

Wildland Urban Interface Evacuation Assessment

October 10, 2019



Town of Los Gatos
110 East Main Street
Los Gatos, CA 95030

Prepared by
Town Managers Office

Coordinated with
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ATTACHMENT 1

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Introduction

Los Gatos is listed as a Community at Risk from wildfires on the Federal and/or California Fire Alliance list of Communities at Risk in Santa Clara County. Wildfires occur in the vicinity of Los Gatos and present a danger to people and property within the Town. Recognizing that there could be a need to conduct an emergency evacuation of Wildland Urban Interface (WUI) portion of the Town of Los Gatos, the following Wildfire Urban Interface Evacuation Assessment has been assembled to better understand the opportunities and challenges associated with being a Wildland Urban Interface community.

Every potential evacuation response will be different based on the nature of the incident at that time, and this assessment and subsequent actions are intended to provide the greatest good for the greatest number of residents. Nothing in this assessment should be interpreted as an obstacle to any potential experience but rather an opportunity for our community and first responders to have the same shared understanding of the unique environment we live in.

Safe and proper evacuation of people (residents, workers, and visitors), pets, and livestock is often a very critical component of WUI fires. Confusing hillside road networks, narrow roads that could inhibit two-way traffic, and dead-end roads all contribute to the complexities faced by the public and responders during WUI fires.

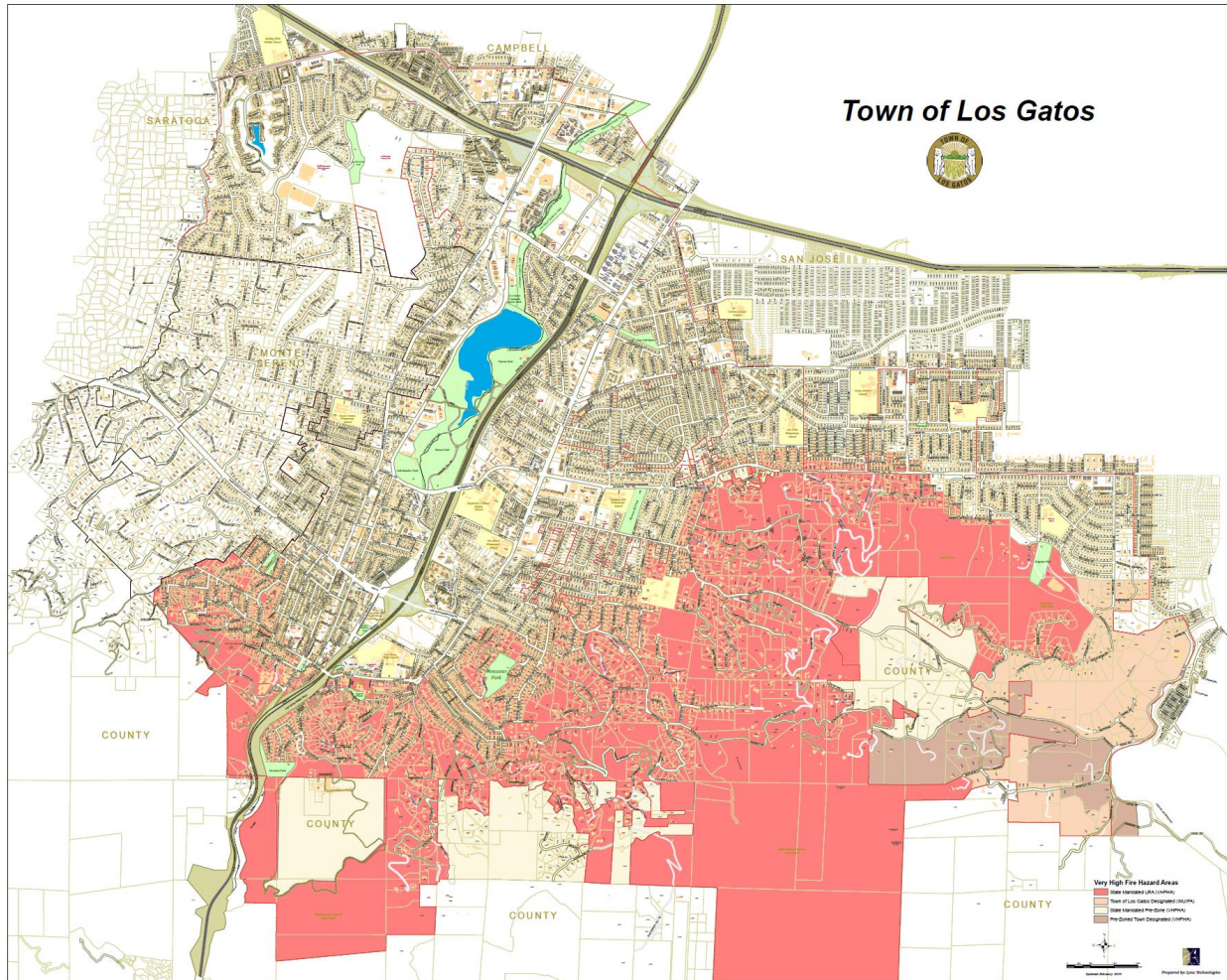
In addition, WUI fires often require immediate “No Notice” evacuations, meaning little or no warning time exists between fire origin and the need for evacuation. The situational awareness associated with the Wildland Urban Interface Evacuation Assessment will help illustrate the critical shared responsibility of a successful “No Notice” emergency evacuation.

Los Gatos Wildland Urban Interface (WUI)

The Los Gatos WUI planning area includes primarily Very High Fire Hazard Severity Zone areas on the southern side of Los Gatos (Exhibit 1). The WUI is composed of both interface and intermix communities and is defined as areas where human habitation and development meet at the edge of, or are inserted in the interior of areas dominated by, wildland fuels (U.S. Department of the Interior and U.S. Department of Agriculture 2001:752–753).

The WUI creates an environment in which fire can move readily between structural and vegetative fuels, increasing the potential for wildland fire ignitions and the corresponding potential loss of life and property. Human encroachment upon wildland ecosystems within recent decades is increasing the extent of the WUI in Santa Clara County and therefor increasing the potential risk of wildfire.

