

Elm Avenue Brownfields Area-Wide Plan Existing Conditions Report



HR&A
Center for Creative Land Recycling
Precision Civil Engineering, Inc.



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1. INTRODUCTION

1.1 WHAT ARE BROWNFIELDS AND HOW CAN THEY BECOME CATALYSTS?

The U.S. Environmental Protection Agency (EPA) defines **brownfields** as “real property, the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant.” Typical brownfield sites are former gas stations, dry cleaners, or industrial facilities. These are sites that may have been impacted by a release of petroleum products, solvents, heavy metals and other pollutants into buildings, soil, surface water and groundwater.

Brownfields are not necessarily contaminated, but they could be. They need environmental review, and possibly remediation, before any reuse can take place. These extra, potentially costly steps often contribute to sites being left inactive for many years. Inactive sites become magnets for illegal dumping or crime, thus adding to the potential for contamination and negative effects on surrounding communities. In other words, the challenge

of redeveloping a brownfield site often causes it to be left unused—and this condition affects not only the site itself but the surrounding area. One neglected site along a corridor can hold back the potential of the properties and neighborhoods around it.

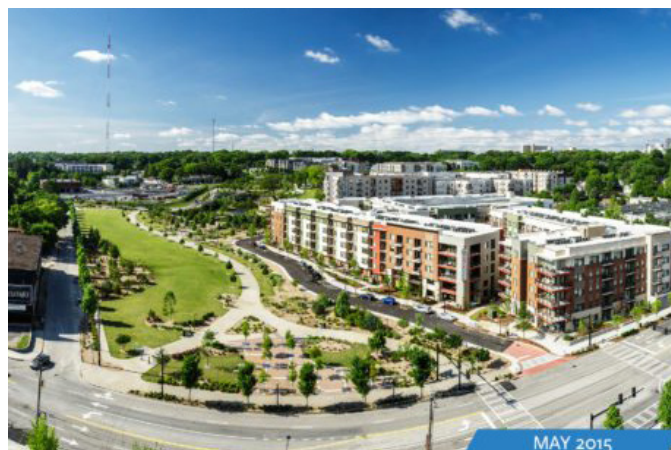
However, it is possible to “flip this script.” If brownfields can have negative effects far beyond the property boundaries, can they also have positive effects that ripple outward? If reuse is enabled on a brownfield, can the effects cascade along a corridor? The answer is yes: brownfield sites can become catalysts for broader neighborhood revitalization. This is the idea of the Brownfields Area-Wide Planning Program.

1.2 THE BROWNFIELDS AREA-WIDE PLANNING PROGRAM

The EPA Brownfields Area-Wide Planning grant program assists communities in responding to local challenges where multiple brownfield sites are in close proximity, connected by infrastructure, and limit the economic, environmental and social prosperity of their surroundings. The program aims to result in plans for future improvements that:

- protect public health and the environment,
- are economically viable, and
- reflect the community's vision for the area.

In 2015, EPA selected the City of Fresno as a Brownfield Area-Wide Plan grant recipient. Fresno received \$175,000 to work with community stakeholders to develop a plan and implementation strategy for the Elm Avenue corridor. Fresno's Brownfields area-wide planning work builds on previous EPA brownfields grants and technical assistance, including the 2011 West Fresno Brownfields Action Plan.



Atlanta's Beltline received an EPA Brownfields Area-Wide Planning Grant in the first year. Remediation and park development have followed.

Source: <https://beltline.org/2016/03/31/brownfield-remediation-on-the-atlanta-beltline/>

1.3 ELM AVENUE STUDY AREA AND SITES

STUDY AREA

The current effort aims to address brownfields along the 2.25-mile Elm Avenue Corridor and adjacent neighborhoods in Southwest Fresno. The 1,092-acre study area is generally bounded by Martin Luther King, Jr. Boulevard to the west, Highway 41 to the east, California Avenue and Ventura Street to the north, and North Avenue to the south. See Figure 1-1.

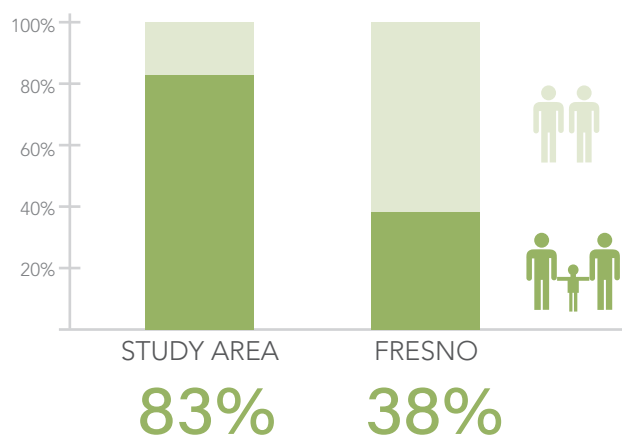
THE PEOPLE

Southwest Fresno and the Elm Avenue corridor are home to a diverse and engaged community. As of 2010, the community had a population of 11,128, representing about 2 percent of the city's population. More than half of the community (59 percent) is Hispanic or Latino, and one quarter is black or African American. Twelve percent of the population is Asian, while non-Hispanic whites make up 2 percent of community residents.

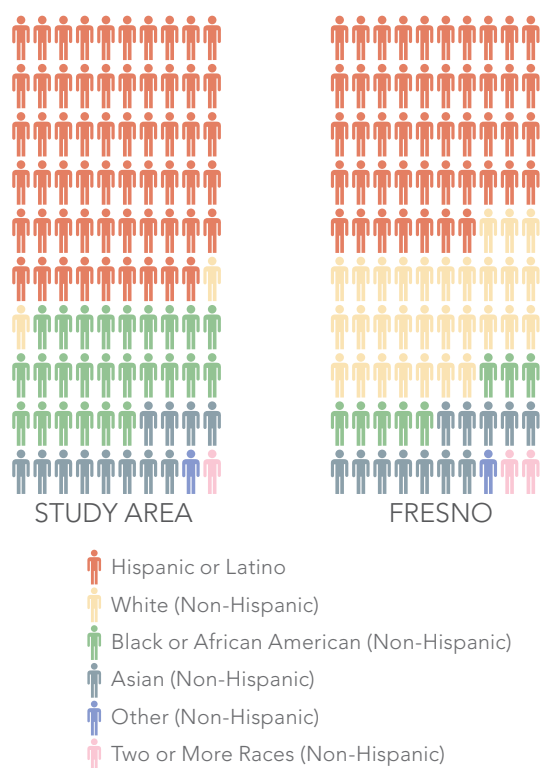
Most households in the Study Area—83 percent—are families with children, compared to 38 percent in Fresno as a whole. The average household in the community has 4 people, compared to 3 citywide. About two out of three of the Study Area's households rent and one in three own (the ratio citywide is approximately 50-50.)

The community generally has lower incomes and education levels compared to the city overall. While these data aren't available for the Study Area specifically, recent planning studies for overlapping areas report that over 40 percent of families live below the poverty line in the Downtown Neighborhoods, as do 34 percent of adults and 54 percent of children in Southwest Fresno.

FAMILIES WITH CHILDREN

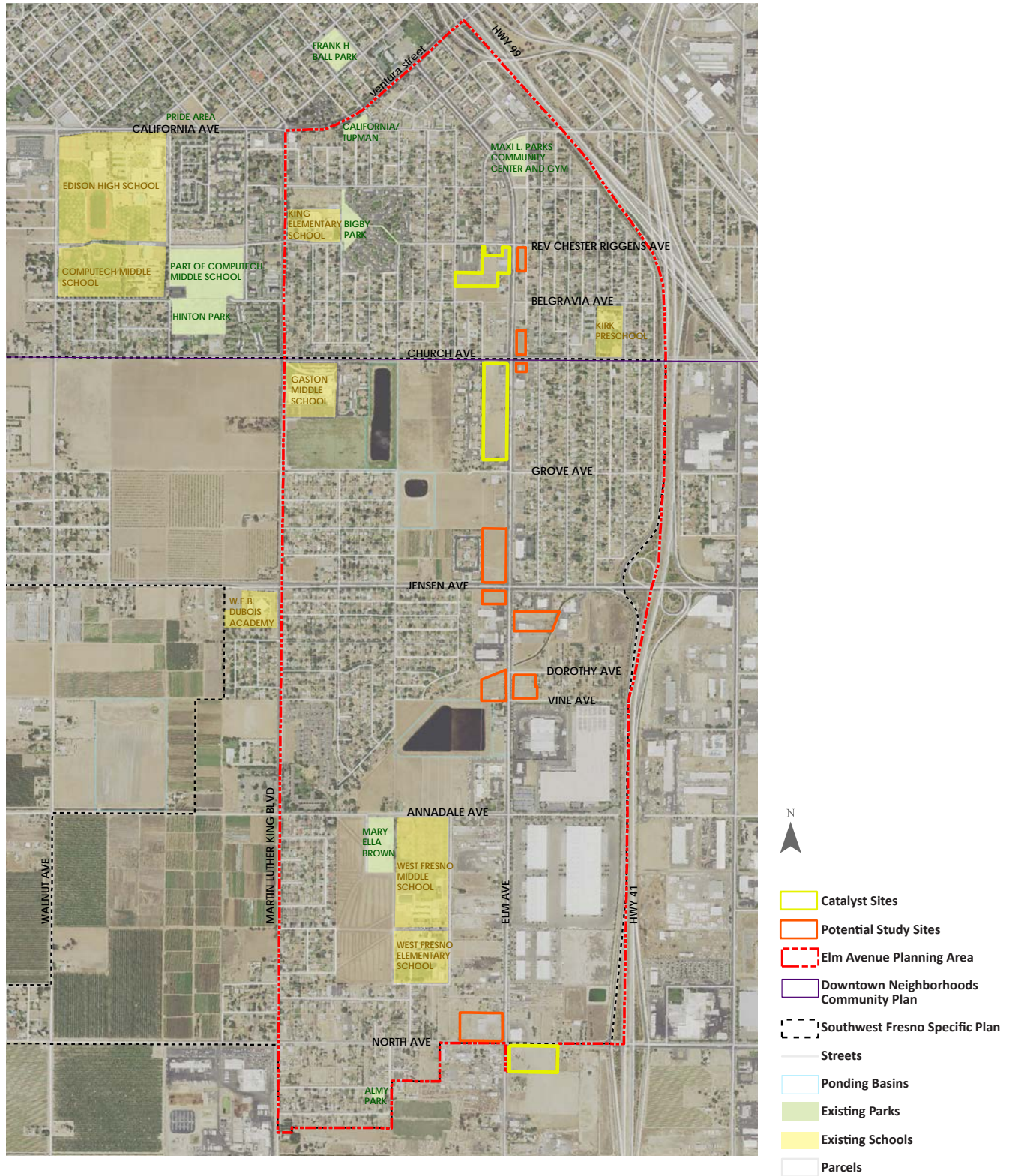


RACIAL AND ETHNIC MIX



Source: US Census, 2010

Figure 1-1

STUDY AREA AND BROWNFIELD SITES

THE PLACE

Like much of Southwest Fresno, development over the years has resulted in industry, residential neighborhoods, and remnants of agricultural land in close proximity. The northernmost portion of the Study Area had begun to develop by the beginning of the 20th century, but the area saw very little development again until the 1950s and '60s, when a sprinkling of new subdivisions began to sprout in the farmland, and new auto and industrial businesses grew up along Elm Avenue. This has continued somewhat in the years since, but on a scale dwarfed by Fresno's growth to the north and east. Figure 1-2 charts the historic growth of the Study Area.

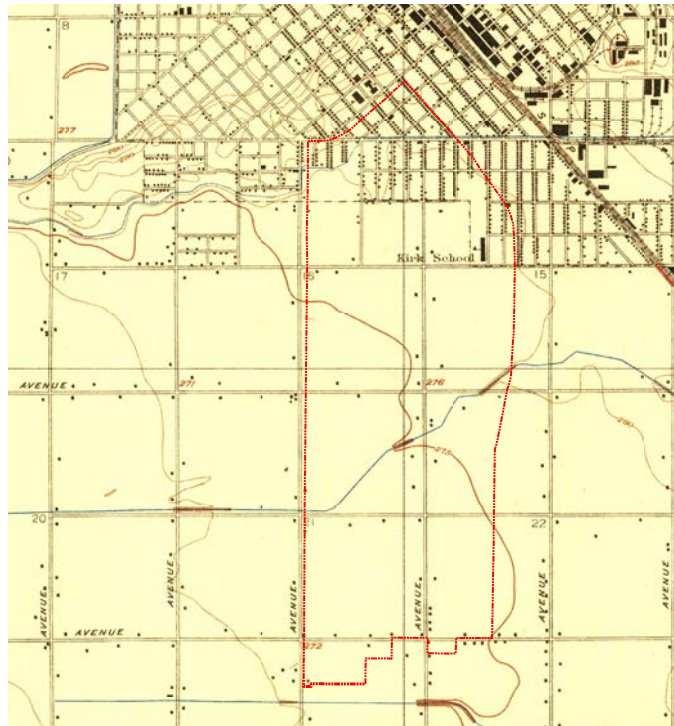
The area has compact neighborhoods of houses and a sprinkling of apartments. There are three elementary and two middle schools, social service providers, and churches. Along Elm Avenue, there are vacant lots and auto repair and service businesses. Industries and auto businesses have come and gone, leaving behind sites that may be contaminated.

The corridor is marked by disinvestment, but it also offers a suburban environment with housing costs within reach of working families and good access to jobs. It has great cultural diversity. As the West Fresno Action Plan (2011) observes, "despite having the impacts of decades of public and private disinvestment, West Fresno possesses strong civic, cultural and physical assets upon which revitalization can build."

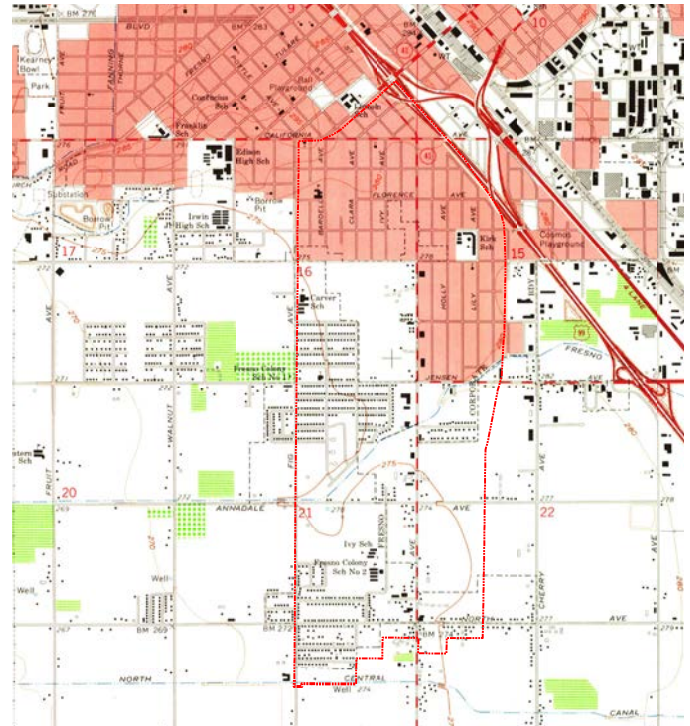
CATALYST SITES

The City of Fresno identified several brownfields along the Elm Avenue Corridor in preparation for this plan. Three of these are identified as "catalyst sites" because of their potential to revitalize the neighborhood. Catalytic sites were chosen after a community stakeholder meeting and a tour of the corridor, and informed by previous research efforts and the priority sites listed in the West Fresno Brownfields Action Plan. Other sites also have potential to contribute to corridor enhancement. Catalyst sites are shown on Figure 1-1.

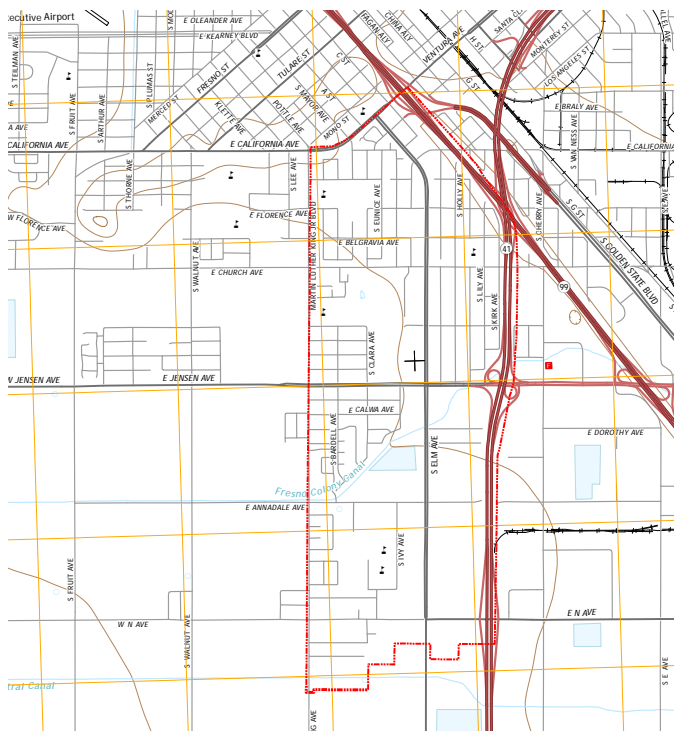
Figure 1-2

HISTORIC DEVELOPMENT OF THE STUDY AREA (CLOCKWISE FROM TOP LEFT)

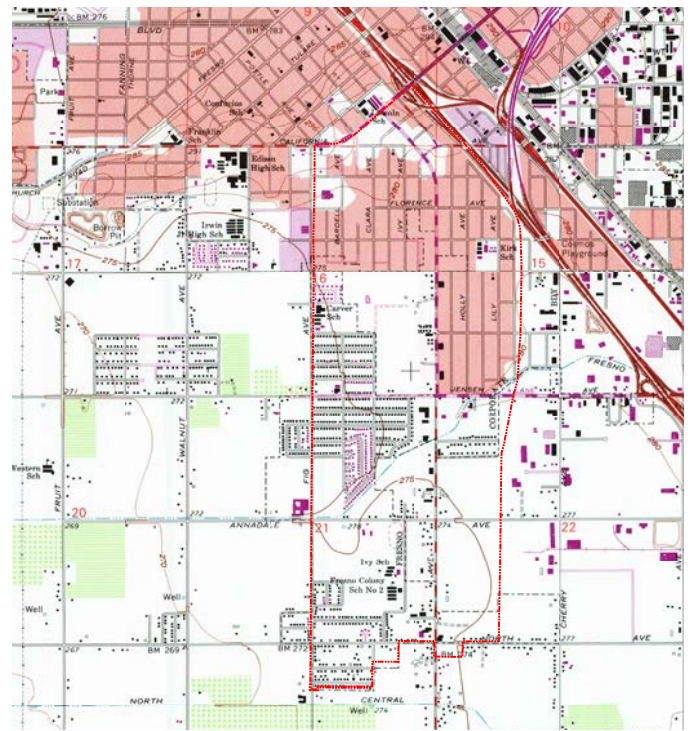
1923



1963



2015



1963, photorevised in 1981

This series of maps shows how development progressed in the area between 1923 (top left) and the present (bottom left).

Source: USGS Topo Maps

1.4 BUILDING ON RECENT PLANS

The Downtown Neighborhoods Community Plan (adopted by City Council in 2016) and the Southwest Fresno Specific Plan (adopted in 2017) cover the northern and southern portions of the Elm Avenue corridor, respectively. The plans aim to help bring neighborhood retail, office and housing to Elm Avenue.

The Active Transportation Plan (also adopted in 2017) proposes a network of bike and pedestrian improvements throughout Fresno, including several that would enhance the pedestrian connectivity in the Study Area.

