

Lake Transit Hub Location Plan Draft



Prepared for the
Lake County/City Area Planning Council

Prepared by



LSC Transportation Consultants, Inc.

LAKE TRANSIT HUB LOCATION PLAN

Public Draft

Prepared for the

Lake County/City Area Planning Council
Under Work Element 6 of the Overall Work Program

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PROJECT OVERVIEW

Lake Transit provides public transit service throughout Lake County including the cities and unincorporated communities, as well as providing connections to Napa County and Mendocino County. An important factor in an effective regional transit network is the transfer point where passengers make connections between routes. The existing transfer site (located at the former Ray's Food Place Supermarket in the City of Clearlake) for Lake Transit Authority (LTA) includes several deficiencies, particularly pertaining to security issues, inadequate size (requiring turnaround on private land), poor public image, and a lack of control over land and utilities. To address this, the Lake Area Planning Council (APC) has initiated a study of locating a new and enhanced transit hub.



While Lake Transit ridership levels declined in the most recent recession and as the result of a labor strike, in the last few years transit improvements have led to a rise in ridership levels. An improved transit center is important in enhancing the overall transit program, and ensuring that adequate capacity is available to accommodate future ridership growth. Transit centers are key elements of a successful public transit agency, for the following reasons:

- ◆ To the *passenger*, the facility is a crucial link in the overall transit trip and optimally should provide easy access, comfort, protection from the elements, a sense of security, pleasant surroundings, and a clear view of the approaching bus.
- ◆ To the *public*, passenger facilities are essential in forming the public perception of the transit program, they are visible “on the street,” and part of the community 24/7.
- ◆ To the *service provider*, facilities can make the boarding and alighting process safer in terms of traffic and passenger safety, and more efficient by speeding passenger boarding through the provision of effective queuing areas, thereby reducing delays getting in and out of traffic.

With the assistance of a consulting team consisting of LSC Transportation Consultants, Design Workshop and WRLDCO Consulting, this study evaluates potential sites for a new transit facility for the Lake Transit. More specifically, this study is intended to identify the program, site and configuration of a new transit transfer facility that can maximize the effectiveness of the transportation program, provide secure services and amenities to the riders of the transit service, and serve as a positive element in

downtown Clearlake. This facility is intended to focus on the needs of the transit passengers, and not to serve as the office or maintenance/bus storage facility for Lake Transit.

This document provides Lake APC, Lake Transit, the City of Clearlake and the public with a summary of existing site conditions and program requirements, an evaluation of potential project sites, and findings on the part of the Consultant Team. The first chapter presents a review of existing local plans and policies in Lake County as well as an overview of demographic trends which typically lead to public transit usage. Next, a summary of the local transit program and the associated requirements for a transit center are presented. The later chapters evaluate a series of potential transit site options, along with the advantages and disadvantages of each. Lastly, this document provides recommendations for a preferred site, alternative site and back-up site for a new transfer hub along with a program, and general design concepts.

STAKEHOLDER AND COMMUNITY INPUT

A wide variety of community input was sought as part of this planning process. Appendix A presents supporting materials for the stakeholder/community input effort. At the outset of the project, an advisory group representing LTA, Lake APC, City of Clearlake, and Caltrans met to discuss potential sites and issues to be addressed during the study. This group met in person and via teleconference multiple times over the course of the study to ensure that the project remained focused on pertinent issues and adequately addressed all community concerns.

After the completion of the first Technical Memorandum and the identification of a preferred site, a design charrette was held on May 12th, 2016 at the Clearlake City Council Chambers. Roughly 20 people attended including City Council members, County Board of Supervisors, Lake APC board members, County/City staff, Clearlake Police Department and representatives from neighboring uses. A list of Charrette invitees is included in Appendix A along with advertisements for the Charrette and the public open house.

The objective of the charrette was to make stakeholders aware of the need for the project and to discuss the alternative sites and scenarios. After a power point presentation and initial discussion, attendees were provided a tour of the existing transfer hub, preferred site as well as the potential site at the Burns Valley Shopping Center. After returning to the City Council Chambers, lunch was provided and a final discussion ensued. After the charrette, Study Team members held a public open house in the lobby of the Clearlake City Hall just prior to the City Council meeting. This provided the public with the opportunity to view and comment on 3D illustrations of potential transfer hub designs and location.

The primary concern voiced by attendees of the charrette was that the preferred transfer hub location is too close to the Konocti Education Center School and Woodland Community College. As a result some charrette attendees felt there would be an increase in the flow of transients through the campuses resulting in crime on campus

and threatening student safety. To address these concerns, the Study Team expanded the scope of the study to include: 1) a peer review of other transit centers located near a school or college, 2) hiring a security expert to review potential security mitigation measures, 3) and conducting a second workshop focused on addressing security concerns. In addition to the workshop, the Study Team and security consultant met separately with the Clearlake Police Department, Konocti Education Center, and Woodland Community College. This report reflects the results of this additional effort.

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LAKE COUNTY AND THE CITY OF CLEARLAKE

Lake County is positioned in the north central portion of California, bounded by Mendocino County to the north and west, Glenn County to the north, Colusa and Yolo Counties to the east, and Napa and Sonoma Counties to the south. This area covers approximately 1,329 square miles, of which 1,256 square miles are land. Lake County is positioned around Clear Lake, which spans 19 miles by 8 miles and represents the largest body of freshwater located entirely within California. Five main highways traverse the area: State Route (SR) 20, SR 29, SR 281, SR 175, and SR 53.



Located at the eastern portion of Lake County, the City of Clearlake is the primary economic and population center in Lake County. Lakeport, the other city in Lake County, located on the Western shore of Clear Lake, represents the county seat. Other notable Census-designated places in the outlying portions of the study area include Middleton, Nice, Upper Lake, Lucerne, Kelseyville, Lower Lake, Soda Bay, North Lakeport, Spring Valley, Hidden Valley Lake, Cobb, Clearlake Riviera, and Clearlake Oaks. Figure 1 presents a map of the Lake County area.

Existing Demographics

In 2014, Lake County had a total population of 64,209, according to the *2014 American Community Survey 5-Year Estimates*. The distribution of this population (in terms of City, Census-designated place, and transit dependence) is presented in Table 1. As shown, approximately 24 percent of this population is located within the City of Clearlake.

When evaluating a program for a potential transit center, it is important to look at concentrations of “transit dependent” population – those elements that typically have a higher propensity to use transit services. This includes seniors, persons with disabilities, youths and low-income persons, as shown in Table 1. There is considerable overlap among these groups. A review of this data indicates the following:

- In 2014, the U.S. Census estimated that roughly 26.0 percent of the population was **elderly** (over the age of 65 years) in Lake County. This proportion of seniors outweighs that of California (17.5 percent) by roughly 10 percent. Of the cities and places listed in the table, Clearlake has the greatest number of senior residents, followed by Lakeport. In terms of seniors proportional to the local populations, Soda Bay has the greatest proportion of seniors (69.2 percent of the population), followed by Clearlake Oaks (50.8 percent of the population).



**Figure 1
Lake County Site Map**

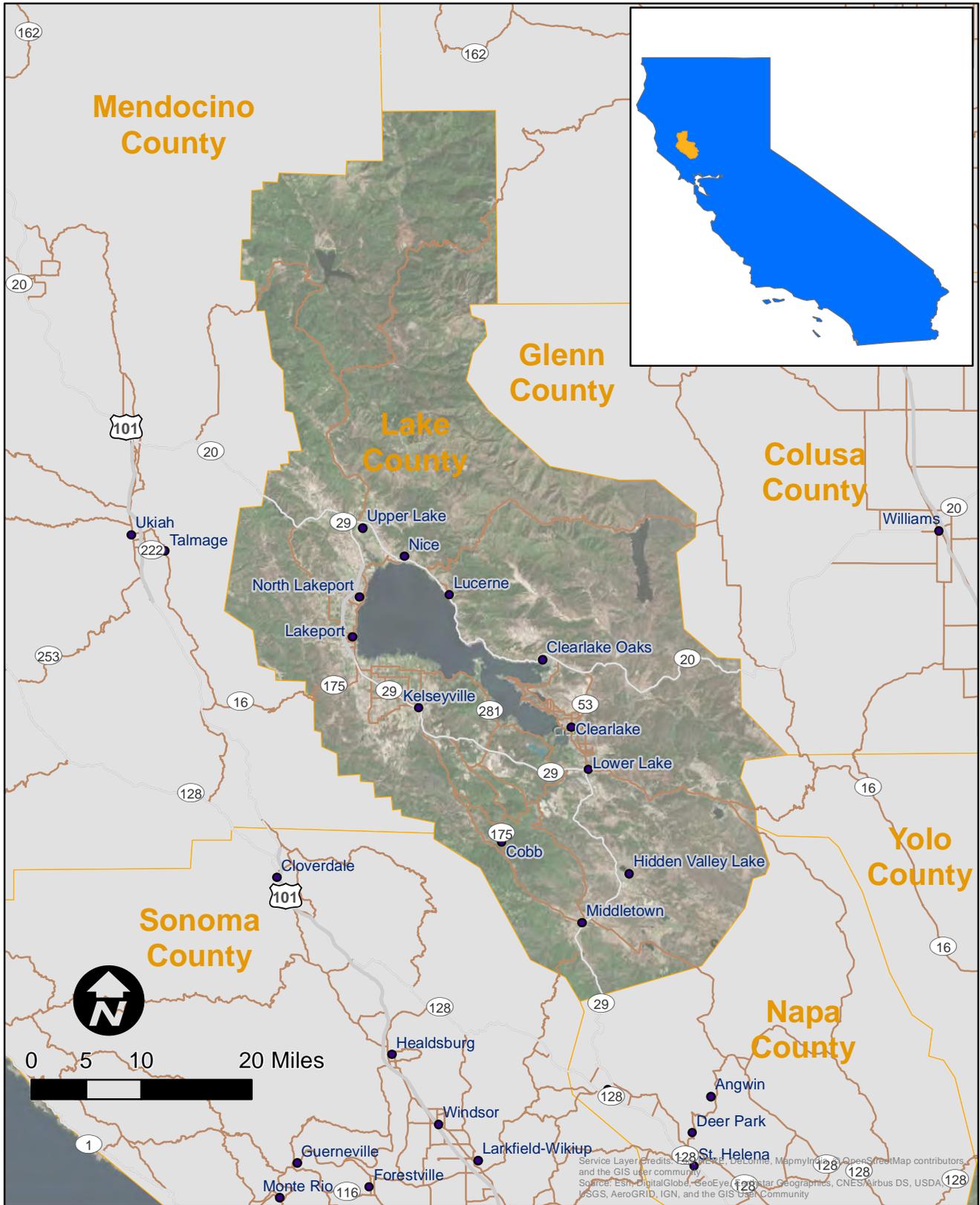


TABLE 1: Population within Lake County

City/CDP	Total Population		Youth (0-17 Years)		Seniors (65+ Years)		Disabled Population		Low Income Population	
	#	%	#	%	#	%	#	%	#	%
Clearlake City	15,121	23.5%	3,281	21.7%	3,402	22.5%	3,871	25.6%	5,262	34.8%
Clearlake Oaks	1,547	2.4%	181	11.7%	786	50.8%	388	25.1%	541	35.0%
Clearlake Riviera	2,912	4.5%	530	18.2%	649	22.3%	620	21.3%	510	17.5%
Cobb	1,147	1.8%	292	25.5%	219	19.1%	143	12.5%	223	19.4%
Hidden Valley Lake	6,168	9.6%	1,844	29.9%	1,184	19.2%	623	10.1%	765	12.4%
Kelseyville	3,516	5.5%	784	22.3%	520	14.8%	686	19.5%	1,160	33.0%
Lakeport City	4,746	7.4%	892	18.8%	1,561	32.9%	793	16.7%	940	19.8%
Lower Lake	1,620	2.5%	235	14.5%	352	21.7%	321	19.8%	164	10.1%
Lucerne	3,318	5.2%	1,062	32.0%	839	25.3%	800	24.1%	1,334	40.2%
Middletown	1,073	1.7%	273	25.4%	374	34.9%	223	20.8%	150	14.0%
Nice	2,156	3.4%	235	10.9%	568	26.3%	578	26.8%	539	25.0%
North Lakeport	2,676	4.2%	466	17.4%	838	31.3%	439	16.4%	487	18.2%
Soda Bay	1,369	2.1%	86	6.3%	947	69.2%	459	33.5%	211	15.4%
Spring Valley	1,000	1.6%	60	6.0%	335	33.5%	464	46.4%	308	30.8%
Upper Lake	755	1.2%	254	33.6%	219	29.0%	204	27.0%	181	24.0%
Remainder Lake County	15,085	23.5%	2,752	18.2%	4,349	28.8%	2,552	16.9%	2,829	18.8%
Total Lake County	64,209	100.0%	13,227	20.6%	17,144	26.7%	13,163	20.5%	15,603	24.3%
State of California	38,066,920	100.0%	9,212,195	24.2%	6,661,711	17.5%	3,920,893	10.3%	6,242,975	16.4%

Source: 2010-2014 American Community Survey 5-Year Estimates

- ◆ Regionally, roughly 20.6 percent of the Lake County population was in the **youth** category (ages 0-17), compared to 24.2 percent in the overall state. Clearlake has the largest youth population (3,281 individuals), followed by Hidden Valley Lake (1,844 individuals) and Lucerne (1,062 individuals). The largest proportion of individuals (33.6 percent) in the youth category resides in Upper Lake.
- ◆ Approximately 20.5 percent of the Lake County population have some type of **disability**. This is nearly double the 10.3 percent of disabled residents within the state of California. Clearlake has the largest disabled population (3,871 disabled individuals) of any region within the Lake County.
- ◆ Lastly, **persons living below the poverty level** is another indicator of the potential transit system ridership. The US Census uses a set of thresholds that vary by family size and age to determine the poverty level for each household. According to the U.S. Census, approximately 24.3 percent of the Lake County population is living below the poverty level, surpassing the state poverty rate (16.4 percent) by roughly 8 percent. Clearlake has a relatively high number of low income residents (5,262 persons), making up roughly 1/3 of the overall low-income population of Lake County.

Demographic Forecasts

Lake County’s rural nature and relatively low cost of living provides the potential for future development and thus an increase in population. According to the California Department of Finance population projections, it is estimated that Lake County’s population will reach 83,532 persons in 2035 (Table 2), an increase of roughly 26.1 percent from 2015 base figures. As shown in the table, the population of the State of California is projected to grow by a lower rate of 17.6 percent overall between 2015 and 2035.

TABLE 2: Population Projections within Lake County					
City/CDP	2015	2020	2025	2030	2035
Lake County Population	66,219	70,690	75,426	79,577	83,532
<i>% Change Every 5 Years</i>	--	6.8%	6.7%	5.5%	5.0%
California Population	38,896,969	40,619,346	42,373,301	44,085,600	45,747,645
<i>% Change Every 5 Years</i>	--	4.4%	4.3%	4.0%	3.8%
<i>Source: CA Department of Finance</i>					

EXISTING LAKE COUNTY AND CLEARLAKE PLANS

It is important for projects to be developed in accordance to adopted plans. The following studies illuminate potential changes to traffic volumes and circulation within the area surrounding the existing transfer hub, as well as planned changes in the public transit network.

