “Low-Income Households” and “Transit-Dependent Households” show higher percentages in this area. The people walking and bicycling to work percentages are similar.

Table 3-1: Socioeconomic Characteristics

Demographics	Phoenix City	Durango Curve
Population Ages 17 and Younger	26.80%	15.77%
Population Ages 65 and Older	9.80%	4.67%
Low-Income Households	17.67%	48.46%
Transit-Dependent Households	8.81%	19.31%
Population Walking to Work	0.70%	0.90%
Population Bicycling to Work	1.76%	1.40%
Population Taking Public Transportation to Work	3.35%	6.09%

Issues and Concerns

- The study area has a higher concentration of “Persons’ Ages 17 and Younger” and “Persons Ages 65 and Older”.
- The area adjacent to the study area, on the east side of I-17 between Buckeye Road and Durango Street, shows a high concentration of households living below the poverty line as well as higher transit dependence.

Figure 3-1: Population Ages 17 and Younger

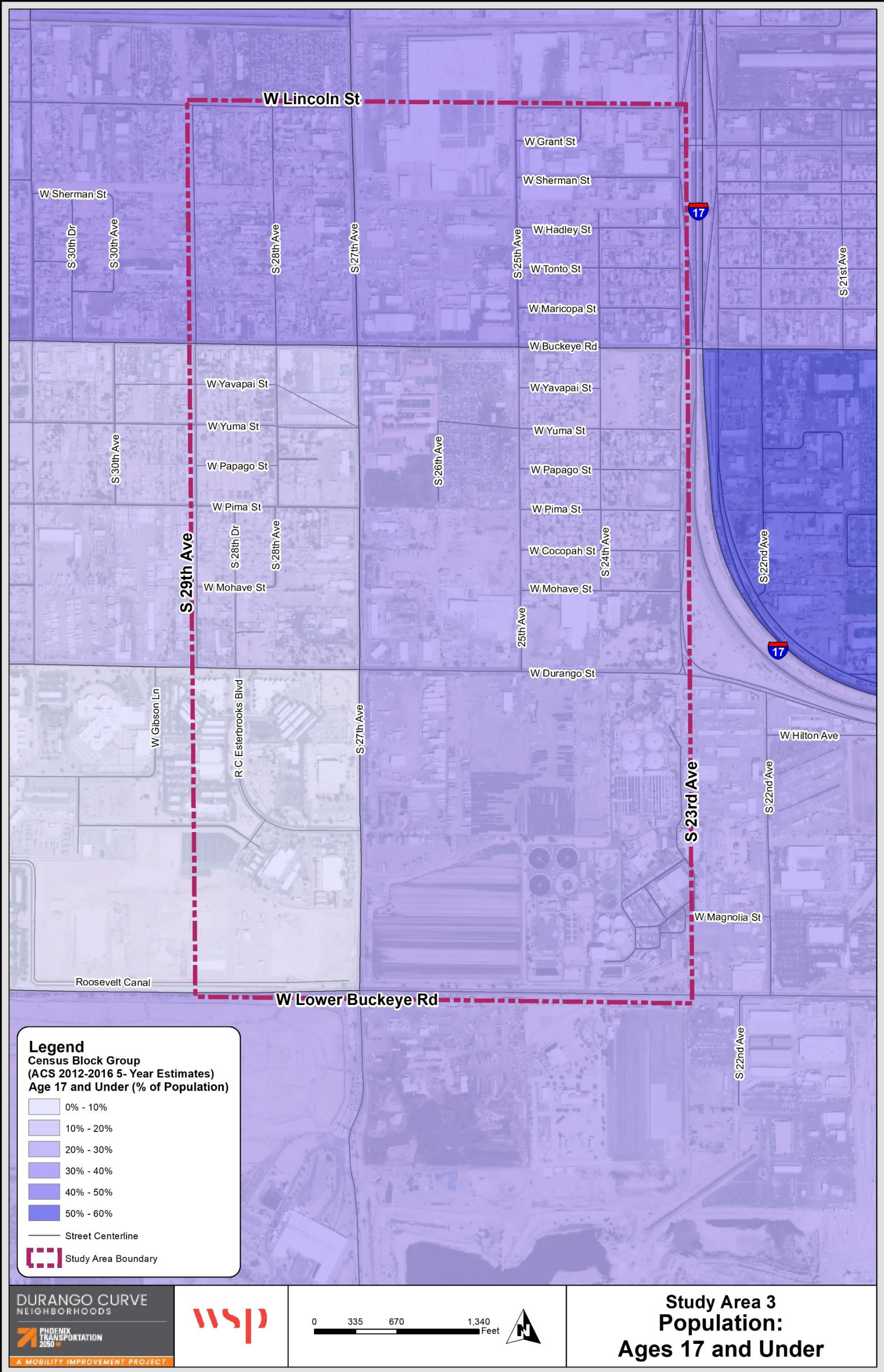


Figure 3-2: Population Ages 65 and Older

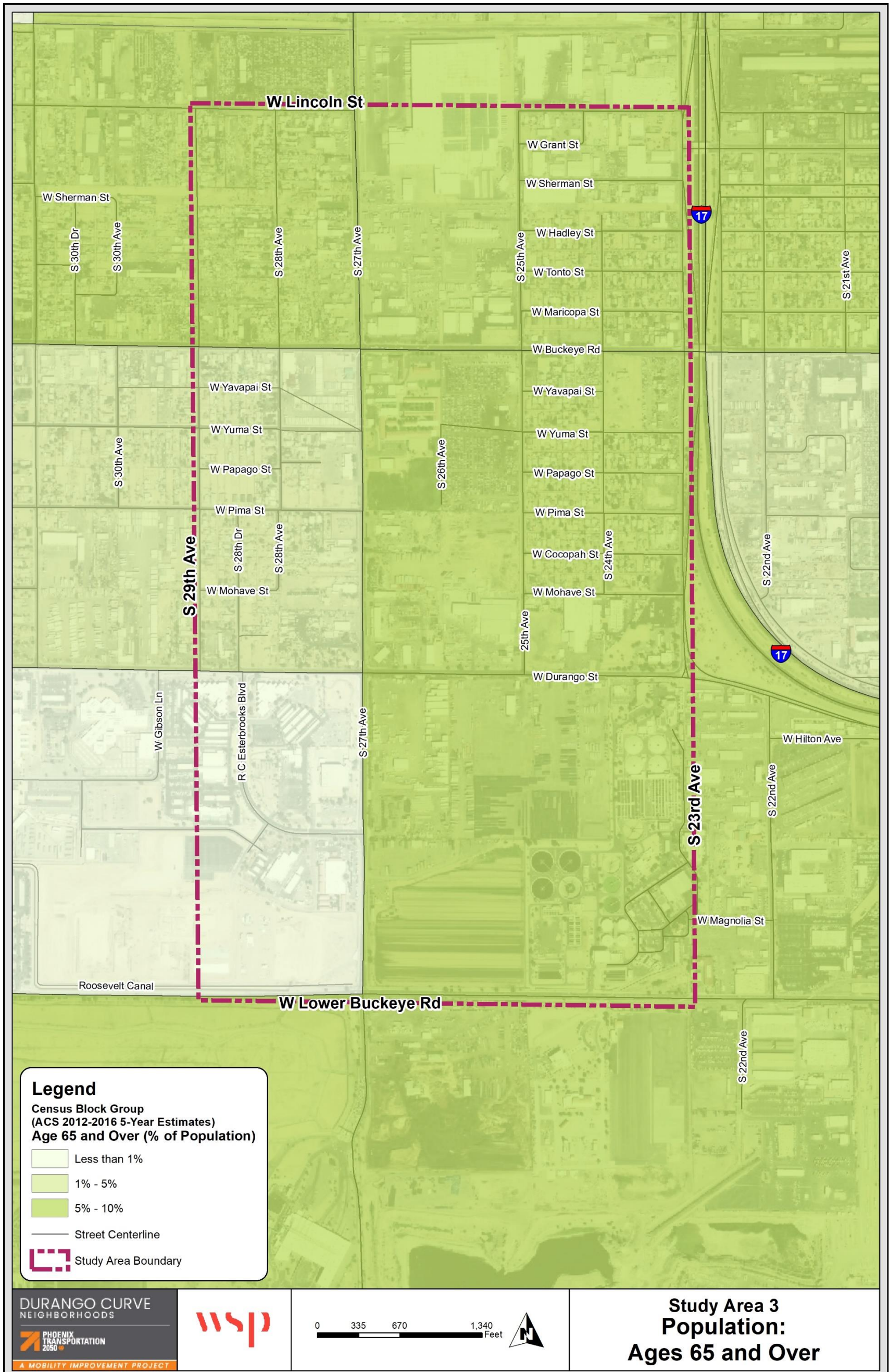


Figure 3-3: Low-Income Households

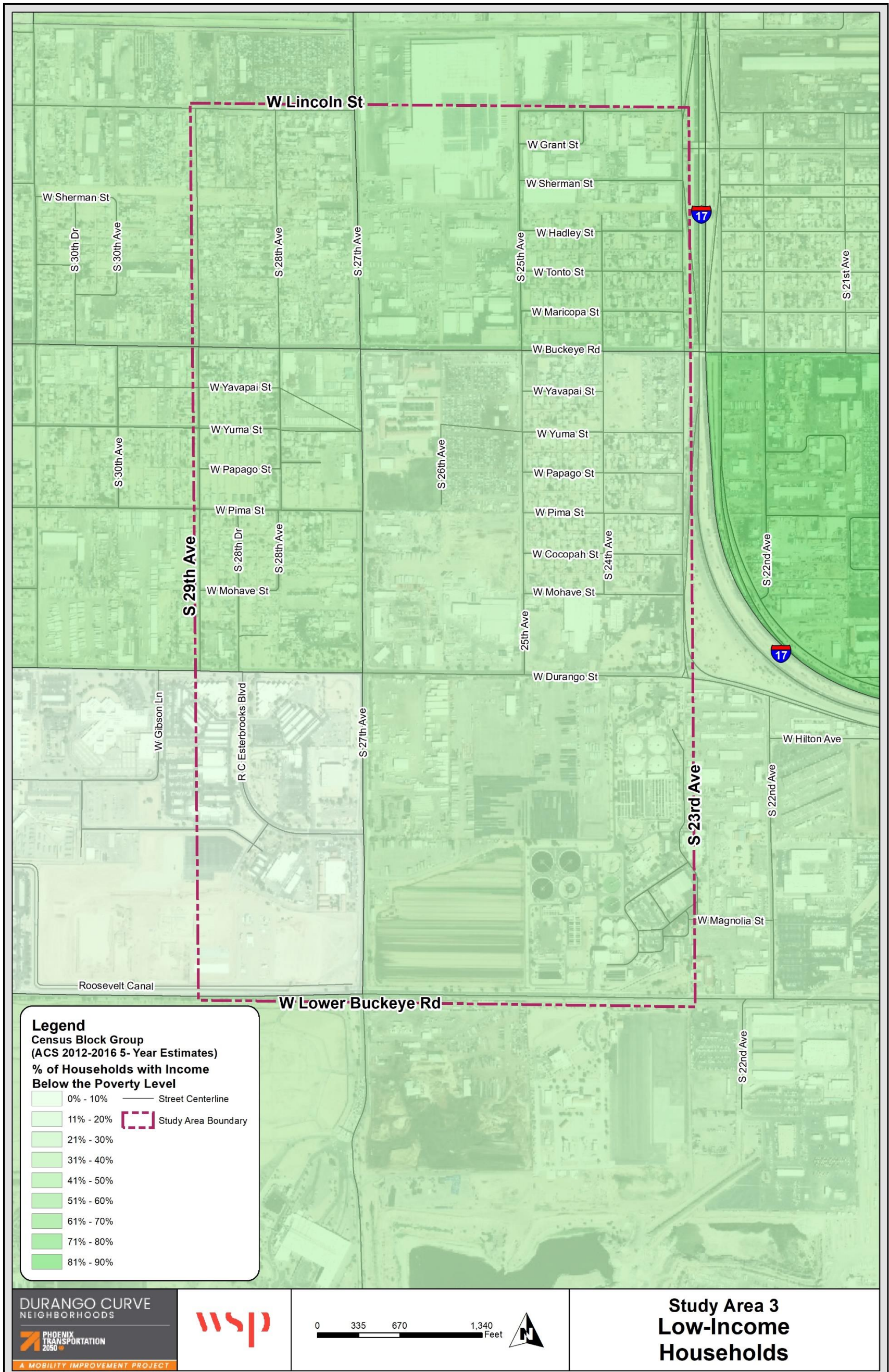


Figure 3-4: Transit-Dependent Households

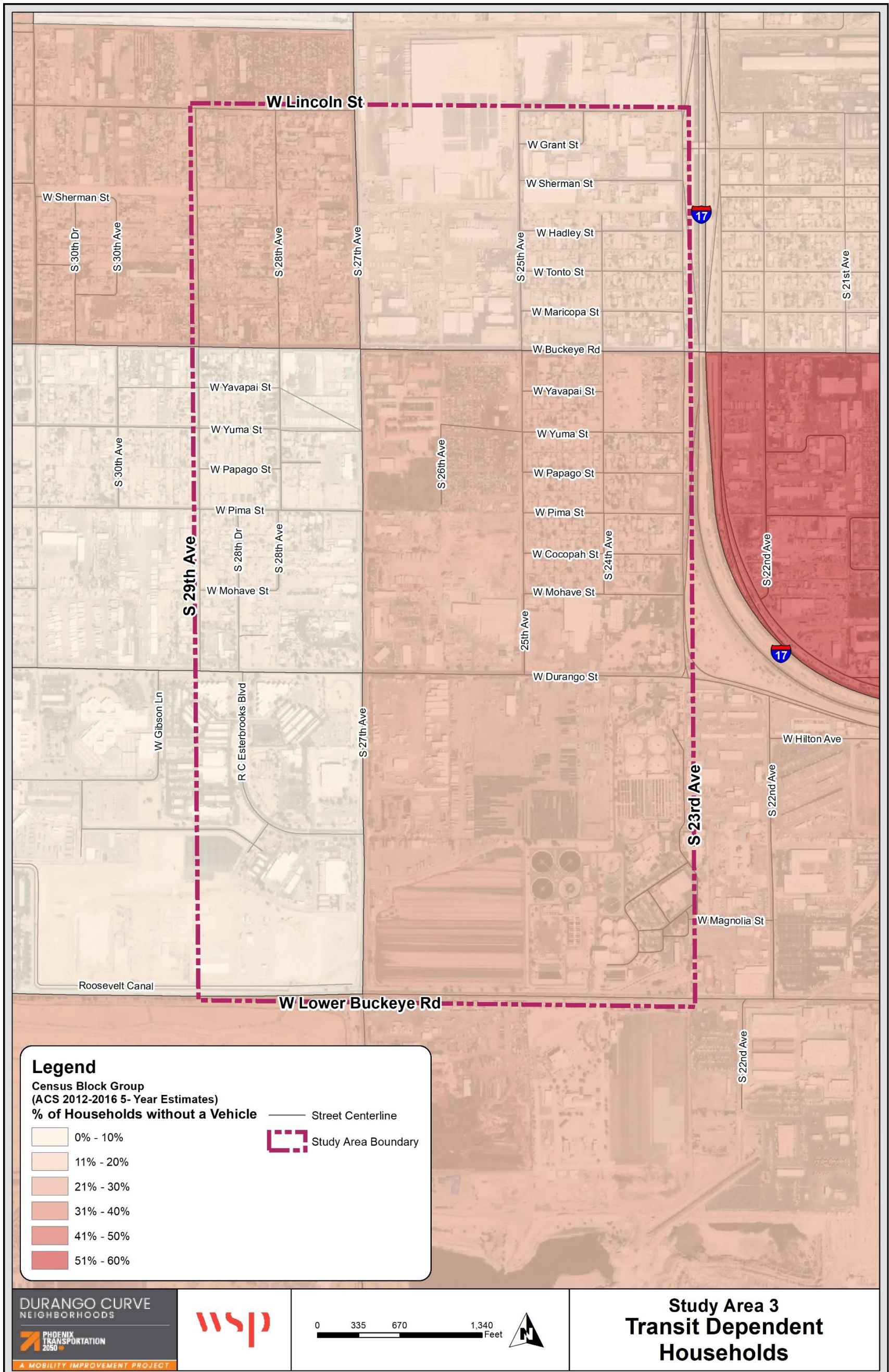


Figure 3-5: Population Density

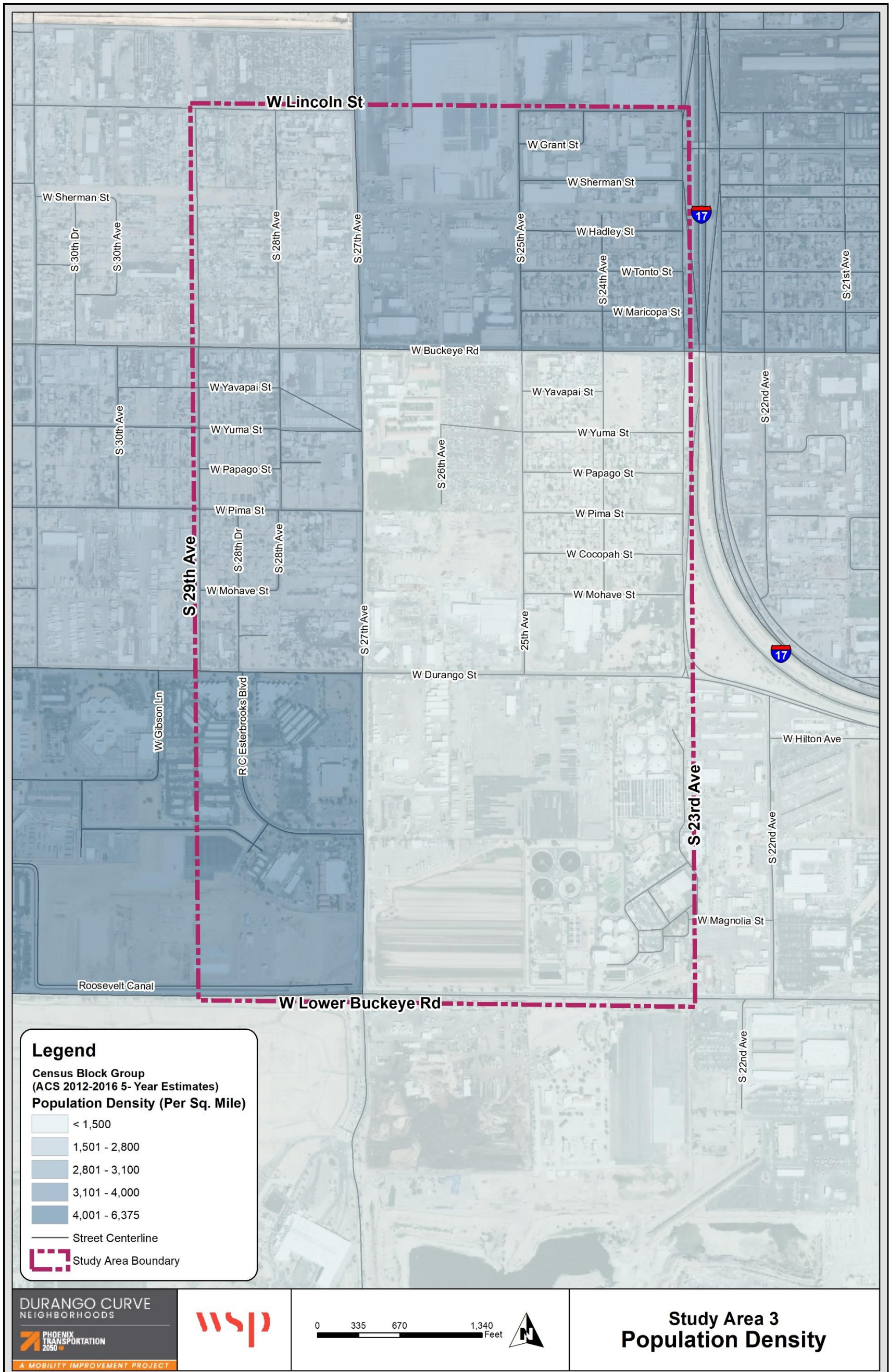


Figure 3-6: Population Taking Public Transportation to Work

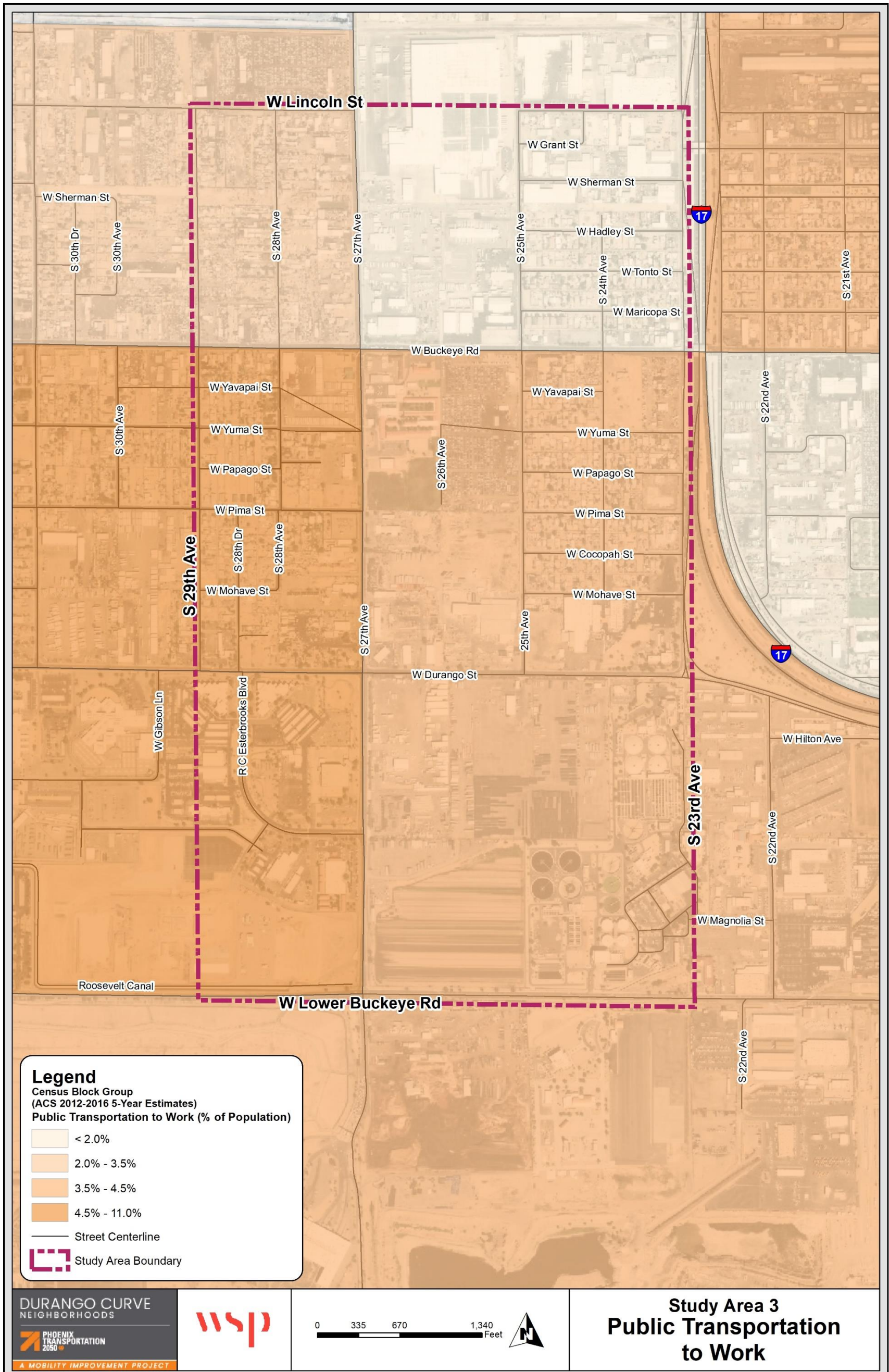


Figure 3-7: Population Bicycling to Work

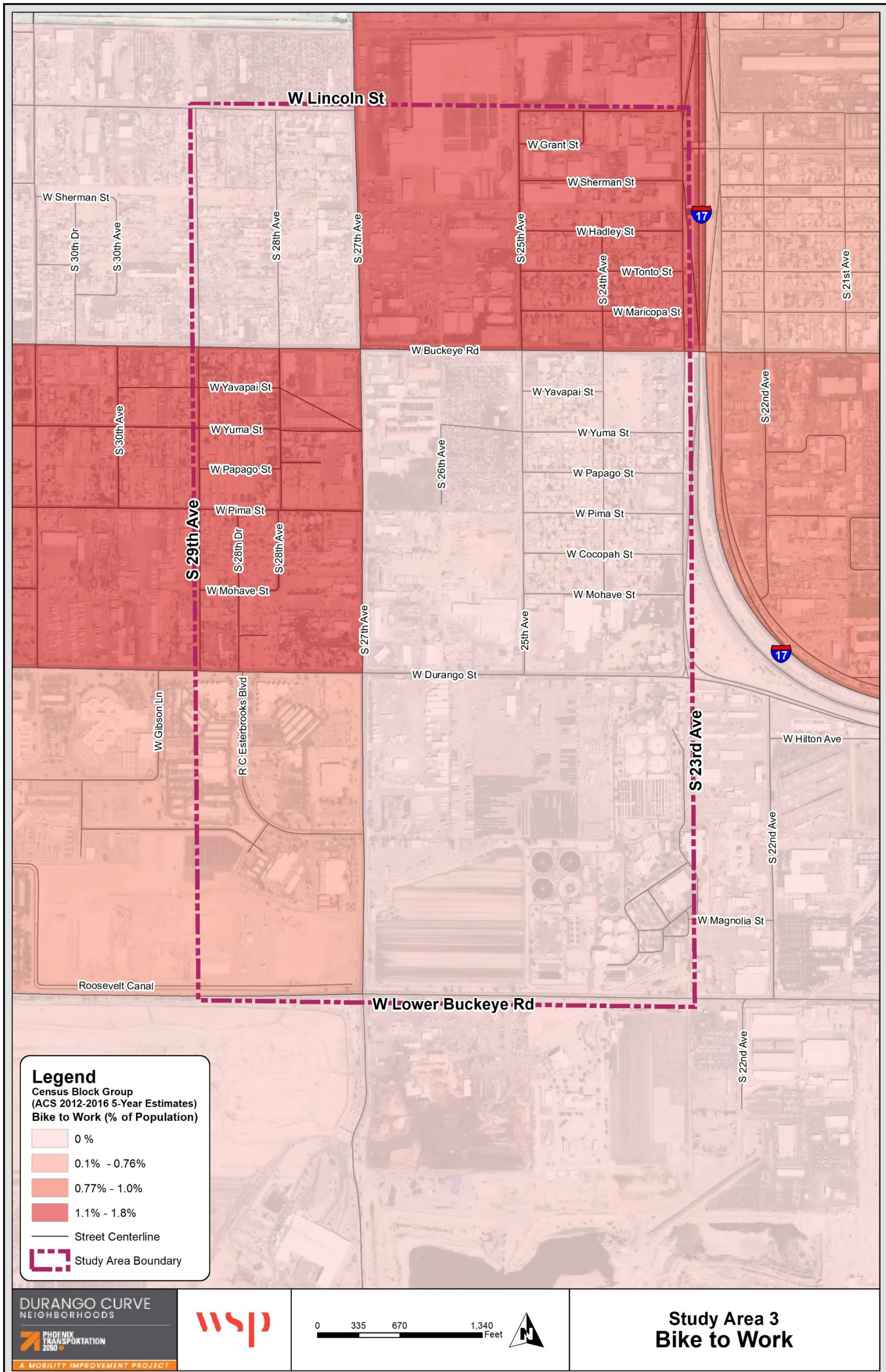
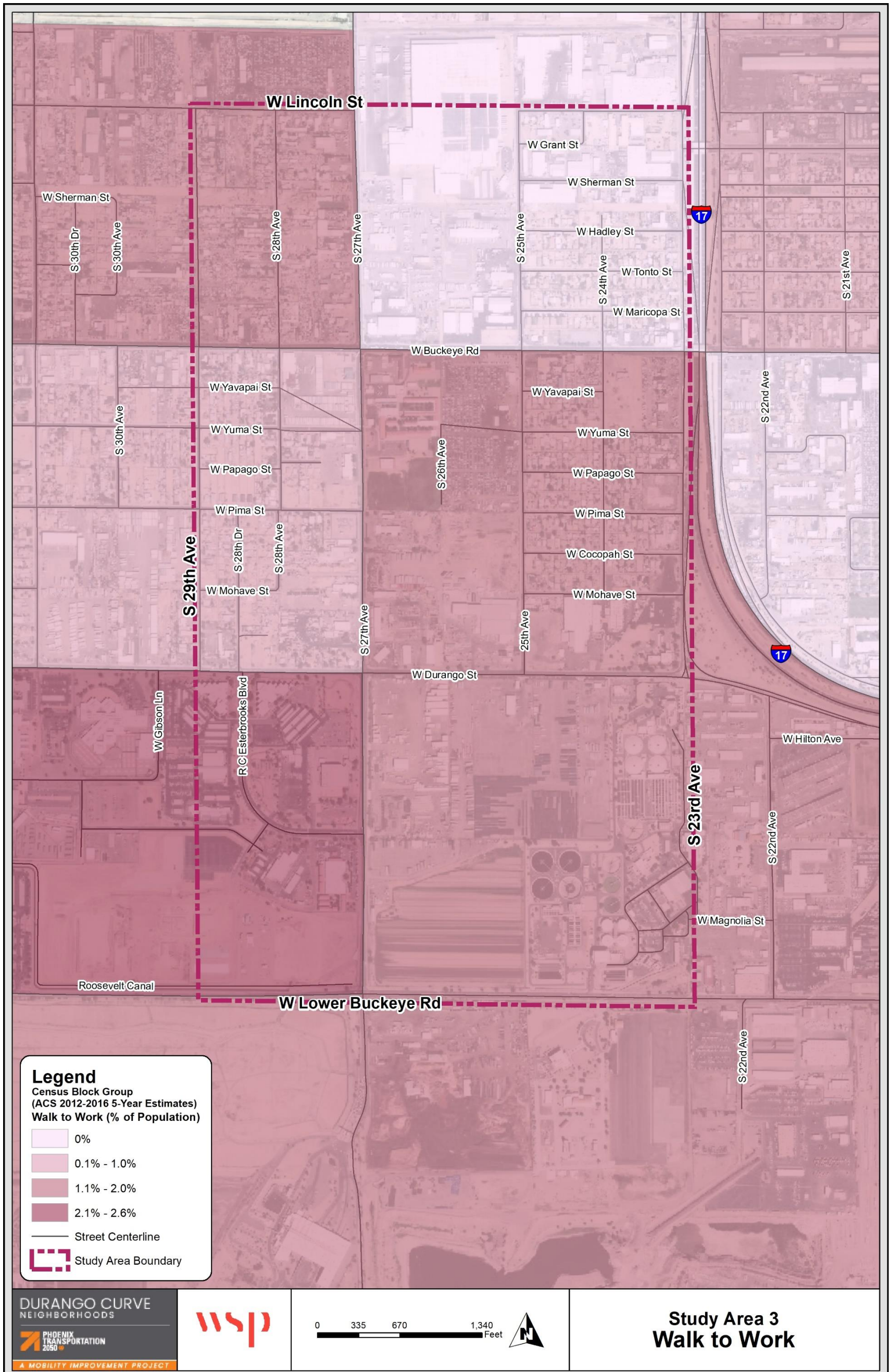