The 41+North Complete Streets Plan (2015) showed how street enhancements could make North Avenue safe and attractive. This Elm Avenue Brownfields Area-Wide Plan (AWP) can bring such development and improvements one step closer to reality.

The West Fresno Brownfields Action Plan, from 2011. That effort focused on raising awareness and capacity among stakeholders, and set forth a series of steps toward successful brownfields reuse. The Brownfields AWP now in progress advances Action Plan elements 1 through 5:

- **Build the coalition**, including a mix of grassroots and agency-driven members;
- **Identify and inventory** brownfields sites;
- **Prioritize** catalyst sites;
- **Engage the property owners**;
- **Create a vision** for the corridor; and
- **Identify financial and technical resources** to be pursued.

While neither the 41+North Complete Streets Plan nor the West Fresno Brownfields Action Plan were formally adopted, these conceptual plans are highly relevant to the current work at hand. Prior plans that are building blocks for the AWP are presented in more detail in Chapter 5.

The community has participated in recent efforts, but many may feel frustrated at not seeing anything take place on the ground after decades of disinvestment. An important challenge for the project at hand will be to reach key stakeholders, communicate clearly with community members, and target our work to yield real outcomes.



Residents participated in planning workshops for the 41 & North Complete Street Plan in 2015.



Community Members worked together at the initial phase of the planning process for Southwest Fresno Specific Plan.

1.5 THIS REPORT AND NEXT STEPS

AREA-WIDE PLANNING PROCESS

The Elm Avenue Brownfields Area-Wide Plan will be created in three phases, as shown in Figure 1-3. Phase 1: Project Initiation + Background Analysis, concludes with this report. Phases 2 and 3 are summarized under Next Steps, below.

EXISTING CONDITIONS REPORT

This report is the culmination of the first stage of the process. Each chapter takes a different view on the Elm Avenue corridor. **Chapter 2: Elm at Eye Level** describes the area as it is experienced today, including its streets, sidewalks, and built environment. **Chapter 3: A Closer Look at Brownfields** describes the sites and discusses the brownfields redevelopment process. **Chapter 4: Beneath the Surface** looks at infrastructure conditions. **Chapter 5: Market Overview** takes a broad look at market conditions to assess the potential for future development to occur. **Chapter 6: Future View** explores what is planned for the area.

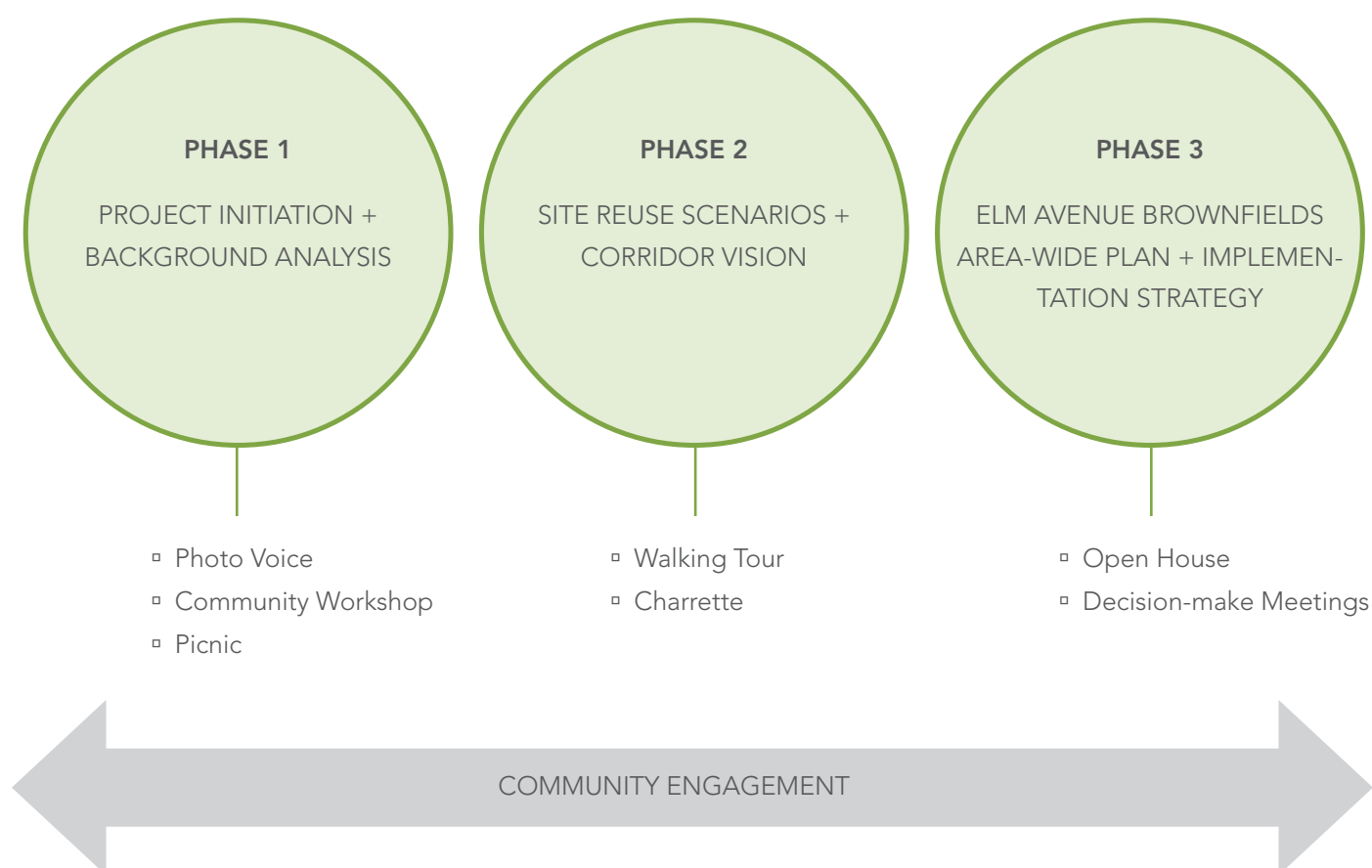
NEXT STEPS

This winter, we will shift to focus on three catalyst sites. We will generate **site reuse scenarios** that reflect community desires, market realities, and site conditions. We'll translate these scenarios into plans for what each site could look like. A **corridor vision** for Elm Avenue will show how new development on specific sites could result in a greater whole.

During the spring of 2018, we will develop an **implementation strategy**: a set of feasible action items, costs, and funding sources. The resulting Elm Avenue Brownfields Area-Wide Plan and Implementation Strategy should serve as a roadmap, a practical reference, and an inspiration for members of the "coalition" working to redevelop brownfields.

Each step of the way, we'll be working to build that coalition, which may include community members, property owners, businesses, churches, non-profits, City agencies, and others. Community engagement activities will be diverse. This December, high school students documented conditions along Elm with photos and video. Specialists in brownfields development led a "train the trainers" workshop for community leaders. A hands-on community workshop was conducted in tandem with a picnic. During the spring, there will be walking tours along the corridor in which we can all help identify needs. There will be a hands-on working session bringing stakeholders and professionals together to develop reuse scenarios for catalyst sites. The idea for all of these activities is to help residents understand the issues, help planners understand community needs and priorities, and help stakeholders recognize opportunities to create change.

Figure 1-3

ELM AVENUE BROWNFIELDS AREA-WIDE PLANNING PROCESS DIAGRAM

REV. CHESTER RIGGINS AVE 1700



34

ORNAMENTAL SIGNS SUPPLY



2. ELM AT EYE LEVEL

2.1 LAND USE

The land use pattern in the Study Area is shown on Figure 2-1. Most of the Study Area is composed of residential neighborhoods. Neighborhoods north of Jensen Avenue tend to have somewhat smaller lot sizes and a greater mix of multifamily, while neighborhoods to the south are more typically suburban. The Study Area features five spacious public school sites as well as churches and other community facilities. Small parks--Bigby Park and the Mary Ella Brown Center--provide areas of respite in the neighborhoods west of Elm.

Elm Avenue itself has a scattering of commercial development, with the greatest concentrations near Church Avenue. South of Jensen Avenue, industrial uses predominate along the corridor.

VACANT LAND

33 percent of land in the Study Area is vacant. Several large vacant parcels front Elm Avenue, with other undeveloped along Annadale, Jensen and Church Avenues. Some of this land—especially along Elm—may have had previous auto service uses. Much of it is former agricultural land that has never been developed with urban uses.

MOST COMMON LAND USES WITHIN STUDY AREA

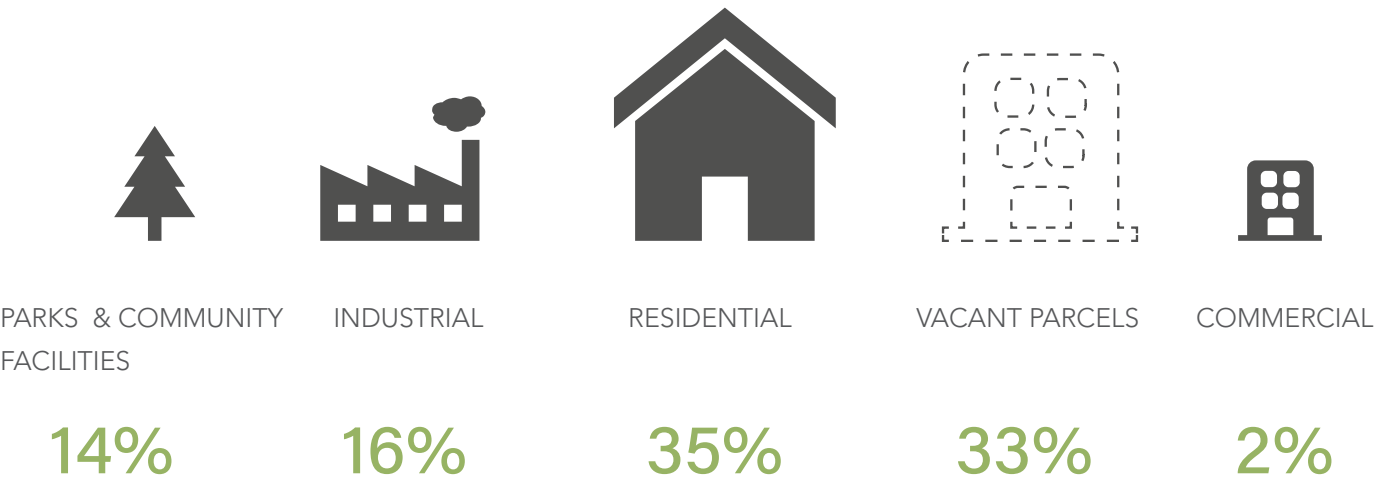
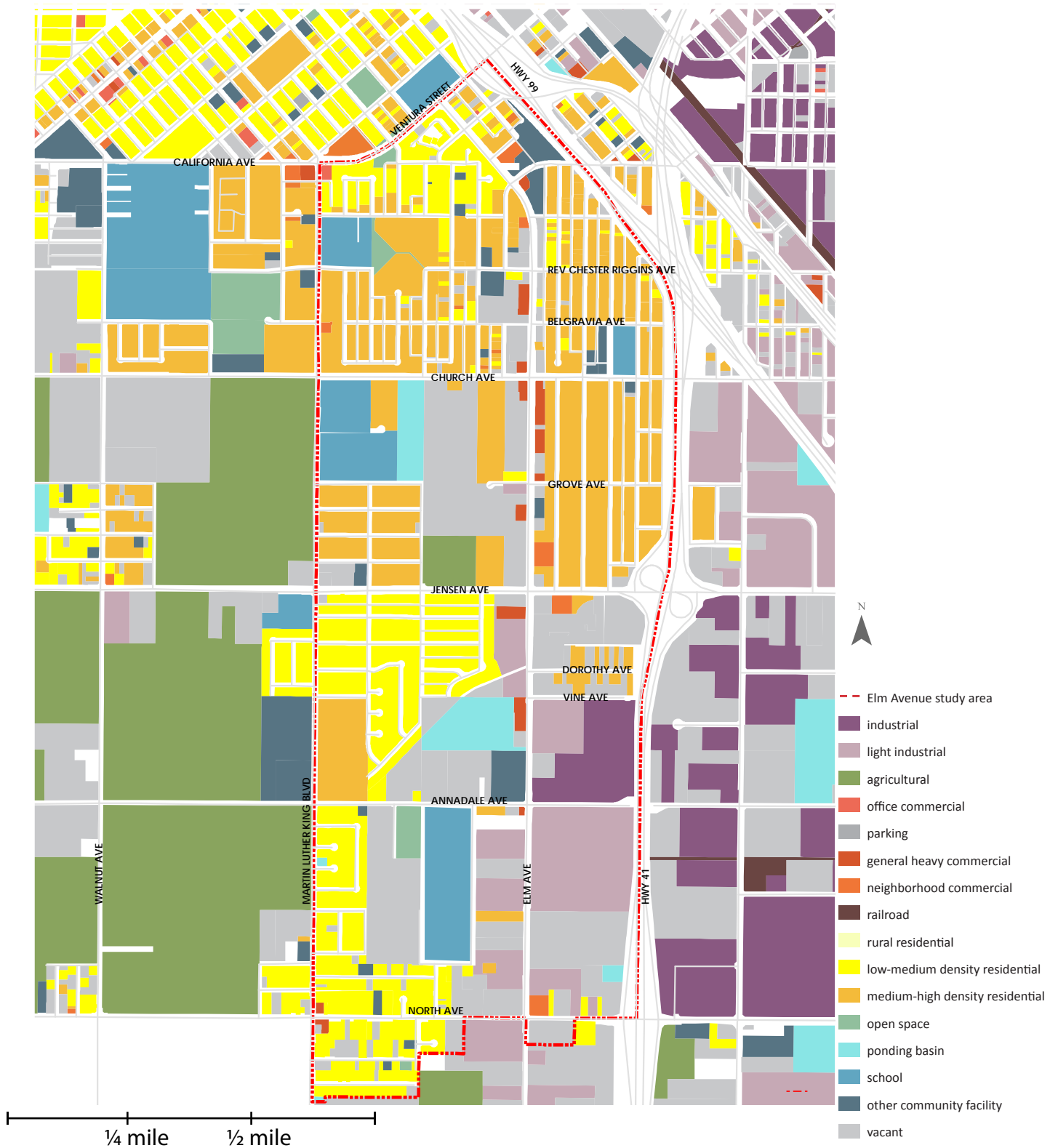


Figure 2-1

LAND USE PATTERN

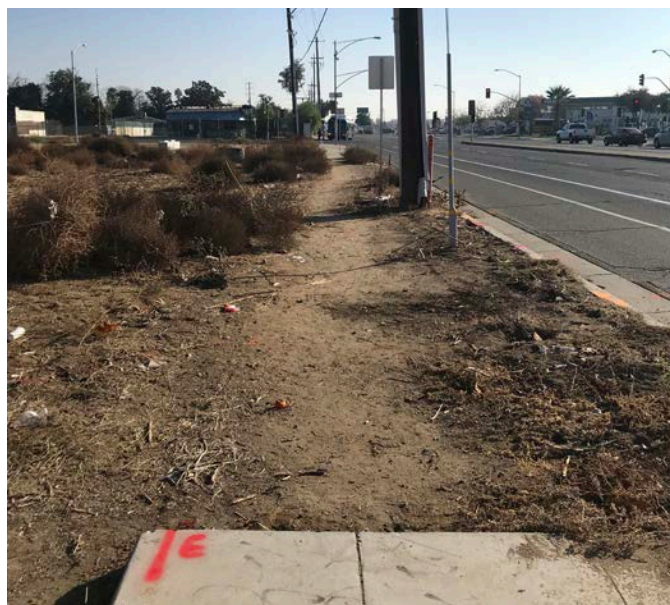
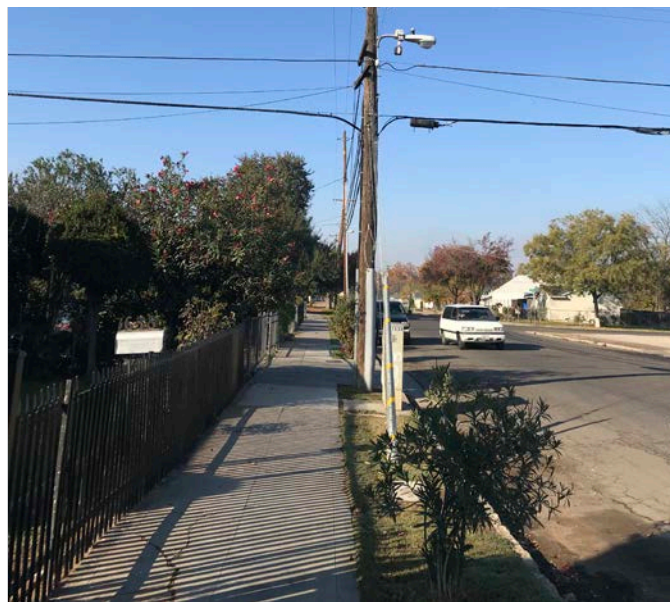
2.2 THE PUBLIC REALM

SIDEWALKS, SHADE AND STREET CROSSINGS

Several characteristics of the Elm Avenue Corridor create an unsatisfactory pedestrian experience, discouraging sidewalk activity and crossing Elm Avenue. In the northern portion of the Study Area, the finer grain of the streets surrounding Elm Avenue creates a more walkable neighborhood. However, several of the crosswalks along this portion of Elm Avenue itself are not pedestrian friendly, lacking pedestrian signals and painted crosswalks at intersections. The middle portion of the Study Area, from Church Avenue to Jensen Avenue, has few street trees or crosswalks along Elm Avenue, but a shadier, more pedestrian friendly condition in the residential areas on either side. South of Jensen, the corridor has larger lots and industrial buildings. Small parks provide areas of respite in the neighborhood to the west.

