



TUOLUMNE HERITAGE TRAIL

Phase 2 – Existing Conditions Report

———— April 10th, 2026 ————



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1 Tuolumne Heritage Trail Phase 2 Overview

The Tuolumne Heritage Trail (previously known as the Gold Rush Path) is envisioned to be a nearly 15-mile path that connects Tuolumne County's historic gold rush towns of Columbia, Sonora, Jamestown and the Chicken Ranch Tribal Lands. The multi-use facility corridor is envisioned to be delivered over six phases. Phase 1 extends along State Road (SR) 49 from the southwestern boundary of Sonora through downtown and north to Sonora High School. Phases 2 and 3 of the Tuolumne Heritage Trail will further extend the facility along SR 49 to the southern boundary of Columbia (Phase 2), and then north along Parrotts Ferry Road to the Columbia State Historic Park (Phase 3).

This Tuolumne Heritage Trail Phase 2 Existing Conditions Report provides an overview relevant plans and policies, the communities, and the existing built and natural environment along the Phase 2 portion of the corridor that connects Sonora to Columbia. The extents of the Phase 2 corridor are identified by the orange segment shown below in **Figure 1**.



Figure 1. Tuolumne Heritage Trail Map

2 Existing Plans & Policies

This section describes the plans and policies related to transportation and mobility. The existing conditions report is informed by relevant plans described below to ensure compatibility among various regional initiatives and local measures. Other plans such as the County's General Plan, Active Transportation Plan, and studies are relevant to the Phase 2 Existing Conditions in understanding current conditions and guiding future transportation projects in the area. The following documents were reviewed to maintain consistency among various policies and programs.

2.1 Vision Sonora Plan (2013)

Vision Sonora is a vision plan for the study limits of SR 49 from SR 108 to Preston Place and S. Washington Street from SR 108 to SR 49. The Plan describes a community vision for the future character of Sonora that boosts economic vitality along main transportation corridors. Main components of the Plan describe design guidelines for corridor landscaping, multimodal circulation, wayfinding, and economic development. Design guidelines from this Plan are applicable to Phase 2 of the Project Area. The Plan describes Washington Street, including a portion of the Project Area, as a gateway to downtown Sonora. Improvements would include new transit stops, drought-tolerant landscaping, entry-sign monument, and re-configuration of the Shaws Flat / School Street intersection to accommodate pedestrians from the Sonora High School.

2.2 Tuolumne Tomorrow: Tuolumne County Regional Blueprint Project Report (2012) and GHG Study (2012)

Tuolumne Tomorrow is a long-range plan providing a vision for future development in land use, transportation, housing, economic development, and ecological conservation, and is a joint effort between the City of Sonora, Tuolumne County, and Tuolumne County Transportation Council. As a regional effort, the report and GHG study considers the emissions for future growth scenarios that informs the Blueprint Program. The Program provides a framework for agencies to promote mobility, increased housing and transportation choices, job accessibility, healthy communities, and economic development in the future.

2.3 General Plans

2.3.1 City of Sonora General Plan (2020)

The City of Sonora’s general plan provides guidance for future development within the City’s limits. Development standards are codified in Titles 10, 12, 15, and 17 of the municipal code (https://library.municode.com/ca/sonora/codes/municipal_code). Standards from the City’s general plan and zoning code apply to Phase 2 of the project area.

2.4 Transportation Plans

2.4.1 Tuolumne County Active Transportation Plan (2020)

The Tuolumne County Active Transportation Plan (ATP) is a strategic plan for prioritizing proposed pedestrian and bicycle networks that promote mobility and access equity. The ATP describes projects that meet the needs of local residents while accommodating regional growth. The ATP notes that 81% of residents drive alone in a personal vehicle to access resident-serving goods and services, and analyzed needs based on anecdotal and computer data. The ATP further recommends infrastructure projects that are anticipated to meet the needs of the community.

2.4.2 Tuolumne County Airport Land Use Compatibility Plan (2025)

The County’s Airport Land Use Compatibility Plan (ALUCP) describes allowable land uses that are compatible with federal aviation regulations surrounding the Columbia and Pine Mountain Lake airports. The Columbia airport is located approximately one mile northwest of the northern SR 49 segment. A portion of the Project Area lies within the airport influence zone which is described as areas that are routinely affected by aircraft operations at an airport and within which certain land use actions are subject to airport land use compatibility review.

2.4.3 Final Draft of 2024 Regional Transportation Plan

The 2022 Regional Transportation Plan is a 20-year plan prepared by Tuolumne County Transportation Council (TCTC) and focuses on the facilitation of the movement of people and goods for work, shopping, education, recreation, and other purposes, utilizing a variety of transportation modes such as automobiles, trucks, buses, trains, planes, bicycles, and pedestrian pathways. The Plan describes the County’s existing conditions, regional vision and goals, actions to achieve transportation measures, and financial feasibility.

2.4.4 2013 General Plan and Regional Transportation Plan Evaluation and Analysis

The 2013 General Plan and RTP Analysis Report provides an evaluation and analysis of the Tuolumne County Transportation Council's and the County’s planning and policy

documents to determine which General Plan and Regional Transportation Plan (RTP) goals, policies, and/or programs should be amended or added to align with the Distinctive Communities growth scenario. The growth scenario is described in the *Tuolumne Tomorrow* plan as the preferred growth scenario within the region.

2.4.5 State Route 108/49 Multimodal Congested Corridor Plan (2021)

The multimodal study identifies transportation needs and opportunities to improve the state highway corridor. The Plan documented the existing and projected future multimodal conditions and assets of the SR 108/49 corridor. The study conducted performance assessments of facilities and traffic behavior, and presented and analyzed strategies' abilities to enhance safety, reduce congestion, reduce GHG emissions, and enhance multimodal opportunities. The outcome was to identify analyzed strategies eligible for funding that could address corridor deficiencies. Existing conditions data from this Plan is incorporated into the findings below.

2.4.6 Columbia Circulation Improvement Plan (2010)

The Columbia Circulation Improvement Plan (CCIP) provides guidance on the implementation of new land use and transportation coordinated strategies for growth and capital improvements. The CCIP supplements the Columbia Community Plan and identifies and evaluates various improvement projects for existing roadways, bike pathways, and trails that will help create a network of safe, comfortable, historically sensitive, pedestrian and bicycle-friendly routes. The improvement projects identified in this plan are considered in the segment analysis below.

3 Equity Analysis

3.1 Demographic Profile

The Central Sierra Me-Wuk people are the original inhabitants of the Sierra Nevada foothill region, with a presence in the area dating back thousands of years. ¹. Descendants of the Central Sierra Me-Wuk people currently still live in the region. The Tuolumne Band of Me Wuk Indians, a federally recognized sovereign tribe, currently has 485 members and roughly 200 of them reside in the Tuolumne Rancheria, east of City of Sonora. The Chicken Ranch Rancheria of Me-Wuk Indians of California is also a federally recognized sovereign tribe, occupying a 2.85-acre rancheria near Jamestown. Despite their small land base, the tribe has established a significant economic presence in the region through tribally owned businesses, most notably the Chicken Ranch Casino Resort. Prior to European colonial settlement, the Me-Wuk people population in the California region totaled roughly 11,000

¹ 2018 Tuolumne County General Plan

to 20,000 people in the mid-18th century.² . . . The Me-Wuk people maintained their presence in the region through the arrival of European colonial settlers beginning in the early 19th century and the subsequent period of Mexican governance from 1821 to 1848, though both periods brought significant disruption and population decline to the Me-Wuk people's communities.

As a rural foothill community, the population surrounding the Project Area is relatively dispersed. According to the 2023 American Community Survey (ACS) 5-Year Estimates, the population is estimated at 4,965. The population is predominantly White, making up 85% of the population.. Approximately 8% identify as mixed race. Of the 8% of mixed race Sonora residents, 22% identify as part Native American. 28% of the mixed race population identify as part Asian. Over 6% of the population speak another language at home other than English. In terms of age distribution, the middle-aged group represents the largest demographic, with approximately 13% of the population falling between 25 and 34 years old. Although 40% of the population has a college or associate's degree, the city's median income is \$35,233. 20% of Sonora is determined to be below 100% of the poverty level.

North of the City of Sonora, along State Route 49 is Columbia, an unincorporated, census-designated place (CDP). Given its CDP status, Columbia has no governing body. ACS's 5 Year Estimates from 2023 show Columbia's population at 2,645. Columbia has a large population of senior residents, with 38% of residents that are 60 years and older. 35.2% of residents live alone. 80% of the population is White. 10% identify as mixed race. Just under 10% of households in Columbia speak another language other than English. Columbia's median income is \$35,000.

3.2 Transit-Dependent Populations

Transit-dependent populations are households who rely on public transit or modes other than private vehicles to conduct daily life activities. Individuals with ambulatory difficulties and preexisting health conditions can be income constrained. According to CalEnviroScreen 4.0, the communities east of SR 49 experience higher pollution burdens than communities west of SR 49 as shown in **Figure 2**. This is due to higher rates of ozone pollution, lead in housing, housing burden, and sensitive populations with asthma and cardiovascular disease. In addition, Browns Flat and Shaws Flat around the Project Area are described as disadvantaged legacy communities in unincorporated County that are

² <https://www.cagenweb.org/tuolumne/his.htm>

remote, lower income households with little to no utility services and whose median income was less than \$49,306⁴.

As shown in **Figure 3** below, the census tracts (06109001100 and 06109001200) surrounding the Phase 2 corridor are rated as high vulnerability based on factors related to socioeconomic status, household characteristics, racial & ethnic minority status, and housing type & transportation⁵. Both census tracts are rated as highly vulnerable due to low housing quality, overcrowding, and lack of vehicles. The Tuolumne County Transit is the sole public transit operator in the area and provides fixed route, flex route, and on-demand services. Currently, there are no routes that operate along the Phase 2 corridor. However, Route 2 provides public transit service on Shaw Flat Road just west of the project area.

⁴ 2018 Tuolumne County General Plan, Technical Background Report.

⁵ https://www.atsdr.cdc.gov/place-and-health/php/svi/?CDC_AAref_Val=https://www.atsdr.cdc.gov/placeandhealth/svi/index.html

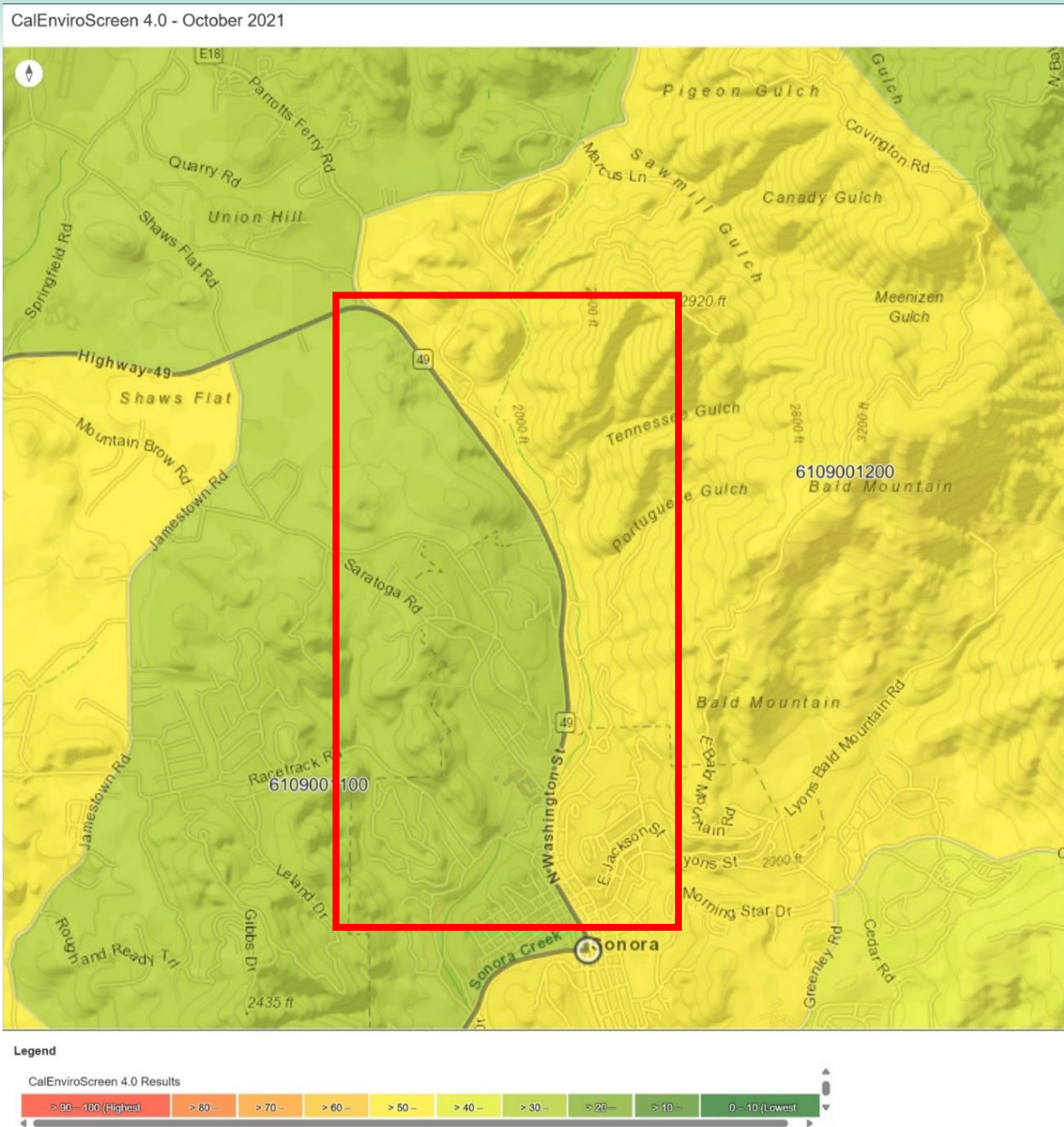


Figure 2. CalEnviroScreen 4.0 Results, Phase 2 Corridor

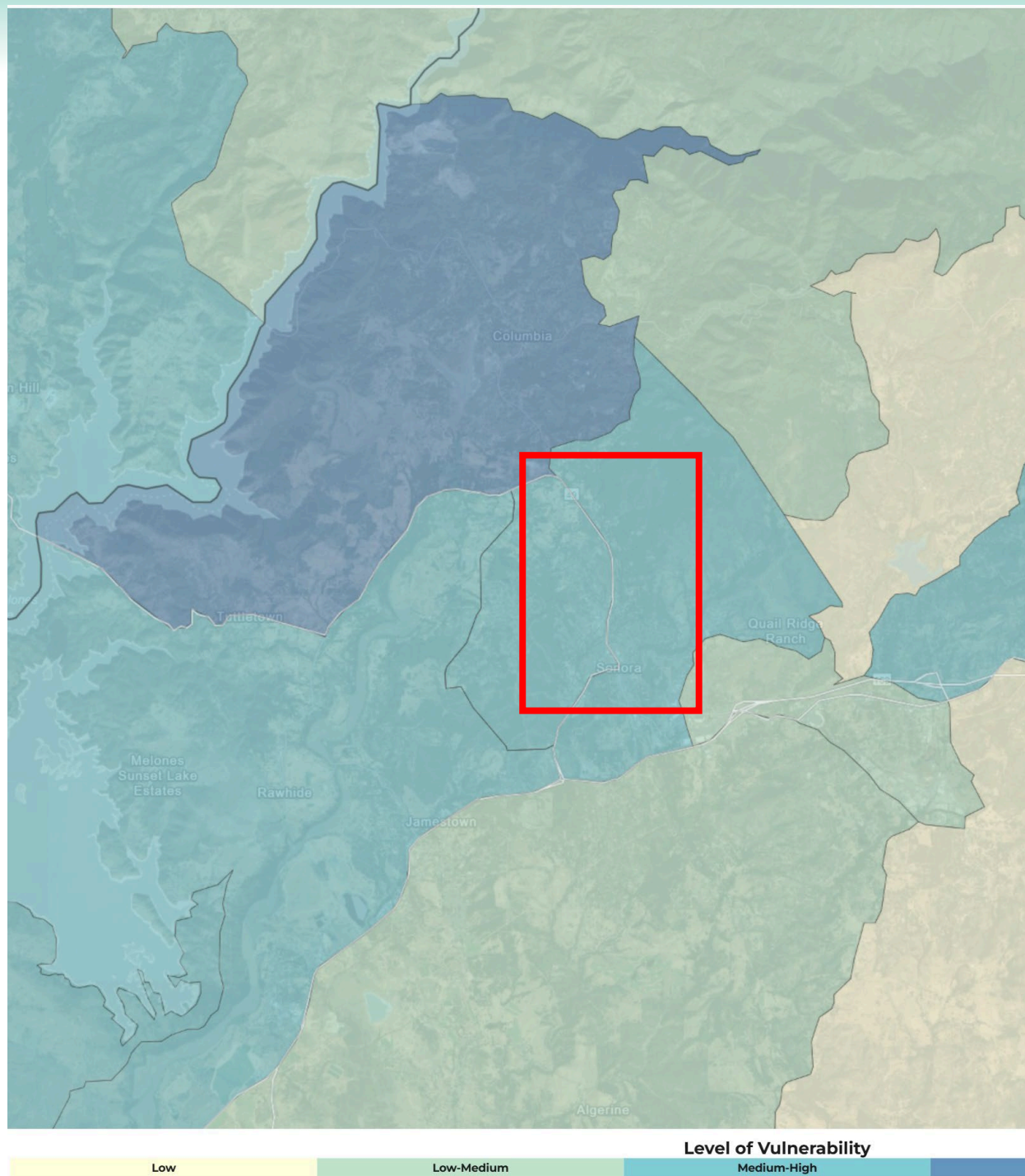


Figure 3. Overall Social Vulnerability Index per Census Tract⁶

⁶ Agency for Toxic Substances and Disease Registry (ATSDR). Accessed on June 2025 at <https://www.atsdr.cdc.gov/>.