Exhibit 1



Los Gatos WUI Fuel Characteristics

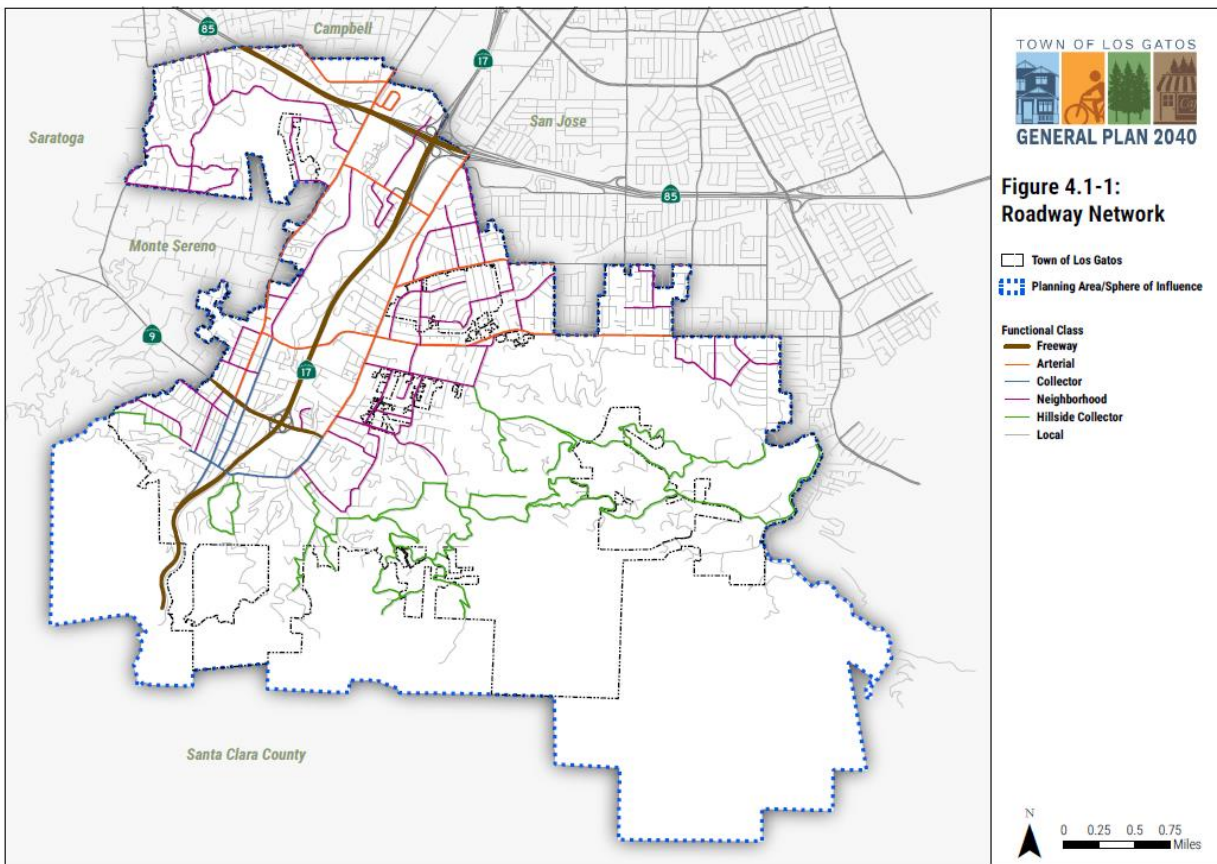
The Los Gatos planning area comprises a range of vegetation communities that differ depending upon elevation, precipitation, and slope. Chaparral vegetation is often found on south facing slopes, where winter precipitation is relatively high, but dry summers are common. The chaparral will have long flame lengths under either moderate or extreme weather scenarios. The nature of these fuels is to burn quickly and intensely. Oak woodlands comprised of a variety of oak species are also interspersed throughout as well as mixed conifer comprising knob cone pine and grey pine. A fire in either the mixed conifer or hardwood would likely be a surface fire with patches of active behavior and fairly low rates of spread. However, active fire behavior is possible in this vegetation type under extreme weather conditions, especially where there is high surface loading. Coastal coniferous forest communities such as redwoods and Douglas fir are located at lower elevations where precipitation is high, fog is common, and temperatures are moderate. Fire spread is generally limited in this fuel type; however, given the right combination of weather conditions, surface fire can be expected to burn uphill. Areas with increased fuel loading from dead and down materials may experience

crowning under the right conditions. The varied vegetation composition result in the Los Gatos WUI comprising a range of wildfire hazard.

Roadway Network within the WUI

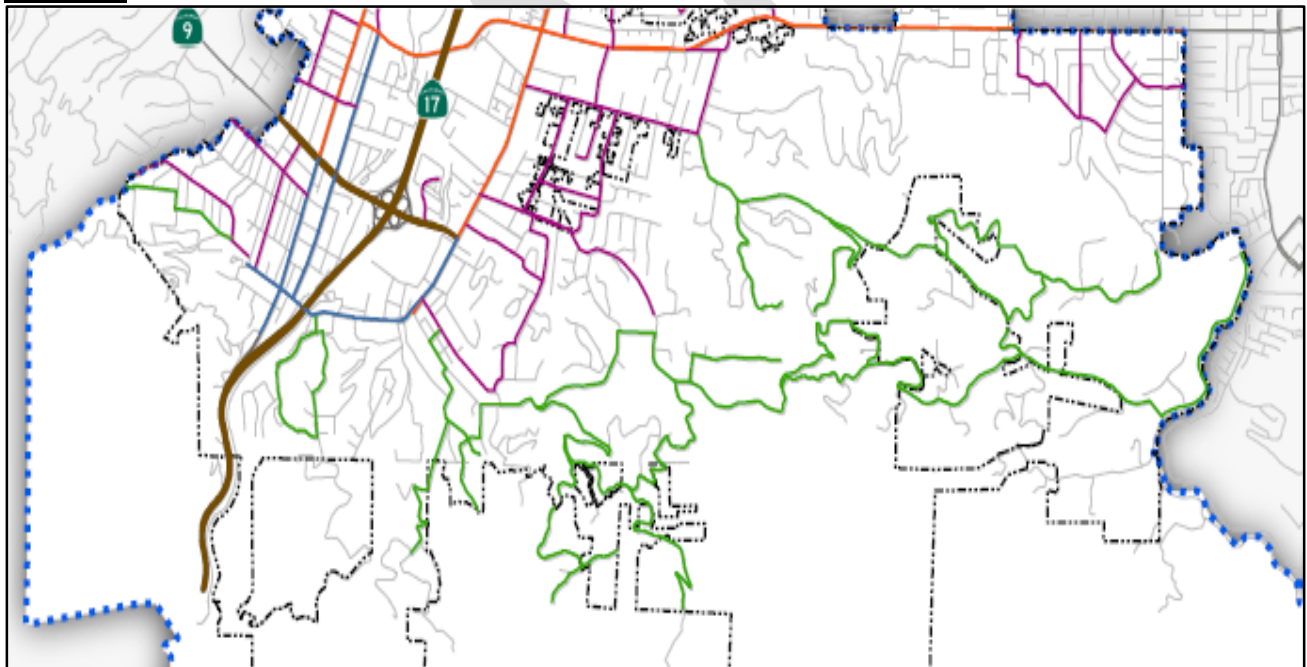
In Los Gatos, the local street system is organized into a hierarchy of six roadway types according to the existing Los Gatos Street Design Standards and the draft 2040 Los Gatos General Plan. The Los Gatos Street Design Standards classify all streets within the Town according to their functional classification. Functional classifications of roadway networks categorize streets by purpose, location, and typical land uses to which they provide access. The functional roadway classifications for Los Gatos include arterial streets, collector streets, neighborhood collector streets, hillside collector streets, local streets, and special design streets. The hierarchy is based on the degree of mobility and amount of local access provided by each roadway.

Exhibit 2



The majority of the Town's WUI neighborhoods are served by Hillside Collector Streets as illustrated by the green roads in Exhibit 3. Hillside collector streets serve properties located in hillside areas, carrying traffic to either arterial streets, collectors, or neighborhood collectors. Many of the hillside collector and local roadways are one-way in and one-way out designs potentially complicating any evacuation. During wildfire events, the routes emergency responders take to the fire are often the same routes being used by residents who may be attempting to flee from the fire. Due to the critical importance of roads for providing ingress for firefighting apparatuses while simultaneously evacuating the public, certain factors such as width, grade, and turning radius need to be considered in an evacuation. Often roads may be too narrow to accommodate two-way traffic of responders and evacuees simultaneously. Roads are generally maintained to primarily serve the transportation needs of the public, however roadsides are frequently the site of ignition for wildfires, and evacuees may need to use the roadways to leave the area even if the vegetation on both sides of the road is on fire. Routes may also be blocked due to consequences associated with an incident including; fallen trees, spot fires, smoke, intense heat, long flame lengths, downed power lines, or vehicle accidents.