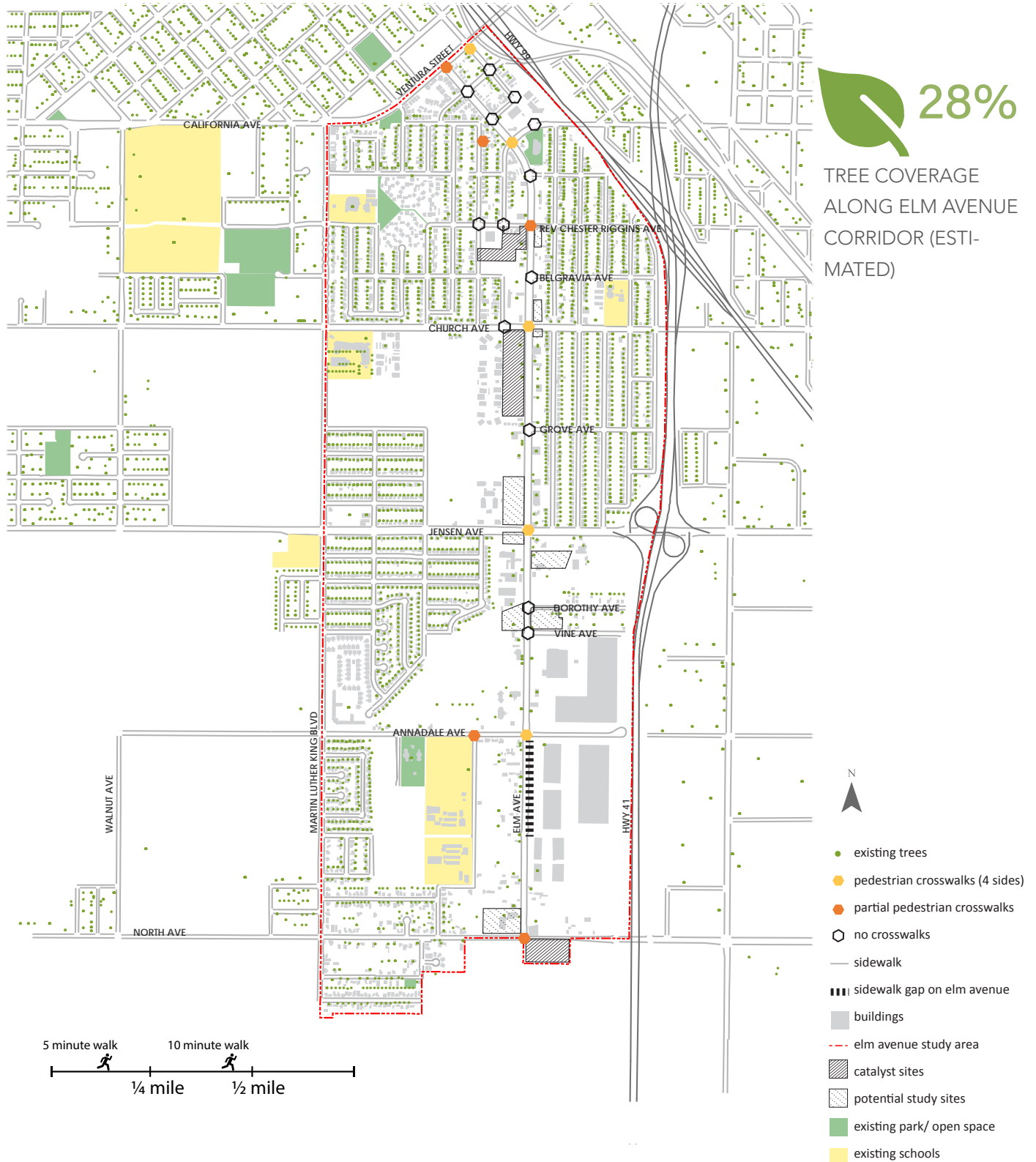
Generally, Elm Avenue has consistent sidewalks on both sides along most of the corridor, except for the east side south of Annnadale Avenue. However, the lack of painted crosswalks and pedestrian signals make it a difficult street to cross. Crossings, ramps, and sidewalks do not meet current accessibility standards in the majority of areas. On the side streets crossing Elm, sections of sidewalks are missing or discontinuous, and in disrepair. Elm Avenue lacks shade due to inconsistent street trees, which are only present along an estimated 28 percent of the corridor. Several of the existing trees are small or in poor condition. Bringing the sidewalks and landscaping up to current standards would dramatically improve the aesthetics of the Study Area and provide a more pedestrian friendly and walkable community.

Figure 2-2 shows existing sidewalks, street trees, and street crossings.



Off of Elm, sidewalks are present along most streets, including Rev. Chester Riggins (left), but there are important gaps, including along Jensen Avenue (right).

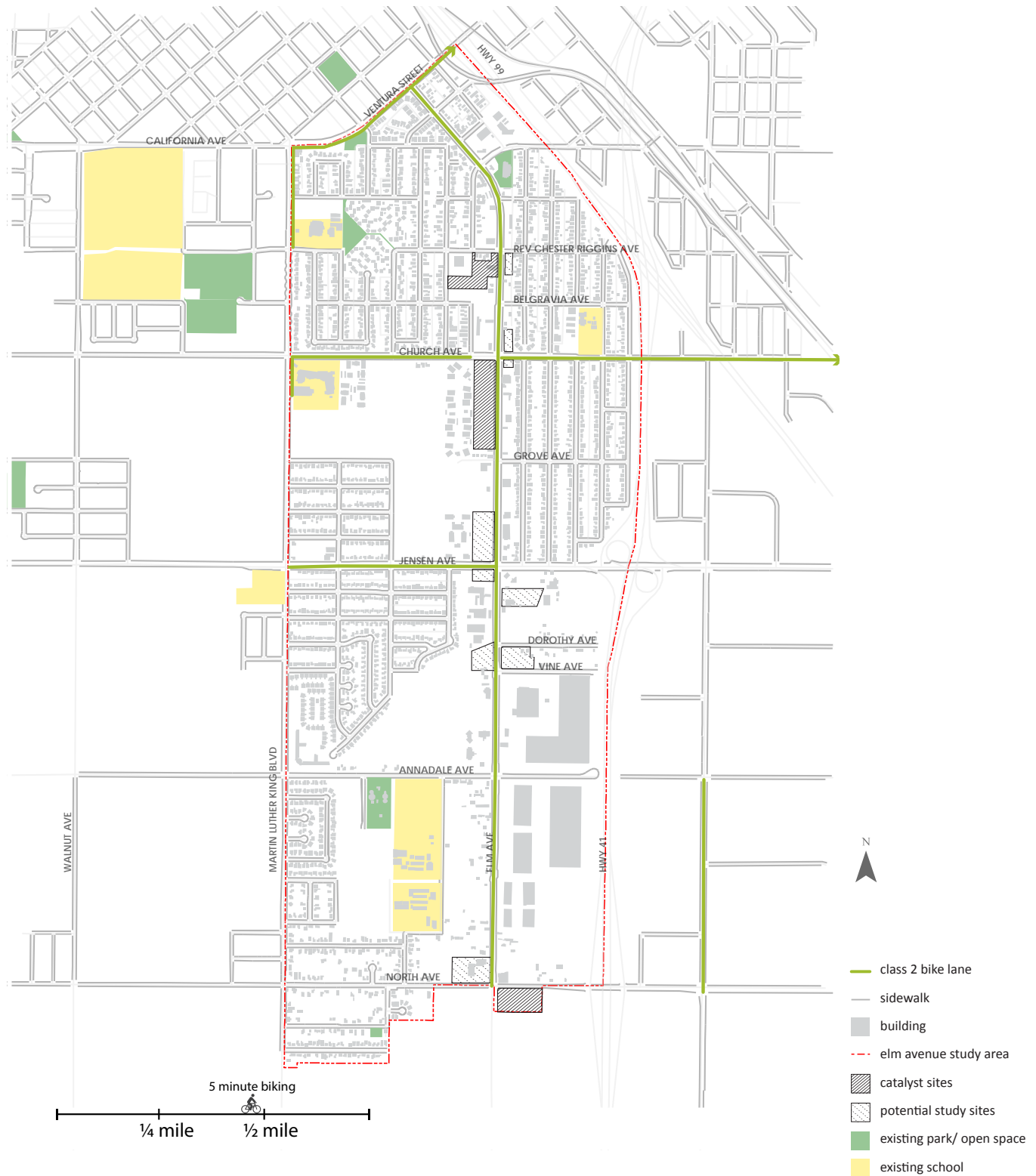
Figure 2-2

EXISTING SIDEWALKS, STREET TREES, AND STREET CROSSINGS

BICYCLE NETWORK

Consistent Class II bicycle lanes exist along the entire Elm Avenue corridor within the Study Area. The lanes connect the area to downtown to the north. East-west Class II bicycle lanes crossing Elm Avenue exist on California Avenue/Ventura Street and also connect to downtown and other neighborhoods. There are also Class II bicycle lanes on segments of Church and Jensen avenues. However, the lack of on-street bicycle lanes on Annadale Avenue, Grove Avenue and smaller east-west side streets make it difficult for bicyclists to connect to Elm Street from surrounding neighborhoods. Fresno's recent Active Transportation Plan describes most of the major streets in the Study Area as "high-stress" corridors for cyclists. The existing bike network is shown on Figure 2-3.

Figure 2-3

EXISTING BICYCLE NETWORK

TRANSIT NETWORK

The transit network in the Study Area consists of three bus lines: 32, 34 and 38. The 32 bus line connects the site border of Martin Luther King Boulevard and the southern section of Elm Avenue with Downtown Fresno. The 34 bus also goes through Downtown Fresno and connects to north Fresno neighborhoods as well. The 38 bus line crosses through the study area along Jensen Avenue to connect to eastern neighborhoods. The northern portion of the Study Area is well connected and served by all three bus lines, however the southern portion is only serviced by the 32 bus. The transit network is shown on Figure 2-4.

ELECTRIC AND TELECOMMUNICATIONS LINES

Dry utilities have been undergrounded along the Elm Avenue corridor, however the crossing streets contain above ground electric and telecommunication services. Undergrounding of these services in conjunction with new developments will improve aesthetics and reliability of services in the neighborhood.

STREET CHARACTER

The character of Elm Avenue is fairly consistent along the corridor. The street has two vehicular lanes in each direction, bicycle lanes, a center median that transitions to a turn lane at intersections, and sidewalks. South of North Avenue, the bicycle lanes, center median and sidewalks disappear.

The major east-west streets that cross Elm in the Study Area vary widely in their character. Jensen Avenue is similar to Elm, with two travel lanes in each direction, but it has vehicular shoulders/curbside parking between the bicycle lanes and the sidewalks. Church Avenue generally has one travel lane in each direction, but these lanes are wide, ranging from 19-22 feet wide, with standard bicycle lanes on both sides, sidewalks, and intermittent curbside parking. Both Annadale and North avenues have one travel lane in each direction, but the lanes are narrower than on Church and there are no bike lanes and only intermittent sidewalks. North Avenue lacks curbs in several locations.

Seven specific street segments are described in more detail below, including four segments along Elm Avenue and one each on Church, Jensen, and North avenues. These segments are identified on Figure 2-5: Key Map for Existing Street Cross-Sections.

Figure 2-4

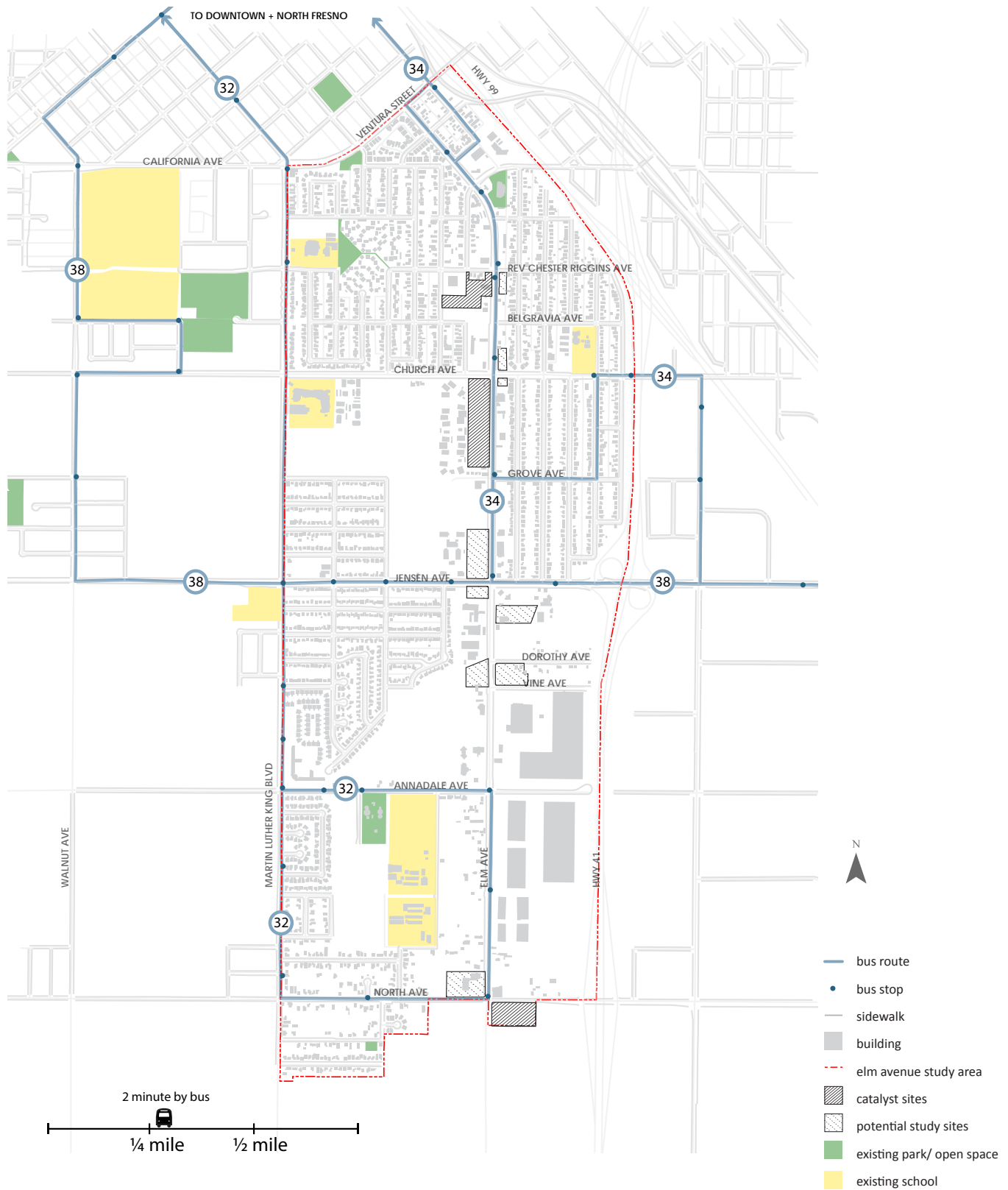
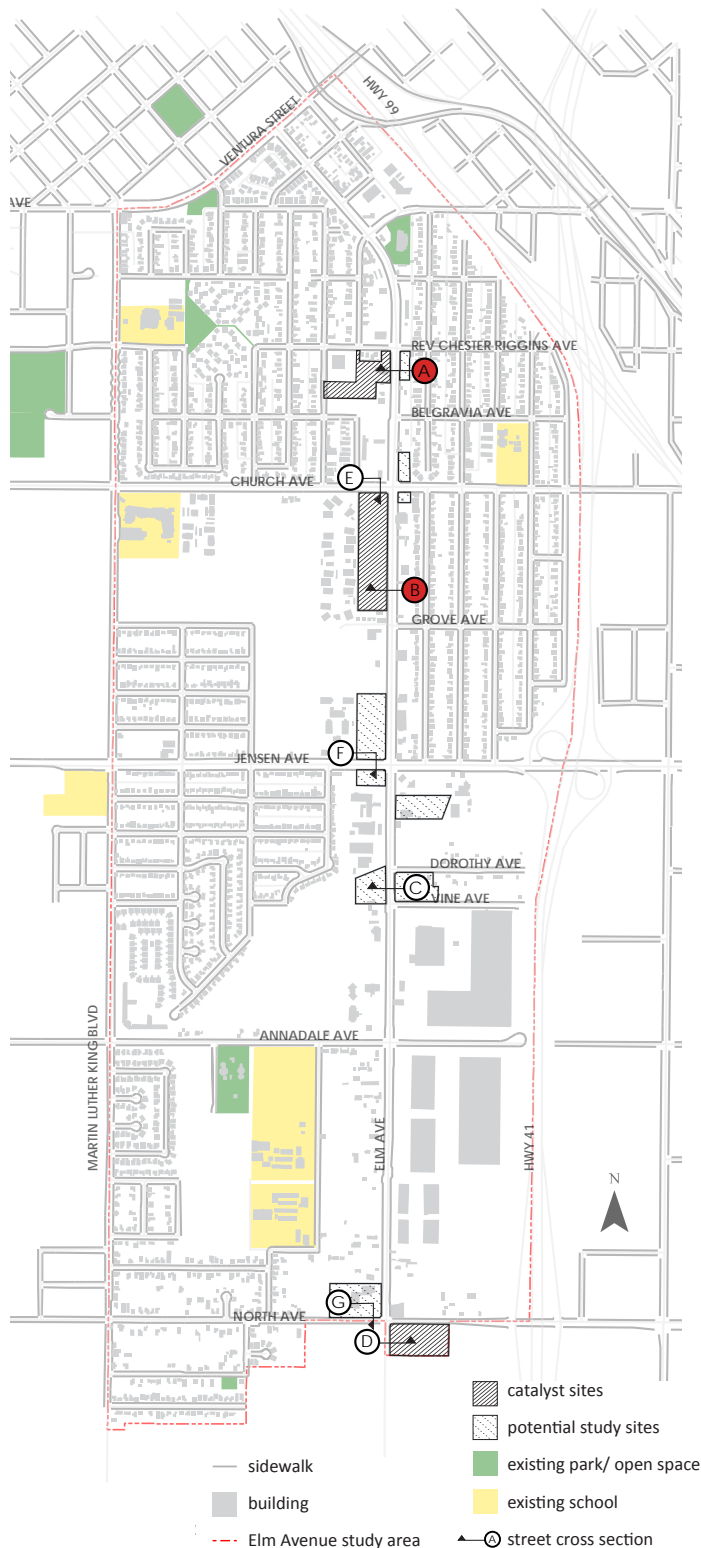
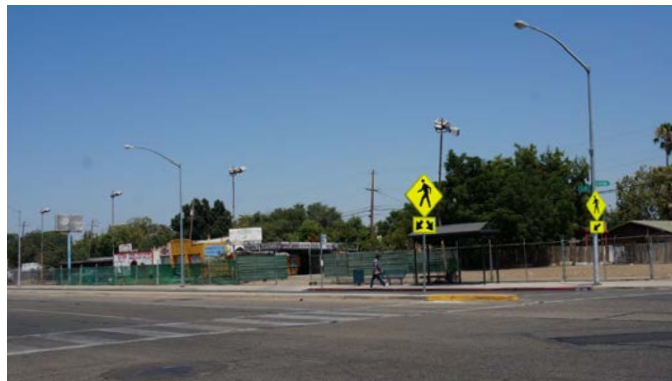
EXISTING TRANSIT NETWORK

Figure 2-5

KEY MAP FOR EXISTING STREET CROSS-SECTIONS**A: ELM AVENUE SOUTH OF REVEREND CHESTER RIGGINS AVENUE**

South of Chester Riggins, Elm Avenue has a planted median that transitions to a turning lane, along with two travel lanes and one bicycle lane in each direction of traffic. The sidewalks are typically 8 feet wide. 8-foot sidewalks are minimally accessible and do not allow adequate space for desired street trees. See Figure 2-6.



Reverend Chester Riggins Avenue crosswalk at Elm Avenue

B: ELM AVENUE NORTH OF GROVE

North of Grove Avenue, Elm Avenue has generous vehicular lanes, two-way bicycle lanes, a center median that transitions to a turn lane at intersections and sidewalks. 8-foot sidewalks are minimally accessible and do not allow adequate space for desired street trees. See Figure 2-7.