4 Circulation & Mobility

4.1 Key Corridors and Intersections

SR 49 or “Golden Chain Highway”, which was named after the 1849 California gold rush, is a 295-mile State Highway that extends from Oakhurst in the south to Chilcoot-Vinton in the north and is part of the National Highway System. As the primary north-south corridor, SR 49 operates as a popular access route through the City’s Historic District. Local residents and visitors use SR 49 to access regional goods and services surrounding the project area.

SR 49 consists of a north-south, two-lane arterial, running from the City of Sonora limits in the south to the intersection of SR 49 and Parrotts Ferry Rd to the north. A two-way left-turn lane is provided on SR 49 (Stockton Street) from approximately 1400’ south of Ponderosa Lane to approximately 1000’ south of S. Washington Street, except at intersections. Key intersections include the SR 49 (Washington St.)/Columbia Way/Shaws Flat Rd three-way intersection east of Sonora Union High School, and SR 49 & Parrotts Ferry Rd west of Columbia College. Other local arterials that connect surrounding rural residences and businesses to the SR 49 corridor include:

- Old Sonora Columbia Road
- Jack Page Road
- Preston Place
- Dossi Way
-
- Ohara Drive
- Pesce Way
- Dane Lan

SR 49 is the only state facility within phase 2 of the project limits. The posted speed limit on SR 49 within the project limits ranges from 25 to 45 miles per hour.

South Washington Street consists of a north-south, two-lane local collector, intersecting with SR 49 (Stockton Street) in the north and SR 108 in the south. The posted speed limit on S. Washington Street within the project limits ranges from 25 to 35 mph.

4.2 Origins and Destination Analysis

Origin and destination data is typically measured in trips based on a mode of travel (i.e., vehicle, bicycle, transit, and/or walking.) Replica data from spring 2021 indicates that a total of 1,510 recreational trips were made into Tuolumne County on a typical weekday originating from the counties of Stanislaus (38.9%), San Joaquin (11.4%), Calaveras

(11.2%), Merced (8.61%), and Mariposa (6.1%)⁷. Total weekend trips almost doubled averaging at 2,630.

Commute patterns show that about 85% of adult residents near the Project Area use a car, van, or truck to commute to work with a majority traveling alone. Although most residents work in Tuolumne County, 16.4% work outside of the County and take about 31 minutes to get to work. About 51.8% of residents who don't work from home start their commutes from 6:30AM to 8:30AM. There is no data available for commuters originating from outside California.

Table 1. Origin and Destination for Commuters along SR 49 Phase 2 Corridor			
	Census tract 11	Census tract 12	Census tract 21.01
Works in County of residence	80.20%	86.40%	89.60%
Works outside County of residence	19.80%	13.60%	10.40%
Work from Home	32.30%	29.20%	32.90%
Source: US Census Bureau ACS 5-Year Estimates, S0801			

There are various attractions around the project area that consist of shopping centers, unique downtown experiences, nature trails, major employment facilities, and public institutions. The major destinations closest to the project area include Downtown Sonora and Columbia College. Columbia College is a significant regional destination for education and employment. Adventist Health employs over 1,000 people in Sonora, and the Corrections Department employs over 1,000 in Jamestown⁸.

Most traffic into the project area originates from neighboring counties: Stanislaus, San Joaquin, and Calaveras. Although there is more traffic during the weekend, trip destinations were the same during the weekend and weekday. Most trip destinations occur in census block groups outside of the project area, which include destinations such as Black Oak Casino, Chicken Ranch Casino, Don Pedro Reservoir, Tuttletown Recreation Area/New Melones Lake, Pine Mountain Lake, and shopping retailers at Mono Village. **Figure 4** and **Figure 5** provide a summary of origin and destination data for vehicular trips in the project area. Origins and destinations via private vehicles show similar amount of trips leaving and coming to the project area, with a concentration of trips originating and departing from the

⁷ 2022 Tuolumne County Transportation Council (TCTC) Regional Transportation Plan.

⁸ 2020 Tuolumne County Active Transportation Plan.

census tract north of the project area. This tract contains the Columbia College which is a primary destination near Sonora.

Figure 6 and **Figure 7** represent pedestrian patterns in the area immediately adjacent to the Phase 2 corridor. There are more pedestrians trips to and from the west side of the project area than on the east side. The west side of the project area has more residential development such as the Saratoga Acres and Shaws Flat communities.

Figure 8 and **Figure 9** shows that the number of cyclists coming from and to the adjacent communities evenly distributed. Most cyclist activity occurs in the census tract north of the project area where Columbia College, downtown Columbia, and Columbia airport are located.