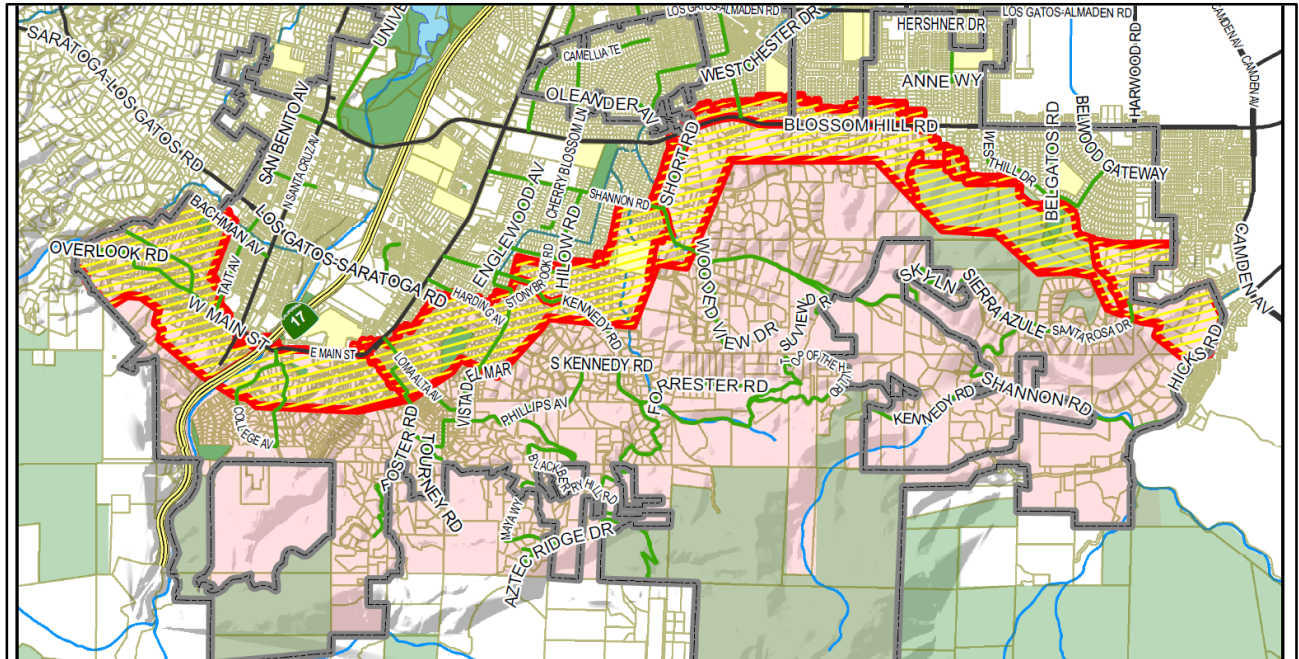
Exhibit 3



Residence and Population Density within the WUI

Approximately a quarter of the Town's total residences are located within the WUI. Of an estimated 2018 Town total of 13,299 residences the WUI contains approximately 3091. In addition, at an estimated 2.2 residents per household the WUI is home to approximately 6,800 residents out of a Town total of 30,250.

Exhibit 4

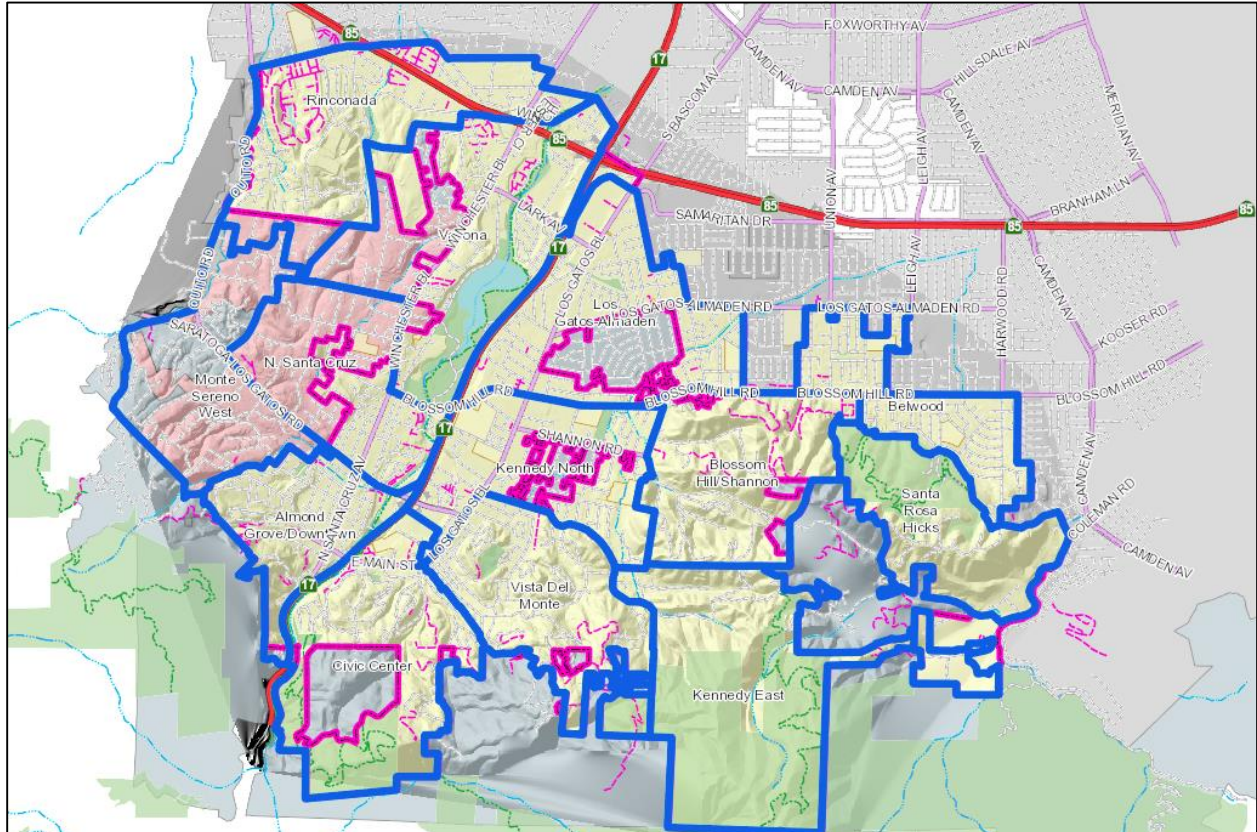


The majority of the northern perimeter of the WUI tends to be flatter terrain with higher concentrations of the WUI residences. To illustrate the residential concentration Exhibit 4 represents a quarter mile band along the northern boundary of the WUI. Of the 3091 residences in the WUI, 1784 of them are concentrated within a quarter mile of the northern boundary. In the event of a mass, or systematic, evacuation over half of the WUI residents will be navigating flatter terrain with greater access to egress options.