SR 53 Corridor Study

According to the study, the long term plan for State Route 53 is a 4-lane freeway/expressway. A Caltrans *Transportation Concept Report* was completed in March, 2014 to further define this project. This study highlighted a preferred interchange location of 18th Avenue and SR 53, which would necessitate the closing of the Dam Road intersection. The SR 53 Corridor Study (2011) identifies alternative interchanges at Center St. and Woodland Community College Access Road, which could potentially affect a new transit center location. Currently there is no finalized alternative for potential SR 53 interchanges, nor is there funding available to make the improvements. It is not likely that an interchange would be constructed in the project study area over the next 20 years or more; however it would not make sense to relocate the transfer hub in the next 20 years.

Walmart Expansion Study

The Walmart in Clearlake has put forth a proposal to expand its building area by 38,741 square feet (from its current 109,517 square feet). This project will include additional space on the sales floor area (to implement fresh food sales), an additional vestibule, and two additional loading docks. This Walmart facility is located directly across the parking lot from the existing transfer point. Many transit passengers disembarking at the transfer point and bound for Woodland Community College walk through the Walmart parking lot to get to the college.

Omni-Means Engineering Solutions conducted a traffic study in December, 2015 to review traffic impacts of the proposed project. This study included traffic counts and potential traffic changes during weekday AM and PM times, as well as Saturday mid-day periods. The following intersections were included within the study:

- ◆ Lakeshore Drive & Old Highway 53
- ◆ 40th Avenue & State Route 53
- ◆ 18th Avenue & State Route 53
- ◆ Old Highway 53/Dam Road & State Route 53
- ◆ Dam Road & Dam Road Extension
- ◆ Dam Road & Walmart Driveway
- ◆ State Route 29 & State Route 53

The study estimated a total of 8,197 average daily trips based on observed traffic counts. Using this figure, the study projected that the expansion will lead to an additional 2,994 daily trips (increasing daily trip numbers by 37 percent). An increased

number of trips will increase the potential for conflict between transit passengers bound for Woodland Community College and Walmart patrons. Of greatest concern for the expanded Walmart project is the proposed heavy duty truck route which will turn left off of Dam Road directly across from the existing transfer site and travel through the parking lot to the east side of the building. The new truck route would be located directly in the path of transit passengers walking to Woodland Community College. At the time of this writing, the project is in the middle of the environmental review process.

Phillips Ave Extension

The expansion of Phillips Avenue will connect the area near Konocti Education Center and Woodland Community College to the neighborhood north, referred to as “The Avenues”. Specifically, roadway will continue north of the Dam Rd Extension/ South Center Drive intersection along the north border of the Konocti Education Center, then curve north to connect with Phillips Avenue. The project will include two 12 foot wide travel lanes and four foot wide bicycle lanes on each side. This will provide greater connectivity between the region surrounding the existing transfer point and the residential neighborhood, particularly if bicycle lanes and/or sidewalks are continued south along the existing Dam Road Extension. This project went out to bid in Spring of 2017.

Lake County 2014-15 Coordinated Public Transit – Human Services Transportation Plan

This plan included the following elements:

- ◆ Bus Stop Improvement Program – The Plan identified the need to improve the signage and information provided at Lake Transit bus stops. At minimum, each stop should have a clear sign identifying that it is indeed a bus stop. Furthermore, Lake Transit should aim to provide information regarding which buses service each stop and scheduling information at most if not all bus stops.
- ◆ Develop non-emergency medical transportation alternatives – In order to achieve this goal, the Plan suggests implementing enhanced transit connections, life-line services and other initiatives.

2015 Transit Development Plan & Marketing Plan

The Plan identified the following goals for service changes to routes in the study area:

- ◆ Alter Route 5 service in the 6 PM hour to better coordinate with Woodland Community College students
- ◆ Extend Route 1 to Konocti Vista Casino, which would include the elimination of Route 8 (to be replaced with a local community service route) and extension of Route 1

- ♦ Consider adding Sunday service to the intercity routes
- ♦ Possible expansion of Route 1 to Cache Creek Casino
- ♦ Consider connecting Lake Transit to Santa Rosa and Cloverdale

2015 Lake County Transit Energy Use Reduction Plan

The Plan identified the following recommendations to reduce Lake Transit's energy use:

- ♦ Implement indoor and outdoor light replacements and UV film installation - completed
- ♦ Investigate feasibility of solar installation (in form of bus canopy at current facilities)
- ♦ Acquire four electric buses (and associated charging station) – applied for grant
- ♦ Investigate feasibility of full or partial conversions to propane and/or natural gas

The new transit center should include facilities such as electric vehicle charging stations to help me LTA meet energy reduction plan goals.

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EXISTING LAKE TRANSIT SERVICES

As shown in Figure 2, Lake Transit provides fixed route service throughout Lake County and beyond, with fixed route service available in Clearlake, Upper Lake, Lakeport, Kelseyville, and Middletown and regional routes connecting to Deer Park (Napa County), Soda Bay, and Ukiah (Mendocino County). In general, service is provided Monday through Saturday between the hours of 7:00 AM and 6:00 PM. Certain routes operate weekdays only and/or during different hours. For general public riders, local fares are \$1.25 and regional fares range from \$2.25 to \$5.00. Discounted fares are available for elderly (ages 65 and over), disabled, children (ages 5 and under) and family riders (defined by two children between ages 6 and 12, riding with at least one adult).



Curb-to-curb Dial-A-Ride (DAR) service is available in the Clearlake/Lower Lake area as well as the Lakeport area during the fixed route operating hours. Passengers must be eligible for DAR services under the Americans with Disabilities Act. Outside of the DAR service area, Lake Transit's Flex Stop program allows passengers to request curbside service up to one mile from the regular fixed routes. The general public can utilize Flex Stop at a higher fare than disabled and other discount riders.

Existing Routes

The following presents a summary of LTA fixed route services available at the time of this writing.

Route 1 – North Shore, Clearlake to Lakeport

Route 1 travels along the north shore of Clear Lake between Clearlake and Lakeport. Transfers are available at the existing transfer point and Sutter Lakeside Hospital. The westbound route travels every one or two hours, on the hour, between 6:00 AM and 7:00 PM. The eastbound route travels every hour (except for a two hour break at mid-day) at 30 or 35 minutes past the hour between 6:00 AM and 8:00 PM, while the westbound runs operated on similar frequency between 6:00 AM and 7:00 PM. The route originates in Clearlake, and includes additional stops in Clearlake Oaks, Glenhaven, Lucerne, Nice and Upper Lake.

Route 2 – Middletown

Route 2 operates between downtown Middletown and Kit's Corner in Soda Bay (and does not serve Clearlake). The route runs four times daily both southbound and

**Figure 2
Lake Transit Routes**



northbound between the hours of 6:30 AM and 6:30 PM. Several locations are served within the Mountain Resorts area. A timed transfer to or from Route 4 at Kit's Corner provides travelers with a connection to Lakeport or Clearlake. Transfers are also available in Middletown at Hwy 29 & Young St.

Route 3 – Highway 29, Clearlake to Deer Park

Route 3 operates between Clearlake (existing transfer point) and Deer Park (St. Helena Hospital). Other areas served include Lower Lake, Hidden Valley Lake, Middletown, and Calistoga. The southbound route includes five daily runs between the hours of 6:10 AM and 4:50 PM. The northbound route runs five times per day between Middletown and Clearlake, with 2-4 runs stopping in Deer Park and Calistoga. Transfers are available at the existing transfer point in Clearlake and Hwy 29 & Young St (Middletown).

Route 4 – Southshore, Clearlake to Lakeport

Route 4 travels between Clearlake and Lakeport, servicing Lower Lake, Rivas, Kelseyville, and several areas within Lakeport. Service is relatively frequent (every one – three hours) between 6:00 AM and 8:30 PM. Transfers are available at Third & Main in Lakeport, which connects with Route 7 to Ukiah. Other transfers take place at Kit's Corner (Rivas) and the existing transfer point in Clearlake.

Route 4A – Soda Bay, Kit's Corner to Lakeport

Route 4a provides three runs westbound and three runs eastbound between Kit's Corner (Soda Bay) and Lakeport. (It does not serve Clearlake.) This route serves four stops in Lakeport, three stops along Soda Bay Road, as well as stops in Kelseyville, Finley and Big Valley Rancheria. Transfer connections are available at both end stops (Kit's Corner on Soda Bay Rd and Third & Main in Lakeport).

Route 7 – Lakeport to Ukiah

This intercity route passes between Lakeport and Ukiah, while also stopping through Robinson Rancheria, Upper Lake, and Blue Lakes. Several Ukiah stops are served, including Mendocino College, Pear Tree Center/Amtrak/Mendocino Transit Authority, Veterans Clinic, and the Airport/Greyhound Station. Four roundtrips are provided each day between the hours of 7:55 AM and 7:00 PM.

Route 10 – Clearlake/Clearlake Park -- North Loop

Routes 10, 11 and 12 combine to provide local service in the Clearlake/Lower Lake area. Route 10 provides hourly service from 5:19 AM to 8:45 PM along a route connecting SR 49 in Lower Lake to Bush Street in northwest Clearlake. In the vicinity of the study area, this route serves the existing transfer point in the northbound direction.

Route 11 – The Avenues Loop

This route operates hourly from 5:40 AM to 8:47 PM. It serves Woodland Community College and the existing transfer point, and then operates in two directions along the same route through The Avenues area north of the study area, before serving a loop consisting of Lakeshore Drive, Olympic Drive, and Old Highway 53.

Route 12 – Clearlake/Lower Lake -- South Loop

Operating hourly between 6:27 AM and 6:49 PM, this route serves Lower Lake (using the same streets as Route 10), as well as central and northeast Clear Lake (similar to Route 11). Unlike the other routes, it serves the existing transfer point twice per hour (after both the southern and northern portions of the route).

TRANSIT OPERATIONS

Existing Fixed Route Ridership

Table 3 presents ridership on each fixed route from FY 2012-13 to FY 2015-16. Within the last four years, ridership on Lake Transit Fixed Routes has ranged from 344,554 one-way passenger-trips (in FY 2012/13) to 361,325 one-way passenger-trips (in FY 2015-16). Overall fixed route ridership increased by 4.9 percent during this time period.

Route 8 (Lakeport) and the Clearlake Routes (Routes 10, 11 and 12) accounted for all of the ridership increase on the fixed routes. The Clearlake Routes alone 175,490 one-way passenger trips in FY 2015-16. Route 2 which travels along Highway 175 carried only 2,762 one-way passengers trips in FY 2015-16. The high level and growth of ridership in the City of Clearlake indicates that Clearlake is a good location for a transit hub.

Variety of incidents outside of the control of LTA affected ridership during this time period. In August 2013, the transit contractor had a labor strike which caused LTA to discontinue service for one month. As a result, LTA lost some respect in the community. In FY 2015-16 Lake County experienced massive wildfires. Although the fires had a devastating effect on the community, LTA received a grant to provide fare free transit for one month. This in turn boosted ridership.

Levels of Service and Vehicle Fleet

In Fiscal Year 2014-15, Lake Transit operated a total of 1,003,603 vehicle revenue miles and 46,894 vehicle revenue hours. Using the ridership figure presented above, Lake Transit services are carrying approximately 0.33 passengers per vehicle mile, and 7.1 passengers per vehicle hour. This is on par with similar transit programs that provide services in other rural areas, with long travel distances to complete. Total annual operating costs are approximately \$2.83 million.

TABLE 3: LTA Fixed Route Ridership by Route Between FY 2012-13 and FY 2015-16

	FY 12/13	FY 13/14	FY 14/15	FY 15/16	% Change FY 12/13 - FY 15/16
Route 1	73,978	55,996	64,354	70,936	-4.1%
<i>% Total</i>	21.5%	18.7%	20.0%	19.6%	
Route 2	6,882	6,100	5,355	2,762	-59.9%
<i>% Total</i>	2.0%	2.0%	1.7%	0.8%	
Route 3	23,617	18,878	21,908	19,463	-17.6%
<i>% Total</i>	6.9%	6.3%	6.8%	5.4%	
Route 4	47,601	34,309	36,861	39,779	-16.4%
<i>% Total</i>	13.8%	11.5%	11.5%	11.0%	
Route 4A	7,754	6,063	5,520	4,641	-40.1%
<i>% Total</i>	2.3%	2.0%	1.7%	1.3%	
Route 7	17,027	13,430	13,261	13,380	-21.4%
<i>% Total</i>	4.9%	4.5%	4.1%	3.7%	
Route 8	28,088	21,313	25,489	34,874	24.2%
<i>% Total</i>	8.2%	7.1%	7.9%	9.7%	
Clearlake Routes	139,607	142,885	149,003	175,490	25.7%
<i>% Total</i>	40.5%	47.8%	46.3%	48.6%	
Total	344,554	298,974	321,751	361,325	4.9%

Source: LTA 2015 Transit Development-Marketing Plan

Currently, Lake Transit has a fleet of 31 vehicles, ranging from 12-seat minibuses to 32-seat buses. Table 4 presents a consolidated view of the current fleet by seating capacity. As shown, all of the vehicles have wheelchair capacity for 2 to 4 wheelchair riders.

Existing Transit Activity Patterns

Clearlake Boarding Patterns

Table 5 displays Lake Transit boarding and alighting patterns at Clearlake stops measured as daily averages over a six day period (Monday through Saturday). This data was collected as part of the 2015 Transit Development Plan. As shown, the existing transfer point represents the busiest Clearlake stop, accounting for a combined 352 (or 59.0 percent of total) boardings and alightings per day. Other common stop

TABLE 4: Lake Transit Authority Vehicle Fleet

# in Fleet	Manufacturer	Wheelchair Capacity	Seating Capacity
2	Eldorado MST II	2	30
2	Eldorado Aerotech	2	16
5	Glaval Titan	2	29
3	Eldorado Aerotech	3	17
3	Glaval Entourage	2	28
7	Glaval Universal	2	18
1	Glaval Universal	4	12
1	Glaval Legacy	2	32
1	Glaval Titan II	2	16
4	Glaval Legacy	3	27
2	Glaval Legacy	2	29

TABLE 5: Clearlake Boarding and Alighting Summary

Average Daily Boardings

Location	Boardings		Alightings		Total Boardings & Alightings	
	#	%	#	%	#	%
Existing Transfer Point	198	65.0%	154	52.8%	352	59.0%
Austin Park	16	5.3%	16	5.4%	32	5.3%
Old Hwy 53 & Lakeshore	12	3.9%	16	5.3%	27	4.6%
Bush & 2nd	12	3.8%	15	5.0%	26	4.4%
Clearlake Family Practice	10	3.2%	13	4.5%	23	3.8%
Veterans Clinic	10	3.1%	10	3.3%	19	3.2%
Social Services	6	2.1%	6	2.1%	13	2.1%
St Helena Hospital	6	2.0%	8	2.7%	14	2.3%
Olympic and Burns Valley	6	1.9%	6	2.1%	12	2.0%
Burns Valley	6	1.8%	9	3.2%	15	2.5%
Parallel Dr	6	1.8%	8	2.8%	14	2.3%
Yuba College	5	1.8%	6	1.9%	11	1.8%
Clearlake Park Post Office	5	1.5%	14	4.6%	18	3.0%
Safeway	5	1.5%	8	2.7%	13	2.1%
Konocti Vista Casino	5	1.5%	2	0.8%	7	1.1%
Phillips & 40th	0	0.0%	2	0.6%	2	0.3%
Total	304	100.0%	292	100.0%	596	100.0%

Source: 2015 Transit Development & Marketing Plan

locations (with a combined boarding and alighting figure of at least 4 percent of the total) include Austin Park, Old Hwy 53 & Lakeshore, and Bush & 2nd.