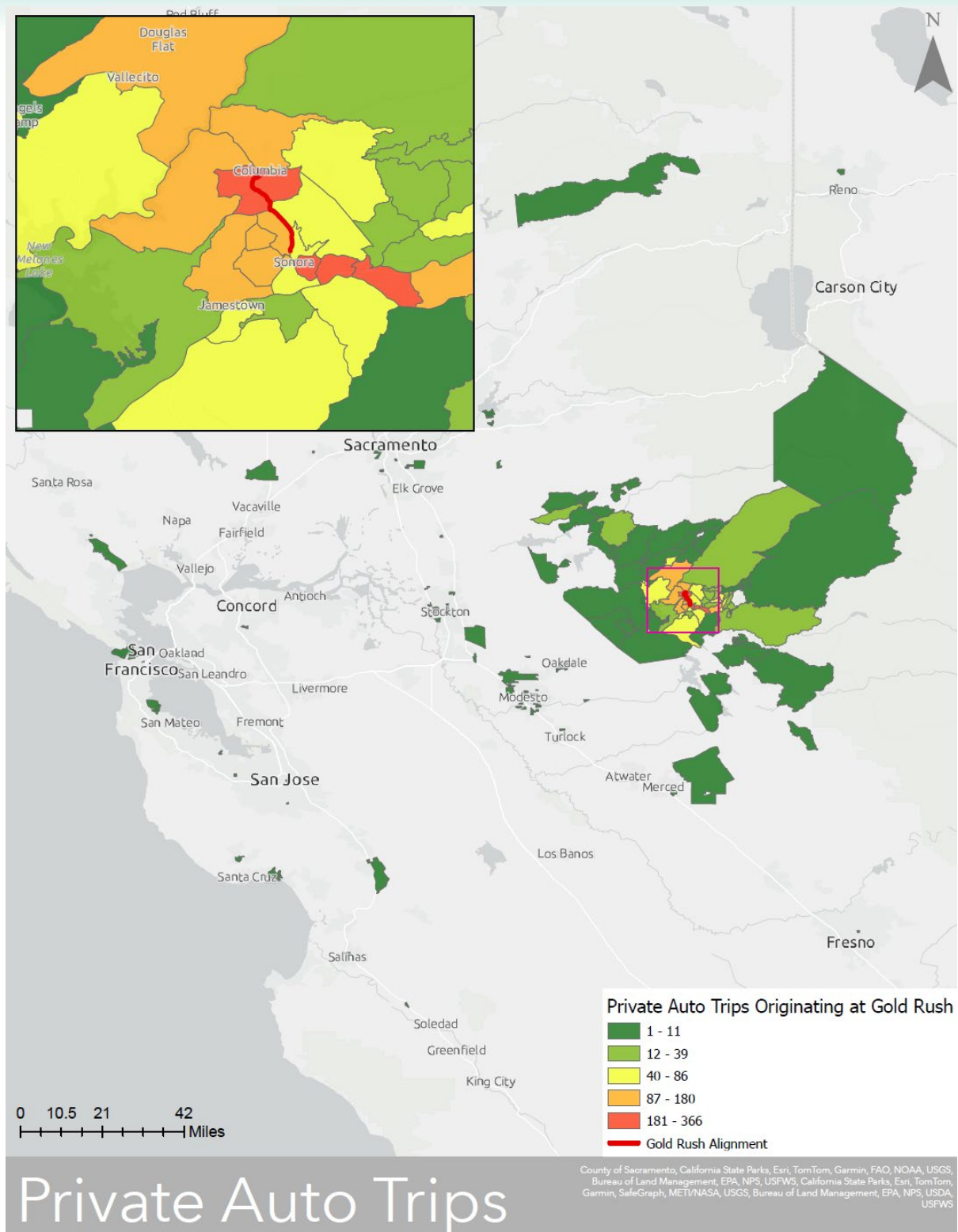


Figure 4. Vehicular Origins by Census Block Group at Phase 2 Corridor

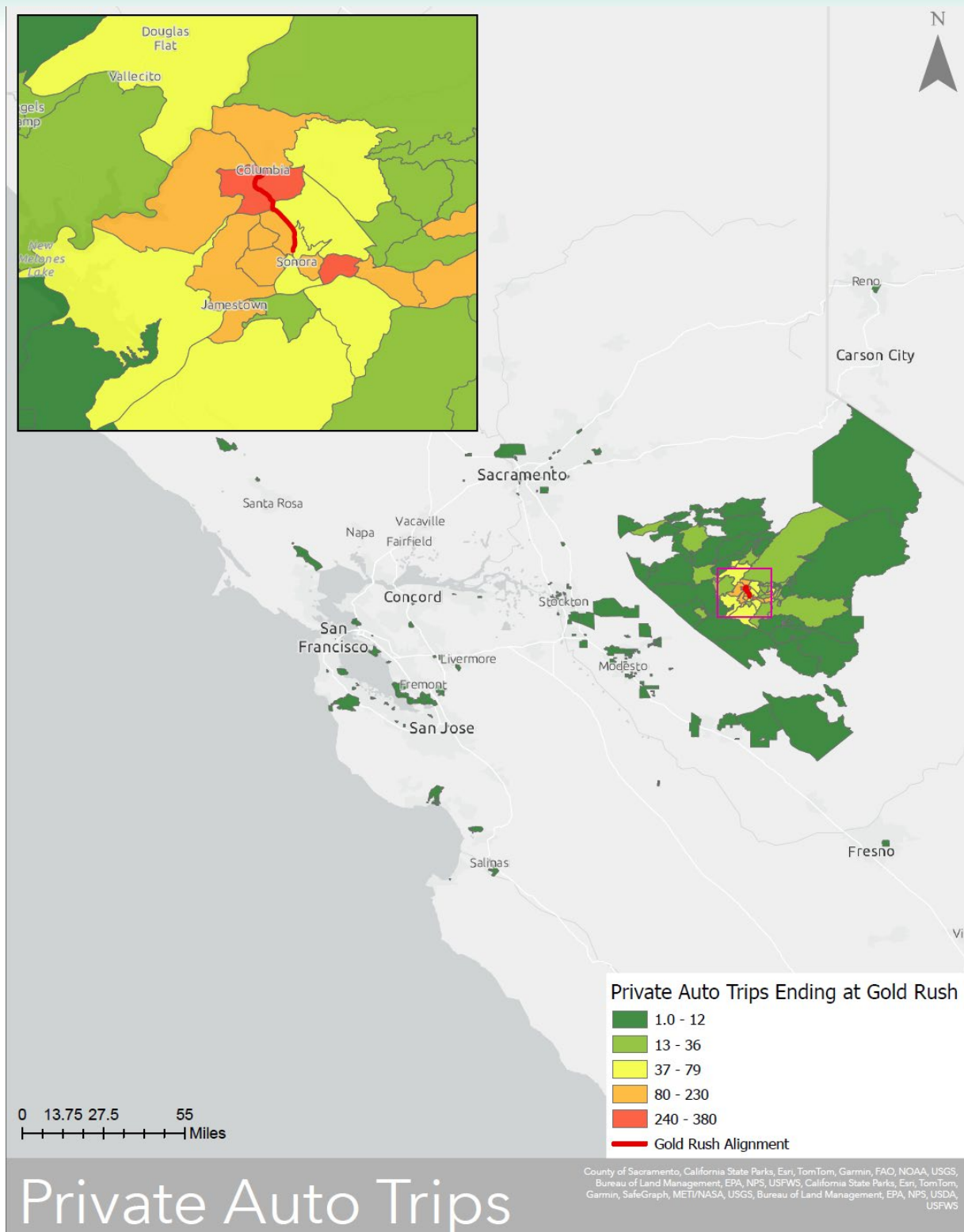


Figure 5. Vehicular Destinations by Census Block Group at Phase 2 Corridor

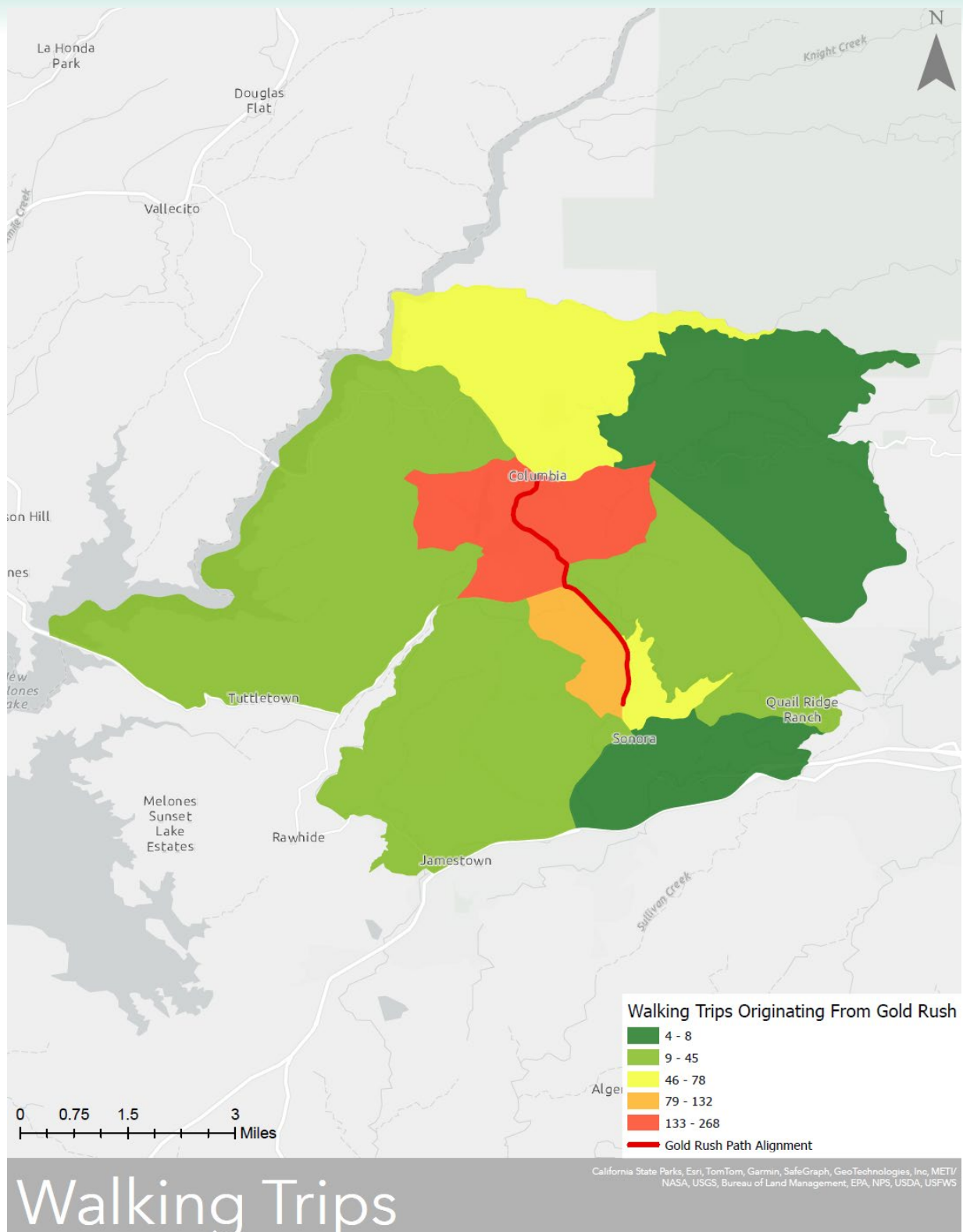


Figure 6. Pedestrian Origins from Phase 2 Corridor

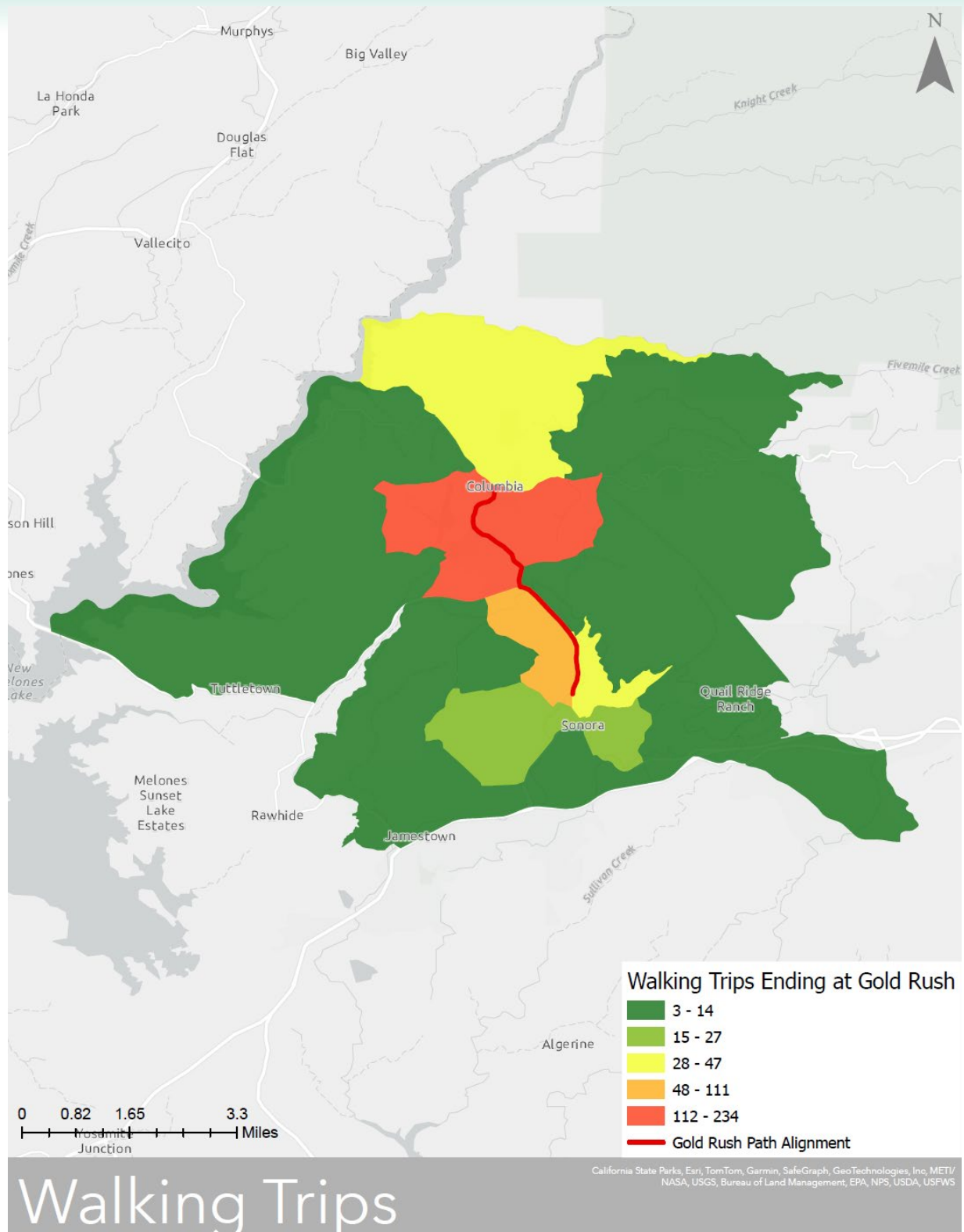


Figure 7. Pedestrian Destinations at Phase 2 Corridor

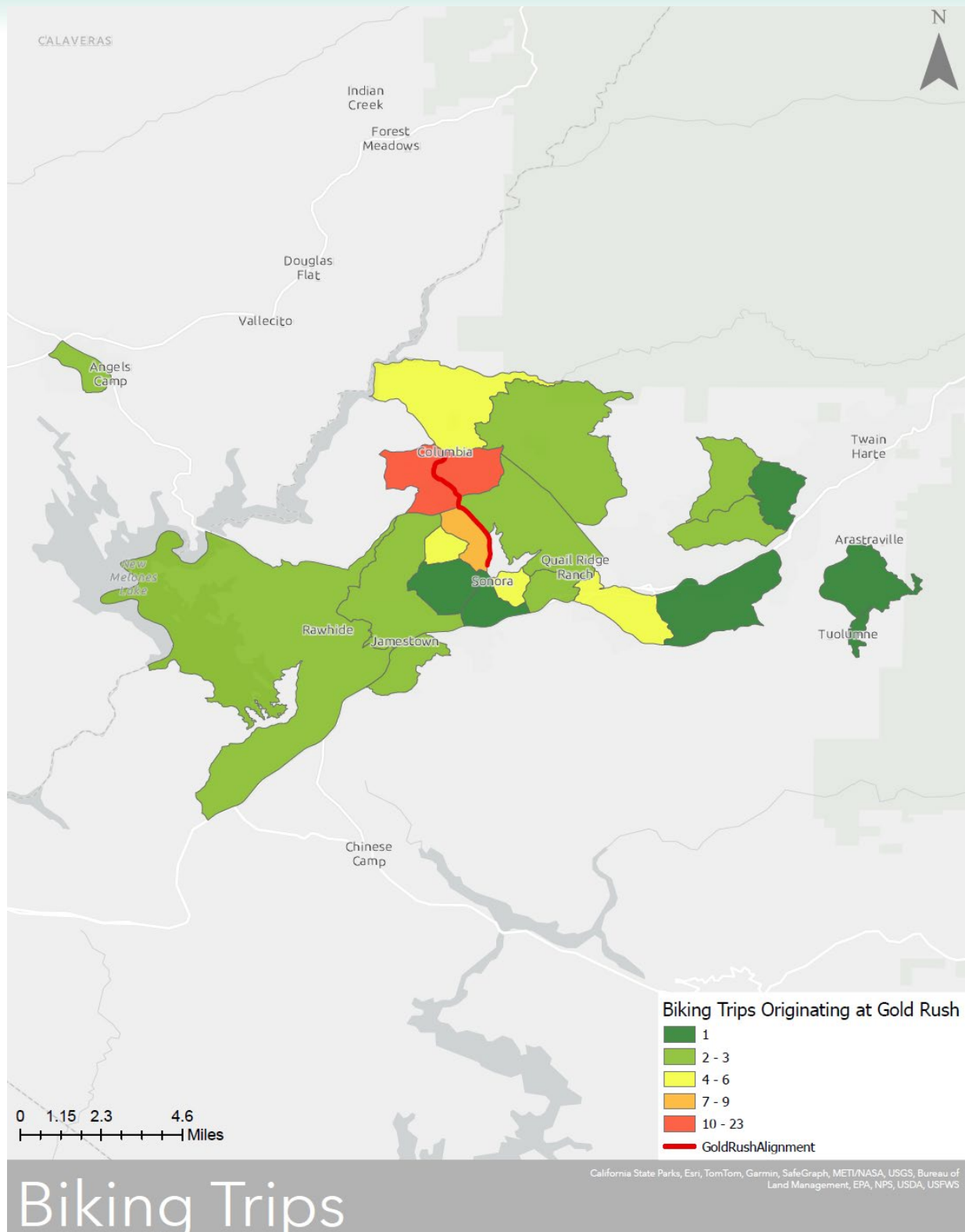


Figure 8. Bicycle Trip Origins by Block Group at Phase 2 Corridor

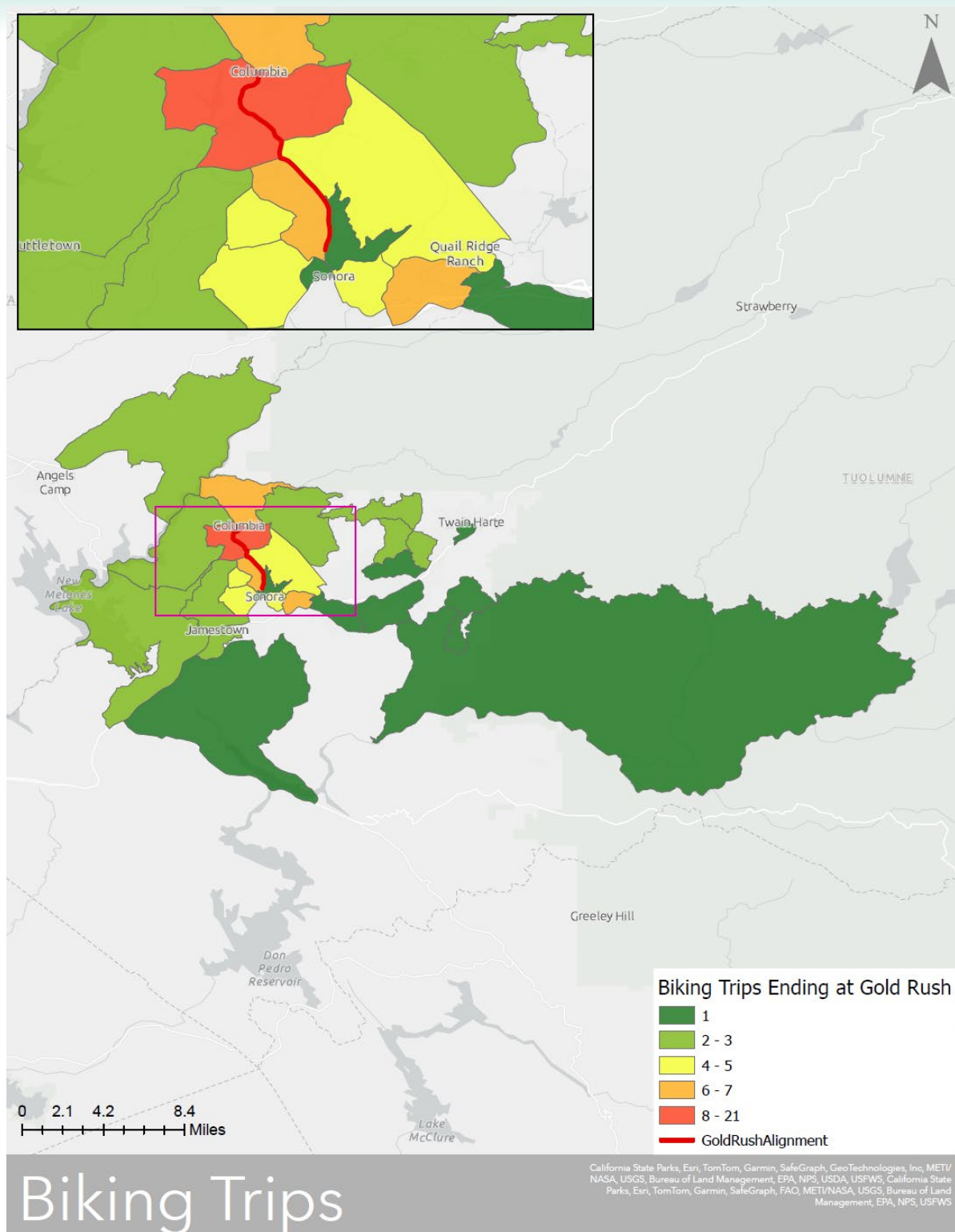


Figure 9. Bicycle Trip Destinations by Block Group at Phase 2 Corridor

4.3 Existing Pedestrian Environment

About 4% of residents walk to work, which is higher than the percentage of residents who take public transportation, a bicycle, or taxicab/motorcycle to work, combined.

The 2-mile segment of the SR 49 corridor between Shaws Flat Rd and Parrotts Fery Rd does not provide pedestrian amenities – except for adjacent to a few parcels on the west side north and south of Steffen Ln. Sidewalks are provided along much of SR 49 (N and S Washington St), as well as along many of the connecting roadways, south of the Phase 2 project limits. To the north, no pedestrian facilities exist along Parrotts Ferry Rd.

4.4 Bicycle Facilities

4.4.1 Current and Proposed Bicycle Facilities

There are bicycle routes along S. Washington Street in downtown Sonora; however, no designated bicycle facilities are available.

The following multimodal improvements have been proposed within the project area:

- Construct improvements to improve pedestrian/bicycle safety at the Hwy 49, Shaws Flat Rd, Columbia Way and School St intersection;
- Install bikeways with 4-8' shoulders and buffers on SR 49 where possible in Tuolumne County;

The Phase 2 corridor has also been identified as a priority active transportation project for the establishment of the Sonora to Columbia Regional Trail. The TCTC recognizes the existing narrow shoulders along this pathway and recommends a TUD easement to widen shoulders that can accommodate added bike lanes. The project would consist of a multi-use trail and Class II bicycle lanes connecting Sonora with Columbia College, and would also serve as a regional extension of the Jamestown to Columbia Regional Trail.

4.4.2 Bikeshed Analysis

Figure 10 illustrates the 3-mile bikeshed surrounding the Phase 2 corridor. The map highlights the areas accessible within a three-mile (i.e., 12- to 15-minute) bicycle ride, demonstrating the connectivity and reach of the corridor for cyclists. The bikeshed encompasses a diverse range of destinations, extending past SR-108 to the south, Quail Ridge Ranch to the east, just short of Tuttletown to the west, and reaching up to the Columbia State Historic Park in the north.

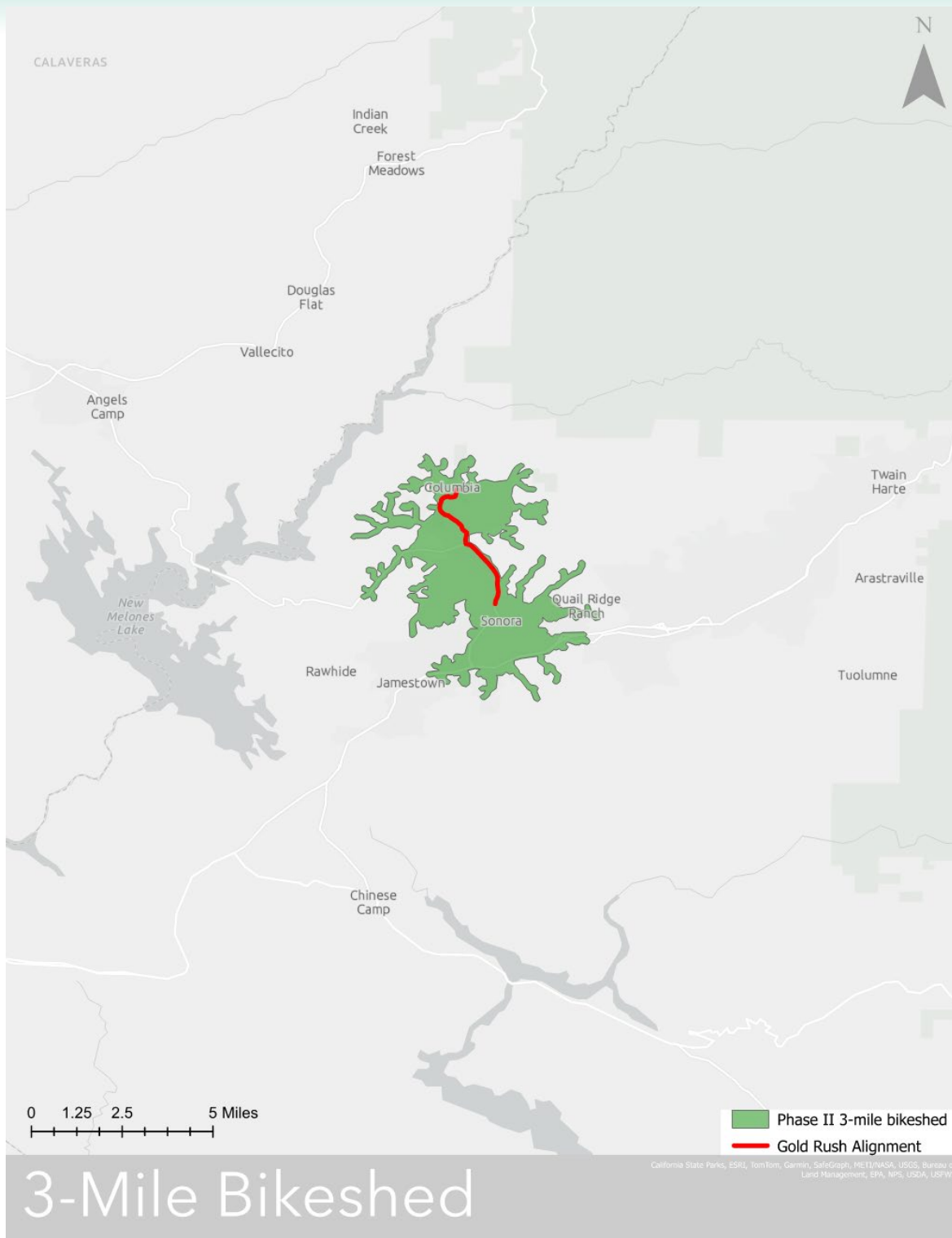


Figure 10. Phase 2 Corridor 3-mile Bikeshed

4.5 Transit

The Tuolumne Heritage Trail is served by multiple transit agencies, including Tuolumne County Transit, Calaveras Connect, and the Yosemite Area Regional Transportation (YARS), as shown below in **Figure 11**.

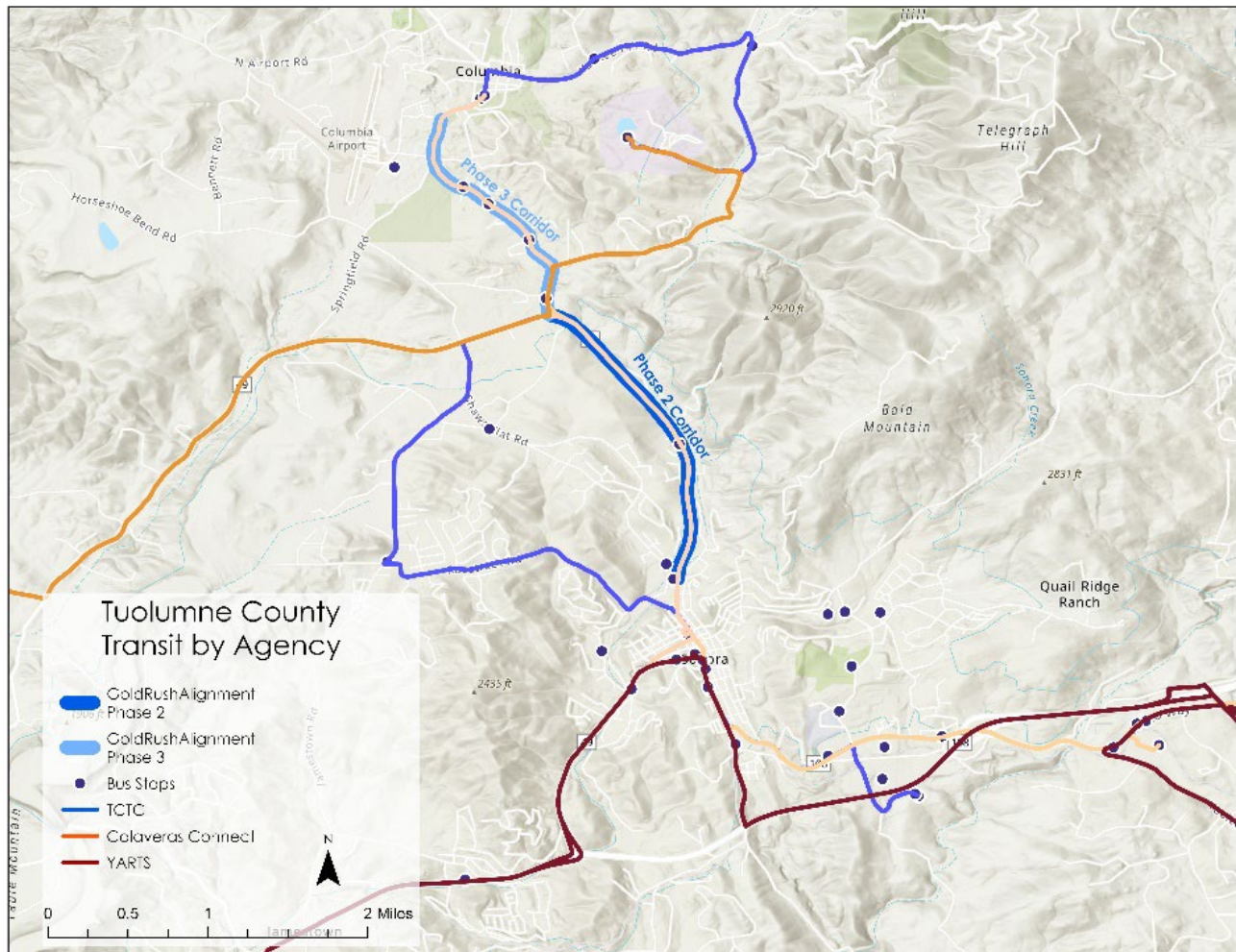


Figure 11. Transit Agencies Serving Tuolumne County

Tuolumne County Transit (TCT) is the primary public transit operator in the area and provides fixed route, flex route, and on-demand services throughout the county passing through the Phase 3 Corridor, particularly the Groveland Columbia Express Route (also called the Groveland Columbia Connect). On-demand stops are at Big Oak Flat, Moccasin, and Chinese Camp, and flag stops can also be made for this daily route which runs twice a

day⁹. Additionally, TCT operates the Adventure Trolley, which is a seasonal fixed-route service available during winter and summer to accommodate seasonal recreational visitors in the area. Monthly passes and individual trip tickets can be purchased. A map depicting TCT is provided in **Figure 12**.