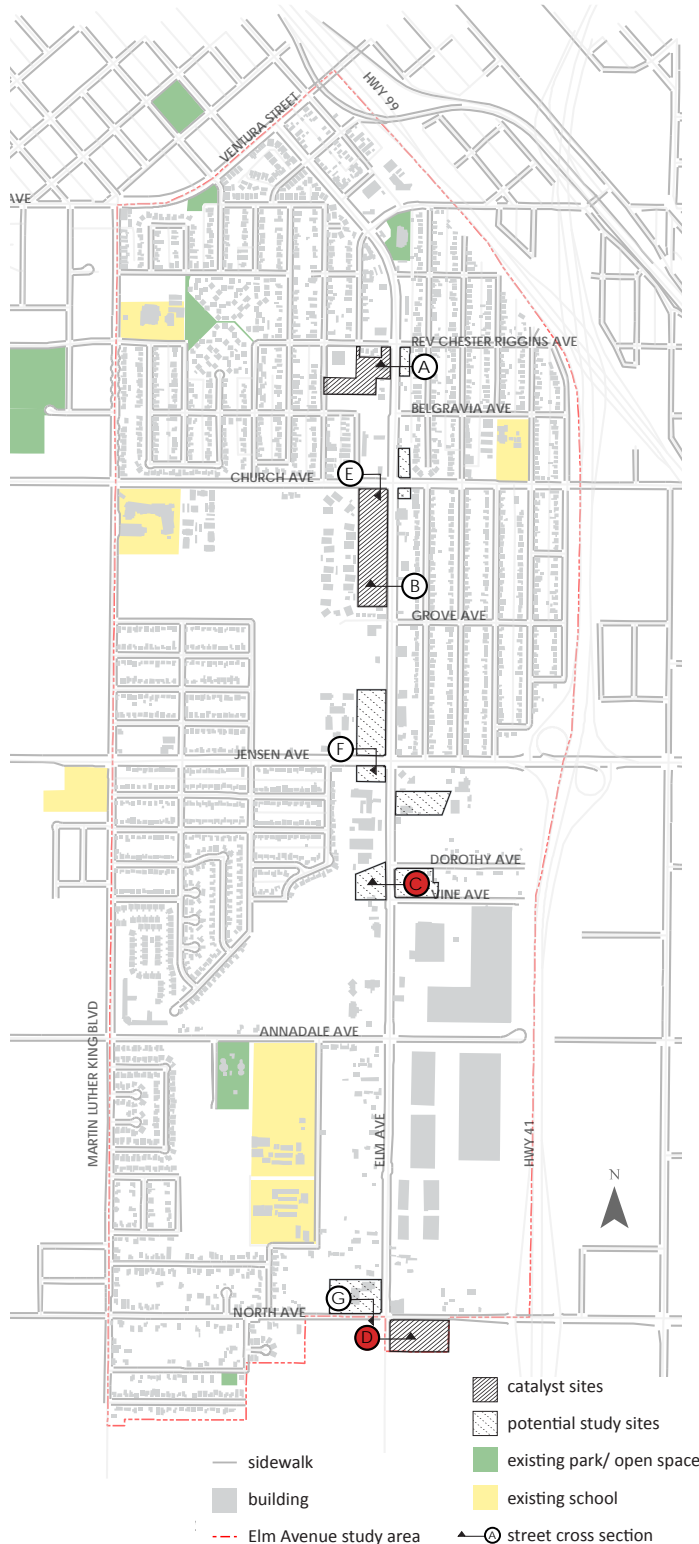
Figure 2-6

A: ELM AVENUE SOUTH OF REVEREND CHESTER RIGGINS AVENUE

Figure 2-7

B: ELM AVENUE NORTH OF GROVE

KEY MAP FOR EXISTING STREET CROSS-SECTIONS



C: ELM AVENUE NORTH OF VINE AVENUE

North of Vine Avenue, the median at Elm Avenue disappears into a center turn lane. The rest of the street layout is similar to Elm Avenue north of Dorothy Avenue, with two travel lanes and a bicycle lane on either side. Sidewalks are adequate for a medium tree and accessible sidewalk on west side. The wider sidewalk on the west side allows larger trees and sidewalk uses such as cafe seating or outdoor retail. See Figure 2-8.

D: ELM AVENUE SOUTH OF NORTH AVENUE

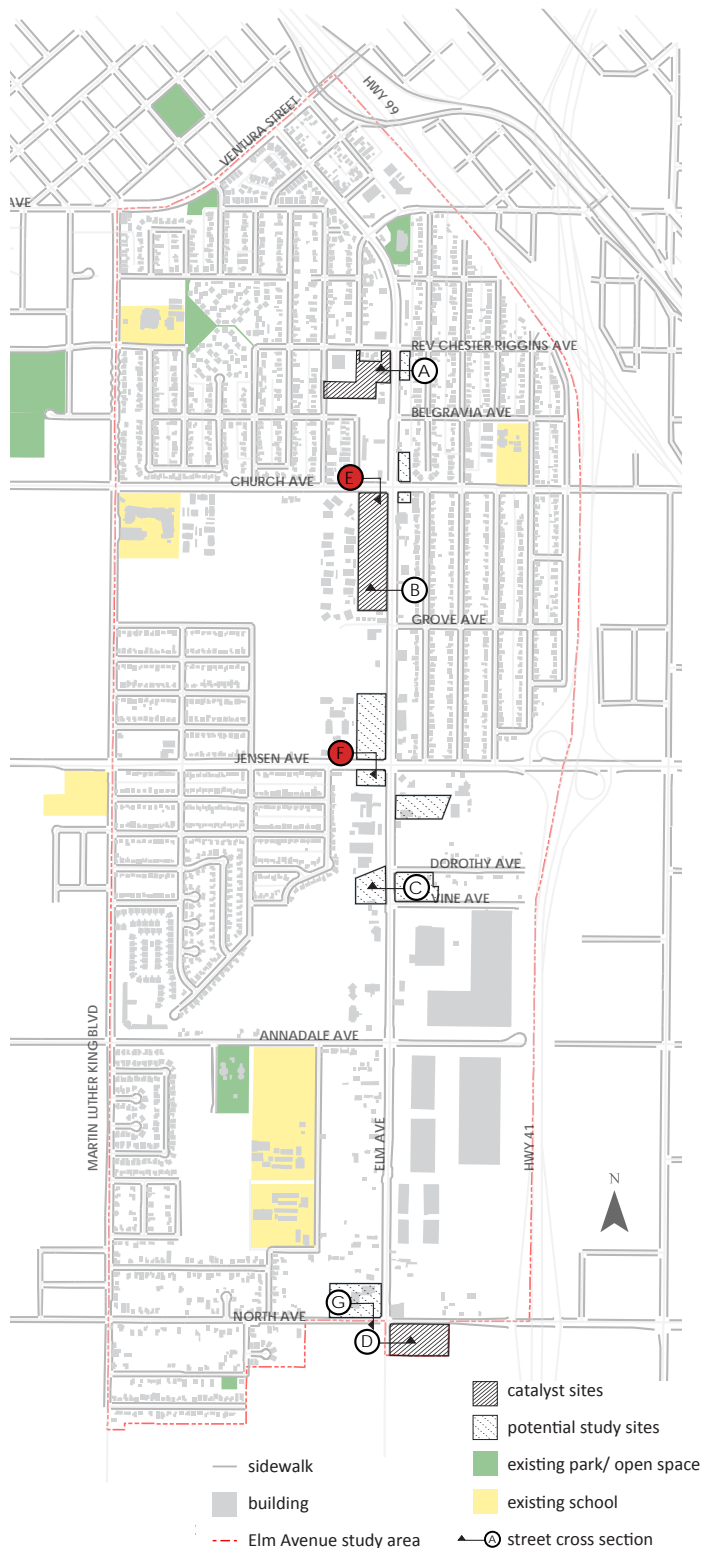
South of North Avenue, the street layout of Elm Avenue changes. There bicycle lanes, center median, and sidewalks disappear and the shoulder is wider on the east side of the street. The road narrows to one travel lane in each direction with a center turn lane (this occurs just south of the section shown in Figure 2-9.)

Figure 2-8

C: ELM AVENUE NORTH OF VINE AVENUE

Figure 2-9

D: ELM AVE. SOUTH OF NORTH AVENUE

KEY MAP FOR EXISTING STREET CROSS-SECTIONS**E: CHURCH AVENUE EAST OF ELM**

Church Avenue has very wide travel lanes, ranging from 19-22 feet wide, with standard bicycle lanes on two sides. On Church, sidewalks vary but are generally adequate for accessibility while too small for large street trees on south side. See Figure 2-10.

F: JENSEN AVENUE WEST OF ELM

Jensen Avenue is similarly laid out to Elm Street, however it has vehicular shoulders/parking lanes on either side that separate the bicycle lanes from the sidewalks. See Figure 2-11.



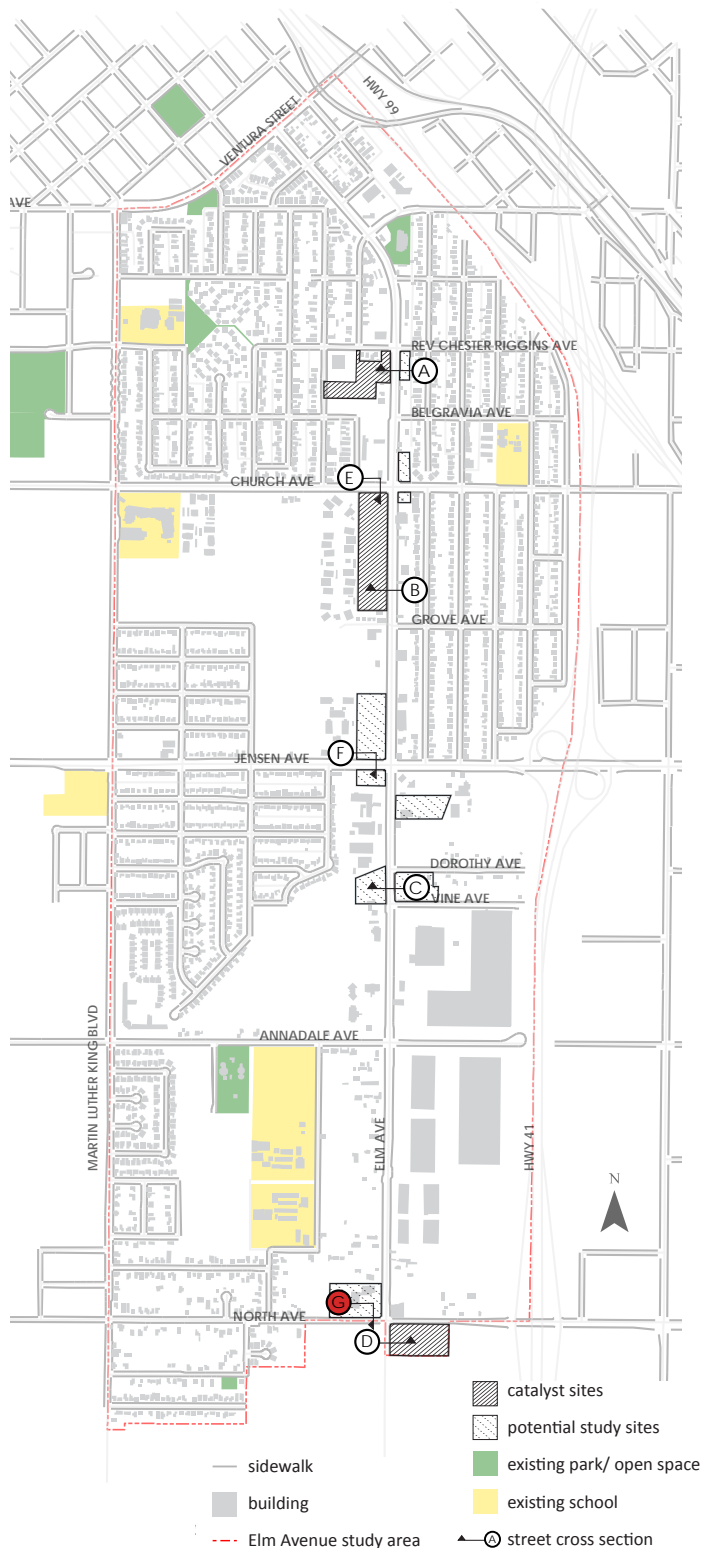
Elm Avenue crosswalk at Jensen Avenue.

Figure 2-10

E: CHURCH AVENUE EAST OF ELM

Figure 2-11

F: JENSEN AVENUE WEST OF ELM

KEY MAP FOR EXISTING STREET CROSS-SECTIONS**G: NORTH AVENUE WEST OF ELM**

North Avenue has two travel lanes and no bike lanes. Sidewalks are intermittent: developed along some segments and not along others. See Figure 2-12.

Figure 2-12

G: NORTH AVENUE WEST OF ELM



3. A CLOSER LOOK AT BROWNFIELDS

3.1 BROWNFIELD INVENTORY

The AWP project team set out to create an inventory of brownfield sites along the Elm Avenue corridor. To identify sites, EPA’s definition of a brownfield was used: “a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.” Sites along the corridor were viewed using the following criteria:

- Is the site perceived to be a former or current commercial or industrial site?
- Does the site look abandoned?
- Does the site look like it could have the presence of a discharge of a contaminant?

The 12 brownfield sites identified for the AWP are identified in Table 3-1.

Table 3-1
BROWNFIELDS AND POTENTIAL BROWNFIELDS SITES

SITE ID	PARCEL ID (APN)	NAME	LOCATION	SITE AREA (ACRES)	CURRENT USE
1*	47818312	St. Rest Property	Rev. Chester Riggins and Elm avenue, SW corner	3.51	vacant
	47818308				vacant
	47818319				vacant
	47818306				vacant
	47818307				general heavy commercial
2	47819122		Rev. Chester Riggins and Elm Avenue, SE corner	0.59	vacant
3	47826135		Church and Elm Avenue, NE corner	0.69	vacant
4	47909126		Church and Elm Avenue, SE corner	0.28	general heavy commercial
5*	47902043	Church/Elm	Church and Elm Avenue, SW corner	7.10	vacant
	47902039				general heavy commercial
	47902044				general heavy commercial
6	47902035		Jensen and Elm Avenue, NW corner	3.97	vacant
7	47924231		Jensen and Elm Avenue, SW corner	0.95	vacant
8	32819102		Jensen and Elm Avenue, SE corner	2.50	light industrial/ partially vacant
9	32825235		Vine and Elm Avenue, NE corner	1.65	vacant
	32825202				vacant
	32825203				vacant
	32825236				vacant
10	47926220		Vine and Elm Avenue, NW corner	1.99	light industrial
11	32815048		North and Elm Avenue, NW corner	3.67	office commercial/ partially vacant
12*	32917025	North/Elm	North and Elm, SE corner	3.89	vacant

* identified as Catalyst Sites

3.2 BROWNFIELD PRIORITIZATION

SETTING PRIORITIES

Residents of the neighborhoods adjacent to the Elm Avenue corridor in Southwest Fresno have been calling for its revitalization for decades. Long a patchwork of auto-body shops, manufacturing facilities, mostly abandoned gas stations, vacant/blighted lots, and liquor stores, the community desires the corridor to serve as the main street of this part of Southwest Fresno. It should provide residents with access to healthy food and a full-service grocery store, storefronts with opportunities for small businesses to thrive, and live-work spaces.

The EPA Brownfields Area-Wide Planning program requires grantees to identify a “catalyst” site or sites—sites that, if redeveloped, will have radiating positive effects for the surrounding community. The City and community partners identified three of the 12 sites listed in the table as catalysts: sites 1, 5, and 12. Catalyst sites were chosen for their potential to serve neighborhood revitalization goals. Each of these sites meets the EPA definition of a brownfield.

The site selection process included a community stakeholder meeting during the grant application process and a tour of the corridor. It was also informed by previous research, and the priority sites listed in the West Fresno Brownfields Action Plan.

CATALYST SITES

SITE 1: ST. REST PROPERTY

Site 1, the St. Rest property, is a 3.5-acre mostly vacant site located on the west side of Elm Avenue between Reverend Chester Riggins Avenue and Church Avenue.

The site is adjacent to and owned by community partner Saint Rest Missionary Baptist church, and has been vacant for several decades. A gas station was previously located on the property. Some environmental assessment was done to uncover potential contamination and leaking underground tanks, but the work has not been completed. Also included on the site is the former Farmer John meat packing company, which also could have some potential contamination.

Saint Rest Missionary Baptist Church has a long history in the community, and a vision to transform its vacant property and the former Farmer Johns’ site into a community-serving use. The site is in the middle of the Kirk Elementary neighborhood that community leaders have been focusing on. The redevelopment of Elm Avenue with more community-serving uses was a feature of the Building Neighborhood Capacity Program (BNCP) cross-sector partnership’s revitalization plan for Southwest Fresno, initiated in 2012. The BNCP program provided targeted

Site 1: St. Rest Property



federal assistance to help distressed communities “collectively solve problems, identify access and leverage existing resources, and put improvements in place.”

SITE 5: CHURCH/ELM

Site 5 is a 7.1-acre vacant parcel located on the west side of Elm Avenue just south of Church Avenue. The site has been vacant for several decades; a gas station was previously located on the site. Current information about the status of underground storage tanks is unknown.

During the EPA-funded West Fresno Brownfields Action Plan process, community residents identified Site 5 as an important catalyst. It is adjacent to a relatively new Fresno Housing Authority development, and has potential to develop with more community-serving commercial or housing uses.

SITE 12: NORTH/ELM

Site 12 is a 3.9-acre vacant parcel on the southeast corner of North Avenue and Elm Avenue. The site has been vacant for some time. It is currently often used for illegal dumping. Previous research on the site has uncovered that it may potentially be contaminated with benzene.

Site 12 is close to where Habitat for Humanity is focusing its neighborhood revitalization efforts, along the Martin Luther King, Jr. Boulevard corridor just to the west. Given current dumping and potential previous contamination, reuse of this site would clear an environmental hazard for the community in addition to providing much-needed community serving uses.

Site 5: Church/Elm



Site 12: North/Elm



3.3 ENVIRONMENTAL CONDITIONS

The consultant team researched each of the brownfield and potential brownfield sites on State databases that track contaminated sites, and reviewed available Phase I Environmental Site Assessments (ESAs). Of the 12 potential brownfield sites, State databases included records for only one. (Records exist for several other nearby sites in the Study Area.) The purpose of this review was to gather information regarding prior assessment and remediation efforts.

WHY STUDY CONTAMINATION ON BROWNFIELDS SITES?

Residents in the Elm Avenue area potentially suffer direct health impacts from multiple pollution sources. Among these sources are brownfields sites, which present potential risks to public health from contaminated soil and groundwater. The public may be at potential risk of exposure through direct contact with soil; airborne dust; or migration of site contaminants into groundwater, and then to surface water or drinking water. Contaminants may also impact food that is grown in the neighborhood.

In addition, the type and extent of contamination on a brownfield may influence the type of redevelopment that is permitted following completion of the site's remediation.

OUR METHODOLOGY

The planning team reviewed the Phase I and II Environmental Site Assessments (ESA) conducted for the 2316 South Elm Avenue site (Site 1). A Phase I ESA includes a review of site and government records, a site visit to

visually inspect existing site conditions and identify any potential releases of hazardous substances, and interviews with people who have direct knowledge about historical uses of the site, past and current operational practices, and any potential for related environmental concerns (USEPA). Information obtained in this Phase I ESA is important because it indicates whether the property may need to be cleaned up to support its intended reuse; and if further environmental investigation and cleanup is needed.

We also reviewed CalEPA's EnviroStar and GeoTracker databases in order to evaluate existing environmental conditions and develop strategies for brownfield site remediation and reuse. Other than Site 1, none of the AWP-identified brownfields had records on State databases. However, most of these sites were within a quarter mile or less of sites where regulatory activity had been conducted. These are identified in the respective site descriptions.

SITE-BY-SITE FINDINGS

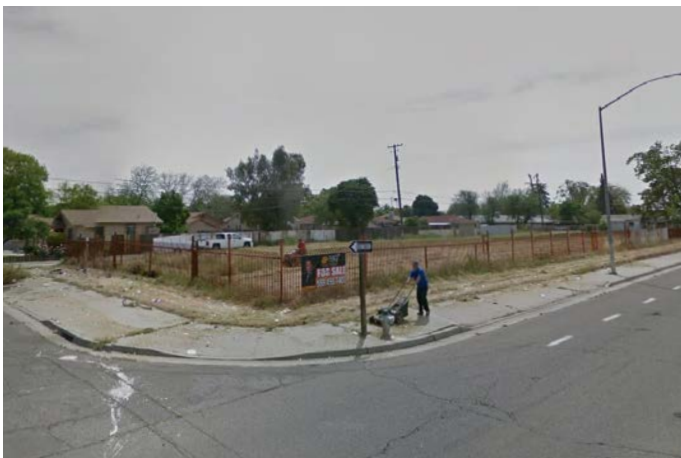
This section summarizes our findings for each of the 12 sites. Sites are shown on five focus area maps, which are presented from north to south along the Elm Avenue corridor.