Existing Public Safety Geographic Delineations in the WUI

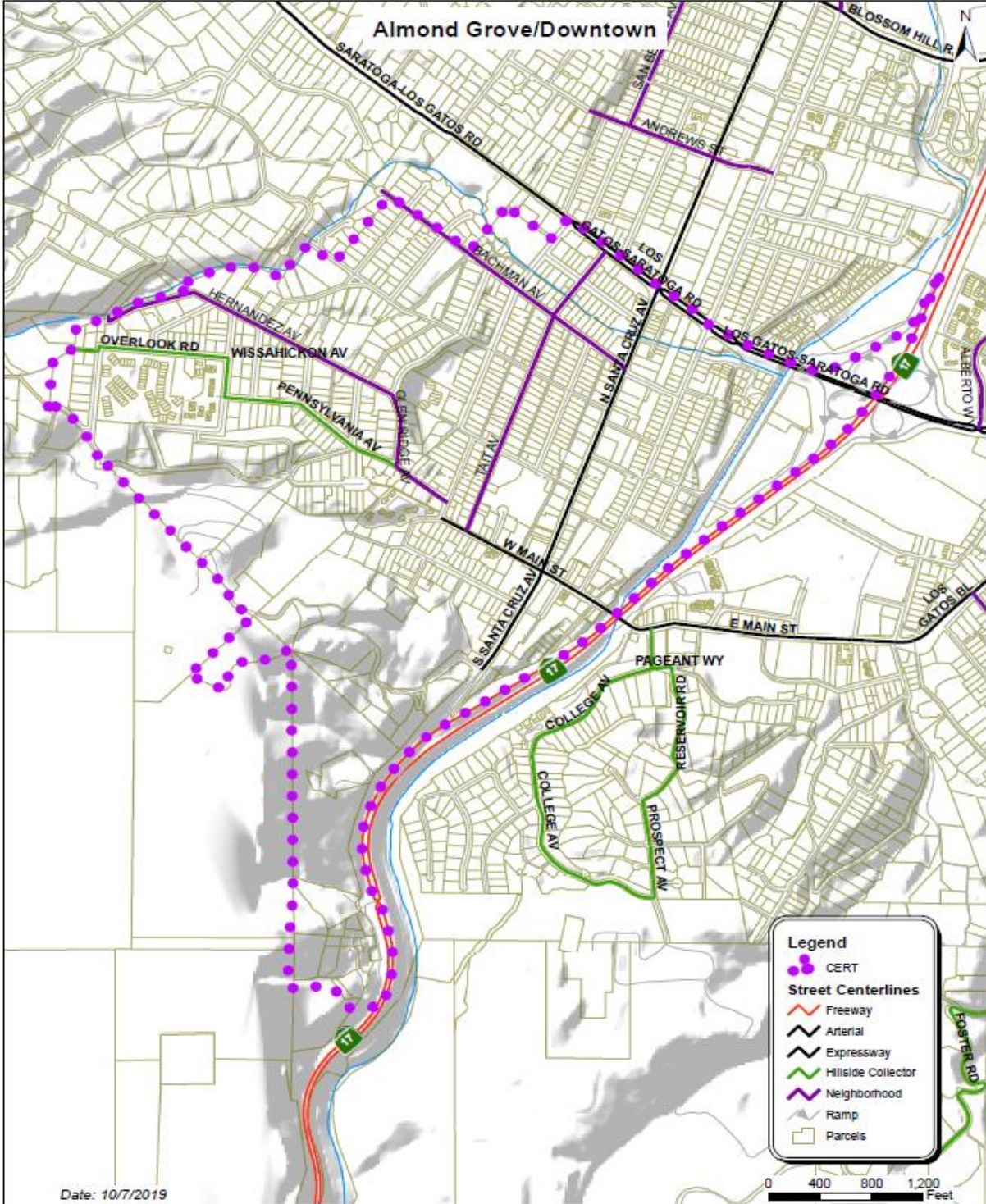
To better understand the unique geographic and infrastructure aspects of the WUI neighborhoods, the Evacuation Assessment parses the WUI into specific boundaries. The Town currently utilizes preestablished areas for the maintenance and execution of its Community Emergency Response Team (CERT) program (Exhibit 5). For purposes of this assessment the CERT zones will be used as the basis of neighborhood review.

Exhibit 5



The following CERT maps are intended to illustrate the main routes of ingress/egress within the zone boundaries and some of the specific characteristics unique to those boundaries. In addition, challenges associated with those areas will be highlighted as well as any identified temporary refuge areas (TRA) and critical sites.

ALMOND GROVE/DOWNTOWN CERT ZONE MAP



ALMOND GROVE/DOWNTOWN CERT ZONE CHARACTERISTICS

Description:

The Almond Grove CERT Zone is a densely populated residential neighborhood abutting the downtown commercial core. The topography consists of a flat valley floor in the eastern portion of the zone with increasing upward slopes as you move west through the zone. Portions of the zone are heavily wooded. The existing roadway network is comprised primarily of a traditional grid road layout with multiple points of ingress/egress with the exception listed in “Special Concerns”.

Special Concerns:

In the event residents in the western reaches of the zone require a western evacuation route, Ridgecrest Avenue is the single none dead-end egress option. Some of the same routes that allow access to the area for responders are the same routes that could be needed for evacuation. In addition, many routes in the area are susceptible to closure due to the potential impact of fire in the area and the encroachment of vegetation into the area.

In the event an evacuation became necessary concurrently with a high-volume summer weekend traffic episode significant additional vehicles could be on the egress routes.

Critical Sites: The following critical sites are located in this zone:

- 120 Laurel Avenue – Water Facility
- La Mirado Rd – Water Facility

Hillside and Neighborhood Collectors:

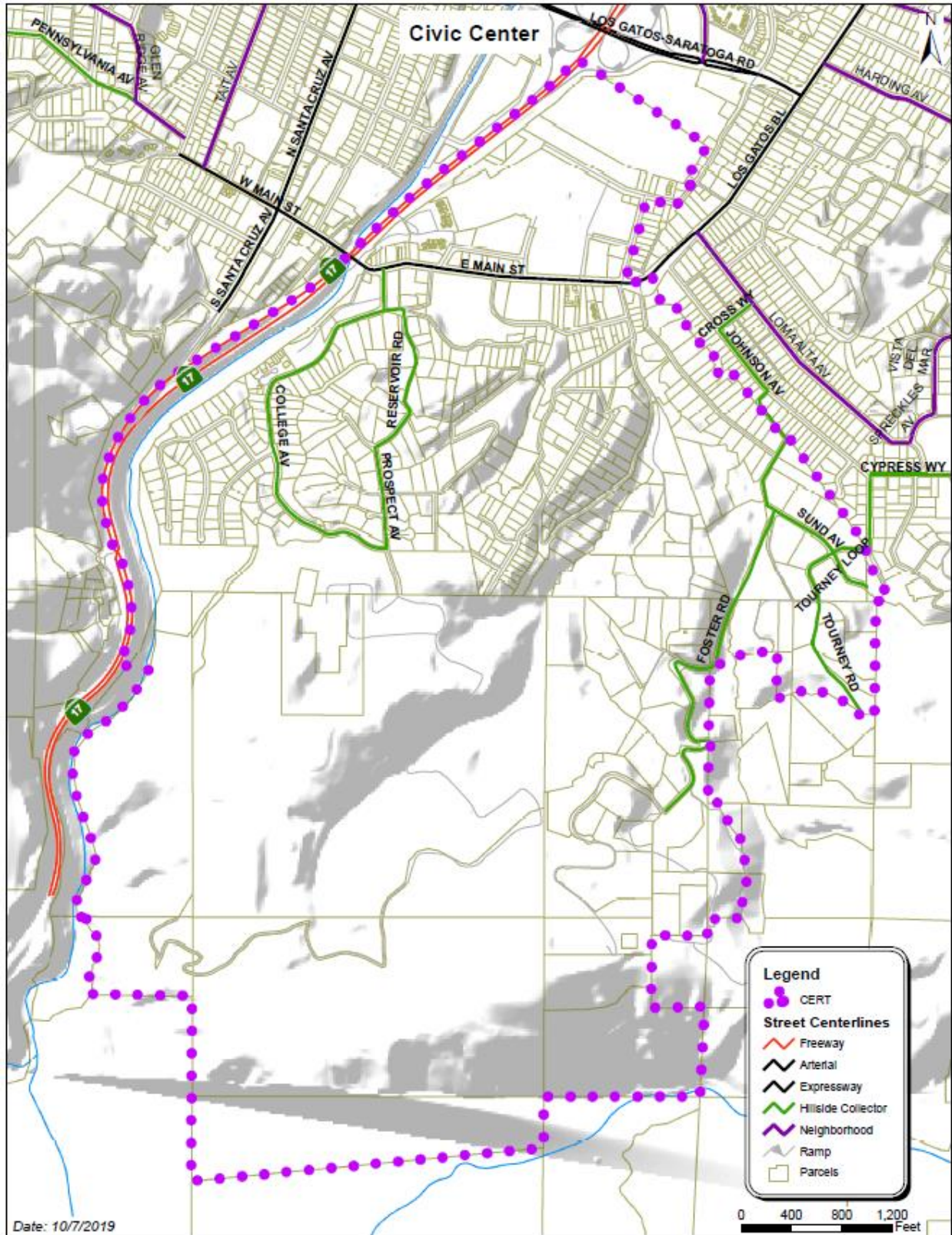
• Overlook Road	• Bachman Avenue
• Hernandez Avenue	• Glenridge Avenue
• Pennsylvania Avenue	• Tait Avenue

Temporary Refuge Areas: The following site location(s) could be considered as evacuation sites under extreme circumstances when sheltering-in-place and total evacuation are not options.

- Non identified at this time

Residence Density: 635 residences total, 607 within a ¼ mile of the boundary.

CIVIC CENTER CERT ZONE MAP



CIVIC CENTER CERT ZONE CHARACTERISTICS

Description:

The Civic Center CERT Zone is a densely populated residential neighborhood that is heavily wooded. The topography consists of a flat valley floor along the southern portion of the zone with increasing upward slopes as you move south. The zone is further punctuated by several valleys which segment the zone into distinct sections. The Central Avenue/Oak Hill Way/Jackson Street section is comprised of only local streets.

Special Concerns:

The existing roadway network throughout the zone is entirely comprised of one-way-in and one-way-out ingress/egress options. Some of the same routes that allow access to the area for responders are the same routes that could be needed for evacuation. In addition, many routes in the area are susceptible to closure due to the potential impact of fire in the area and the encroachment of vegetation into the area.

Critical Sites: The following critical sites are located in this zone:

- Sacred Heart Jesuit Center

Hillside and Neighborhood Collectors:

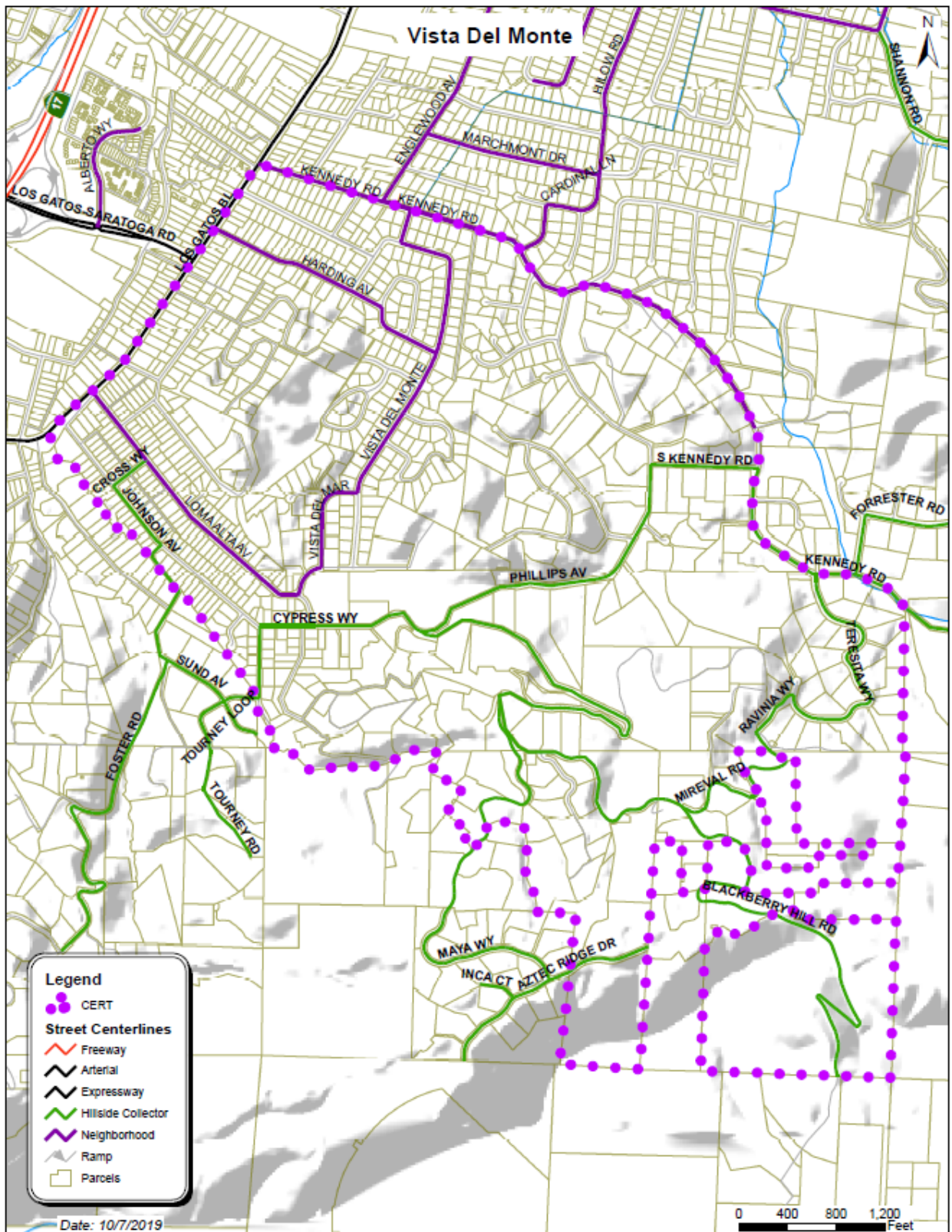
• College Avenue	• Foster Road
• Prospect Avenue	• Tourney Road & Loop
• Reservoir Road	• Sund Avenue

Temporary Refuge Areas: The following site locations could be considered as evacuation sites under extreme circumstances when sheltering-in-place and total evacuation are not options.