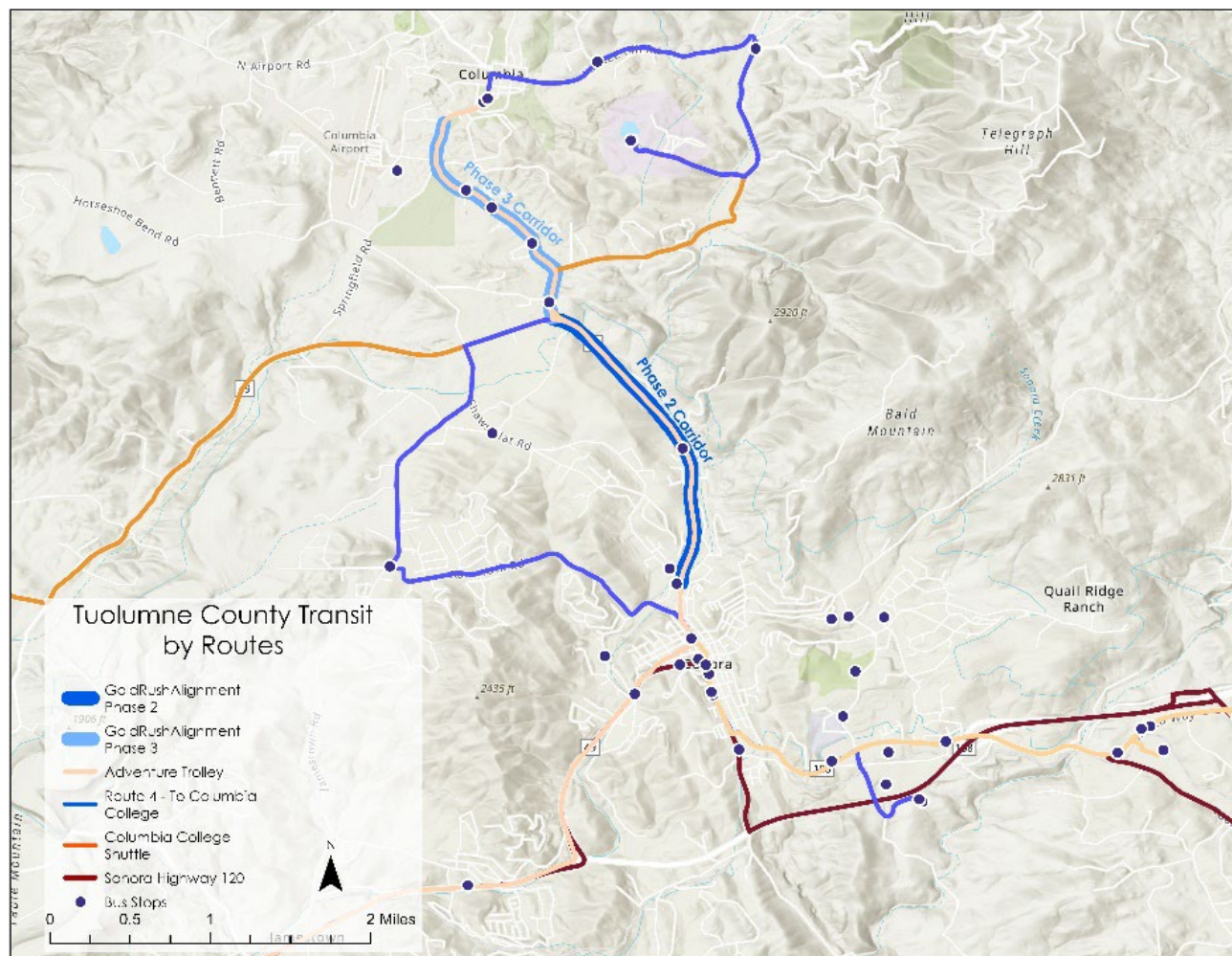


Figure 12. Tuolumne County Transit Routes

The Calaveras Connect provides service connecting across San Andreas, with all three operational fixed-route shuttles connecting at Angels Camp, where Angels Camp serves as a transfer stop for all three Calaveras Connect routes. The shuttle service serves seasonally conforming to the Spring and Fall Columbia College semesters, running daily in

⁹ [Tuolumne County Transit Route 4: Sonora - Columbia](#)

the morning and evening. The Columbia College Shuttle runs on weekdays from Sonora to Columbia College through the Phase 3 Corridor along Parrotts Ferry Road¹⁰.

Yosemite Area Regional Transportation (YARTS) also runs several routes taking visitors into Yosemite National Park providing service to Merced and Mariposa Counties on Highway 140, Tuolumne County on Highway 120, Mono County on Highway 395/120 E, or the City of Fresno and Madera Count on Highway 41. YARTS operates the Sonora Highway 120 route that runs through downtown Sonora along South Washington street, with an overlapping stop with TCT's Groveland Columbia Express Route at Hotel Lumberjack, and another stop on Stockton Street at the Bank of America, hours of operation are updated seasonally adding a North-South connection to the East-West running Sonora Highway 120 route.

4.6 Vehicular

4.6.1 Traffic and Level of Service (LOS) Analysis

Vehicle traffic along the corridor is measured through annual average daily traffic (AADT). Caltrans data from 2022 provides AADT, by direction, along SR 49. At the intersection with Parrotts Ferry Rd, SR 49 had an estimated AADT of 13,300 westbound (North along SR 48) and 4,800 southbound trips towards Sonora. These translate to an estimated 1,350 westbound trips and 570 southbound trips during the annual average peak hour There are more trips going westward out of the project area than towards it. AADT for the south portion of the Phase 2 segment ranged from 16,100 trips in the northbound direction to 17,700 trips in the southbound direction. The estimated peak-hour volumes are 1,600 for northbound trips and 1,650 southbound trips.

The 2022 TCTC Regional Transportation Plan has identified the SR 49 (N Washington St) & Columbia Way and SR 49 (N Washington St) & School St intersections to have Level-of-Service deficiencies, meaning that the intersections are known to experience high levels of congestion, or which had been forecasted to fail in the near future.

4.6.2 Potential queuing issues

Intersections have the greatest potential queuing issues, especially near Downtown Sonora and Columbia College. Intersection Level-of-Service (LOS) analyses regarding AM and PM peak hours were conducted at high-volume intersections in the project area. The analyses were forecasted for the years 2030 and 2040. The 2022 TCTC Regional Transportation Plan has identified the SR 49 (N Washington St) & Columbia Way and SR 49 (N Washington St) & School St intersections to have Level-of-Service deficiencies, meaning

¹⁰ [Columbia College Shuttle - Calaveras Connect](#)

that the intersections are known to experience high levels of congestion, or which had been forecasted to fail in the near future. This stretch of SR 49 has also been identified as a priority active transportation project for shared vehicle and bicycle uses.

4.6.3 Parking

4.6.3.1 On-Street

Along the Phase 2 alignment of the Tuolumne Heritage Trail, there are no officially designated on-street parking spaces. Instead, drivers often rely on several informal, unpaved pull-off areas to park temporarily. These pull-offs provide limited accommodation and may not be suitable for long-term parking or larger vehicles. In particular, the segment between Columbia Way and Jack Page Road features wider shoulders, allowing motorists to safely pull over and park.

4.6.3.2 Off-Street

The segment between Columbia Way and Jack Page Road features numerous driveways for local businesses, each providing substantial off-street parking options for customers and visitors. These parking areas typically accommodate a variety of vehicle sizes and offer a safer alternative to the informal, unpaved pull-off spaces found elsewhere along the alignment.

4.6.4 Access Points & Emergency Vehicle Access

Vehicular access throughout the Phase 2 alignment is notably restricted, as only a handful of local cross-streets link to the proposed multi-use path. This creates pockets of limited accessibility, especially in segments further away from downtown Sonora. By contrast, the southern portion of Phase 2, which begins at the Sonora High School frontage, offers numerous vehicle access points for trail users and visitors.

At present, Phase 2 of the proposed Tuolumne Heritage Trail does not feature a dedicated route for emergency vehicles, which limits access for first responders. The corridor's narrow roadway and limited spaces for vehicles to pull over create significant obstacles for both everyday traffic and emergency services. According to the Tuolumne County Evacuation Needs Assessment and Communication Strategies¹¹ document, integrating a shared-use path into the alignment would greatly enhance emergency response by providing a direct route for emergency vehicles to reach the area during critical situations.

¹¹ 2023 Tuolumne County Evacuation Needs Assessment and Communication Strategies.

This improvement would not only support safer and faster responses in emergencies but also improve overall roadway safety for all users.

A map of the existing access and emergency exit routes serving Downtown Sonora is provided in **Figure 13**.

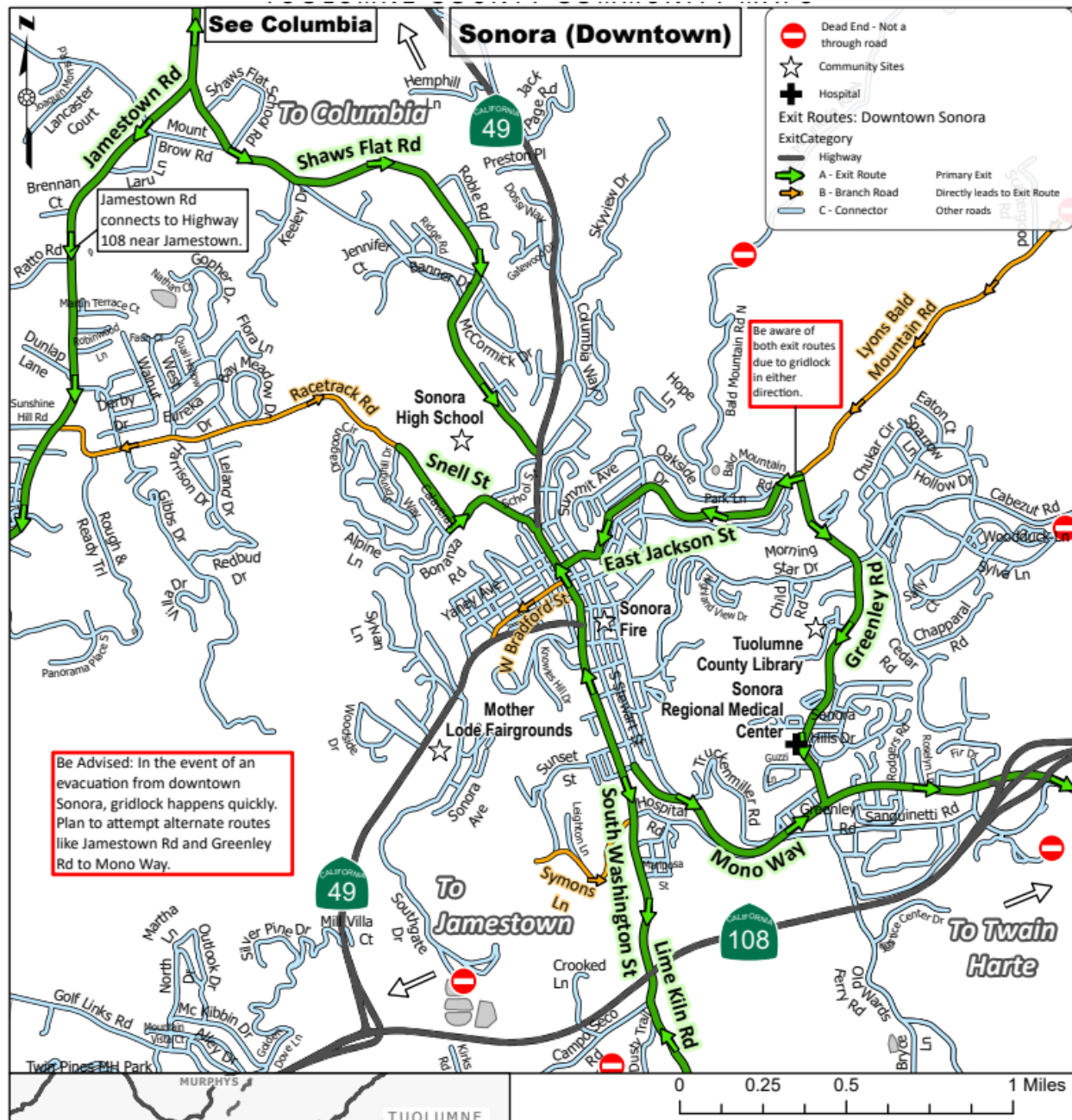


Figure 13. Emergency Routes and Facilities Serving Downtown Sonora

4.7 Collisions (past 5 years)

The Statewide Integrated Traffic Records System (SWITRS) identifies a total of 27 reported crashes along the Phase 2 alignment between January 1st, 2021, and December 31st, 2025, as depicted in **Figure 14** below. Out of these incidents, two involved pedestrians; one resulted in a fatality and the other in a severe injury, highlighting the ongoing safety concerns for non-motorized users in the corridor. According to the 2020 Tuolumne County ATP, most pedestrian collisions occurred within a one-mile radius of downtown Sonora. Additionally, one crash involved a cyclist, which led to a severe injury. These statistics underscore the need for enhanced safety measures and improved infrastructure to better protect both pedestrians and cyclists traveling through the project area.

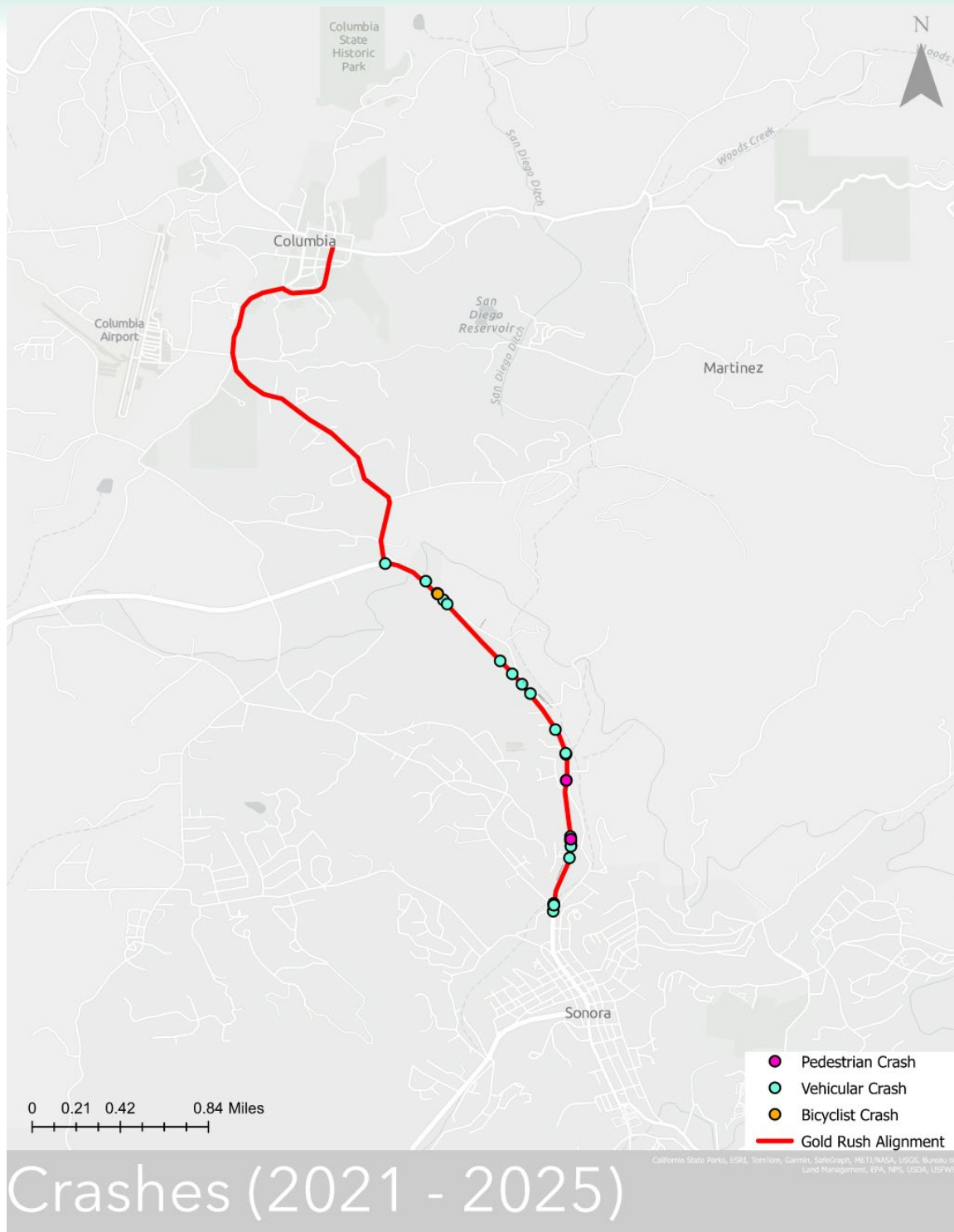


Figure 14. Crashes (2021 – 2025)

5 Land Use

5.1 Current Land Use

Areas closer to the downtown core of Sonora are generally denser with commercial and mixed-use designations whereas the northern areas surrounding the SR 49 corridor are residential. The south portion of the segment is designated Commercial (C), Single-family Residential (R-1), Limited Multi-family Residential (R-2), and Planned Development (PD) per the City of Sonora. The remaining portion of the segment is designated Low Density Residential (LDR), General Commercial (GC), Rural Residential (RR), Heavy Commercial (HC), Estate Residential (EC), Mixed Use (MU), and Large Lot Residential (LR). **Figure 15** and **Figure 16** represent the existing land uses within the City of Sonora and Tuolumne County, respectively.