Figure 3-8: Population Walking to Work



4.0 Destinations

Key destinations were identified within and adjacent to the Durango Curve study area (See **Figure 4-2**). Destinations include neighborhoods, employment centers, shopping/retail centers, community centers, park/recreational facilities, medical facilities, educational facilities, and industrial/manufacturing facilities. Destinations were identified through field review and interviews with stakeholders.

Within and adjacent to the Durango Curve study area, there are several State, County, and City government complexes. The government complexes are south of Durango Street and include the Maricopa County Transportation, Flood Control, Transportation Management, Solid Waste, and Animal Control Departments, ADOT Traffic Operations Center and a City of Phoenix Wastewater Treatment Plant.

The Alfred F. Garcia Elementary School, located at the southeast corner of Buckeye Road and 27th Avenue is the only school within the study area. In addition to the school,

Figure 4-1: Sherman parkway



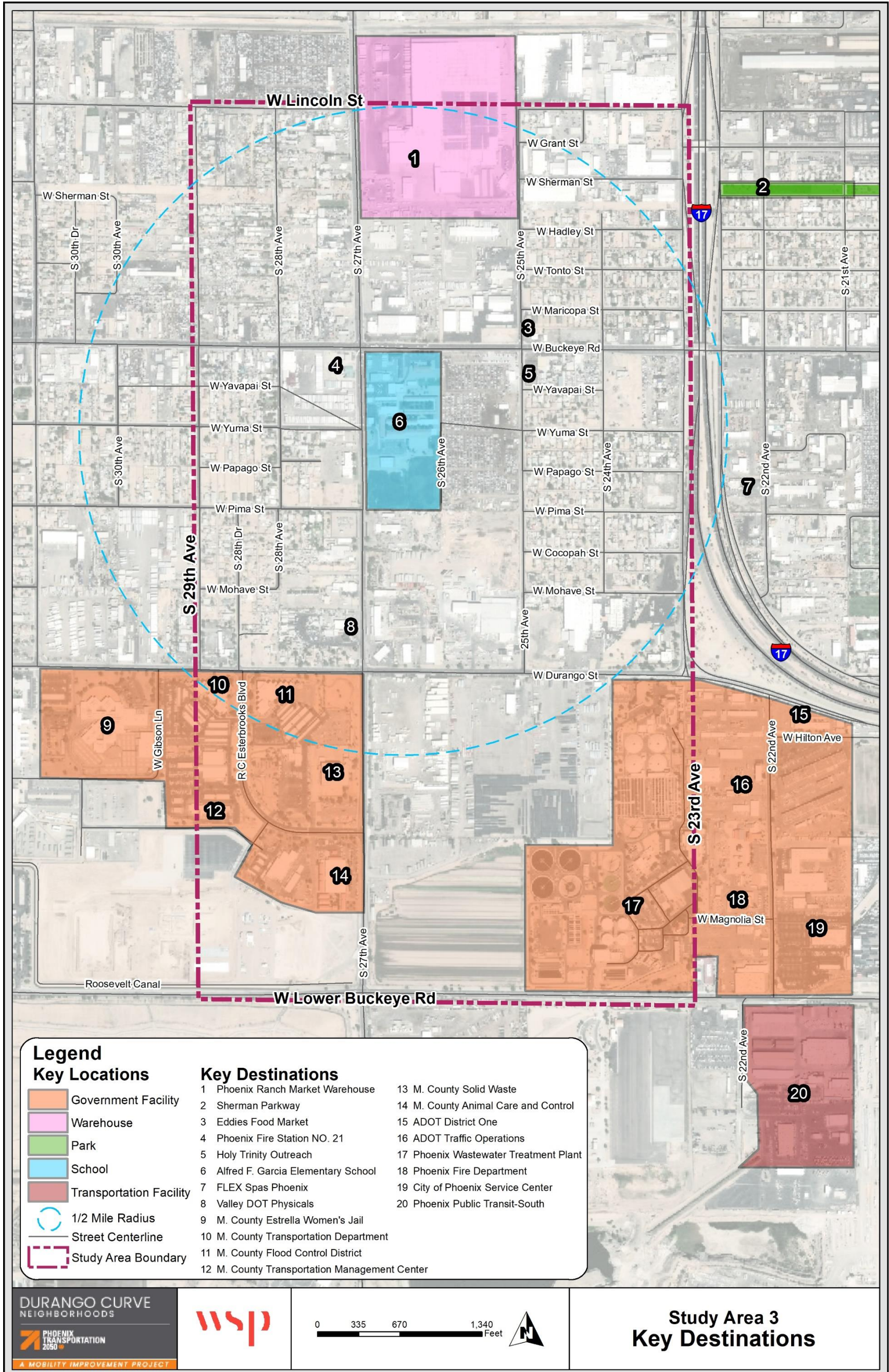
Eddie's Food Market is located at Buckeye Road and 25th Avenue. There is a warehouse district north of Garcia Elementary School between 27th Avenue and 25th Avenue. Sherman Parkway, a linear park within the utility corridor between Black Canyon Highway and 19th Avenue, is adjacent to I-17 on the east side, outside the eastern boundary of the study area. Other destinations outside the study area include the health clinic at Murphy School District, Phoenix Rescue Mission, Arizona Center, Walmart, and Food City. These destinations were highlighted by GIS analysis and

interviews with stakeholders.

Issues and Concerns

- Garcia Elementary School is located at the southeast corner of Buckeye Road and 27th Avenue, which are both arterials and carry heavy industrial traffic.
- South of Durango Street there are various State and County facilities that are considered major employment centers. These facilities are concentrated in the south portion of the Durango Curve study area, however there is limited connectivity between these facilities and the north/south arterials or collector roads connecting to the remainder of the study area.

Figure 4-2: Key Destinations



5.0 Existing Transportation Facilities

Existing transportation facilities were analyzed to catalog the kinds of facilities that exist within the study area. Transportation facilities include streets and roadways, public transportation facilities, bicycle and pedestrian facilities, and supportive streetscape amenities (lighting and landscaping). In addition, pertinent issues and areas of concern were evaluated.

5.1 Streets and Roadways

Streets and roadway facilities data include the street classification and hierarchy, traffic volumes, roadway characteristics, and crashes. **Figure 5-3** shows all current street and roadway infrastructure within the Durango Curve area.

Functional Classification and Hierarchy

Roadways existing within the study area include major arterial, minor arterial, minor collector and local roadways. Classification of streets is shown in **Table 5-1**. All minor roadways are categorized as local roads.

Figure 5-1: No sidewalks and informal on-street parking



Table 5-1: Functional Classification

Street Name	Classification	Direction
Buckeye Rd.	Major Arterial	EB/WB
27 th Ave.	Minor Arterial	NB/SB
Durango St.	Minor Collector	EB/WB

Volume of Traffic

Traffic volumes provide an understanding of the utilization of roads and streets within the study area. Traffic volumes help to analyze areas of concern and indicate where traffic is most densely concentrated. 2017 traffic volumes were provided for a 24-hour period. Areas of highest traffic volume are in **Table 5-2**.

Westbound (WB) traffic volumes on Buckeye Road are over 16,500 vehicles from 23rd Avenue to 27th Avenue and increase to over 17,000 vehicles from 27th Avenue to 29th Avenue. Eastbound (EB) traffic volumes on Buckeye Road have a similar pattern. Furthermore, traffic volumes on Durango Street from 23rd Avenue to 29th Avenue are nearly double compared to volume of EB traffic.

Table 5-2: Traffic Volumes

Roadway Segment	Classification	Direction	Volume
Buckeye Rd.: 27 th Ave. to 29 th Ave.	Major Arterial	WB	17,227
Buckeye Rd.: 23 rd Ave. to 27 th Ave.	Major Arterial	WB	16,766
Buckeye Rd.: 27 th Ave. to 23 rd Ave.	Major Arterial	EB	15,602
Buckeye Rd.: 29 th Ave. to 27 th Ave.	Major Arterial	EB	13,434
Durango St.: 23 rd Ave. to 29 th Ave.	Minor Collector	WB	8,060
27 th Ave.: Durango St. to Buckeye Rd.	Minor Arterial	NB	4,943
Durango St.: 29 th Ave. to 23 rd Ave.	Minor Collector	EB	4,719
27 th Ave.: Durango St. to Lower Buckeye Rd.	Minor Arterial	SB	4,344
27 th Ave.: Lower Buckeye Rd. to Durango St.	Minor Arterial	NB	3,608
27 th Ave.: Buckeye Rd. to Durango St.	Minor Arterial	SB	3,528

Signage & Traffic Calming

Signage for intersections includes guidance for signalized, non-signalized and sign-controlled intersections. The study area has eight (8) signalized intersections and contains a significant number of non-signalized intersections. One high-intensity activated crosswalk (HAWK) exists along 27th Street near Garcia Elementary School (See **Figure 5-12**). All signalized intersections are located along major and minor arterials. Non-signalized intersections are mainly located within neighborhoods and along collector roads.

There are eight (8) speed humps within the study area, with a concentration in the area bounded by Pima Street/Buckeye Road/27th Avenue/29th Avenue, and on 29th Avenue between Buckeye Road and Lincoln Street. However, traffic calming measures are not used consistently throughout all areas.

Crashes

Bicycle and pedestrian crashes were analyzed to identify areas of major safety concern. Crash severity was categorized by fatal, serious, and minor crashes. Crash analysis was conducted based on police reports documented between 2013 and 2016.

A total of 11 crashes occurred within the study area during the period analyzed. They included eight (8) minor crashes, two (2) serious crashes, and one (1) fatal crash. Most incidents were related to impairment or inattention and during the evening between 4 PM and 11 PM. In addition, the highest number of crashes occurred at mid-block. Buckeye road has the highest concentration with a total of 7 crashes. Crashes are depicted in **Table 5-3** and in **Figure 5-4**.

Table 5-3: Intersections of Concern

Intersection	Type	Signage	Cause	Severity
Buckeye Rd. Between 24 th Ave. and 25 th Ave.	Major Arterial	None	Other	Fatal
Buckeye Rd. Between 24 th Ave. and 25 th Ave.	Major Arterial	None	Did not use crosswalk	Serious
Buckeye Rd. Between 24 th Ave. and 25 th Ave.	Major Arterial	None	Inattention	Serious
Lower Buckeye Rd. and 27 th Ave.	Minor Arterials	Signalized Intersection	Crossing Road	Minor
Lincoln St. and 23 rd Ave.	Local roads	Stop Sign	In opposing lane	Minor
Lincoln St. and 29 th Ave.	Local roads	Stop Sign	Failed to Yield	Minor
Lincoln St. and 27 th Ave.	Minor Arterial and Local Road	Signalized Intersection	Other	Minor
Buckeye Rd. Between 25 th Ave. and 27 th Ave.	Major Arterial	None	Not Reported	Minor
Buckeye Rd. and 24 th Ave.	Major Arterial and Local Road	Stop Sign	Not Reported	Minor
Buckeye Rd. and 27 th Ave.	Major Arterial and Minor Arterial	Signalized Intersection	Other	Minor
Lincoln St. and 27 th Ave.	Minor Arterial and Local Road	Signalized Intersection	Other	Minor

Issues and Concerns

- The main safety concern for the Durango Curve area is Buckeye Road due to the occurrence of multiple pedestrian and bicycle crashes between 24th Avenue and 25th Avenue. The incidents appear to occur mid-block where there are no designated crossings, traffic calming devices, or signalized intersections.
- Highest concentrations of traffic volumes within the area also occur along Buckeye Road. Buckeye Road is a major east/west connector and is designated as a critical freight corridor through the area.
- Buckeye Road is designated as a major urban freight corridor.