Analysis was done to compare the number of combined boardings and alightings at the existing transfer point at different hours throughout the day. While the stop is slightly busier at certain times (such as 7:30 – 8:30 AM, 11 AM, 12:00 – 1:00 PM, and 3:00 PM) the stop use is relatively consistent over the day.

Transit Destination Patterns

The 2015 Transit Development Plan included a survey of Clearlake riders to identify the common destinations among Lake Transit riders in the Clearlake region. The results of this study proved that The existing transfer point was the most common destination, representing the travel destination for 27.3 percent of total respondents. Other popular destinations included Lakeshore and Clearlake Park.

Passenger Survey

During the week of November 4, 2013, an on-board passenger survey was conducted on Routes 1, 2, 3, 4, 4a, 7, 8, as well as the Clearlake routes. A sample of 363 participants responded to questions regarding demographics, transit use, communication, and service satisfaction. The following survey results are relevant to this study:

- ◆ Among the respondents, 51 percent lived in Clearlake, followed by Lucerne (9 percent), Lakeport (9 percent) and Clearlake Oaks (7 percent).
- ◆ The largest proportion of respondents are ages 41-64 (34 percent), followed by 25-40 (24 percent) and 18-24 (19 percent).
- ◆ A significant 44 percent of all respondents are unemployed.
- ◆ Only 9 percent of the respondents are Woodland Community College students and 5 percent are Mendocino College students.
- ◆ A substantial 55 percent of respondents have no license and no car.
- ◆ In terms of trip purpose, the most prevalent trips were to go shopping (26 percent), to work (23 percent), to school/college (21 percent), to recreational activities (19 percent) and to medical appointments (17 percent).
- ◆ A total of 2 percent of respondents were using a wheelchair, and 3 percent were using a bicycle. Route 7 had the highest proportion of wheelchair users (6 percent) and Routes 2, 3, and 4A has the highest proportion of bicycle riders (respectively 8, 6, and 7 percent).

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EXISTING TRANSFER POINT

The existing LTA transfer point is located on the north side of the former Ray's Food Place building at the eastern dead end of Dam Road, as shown in Figure 3. This site provides three bus shelters and three bus pullouts. Six LTA fixed routes transfer at this location (three regional routes and three City of Clearlake routes). Many common destinations for public transit users are within walking distance of the transfer point including: Walmart, Woodland Community College, County Courts, County Mental Health Department and St. Helena Hospital. As such, the existing transfer point in Clearlake represents a key location within the overall transit network.



Tables 6 and 7 present information on bus activity at The existing transfer point during peak morning and afternoon hours. As shown in the tables, there is a maximum of 6 buses (not accounting for Dial-A-Ride vehicles) at the transfer point at peak times. In the morning hours between 6:00 AM and 10:00 PM, the hour marks of 7:00, 8:00, and 9:00 are the busiest, with 5 buses stopped at The existing transfer point (as shown in Table 6). As illustrated in Table 7, peak evening bus activity occurs around 7:00 PM, with 5 to 6 buses stopped at The existing transfer point at one time.

Deficiencies of Existing Transfer Point

As indicated at the beginning of this document, there are currently substantial deficiencies at this key stop.

Long-term Uncertainty

LTA does not own the land the transfer point is located on. Rather, LTA had an agreement with the former grocery store (Ray's Food Place) at the existing transfer site for its use. During the course of this study Ray's Food Place in Clearlake closed. At this point, it is unknown if and how long LTA will be allowed to continue to use the site. If LTA were forced to relocate the transfer point, it could disrupt transit service with little warning. If LTA were to have ownership or a secure lease for a transfer hub, there would be greater certainty about the future of the transfer hub and the reliability of the transit system.



Figure 3 Existing Transfer Hub Location

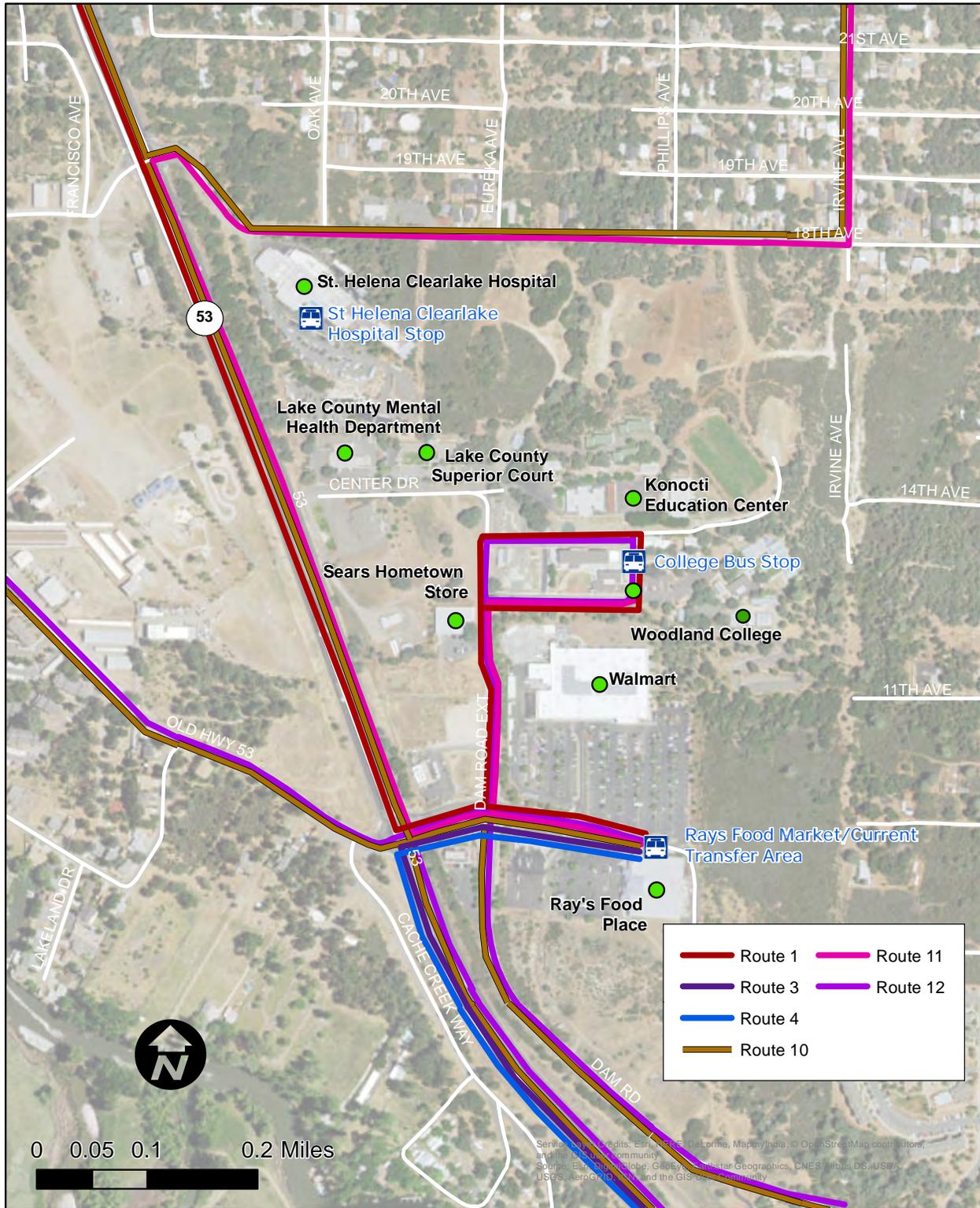


TABLE 6: Existing AM Peak Hour Transit Buses at the Existing Transfer Point

Weekday

Time (AM)	Lake Transit Routes through Clearlake						Total Transit Buses Onsite
	1 N Shore Clearlake to Lakeport	3 Hwy 29 Clearlake to Deer Park	4 South Shore Clearlake to Lakeport	10 Clearlake/ Clearlake Park North Loop	11 The Avenues Loop	12 Clearlake/ Lower Lake South Loop	
6:00	Dep		Dep	Dep	Dep		4
6:05							0
6:10		Dep					1
6:15							0
6:20							0
6:25							0
6:30							0
6:35							0
6:40							0
6:45				Arr	Arr		2
6:50			Arr			Arr	4
6:55							4
7:00	Dep		Dep	Dep	Dep	Dep	5
7:05							0
7:10							0
7:15							0
7:20							0
7:25							0
7:30							0
7:35			Arr				1
7:40							0
7:45				Arr	Arr	Arr	3
7:50							3
7:55	Arr	Dep					5
8:00	Dep			Dep	Dep	Dep	4
8:05							0
8:10							0
8:15							0
8:20							0
8:25							0
8:30		Arr					1
8:35							0
8:40							0
8:45				Arr	Arr	Arr	3
8:50							3
8:55							3
9:00	Dep		Dep	Dep	Dep	Dep	5
9:05							0
9:10							0
9:15	Arr						1
9:20							1
9:25							1
9:30	Dep						1
9:35							0
9:40							0
9:45				Arr	Arr	Arr	3
9:50	Arr						4
9:55							3
10:00				Dep	Dep	Dep	3

Source: LTA Website

TABLE 7: Existing PM Peak Hour Transit Buses at the Existing Transfer Point

Weekday

Time (PM)	Lake Transit Routes through Clearlake						Total Transit Buses Onsite
	1 N Shore Clearlake to Lakeport	3 Hwy 29 Clearlake to Deer Park	4 South Shore Clearlake to Lakeport	10 Clearlake/ Clearlake Park North Loop	11 The Avenues Loop	12 Clearlake/ Lower Lake South Loop	
4:30			Arr				1
4:35							0
4:40							0
4:45				Arr	Arr	Arr	3
4:50		Dep					4
4:55							3
5:00			Dep	Dep	Dep	Dep	4
5:05							0
5:10							0
5:15							0
5:20							0
5:25							0
5:30							0
5:35							0
5:40							0
5:45				Arr	Arr	Arr	3
5:50	Arr						4
5:55							4
6:00	Dep			Dep	Dep	Dep	4
6:05							0
6:10							0
6:15							0
6:20							0
6:25							0
6:30							0
6:35							0
6:40							0
6:45			Arr	Arr	Arr	Arr	4
6:50	Arr	Arr					6
6:55							5
7:00	Dep			Dep	Dep	Dep	4
7:05							0
7:10							0
7:15							0
7:20							0
7:25							0
7:30							0
7:35							0
7:40							0
7:45				Arr	Arr	Arr	4
7:50	Arr						3
7:55							3
8:00				Dep	Dep	Dep	3

Source: LTA Website

Capacity Constraints

The existing transfer point limits the number of buses and passengers which can be safely and efficiently accommodated at one time.

- ◆ Amenities are limited to three large bus shelters, which have inadequate capacity to accommodate peak loads.
- ◆ The bay has capacity for up to three buses at a time. However, there are currently up to six buses scheduled to be at the stop at one time, consisting of Routes, 1, 3, 4, 10, 11, 12. This results in buses stretching along the access drive, with passengers loading/unloading along the shoulder. Delays in transit service can occur if buses are waiting in line to pick up/drop off passengers.

Geographic Location

The existing transfer point is adjacent to major commercial centers (Ray's and Walmart). It may be more beneficial to be more closely located to other key transit generators such as the County Human Services office and Woodland Community College, St. Helena Hospital and the branch office of the Lake County Behavioral Health Department.

The existing site is located adjacent to a brush-covered hillside which has become a camp for transient residents. Because of the proximity to this camp and the cover provided by the vegetation, it is not unusual for illegal activities such as selling drugs to occur near the transfer point. There is also greater potential for confrontations with passengers.

Traffic/Pedestrian Circulation

The existing transfer point has traffic/pedestrian circulation issues for students. The shortest distance between the existing transfer point and Woodland Community College is to walk through the busy Walmart parking lot to the dirt lot just east of the store to reach the College. There is the potential for conflict between these students, Walmart customer cars and delivery trucks. This problem will be exacerbated in the future as the new Walmart site plan includes a proposed heavy duty asphalt truck access driveway beginning opposite from the existing transfer point and wrapping around the east side of the building.

Although there are sidewalks at the existing transfer point, these pedestrian facilities do not connect to Walmart, McDonalds or Woodland Community College. The proposed Walmart expansion project is forecast to increase traffic by roughly 2,994 daily vehicle trips, which will further increase the potential for vehicle/pedestrian conflict.

Safety

Safety is one of the primary concerns at the existing location. Located at the end of a parking lot on a cul-de-sac, it is relatively difficult for law enforcement to keep an eye on the facility. During one week in October, three thefts and three fights were reported in the area surrounding the existing transfer point. Lake Transit incident reports show that the existing transfer point has been the location of multiple fights, passenger and driver harassment, loitering, drinking, drug deals and graffiti. Table 8 displays an excerpt of LTA incident reports for 2014 and 2015 which occurred at the existing transfer point. Providing a larger and more visible facility with appropriate lighting will help reduce crime rates. There is also the potential of including other uses at the new transfer hub location, such as a café or government offices. This would make the transfer hub even more visible and decrease the incentive for crimes.

**Table 8: Safety Incidents Reported by LTA at the Existing Transfer Point
2014, 2015**

Date	Description	Time Delay	Medical/Police	
			Action	Details
8/19/2014	Passenger Behaviour	5 Minutes	Yes	Fight at Rays's transfer point between two passengers picked up at Yuba College
2/20/2014	Passenger Behavior	N/A	Yes	Passengers at Ray's bus shelter drinking alcohol CLPD called
3/26/2015	Passenger Behavior	20 Mins	Yes	Passenger who was intoxicated disembarked bus in Ray's parking lot and walked away about 20' and fell down to the asphalt EMTs were called to the scene
4/9/2015	Graffiti	30 Mins	No	Driver reported graffiti at Ray's on one of the bus shelters utility person was dispatched to clean shelter
6/18/2015	Passenger Behavior	N/A	Yes	Passenger was cussing at passengers and driver at Ray's CLPD was dispatched to Ray's passenger disappeared
7/14/2015	Passenger Behavior	2 Mins	No	Passenger yelling for the Bus to hold from Ray's parking lot Driver didn't yell back so passenger got mad and parked scooter with shopping basket in front of bus and walked away
10/8/2015	Passenger Behavior	N/A	No	High School kids got on bus in Lower Lake, when driver got to Ray's one of the students lunged at driver and threatened driver with violence
10/26/2015	Passenger Behavior	N/A	No	Passenger harassing two female passengers at Ray's Bus Stop
11/19/2015	Passenger Behavior-Medical Aid	N/A	Yes	GM was sent to Ray's bus stop for intoxicated male passenger upon her arrival she called dispatch to request medical aid for the passenger who had fallen and had lesions to his hands

Source: LTA Incident Reports 2014, 2015

Chapter 5

Lake Transit Hub Site Selection

The next step in the study was to determine an appropriate and feasible location for a new transfer hub. Given the high level of boarding and alighting at the existing transfer point as well as the number of major commercial, medical, education, and government activity centers nearby, the general area surrounding the existing transfer point was the primary the focus of the potential site analysis.