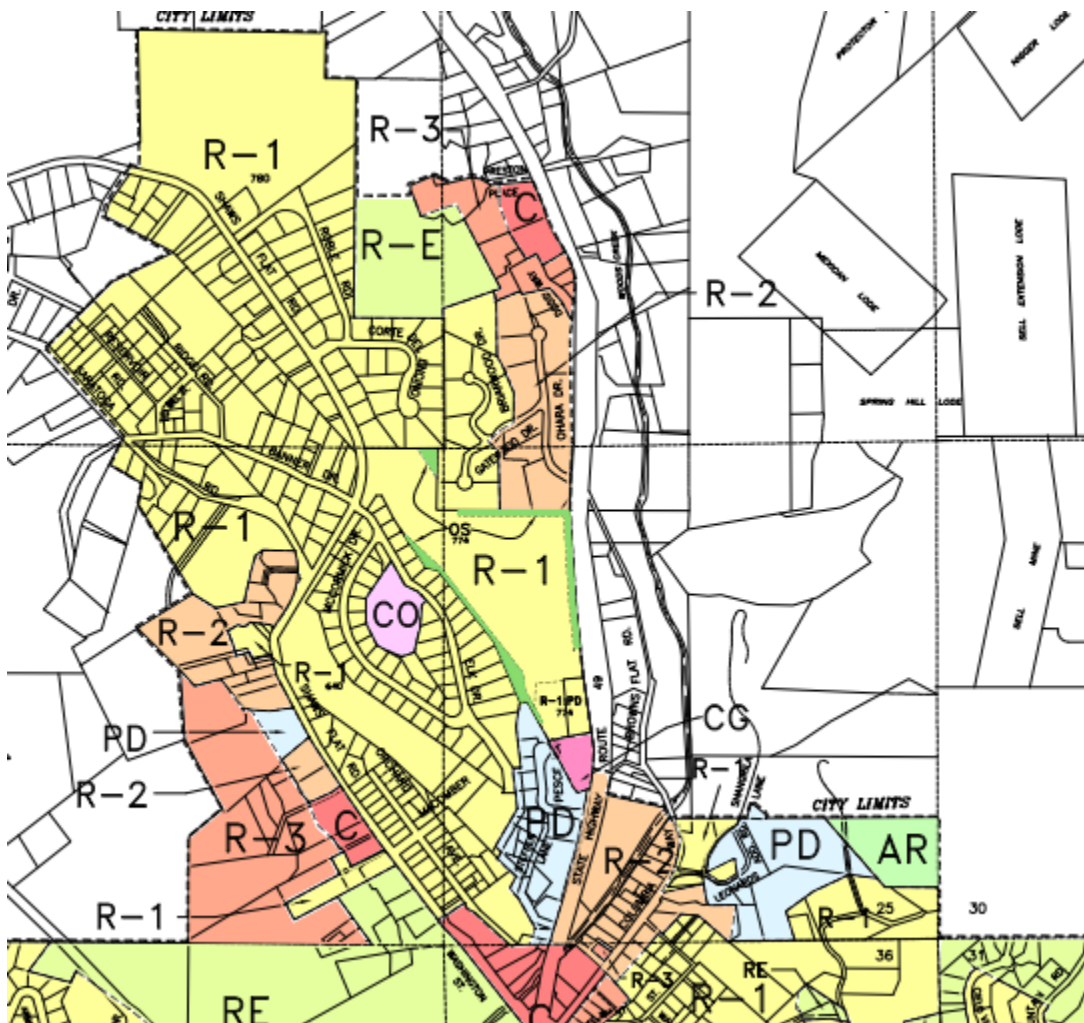
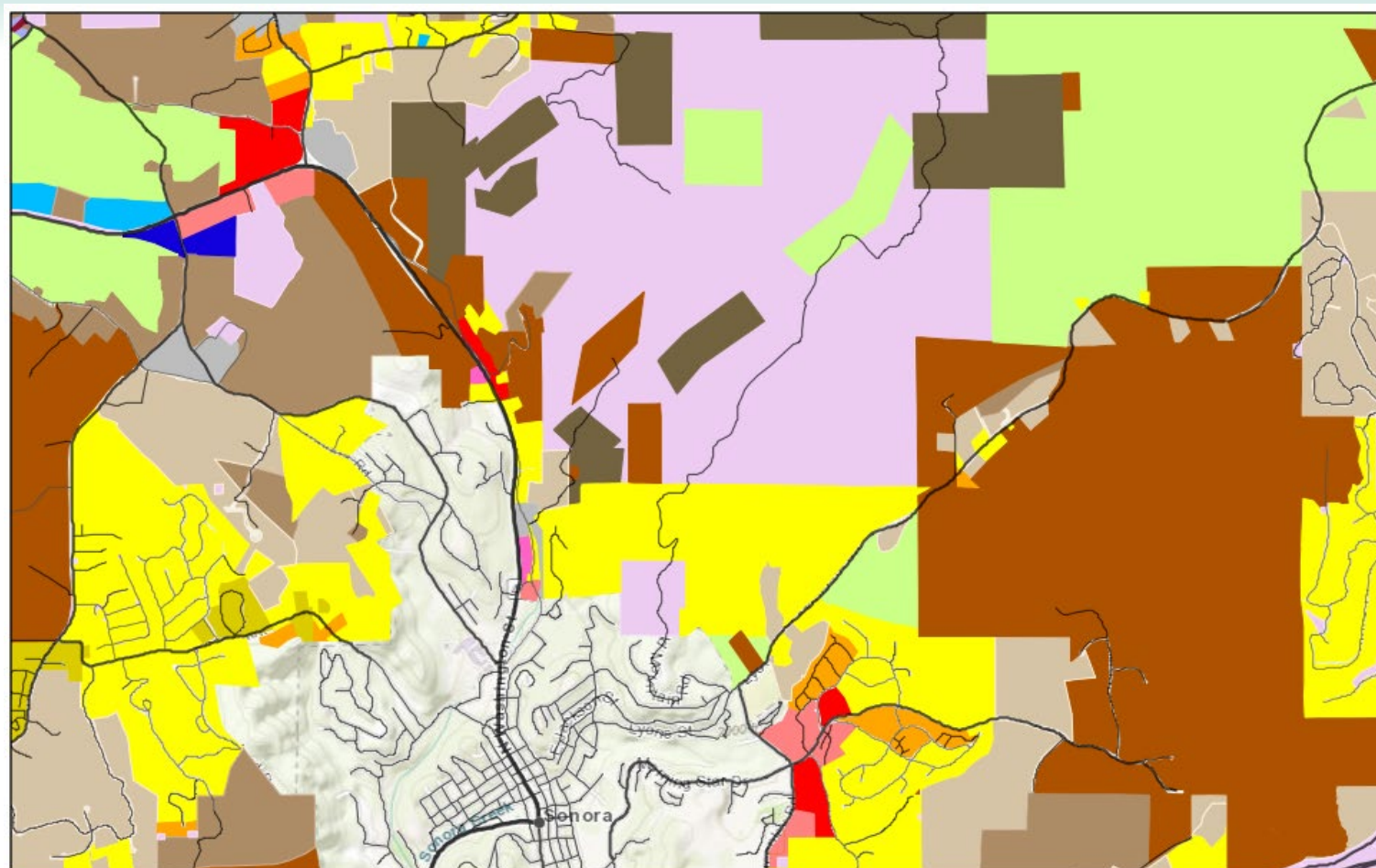
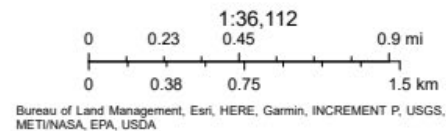


Figure 15. City of Sonora Land Use



6/10/2025, 9:03:13 AM



Tuolumne County GIS

Figure 16. County of Tuolumne Land Use

Land uses in unincorporated County are designated by private property and lot, whereas land uses in the City of Sonora are designated within a general area. Property owners can request land use changes and therefore zoning changes, otherwise known as “spot zoning”, as long as they are consistent with the General Plan. From 1986 to 2020 the distribution of land uses by number of parcels in Sonora has changed to less residential and more commercial/mixed uses. The rate of public, recreation, industrial, and rail uses have remained roughly the same.

5.3 Public Facilities

Public facilities are institutional, academic, governmental and community service uses that are publicly owned or operated by non-profit organizations. There are also quasi-public facilities that are privately owned open spaces that are open to the public for recreation. Public facilities provide critical services to the community, including education, administration, and public safety. Public facilities within the corridor consist of the Sonora High School on the south end, the City Shop within Sonora High School, the Sonora Pool, the Tuolumne County District Attorney office, and the Tuolumne County Victim/Witness office on the south end of the corridor.

5.3.1 Safe Routes to Schools

The south end of the Phase 2 segment of the Tuolumne Heritage Trail is adjacent to Sonora High School and therefore has the potential to contribute to the Safe Route to School (SRTS) network serving students accessing Sonora High.

The primary roadways serving the high school include SR 49 (N Washington St to the south, and Golde Chain Hwy to the north), Shaws Flat Rd to the northwest, Snell Street to the southwest, Columbia Way to the northeast. West School St serves as the primary access to the school’s entrance, and connects Snell St with N Washington St.

Sidewalks are generally available along these primary access routes. The sidewalk along Snell St does not appear to meet ADA requirements. An uncontrolled crosswalk is provided along Snell St at the intersection with West School St. An uncontrolled mid-block crosswalk also exists along Shaws Flat Rd, near the north side of the school campus. High visibility crosswalks are provided along N Washington Street and include ADA ramps – though these are often paired with yield signs for motorists, and do not offer additional signalization or protection for pedestrians crossing.

The neighborhood streets on the east side of N Washington St generally do not provide designated pedestrian amenities such as sidewalks, crosswalks, or street lighting.

5.4 Key Businesses within the Segment

Businesses that are within the SR 49 right-of-way are listed in **Table 2** are the businesses within proximity, however, not all might be impacted by the Gold Rush Multi-Use Path.

Table 2. Businesses Impacted, Phase 2 Corridor		
Businesses	Address	Business Type
Goodness Café	230 N Washington St Sonora, CA 95370	Coffee shop
Sonora High School	430 N Washington St Sonora, CA 95370	High school
City Shop	111 W School St Sonora, CA 95370	City government office
Kristin Frankhauser	207 S Washington St Sonora, CA 95370	Real estate agent
Sonora Pool	430 N Washington St Sonora, CA 95370	Public swimming pool
Creative Sounds	395 N Washington St Sonora, CA 95370	Car stereo store
ATCAA Amador Tuolumne Community Action Agency	427 CA-49 #302 Sonora, CA 95370	Non-profit organization
Tuolumne County District Attorney	423 N Washington St Sonora, CA 95370	County government office
Tuolumne County Victim/Witness	423 N Washington St Sonora, CA 95370	County government office
Good Stuff	10 Pesce Way #5659 Sonora, CA 95370	Thrift store
Sonora Express Lube	6 Pesce Way Sonora, CA 95370	Oil change service
Athena Bitcoin ATM	15 Pesce Way Sonora, CA 95370	Crypto ATM
Arco Gas Station	15 Pesce Way Sonora, CA 95370	Gas station
Sonora Custom Cycles	11994 CA-49 Sonora, CA 95370	Motorcycle repair shop
Provost & Pritchard Consulting Group	1194 CA-49 Suite B Sonora, CA 95370	Association / Organization
Barbershop 49	1916 CA-49 Sonora, CA 95370	Barber shop
Arise Tattoo	11914 CA-49 Sonora, CA 95370	Tattoo shop
Go Getter Builder	21033 Old Sonora Columbia Rd Sonora, CA 95370	Construction company

Table 2. Businesses Impacted, Phase 2 Corridor		
Businesses	Address	Business Type
Sonora Veterinary Group	21151 Old Sonora Columbia Rd Sonora, CA 95370	Veterinarian
Sonora Christian Life Center	21320 Old Sonora Columbia Rd Sonora, CA 95370	Pentecostal church
Union Hill Inn	21645 Parrotts Ferry Rd, Sonora, CA 95370	Wedding venue

6 Built Environment Analysis

Sonora’s urban design is based on the rich history of Gold Country and as the “Queen of the Southern Mines.” The existing architecture is exemplified by the historic buildings, hilly topography, and continued success in the logging industry. As a small rural community, with a historic downtown core, Sonora celebrates its culture through arts, live theater, and a variety of events within walking distance of SR 49 (Washington Street) and S. Washington Street. The pedestrian-scaled environment creates an intimate environment that attracts locals and visitors alike.

Regionally, Sonora is located in the Sierra Nevada foothills with access to a few national parks such as Stanislaus National Forest and Yosemite National Park, and several state parks, including Railtown 1897 State Historic Park and Columbia State Park. This provides ample opportunities for active recreation such as hiking, mountain biking, camping, golfing, and many other outdoor activities accessible within proximity to Sonora.

Some of the well-known businesses in the County are located in Sonora, which includes Sonora Regional Medical Center, County of Tuolumne, and Wal-Mart. Meanwhile, local destinations include the Mother Lode Fairgrounds, Dragoon Gulch Trail, Tuolumne County Courthouse, the Red Church (Saint James Historic Church), Sonora High School, and a variety of businesses along the commercial corridor along SR 49 (Washington Street).

6.1 Utilities

Utilities in the project area comprise transmission lines, light and/or utility poles, manhole covers, street trees, sidewalks and curbs, catch basins, and retaining walls. Culverts also exist throughout the project area, especially along steep areas like Segment 3 that are prone to erosion.

6.2 Streetscape

The Phase 2 corridor has been segmented to show key features including roadway and shoulder width, contours, key businesses, trees/vegetation, utilities (i.e., drainage, powerlines, gas lines, manholes, catch basins, etc.), intersections, pavement conditions, and signage. Segment 1 streetscape is the southern extent of the corridor and Segment 8 is the northern extent of the corridor. Segment 2 has the most amount of development including 12 utility manholes, 9 streetlights, one traffic signal, neighboring businesses, signs/billboards, ornamental palm trees, and sidewalks. Other segments exhibit minimal development due to steep topography. Segment 8 exhibits a wider right-of-way and shoulder width to accommodate a right-hand turning lane onto Parrotts Ferry Road.

6.2.1 Pavement Conditions

The pavement within Phase 2 generally consists of well-maintained roads. The most notable areas with a few pavement cracks and potholes are within the Mill's Garden Apartment area. Pavement striping appears to be well maintained with an overall legible pavement striping throughout.

6.2.2 Placemaking Elements

The corridor has only a few placemaking elements. The most common types are monuments or free-standing signages that have plaques to describe the history of the area. These generally are within bus bays to provide additional roadway space for stopping vehicles and buses for visitors and locals to enjoy. Other placemaking elements include retail signages, street signs, and mailboxes. Trees and ornamental vegetation can also be a placemaking element. Segments closer to downtown Sonora exhibit ornamental palm trees and native-species street trees near the N Washington St and Columbia Way intersection.

6.3 Landscape & Cultural Heritage

Prior to European settlement in the early 19th century, the dominant land cover was a mosaic of oak woodland and oak savanna. Ponderosa pines (*Pinus ponderosa*) are also prevalent at elevations of about 1,500 feet to 2,500 feet and commonly found with California black oak (*Quercus kelloggii*) and is typical of the Sierra Nevada foothills. The Central Sierra Me-Wuks arrived between 2,000 and 600 years ago and had a significant influence on the natural landscape and vegetation on the area¹³. Cultural practices such as

¹³ 2018 Tuolumne County General Plan Updated EIR.

prescribed burning resulted in reduced ground covering shrubs and thickets, reduced crown canopy cover, lower tree density, and dominance of fire-resistant tree species like ponderosa pine¹⁴. Since European settlement, many of the Ponderosa pine trees have been cut for timber.

To aid the rapidly growing gold and timber industry, multiple roads were built and paved to increase the flow of supplies from the eastern Sierras to western foothills. The natural storage of water via lakes and reservoirs in the Sierra Nevada mountains resulted in the development of dams, water systems, and other utilities that stretched from the mountains to foothill towns to encourage economic growth in the region¹⁵. Natural water systems were also re-routed to aid with the second wave of gold mining in the 1880s that required moving water to separate gold ore from the surrounding sediment, also known as “placer mining”¹⁶. This resulted in a change in the vegetative landscape to decreased tree canopy and density and increased species richness. The amount of impervious surfaces has also increased as a result of buildings, roads, and other developments. Currently, the landscape within the corridor consists mostly of gravel, grass, sidewalk pavements, rows of trees, or a few street trees and shrubs in areas with building development.

A map of existing vegetation is provided in **Figure 17**.

¹⁴ https://pubs.usgs.gov/dds/dds-43/VOL_II/VII_C46.PDF.

¹⁵ <https://tchistory.org/up-in-the-hills/>.

¹⁶ <https://tusccountystories.com/2023/01/30/william-watson-gold-mining-and-a-california-tragedy/>.