Figure 5-2: Pedestrians crossing major arterial intersection



Figure 5-3: Streets and Roadways

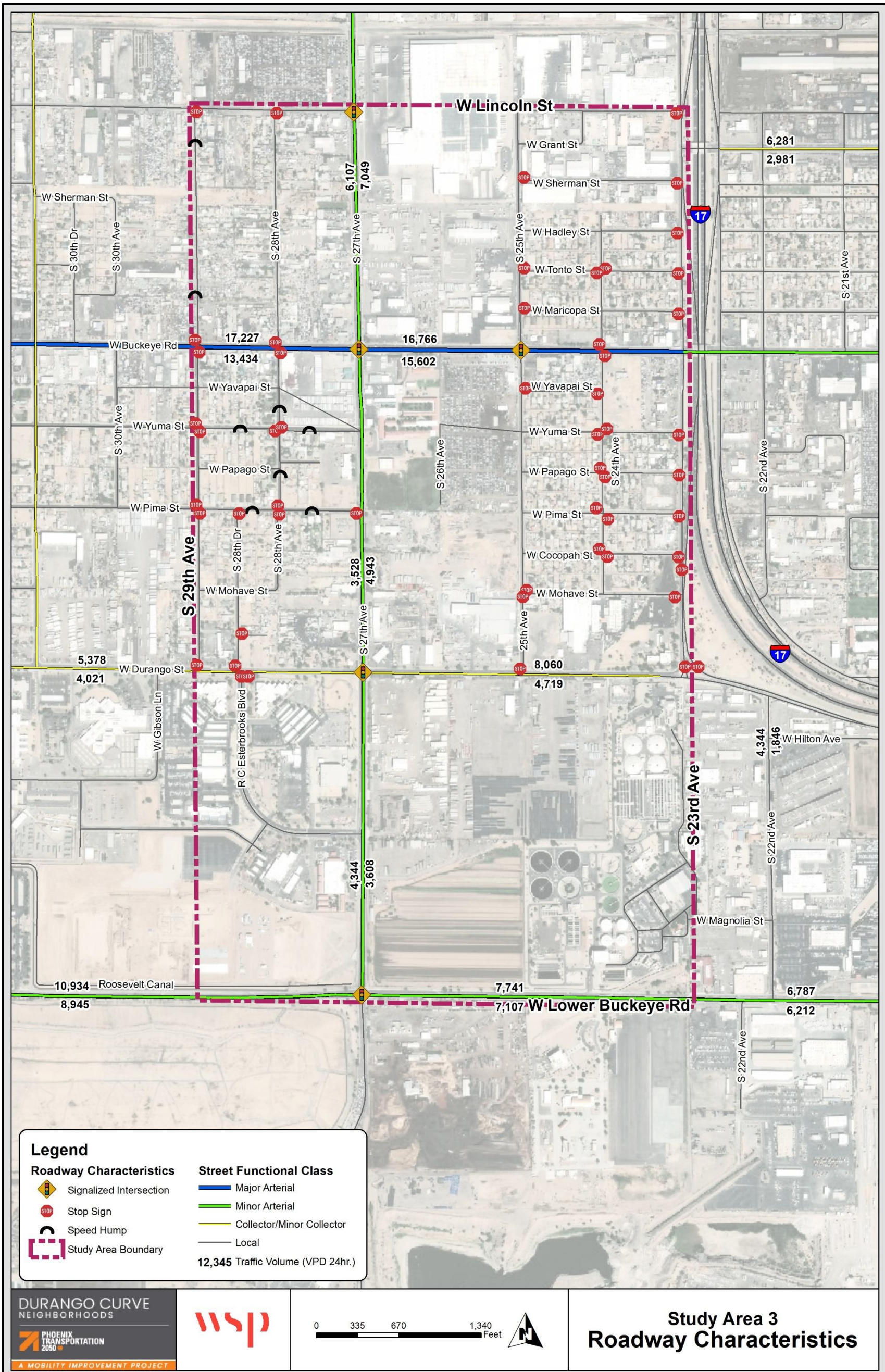
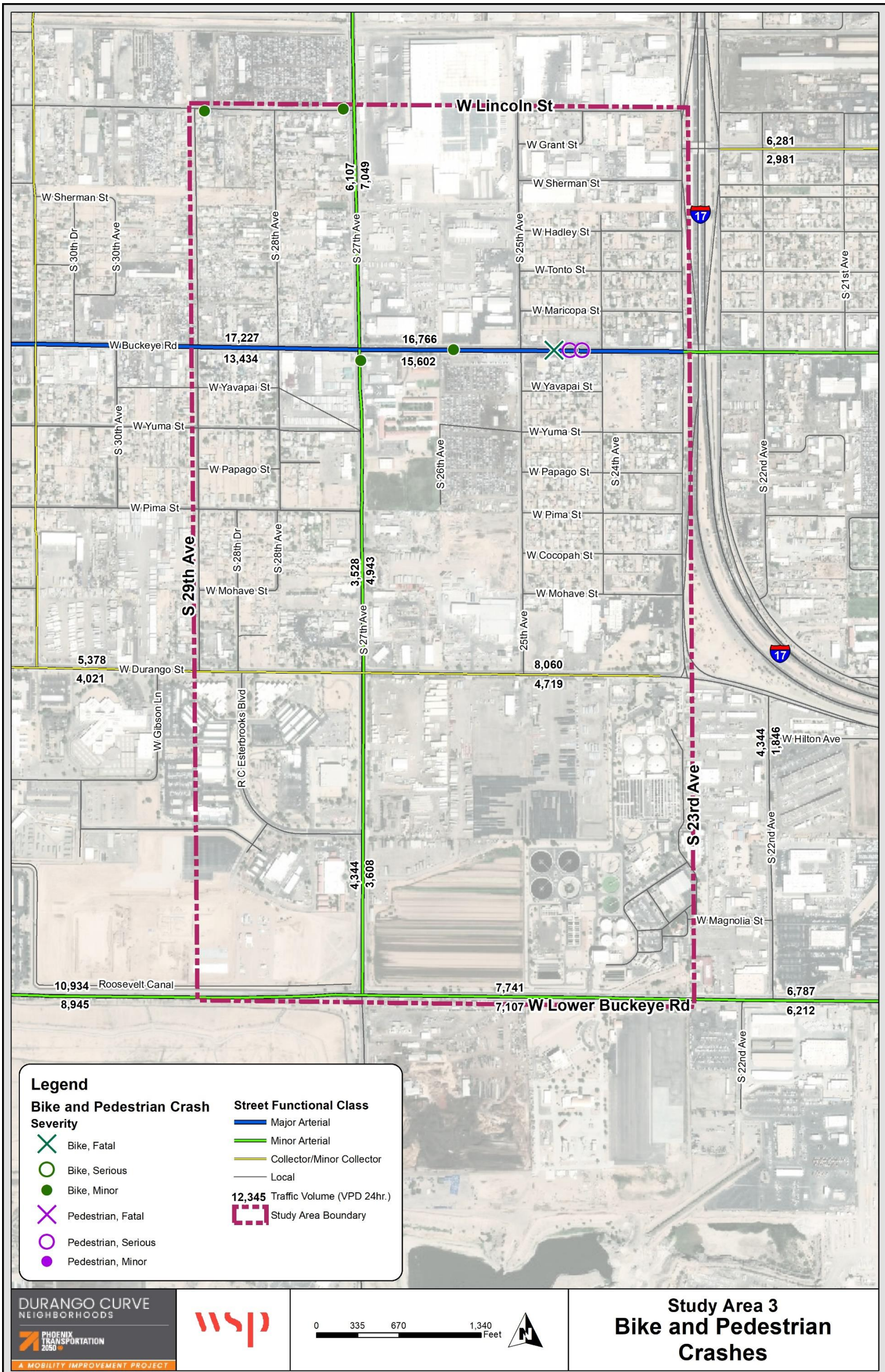


Figure 5-4: Crashes



5.2 Right of Way

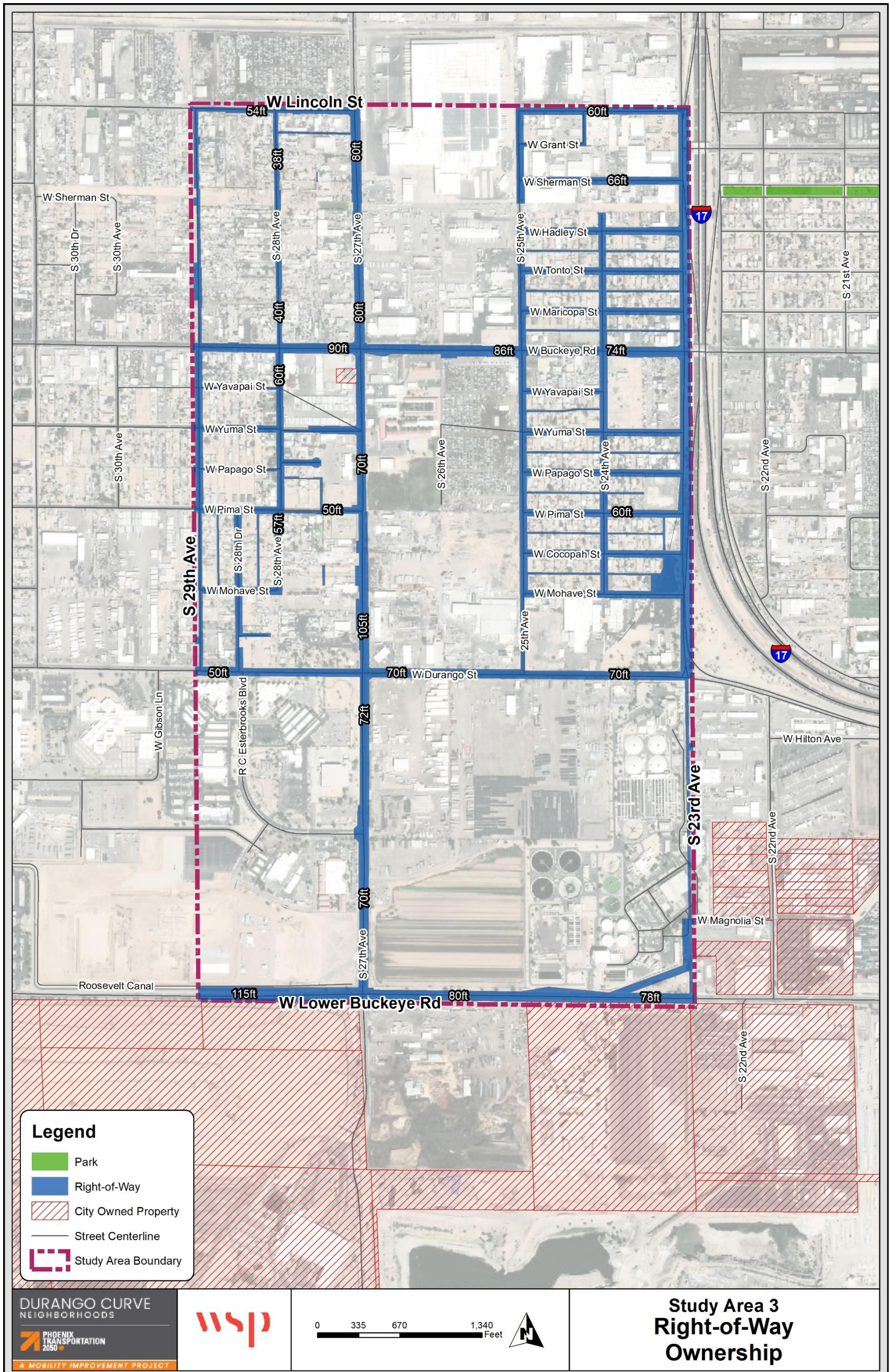
The Right-of-way (ROW) assessment looks at both roadway ROW and city-owned properties. ROW will determine where roadway improvements can be implemented as well as what kind of recommendations can be proposed, without the need for potential private property acquisitions. **Figure 5-5** illustrates the ROW within and adjacent to the study area. Roadway ROW varies based upon functional classification of the road. Major and minor arterials vary between 50 feet and 100 feet which include whereas local streets vary between 30 – 60 feet.

Multiple city-owned parcels are located within the Durango Curve study area, including the Phoenix Fire Department Station 21. The City of Phoenix also has large sections of ROW adjacent to the southern border of the Durango Curve study area.

Issues and Concerns:

- Areas of smaller amounts of ROW include Lincoln Street only have 54 feet of ROW between 29th Avenue and 28th Avenue. Durango Street only has 50 feet of ROW between 29th Avenue and 27th Avenue.
- Some areas in neighborhoods only have 30 feet of ROW, which include Pima Street, Yavapai Street, Papago Street, and 25th Avenue.

Figure 5-5: Roadway Right-of-Way



5.3 Public Transportation Facilities

The public transportation inventory was completed to understand where current facilities are located, usage, and if there are gaps and barriers to accessing them. The Americans with Disabilities Act of 1990 (ADA) was passed to ensure equal opportunity and access for persons with disabilities.¹ The U.S. Department of Transportation establishes ADA regulations for transit services and facilities. For this report, transit stations and the surrounding areas were analyzed to gauge accessibility. Public transportation data collected include transit routes, stops and ridership. Public transportation services show transit stops that are most utilized, annual ridership, transit lines and where transit lines connect.

Transit Routes and Stops

There are four fixed transit/bus routes that provide service in the Durango Curve study area (See **Figure 5-8**). **Table 5-4** shows the route, route type, route description, frequency, and key stops. Two bus routes, route 27 and 19, run NB/SB and two routes, route 13 and 28, run EB/WB. All routes have a frequency of 30 minutes, except Route 19, which operates at a frequency of 24-30 minutes. Key stops were identified based on the number of boardings and alightings. The key stops are located mainly along Buckeye Road and 27th Avenue along Route 27 and Route 13. Stops that are ADA non-compliant and ADA non-accessible were highlighted in **Figure 5-8**. In total, there are four (4) ADA non-compliant bus stops and four (4) ADA non-accessible bus stops within the study area, both do not meet current standards.