- Sites 1, 2 and 3 are shown on Figure 3-1;
- Sites 4 and 5 are shown on Figure 3-2;
- Sites 6, 7, and 8 are shown on Figure 3-3;
- Sites 9 and 10 are shown on Figure 3-4;
- Sites 11 and 12 are shown on Figure 3-5.

Figure 3-1

FOCUS AREA 1





Top and middle rows: the 3.5-acre property adjacent to St. Rest Church (Site 1) is primarily vacant, and also includes a warehouse facing Elm Avenue.

Bottom row: Vacant parcels on the east side of Elm at Chester Riggins and Church are other potential study sites (Sites 2 and 3).

SITE 1: ST. REST PROPERTY (CATALYST SITE)

The St. Rest Property includes two parcels totaling approximately 0.58 acre which were the subject of the Phase 1 and 2 ESA for 2316 South Elm Avenue. The northern parcel is vacant and partially paved. The southern parcel is developed with an approximately 46,000-square-foot warehouse with loading docks and a paved lot. The site is fenced, with gated access from South Elm Avenue and East Reverend Chester Riggins Avenue. See Figure 3-1 on page 38.

According to the Phase 1 ESA, the northern parcel operated as an automotive fuel and service station from the early 1930s to the early 1970s, when the structures were demolished and underground storage tanks (USTs) were removed. The southern parcel was used prior to 1937 as an orchard/grove with residential and agricultural structures. In the early 1950s the southern parcel was developed as a bakery then later converted to a meat packing facility and warehouse. The warehouse was expanded in 1959 and building construction plans identified a septic system, gasoline UST, and dispenser for planned removal. The meat packing facility has two large refrigerated storage rooms, and operated until relatively recently.

Previous investigations included a geophysical survey to locate potential USTs, and collect subsurface soil and soil gas samples. All the soil gas samples contained volatile organic compounds (VOCs), but these were at concentrations below site screening levels. As a result, a vapor encroachment concern (VEC) was ruled out.

The Phase 2 included collecting surface soil samples from unpaved areas of the site, conducting an additional geophysical survey, and investigating anomalies.

Additionally, a hazardous building material survey of the warehouse was conducted to determine whether asbestos-containing material (ACM) and lead-based paint (LBP) are present. The following is a summary of the Phase 2 results:

- Lead was found to impact surface soil in a portion of the northern parcel at concentrations above human health screening levels.
- No USTs were found. However, piping, possibly related to former USTs was identified at the northern parcel.
- A concrete vault, possibly an oil-changing pit associated with the former service station, was identified at the northern parcel. The vault appears to be filled with demolition debris and had been paved over with asphalt. A sample collected from near the top of the vault contained detectable petroleum hydrocarbons at concentrations below screening levels.
- The hazardous building material survey identified ACM in some building materials. However, the condition of the ACM was assessed to be non-friable at the time of the inspection and does not pose an immediate hazard unless disturbed. The survey identified LBP on the building's exterior that was noted to be in fair condition.

Recommendations

Surface soil at the northern parcel contains lead above site screening levels and requires removal or capping to mitigate potential impacts to human health. The removal of the subsurface concrete vault (possibly an oil changing pit) and UST piping associated with the former service station should be conducted to assess whether the release of petroleum to the subsurface soil has occurred.

The warehouse building materials containing ACM and LBP will require proper abatement prior to any building renovation or demolition activities. Hazardous materials (drummed oil and compressed gas) should be removed before an accidental release occurs. The R717-Ammonia stored in the 500-gallon plastic aboveground refrigerant emergency discharge storage tank should be removed for proper disposal and the refrigeration system should either be maintained or removed, dependent on whether the use of the refrigerated storage rooms is planned.

An Analysis of Brownfields Cleanup Alternatives will be prepared to evaluate cleanup alternatives required to address lead reported above screening levels in surface soil, the removal of the subsurface concrete vault and UST piping, and ACM/LBP abatement at the warehouse.

SITE 2

There were no reports found for Site 2 (2305 South Elm Avenue, at Rev. Chester Riggins). It is comprised of one parcel totaling about 0.5 acres. It is currently a vacant, fenced site. Because of its proximity to sites where cleanup is indicated, it is recommended that a Phase I be conducted on this site.

SITES 3 AND 4

Sites 3 and 4, on the northeast and southeast corners of South Elm and East Church Avenue, have been identified as potential brownfield sites. No reports were found in State databases for these sites. However, there is a report on a site that is within 200 feet of these parcels at 2394 South Elm Avenue, at the northwest corner of

South Elm and East Church¹. It is recommended that a Phase I be conducted on these sites.

SITE 5: CHURCH/ELM (CATALYST SITE)

No reports were found for Site 5, at the southwest corner of South Elm and East Church Avenue (2410 South Elm). The site appears to be occupied by a car wash, and a vacant parcel where improvements appear to have been demolished. There is a curb cut to the vacant site on South Elm. Because of the telltale signs of past auto-related activities, it is recommended that a Phase I be conducted on this site. In addition, the site is directly across Church Avenue from the 2394 South Elm Avenue site (see below).

Nearby Contaminated Site: 2394 South Elm Avenue

The 2394 South Elm Avenue site is identified as J&C Food and Gas. It is currently occupied by a convenience store, which previously operated as a commercial petroleum fueling facility. In 2001, three 12,000 gallon underground storage tanks (UST), six fuel dispensers and associated plumbing were removed. Remediation was conducted from September 2006 to December. The case was closed in 2014. No offsite contamination was reported.

1. http://geotracker.waterboards.ca.gov/profile_report?global_id=T0601791878

Figure 3-2

FOCUS AREA 2





Top: The 7.1-acre vacant parcel extending south from Church Avenue (Site 5) has been identified by residents as an important catalyst site.

Bottom: The vacant parcel on the southeast corner of Elm and Church is another potential study site (Site 4)

Figure 3-3

FOCUS AREA 3





SITES 6, 7, 8, 9, AND 10

Five other potential brownfield sites are identified in the central Elm Avenue corridor between Church and Anadale. While there are no reports on these sites, there are four sites within a quarter-mile where there have been releases of petroleum hydrocarbons, lead and other heavy metals.¹ There are also telltale signs of past agricultural uses on these sites. Due to the proximity of auto-related, light industrial and agricultural activities in the area, a Phase I is recommended for these sites.



Sites 6 (top), 7 (middle), and 8 (bottom), represent a cluster of potentially developable land around Elm and Jensen.

1. http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=10000002, http://geotracker.waterboards.ca.gov/profile_report?global_id=T0601900396, http://geotracker.waterboards.ca.gov/profile_report?global_id=T0601900189, http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SLT5FR931133

Figure 3-4

FOCUS AREA 4





Sites 9 (top) and 10 (bottom) together make up 3.6 acres of vacant land in the central Elm Avenue corridor.

Figure 3-5

FOCUS AREA 5





SITE 11

No reports exist in State databases concerning Site 11, on the northwest corner of South Elm and East North Avenue. It is currently a fenced, vacant site. Because of the telltale signs of past auto-related activities, and proximity to active sites (see below), it is recommended that a Phase I be conducted on this site.

SITE 12: CHURCH/NORTH (CATALYST SITE)

There were also no reports found for the Site 12, at the southeast corner of East North Avenue (**3032 South Elm**). This identified catalyst site appears to be occupied by a commercial drop-off facility. Because of current activities, and proximity to active sites (see below), it is recommended that a Phase I be conducted on this site.



Site 11 (top) has telltale signs of past auto-related activities. Site 12 (bottom) has been identified by the community as a priority.

Nearby Contaminated Sites

Reports exist on two sites within 200 feet of sites 11 and 12.¹ These are 2940 South Elm Avenue and an undefined site at the corner of South Elm and East North Avenues. In addition there are several properties on the southwest corner which appear to be auto-related, storage and recycling activities.

The 2940 South Elm Avenue Site is referred to as Commercial Electroplaters, and is currently an open case under the oversight of the Department of Toxic Substances Control (DTSC). It has a long history dating back to 1982. The undefined release site at the intersection appears to be a spill that is unrelated to any particular site.

1. http://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=10340074, http://geotracker.waterboards.ca.gov/profile_report?global_id=SL0601990145

3.4 THE BROWNFIELDS REDEVELOPMENT PROCESS

This section describes the different phases of the brownfields redevelopment process: site assessment, predevelopment, cleanup planning, remediation, redevelopment and occupancy. For the purposes of this report, stakeholders are considered to be:

- The community/neighbors,
- local government,
- the property owner, and
- the developer/prospective purchaser.

THE PROCESS IN A NUTSHELL

Predevelopment: The predevelopment phase consists of schematic planning and early financial projections. During this phase, project proponents may conduct market analysis, site appraisals, and design alternatives based on the desired land uses. Community meetings may be held to solicit ideas and concerns from the community/neighbors.

Assessment: The Assessment phase is when Phase 1 and Phase 2 Environmental Site Assessments (ESA) are conducted by qualified engineering professionals under contract with the property owner, local government or developer/prospective purchaser. The goal of this phase is to determine whether the site is safe for the intended use, or if additional studies and/or cleanup is necessary.

Cleanup Planning: If a Phase 2 ESA shows evidence of contamination, the qualified engineering professional may conduct additional assessments and, if necessary, prepare cleanup alternatives for stakeholders to consider, under the oversight of a regulatory agency. The goal of this phase is to develop a cleanup plan, and any associated site management.

Remediation: Remediation is the response action to remove and/or limit exposure to site contaminants. This may involve removing toxics from the soil and or groundwater and mitigating any impacts to those who may be impacted by removal activities. It also involves incorporation of Activity Use Limitations (AUL). These may be

Figure 3-6

STEPS IN THE REDEVELOPMENT PROCESS*



*The redevelopment process may not be linear. Steps will vary based on when stakeholders become aware of contamination.

engineering controls (EC), or barriers to limit exposure to toxics that are allowed to remain on site, and institutional controls (IC) to inform all stakeholders of the presence of residual contamination and the EC measures. The goal of this phase is to implement the cleanup plan.

Redevelopment and Occupancy: The redevelopment phase usually overlaps with or follows remediation. Once construction of improvements is completed, the redevelopment project is complete and the project can be occupied. The goal of this phase is to ensure that the parties monitor the AULs for compliance with the cleanup plan.

The end goals of a brownfields redevelopment include the following:

1. Removal of blight and contamination from the community
2. A redeveloped project that provides community benefits, affordable housing, sustainable industry and/or living wage employment
3. Cleanup and construction process that minimizes impacts to the community/neighbors and environment. This third goal is the topic of this section.

A simple diagram of the process is shown on Figure 3-6.

Since redevelopment occurs under many circumstances, the following must be taken into consideration:

- **The redevelopment process is not linear.** The steps will vary based on when stakeholders become aware of contamination. Sometimes, contamination is suspected at the beginning of the process.

Other times, the contamination is discovered after construction has started.

- **The redevelopment process is location-specific.** In California, oversight of cleanup activities varies by geographic location, the contaminants of concern, severity of the contamination, proposed land use and other factors.
- **The process may vary depending on which party initiates redevelopment.** The property owner, local government, developer/prospective purchaser or community/neighbors may take the lead, which changes the process. For instance, there are times when the redevelopment process starts without local government and/or community/neighbor knowledge or involvement. The developer/prospective purchaser and property owner may conduct studies before sharing the information with the community/neighbors. For the purposes of this report, the assumption is that all parties are aware at project inception.
- In addition to the end goals mentioned above, **the priorities of the stakeholders are all different.** For a local government, additional priorities may include a redevelopment project that promotes broad planning goals, minimizes costs, and provides long-term tax generation. For the developer/prospective purchaser it could be maximizing revenues and limiting liability. For the property owner, it may be maximizing the selling price.

For many readers, this may be as much information as you need. Readers who aim to be directly involved in brownfields redevelopment should read on for a more detailed description of each stage of the process, or may want to skip ahead to Section 3.5.

PREDEVELOPMENT

Every project begins with a predevelopment phase. During this time, the project lead – whether it is the local government, developer/prospective purchaser, property owner or community/neighbors, conducts studies, market research, schematic planning and financial projections to determine the acceptability and feasibility of a project. The predevelopment activities vary by type of project, and whether it is a public or private project. For instance, affordable housing projects begin with market studies, community outreach and financial projections. Open space projects may involve budget projections and design meetings. Commercial projects may involve traffic and noise analysis, research on tax incentives and employee sourcing.

Analyzing consistency with land use and compatibility with adjoining properties is a common predevelopment activity. During this early stage, the project proponent should research the history of uses in the neighborhood to determine if the proposed reuse will be compatible with the past uses on the site and surrounding neighborhood. Often, “windshield” surveys are conducted during this phase, which includes scoping the neighborhood for possible contamination sources and concerns.

ASSESSMENT

The Assessment phase begins when a qualified engineering professional conducts an ESA. This is necessary for a number of reasons. For the developer/prospective purchaser, or a local government wishing to purchase a site, an ESA is required to obtain liability protection for contamination caused by past owners, operators or adjacent properties. If loans or grants of any type are part of

project financing, the lender or granting agency requires an ESA. If there is any planned excavation or land use change, the local government usually requires a site assessment. The assessment phase is generally divided into the steps below:

1. A Phase 1 ESA is conducted to research potential environmental concerns on a site, based on its history and any available records. It includes a search of several databases from various federal, state and county regulatory agencies. An All Appropriate Inquiry (AAI) Phase 1 is a type of ESA that, in order for the prospective purchaser to obtain immunity from liability, requires specific activities, including a site visit and interviews of past owners, occupants and operators. An AAI Phase 1 has a shelf life of six months. The property owner, or a developer/prospective purchaser and local government that is granted site access typically has an ESA prepared by a qualified engineering professional. If no site acquisition is contemplated within the next six months, it will not be necessary to complete all the steps of an AAI Phase I. The key end products of a Phase 1 is a finding that no additional assessment is necessary, or that there are recognized environmental conditions (REC) that need further study.

2. If the Phase 1 finds RECs that need additional study, the qualified engineering professional may recommend soil, groundwater, and if applicable, building material sampling and analysis. Phase 2 and/or building materials survey (for lead, asbestos and other chemicals) reports are generated. These reports will confirm whether contaminants exist

that are potentially harmful to people and the environment. At this point, the regulatory agency jurisdiction may be determined, or might require additional analysis. The sampling results from a Phase II are valid for as long as the site condition remains as it did during the time of sampling. Often, sampling results are “data points” that can be used to analyze trends.

The environmental regulatory agencies that may be involved in soil and groundwater contamination are usually the local Certified Unified Program Agency (CUPA), which in Fresno is the Fresno County Department of Public Health, Division of Environmental Health), the California Environmental Protection Agency (CalEPA) Regional Water Quality Control Board (RWQCB) or the CalEPA Department of Toxic Substances Control (DTSC). In most cases, a lead regulatory agency is determined and other agencies may coordinate.

Hazardous building materials are under the jurisdiction of the local air board (which in Fresno is the San Joaquin Valley Air Pollution Control District).

3. Often, sampling and analysis is incrementally repeated, usually to define the extent of contamination, and to define and refine any cleanup activities necessary. The results of this sampling will determine if the site is safe, or if cleanup is necessary for the intended use. If there is no use proposed at that time, the regulatory agency uses the site’s current land use and zoning as the basis for the cleanup standard, (which is discussed below). Additional studies such as risk assessments and fate and transport analysis are also conducted during this phase.

CLEANUP PLANNING

This phase is an extension of the assessment phase. In this phase, the Project Lead - the local government, property owner or developer/prospective purchaser – commissions additional sampling and analysis is conducted to define the depth and lateral extent of contamination, and the applicable site cleanup goals. At this juncture, it is ideal to have a redevelopment site plan(s) on which to base the cleanup plan. In many cases, cleanup planning is incorporated into a project entitlement and CEQA (California Environmental Quality Act) process. The steps involved in cleanup planning include:

1. Determine site cleanup goals based on land use, and if available, site plan or proposed building design.
2. Determine the appropriate remediation methods for soil and groundwater. For soil, alternatives may include a combination of excavation and disposal to a landfill, encapsulation, and treatment (in place, on- or off-site). For groundwater, alternatives may include a combination of pumping out and treating the groundwater, reinjection or disposing of treated water into the sewer or stormwater system, or treating the groundwater in place. It may also be necessary to control for vapors that originate from the subsurface.
3. Determine if any AULs are necessary, the most common of which are restricting allowable land use on the site, installation of ECs to prevent exposure to any residual levels of toxins in soil or groundwater, and instituting reporting and monitoring requirements.

4. The alternative methods, and the costs and impacts from implementation are analyzed and presented at public meetings. Comments from all stakeholders are considered by the regulatory agency prior to selection of the final remedy.

REMEDATION

Remediation begins when the project lead – the property owner, developer/prospective purchaser or local government – commissions the design and engineering of the selected remedy, and implementation of the response actions to remove or limit exposure to site contaminants. The steps involved in remediation include:

1. Finalizing the engineering and logistical steps in the site cleanup plan for the approval of the regulatory agency. This includes finalizing truck routes to/from the site, traffic controls, dust and noise control measures, stormwater management, public noticing, and other construction related activities.
2. Implementing the removal actions and/or treatment, installation of the ECs, or barriers to limit exposure to toxics that are allowed to remain on site, and ICs to inform all stakeholders of the presence of residual contamination and the EC measures. The removal action could be brief or take many years to complete, and is influenced by the financial resources for cleanup, complexity of cleanup requirements, size of the site, and many other factors.
3. Obtaining a closure document from the regulatory agency, such as a no further action, certification of completion, or site closure.

REDEVELOPMENT AND OCCUPANCY

The redevelopment phase usually overlaps with or follows remediation. In some instances, features of the redeveloped project, such as a parking lot or building foundation, are part of the remedial measures. Once construction of improvements is completed, the redevelopment project is complete and project can be occupied. It will be necessary to monitor all the AULs that were approved as part of the cleanup plan to ensure compliance.

In many communities, the responsibility for monitoring the AULs falls on different parties. In California, CalEPA has two registries – DTSC’s Envirostor, and the State Water Board’s Geotracker. Other means of monitoring AULs are part of the project entitlement process, where title searches or Phase I’s are necessary.

THE END GOAL: A CLEAN SITE. BUT WHAT DOES “CLEAN” MEAN?

Regulatory agencies have established standards and processes to ensure that sites are safe for the intended use, whether that be residential, commercial, industrial or open space. The end goal is for any contaminant level that may be on the site to be below threshold levels that are known to cause harm to the public and environment. Prescriptive standards, such as “screening levels” or “cleanup numbers” are conservative standards developed to gauge the safe level of contamination at a site, based on the intended use. Residential cleanup levels are most conservative since calculations are based on constant exposure of a child to contaminants, whereas industrial standards are based on 12-hour exposure for an adult. Construction worker standards may also ap-

ply. In urban areas and areas where there are naturally occurring minerals that exceed cleanup numbers, these conservative standards are usually difficult to meet.

In addition, it is often prohibitively expensive and economically infeasible to meet conservative cleanup levels at every site. Digging up and pumping large amounts of soil and groundwater, transporting and depositing these contaminated soils to distant landfills also has harmful impacts on the environment.

As an alternative to cleanup numbers, regulatory agencies use risk assessments to calculate cleanup levels based on the projected land use and anticipated period of exposure of different receptors - such as children, workers, wildlife and natural resources , etc. – to the contaminants. Fate and transport studies are also conducted to model the movement of residual chemicals in the soil, groundwater, soil vapor, and air.