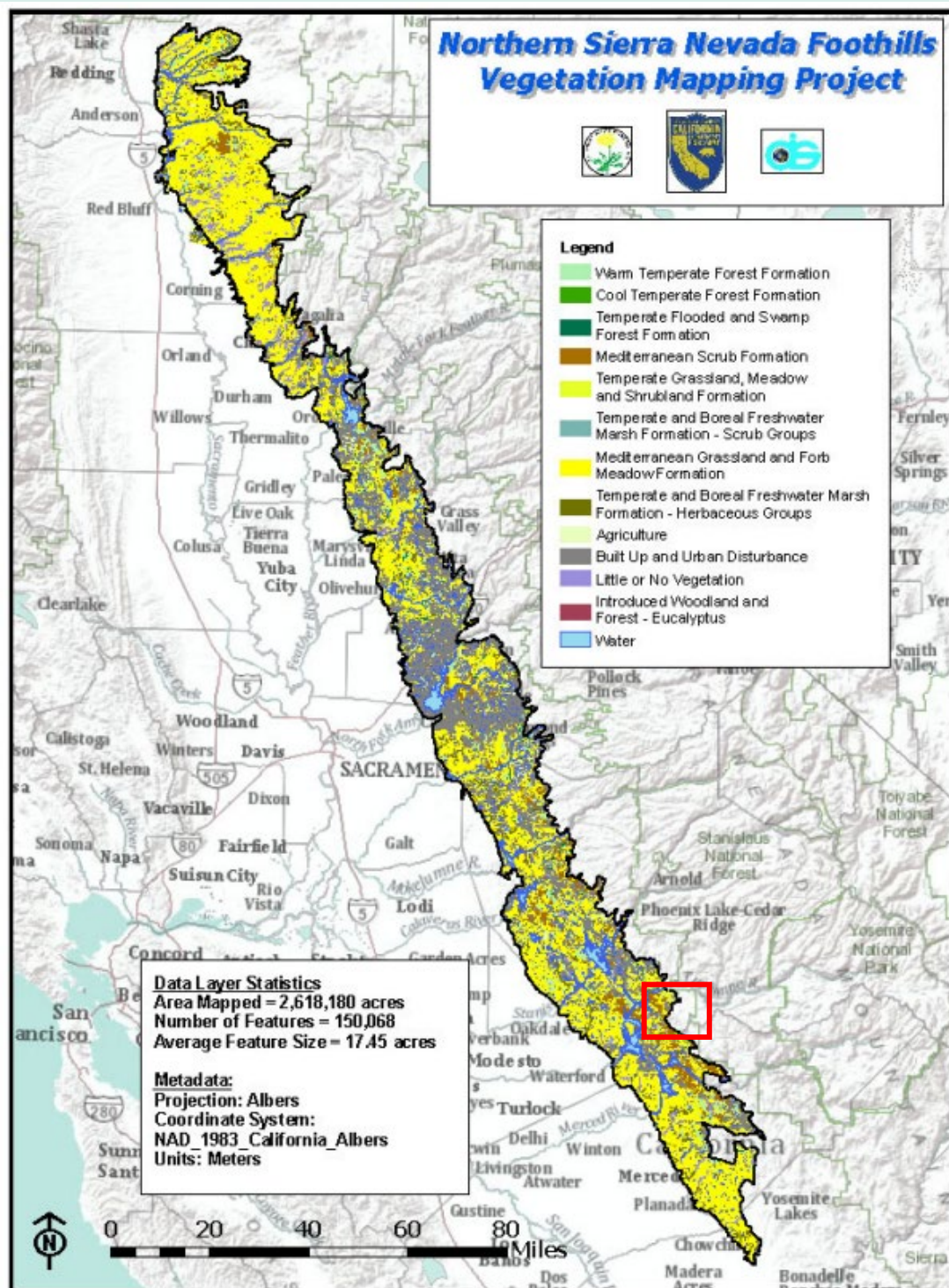


Figure 17. Vegetation Map of Northern Sierra Nevada Foothills

(Source: 2011 California Native Plant Society)

6.4 Corridor Topography

The project area begins at higher elevations near Parrotts Ferry Rd and runs through the Browns Flat and Shaws Flat area, a relatively flat riverine valley (Woods Creek) that had significant mining activity during the mid-19th century and consisted of mining camps. The project area terminates to the south at lower elevations in downtown Sonora near Sonora High School. Sonorians, a term describing Spanish-speaking miners from Sonora, Mexico, settled in a camp along Woods Creek currently known as Sonora High School during the early 19th century¹⁷.

Drainage generally flows westerly downslope from the Sierra Nevada mountains through Sonora to lower elevation lakes and reservoirs. Sonora is generally south facing with tributaries such as Woods Creek, Portuguese Gulch, O'Neil Ditch, and Shaws Flat Ditch draining into Tuolumne River to the south. Prominent hillsides around the project area include Bald Mountain and Squabbletown to the east. Figure 18 below shows the percent rise or inclination of slope for the project area. Areas with lower percent rise indicates a flatter terrain, where 0 is a flat surface, and higher percent rise indicates more vertical inclines, where 100 is a 45-degree angle.

Geologic surveys show that the project area consists of fine-loamy, alluvium or riverine deposits (Qa) and mixed soils¹⁸ and are classified in the late Paleozoic and early Mesozoic periods. The project area is primarily underlain by metasedimentary bedrock^{19,20}:

- Marble – white to gray-blue recrystallized limestone and dolomite (M_zP_zcm), and
- Calaveras Complex – mix of strongly foliated argillite, phyllite, quartzite, schist, chert, and extensive marble lenses and blocks (M_zP_zcc).

¹⁷ <https://tchistory.org/sonora-crossroads-of-tuolumne-county/>.

¹⁸ USDA. Natural Resources Conservation Science Web Soil Survey. Accessed at <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.

¹⁹ Spangler, E.R., Holland, P.J., Schweickert, R., and O'Neal, M.D., 2023, Preliminary geologic map of the Columbia 7.5' Quadrangle, Calaveras and Tuolumne counties, California, California Geological Survey, Preliminary Geologic Maps PGM-23-01, 1:24,000. Accessed at <https://ngmdb.usgs.gov/mapview/?center=-120.369,37.987&zoom=13>.

²⁰ Wills, C.J., O'Neal, M.D., Holland, P.J., Parrish, B.M., and Delattre, M.P., 2021, Preliminary geologic map of the east half of the Oakdale 30' x 60' quadrangle, California [superseded by PGM 22-09], California Geological Survey, Preliminary Geologic Maps PGM-21-04, 1:100,000. Accessed at <https://ngmdb.usgs.gov/mapview/?center=-120.369,37.987&zoom=13>.

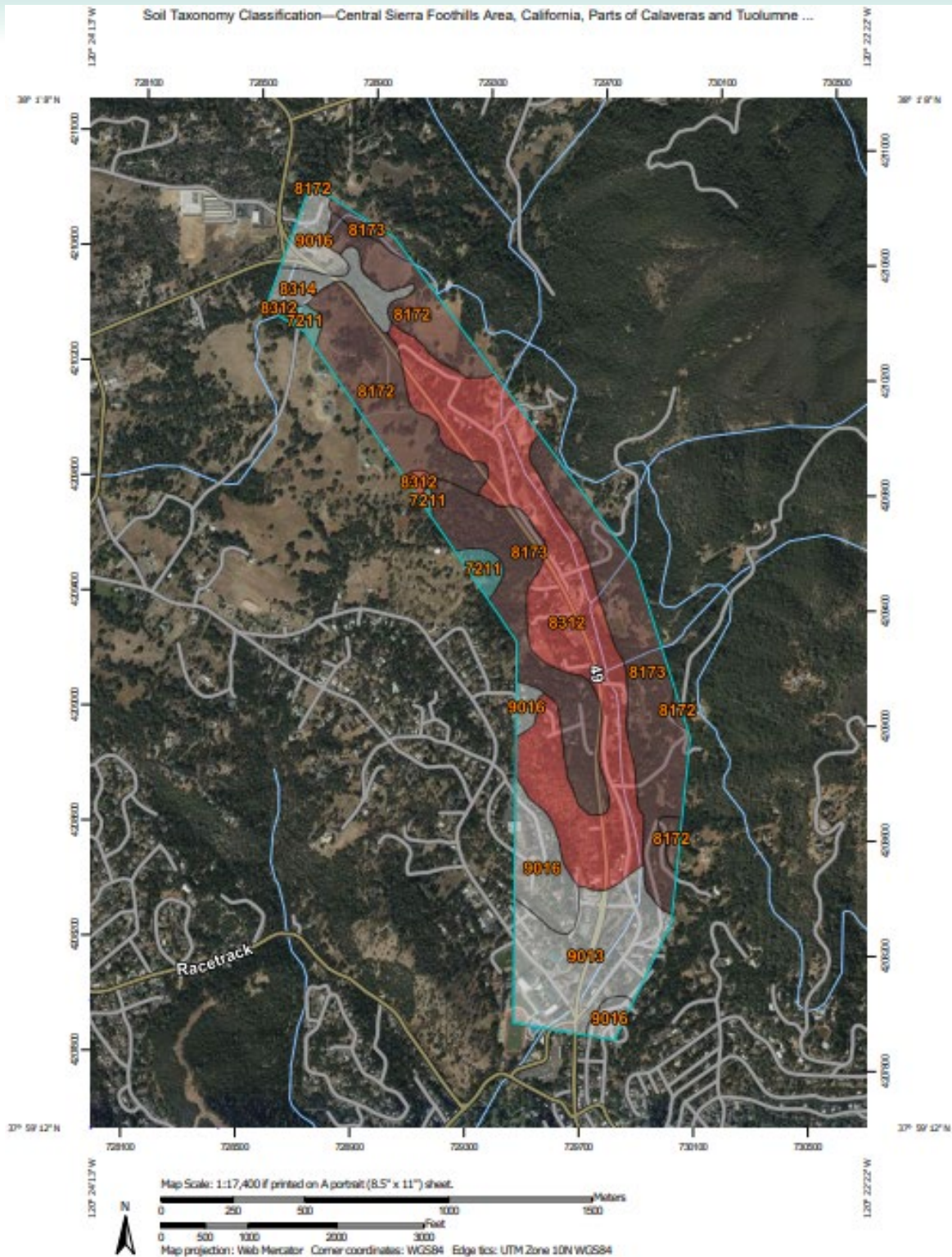


Figure 18. Soil Taxonomy Classification for Phase 2 Corridor

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
7211	Milvilla-Luckymine complex, 15 to 30 percent slopes	Fine-loamy, mixed, active, thermic Ultic Haploxeralfs	7.6	2.0%
8172	Nedsgulch-Wallyhill-Arpatutu complex, 15 to 30 percent slopes	Fine-loamy, mixed, semiactive, mesic Ultic Palexeralfs	64.3	16.7%
8173	Nedsgulch-Wallyhill-Arpatutu complex, 30 to 60 percent slopes	Fine-loamy, mixed, semiactive, mesic Ultic Palexeralfs	103.0	26.8%
8312	Aquariusmine-Milvilla complex, 3 to 30 percent slopes	Fine-loamy, mixed, superactive, thermic Vertic Haploxeralfs	113.8	29.6%
8314	Rock outcrop-Tiger Creek-Vertic Haploxerepts complex, 1 to 45 percent slopes		11.3	3.0%
9013	Urban land-Milvilla complex, 1 to 25 percent slopes		49.3	12.9%
9016	Urban land-Nedsgulch-Wallyhill complex, 15 to 30 percent slopes		34.7	9.0%
Totals for Area of Interest			383.9	100.0%

6.5 Historical, Tribal, and Cultural Significance

Tribal history goes back to time immemorial when the Me-Wuk peoples first settled in the Tuolumne region. Year-round Me-Wuk villages were usually located on ridges near a major spring or drainage confluence below the heavy snow line (about 3,500–4,000 feet in elevation). Seasonal and temporary camps occurred in higher elevations and floodplains that were convenient for hunting, gathering, and fishing. There was an estimated 35 pre-1848 villages in the County, indicating that the County was a significant residential and resource procurement area for the Central Sierra Me-Wuk²¹. The Sonora Pass that is now SR 108 was an important trading route with neighboring tribes located in the eastern Sierras. Since the development of the region after 1848, the Central Sierra Me-Wuk have consolidated under two federally recognized reservations, as shown in the figure below.

²¹ 2018 Tuolumne County General Plan Update Draft EIR.

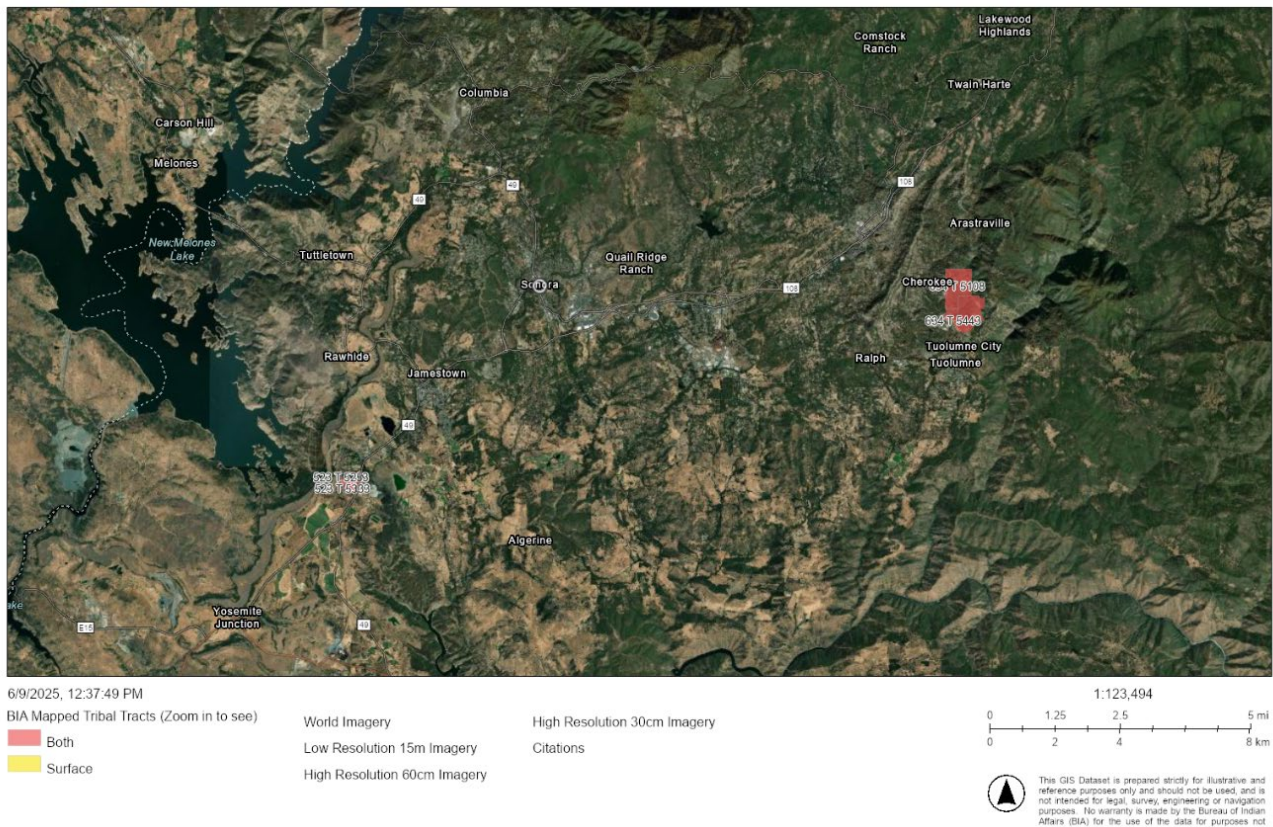


Figure 19. Tribal Reservation Land

The incorporation of Sonora dates back to 1851, as the 10th oldest city in California and was founded as a mining town during the California Gold Rush. The following places within the City of Sonora have been listed under the National Register of Historic Places:

- Cady House – 72 N. Norlin Street
- City Hotel – 145 S. Washington Street
- Sugg House – 37 Theall Street
- Tuolumne County Courthouse – 41 W. Yaney Avenue
- Courthouse Square
- Tuolumne County Jail – 156 W. Bradford Avenue

A historic landmark located within the City of Sonora boundaries resides St. James Anglican Church and is formally listed on the California Historical Landmarks (No. 139). Also known as the Red Church, named after the California Redwood, the historic building

was built in 1859 and is one of the oldest Episcopal Church buildings in the state. It is located at the intersection of SR 49 (Washington Street) and Snell Street.

Other historically significant buildings that represent the City’s unique history include the following:

- Coffill Park
- Opera Hall
- Sonora Fire Museum
- Prospector Park
- Grigsby Park
- Dragoon Gulch Trail
- Shay Engine #3
- Morgan Mansion
- Bradford Building
- Wells Fargo Building
- City Hotel
- Sonora Inn
- Gunn House
- Tuolumne County Museum
- Tuolumne County Veterans Museum

7 Right-of-Way

7.1 Public Right-of-Way

The Caltrans corridor approximately follows the project limits. It widens at Parrotts Ferry Rd to allow for any future intersection expansions. Right-of-Way maps for the 2-mile Phase 2 segment are provided in **Appendix A: Tuolumne Heritage Trail Phase 2 Corridor Survey**.

7.2 Typical Cross Sections

The typical cross sections of the corridor have been broken up into segments that best demonstrate the variety and most common condition throughout the corridor. Curb cuts for all segments within the corridor are mapped in Figure 21.