Figure 5-6: Bus stop along major arterial



Figure 5-7: Bus stopping along major arterial



¹ U.S. Department of Transportation (2015). *Americans with Disabilities Act (ADA): Guidance Circular*. Federal Transit Administration

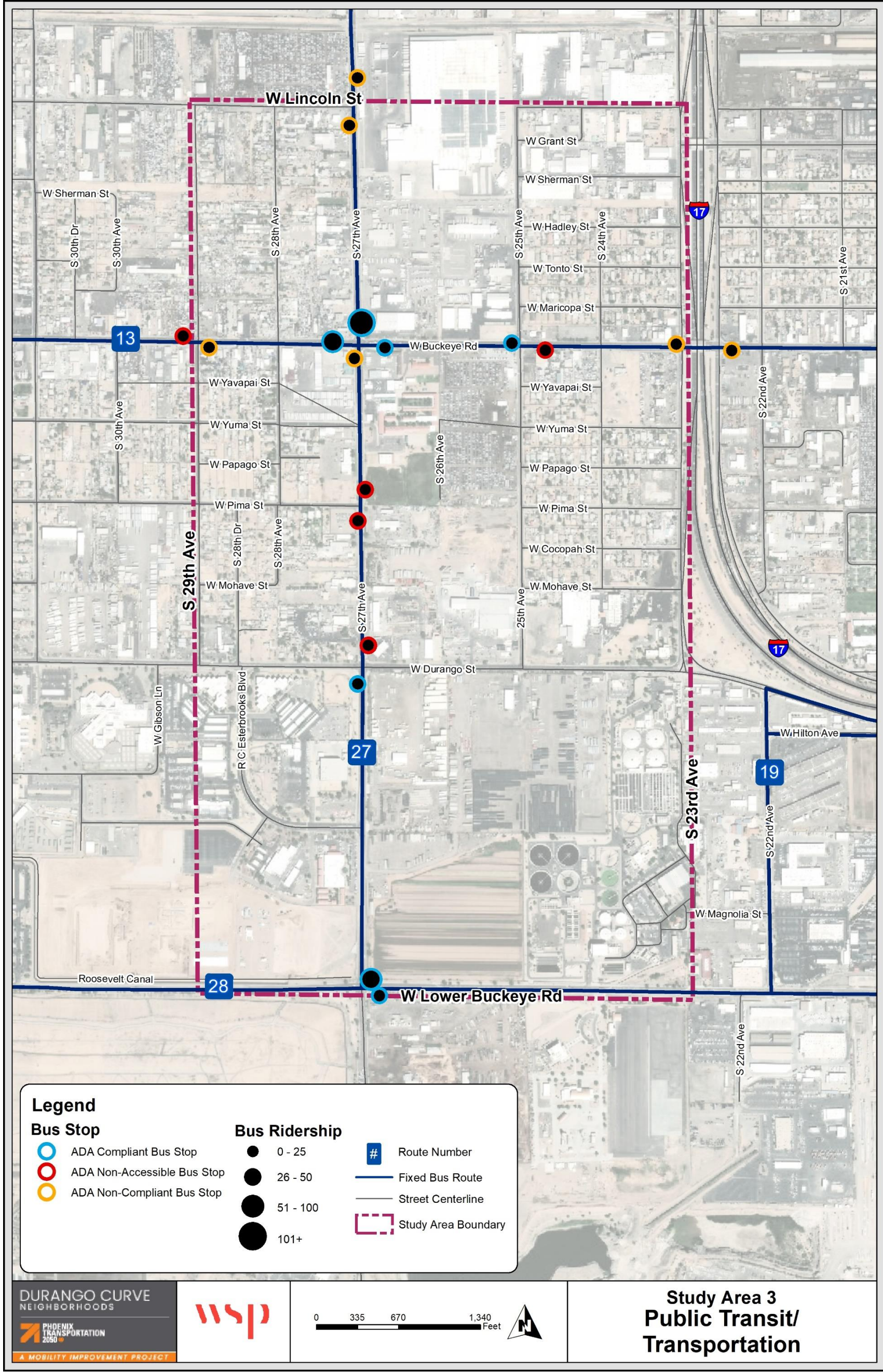
Table 5-4 Transit Routes

Name	Route Type	Route Description	Frequency (Minutes/Days)	Key Stops (Highest Ridership)
Route 13 EB/WB	Fixed	Buckeye Rd.	30 M-SU	Buckeye Rd. and 27 th Ave.
Route 27 NB/SB	Fixed	27 th Ave.	30 M-SU	27 th Ave. and Buckeye Rd.
Route 28 EB/WB	Fixed	Lower Buckeye Rd.	30 M-SU	Lower Buckeye Rd. and 27 th Ave.

Issues and Concerns

- The northbound (NB) bus stop at Buckeye Road and 27th Avenue has the highest ridership within the study area. The Alfred F. Garcia Elementary School is also located on the southeast corner of this intersection.
- The westbound (WB) bus stop at Buckeye Road & 27th Avenue and the NB bus stop at 27th Avenue and Lower Buckeye Road have the second and third highest ridership within the study area.
- ADA non-compliant and ADA non-accessible bus stops exist throughout the study area with the most located along Buckeye Road.
- No sidewalks exist at bus stops that do not meet ADA standards.
- Limited number of bus stop amenities are provided including bus shelters and benches.

Figure 5-8: Public Transportation/Transit



5.3 Bicycle and Pedestrian Facilities

Bicycle and pedestrian facilities include sidewalks, crossings, bike lanes, bike routes, bicycle boulevards, paths, and shared-use paths. Issues and areas of concern were also highlighted to note where infrastructure is lacking and where improvements will be beneficial.

Pedestrian Facilities

Pedestrian facilities include sidewalks, signalized crossings, and mid-block crossings. Sidewalks within the study area vary in size and connectivity. Sidewalks located in neighborhoods have an average width of 4 feet. Along arterials, the average width is 6 feet. The sidewalk connectivity is important in identifying gaps in the pedestrian environment and influence how people decide to get to their destination.

In addition to sidewalks, crossings are a key element that promote/improve mobility and accessibility for pedestrians. The number of crossings available for pedestrians help

Figure 5-10: High-intensity activated crosswalk (HAWK)



determine mobility impairment and where improvements are needed. Most signalized crossings are located at major intersections. One (1) high-intensity activated crosswalk (HAWK) at 27th Avenue at Yuma Street and connects to Garcia Elementary School. Due to large distances between crossings, there are inadequate safe crossing opportunities to connect many intermediate destinations.

Furthermore, there are many gaps in the sidewalk infrastructure causing pedestrians to cross at mid-block or unmarked crossings. In addition to gaps, many sidewalks within the study area do not have a buffer from vehicle traffic, thus making the utilization of these sidewalks less attractive due to the proximity of moving vehicles. Areas without any sidewalk include:

- Both sides of 25th Avenue
- Both sides of 27th Avenue between Durango Street and Yuma Street
- Both sides of 29th Avenue

Figure 5-9: Missing sidewalk



- Sections on both sides of Buckeye Road between 23rd Avenue and 29th Avenue, and
- Approximately one-half of all neighborhood streets have no sidewalk

Bicycle Facilities

Bicycle facilities were analyzed within and adjacent to the Durango Curve study area. The study area has only one bicycle lane, located along Durango Street between 29th Avenue and 23rd Avenue, in the EB direction.

Figure 5-11: Bicyclists using the sidewalk



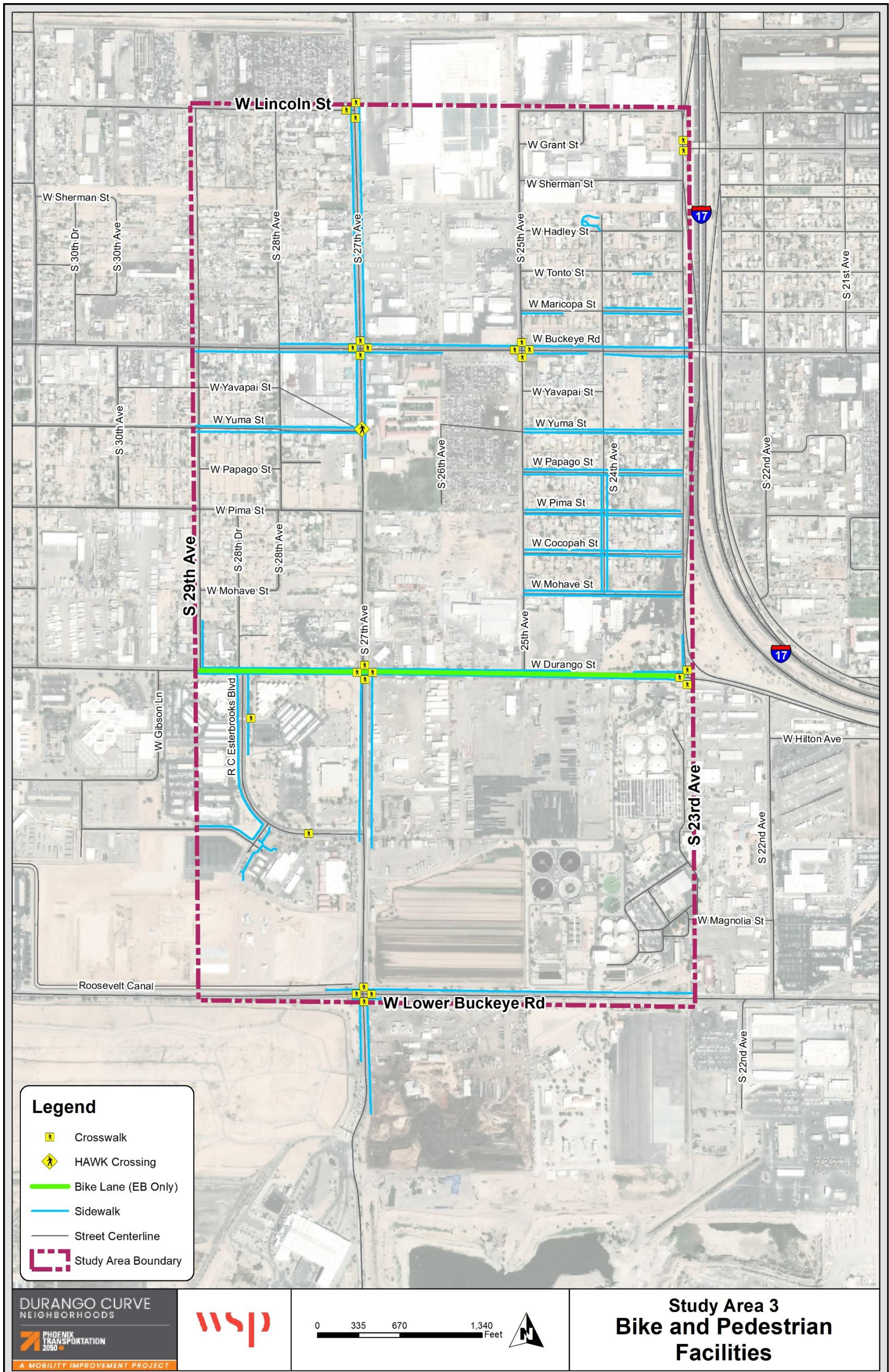
Some of the major gaps and barriers between bicycle facilities exist within neighborhoods and freeway crossings. Currently, there are only two crossings for pedestrians within the study area at Buckeye Road and Grant Street. Part of the northern portion of the Durango Curve study area is residential and there are no designated bike facilities to connect the residential areas, commercial areas, elementary school, or public transportation facilities.

Issues and Concerns

The major concerns regarding pedestrian and bicycle facilities include accessibility and connectivity. Listed below are the key issues:

- Only one bike facility exists within the study area and it only provides an EB connection for bicyclists. Currently there are no connections for bicyclists to cross the I-17 within the study area.
- Sidewalks are inconsistent throughout the study area and do not provide adequate connections between neighborhoods, destinations, public transportation and employment.
- Signalized crossings are located along major/minor arterials and are distributed throughout the study area. One HAWK is located at 24th Street and Yuma Street at Garcia Elementary School.

Figure 5-12: Bicycle and Pedestrian Facilities



5.4 Supportive Streetscape Amenities

Lighting and landscaping were analyzed because they help encourage the use of alternative modes of transportation, promote safety, create a cooling environment, and provide a more inviting environment to bicyclists and pedestrians.

Lighting

A review of lighting infrastructure identified existing lighting, lighting coverage and lighting facilities that will be updated through the light emitting diode (LED) Light Program. Areas of concern were also identified. Lighting acts as complementary infrastructure to transportation facilities. Lighting provides a sense of safety and helps encourage usage of transportation facilities.

Existing Street Lighting

Existing street light infrastructure data show that most lighting is located along major/minor arterials and collector roads such as Durango Street, Buckeye Road, and 25th Avenue (See **Figure 5-15**). Currently, the City of Phoenix is updating their entire street lighting infrastructure to LED lights. The LED lighting program will replace 100,000 existing street lights with LED fixtures. The program began in 2016 and is programmed to be completed in Fall 2019. Updated street light fixtures will improve visibility for pedestrians, bicyclists and vehicles as well as create a safer environment for non-motorized modes of transportation while reducing operating and maintenance costs.

Issues and Concerns

- Lighting infrastructure is highly concentrated along major roads and sparingly located within neighborhoods.
- There is no street lighting in the southern portion of the study area where the State, County, and City facilities are concentrated.
- Smallest number of street lights is along Lower Buckeye Road with a total of eight (8) light poles.