ALTERNATIVE SITE DISCUSSION

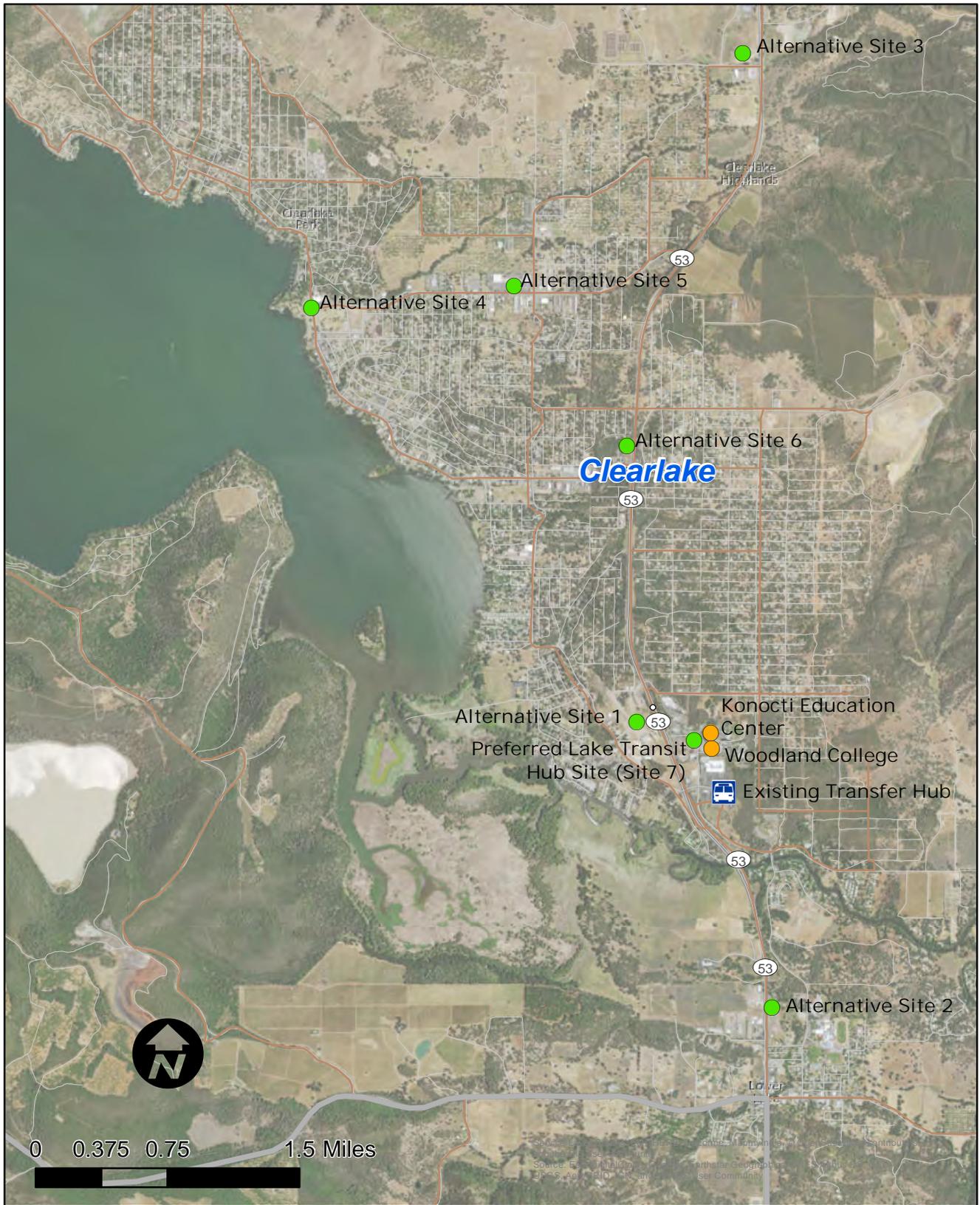
As discussed in Chapter 4, the current transfer center location is not a viable long-term solution. If LTA is to provide a safe, efficient, effective and customer responsive transit service over the next twenty years, LTA will need more control over the site. This transit center must be well-sited (with respect to route operations and security operations) with adequate interior space, located on an area large enough to accommodate bus/van parking along with Park and Ride, carpool, and short-term visitor parking. As such, a total of seven sites have been evaluated for the location of the potential transit center in Clearlake. The sites considered for this study were generated through conversations with the study team and previous analysis conducted as part of this study. Although initial analysis indicates that the area near the existing transfer location was preferred, public/stakeholder input indicated a need to review sites throughout the City of Clearlake. The “Potential Sites” are illustrated in Figure 4. Most of the sites were selected based on one or more of the following factors:

- ◆ Ease of acquiring/leasing the land
- ◆ Vacancy status of the parcel(s)
- ◆ Proximity to current typical transit generators/activity centers such as shopping, employment, social services
- ◆ Centrality to LTA Clearlake routes
- ◆ Impact on annual LTA operating costs – Costs were estimated based on LTA FY 2014-15 cost per mile of \$2.83. Actual operating costs vary from year to year but the estimates below represent a good picture of the financial impacts of each alternative site.

Potential Sites

The following are descriptions of the seven location options for the transit center, with both constraints and opportunities discussed for each.

Figure 4
Alternative Sites for New Transfer Hub Location



City of Clearlake Owned Property at the Old Airport (Alternative Site 1)

The City of Clearlake owned property at the old airport site is a potential site for a new transfer hub. The City is considering redevelopment of this property and some large commercial uses such as Safeway, Walgreens and Starbucks have indicated interest in relocating to this area.

Opportunities

- Potential to be located close to new commercial centers in the future.
- Land is already publicly owned.
- Minimal reroute of bus routes required but would still require 5,100 additional annual vehicle-miles and roughly \$14,400 in additional annual operating costs.

Constraints

- Located across SR 53 from existing activity centers such as Walmart, Woodland Community College, Lake County Mental Health Services, Lake County Superior Court, and St. Helena Hospital.
- Until redevelopment occurs, no existing transit destinations within walking distance.
- Would likely require construction of new road for transit travel.
- As the site is relatively isolated, passengers may feel unsafe waiting at the center.
- Walking or bicycling to/from the site would largely require traveling along or across busy SR 53.

If this site is considered further, the bus stops at the existing transfer point and Woodland Community College should be maintained so as to provide close access to these transit activity centers.

Existing LTA Operations and Maintenance Facility at 9240 SR 53, Lower Lake (Alternative Site 2)

Another option would be to reroute the buses so that the main transfer point is located at the property currently used as the LTA Operations and Maintenance Facility in Lower Lake. The property is roughly one mile south on SR 53 from the existing transfer site.

Opportunities

- Close to operations and maintenance facility
- Property owned by LTA

Constraints

- To be an effective transit hub, this would require Routes 1 and 11 to be extended, adding 2.6 miles of running distance to each run. Multiplied by the number of annual runs (Route 11, for example, is operated on approximately 4,700 runs per year), the net effect would be to increase annual Lake Transit vehicle service miles by approximately 10,500 per year, in turn increasing annual operating costs by \$29,700.
- Environmental issues as the property is located near wetlands.
- The additional running time would exceed the hourly schedule for Routes 11, requiring elimination of service on some other portion of the route or reducing the frequency of service.
- Roughly one mile from transit activity centers in Clearlake – no transit trip destinations within convenient walking distance.
- No signalized access onto SR 53 – potential for delays to buses exiting the site.

City-Owned Property North on SR 53 (Alternative Site 3)

The City of Clearlake also owns some vacant property on the north end of the city limits along SR 53 near Pond Road.

Opportunities

- No land acquisition cost

Constraints

- Only the regional Route 1 travels by this location. Extending the other routes would add 3.8 miles per round trip for the local Clearlake routes and 7.6 miles for Routes 2 and 4.
- This would result in a net increase of 55,000 vehicle-miles per year or \$155,700 in additional annual operating costs.

- The additional running time would exceed the hourly schedule for Routes 10, 11 and 12, requiring elimination of service on some other portion of the route or reducing the frequency of service.
- Routes 2 and 4 would also require changes to the schedule, reducing the service frequency.
- There are no commercial, medical or other transit activity generators nearby.
- Would require buses to enter high-speed traffic on SR 53 at an unsignalized location.

Lakeshore and Olympic Drive (Alternative Site 4)

There are a couple City owned vacant parcels located around the intersection of Lakeshore and Olympic Drive, across the street from City Hall.

Opportunities

- Central location for the Clearlake City Routes.
- Near Austin Park, City Hall and other commercial centers.

Constraints

- Would add travel time and distance to Routes 2 and 4. Considering the reduction in travel distance for Route 1, overall impact would be an increase of 21,000 vehicle-miles per year.
- Would add approximately 15 minutes of running time to each Route 2 and 4 run, reducing service frequency.
- If located on park land, Federal Transit Administration (FTA) Section 4(f) requirements make it difficult to use Federal funding if there are other viable alternatives.
- Likely other plans for lakefront property.

Vacant Parcels Just East of Burns Valley Shopping Center on Olympic Drive (Alternative Site 5)

There are multiple vacant parcels between Burns Valley Road and Washington Street just north of Cooper Tires on Olympic Drive.

Opportunities

- Central location for the Clearlake City Routes.

- Near Senior Center and low income housing.
- Not located near a school.

Constraints

- Multiple property owners
- It is not known if the property owners are willing sellers.
- Would add travel time to Routes 3 and 4, resulting in net increase of 12,900 vehicle-miles per year (\$36,500 in operating costs) and reduced service frequency.
- Narrow sidewalks.
- Would incur costs for purchase or long-term lease.
- Only limited parking would be available as the parcel is smaller.
- Near another known homeless camp.

Lakeshore Drive and SR 53 (Alternative Site 6)

There are two privately owned vacant parcels near the intersection of Lakeshore Drive and SR 53, just north of the Verizon Wireless store on Lakeshore Drive.

Opportunities

- Roughly one-quarter mile from the IGA shopping center.
- Better access to SR 29 for regional routes than Alternative Sites 4 and 5.
- Location is served by two Clearlake City Routes.

Constraints

- Would add travel time for regional routes and City Route 12, resulting in a net increase of 5,100 vehicle-miles of bus travel and \$14,400 in operating costs per year.
- Would incur costs for purchase or long-term lease.
- Limited transit activity centers nearby.

- Sloped site could make construction more difficult and costly.
- Transit vehicle access in/out of the site could be challenging.
- Unknown if there is a willing seller.

County-Owned Property Along Dam Road Extension (Alternative Site 7)

This property includes the vacant land bordered by S. Center Street to the north and Dam Road Extension to the east. The parcel also includes the existing Mental Health Services building.

Opportunities

- Central location for the Clearlake City Routes.
- No (minimal) land acquisition cost.
- Central location to major activity centers, such as Woodland Community College and Walmart.
- Clear location for increased security capacity.
- Minimal impact on LTA operating costs: \$1,400 or 500 additional miles per year.
- With extension of Dam Road Extension north to 18th Avenue, Route 11 could be realigned to provide more direct service to and from the north.

Constraints

- The site is in close proximity to the Konocti Education Center and Woodland Community College, posing security concerns.

Comparison of Sites

A summary of the advantages and disadvantages of each site is presented in Table 9. This table presents a simple comparison of the sites by assessing whether or not they meet the base criteria identified for the transit center. These basic site requirements are as follows:

- Conveniently located near major transit destinations
- Avoids major route rescheduling
- Located in an area allowing good access to the site
- Low cost/feasibility of acquiring the site
- Avoids impact on park lands

- Avoids parking impact
- Avoids significant environmental impact
- Avoids major impact on annual bus miles
- Avoids major impact on annual operating costs

Table 9: Alternate Site Comparison
Lake Transit Hub

	Alternate Sites						
	1	2	3	4	5	6	7
	Old Airport	LTA Ops Facility	Pond Road	Austin Park	Burns Vly Shopping Center	SR 53 / Lakeshore Drive	Preferred Site
Convenient to Transit Destinations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Avoids Major Route Rescheduling?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Good Access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Feasible to Acquire Property at Low Cost?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Avoids Impact on Park Lands?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Avoids Parking Impact?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Avoids Significant Environmental Impact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Impact on Annual Bus Miles?	5,100	10,500	55,000	21,000	12,900	5,100	500
Impact on Annual Operating Cost?	\$14,400	\$29,700	\$155,700	\$59,400	\$36,500	\$14,400	\$1,400

Based upon the analysis summarized in Table 9, the county-owned property along Dam Road Extension is the preferred site. The Old Airport Site (Site #1) and the lot adjacent to the Burns Valley Shopping center (Site # 5) also have potential.

Further Evaluation of Top Three Alternative Sites

This section takes a closer look at the pros and cons of the top three alternative sites.

County-Owned Property along Dam Road Extension (Alternative Site 7)

The property along Dam Road Extension (Site 7) has the following opportunities:

- ◆ **Minimal increase in operating costs** - One of the most appealing benefits of Site 7 is that the site is close to the current transfer hub and thus it would not cause a major change in bus schedules or add a significant amount of operating costs by driving to the new location. Moving the transfer hub to Site 7 would require only 500 additional vehicle miles or \$1,400 in annual operating costs.

- ◆ **Close to transit destinations** - At the same time, moving the transfer hub to Site 7 would not increase the distance for passengers to travel to popular transit generators. Walmart would be a similar walk time, Mental Health services would be closer but the commercial and fast food uses near the existing transfer point would be a few minutes further. If the transit hub were moved to a location without such services, it is likely that ridership would drop as transit would be less convenient.
- ◆ **Low environmental impact** – Site 7 is currently a vacant dirt lot. It is not located near wetlands and it is relatively flat. Additionally, most of the existing trees on the parcel could be preserved and incorporated into to the new transit hub. As would be true with all the potential sites, a well-designed transit center which incorporates green building concepts and appropriate landscaping would increase the visual appeal of the area. Other positive environmental impacts could be gained through bike lockers (encouraging bike commuting), electric vehicle charging stations for both personal cars and transit vehicles. It is likely that a new transit hub would have a minimal negative environmental impact, particularly at site 7.
- ◆ **Low acquisition costs** - The property is owned by the County. Although no agreement has been formalized, there is the potential to acquire the property for significantly less than market rate. Acquiring privately owned property is more challenging, particularly if there is not a willing seller.
- ◆ **Parking availability** – Site 7 is large enough that a Park and Ride lot could be constructed along with the transfer hub. This could provide secure and convenient overflow parking for the expanding Konocti Education Center and Woodland Community College. The Park and Ride lot could also be used by LTA regional route passengers travelling out of county.
- ◆ **Potential for crime** – It is thought that one of the main reasons the existing transfer site has had crime and incident issues is that it is located next to a well-known homeless camp. Additionally, the existing transfer point at the former Ray’s Food Place (or any busy commercial use) is a common location for panhandling. With a potential source of money nearby and an easy escape to the brushy woods of the adjacent vacant lot, the existing transit hub becomes a convenient location to loiter, sell drugs, drink, etc. By moving the transfer hub farther from the vacant lot combined with implementing other security measures such as cameras and daytime supervision, crime will be reduced.
- ◆ **Traffic and circulation** – Site 7 would not require buses to pull out onto the state highway or a major arterial except where protected by a traffic signal, yet SR 53 is only ¼ mile from the site. The Dam Road Extension project would also increase access into the area, and allow at least one transit route to directly access to/from the north.