- None identified at this time

Residence Density: 537 residences total, 203 within a ¼ mile of the boundary.

VISTA DEL MONTE CERT ZONE MAP



VISTA DEL MONTE CERT ZONE CHARACTERISTICS

Description:

The Vista Del Monte CERT Zone is a densely populated residential neighborhood along its northwestern boundaries. The southeastern portions of the zone tend to be less densely populated and more wooded. The topography consists of a flat and gently sloping valley floor in the northwestern portions of the zone with increasing upward slopes as you move east and south through the zone. The zone does have instances of one-way in and one-way out roadways but is predominately comprised of multiple looping roadway options which span the zone.

Special Concerns:

Some of the same routes that allow access to the area for responders are the same routes that could be needed for evacuation. In addition, many routes in the area are susceptible to closure due to the potential impact of fire in the area and the encroachment of vegetation into the area.

Critical Sites: The following critical sites are located in this zone:

- 17465 Phillips Avenue – water facility

Hillside and Neighborhood Collectors:

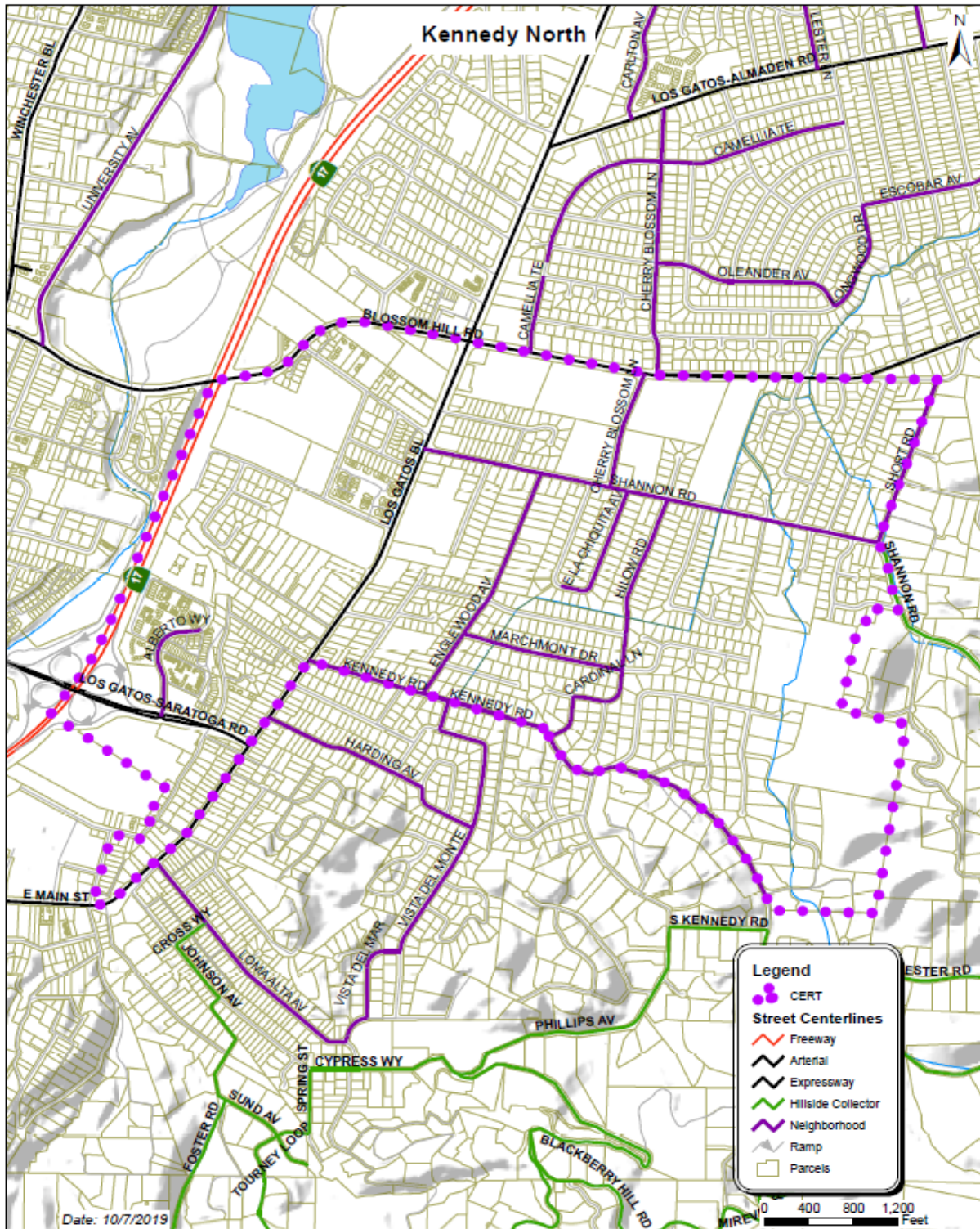
• Loma Alma Avenue	• Harding Avenue
• Johnson Avenue	• Cypress Way
• Vista Del Mar	• Phillips Avenue
• Vista Del Monte	• South Kennedy Road
• Teresita Way	• Kennedy Road
• Ravina Way	• Blackberry Hill

Temporary Refuge Areas: The following site locations could be considered as evacuation sites under extreme circumstances when sheltering-in-place and total evacuation are not options.

- None identified to date

Residence Density: 756 total residences, 436 within a ¼ mile of the boundary.

KENNEDY NORTH CERT ZONE MAP



KENNEDY NORTH CERT ZONE CHARACTERISTICS

Description:

The southeastern portion of the Kennedy North CERT Zone is located within the WUI. This WUI portion of the zone is a densely populated residential neighborhood abutting wooded terrain. The topography consists of a flat and sloping valley floor in the northwestern portions of the WUI boundary with increasing upward slopes as you move east and south through the WUI portion. The existing roadway network throughout the WUI portion of the zone is primarily comprised of one-way-in/one-way-out ingress/egress options feeding into Kennedy Road.

Special Concerns:

High concentration of one-way in and one-way out ingress/egress options. Some of the same routes that allow access to the area for responders are the same routes that could be needed for evacuation. In addition, many routes in the area are susceptible to closure due to the potential impact of fire in the area and the encroachment of vegetation into the area.