So, what does “clean” mean? In the context of brownfields redevelopment, it is the level of contamination allowed to be left in place that, if exposed to the receptors, has a very low likelihood – measured in excess cancer and hazard risk - of causing harm.

3.5 WHAT TO BE AWARE OF AT EACH STAGE

WHAT TO BE AWARE OF DURING PREDEVELOPMENT

Community members and neighbors are usually not aware of predevelopment activities that are being conducted by a local government, developer/prospective purchaser or property owner. The opportunity arises when a project application is filed with the City's planning department, and the project is scoped for review under the California Environmental Quality Act (CEQA).

The project review process offers opportunities for community members to raise concerns, during meetings or in writing, about noise, traffic, infrastructure, quality of life, public safety, and other topics covered under CEQA. This may also be the time to build partnerships with other stakeholders to ensure a development that meets common goals and minimizes conflicts. Predevelopment is also usually the stage when potential financing and grant sources are being considered. Strong partnerships ensure that the redevelopment project progresses smoothly and is more competitive for grants and financing.

WHAT TO BE AWARE OF DURING ASSESSMENT

During the assessment phase, a party that is considering acquiring or developing a brownfield site retains a qualified engineering professional to conduct a Phase 1 and, if indicated, a Phase 2 ESA, as described in the previous section.

Unless the project is a grassroots effort or one in which the local government is the lead, the community and neighbors are unaware of the results of a Phase I or Phase II. A Phase I, even one where recognized environ-

mental conditions (RECs) are identified, is not subject to public disclosure unless it is prepared with public funds (and not even under certain circumstances).

The community/neighbors may first become aware of a site assessment after the Phase 2 has been submitted to the regulating agencies and it has been determined that the site needs to be remediated. Beginning at this stage, the community/neighbors should ensure that the qualified engineering professional did not omit information that members of the community/neighbors are aware of. This might include:

1. Past occupants and workers on the site or in the neighborhood, site history, people that should be interviewed, or uses (legal or illegal) that were not identified.
2. List of sensitive receptors, current and planned, in the reports for completeness. This may include current or planned parks, schools and housing, or streams, wildlife, and cultural resources.

Community members should inspect the references for the documents and sources that were used to create the reports.

WHAT TO BE AWARE OF DURING THE CLEANUP PHASE

During cleanup planning, the regulating agencies and qualified engineering professionals evaluate alternative ways that remediation may be done. This has implications for the general safety of the community and neighbors as well as for the future uses on the site, and management of the Activity Use Limitations (AULs). In addition, the construction activities for the redevelopment project will add to the impacts to the neighbor-

hood. The latter may include installation of roads, sidewalks, and other infrastructure.

In order to ensure a remediation alternative that minimizes impacts on the neighborhood, the community and neighbors should consider the following actions:

1. Request technical assistance in reviewing, explaining and evaluating risk assessments and other technical documents. (Often, the regulatory agency or local government will initiate this.)
2. Coordinate with the local government to ensure that cleanup is coordinated with development activities, to minimize impacts on the community.
3. Request that an environmental baseline be measured for key indicators such as air quality and noise. This helps measure impacts, and also helps measure benefits after the project is constructed.
4. Review the proposed AULs for effectiveness and implementability. The community/neighbors can help ensure that measures are in place to protect AULs. Common concerns include:

- **Capping.** At some sites, soil is required to be capped to prevent direct exposure of residual contaminants to people and the environment. Caps need to be inspected for cracks regularly. There also needs to be assurance that any digging is conducted after consulting with the regulating agencies or the local government.

- **Use Restrictions.** Some cleanup requirements incorporate deed restrictions, the most common of which are prohibition of groundwater use and restriction of sensitive uses. These restrictions are usually registered with the county recorder's

office, county health office and/or Envirostor and Geotracker. The community/neighbors should work with the regulating agencies and local governments to ensure that measures are in place to assure the protectiveness of these measures are maintained.

WHAT TO BE AWARE OF DURING REMEDIATION

Once cleanup activities start, the community/neighbors should work with the regulating agencies and local governments to ensure that the remedial activities and mitigation measures are consistent with the approved cleanup plan. All available notices and reports should be reviewed to ensure consistency.

REDEVELOPMENT AND OCCUPANCY

Once the cleanup and redevelopment project are completed, the risks pertain to the integrity of the AULs. It is difficult for community/neighbors to be vigilant after a project has been completed. They must be aware of where the AULs are recorded so they can recognize when a cap has been cracked, and prevent unauthorized land uses and unintended digging into protected areas.



4. BENEATH THE SURFACE

4.1 WATER, SEWER, AND STORMWATER INFRASTRUCTURE

Infrastructure is one factor in understanding the opportunity for development. Sites with more available infrastructure may be able to proceed more quickly.

Water and sewer mains as well as storm drains and basins are part of master planned systems that span all of Fresno. This “wet utility” infrastructure is designed to meet the expected demand of current and future development, based on zoning.

Water and sewer are managed by the City, and local service lines are generally located within each street. Trunk sewer lines handle distribution from a larger area for transmission to the treatment plant.

The water system is shown on Figure 4-1, and the sewer system on Figure 4-2.

The stormwater system is maintained by the Fresno Metropolitan Flood Control District (FMFCD). In general, minor streets are graded to surface drain via curb and gutter to inlets located on the larger streets. Commercial developments will often have on-site collection system that ties into a FMFCD inlet or manhole, as well as street drainage. Basins are typically designed and sized to store runoff from one season of rainfall, allowing water to filter into the ground. See Figure 4-3: Stormwater System.

OPPORTUNITIES ALONG THE ELM AVENUE CORRIDOR

The following deficiencies and potential challenges were identified adjacent to potential future development sites.

Underground wet utility pipes suitable for future development exist in the streets fronting the Saint Rest Church area (Site 1). Elm Avenue and Rev. Chester Riggs Avenue both have curb, gutter and drainage inlets. South of the church along the west side of Ivy Avenue, there is only curb without gutter: this presents an im-

provement opportunity.

At Site 5 (Elm and Church), existing underground wet utilities are adequate to allow for future development. Along the north edge of the site, a portion of Church Avenue has discontinuous curb and gutter. Development of the site and tie-in of this section to the surrounding infrastructure should provide improved drainage. Church Avenue contains sewer and storm drain trunk lines of large diameter (greater than 30”). These may present interference issues for trenching of new underground facilities.

Around Elm and Jensen, existing underground wet utilities are capable of supporting future development on Sites 6, 7 and 8, except that no storm drain infrastructure is present on the northwest corner of Elm and Jensen. Additional lines and inlets may be needed to support future development.

Existing infrastructure adjacent to sites 9 and 10 is at the highest service standards in the Study Area. The dry utilities including, power and telecommunications are below grade in this section of Elm Avenue. Sanitary sewer, water and storm drain services are all present and capable of serving development. The area also presents an interesting opportunity: if the irrigation canal running southwest from Jensen to Elm were piped, the alignment could provide a pedestrian/bike trail opportunity.

Water and sewer services are present in North Avenue and could provide usable connections for future development at sites 11 and 12. However services do not extend south of the intersection in Elm and there is the potential for future expansion opportunities that could improve service to the area. This area lacks significant storm drain services. FMFCD has plans for improvements in this area which would need to be built as part of future development. In addition, there is no existing curb and gutter along the south side of North Avenue or on Elm south of the intersection.

Figure 4-1

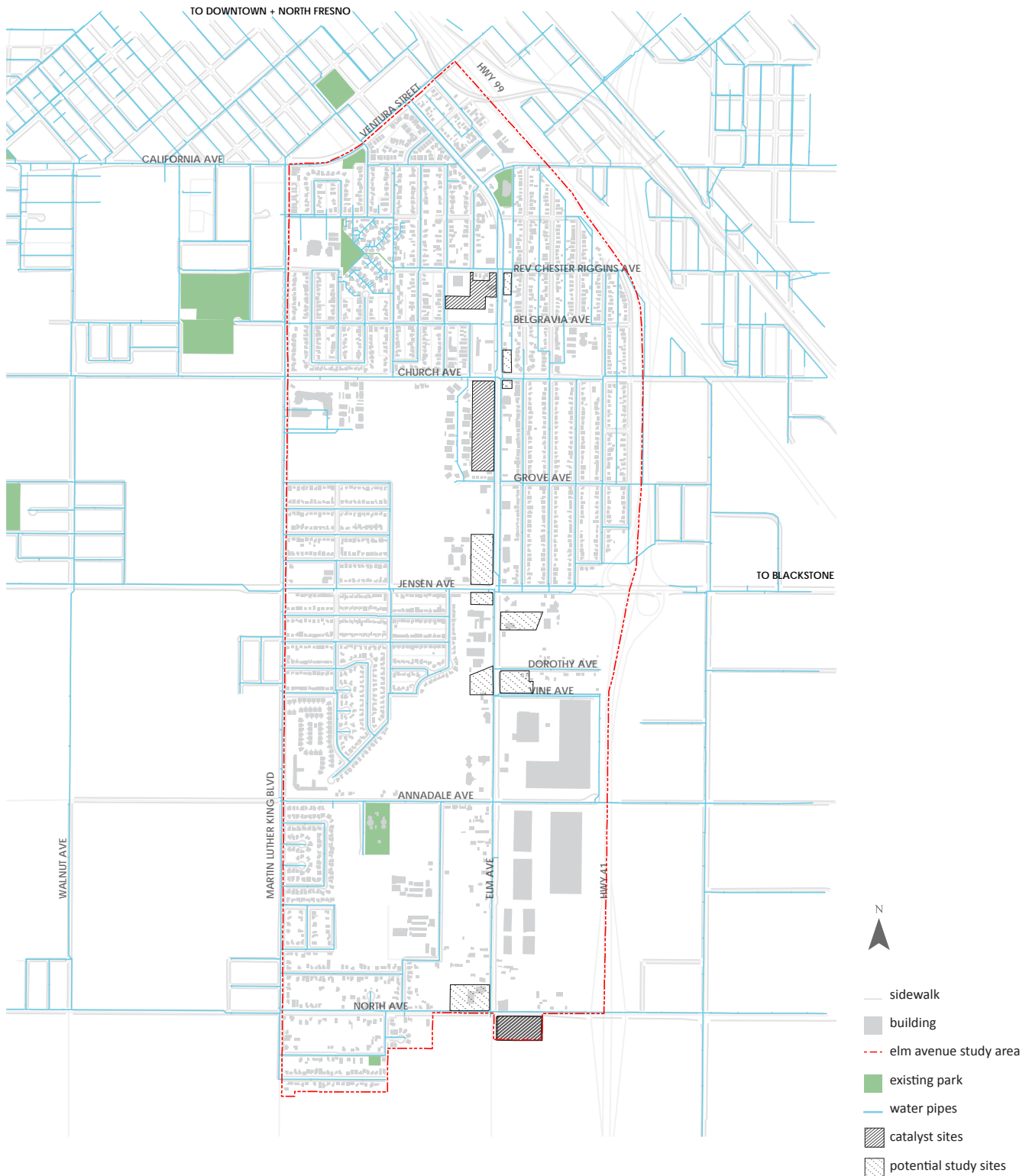
WATER SYSTEM

Figure 4-2

WASTEWATER SYSTEM

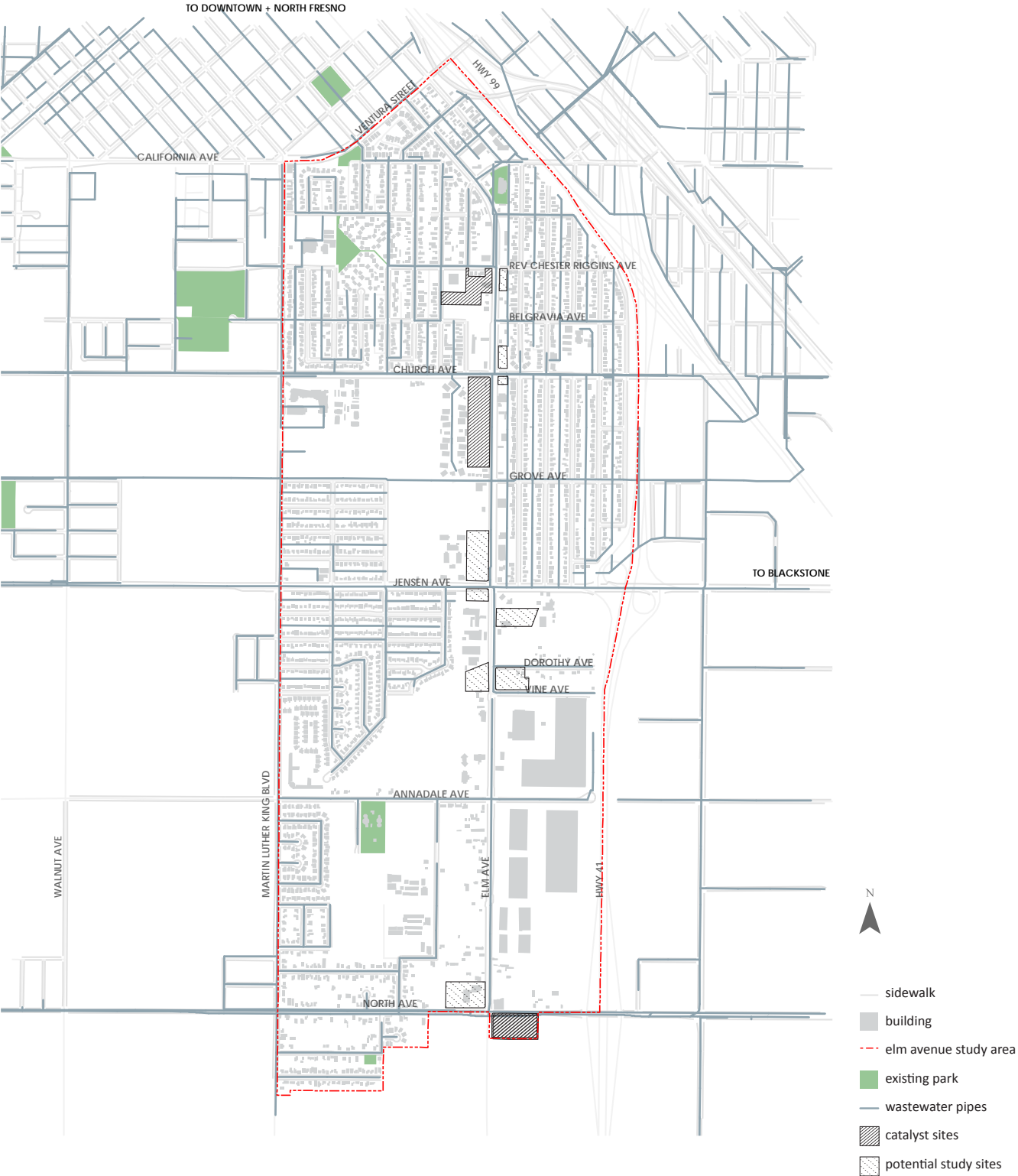
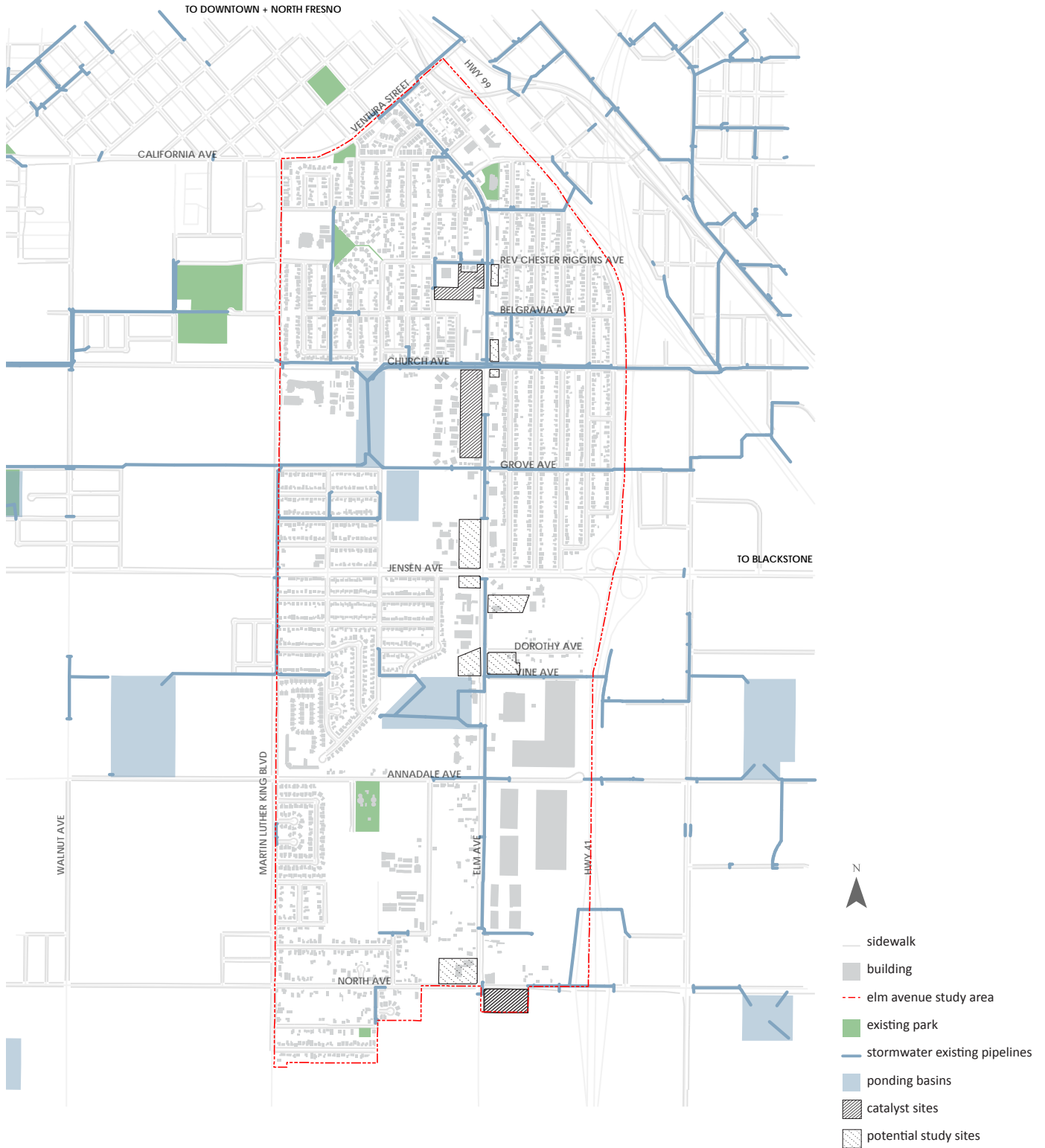


Figure 4-3

STORMWATER SYSTEM

TAQUERIA Y CARNICERIA

CHEESE BURGERS



MENUDO
SAPOTE Y CHINGO



TORTAS BURRITOS



TACOS



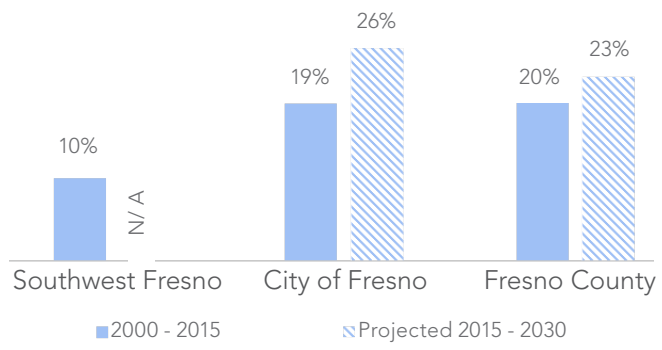
5. OVERVIEW: THE MARKET

5.1 DEMOGRAPHIC AND SOCIOECONOMIC OVERVIEW

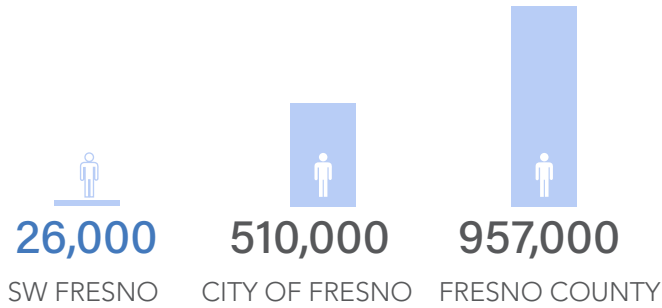
Southwest Fresno¹ has approximately 26,000 residents, or about 5 percent of the City of Fresno’s population of 510,000 in 2015. In the past ten years, the region has grown at a slower rate than the City and Fresno County. This is due primarily to a lack of housing production in Southwest Fresno. The area’s median income (\$24,060) is also well below the City and County averages of \$41,530 and \$45,230, respectively, and Southwest Fresno has more persons living in poverty (34 percent of adults and 54 percent of children). The unemployment rate has historically been higher than the City and County, with rates as high as 17 percent in recent years. Southwest Fresno has a comparatively young and racially/ethnically diverse population; more than half of the residents are non-white and 62 percent of residents are of Hispanic or Latino origin, and the median age is 26.2, well below the City and County averages of 30.0 and 31.4 respectively.