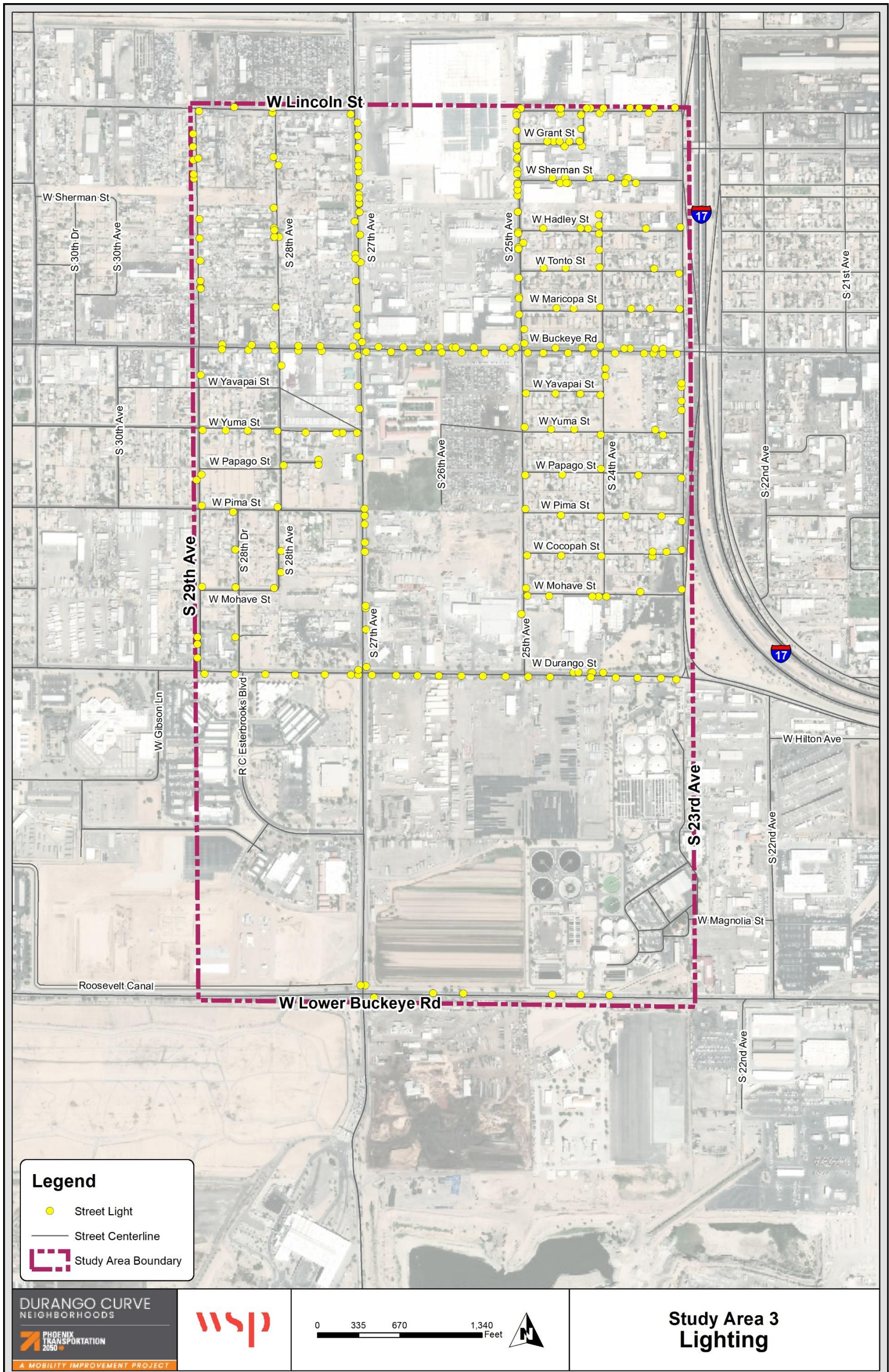
Figure 5-13: Street lights on one side of the road



Figure 5-14: Street lighting along major arterial



Figure 5-15: Lighting



Landscaping and Shade Covering

Landscaping and tree canopy are identified as key streetscape amenities to transportation facilities that encourage multi-modal access by providing greater shade coverage in the Phoenix area. The landscaping inventory looked at existing landscaping, including trees and other vegetation provided by the City of Phoenix. In addition to shade created by landscaping, structural shade was also evaluated. Structural shade refers to shade created by infrastructure which includes bus shelters. Structural shade only exists at some bus stops within the project area.

Figure 5-16: Lack of landscaping along major arterial



Existing Landscaping

Most public landscaping is located along Lower Buckeye Road (See **Figure 5-18**). Landscaping inventory in the study area shows existing trees and a vacant site where landscaping exists or could be added in the future. City-owned trees are located only along Lower Buckeye Road between 27th Avenue and 23rd Avenue. Existing trees are mature shade trees. However, most trees are spaced far apart and placed far from the sidewalk thus not providing shade to pedestrian or bicycle facilities.

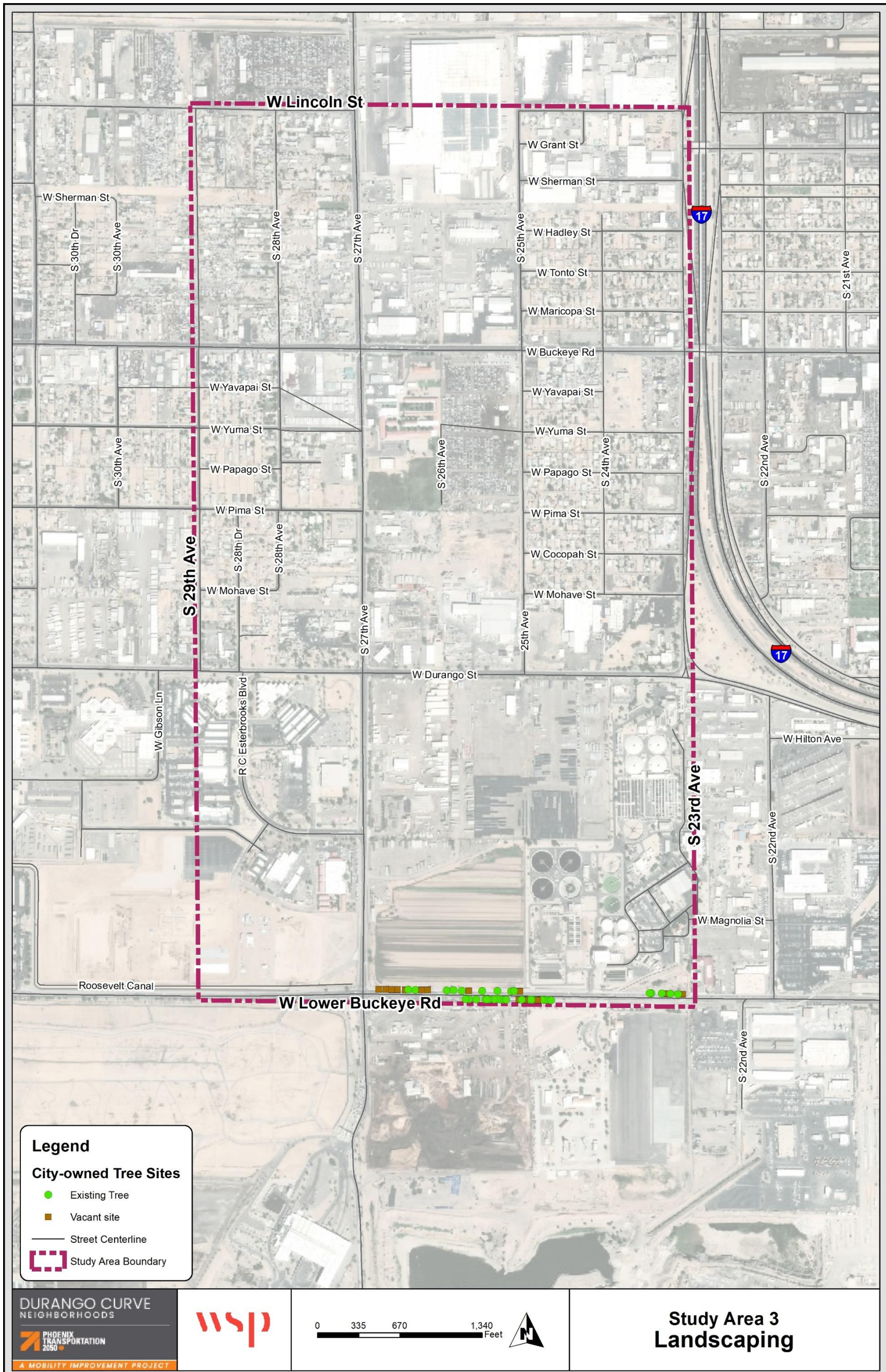
Issues and Concerns

- Overall, the Durango Curve study area does not have significant tree coverage or shade within the public ROW.
- The concentration of trees along Lower Buckeye Road is near the same locations as the eight light poles identified in the previous section.
- Most shade trees do not provide adequate shade for pedestrian and bicycle facilities due to spacing.

Figure 5-17: Lack of shade along local street



Figure 5-18: Landscaping



6.0 Land-Use Issues and Infrastructure

In addition to transportation infrastructure existing land-use, additional infrastructure, and environmental constraints were evaluated. Existing infrastructure includes drainage structures, and utilities. Environmental constraints include culturally sensitive sites.

6.1 Zoning

Current zoning was used to evaluate how closely current use of the parcels follows the City's requirements. Zoning, in some cases, doesn't reflect the land-use designations set forth in the General Plan. However, the zoning is generally consistent with current usage within the study area. Based on the Phoenix General Plan zoning regulations, most of the study area is zoned as industrial or light industrial. The highest concentration of commercial and multiple family residences is located near the center of the study area, primarily along Buckeye Road. Some of the residential neighborhoods include Garcia Neighborhood and Maryvale Estrella Neighborhood. Future zoning changes include commercial and light industrial changes along 29th Avenue and 28th Avenue (See **Figure 6-1**). Potential conflicts between growing industrial areas and residential could result in the prioritization of industrial facilities verses creating a safer environment for pedestrians and bicyclists.

6.2 Existing Land-Use

Existing land-use considers current development patterns within the study area, which includes residential, commercial, industrial, public/quasi-public, and transitioning to industrial. The largest uses, by land area, within the study area are public, quasi-public and industrial. The primary corridors, Buckeye Road, 29th Avenue, and 24th Avenue, are largely bordered by commercial or residential land-uses (See **Figure 6-2**). Zoning maps show areas where existing residential areas are zoned for industrial uses.

Figure 6-1: Zoning

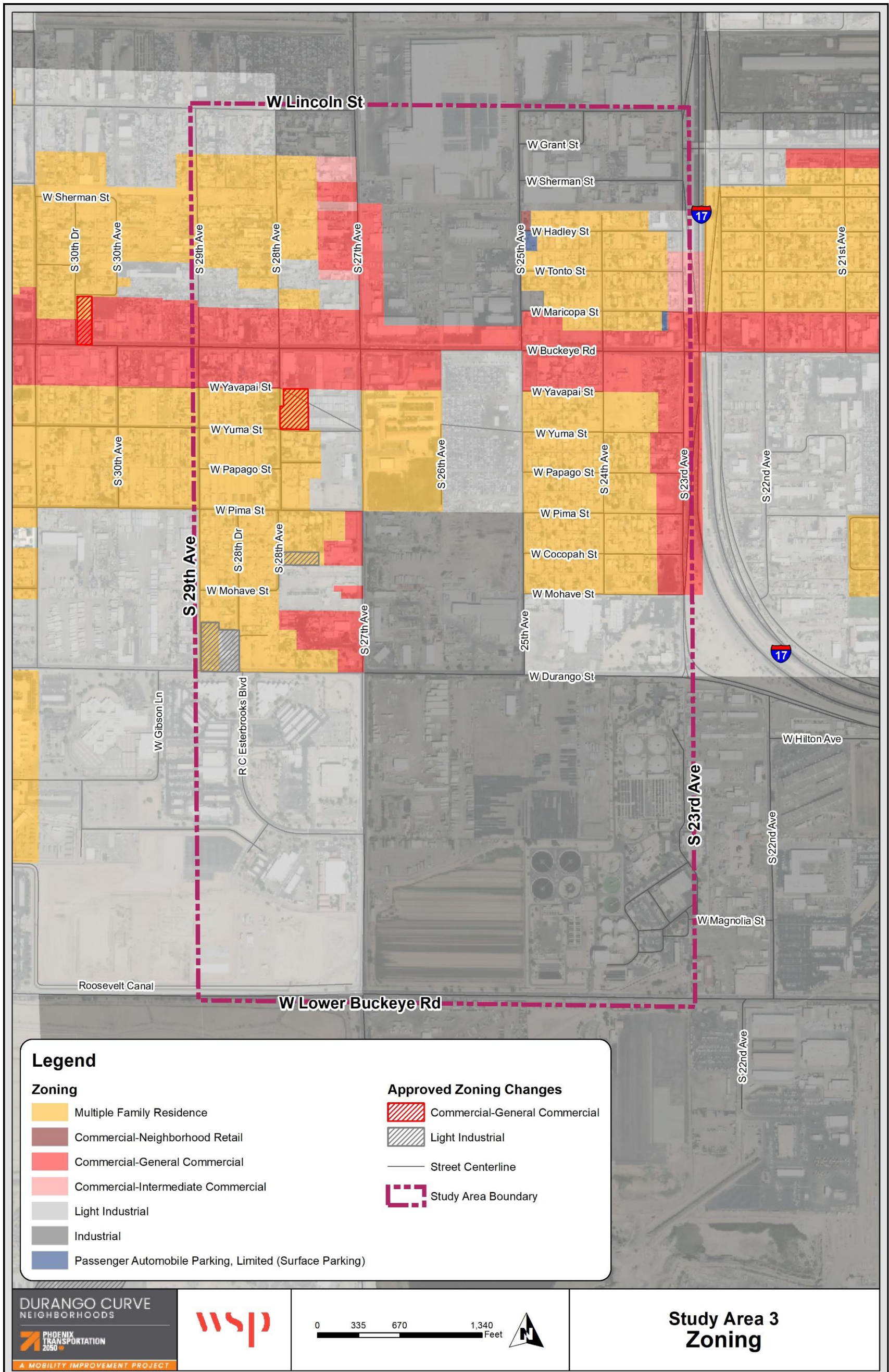
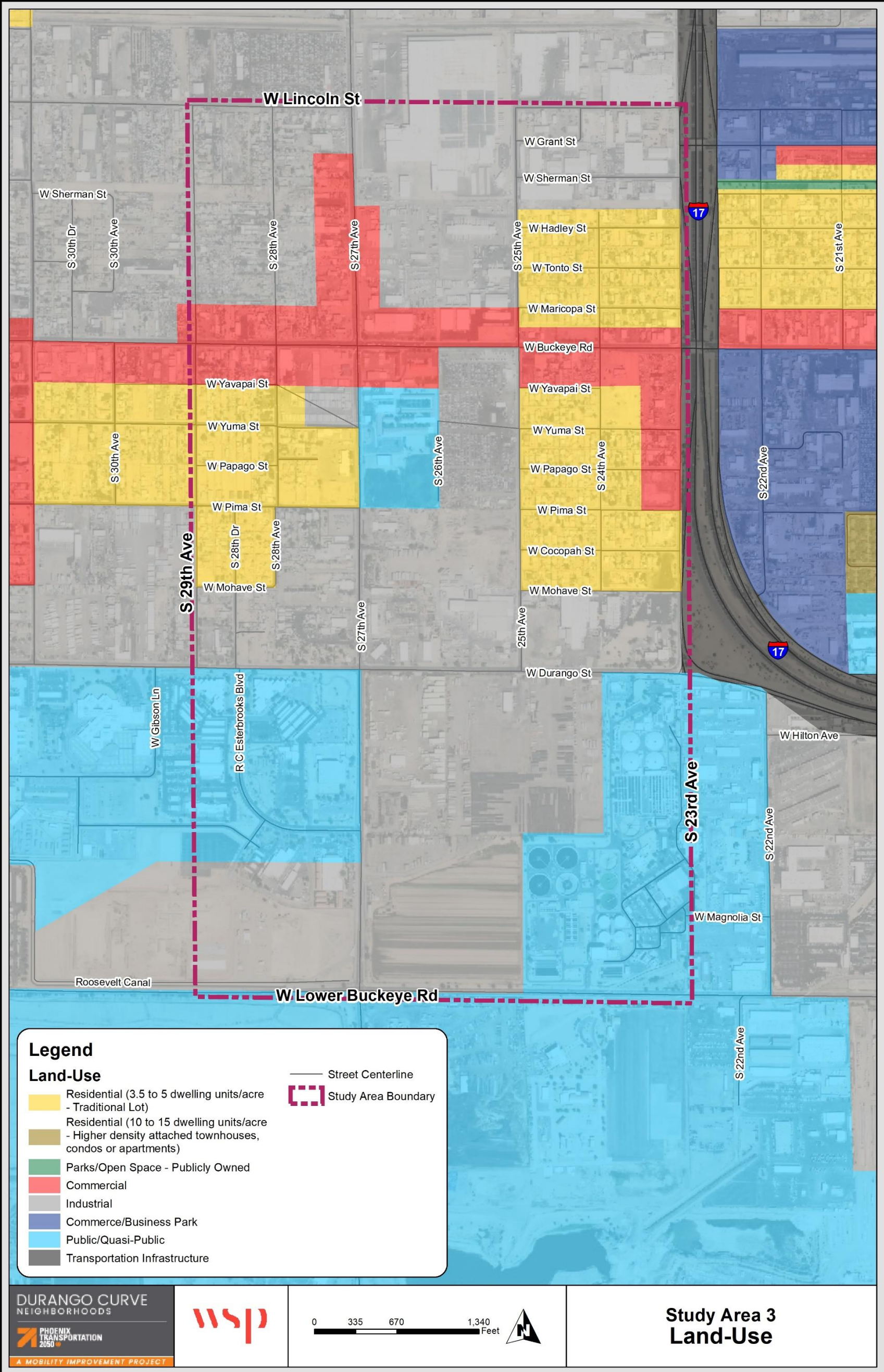


Figure 6-2: Land-Use



6.3 Drainage

Existing drainage infrastructure, stormwater structures, stormwater storage areas and linear open channels, are located along major/minor arterials and some local streets. Stormwater storage and stormwater structures are generally absent or incomplete throughout the neighborhoods.