The constraints of Site 7 are:

- ◆ **Security concerns** -- The primary downside of Site 7 on Dam Extension Road is that the new transit hub would be located 0.05 mile from the Konocti Education Center. This is a charter school for grades 4 – 12. Currently there are 350 students and the school intends to expand to 575 students. Generally, a transit center located close to a school or college is seen as a benefit as this provides convenience to students and parents. Unfortunately, some of the incidents which have occurred at the existing transfer point and on LTA buses have cast a negative image of public transit. There is fear that the students will be in danger of attacks from homeless or transit passengers with ill intent while walking to/from campus or even if they remain on campus. Although the primary objective of the project is to build a transit center which will eliminate/reduce the unwanted behaviors such as loitering, drinking in public and fighting, it is difficult to overcome a negative image, particularly when young children are involved. During the public input process, Woodland Community College has also expressed similar concerns about the safety of their students if the transit center is located across the street.
- ◆ **Traffic Circulation** – The left turn lane from Dam Road to Dam Road Extension already experiences queues during the AM peak hour when parents are dropping off their children at the Konocti Education Center. The addition of four bus routes making this turning movement may add to traffic congestion.

Vacant Parcel Just East of Burns Valley Shopping Center on Olympic Drive (Alternative Site 5)

Alternative Site 5 has many of the same opportunities as Site 7 such as:

- ◆ **Close to transit destinations** - This site is centrally located in the middle of Clearlake and near many transit activity centers. In addition to the Safeway supermarket, the library is around the corner, there is a movie theater nearby as well as numerous other small retail uses as part of the Burns Valley Shopping Mall.
- ◆ **Traffic and circulation** – Informal observations show that Burns Valley Road has more traffic than Dam Road Extension but circulation in/out of a transit center would be feasible.
- ◆ **Low environmental impact** – Site 5 is also a vacant flat lot not located near environmentally sensitive areas. As would be true with all the potential sites, a well-designed transit center which incorporates green building concepts and appropriate landscaping would increase the visual appeal of the area. Other positive environmental impacts could be gained through bike lockers (encouraging bike commuting), electric vehicle charging stations for both personal cars and transit vehicles.
- ◆ **Proximity to schools** – This site is not located near a school and therefore does not cause the same security concerns as site 7.

Constraints of Site 5 are:

- ◆ **Need to modify regional routes** - Routes 3 and 4 would need to be extended further into Clearlake to reach the new transfer hub. Route 1 would also need to travel slightly off of SR 53. This would add \$36,500 in annual operating costs and 12,900 annual vehicle service miles as well as require reduced frequency on regional Route 3. As moving the transfer hub to Site 5 would require heavy buses to travel longer distances on City streets, the City may impose mitigation fees to compensate for the additional wear and tear.
- ◆ **Potential for crime** - The site across from the Burns Valley Shopping Center is similar to the existing transfer hub in a few ways:
 - Being a popular grocery store, this location would also make a good location for pan handling, much like the former Ray's Food Place.
 - There is an old orchard which is now vacant behind the Burns Valley Mall which is used by the homeless population as a camp.

These factors are likely to attract homeless residents near the transfer hub.

- ◆ **High acquisition costs** - The proposed site actually consists of 20 individual lots owned by three different private property owners. If the owners are willing to sell, it would likely be more expensive than acquiring property from the city or county. Note that the Bridge Peer Support Center operated by Lake County is the only existing use on this group of parcels. The parcel is owned by the City of Clearlake. This could potentially be a compatible use with the transit center.
- ◆ **Adjacent uses** – A residential neighborhood is located nearby to this site. Although this would make transit convenient for the residents, noise and bus traffic could be seen as a negative by residents.
- ◆ **Parking availability** – As the proposed site is just over an acre, there would not be space for a Park and Ride lot.

City of Clearlake Property at the Old Airport (Alternative Site 1)

The advantages of Site 1 are as follows:

- ◆ **Low acquisition costs** – The old airport site is currently owned by the City of Clearlake so it is likely that this site could be acquired for a low cost.
- ◆ **Modest adjustments of bus routes** – The old airport site is located less than a mile from the existing transfer point so only minor changes to bus routes would be required as compared to some of the other alternative sites.

- ◆ **Limited environmental impact** – Site 1 is not located near an environmentally sensitive area. The positive environmental impacts of the other three transit center locations would apply to Site 1 as well.
- ◆ **Parking availability** – The City owned property is quite large. Therefore depending on the redevelopment plans, there may be room for additional parking at Site 1, although with no other existing uses, there may be little need for parking.

The disadvantages of Site 1 are as follows:

- ◆ **Moderate impact to LTA operating costs** –Serving a transit hub at Site 1 would add 5,100 annual vehicle service miles and \$14,400 in operating costs. It would also add 3 to 5 minutes to each bus schedules. Passengers on the regional routes wishing to visit the former Ray’s Food Place, Walmart, or Woodland Community College would need to transfer to one of the local routes.
- ◆ **Currently no transit destinations nearby** – The City of Clearlake has plans to redevelop the old airport site. Major retail centers such as Walgreens, Safeway and Starbucks have indicated interest in relocating there. Until redevelopment occurs (which would be several years down the road), there are no commercial or social services facilities at Site 1. Regional route passengers wishing to access services in Clearlake would be required to transfer to one of the local Clearlake routes. Until there are major retail centers nearby, the transfer point would be distant from other uses and somewhat “hidden” from the general public and law enforcement. This would not help with security concerns.
- ◆ **Traffic and Circulation** – Depending on precisely where the transit hub would be constructed on the old Airport property, a new access road may be required.
- ◆ **Security** – As there is little other activity in the vicinity, it is not convenient for police to patrol this site without making a specific trip. There is also little other private traffic.

After further evaluation, Site 7 (Dam Rd Extension) has the greatest advantages, particularly in terms of cost, compatibility with the transit routes, and access to transit destinations. One significant drawback of Site 5 (Burns Valley Shopping Center) is that the 20 parcels composing the site are currently owned by three different parties and it is unknown if they are willing sellers. Additionally, the location does not significantly improve issues associated with the homeless population over the existing transfer hub. Much like the existing transfer hub, Site 5 is located adjacent to a vacant lot and major grocery store which provides transients with an ideal location to sleep and panhandle. Site 1 (Old Airport) also has the advantages of low acquisition cost and minimal adjustments to routes and would be more attractive than Site 5, if there were significant existing commercial uses or social services nearby.

Other Strategies Considered

During the course of this study, the Ray's Food Place grocery store closed. Given this change in events, the following alternatives were reviewed.

Alternative: Construct Transit Center at Existing Transfer Site

With the closing of Ray's Food Place in Clearlake, another alternative would be to construct a transit center at the Ray's location.

Opportunities

- ◆ Central location for a transfer point
- ◆ Central location to major activity centers, such as Woodland Community College and Walmart
- ◆ No impact on operating costs associated with moving the transfer point
- ◆ LTA would have control over the site and any needed improvements

Constraints

- ◆ Land acquisition costs – Assessed value of the property is around \$5 million
- ◆ Demolition Costs - \$64,000
- ◆ Proximity to Homeless Camp – One of the primary reasons for relocating the transit hub is to distance the hub from the vacant lot and homeless camps behind the existing transfer point, in an effort to increase security. Under this alternative, the situation would not be changed and perhaps exacerbated if the Ray's Food Place building lies vacant for a while.
- ◆ The Ray's Food Place parcel is significantly larger than the space needed for a transit center. The parcel is on the order of 4.5 acres whereas a new transit center would only require around 1.6 acres. If LTA purchased this parcel, the transit agency would likely need to lease or sell the other portions of the property. This is not the primary job of a transit agency, and would place administrative burdens on the organization. There is also the chance that a purchaser or lessee cannot be found, increasing costs to LTA.

One option which might be feasible under this alternative would be for another public agency to purchase the property and to jointly develop with LTA. However, overall, this alternative has high acquisition costs and does not meet the objectives of the study.

Scenario: LTA Is No Longer Able to Maintain a Transfer Hub at the Existing Location

Much of the impetus for this study was the long-term uncertainty of the continued availability of private land (Ray's Food Place supermarket) for the transfer point. As feared, Ray's Food Place closed in the fall of 2016. As discussed above, if the current arrangement with the property owner could not be maintained and LTA were asked to leave the property, it would cause major disruptions to public transit service. Approving, funding, designing and constructing a new transit center is a multi-year process, therefore, it is worthwhile to consider a temporary transfer hub, as a stop gap measure.

A temporary transfer hub would likely consist of simply:

- ◆ Space on public land or right-of-way out of the flow of traffic which is large enough for four to six buses to park (approximately 250 to 300 feet of curb length),
- ◆ An LTA bus stop sign,
- ◆ Several bus shelters,
- ◆ Public restroom option or portable toilet for driver breaks,
- ◆ Street lighting.

Site 7 (County-owned parcel on Dam Rd Extension) is the most appealing candidate for a temporary transfer hub as it is already in public ownership and would not dramatically change current routes and schedules. In order for buses to park without blocking the current southbound travel lane and to provide adequate capacity, it would be necessary to pave roughly a 50' (east-west) by 150' (north-south) area, which would be striped for two north-south rows of accommodating three buses each with intervening space for passenger loading/unloading and shelters.

Another location with is publicly owned is the LTA Operations and Maintenance Facility in Lower Lake. Buses could potentially turnaround in the existing parking area; however, this would have the same negative cost and service reduction impacts as Alternative Site 2.

Title VI

The Federal Transit Administration (FTA) strives to ensure that all recipients of federal grants do not discriminate based on race, color, and national origin. FTA specifically draws attention to the potential to discriminate against a disadvantaged population in the siting of new FTA funded facilities. For example, would a disadvantaged population be displaced by the land acquisition of a new operations facility or maintenance facility. In order to ensure that populations are not unfairly displaced, FTA requires a Title VI Equity Analysis for certain types of facilities. "Transit stations" such as this Lake Transit Hub project are not required to conduct a Title VI Equity Analysis.

In any case, the alternative sites discussed above for the Lake Transit Hub are vacant land and are not the location of established homeless camps. Therefore, people will not be displaced. Further, a new transfer hub will provide benefits to low income populations who are dependent on public transit in the form of a convenient and safe location to catch the bus.

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Chapter 6

Transit Center Security Peer Review

TRANSIT CENTER SECURITY PEER REVIEW

Public input received as part of the study brought forth concerns regarding the proximity of a potential transit passenger hub to the Konocti Education Center and Woodland Community College. The Konocti Education Center is located across the street from the preferred transit center site on the southwest corner of Dam Road Extension and South Center Drive. The driveway and bus drop-off are within the line of sight of the transit center parcel. The Woodland Community College is located a similar distance from the proposed transit center site, but with an intervening parcel. The specific concern is that persons attracted to the area by the presence of a transit center would pose a security threat to students and staff of the educational campuses.

To provide information as to whether a transit hub results in security issues, the Study Team conducted a peer review of similar areas where a transit center is located within one-half mile of a grade school or college. Based on an initial review of transit centers in small to medium sized cities in California and Oregon, six communities were identified to include in the peer review. These six communities are listed in Table 10: Yreka, Chico, Watsonville, Manteca, and Fresno in California, and Medford, Oregon. For each community, three different types of agencies were contacted for input: police, transit agency, and the school. Each agency was asked to respond to the following questions:

- ◆ Has the presence of the transit center resulted in any security issues with school students? With school staff?
- ◆ If the transit center was recently constructed, has it changed security conditions at the school? If so, how?
- ◆ Overall, do you believe the presence of the transit center near the school is a net benefit to the school, or a detriment?
- ◆ Do you have any suggestions or thoughts that you would like to share with school administrators or transit agencies considering a transit center near a school site?

Three contact attempts were made in late September and early October of 2016 for each organization and each site. Only two agencies have not responded. A summary of responses by community is outlined below. Maps displaying the location of each transit center relative to the school are attached at the end of this report, in Appendix B. For comparison purposes, a map of Clearlake and the potential transit hub location is also included. Appendix C presents each agency's response.

TABLE 10: Peer Transit Centers Near Schools						
Community	Transit Center		Name	School Level	Address	Walk Distance
	Transit System	Center Name / Location				
Yreka	STAGE	STAGE Transit Center 190 Greenhorn Rd, Yreka	Covenant Chapel Bible Academy	K-12	200 Greenhorn Rd, Yreka	Adjacent
Chico	B-Line	Chico Transit Center 2nd and Salem, Chico	CSU Chico Notre Dame Catholic School Chico Jr. High	College K-8 6-8	400 W 1st St, Chico, 435 Hazel St, Chico 280 Memorial Way, Chico	1 block 0.3 mile 0.5 mile
	Santa Cruz METRO & Monterey-Salinas Transit	Watsonville Transit Center 475 Rodriguez Street, Watsonville	Raddliff Elementary Cabrillo College Watsonville Center	K-5 College	550 Rodriguez Street, Watsonville 318 Union St, Watsonville	Adjacent/0.1 mile 0.3 mile
Manteca	Manteca Transit Sac Joaquin RTD	Manteca Transit Center 220 Moffat Blvd, Manteca	Manteca High School	9-12	450 E Yosemite Ave, Manteca	0.2 mile
Fresno	FAX	Manchester Transit Center 3630 N. Blackstone Ave, Fresno	Fort Miller Preparatory Crescent View South Charter High UEI College, Fresno	7-8 College	1302 E Dakota 1901 E. Shields, Fresno	0.3 mile .25 mile
	Rogue Valley Transit	Front Street Station 200 S Front St, Medford	Rogue Community College	College	101 S Bartlett St, Medford	Adjacent 0.2 mile

Yreka, California

Yreka is a city of around 7,600 residents in rural Siskiyou County in northern California. The Siskiyou Transit and General Express (STAGE) operates local and regional public transit service throughout the county. The transit center was completed in December 2015 and includes an indoor waiting area and public restrooms as well as the STAGE administrative offices and a multi-purpose conference room. The area is under 24 hour camera surveillance but (other than normal rounds by Yreka Police Department) there is no security personnel assigned to the transit center. The Covenant Chapel Bible Academy is located directly across the street from the transit center. The STAGE transit agency, school and police department responded to the survey.



According to the transit agency, the community did not oppose the construction of the transit center, particularly as a juvenile detention center was originally proposed for the site. Both the transit agency and the school noted that transit agency staff are quite vigilant about making sure transients do not loiter near the school. This is partially due to the fact that some transit agency staff have or had children attending the school. The transit center was designed so that the waiting area is on the opposite side of the transit center as the school.

The only problems reported by the school was one or two instances of a homeless person walking over to the school to ask for money for the bus. After they were turned down, they never bothered the school again. The transit agency cautioned that if there are electrical outlets outside the transit center building, as is for their transit center, transients may use them to charge electronic devices. It was discovered that on weekends, when the transit center was not in operation, a homeless person was charging their ankle bracelet at the electrical outlet. Once this was discovered, the person was asked to leave by police and complied. The only issues police noted were that syringes had been left at the transit center. All agencies felt that the transit center was benefit to the community.