The Southwest Fresno Market Area relative to the City of Fresno and the larger region is shown on Figure 5-1.

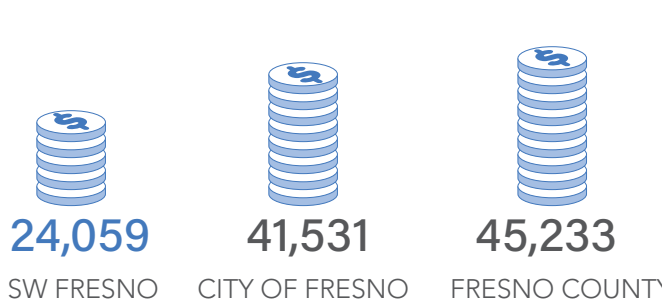
POPULATION GROWTH



POPULATION (2015)



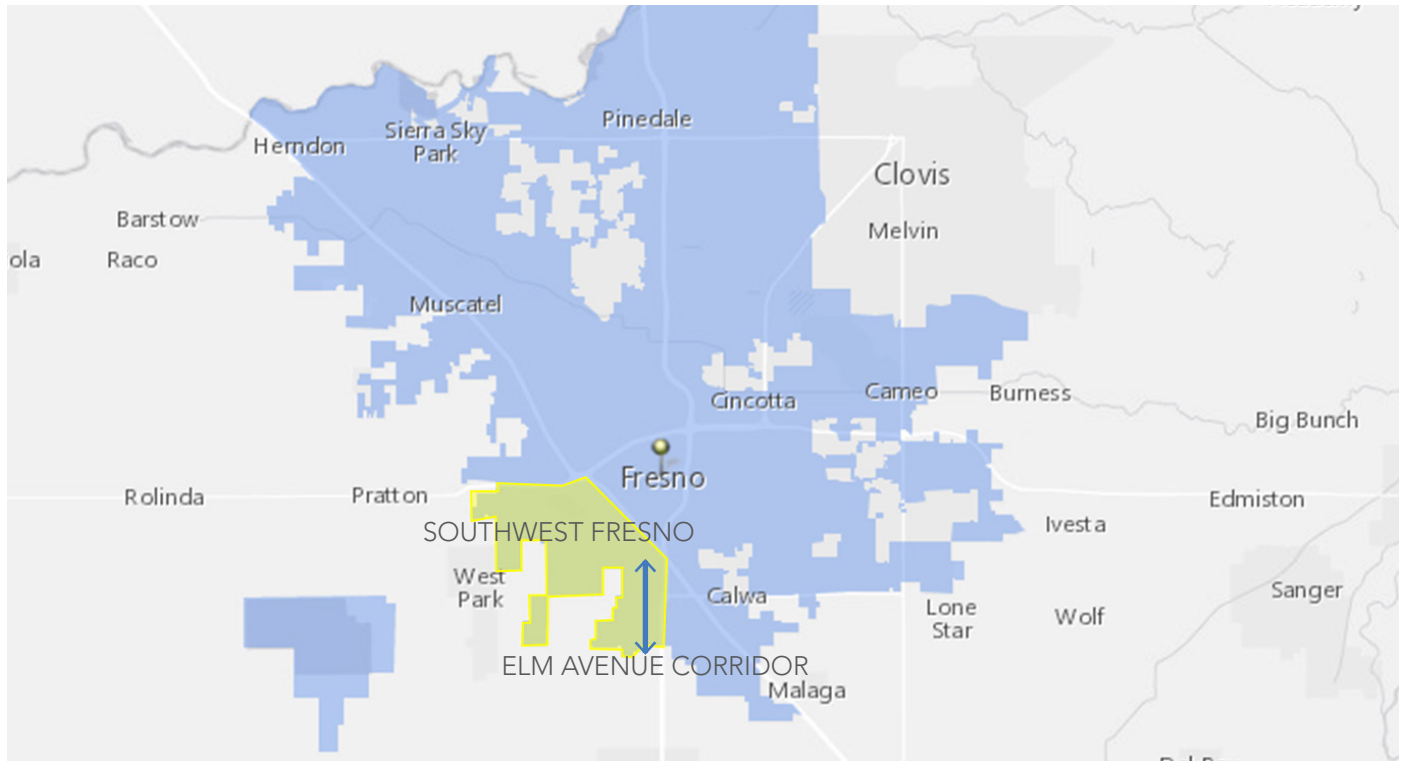
MEDIAN HOUSEHOLD INCOME (2015)



Source: American Community Survey, Fresno County Council of Governments

1. We have defined Southwest Fresno as the portion of the City of Fresno south of State Route 180, southwest of State Route 99 and west of State Route 41. This area differs from the Southwest Fresno Specific Plan area to better align with perceived trade areas for retail uses.

Figure 5-1

SOUTHWEST FRESNO MARKET AREA

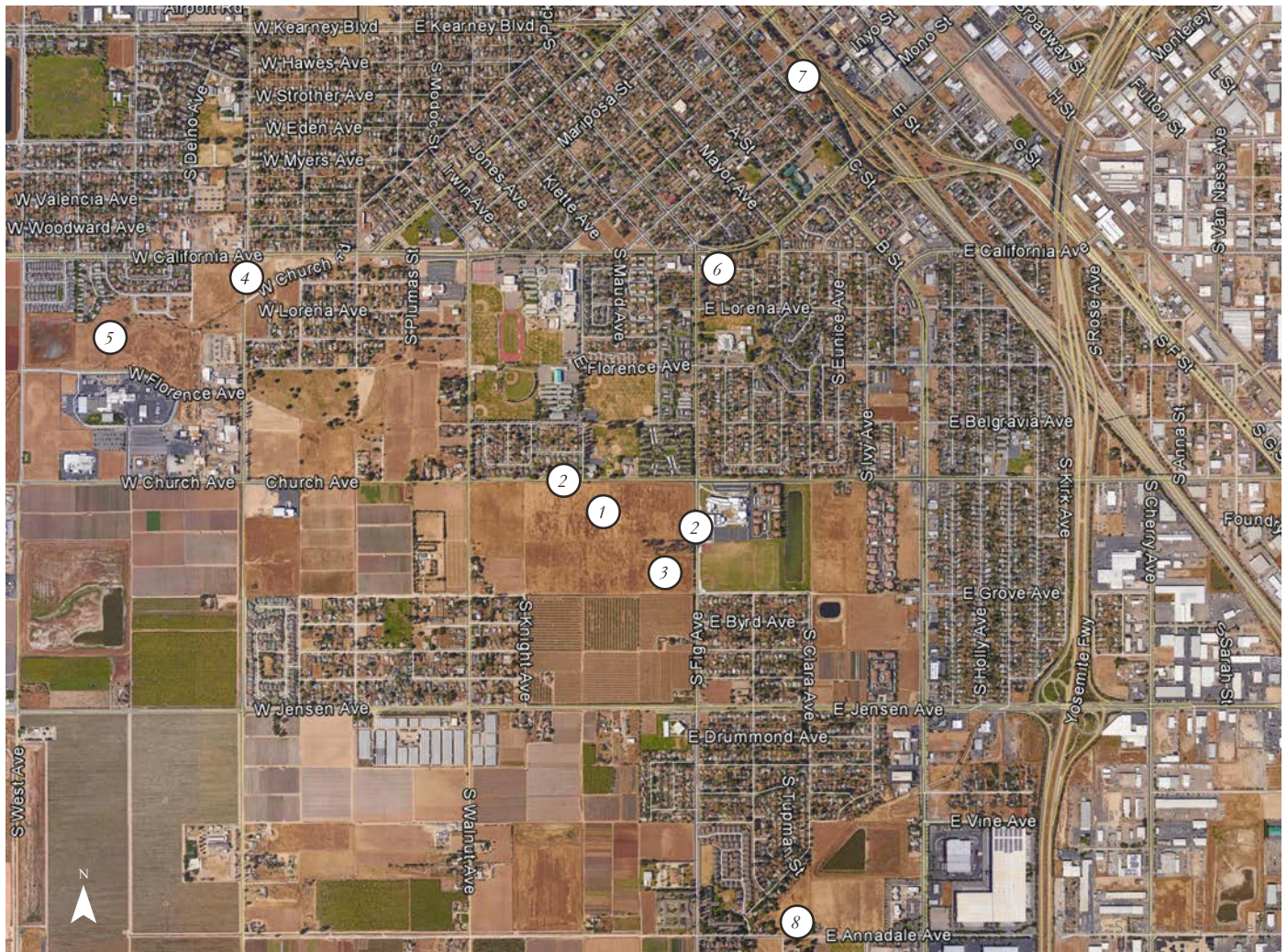
5.2 TRANSFORMATIVE COMMUNITIES GRANTS

Southwest Fresno is due to receive tens of millions of Cap & Trade Transformative Climate Communities (“TCC”) grants for a variety of open space, education and transportation projects. Funded projects include a new satellite campus for Fresno City College, a grocery store, an urban park and farm, and infrastructure street improvements. These projects, which were advocated for and prioritized by Southwest Fresno residents, are anticipated to improve quality of life and economic opportunity for people in the area. The public-sector commitment to Southwest Fresno represented by these grants may stimulate additional private-sector investment.

Cap and Trade-funded projects are shown on Figure 5-2.



Figure 5-2

CAP AND TRADE FUNDED PROJECTS (2017)

- | | |
|--|--|
| <p>1 Fresno City College West Fresno Satellite: Fresno City College's new campus will provide workforce training and educational pathways to Southwest Fresno residents</p> <p>2 Street Improvements</p> <p>3 MLK Activity Center Park</p> <p>4 Grocery Store, Distribution Center & Community Orchard</p> | <p>5 Community Garden & Urban Farm</p> <p>6 Community Garden</p> <p>7 Landscaping, Playground & Solar Charging</p> <p>8 Annadale Mode Shift Project (Sidewalk, Bike Improvements & Trails)</p> |
|--|--|

5.3 REAL ESTATE MARKET CONTEXT

RESIDENTIAL MARKET

Since the Great Recession, Fresno has seen a dramatic increase in rents and home values, with relatively little new housing construction, indicating robust, unmet demand. In the last year alone, rents increased by 6.1 percent and asking home prices increased by 9.8 percent. Recent residential development in Southwest Fresno includes the first phase of a 128-unit mixed-income development and a 40-unit development for homeless and disabled veterans. Fresno's multifamily housing stock overall has grown by 6.1 percent since 2011. However, few housing units have been built in Southwest in recent years compared to elsewhere in Fresno.

The lack of housing development in Southwest Fresno may contribute to overcrowding in the area: the average household size in Southwest Fresno is 3.7 persons, 15 percent higher than the Countywide average. Furthermore, almost 20 percent of Southwest Fresno households have six or more residents, even while roughly 450 units in the area are vacant but not available on the rental or for sale markets.

Current projections indicate a need for an additional 90,000 units citywide by 2050. In addition to a latent demand for housing demonstrated by Southwest Fresno's limited growth and larger household sizes, a portion of this citywide growth could also be captured by new development in Southwest Fresno. Affordability, however, will continue to be a key consideration to ensure that current housing pressures related to both cost and availability are relieved.



6.1%

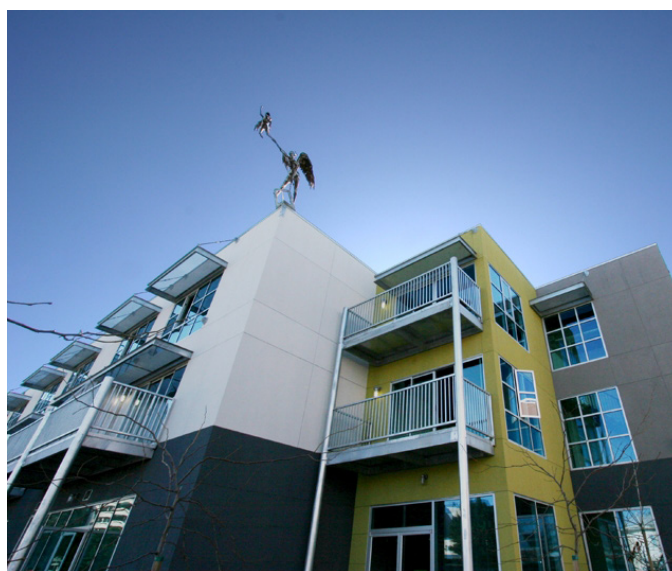
INCREASE IN RENT
(2016 - 2017)

9.8%

INCREASE IN HOME VALUES
(2016 - 2017)

6.1%

INCREASE IN FRESNO MULTIFAMILY
UNITS
(built 2011 - 2017)



Iron Bird Lofts complex in Downtown Fresno; completed in 2010

OFFICE MARKET

Fresno's office market continues to strengthen. Since the recession, office vacancy rates have fallen to 11.1 percent and around 490,000 square feet of new office space has been added in the last five years. In 2017, 68,300 square feet of office space were occupied (or "absorbed") in Fresno, mainly at Palm Bluffs and Woodward developments.

Corporate tenants have typically located in Northwest and Central Fresno. Southwest Fresno has good access and potential freeway visibility, but most office users are likely to prefer locations with more amenities and in proximity to employees' homes. Although Southwest is unlikely to capture demand for traditional office space, storefront community-serving offices such as medial offices, day cares, smaller insurance companies, and services, would likely be viable, although may also require a forward-looking developer or partnership with an institutional anchor. These types of businesses align with the Southwest Fresno Specific Plan.



11.1%

FRESNO OFFICE VACANCY

68,300

SF YEAR-TO-DATE ABSORPTION
(Primarily Palm Bluffs, Woodward)

486,500

NEW FRESNO OFFICE SF
(last 5 years)



DaVita Medical Office Building (2017)

RETAIL MARKET

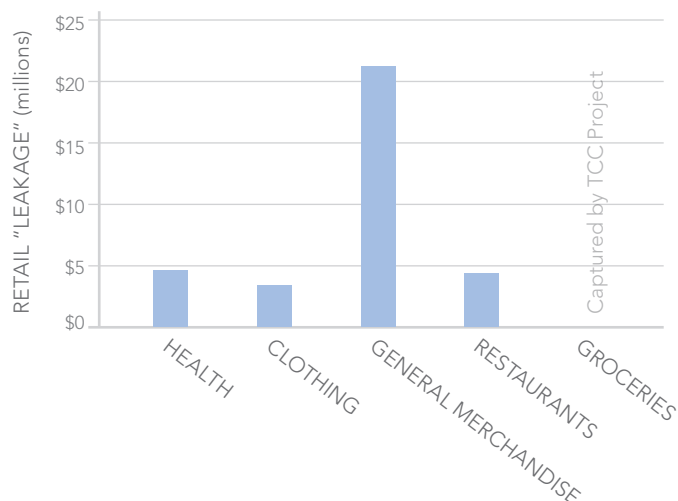
Southwest Fresno residents currently have to leave the area for many of their retail needs. A portion of this “leakage,” could potentially be re-captured in the area. Specifically, Southwest Fresno is under-supplied in terms of general merchandise stores, pharmacies and personal care stores, clothing stores, restaurants and grocery stores. Proposed TCC projects include the development of a new grocery store and mixed-use development, but there are no other plans for retail development and few spaces suitable for new tenants.

Based on the numbers, unmet consumer spending potential in Southwest Fresno could currently support a small general merchandise store with a pharmacy component, two to three small local apparel and cloth-

ing stores as part of a larger retail center, and one or two chain restaurants. There may be opportunities to deliver these services in alternative formats in the future as pharmacies and other stores increasingly deliver a wider range of general merchandise goods. Attracting these types of stores will likely require a forward-looking developer willing to absorb a certain amount of risk and/or willing to subsidize rents to one or more tenants.

There may be interest from smaller, local stores or smaller regional chains with niche consumer bases aligned with Southwest Fresno. Today, it is unlikely that national chains will locate in the area without significant investment. Population and employment growth and a wider consumer base in Southwest Fresno may increase retailer interest in the area over the longer term.

RETAIL LEAKAGE (2017)



Source: Esri; HR&A Advisors



Medium-sized General Merchandise Store



Local Apparel Stores



Small Pharmacy



Small Restaurants

5.4 PARTNERSHIP OPPORTUNITIES TO FACILITATE GROWTH

Fresno's aspirations to catalyze development along the Elm Avenue corridor are well-timed. The projects proposed for TCC grants show the City's confidence in and commitment to the future of Southwest Fresno. These projects are poised to provide a range of amenities for residents and potentially future employees, which may stimulate developer interest.

Still, redevelopment of brownfield sites is likely to require partnership between property owners, non-profit organizations and/or developers, and potentially the City or other public entities. Retail and office uses in particular are likely to require developers to absorb above-average risk and/or subsidize rents to attract tenants. These considerations may make it difficult for a conceptual project to "pencil out," or become financially feasible. Furthermore, certain sites along the Elm Avenue corridor are likely to require creative funding strategies to support environmental remediation. These costs are likely to be higher for residential uses, which require more extensive mitigation.

There are a number of opportunities for property owners and the City of Fresno to partner with non-profits and other organizations to catalyze investments that meet the community's needs. These options include:

- The ability of landowners to "leverage" their real property assets to stimulate development of housing and other uses. Generally, this entails making land available at a below-market cost or delaying financial return until the project has been developed and is stabilized.
- Partnerships with non-profit developers and other community development organizations who can

provide expertise to landowners who do not have experience with development. These organizations can also provide financial resources to generate mission-aligned community benefits, and generally have lower return expectations, as compared to for-profit financial institutions.

- Accessing grants, tax credits and other funding, which can lower financial risk to landowners and developers to help make community visions a reality. A note of caution: shifts in federal policy could affect the availability of resources.



The Juanita Tate Marketplace in South Los Angeles, which includes a grocery store, pharmacy and local bank, was developed by a partnership including a community group, private developer and the City of Los Angeles.