The Durango Curve study area has linear open channel stormwater structures along 27th Avenue (See **Figure 6-4**). Additionally, there are stormwater retention areas near 23rd Avenue and Durango Street.

Two flooding reports within or near the study area in 2014:

- Flooding on Durango Street between 27th Avenue and 35th Avenue.²
- Flash flood conditions on I-17 at Durango Curve, causing a section of the interstate to be closed.³

6.4 Utilities

Transmission lines run east/west between Sherman Street and Hadley Street through the Durango Curve study area (See **Figure 6-5**). The current transmission lines create a barrier on 24th Avenue between development on the north and south sides of the fenced transmission lines (See **Figure 6-3**). Mobility improvements will build upon additional utility information as it becomes relevant in the development of project recommendations.

Issues and Concerns

- The Durango Curve study area has limited linear open channels for storm water drainage.

Figure 6-3: Utility barrier



² Casey, Matthew. "Avoid These Valley Areas Due to Flooding, Street Closures." *Azcentral*, The Republic | Azcentral.com, 9 Sept. 2014,

³ "Phoenix Pounded By Intense Storms." *The Weather Channel*, The Weather Channel

Figure 6-4: Drainage

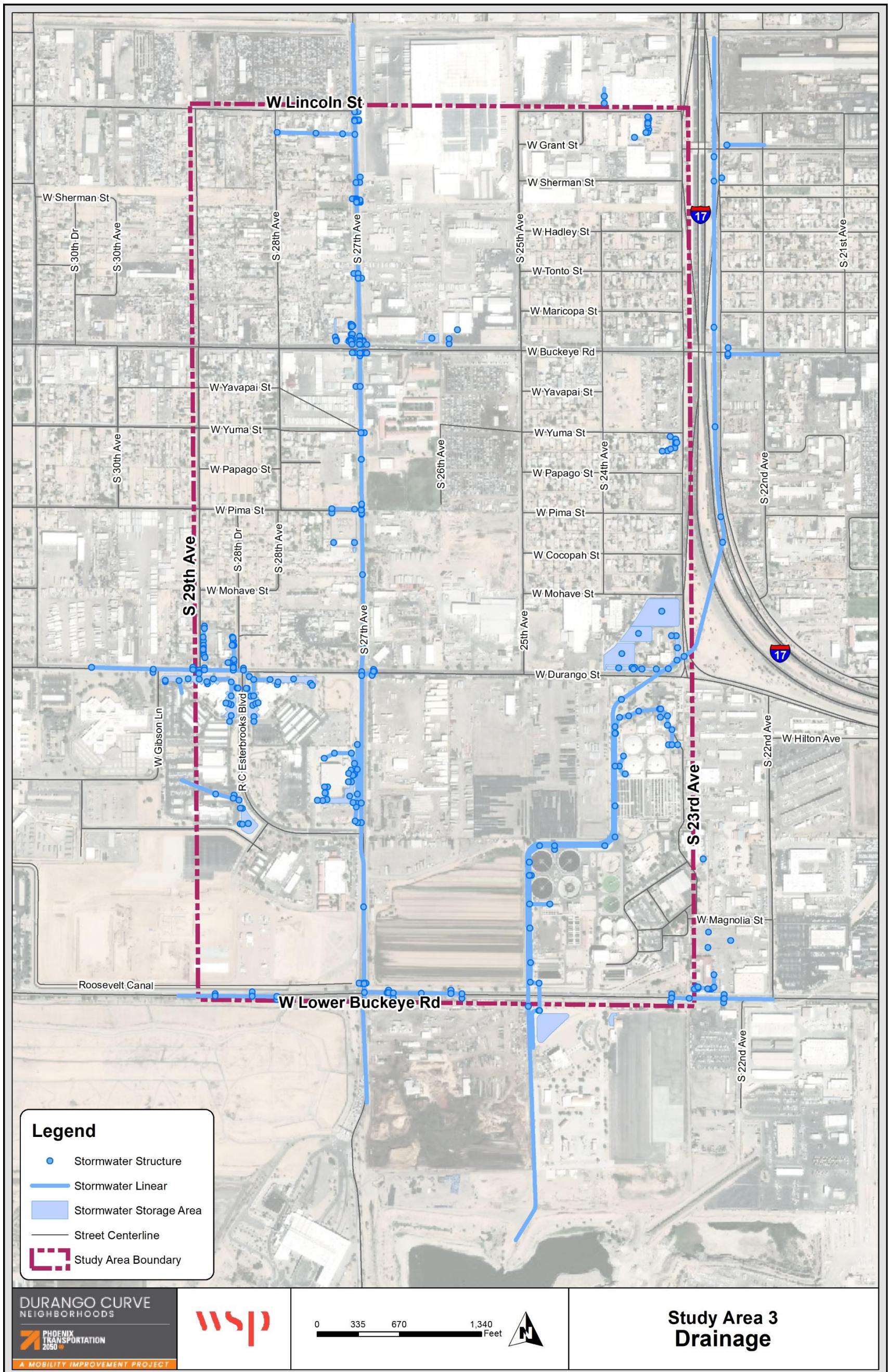
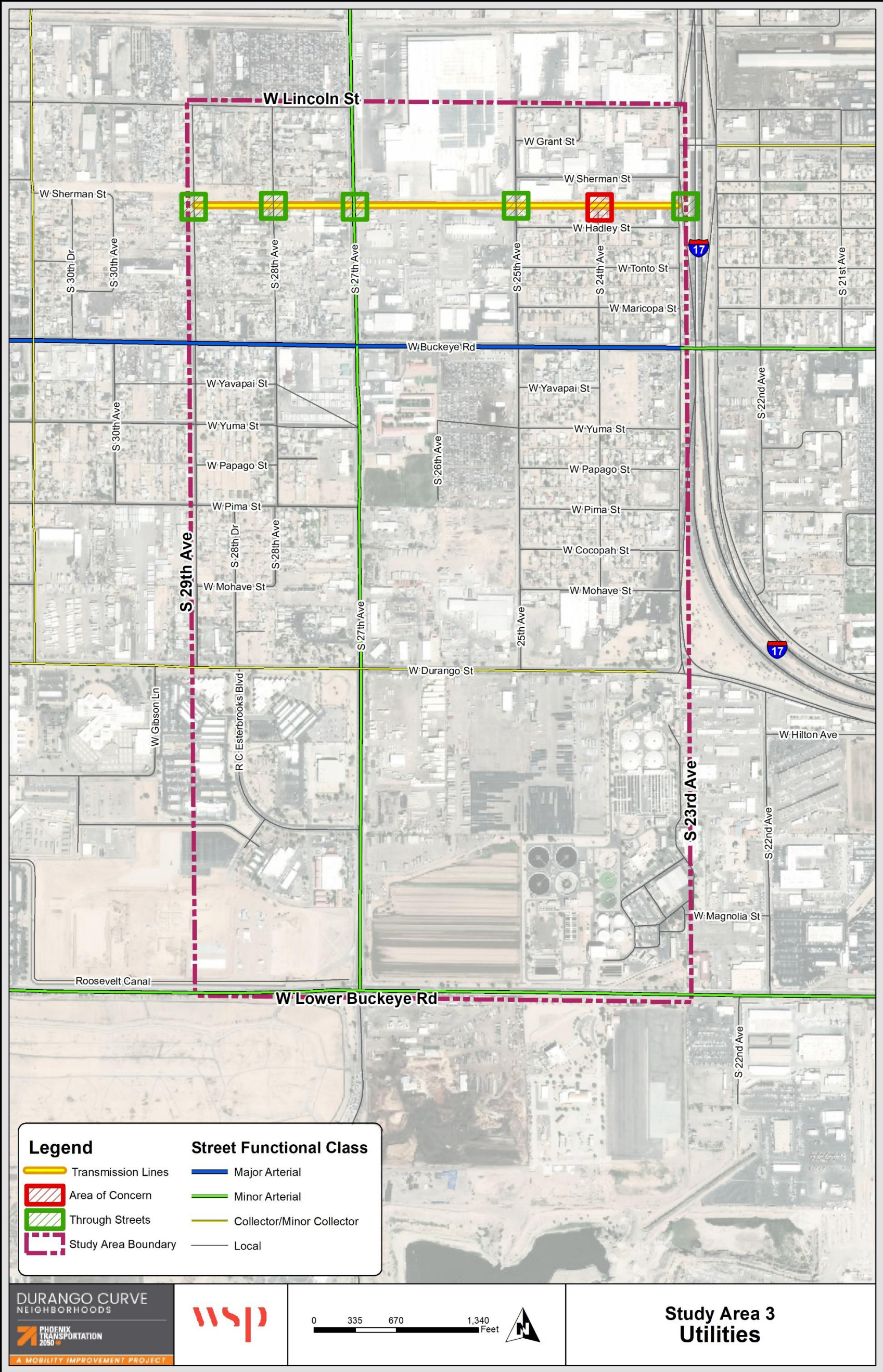


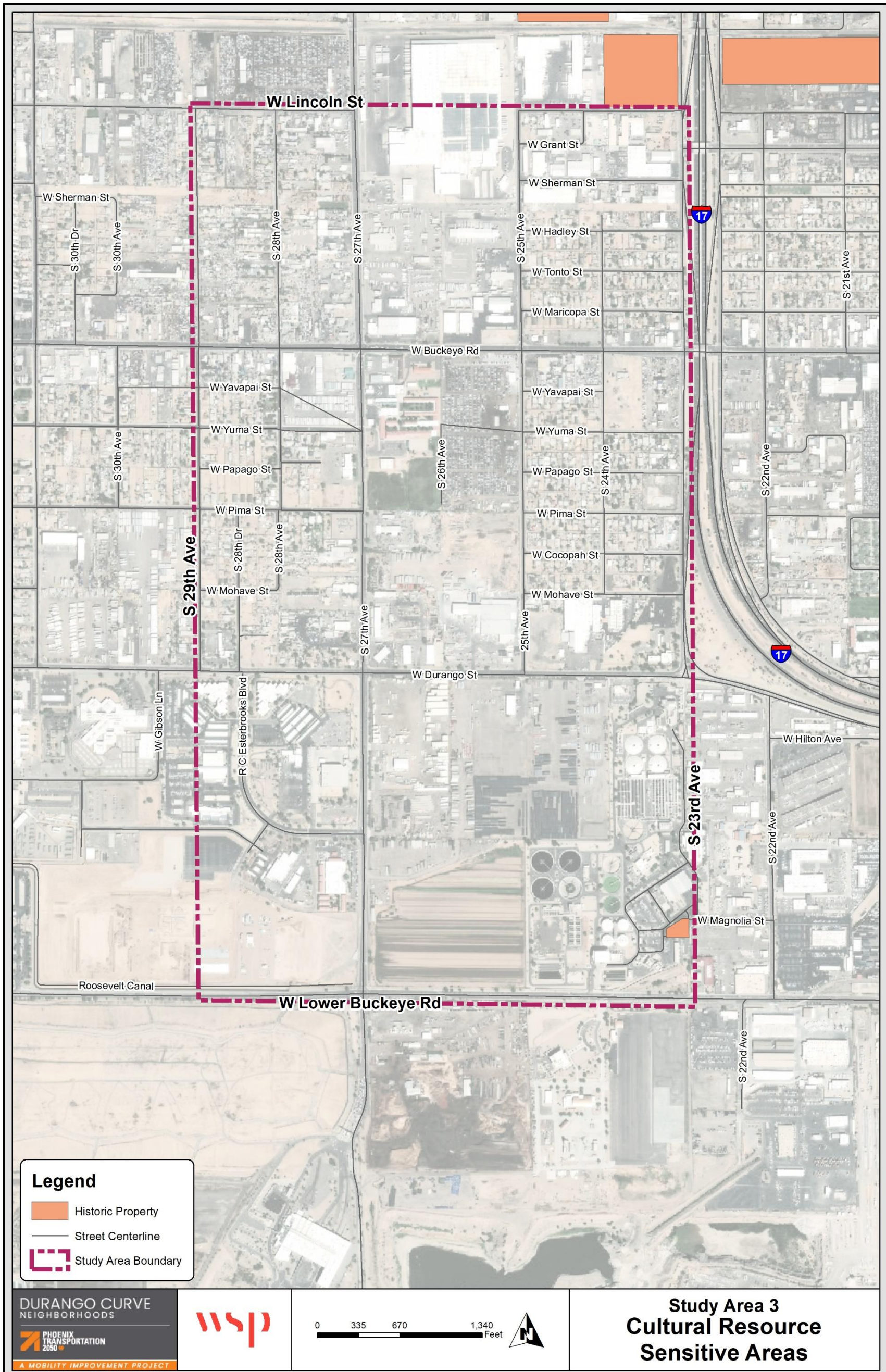
Figure 6-5: Utilities



6.5 Environmental and Cultural Resources

In addition to land-use and infrastructure, environmental constraints were considered. Cultural resources can constrain the implementation of new projects within the study area. Cultural resources include historic properties and sites. There is one historic property located in the southeast corner of the Durango Curve study area and one adjacent to Lincoln Street in the northeast corner of the study area (See **Figure 6-6**). Historic properties pose constraints to future mobility projects when they have protected status or eligibility to obtain protected status. These historic properties should be taken into consideration when evaluating potential mobility projects, but are not likely to inhibit the kinds of strategies that can be implemented.