Lessons Learned and Suggestions

- ◆ Place a locking cap on all electrical outlets.
- ◆ Supervision of the transit center by staff is key.

Chico, California

The City of Chico is a small urbanized area in northern California with a population of 88,000. The city is



most known for the Chico State University campus. The B-line Transit system operates a transit center across the street from the university and about one-half mile from Chico Junior High. There is also a private school, Notre Dame Catholic School, located about one-third of a mile from the transit center. The City Police Department, CSU Chico Police Department, Notre Dame Catholic School and B-line responded to the survey. Chico Jr. High did not respond. The transit center consists of covered waiting areas and a kiosk. There is no indoor waiting area. The City has a substantial homeless population and as such provides homeless with a free bus pass. The transit center is also located near several city parks.

Although the transit center technically lies within the jurisdiction of the City Police, the CSU Chico Campus police headquarters is located directly across the street from the transit center. For this reason the CSU Police end up responding to more incidents than the City police. According to CSU police, they see fights and public drunkenness near and around the transit center. CSU Chico Police's greatest concern is for vehicles left in the parking garage near the transit center. Homeless often loiter in the parking garage to get out of the sun. As a result, there has been some burglaries and damage to vehicles there. CSU Chico Police believe that transients also wander on to the college campus to charge their cell phones and look for water. Overall, CSU Police believe that the transit center may have increased crime slightly but still see it as a benefit to the community and the students. The only crime that does occur is non-violent such as petty theft. One officer recommended that electrical outlets be locked or located away from ADA walkways. Additionally, if there are ordinances regarding behavior or actions on the college campus that differ from those in the City, this should be clearly outlined and communicated to the public.

On the other hand, City of Chico Police have not heard of any issues stemming from the transit center, although they are aware of the transient population. City Police that the Jr. High is too far away to be affected by the transit center. Overall, City of Chico police feel that the recently remodeled transit center is a benefit to the downtown area.

A representative of Chico B-line transit agency has not heard of any issues stemming from the transit center which have threatened students' safety. According to staff, there is no violence on the buses and the homeless tend to not panhandle much at the transit center. On the other hand, many middle school students ride the bus and have occasionally harassed the driver.

Notre Dame Catholic School is more neutral on the subject and cannot definitively state whether the transit center is a benefit or a detriment to the school. Occasionally the school has problems with transients, but it is not possible to tell if that is a result of the

transit center. Over the last few years, the school has implemented security cameras, constructed a new fence, and installed a buzzer system. The Principal of the school noted that she would be concerned about the situation in Lake County but really cannot be sure that the problems Notre Dame has experienced is related to the transit center.

Lessons Learned and Suggestions

- ◆ Be wary that the homeless will use electrical outlets to charge cell phones.
- ◆ Make clear to the public any ordinances which apply to a college campus which may not apply to the city as a whole.

Watsonville, California

Watsonville, California is located in the southern portion of Santa Cruz County and has a population of around 52,500 people. The Santa Cruz Metro Watsonville Transit Center is located diagonally across an intersection (less than 100') from Radcliff Elementary School and one-third of a mile from Cabrillo Community College Watsonville



Center. Both Monterey-Salinas Transit and Greyhound use the transit center in addition to Santa Cruz Metro. Santa Cruz Metro hires a security guard to patrol the transit center from 5:00 AM to 1:00 PM on weekends and 6:00 AM to 1:00 AM on weekdays. The transit agency has also partnered with City Police and established a satellite office in transit center. The transit agency also encourages police to park vehicles at the transit center in an effort to discourage illegal activities.

The Watsonville Police Department is not aware of any issues caused by the transit center being close to a school.

A senior staffer at Santa Cruz Metro is not aware of any issues or concerns from parents or students regarding the proximity of the transit center to the elementary school. The transit agency recommends that other transit agencies considering a transit center make certain that there are crosswalk connections between buses and activity centers as well as across streets which border the transit center and the school. Posted 25 mph or under signs are also important. Another issue to consider is that people will use garbage cans, trees and bushes as stash holes for "transactions". So Santa Cruz Metro recommends landscaping with cactus or rock gardens.

The Principal at Radcliffe Elementary School indicated the neighborhood surrounding the school and the transit center is not considered a "nice" neighborhood. Therefore, the transit center is the least of the school's concerns. The transit center is located near transitional housing, so this contributes to homeless issues. The Principal remarked that

the transit center is well lit and close to a police substation, which they believe is important for maintaining safety. Overall, there have been no issues or reported concerns from parents. The Principal believes that the transit center is a benefit to the school, as it makes easy for teachers to take students on a field trip via public transit.

Cabrillo College recently passed a transit registration fee. Therefore, all students receive a free bus pass. A Student Services representative at the college stated that they receive a wide variety of complaints and none of them had been with respect to safety and the transit center. College marketing staff indicated that they would like to see a bus stop right at the college, as the transit center is several blocks away. The way it stands now, students must walk through or around the downtown plaza, which is not well lit, to reach the bus. Some students feel uncomfortable walking directly through the plaza because of the homeless. The college staff therefore believes that student safety would be improved by having a transit center closer to campus.

Lessons Learned and Suggestions

- ◆ Landscape with rocks or cactus gardens in an effort to discourage people from using the location for "stash holes".
- ◆ Construct crosswalks and lighting (for community college) along the path between the school and the transit center.
- ◆ Having a police substation at the transit center is beneficial.

Manteca, California

Located in the Central Valley, the City of Manteca has a population of around 67,000. The transit center is a relatively new City-owned facility with a 97 space parking lot, multiple bus bays, and common room available for events such as weddings or banquets. The Tidewater Bikeway and Tidewater Railway line is located directly behind the transit center. Manteca High School is about 100 yards from the transit center but out of the sight line. Both Manteca Transit and San Joaquin RTD use this facility. The transit center is located in a low-income area.



Manteca Transit has not heard of any incidents where a student's safety was threatened. The Police Department sees the new transit center as a great improvement over the previous use and is also not aware of any issues. Prior to the construction of the transit center, there was an old trailer park at the location with, high crime and drug use. When incidents occurred at the trailer park, it was difficult for police to safely get into the trailer park to patrol. Now these problems have been removed and the overall

situation improved. Although construction of the transit center forced transients from the abandoned units of the trailer park to the streets, police feel that it is easier to deal with the issues this way. The Manteca Transit Center is located on a major arterial and is a City-owned building. For these reasons, the transit center is regularly patrolled by police. Police officers recommend that a transit center be built at least two blocks away from a school and out of the line of sight.

The Principal of Manteca High School has some concerns about the Manteca Transit Center. Although the center is a beautiful building that has added to the overall look of the area, it has had the negative impact of attracting homeless. The school has seen a slight increase in the number of homeless which results in more trespassing, property damage, and theft incidents during school and after hours. The school has increased patrols and constructed additional fencing to deal with these issues. The Principal feels that because of these issues the transit center has been an overall detriment to the school and recommends to other schools in a similar situation to develop strategies to prevent theft.

City of Manteca staff stated that the multi-modal transit center project was welcomed by the community. Downtown Manteca does have a significant homeless problem and the transit agency has had to deal with illegal activities occurring at the transit center such as: drugs, prostitution, graffiti, and property damage to the facility. Unfortunately, the transit agency had to close the public restrooms as illicit activities were occurring there. The City implemented a new trespassing ordinance so that transients could be evicted from the alcoves and shelters of the of transit center. It becomes a constant battle as they tend to return when the bus is not in service. City staff recommended that a new transit center design limit alcoves or corners which can be seen as “cozy” locations to sleep or loiter.

Lessons Learned and Suggestions

- ◆ Locate the transit center at least two blocks from the school
- ◆ Limit alcoves and corners in architectural design of the transit center
- ◆ The school should separately conduct an overall assessment to prevent theft

Fresno, California

The Manchester Transit Center is the smaller of two transit centers for the Fresno Area Express (FAX) public transit service. Six FAX bus routes meet at this transit center. The transit center is located at the edge of a commercial center parking lot. With a population of around 520,000 people, the city



itself has urban issues such as homeless and gangs. Fort Miller Preparatory Middle School is one-third of a mile from the transit center. The Crescent View Public Charter School is located in the Manchester Shopping Center adjacent to the transit center.

According to the Principal of Fort Miller Preparatory School, there have been no problems with the transit center itself. The aging Manchester Shopping Mall does tend to breed crime, however. Fresno Police Department agree but also attribute security at the transit center itself to the fact that four police officers are available to patrol the transit center during transit service hours. Fresno PD has plans to add a police substation nearby. Overall, the police department sees the transit center as a net benefit to residents.

FAX staff had not heard of any incidents involving passengers at the transit center or people near the transit center jeopardizing the safety of the middle school students. Transit staff indicated that since Fresno stepped up patrol of the transit center, there have been no real issues in general. FAX staff's greater concern was with students crossing the major streets after disembarking a bus. As a result of previous issues, the City is putting in a pedestrian signal at north end of transit center. FAX staff cautioned other transit agencies to construct a convenient protective crossing from the transit center to school or other transit activity center

Lessons Learned and Suggestions

- ◆ Construct a convenient protective crossing between the transit center and school or other transit activity center.
- ◆ Designate/hire police officers to patrol the transit center during transit service hours.

Medford, Oregon

Most routes operated by the Rogue Valley Transportation District (RVTD) pass through the Front Street Transfer Station in downtown Medford. Medford has a population of around 80,000 and is bisected by I-5. This transit center consists of an outdoor waiting area, bus shelters, sawtooth bus bays and is staffed by a RVTD customer service representative from 6:00 AM to 6:00 PM, Monday through Friday. The Rogue



Community College Medford Campus is located one block (100 yards) from the transit center. The Medford Greyhound Station is located next door to the Front Street Transfer Station.

RVTD staff has not heard of any issues resulting from the proximity of the transit center to the community college. RVTD also has a high school bus pass program and as a result nine percent of passengers are between 16 – 18 years old. According to staff,

most of the problems at the transit center, such as homeless, drug trafficking, and vandalism are “downtown” problems. However, staff believes that they have seen an increase in these issues since their partnership with Greyhound. RVTD contracts for security jointly with nearby Rogue Valley Community College from 7:00 AM to 7:00 PM. Staff sees this as an important element to dealing with homeless issues.

The Medford Police Department responded that much effort is put into patrolling the Front Street Transfer Station. They see many college students pass through the transit center but are not aware of any issues involving them. The City has a trespassing agreement in place at the transit center so this provides police with the authority to force homeless to go elsewhere.

The Director of Rogue Community College – Medford Campus is not aware of any issues occurring at the college that can be directly tied to the transit center. She responded that the transit center is part of overall downtown scene which has usual urban downtown problems.

Lessons Learned and Suggestions:

- ◆ Police/security guard presence is important at the transit center
- ◆ Trespassing regulations are helpful to keep the homeless population away from the transit center

Summary

A few of the entities (though not a majority) contacted did make a connection between location of the transit center and an increase in theft and vandalism at their school. However, no respondents stated that they felt students’ personal security was at risk. The most important lesson learned from the transit center peers is that police/security guard presence at the transit center is key. Staffing the transit center also provides the benefit of constant oversight.

Another issue peer agencies discovered, which should be considered in Clearlake, is the importance of transit center architecture and site design. A design which discourages transients and illegal activities might include:

- ◆ No alcoves or “cozy” corners
- ◆ Rock gardens for landscaping
- ◆ No public restrooms
- ◆ No/locked electrical outlets on the outside of the building
- ◆ Lighting

Lastly, several respondents highlighted the importance of safe, visible, and convenient crosswalks between the transit center and major transit activity centers or schools.

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Chapter 7

Potential Transit Hub Design Features

This chapter reviews potential transfer hub design features which could be applicable to any of the sites chosen for a new LTA transfer hub. It is beneficial to develop a conceptual list of desirable transit hub elements, as the basis for sizing the potential facility site. This section first develops a list of “transit hub program” elements. Next, general dimensions of a site are defined.

As a whole, a transit system has three functions requiring facilities: a facility for passengers, a facility for transit bus maintenance and storage, and a facility for administration and operations. The requirements of the passenger facility and maintenance/storage facility differ substantially: the former is best located in an area of high activity (and thus land costs), while the latter requires a large parcel, and is a light industrial use better sited in an area of similar land uses with lower land costs. Lake Transit already has established the latter facilities in Lower Lake. The current study therefore focuses on passenger center functions only.

EXISTING AND FUTURE TRANSIT CENTER PROGRAM ELEMENTS

This discussion first focuses on the minimum essential elements of a Lake County transit hub. This is followed by a discussion of other elements that could be considered.

Building Program: Baseline Essential Elements

A “core” use of the facility will be to serve as the primary public transit passenger facility for the community. Table 11 presents a summary of those uses found to be essential to this function, along with general space requirements associated with each. As shown, these factors culminate in a required 13,400 square feet. In this capacity, the following elements should be considered as crucial elements:

Bus Bays - As discussed in previous chapters, current Lake Transit schedules result in up to six buses at one time at the existing transit center. A key question is how this figure can be expected to grow over the 20 years (or longer) that would be the expected useful life of a new transit passenger facility. The need for additional bus capacity can come from the following:

- ◆ As the population of the area and the need for transit services grows, much of the growth in the transit capacity will take the form of higher service frequency on existing routes. While additional frequency increases the overall bus activity at the transit center, it does not increase the number of buses onsite at any one time. Rather, it is the establishment of new transit routes that increases the need to accommodate buses at the transit center. The establishment of new routes is in response to development of new areas or new transit funding opportunities allowing for the addition of routes. Considering the geographic constraints to new

TABLE 11: Summary of Essential Transit Facility Components and Associated Space Requirements

Program Element	#	Individual Area	Total Area	Units
35' Bus Bays	6	1,100	6,600	SF
40' Bus Bays	2	1,200	2,400	SF
Dial-A-Ride Parking	1	400	400	SF
Platform/Pedestrian Space	1	1,000	1,000	SF
Driver Restrooms	2	80	160	SF
Bicycle Parking	8	6.5	52	SF
Staff Parking	2	300.0	600	SF
Landscaping			2,200	SF
Total Area Required			13,400	SF

development and the current area covered, the current bus routes serve all of the major corridors directly accessing the hub site. It can therefore be concluded that any additional routes would be in the form of an intercity route to a major activity center. While Lake Transit already has intercity connections to the south (St. Helena in Napa County) and to Ukiah to the west, there is no existing transit connection to the Sacramento region to the east. Therefore, it is estimated that at least one additional route serving the Lake Transit Center will be added in the future 20 years. In an effort design a long-term facility, the project accounts for up to two additional buses at one time.

- ◆ At present, the largest vehicles within the LTA fleet span 35-feet long. It is reasonable to expect that growth in transit ridership will result ultimately result in an increase in vehicle size for some routes. This program therefore assumes space for six 35-foot vehicles and two 40-foot vehicles.