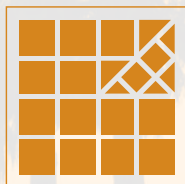


41 + NORTH CORRIDOR

Complete Streets Plan



Downtown Neighborhoods Community Plan
Fresno, California



SOUTHWEST FRESNO SPECIFIC PLAN

PUBLIC REVIEW DRAFT • MAY 2017



CITY OF FRESNO

6. FUTURE VIEW: PLANS AND OPPORTUNITIES

6.1 RECENT AREA PLANS

Two recent area plans, the Downtown Neighborhoods Community Plan and the Southwest Fresno Specific Plan, cover the northern and southern portions of the Elm Avenue corridor. The plans seek to facilitate revitalization, including neighborhood-scaled mixed-use and office development along Elm. The Southwest Fresno Specific Plan folds in more detailed work on “41 and North” – the area along North Avenue that overlaps with our study today.

DOWNTOWN NEIGHBORHOODS COMMUNITY PLAN

The Downtown Neighborhoods Community Plan, adopted in 2016, covers Downtown Fresno and surrounding neighborhoods, including the Edison neighborhoods—which includes the Elm Avenue corridor north of Church. Goals from plan include:

- Transform Edison into a clean, safe neighborhood that reflects its unique identity.
- Create a pedestrian-friendly environment by introducing human-scaled buildings that provide “eyes on the street.”
- Target private development and civic resources towards bringing neighborhood-serving uses, including retail, banking, and schools, within the community.
- Support neighborhood associations and community development organizations to work with the City to ensure the Community Plan is implemented according to the vision.

Elm is designated as a “neighborhood mixed use” district, which would feature small-scale retail, office, civic, and entertainment uses along with housing. Elm is also identified as a “boulevard with bike lanes,” and is identified for widened sidewalks, corner bulbouts, lighting and landscape, façade improvements, and bike lanes. A bird’s-eye vision of future development along Elm Avenue is shown on Figure 6-1. A detail of the Downtown Neighborhoods Community Plan Land Use Map is shown on Figure 6-2.

Figure 6-1

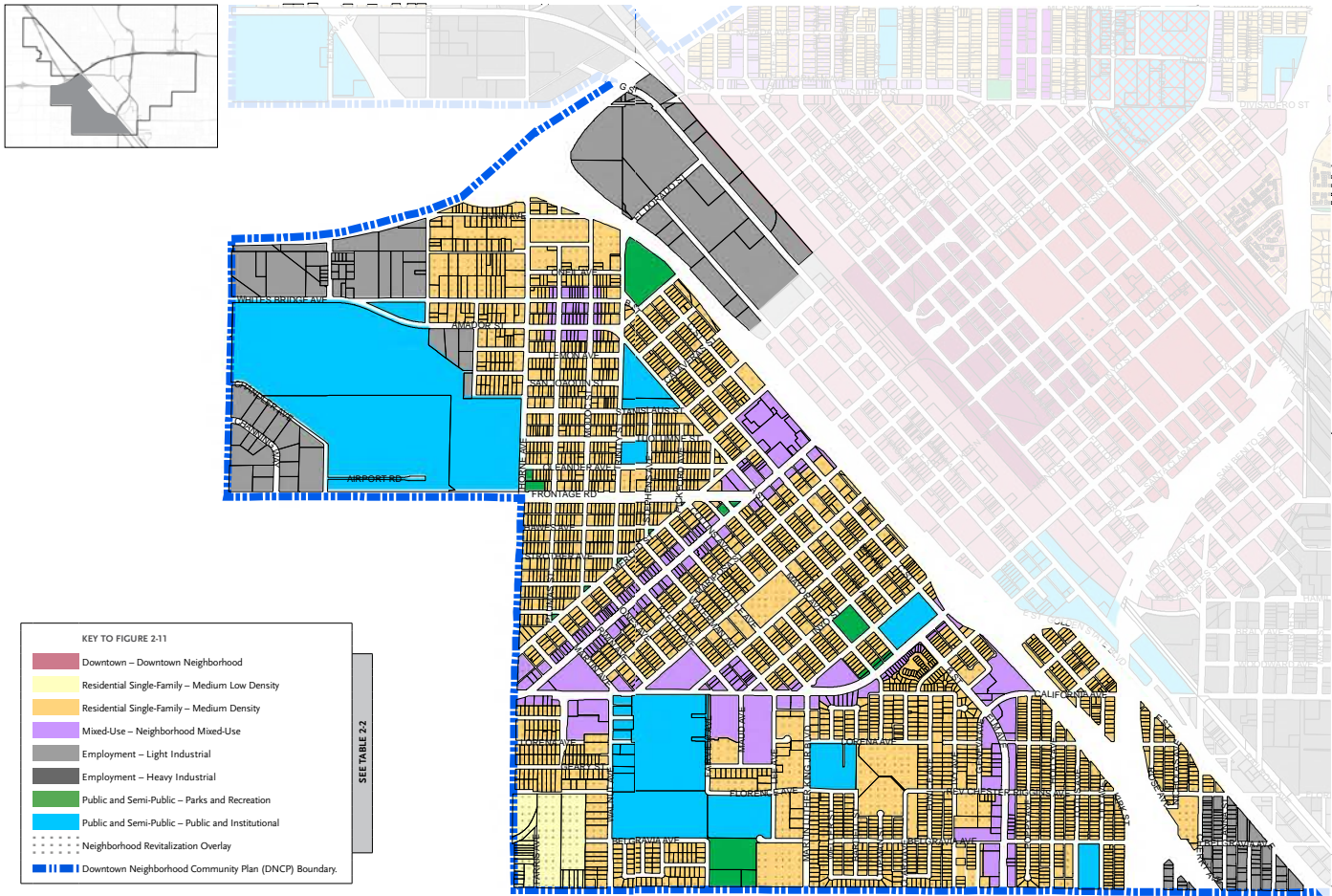
DOWNTOWN NEIGHBORHOODS COMMUNITY PLAN'S ELM AVENUE VISION



Source: Downtown Neighborhoods Community Plan, City of Fresno, 2016

Figure 6-2

DOWNTOWN NEIGHBORHOODS COMMUNITY PLAN LAND USE MAP



Source: Downtown Neighborhoods Community Plan, City of Fresno, 2016

SOUTHWEST FRESNO SPECIFIC PLAN

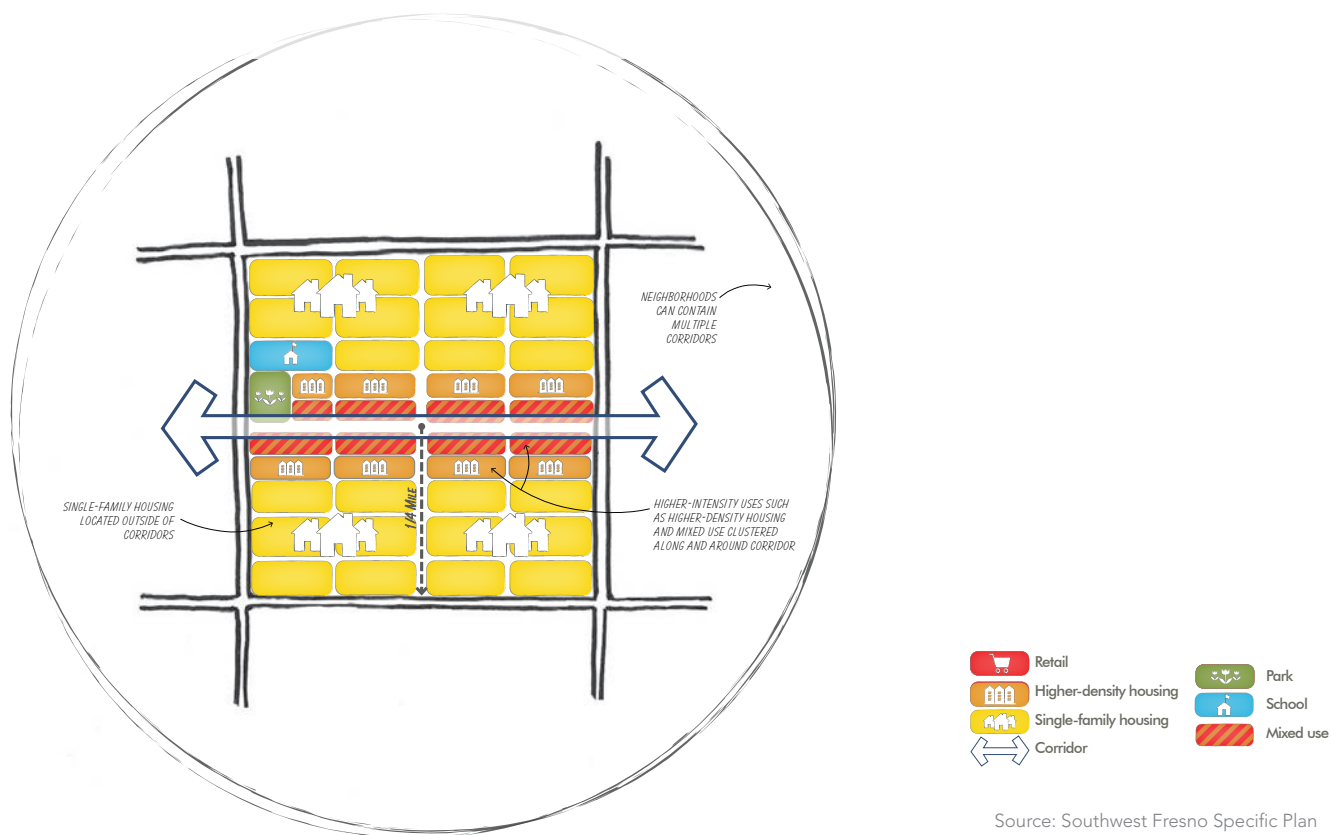
The Southwest Fresno Specific Plan, just adopted in fall 2017, similarly envisions Elm Avenue as a “Mixed Use Jobs Corridor.” Figure 6-3 describes the relationship between the mixed-use corridor and neighborhoods on either side. The planned land use pattern, shown in Figure 6-4, would bring about segments of mixed-use development, with commercial areas around Jensen and North Avenues. This represents a substantial change from current zoning, which accommodates industrial

uses along the southern portion of the corridor.

Elm Avenue is recommended for enhanced transit and “streetscape” improvements with more amenities for pedestrians. Meanwhile, bike lanes are planned for other major streets in the Study Area, and a multi-use trail is envisioned along the irrigation canal corridor and connecting to West Fresno Elementary and Middle Schools.

Figure 6-3

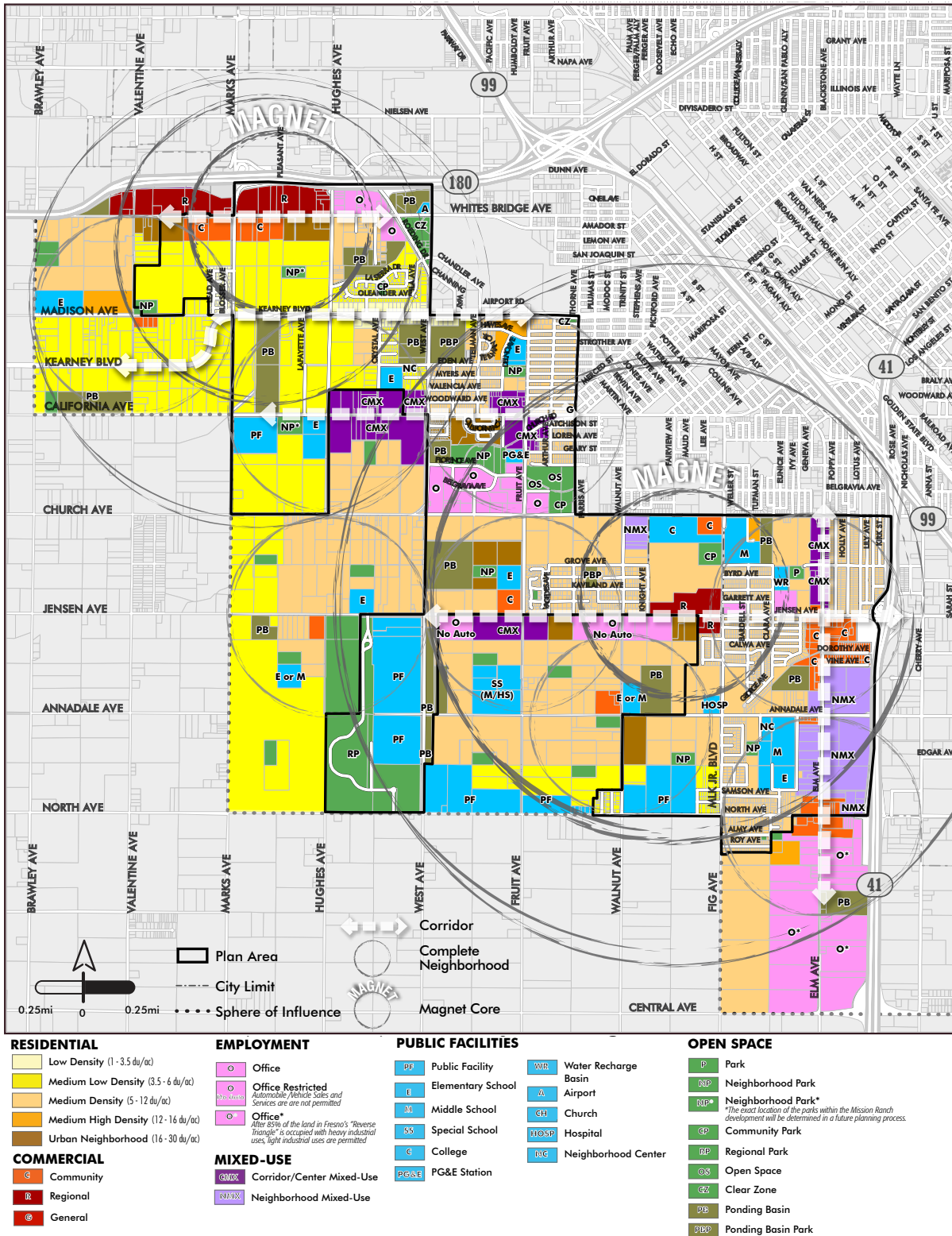
CONCEPTUAL DIAGRAM OF DEVELOPMENT ALONG A CORRIDOR (SOUTHWEST FRESNO SPECIFIC PLAN)



Source: Southwest Fresno Specific Plan

Figure 6-4

SOUTHWEST FRESNO SPECIFIC PLAN LAND USE



41+NORTH PLAN

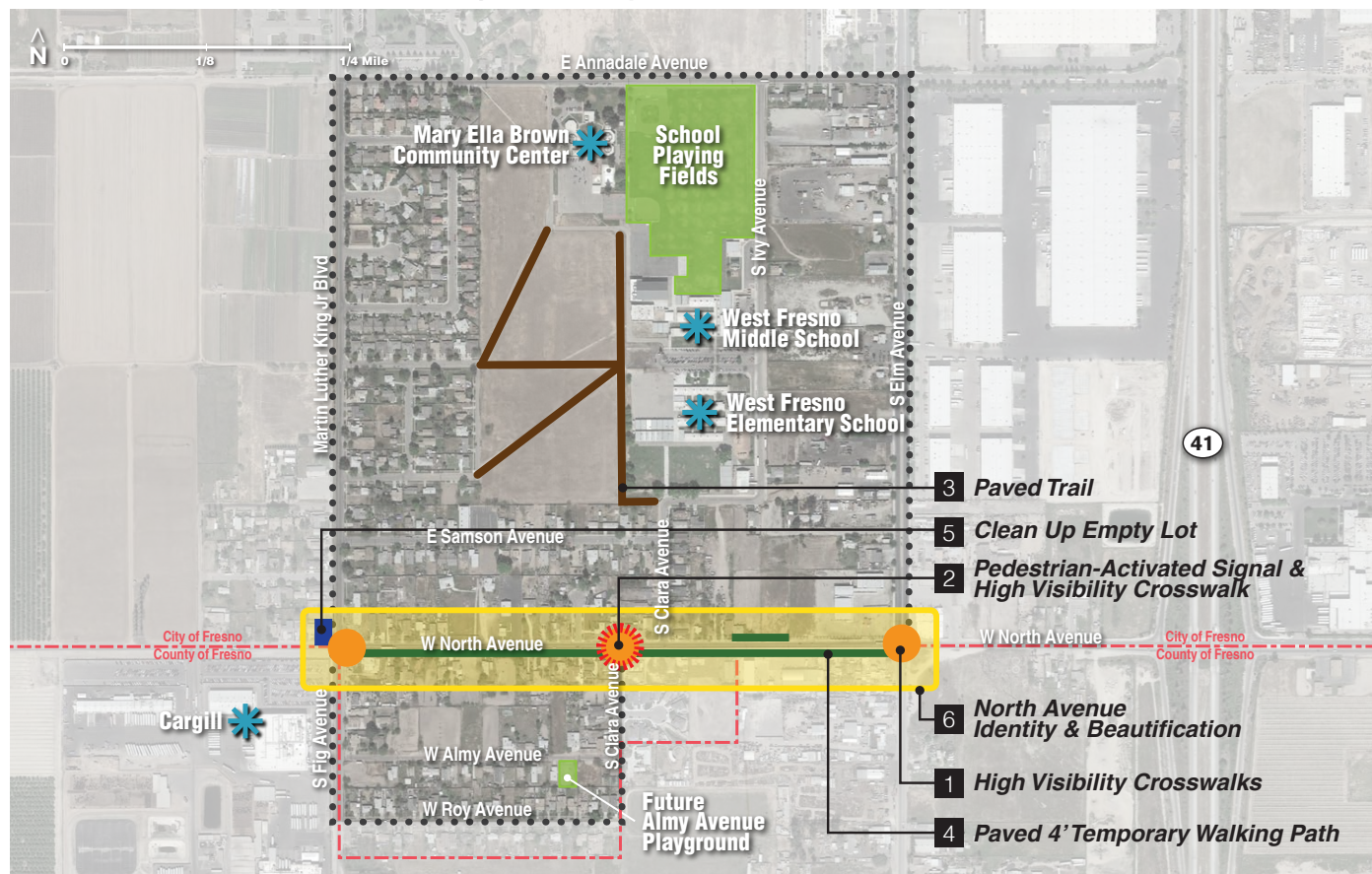
The 41+North Complete Streets Plan involved a closer look at the under-developed stretch of North Avenue between Elm and Martin Luther King, Jr. Boulevard, and the neighborhoods to the north and south. The Plan identified high-priority needs to improve safety and enhance identity—these are indicated on Figure 6-5. This Plan also provides less detailed guidance for Annadale Avenue, Martin Luther King, Jr. Boulevard, and Elm

Avenue itself. Figure 6-5 shows the “immediate needs” identified in the 41+North Complete Streets Plan.

This plan was not formally adopted. Its findings helped guide the Southwest Fresno Specific Plan, and should also help guide our plan for the Elm Avenue corridor.

Figure 6-5

SUMMARY OF IMMEDIATE NEEDS (41+NORTH)



6.2 ACTIVE TRANSPORTATION PLAN

The City of Fresno Active Transportation Plan, approved in March 2017, provides the blueprint for citywide improvements to the bike and pedestrian network. In the Elm Avenue Study Area, key findings and recommendations include:

- The area between Elm and Martin Luther King, Jr. Boulevard south of Annadale is identified as a “priority underserved neighborhood” with large numbers of sidewalk gaps.
- Elm Avenue and most other major corridors in the Study Area are places with the highest level of “bicycle stress”, where only “strong and fearless” riders feel safe (Grove and Rev. Chester Riggins avenues are classified as low-stress routes.)
- North, Annadale, Jensen, and Church Avenues would join Elm Avenue in providing continuous Class II bike lanes.

6.3 WHAT OPPORTUNITIES WILL WE UNCOVER?

The Elm Avenue Brownfields Area-Wide Plan can mesh recommendations from these planning efforts with a fresh perspective on what the community wants to see happen on brownfields sites, to generate a vision for Elm Avenue. Community members will be vital to uncovering these possibilities. What are your ideas?