Figure 21. Curb Cuts Bisecting SR 49 (Kimley-Horn, 2025)

7.2.1 Cross Section – Segment 2

This is the southernmost segment of SR49 consisting of a 52-foot-wide right-of-way (ROW). The ROW includes an 8-foot sidewalk on one side, 12-foot lanes going both directions, a 12-foot center running median, and 4-foot shoulders on each side. This segment begins by Sonora Veterinary Group to the north and ends by Arco Gas Station to the south. The terrain within this segment is generally flat with a downward slope to the southern portion of the segment near Sonora High School. Main businesses surrounding this segment include Sonora Custom Cycles, Provost & Pritchard Consulting Group, Vic’s Towing yard, Arise Tattoo, and other visitor and resident serving uses that are nearby downtown Sonora. Vegetation consists mainly of chaparral communities such as scrub oak, coast live oak, and dry grassy areas typical of the Sierra Nevada foothills. Streetlights, utility manholes,

fire hydrants, and water pipelines are prevalent at the southernmost portion of the segment around the three-way intersection. There are no dedicated bike lanes or sharrows along this segment of SR49. Speed limits are posted at 25 to 35 mph. There are 21 existing curb cuts that intersect SR 49 and where vehicles can access the main corridor. Streets that intersect SR 49 in this segment include:

- Shaws Flat Road
- Columbia Way
- Steffen Lane
- O'Hara Drive
- Dossi Way
- Preston Place
- Various unnamed private driveways

Existing Cross Section - Segment 2: Shaw Mills Flat to Arco Gas Station

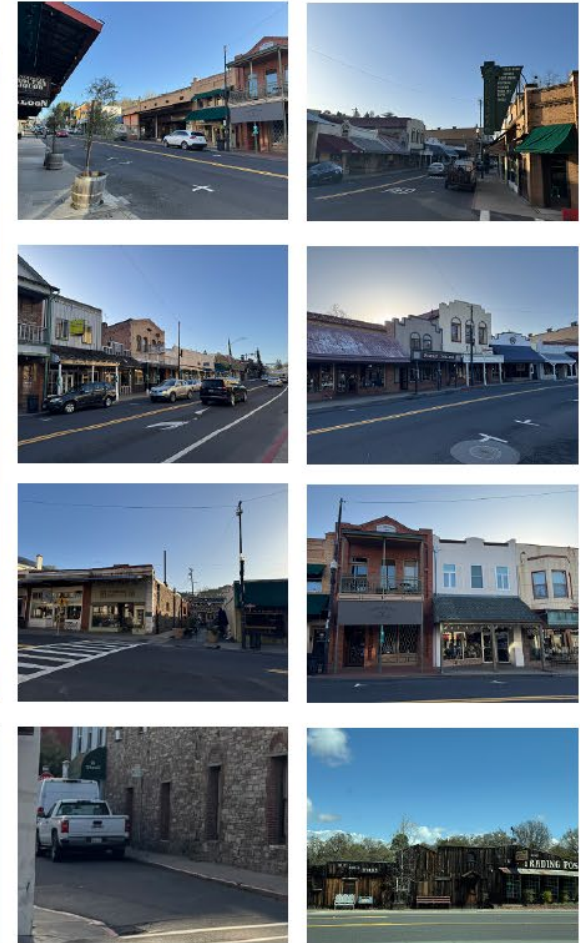
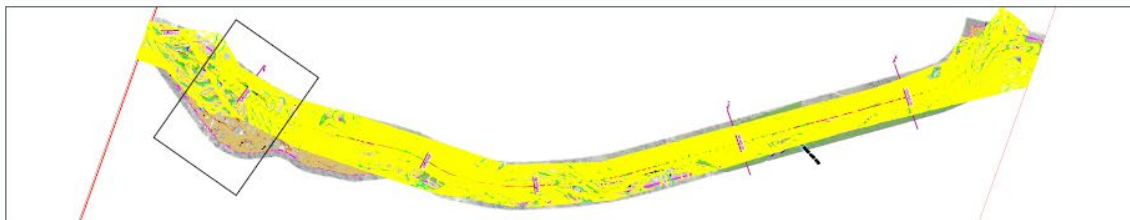


Figure 22. Existing Cross Section - Shaw Mills Flat to Arco Gas Station

7.2.2 Cross Section – Segment 3

This segment has the narrowest and most constrained condition with a trenched topography. The southern portion of the segment spans about 29 feet wide and then narrows closer to the north portion of the segment where the right-of-way spans 24 feet in width with only two 12-foot lanes on both sides. The segment is generally flat with a slightly downward towards the south and is surrounded by thick rows of trees which slopes uphill on both sides. This segment begins by Old Sonora Columbia Road to the north and ends by Sonora Veterinary Group to the south. Sonora Christian Life Center is the main point of interest and is predominantly undeveloped. Existing vegetation comprises of dense oak trees and shrubs. There are no pedestrian sidewalks or demarcation for bicycles. ROW shoulders are narrow and covered with sediment from upslope. Utility manholes and streetlights are generally dispersed along SR49. There are four (4) curb cuts that intersect SR49, including:

- Old Sonora Columbia Road
- Jack Page Road
- Unnamed paved private driveways

Existing Cross Section - Segment 3: Arco Gas Station to Sonora Veterinary Group

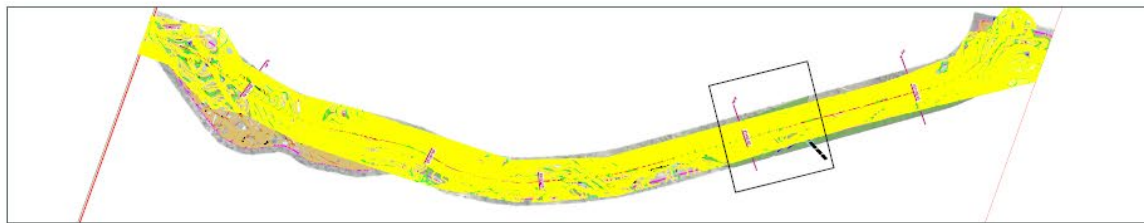


Figure 23. Existing Cross Section - Arco Gas Station to Sonora Veterinary Group

7.2.3 Cross Section – Segment 4

This segment consists of 37-foot right-of-way that includes two 12-foot travel lanes going both directions, a 3-foot shoulder on one side, and a 10-foot shoulder on the other side. Portions of the 3-foot shoulder are covered by upslope debris that constrains potential pedestrian or bicycle uses. Portions of the 10-foot shoulder are intersected with wide curb cuts that allow vehicles to park, load, or idle away from the main traffic along SR49. The topography on this area has a slight grade change with an upward terrain where the larger shoulder is and a downward terrain on the side with a smaller shoulder. This segment begins by Parrots Ferry Rd to the north and ends by Old Sonora Columbia Road to the south. There are no buildings or businesses along this segment of SR49 and is lacking utility improvements. There are no intersections that bisect or cross the segment, however, the northernmost portion of the SR49 segment is wider due to a dedicated right hand turn lane and center median.

Existing Cross Section - Segment 4: Old Sonora Columbia Rd to Parrots Ferry Rd

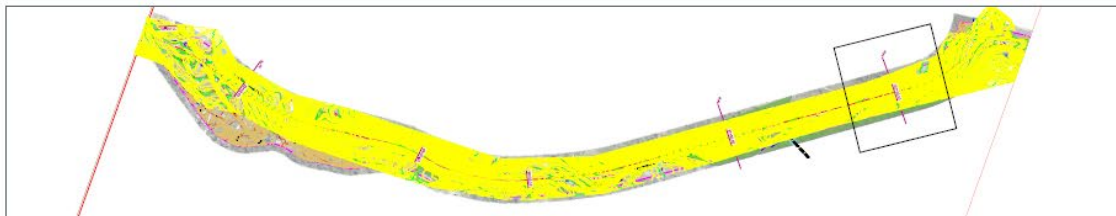
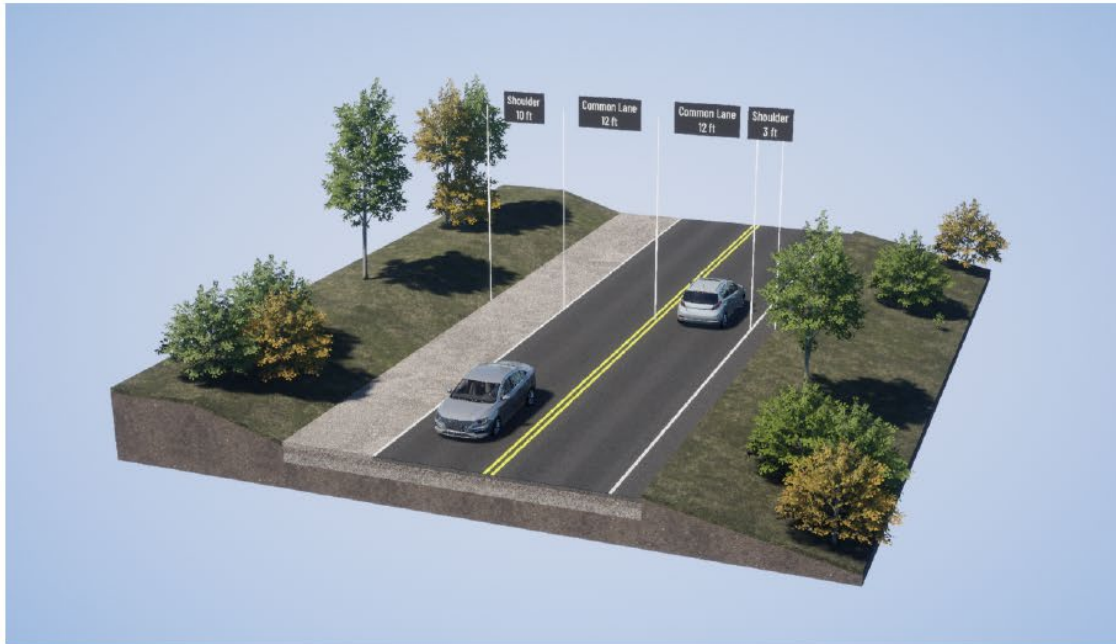


Figure 24. Existing Cross Section - Old Sonora Columbia Rd to Parrots Ferry Rd

Parcels surrounding the project area are primarily privately owned by individuals whereas commercial properties closer to downtown Sonora are privately owned by LLCs or organizations.

7.4 Easement and Acquisition Needs

The survey conducted by Unico Engineering for the Phase 2 corridor was reviewed to identify the potential right-of-way needs required to support Phase 2 of the Tuolumne Heritage Trail. Based on preliminary review, the construction of a Class I Bikeway along SR 49 would require easement or acquisition of between 10 and 40 adjacent parcels, each ranging from 2 to 40 feet in width, depending on design of the facility and alternative selected for construction.

7.5 Grading Challenges and Required Retaining Walls

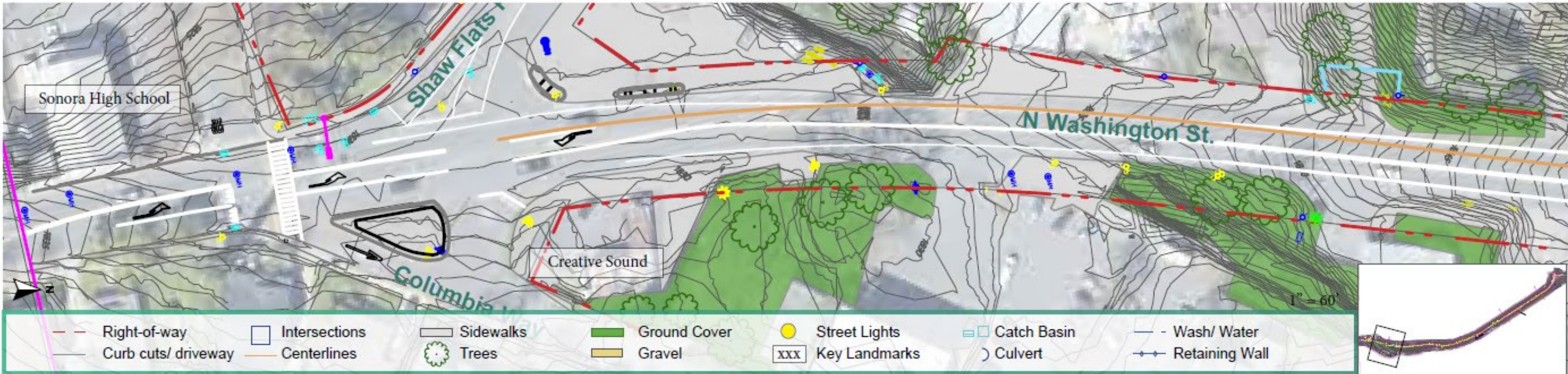
In the Phase 2 project area, SR 49 passes through hilly terrain. Therefore, the excavation or fill required to build the Class I Bikeway will significantly affect the price and complexity of construction. The existing conditions on both the west and east side of SR 49 are considered to help determine if one side is significantly more favorable for earthwork and retaining wall needs than the other.



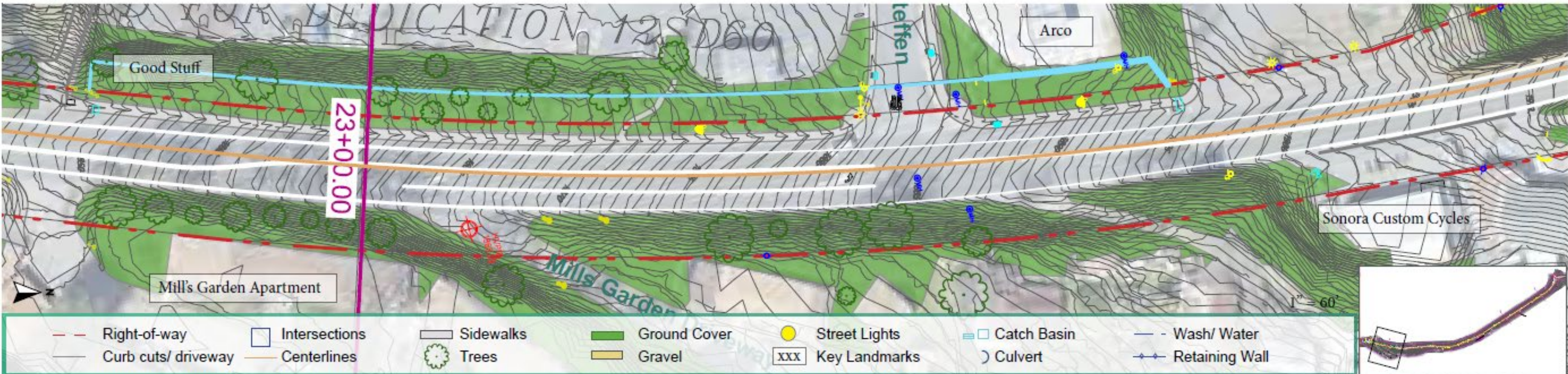
Appendix A: Tuolumne Heritage Trail Phase 2 Corridor Survey



Segment 2a: Shaw Flat Road to Arco

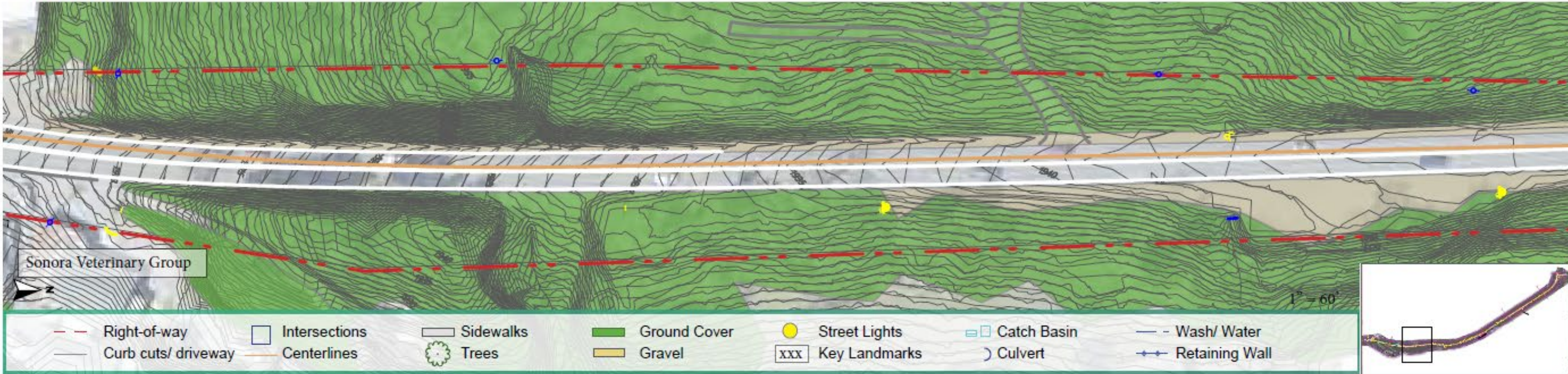


Segment 2b: Shaw Flat Road to Arco

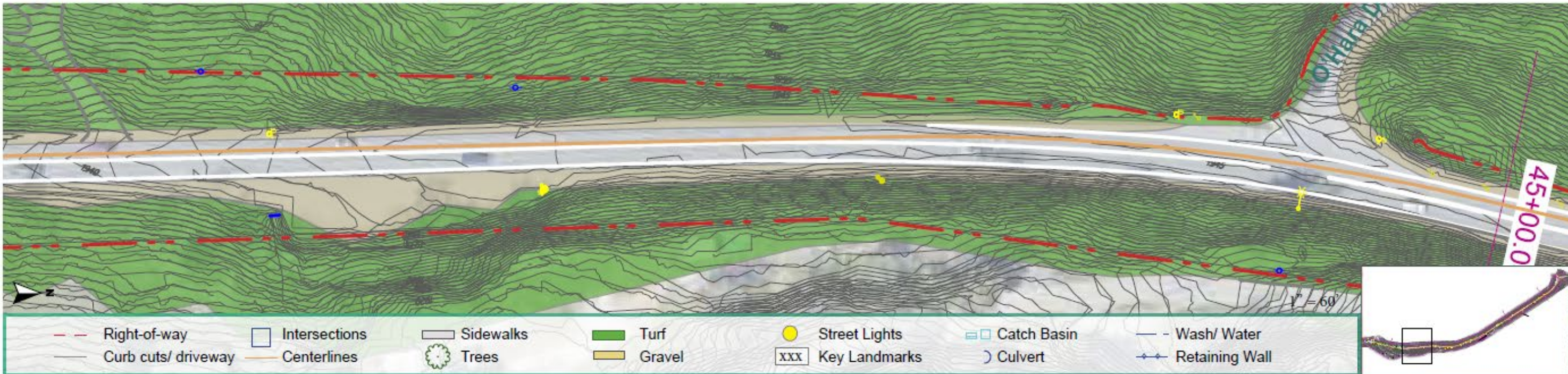




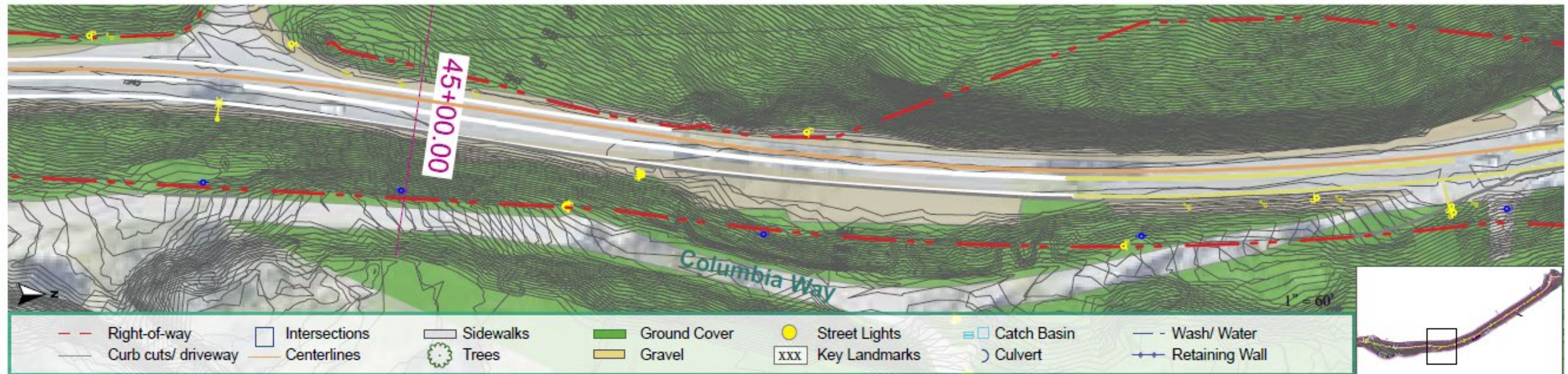
Segment 3a: Sonora Veterinary Group to O'Hara Drive