Space Requirements - The space requirements for these bays depend on their configuration:

- ◆ One configuration option includes the buses pulling up along a straight curb. This typically precludes one bus from departing if there is another bus in the bay in front, or entering a bus bay if there is a bus in the bay just behind. Under this layout, designated bus bays are not feasible, as drivers need to pull up as far as possible along the curb when entering the transit center. Leaving 10 feet between vehicles, each bay requires 540 square feet for 35-foot buses and 600 square feet for 40-foot buses. The straight curb configuration would necessitate 3,900 square feet of land area.
- ◆ Optimally, each bus would be provided with a “sawtooth bay” that allows all buses to enter and exit the site regardless of the presence of buses in other bays, thereby reducing delays. This also allows specific bays to be designated for specific routes, which is a convenience to passengers. Sawtooth bays require 1,100 square feet

each for 35 foot buses and 1,200 square feet for 40 foot buses. Assuming the sawtooth configuration, the bus bays will require a minimum of 7,900 square feet of land area.

Passenger Uses – Passenger waiting areas are needed for those passengers not directly transferring from one bus to another. At minimum, a covered outdoor passenger waiting area should be included to accommodate sitting and standing passengers. The space requirements should consider the following:

- ◆ Based on the 2015 Lake Transit Boarding and Alighting surveys, a maximum of 58 passengers are boarding and alighting at the existing transfer point at one time (not simply walking from one bus to another). To address growth in the transit system over time as well as peak events, designing for up to 85 waiting passengers is appropriate. Of the waiting passengers, seating should be provided for half. Typical floor area required for waiting passengers are 13 square feet for every seated passenger, and 7.5 square feet for every standing passenger. This element requires the implementation of outdoor seating to accommodate 43 passengers. Applying these factors, and including space for a drinking fountain, pay phone, and trash bins, 1,000 square feet is required of outdoor waiting space.

Other Essential Factors – The following is a list of other essential factors to be considered in the construction of a transit center:

- ◆ **ADA Accessibility:** The transit facility will need to be fully compliant with guidelines set forth under the American Disability Act. This will necessitate ensuring that there is no more than a 2 percent slope in any direction of travel. Another consideration is the requirement that there be a space of 5 feet by 8 feet between the bus and sidewalk to accommodate wheelchair ramps and passage. It is also necessary to provide clear passages of travel for disabled patrons.
- ◆ **Bicycle and Pedestrian Circulation:** The transit facility must provide ample passageways for bicycle and pedestrian passengers to pass through and to and from the transit facility. In addition, sufficient lighting should be provided to ensure clear and safe travel in the evening hours.
- ◆ **Transit Information:** At minimum, transit information should be provided through the use of a general route and schedule information board.
- ◆ **Restrooms:** Two restrooms should be provided for driver and staff use. These could be minimal, amounting to a combined 160 square feet.
- ◆ **Bicycle Parking:** Bicycle parking should be provided for at least 6 to 8 bikes. This would require approximately 50 square feet.
- ◆ **Security Facilities:** At minimum, several steps should be taken to ensure adequate safety and security at the transit center. The essential provisions include real-time cameras (connected to the dispatch center), and safety-oriented design (including clear lines of site from the facility to the street and rounded corners). Stationing at

least one LTA employee at the transit center will greatly improve security.

- ◆ Landscaping: Landscaping should be implemented in accordance with the Landscaping City of Clearlake zoning ordinances.
- ◆ Staff Parking: Parking for two staff vehicles should be included in the site plan.

Building Program: Possible Elements

While the previous section identified the crucial elements required for an adequate transit center, this section will discuss potential elements that could enhance the transit center. A potential scenario that combines elements from both sections is shown in Table 12 in order to illustrate the space needs of a more comprehensive transit center. As shown, this upgraded scenario necessitates 24,940 total square feet. The following is a list of possible amenities that could be included within the transit center:

- ◆ Indoor Passenger Facility: An indoor passenger facility to allow temperature-controlled passenger waiting could be included within the project. This would necessitate the same amount of passenger waiting as the outside waiting area (1,000 square feet). This addition would require space for a janitorial closet and a utility room (for heating, water heater, and other utilities). These additions would culminate in another 150 required square feet.
- ◆ Transit Information: In order to provide greater route and schedule clarity for transit users, a real-time traveler information system could be installed.
- ◆ Restrooms: In addition to driver restrooms, separate public restrooms could be provided, which would require roughly 100 square feet each.
- ◆ Bicycle Parking: In order to provide highly secure bicycle storage, the transit center could include bicycle lockers for 6 to 8 bicycles, which would require roughly 80 square feet.
- ◆ Security Facilities: In addition to the security measures aforementioned, space could be included for a sheriff facility within the transit center. At present, the Lake County Sheriff's office is not interested in this initiative.
- ◆ Other Office Space: The Lake County Department of Social Services expressed interest in inhabiting an office space within the transit center. This space could be relatively small in size (roughly 120 square feet). The additional office space could also be used by LTA staff as operations grow in the future.
- ◆ Ticket Counter: A counter could be provided to be used by Lake Transit staff towards transit operations, such as sales of passes. It is reasonable to allocate 300 square feet for this purpose.

TABLE 12: Summary of Potential Transit Facility Components and Associated Space Requirements

Program Element	#	Individual Area	Total Area	Units
Outdoor Elements				
35' Bus Bays	5	1,100	5,500	SF
40' Bus Bays	3	1,200	3,600	SF
Dial-A-Ride Van	1	400	400	SF
Outdoor Platform/Pedestrian Space	1	1,000	1,000	SF
Staff Parking	3	300	900	SF
Park and Ride Lot	30	300	9,000	SF
Landscaping			2,300	SF
Bicycle Lockers	8	10	80	SF
<i>Subtotal: Outdoor Elements</i>			22,780	SF
Indoor Elements				
Indoor Pedestrian Space	1	1,000	1,000	SF
Driver Breakroom	1	200	200	SF
Driver Restrooms	2	80	160	SF
Public Restrooms	2	100	200	SF
Staff Counter/Office Space	1	300	300	SF
Maintenance and Utility Closet Space	1	150	150	SF
Other Office Space	1	150	150	SF
<i>Subtotal: Indoor Elements</i>			2,160	SF
Other Amenities				
Real-Time Travel Information Screens				
Water Harvesting System				
Trash Receptacles				
Electric Vehicle Charging Stations				
Total Space Requirements			24,940	SF

- ◆ **Driver Breakroom:** A driver break area (consisting of 200 square feet) could be included in the establishment.
- ◆ **Shelters:** Individual shelters could be included as part of the outdoor passenger element in order to provide shelter in front of the buses themselves (if the bus circulation led to buses that were spread apart).
- ◆ **Staff Parking:** Auto parking for three Lake Transit supervisor vehicles would be desirable. These spaces could be used for driver relief runs, for staffing the transit center information booth, for Dial-A-Ride parking, or for a mechanic making “running repairs.”
- ◆ **Passenger Vehicle Parking:** The inclusion of passenger vehicle parking facilities (Park and Ride Lot) would require significant space, but would greatly increase incentives for riders who have cars to utilize public transit to travel. A passenger

parking lot should include spaces for 30 cars (roughly 1/3 of the total passenger capacity accounted for). Using the commonly accepted figure of 300 square feet per car, this would require an additional 9,000 square feet of outdoor space.

- ◆ Green Initiatives: There are several green initiatives that could be included within the new transit center, including:
 - The installation of solar panels (on the facility or in the form of a bus canopy)
 - The addition of a vehicle charging station
 - The implementation of water harvesting methods, such as permeable pavement

Note that these figures do not include any land for vehicle circulation. These figures therefore are applicable to an “on-street” configuration for the transit center, whereby all bus bays are provided along existing public street curbs. An off-street configuration (in which buses pull into the parcel) requires substantially more land in order to accommodate the vehicle driveways, particularly if it is necessary for buses to turn around on site.

Before evaluating specific site design options, it is also worthwhile to identify the length of street curb needed to accommodate the desired seven transit bays, under the on-street configuration. With the sawtooth bay option, a minimum of 360 linear feet of street frontage would be required, while the non-sawtooth option would require 325 feet of frontage.

The land area required for the site will depend on the specific parcel configuration, and factors such as the ability to use existing public streets for one or more bus bay and the need to turn buses around within the site for a parcel with access on only one side versus the ability to use adjacent streets on two or more sides. Given the minimum program discussed above, a reasonable minimum parcel size necessary for the transit hub is 1.0 acres.

PREFERRED SITE

As discussed in Chapter 5, Site 7 (County-Owned Property along Dam Road Extension) has the most advantages of the alternative sites reviewed:

- Minimal increase in operating costs
- Close to transit destinations
- Low environmental impact
- Low acquisition costs
- Parking availability
- Reduced potential for crime by moving farther from homeless camps

The primary disadvantage of Site 7 is security concerns resulting from the site location near a school and community college. The general consensus from the peer review effort was that the advantages of a transit center outweighed the disadvantages of being located close to a school/college. In many cases, problems that have occurred, such as trespassing, are a result of the transit center's location in a downtown urban area instead of a direct result of the transit center.

Understandably, Konocti Education Center and Woodland Community College want to ensure that their students have a safe academic experience. Separate discussions with representatives from these uses indicate a willingness to consider Site 7 as a new transfer hub location, if security mitigation strategies (discussed below) are applied. Therefore, this Study Team recommends the Site 7 (County-Owned Property along Dam Road Extension) as the preferred site location for a new LTA transfer hub.

Potential Site Designs

Within the preferred site parcel, there are a number of options for specific site locations. Within this area, there are two specific potential site designs: the "Corner Site" and the "Mid-Block Site" as discussed below. For both the Corner and Mid-Block site options, an example site plan (Figures 5 and 6) have been developed, based upon the design principles:

- ◆ The site plans meet the program requirements identified in Table 11. In particular, they provide the eight total bus bays and one DAR van parking area, along with the transit building site.
- ◆ The number of auto parking spaces has been increased to nine, to accommodate transit staff parking, social service office staff and visitor parking, visitors purchasing passes, and potentially EV charging spaces.

**Figure 5
Corner Option - Plan View**



- 1 Transit Building
- 2 Seating Under Brezeway
- 3 Bike Lockers
- 4 North Bus Shelter
- 5 East Bus Shelter
- 6 Bike Lane
- 7 Parking



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**Figure 6
Mid-Block Option - Plan View**



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- ◆ Security is an important design consideration. Accordingly, the overall designs have been developed to minimize the areas hidden from police traveling along the adjacent roadways. Within the site, the areas not visible from a potential staff office location have been minimized.
- ◆ Where possible, driveways have been aligned with driveways on the opposite side of the street.
- ◆ On the public streets, 12-foot travel lanes have been provided, along with a 4-foot area for a bike lane.
- ◆ Both site plans have “sawtooth” bus bays for at least some of the bus bays. Sawtooth bays are common at larger transit centers. Their advantage is that they allow the bays to be relatively close together (maximizing the number of bays that can be provided along any length of plaza frontage) while still allowing buses to operate fully independently with each other. This means that buses can pull in or out of all bays regardless of the presence of buses in the adjacent bays. In comparison, a line of straight curb bus bays (unless at least 40 feet of curb length is provided between each bus bay) runs the risk that an arriving bus cannot get fully parallel with the curb if there is a bus in the bay before the designated bay (creating a potential tripping hazard) or that a bus cannot depart due to the presence of a bus in the following bay. This can create substantial delays at busy “hub” times, particularly if buses are delayed due to wheelchair boardings or deboardings.
- ◆ 4 feet of distance has been provided between bike lanes and the adjacent parked buses, in order to improve sight lines and reduce the potential for conflicts. Some transit centers are provided with a thick (such as 12 inch) solid striping along the bus bays to better define the bus bay spaces, though this is not common or necessary.
- ◆ Sawtooth bays also provide clear definition of the bus bay locations, which makes it easier for passengers to know where to wait.

Figures 7 through 12 present 3-D illustrations of the two sites. If the alternative or backup site is chosen as the transfer hub location, either one of the site plans could easily be adjusted to meet the size restrictions of a different location.

Corner Site

This site plan has the following characteristics:

- ◆ The overall site plan is triangular in shape. Three sawtooth bays are provided along the northern (Center Drive) side, two straight bays are provided on the eastern (Dam Road Extension) side, and three sawtooth bays are provided along the diagonal. This diagonal driveway would be one-way in the northwestbound direction, and would also provide space for a Dial-A-Ride vehicle along the plaza. All of the bus bays are of sufficient dimensions to accommodate a 40-foot bus.

**Figure 7
Corner Option - Bird's Eye View**



**Figure 8
Corner Option - Main Entry View**



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**Figure 9
Corner Option - Breezeway View**



Figure 10
Mid - Block Option - Bird's Eye View



Figure 11
Mid - Block Option - Main Entry and Breezeway view



Figure 12
Mid - Block Option - Bus Shelter View



- ◆ The straight bays along Dam Road Extension would have an adequate length to allow a bus in the northern bay to depart even with a bus parked in the southern bay, though a bus could not access the southern bay if a bus is parked in the northern bay. This limitation could be addressed by designating the southern bay for a route that accesses the transit center at times when the bus on the route using the northern bay is not on-site. On the other hand, a longer section of straight curb provides some flexibility in case larger buses (like 45-foot over-the-road coaches).
- ◆ The auto parking is provided in a small separate parking lot on the southern portion of the site, with two-way auto access onto Dam Road Extension. Providing a fully separate access to this lot separate from the bus entry would increase site land requirements and costs, would result in an additional access point to create conflicts with cyclists and through motorists, and is not warranted given the small number of spaces served.
- ◆ The site is designed to provide good pedestrian cross walks both at the northeast corner (to the Mental Health Department and the Hospital) and at the southeast corner (to access Woodland Community College and Wal-Mart). To enhance the pedestrian conditions at the northeast corner, the design would formalize the current large-radius curve between Center Drive and Dam Road Extension. While the intersection would still serve all types of vehicles (a 25-foot curb return radius), this would slow traffic speeds and enhance pedestrian safety.
- ◆ The structures on-site consist of a one-story transit center (with pedestrian waiting areas, restrooms, and offices). Within this building, the waiting area would be on the south side (both to provide passengers with a view of arriving buses and to take advantage of natural sunlight) and the offices/restrooms on the north side. In addition, a roofed but unwallled breezeway area extends to the west. This breezeway area would provide shade and scattered seating.
- ◆ This plan would require removal of two of the three existing trees in the small grove on the west side of Dam Extension Road approximately 100 feet south of Center Drive. However, the largest (westernmost) tree could potentially remain. Other existing trees to the southwest and west could also potentially remain.
- ◆ For the bus bays not convenient to the building or breezeway, one bus shelter is provided to the south and one to the north. Eight bike lockers are provided adjacent to the northerly shelter.

This site design would require 53,800 constructed square feet, and approximately 1.4 acres in land. Table 13 presents a preliminary cost estimate for this site. As shown, construction of this site will require approximately \$2.5 million, including architectural, engineering and permitting costs, as well as 5 percent for contingencies, 1 percent for bonding, 6 percent for general conditions and 15 percent for contractor overhead and profit. Note that no costs are included for project management, or for land acquisition.