Critical Sites: The following critical sites are located in this zone:

- Hillbrook School

Hillside and Neighborhood Collectors:

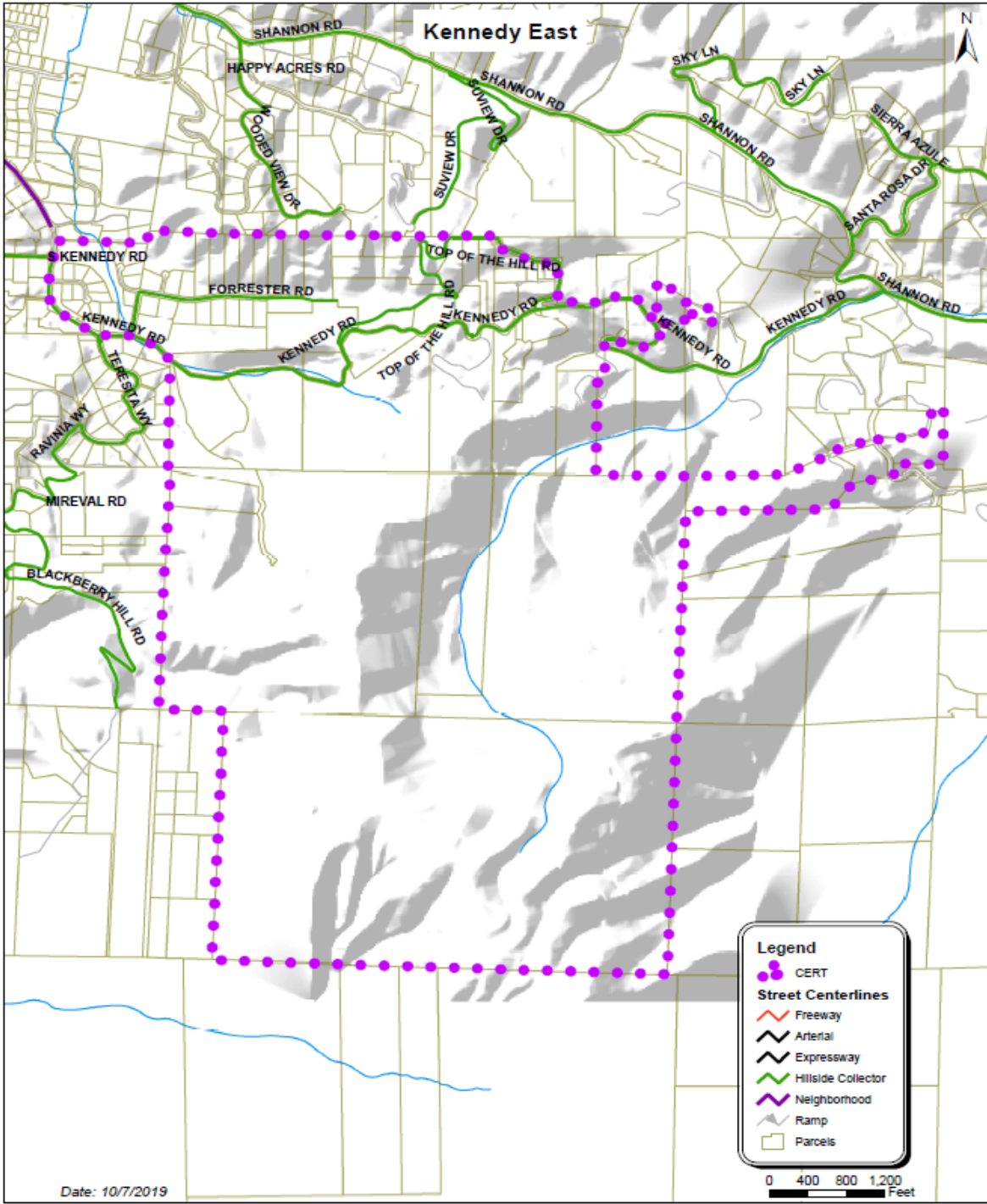
• Kennedy Road	• Cardinal Lane
• Hilow Road	• Shannon Road

Temporary Refuge Areas: The following site locations could be considered as evacuation sites under extreme circumstances when sheltering-in-place and total evacuation are not options.

- None identified at this time

Residence Density: 230 total residences, 202 within a ¼ mile of the boundary.

KENNEDY EAST CERT ZONE MAP



KENNEDY EAST CERT ZONE CHARACTERISTICS

Description:

The Kennedy East CERT Zone is a sparsely populated residential neighborhood that is surrounded by rolling hills, vegetation and heavily wooded areas. The area is accessed through a single road, Kennedy Road. The topography consists of varied wooded and higher elevation terrain.

Special Concerns:

Kennedy Road is the single ingress/egress option. The same route that allows access to the area for responders is the same route that could be needed for evacuation. In addition, routes in the area are susceptible to closure due to the potential impact of fire in the area and the encroachment of vegetation into the area.

Critical Sites: The following critical sites are located in this zone:

- None identified to date

Hillside and Neighborhood Collectors:

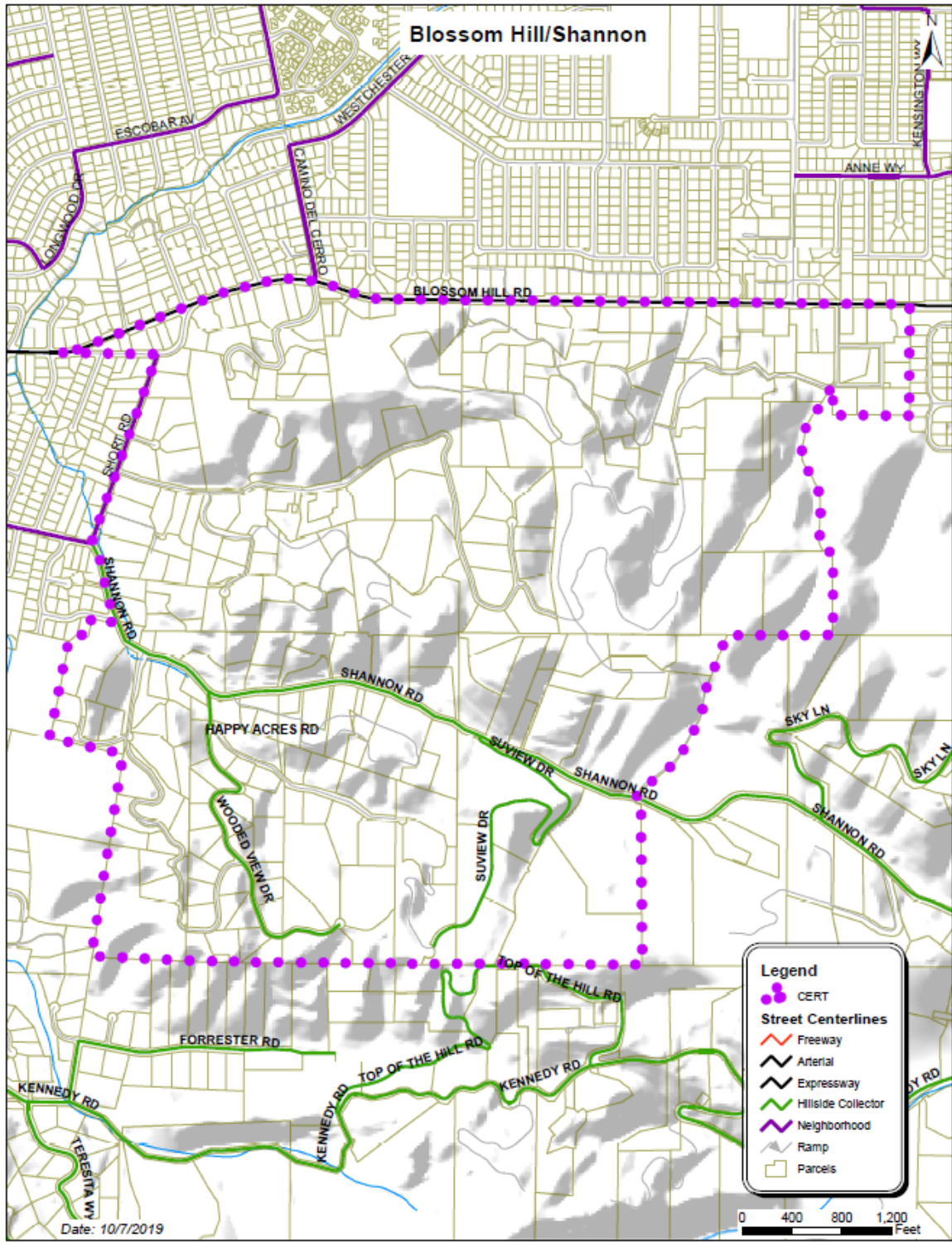
• Kennedy Road	• Top Of The Hill Road
• Forrester Road	

Temporary Refuge Areas: The following site locations could be considered as evacuation sites under extreme circumstances when sheltering-in-place and total evacuation are not options.