Figure 6-6: Cultural Resource Sensitive Areas



7.0 Stakeholder Outreach

The initial stakeholder outreach activity was to develop a list of key stakeholders with a variety of connections to the community and current knowledge of activity within the mobility area. Key stakeholders include schools, neighborhoods associations, neighborhood watches, non-profit organizations, businesses and State and County facilities. Stakeholder outreach efforts focused on conducting and recording individual telephone interviews with the key stakeholders. An interview guide was crafted to help interviewers encourage interviewees to share the information that was most relevant to them. The purpose of the interviews was to gain better understanding to the local community, how individuals use existing transportation facilities and where they would like to see improvements.

7.1 Stakeholder Interviews

Interviews with stakeholders were conducted over the phone and centered on series of questions on who lives within the community, what kinds of activities take place in the community, what key destinations exist and where mobility improvements are needed. **Appendix B** provides the stakeholder questionnaire that was used for stakeholder interviews.

Interviews were conducted with the following individuals:

Sean Sweat, Urban Phoenix Project

- Sean Sweat is the President and Director of Traditional Media at the Urban Phoenix Project.
- Seems like the entire area is ripe for bike facilities.
- Would like to see bike lanes striped through high volume intersections and protected bike lanes as part of the light rail extension.
- Improved pavement and more shade would make a huge difference for pedestrians and cyclists.
- “Superblocks” are a barrier to mobility.
- It would be nice to provide trash cans
- Don’t overdo the pedestrian lighting

Michelle Lopez, Murphy School District

- Michelle Lopez is the main administrative assistant for the school.
- The most popular destinations within the mobility area include the Health Center on 31st Avenue and Buckeye Road.
- Popular destinations outside of the mobility area include the outlet malls, the Arizona Center, Walmart at 35th Avenue and Southern Avenue, Food City on 27th Avenue and Van Buren Street.

- The most common way to get around in the area is by car or bus.
- Mobility Issues - Areas to avoid are 27th Avenue and Jefferson (going southbound) due to accidents and Kuban Park at night due to loitering and inadequate lighting, too much industrial uses and not conducive to walking.
- There aren't enough sidewalks, there aren't enough bike lanes.
- Not enough safe places to cross the street between intersections.
- Vehicles drive too fast.

Jennifer Rouse, Phoenix Block Watch Committee

- Jennifer Rouse is the president of the Maryvale/Estrella Mountain Precinct
- 27th Avenue and Durango Street intersection seems like a dangerous intersection and seems like an area where accidents would occur.
- The entire area needs more lighting and sidewalks, especially along Durango Street.
- Sidewalks should be buffered along Durango Street.
- 27th Avenue north of Durango Street needs more trees.

Eva Olivas, Phoenix Revitalization Corporation (PRC)

- Eva Olivas is the executive director of PRC and has been actively involved in the South Phoenix/Central Phoenix areas for many years. She sees mobility problems as stemming from multiple causes including lack of lighting, shade and security.
- The Health Clinic associated with Murphy School District is an important destination for residents.
- She believes one of the main issues preventing pedestrian and bicyclist activity within the mobility area is that Buckeye is blighted and there are not many places people want to go. She believes a grocery store and chain dollar store is needed.
- Improvements suggested by Eva include eliminating the loose dog issue, installing better lighting and creating more shade along sidewalks. Eva believes transit is used a great deal within the area.

Jared Forte, Transdev

- Transdev provides bus service for the City of Phoenix. The facility is open seven days a week and employs over 600 people. Most employees commute to work by car.
- Key Destinations include local fast food restaurants and printing companies.
- Mobility issues include certain neighborhood streets not designed well for buses - specifically during detours/construction, not enough sidewalks or shade,

destinations are too far to walk or bike, not enough safe mid-block crossing areas, and sidewalks and streets do not connect destinations.

- Mobility improvements include more lighting, shade, and sidewalks within area, and places to cross mid-block.

Pamela Morrison - Phoenix Rescue Mission

- Worked in the area for 35 years and is very interested in the project.
- Key Destinations include the Phoenix Rescue Mission, Kuban Elementary School, Murphy Elementary School, Kuban Park, and Jack in the Box.
- Mobility issues include people walking or biking as their only means of transportation, and 35th Avenue and Buckeye Road, and 35th Avenue and Durango Street, because of fast traffic and large trucks turning on narrow roads. Other mobility issues include difficulty crossing busy intersections, lack of shade, not enough lighting, crime, and motorists driving too fast.
- Mobility improvements include a HAWK or crosswalk at the SB bus stop at 35th Avenue and Cocopah St., more shade-especially at bus stops, and sleep-prevention benches at bus stops.

7.2 Key Takeaways

Stakeholder interviews provided essential knowledge about how the community uses transportation facilities and the barriers or inadequacies community members face when using the area's transportation facilities. Some of the key takeaways include key destinations, key problems, and mobility improvements that are needed. Important destinations within the study area include a Health Clinic at Murphy School District, bus stops, the Phoenix Rescue Mission, and the County and State facilities. Other important destinations outside the study area include Arizona Center, Walmart and Food City. Some of the main places where mobility issues occur are along Buckeye Road, 27th Avenue, and Durango Street Stakeholders expressed that safety was one of their major concerns and that they would like to see more lighting, shade, add mid-block crossings, and sidewalks within the study area.

8.0 Conclusion

The goal of the Current Conditions Report is to catalog key mobility infrastructure, identify gaps and constraints in mobility infrastructure and gain a better understanding of the community. Some of the main takeaways are the lack of pedestrian and bicycle facilities, and unsafe areas for pedestrians to cross. While there are sidewalks and one bike lane within the study area, there are insufficient safe routes and poor connections to neighborhoods and areas beyond the study area freeways. In addition to a lack of connectivity, there are also very few connections in and out of the study area, including access to the I-17 and access to public transportation. Listed below are locations and mobility concerns that are most significant to the study area:

- Buckeye Road with a total of 7 crashes, including one fatal bicycle crash and two serious crashes
- Buckeye Road from 29th Avenue to 23rd Avenue has a total of three bus stops that do not meet current ADA standards
- Only one bike lane exists along Durango Street
- Few or no sidewalks within the neighborhoods and along major streets
- Minimal lighting throughout the entire study area
- Minimal landscaping throughout the entire study area and large spacing between sections of trees along Lower Buckeye Road

8.1 Next Steps

Following the current conditions report a recommendations report will identify the primary areas where improvements can be made to improve study area mobility. Recommendations will build upon current conditions and input received from stakeholders.

Appendix A: Existing Plans and Documents

Document	Date	Agency	Summary
MAG Freight Transportation Plan	2018	MAG	The MAG Freight Transportation Plan is a federally-supported freight network and identified routes used by freight transportation. This includes primary highway freight system, critical rural freight corridors, and critical urban freight corridors. Priority corridors and critical urban freight corridors within Mobility Area 3 include: Buckeye Road from 7 th Street to 75 th Avenue
LED Street Light Program	2018	City of Phoenix	The LED Street Program As part of a citywide effort, the city is replacing approximately 100,000 existing street light fixtures with energy-efficient light-emitting diode (LED) fixtures. New fixtures feature a 2,700 kelvin LED, the city's new kelvin standard for street lights
Phoenix Capital Improvement Program 2017-22	2017	City of Phoenix	Phoenix Capital Improvements Program (CIP) includes documentation on budgeted and planned projects for years 2017- 2022. Pertinent projects to Mobility Area 3 include: <ul style="list-style-type: none"> 27th Avenue: Lower Buckeye Road to Buckeye Road - Design, acquire ROW and construct one mile of major street.
FY 2018-2022 MAG Transportation Improvement Program (TIP)	2017	MAG	Transportation Improvements Program (TIP) is a federally required program report that serves as a five-year guide for the preservation, management, and expansion services across Maricopa County. This report also implements the MAG Regional Transportation Plan (RTP). Citywide improvements include: <ul style="list-style-type: none"> Bikeshare station siting (2019) and equipment (2020)
Estrella Annual Report	2017	City of Phoenix	Estrella Annual Report identified completed and potential projects within the area which includes redevelopment, land-use and transportation project. Projects pertinent to Mobility Area 3 include A potential Center Location is recommended between Buckeye Road and Lower Buckeye Road on 27 th Avenue

2040 Regional Transportation Plan (RTP)	2017	MAG	<p>The 2040 Regional Transportation Plan is a comprehensive, performance based, multimodal and coordinated regional plan, covering the period through 2040. This report covers the planned recommendations of all major modes of transportation at a regional level.</p> <p>Key Takeaways:</p> <ul style="list-style-type: none"> • Arterial Capacity/Intersection Improvements • Intelligent Transportation Systems • Arterial Street Grid Extensions, Widening and Improvements • Planned Dial-A-Ride/Paratransit Programs/Vanpools • Planned HCT • Expansion/addition of bus services • Continued support and implementation of the various regional Bike and Ped programs and plans. • Support the Transportation enhancements program: designed to strengthen the aesthetic, cultural and environmental aspects of intermodal transportation. <p>There will be weekend service in all 4 areas</p>
Phoenix Parks and Recreation Department's 2017 Annual Report	2017	City of Phoenix	<p>The Phoenix Parks and Recreation Annual Report highlights completed projects, programs and outreach efforts surrounding parks and recreation facilities within the city. Programs pertinent to Mobility Area 3 include:</p> <p>Mobile Recreation: active programming to 20 parks 5 days a week to strategically ensure opportunities for youth in areas of the city that do not have a nearby recreation/community center.</p>
Plan PHX 2015 General Plan	2015	City of Phoenix	<p>Plan PHX General Plan identified area for growth and preservation as well as future infrastructure that could be improved.</p> <p>Growth/Preservation Areas</p> <ul style="list-style-type: none"> • Cores, Centers and Corridors • Infill Development • Opportunity Sites • Transit Oriented Development <p>Infrastructure Areas</p>

			<ul style="list-style-type: none"> • Complete Streets • Bicycles • Public Transit • Parks • Canals/Trails • Access and Functional Needs Infrastructure • Knowledge Infrastructure
Bike Master Plan	2014	City of Phoenix	<p>The Bike Master Plan identified potential projects and policy recommendations for future bike infrastructure. Potential projects from the Bike Master Plan pertaining to Mobility Area 3 include.</p> <ul style="list-style-type: none"> • Measure changes in the level of bicycling throughout the community <ul style="list-style-type: none"> ○ Conduct biannual bicycle counts • Develop interactive smart phone application for bicycle facility inventory and reporting • Review and update City policies, procedures, codes, ordinances, guidelines, and standards to promote bicycle safety and facilities • Create an interdepartmental bicycle Task Force to plan for, fund, manage and maintain bicycle facilities. • Establish and promote City of Phoenix as a bicycle friendly community
City of Phoenix Tree and Shade Master Plan	2010	City of Phoenix	<p>The Tree and Shade Master Plan is a roadmap to implementing green, sustainable shade structures throughout the City. Key takeaways include:</p> <ul style="list-style-type: none"> • Raise Awareness • Preserve, Protect, Increase <ul style="list-style-type: none"> ○ Create an Urban Forest Infrastructure Team ○ Conduct a Tree Inventory ○ Develop and Adopt Best Management Practices ○ Research and Develop Dedicated Revenue Streams

			<ul style="list-style-type: none">• Sustainable and maintainable infrastructure<ul style="list-style-type: none">○ Revise City Ordinances
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Appendix B: Stakeholder Interview Questionnaire



City of Phoenix Mobility Studies
Stakeholder Interview Questionnaire

Interviewee Name: _____

Interviewee Organization: _____

Interview Date: _____

Interviewer Name: _____

1. Where do you and other people regularly travel to in the area? (Destinations, such as schools, social service facilities, parks, houses, shopping, restaurants.)
2. What is the most common way to get around in the area? For instance, walking, driving, riding with someone in a car, biking or using transit?
3. Do you travel recreationally in the area, such as taking walks or bike rides? Do you see or know of others who do?
4. How often do you (or your organization/group/members...) travel within the area?
5. Where do you (or your organization/group/members...) travel outside of the area? What are the most popular places to travel to in the surrounding area(s)?
6. What areas do you avoid or instruct others to avoid?
7. Why do you avoid the stated areas? (please list any safety concerns, i.e. loitering, lack of lighting, hiding areas, etc.)
8. Have you ever had a negative experience (crash, near-miss, bad motorist behavior, etc.) in this Mobility Area while you were:

Riding a bicycle?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Walking?	Yes <input type="checkbox"/>	No <input type="checkbox"/>



Driving? Yes No

9. Have you heard others express issues with mobility in the area, such as a lack of parking, disconnected sidewalks, areas where collisions seem more likely?

10. What areas/streets do you feel are most dangerous for pedestrians and cyclists? Where do accidents mostly occur?

11. What is the greatest mobility/transportation issue within the study area?

12. Where would you like to see more bicycle/pedestrian/transit amenities (crosswalks, sidewalks, traffic calming devices, shade, pedestrian refuge island, bike lanes, etc.)

13. Inside of this Mobility Area where would you like to walk, bike, or ride transit to, but can't?

- a. _____ - (nearest intersection) _____
- b. _____ - _____
- c. _____ - _____

14. What are the top five challenges to getting around in this area

- a. There aren't enough sidewalks – mainly walking areas
- b. Sidewalks are cracked/ in disrepair
- c. There aren't enough bike lanes
- d. Bike lanes are too narrow
- e. It's difficult for me to cross busy intersections
- f. My neighborhood streets and bike lanes/routes don't go where I want to go
- g. The places I want to go are too far away to walk/bike
- h. There isn't enough shade (not enough trees)
- i. There aren't enough safe places to cross the street *between* intersections
- j. The existing streets and sidewalks don't go where I want to go
- k. There isn't enough street lighting (it's too dark)
- l. I am afraid of crime
- m. I am afraid of stray dogs
- n. Drivers don't obey traffic laws
- o. Vehicles drive too fast – noisy cars
- p. Vehicles drive too close to me