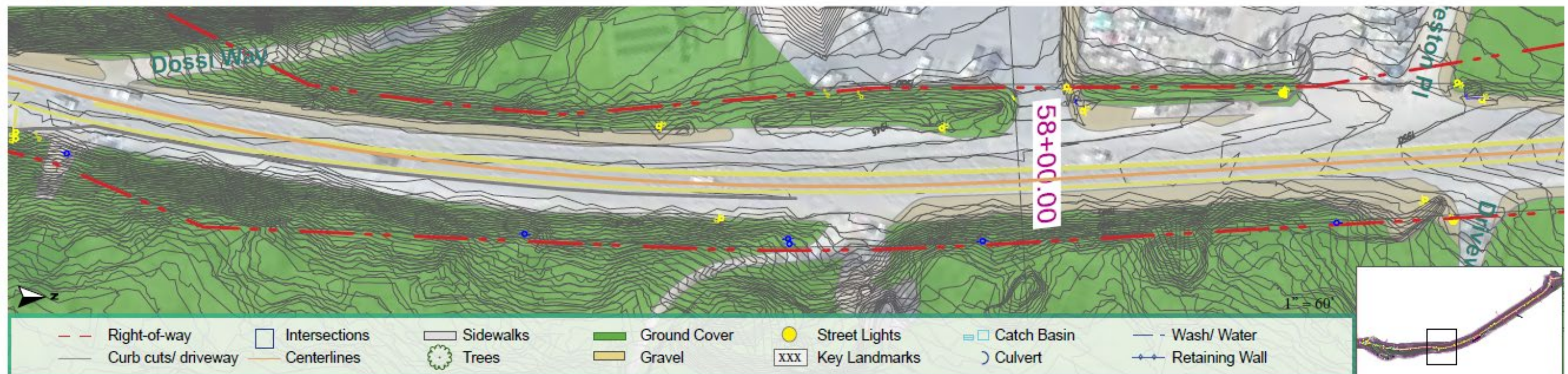
Segment 3b: Sonora Veterinary Group to O'Hara Drive



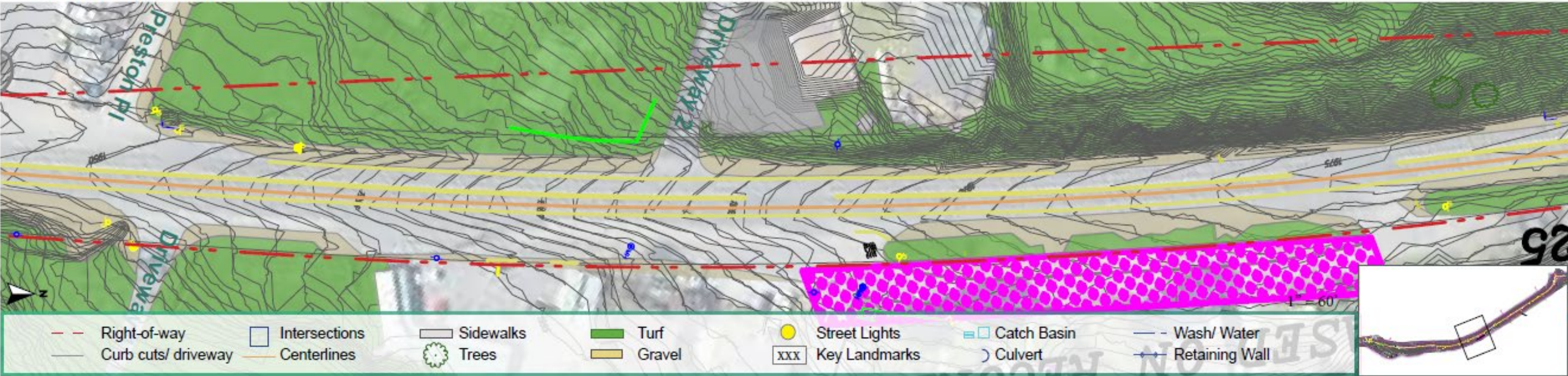
Segment 4a: O'Hara Drive to Preston Place



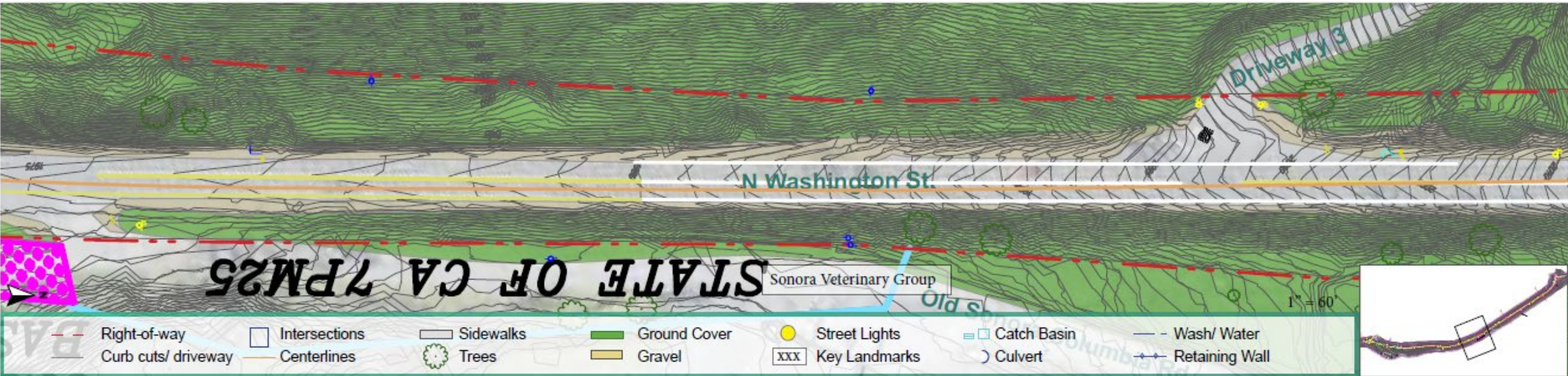
Segment 4b: O'Hara Drive to Preston Place



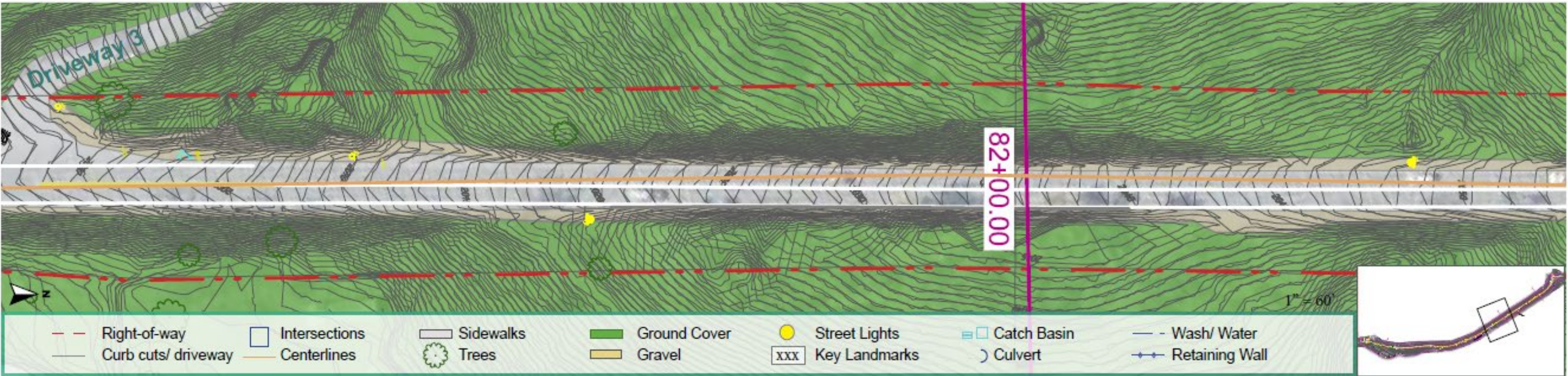
Segment 5a: Preston Place to Sonora Veterinary Group



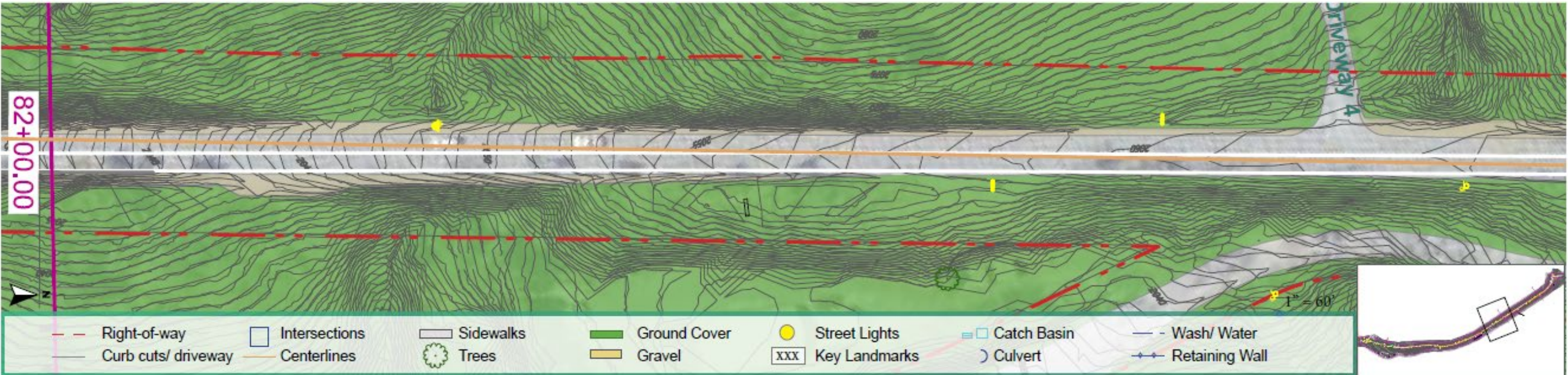
Segment 5b: Preston Place to Sonora Veterinary Group



Segment 6a: Driveway 3 to Driveway 4

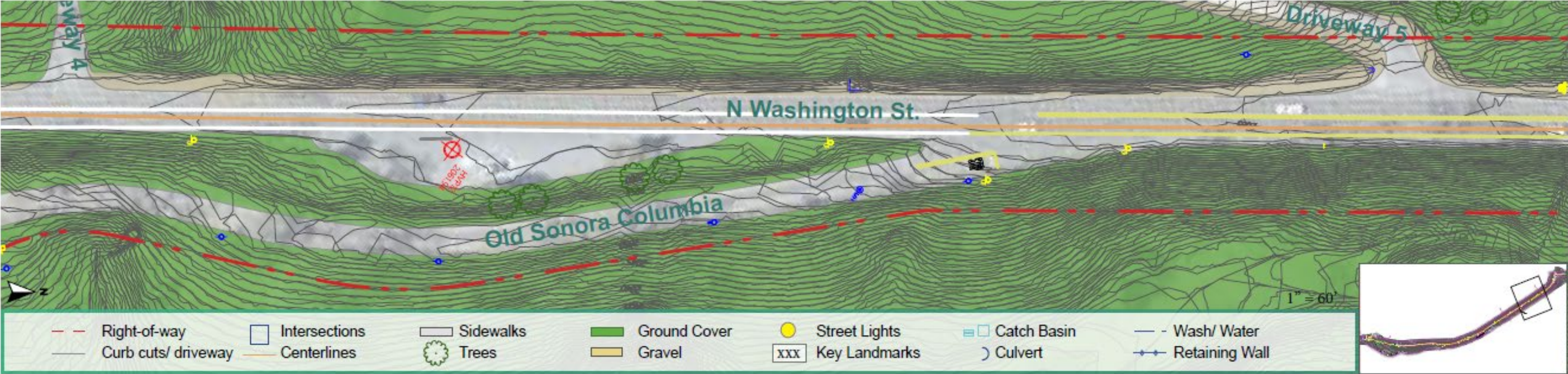


Segment 6b: Driveway 3 to Driveway 4

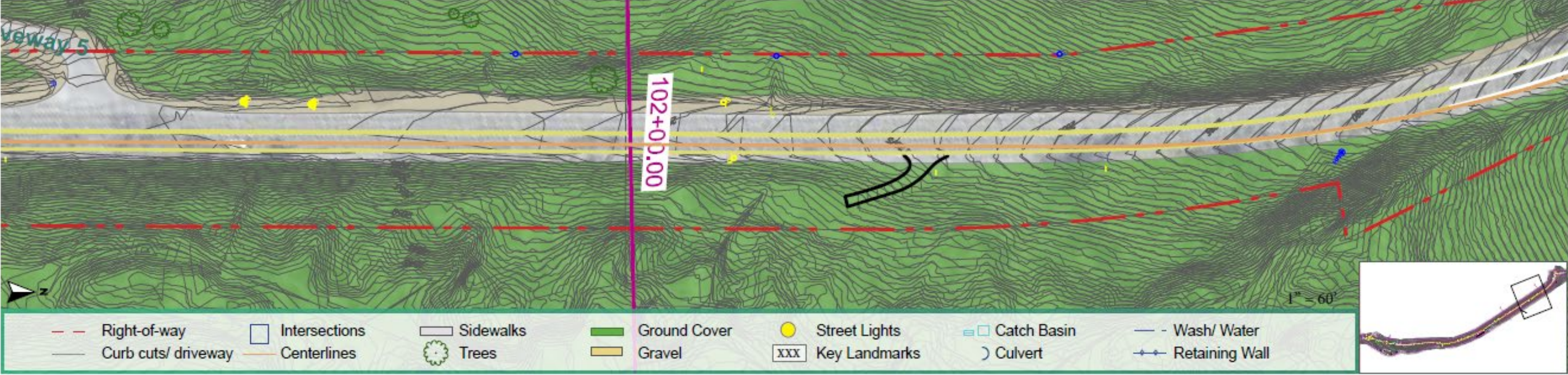




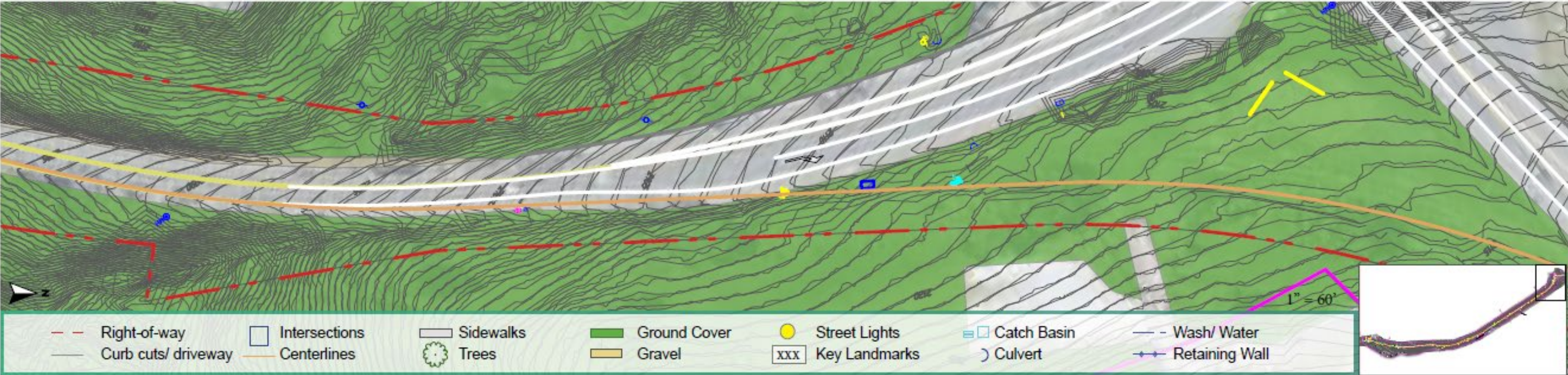
Segment 7a: Driveway 4 to Driveway 5



Segment 7b: Driveway 4 to Driveway 5



Segment 8a: Driveway 5 to Parrots Ferry Road



Segment 8b: Driveway 5 to Parrots Ferry Road