- None identified to date

Residence Density: 94 total residences, 0 within a ¼ mile of the boundary.

BLOSSOM HILL/SHANNON CERT ZONE MAP



BLOSSOM HILL/SHANNON CERT ZONE CHARACTERISTICS

Description:

The Blossom Hill/Shannon CERT Zone is a moderately populated residential zone comprised of rolling hills, vegetation and wooded areas. The topography consists of flat valley floor area along the northern and western portions of the zone with increasing upward slopes as you move south through the zone. The existing roadway network is comprised primarily of one-way in and one-way out ingress/egress options except for Shannon Road which traverses the southern portion of the zone.

Special Concerns:

High concentration of one-way in and one-way out egress options. Some of the same routes that allow access to the area for responders are the same routes that could be needed for evacuation. In addition, many routes in the area are susceptible to closure due to the potential impact of fire in the area and the encroachment of vegetation into the area.

Critical Sites: The following critical sites are located in this zone:

- None identified to date

Hillside and Neighborhood Collectors:

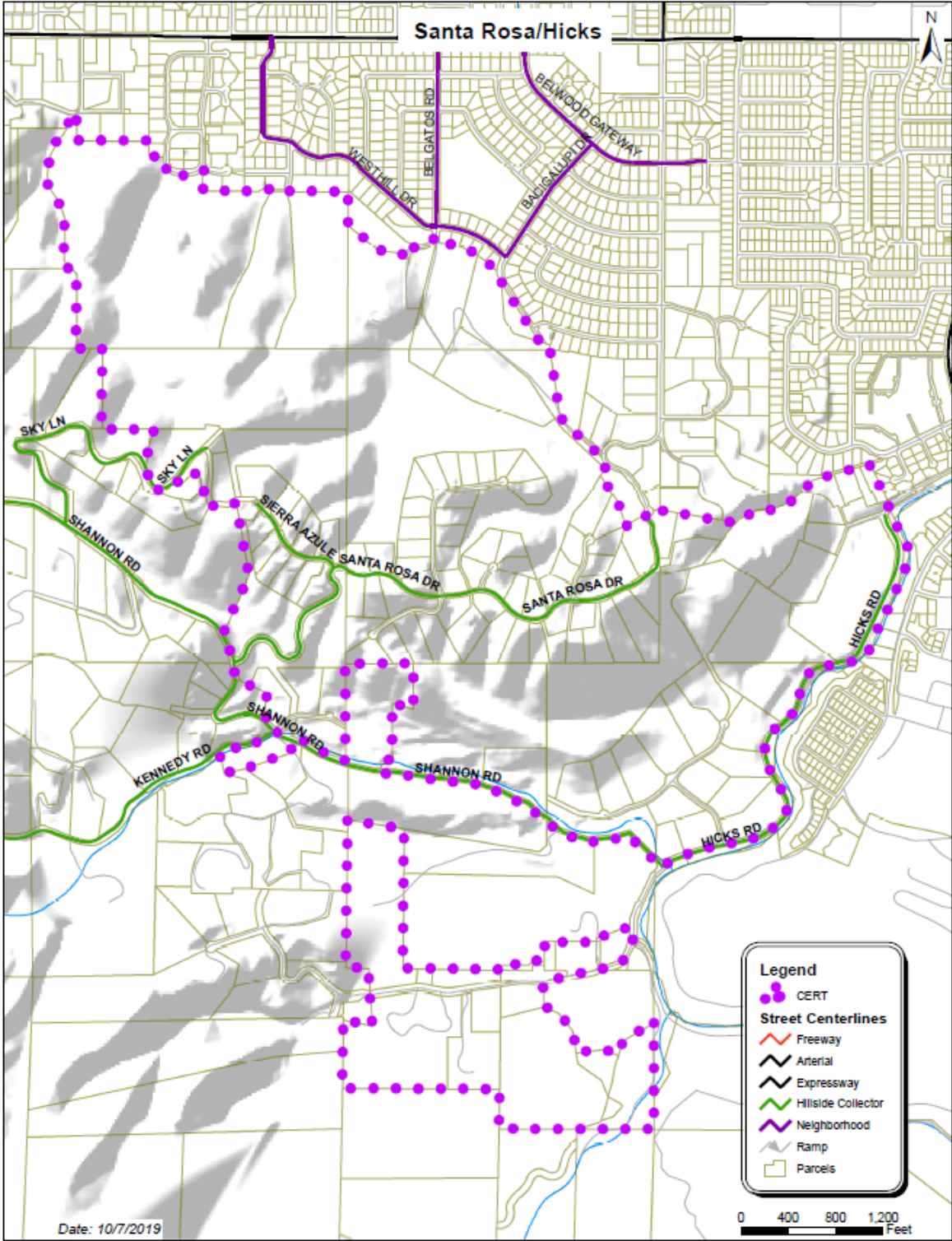
• Shannon Road	• Suview Drive
• Happy Acres Road	• Short Road
• Wooded View Drive	• Blossom Hill Road

Temporary Refuge Areas: The following site locations could be considered as evacuation sites under extreme circumstances when sheltering-in-place and total evacuation are not options.

- None identified to date

Residence Density: 309 total residences, 102 within a ¼ mile of the boundary.

SANTA ROSA/HICKS CERT ZONE



SANTA ROSA/HICKS CERT ZONE CHARACTERISTICS

Description:

The Santa Rosa/Hicks CERT Zone is a sparsely populated residential neighborhood dominated by the Santa Rosa Drive ridgetop community. The topography consists of rolling hills, vegetation and heavily wooded areas. The existing roadway network is comprised primarily of one-way in and one-way out ingress/egress options except for Shannon Road which traverses the southern portion of the zone and Hicks Road which borders the eastern portion.

Special Concerns:

High concentration of one-way in and one-way out egress options. Some of the same routes that allow access to the area for responders are the same routes that could be needed for evacuation. In addition, many routes in the area are susceptible to closure due to the potential impact of fire in the area and the encroachment of vegetation into the area.

Critical Sites: The following critical sites are located in this zone:

- 175 Sierra Azule Drive – water tank
- 118 Harwood Court – water tank
- 16845 Hicks Road – Venture Christian Church
- water tanks Belgatos Park

Hillside and Neighborhood Collectors:

• Sierra Azule Drive	• Hicks Road
• Santa Rosa Drive	• Shannon Road
• Sky Lane	•

Temporary Refuge Areas: The following site locations could be considered as evacuation sites under extreme circumstances when sheltering-in-place and total evacuation are not options.

- None identified at this time

Residence Density: 155 total residences, 33 within a ¼ mile of the boundary.