TABLE 13: Lake Transit Corner Transfer Center - Cost Estimate

ITEM	QTY	UNIT	UNIT PRICE	TOTAL ESTIMATE
<u>Mobilization</u>	1	EA	\$5,000	\$5,000
<i>Subtotal</i>				\$5,000
<u>Asphaltic Pavement Circulation</u>				
Fine Grade	53,800	SF	\$2.00	\$107,600
Agg. Base	2,282	TON	\$150	\$342,364
Asphalt	734	TON	\$125	\$91,711
Pavement Markings/Striping	1,000	LF	\$1.50	\$1,500
Construction Staking	1	LS	\$15,000	\$15,000
Clean-up	1	LS	\$2,800	\$2,800
Miscellaneous	1	LS	\$5,000	\$5,000
<i>Subtotal</i>				\$565,974
<u>Sitework</u>				
Site Concrete	284	CY	\$250	\$70,943.75
Regrading	53,800	SF	\$3.00	\$161,400.00
Concrete Curb and Gutter	2,000	LF	\$40.00	\$80,000.00
Temporary Fence	1,120	LF	\$6	\$6,720.00
Construction Staking	1	LS	\$4,000	\$4,000.00
Clean-up	1	LS	\$2,800	\$2,800.00
Landscaping	4,900	SF	\$5	\$24,500.00
Traffic Control	1	LS	\$10,000	\$10,000.00
Miscellaneous	1	LS	\$5,000	\$5,000.00
<i>Subtotal</i>				\$365,364
<u>Facilities, Furnishings, Lighting</u>				
Transit Building	2,160	SF	\$250	\$540,000
Breezeways	2,800	SF	\$62.61	\$175,308
Shelters	2	LS	\$12,000	\$24,000
Benches	10	LS	\$1,500	\$15,000
Facility Furnishings	1	LS	\$30,000	\$30,000
Lighting	10	EA	\$4,000	\$40,000
Miscellaneous	1	LS	\$600	\$600
<i>Subtotal</i>				\$824,908
Subtotal				\$1,761,246
Contingency (5%)				\$88,062
Subtotal				\$1,849,308
Bond				\$18,493
General Conditions (6%)				\$110,959
Subtotal				\$1,978,760
Overhead & Profit (15%)				\$296,814
TOTAL				\$2,275,574
TOTAL ORDER OF MAGNITUDE CONSTRUCTION ESTIMATE				\$2,300,000
Architectural, Engineering and Permitting				\$200,000
Total Project Costs				\$2,500,000

Alternative Designs Considered

In the development of this site plan, two other options were considered:

- ◆ The plan could be “transposed”, providing three bus bays along Dam Road Extension and two along Center Drive. This would elongate the site in the north-south direction so that the driveway along Dam Road Extension would not align with the roadway on the opposite side, and would reduce the future opportunity for an additional use to the south of the Transit Center. For these reasons, the site plan presented above was found to be preferable.
- ◆ Two sawtooth bays could be provided along the Dam Road Extension side, rather than a straight curb. However, due to the geometrics of sawtooth bays, this would have extended this north-south dimension beyond the location of the roadway intersection on the opposite side of Dam Road Extension, and would also require removal of all of the existing trees near Dam Road Extension.

Midblock Site

This site consists of the southeast corner of the overall parcel, along the west side of Dam Road Extension just to the north of the Sears Hometown Store. This example site design has the following characteristics:

- ◆ The design concept consists of a curved one-way (northbound) roadway of constant radius to provide a total of five bus bays. By providing 40-foot-long tangents along the inside of this curve with sufficient distance between the tangents, each of these five bus bays can operate independently of each other, similar to a sawtooth bay. A transit center of similar design has been successfully serving the Cache Valley Transit District in Logan, Utah since 2001.
- ◆ Three sawtooth bays are provided in the southbound direction along the Dam Road Extension frontage, along with curb space for a Dial-A-Ride vehicle.
- ◆ The auto parking is provided in a small separate parking lot on the southern portion of the site, with two-way auto access onto Dam Road Extension. Providing a fully separate access to this lot separate from the bus entry would increase site land requirements and costs, would result in an additional access point to create conflicts with cyclists and through motorists, and is not warranted given the small number of spaces served.
- ◆ Crosswalks are provided at Yuba College Road and the drive to the north. A crosswalk on the north side of Yuba College Road better serves a direct pedestrian route between the transit center and the College than would a crosswalk on the south side.
- ◆ A transit center building is provided in the center of the plaza area, with breezeway roof coverings extending both to the north and to the south. A trapezoidal shape to

the transit building reduces the area to the west of the building that is not observable from Dam Road Extension.

- ◆ As the breezeways (with seating) are sufficiently close to each individual bay, there is no need for additional shelters.
- ◆ Bike lockers are provided at the northern end of the site, angled so that all sides can be observed from Dam Road Extension.

This site plan would require 46,100 constructed square feet, and 1.4 acres. As shown in Table 14, this site alternative would have a construction cost of \$2.3 million.

Additional Park and Ride Lot

With the mid-block site configuration, there would be room on the parcel to construct a 20 - 30 space Park and Ride Lot on the northwest corner of the parcel. This would require at least one-quarter acre in land and cost an additional \$100,000 to \$150,000. The Park and Ride lot should include direct pathways to the transit center and to a crosswalk on South Center Drive. The Park and Ride Lot could be constructed on the opposite side of the transit center from Konocti Education Center so as to direct the flow of pedestrian traffic away from the school. The intended use of the Park and Ride lot would be for transit passengers connecting to Lake Transit regional or local routes. However, an agreement could be made with or for Konocti Education Center or Woodland Community College to use the parking lot for special events after transit hours. A parking enforcement program should be implemented so that college students do not use the lot to evade paid parking lots on campus.

Alternatives Considered

An alternative considered for this midblock site was a square configuration, with two bus bays on each side of a square central plaza. This was found to be disadvantageous from a security perspective, as more of the site would be farther from police and others traveling along Dam Road Extension.

Utilities

The following utility capabilities are available to each site plan at the preferred site along Dam Road Extension:

- ◆ Water: The property is circled by both 6 inch and 10 inch water pipes. The 10 inch water pipe, which required the implementation of a new water tank, was installed in conjunction with the establishment of Walmart. The previous existing 6 inch water pipe has been left intact, and continues to serve older properties in the area. The 10 inch water pipe currently services Walmart and Woodland Community College, and has ample resources to serve the potential transfer center.

TABLE 14: Lake Transit Mid-Block Transfer Center - Cost Estimate

ITEM	QTY	UNIT	UNIT PRICE	TOTAL ESTIMATE
<u>Mobilization</u>	1	EA	\$5,000	\$5,000
<i>Subtotal</i>				\$5,000
<u>Asphaltic Pavement Circulation</u>				
Fine Grade	46,100	SF	\$2.00	\$92,200
Agg. Base (10")	1,956	TON	\$150	\$293,363.64
Asphalt (4")	646	TON	\$125	\$80,777
Pavement Markings/Striping	1,000	LF	\$0.50	\$500
Construction Staking	1	LS	\$15,000	\$15,000
Clean-up	1	LS	\$2,800	\$2,800
Miscellaneous	1	LS	\$5,000	\$5,000
<i>Subtotal</i>				\$489,640
<u>Sitework</u>				
Site Concrete	218	CY	\$250	\$54,450
Regrading	46,100	SF	\$3.00	\$138,300
Concrete Curb and Gutter	2,000	LF	\$40.00	\$80,000
Temporary Fence	1,100	LF	\$6	\$6,600
Construction Staking	1	LS	\$5,000	\$5,000
Clean-up	1	LS	\$2,800	\$2,800
Landscaping	8,000	SF	\$5	\$40,000
Traffic Control	1	LS	\$10,000	\$10,000
Miscellaneous	1	LS	\$5,000	\$5,000
<i>Subtotal</i>				\$342,150
<u>Facilities, Furnishings, Lighting</u>				
Transit Building	2,160	SF	\$250	\$540,000
Breezeways	2,300	SF	\$62.61	\$144,000
Benches	10	LS	\$1,500	\$15,000
Facility Furnishings	1	LS	\$30,000	\$30,000
Lighting	9	EA	\$4,000	\$36,000
Miscellaneous	1	LS	\$5,000	\$5,000
<i>Subtotal</i>				\$770,000
Subtotal				\$1,606,790
Contingency (5%)				\$80,340
Subtotal				\$1,687,130
Bond				\$16,871
General Conditions (6%)				\$101,228
Subtotal				\$1,805,229
Overhead & Profit (15%)				\$270,784
TOTAL				\$2,076,013
TOTAL ORDER OF MAGNITUDE CONSTRUCTION ESTIMATE				\$2,100,000
Architectural, Engineering and Permitting				\$200,000
Total Project Costs				\$2,300,000

- ◆ Electricity: Electrical lines run south and west of the project parcel. The western electrical line spans roughly 490 feet, and runs between the project parcel and the parcel to the west. The southern electrical line spans roughly 190 feet, and borders the project parcel and the Sears property.
- ◆ Sewage: A sewer line runs across the southernmost portion of the project parcel. A lateral tap will be needed to provide sewage to either of the potential project sites

Security Concerns and Mitigation Strategies

WRLDCO Consulting prepared a report addressing security issues and potential mitigation measures for the preferred site location of the new Lake Transit Hub. The complete report is included as Appendix D and discussed below. In summary, the security report discusses:

- ◆ Specific security concerns of Konocti Education Center and Woodland Community College
- ◆ Unauthorized pedestrian circulation between the “Avenues” neighborhood, homeless camps, and the shopping areas
- ◆ Options for improving security along Konocti Education Center’s property line
- ◆ Options for treating the pathway between homeless camps and Walmart
- ◆ Proposed security improvements at the transfer hub itself

The root of the problem is that Konocti Education Center, Woodland Community College, Walmart, and the old Ray’s shopping center all border vacant land which is used as homeless camps. Residents of the camps use the path of least resistance to access stores, roads and services that they need during the day. This path often takes people through private property. Fences do not necessarily deter people from traveling through either the Konocti Education Center or Woodland Community College campus.

Konocti Education Center Area Issues

As shown in Aerial 1 and corresponding photos of Appendix D, the dirt road at the south end of the Konocti Education Center athletic field is a common pathway between camps and services. This dirt road connects to Woodland Community College Access Road and Dam Road Extension. This would also be the shortest distance for some homeless camp residents to access the new transit center. Pedestrians also travel from the “Avenues” neighborhood through an unauthorized hole in the fence on the north side of the Konocti Education Center athletic field and across the field to the aforementioned dirt road. In addition to cutting the Konocti Education Center fence, people have littered the area and stolen parts from the school garden irrigation system.

Walmart/Woodland Community College Area Issues

As shown in Aerial 1, 3 and corresponding photos of Appendix D, the path of least resistance between homeless camps, Walmart and other services (including the new transfer hub) is along the east side of the Walmart building and the southern portion of the Woodland Community College campus. A hole has been cut in the fence near the southern parking lot for Woodland Community College so some pedestrians travel through the College property.

Potential Solutions

Aerial 4 (Appendix D) presents a few options to limit trespassing on to the College property between Walmart and homeless camps:

- ◆ Extend Walmart rear fencing
- ◆ Strengthen fencing or build a solid wall around the southeast corner of the Woodland Community College property.
- ◆ Construct a fence between Walmart fencing and College fencing to close of the commonly used pathway between Woodland Community College and Walmart.
- ◆ As it is likely that new holes will be cut in additional fencing, a better option might be to designate and construct an official pedestrian path along the southern border of the College and between Walmart and the western border of the College. If this designated path becomes the path of least resistance, fewer people will cut through the College campus to access College Access Road and the new transfer hub.

Aerial 5 (Appendix D) presents recommended security measures for Konocti Education Center:

- ◆ Repair and reinforce fencing along the north side of the athletic field
- ◆ Lock the existing gates and provide security lighting along the south side of the property
- ◆ Install a new gate at the end of College Access Road

Both physical improvements and procedures should be implemented with the construction of the new transfer hub at the corner of Dam Road Extension and South Center Drive. Aerial 9 of Appendix D graphically displays recommended security improvements for the transfer hub location

- ◆ One of the best security measures is to have “eyes” on site. At least one LTA staff member should be stationed at the new transfer hub during transit hours. This could be administrative personnel who could assist passengers with questions and ticket

sales and/or a transit supervisor. Transit staff should have a good line of sight from the office onto Dam Road Extension in the direction of Konocti Education Center and Woodland Community College. Periodically, staff should walk the perimeter of the transfer hub property in an effort to maintain a strong presence as well as enforce no loitering on the premises. Transit staff should also be trained to coordinate with Konocti Education Center/Woodland Community College staff and security personnel.

- ◆ Security cameras should be installed throughout the transfer hub.
- ◆ “No Loitering” signage should be placed throughout the facility.
- ◆ Lighting on the bus shelters will help to discourage sleeping there at night.
- ◆ Work with Clearlake Police Department to conduct period police patrols.
- ◆ Dam Road Ext extension to 18th Avenue project – As noted previously in this report, a future circulation improvement project for the City of Clearlake is to extend Dam Road Extension north to intersect with 18th Avenue at Phillips Avenue. As it stands now, any local vehicle traffic from the “Avenues” neighborhood must use SR 53 to access Walmart and the surrounding shopping areas. Pedestrians, however, can walk through the vacant land between 18th Avenue and the Konocti Education Center to travel to Walmart or the former Ray’s Food Place. Bike lanes and sidewalks on Dam Road Extension have been proposed as part of the Dam Road Ext extension project. Constructing non-motorized facilities along this corridor, will help to direct the flow of pedestrian traffic to/from new transit center along Dam Road Ext and away from Woodland Community College and KEC. It would also make sense for the new transit hub to be constructed at the same time as the road project.
- ◆ City of Clearlake Ordinance 5.21.3.d prohibits panhandling within 10 feet of a public transportation vehicle or stop, if asked to leave by the owner/operator. As suggested by peer transit agencies, this rule should be enforced so as to increase security at the transit center.

Other Security Design Features

The peer review indicated that transit center design is a key component to limiting long term stays by transients and illegal activities. Therefore, the new Lake Transit transfer hub should incorporate the following elements:

- ◆ Architecture should avoid alcoves and “cozy corners” which cannot be seen from the street and might encourage overnight visits
- ◆ Rock or cactus garden landscaping is also less inviting for long term stays as well as limits opportunities for stashing belongings or controlled substances.

- ◆ Avoid or secure with locking caps all outdoor electrical outlets where transients could easily charge cell phones or other electronic devices.
- ◆ Install roll down doors or fencing at the entrance to the breezeways in the transfer hub.
- ◆ Contain water outlets within locked boxes to discourage homeless access.
- ◆ Lighting and security cameras should be installed throughout the transfer hub.
- ◆ Although a public restroom would be a great convenience to passengers, a public restroom could become a convenient place to conduct illegal activities and should be avoided. A public restroom should be provided only if it is accessible using a key provided by on-site staff.
- ◆ Install speed limit signs and warning signs on Dam Road Extension for a school zone and buses turning into the transit center.

Other Considerations

Another concern of neighboring uses is that traffic congestion will increase at the Dam Rd/Dam Rd Extension intersection during the AM peak hour. Konocti Education Center school buses and parent vehicles already cause delays on the eastbound left hand turn lane on to Dam Road Extension.

Konocti Education Center bell times are 8:10 AM and 3:10 PM. School buses begin arriving at 7:30 AM until 8:10 AM. Roughly 5 buses serve the Konocti Education Center and depart immediately after dropping off students. This may increase as the study body increases over time. LTA buses would be making the left turn on to Dam Road Extension to reach the new transfer hub at the following times:

AM Peak Hour

- ◆ Route 1 – Arrives at transfer hub at 7:55 AM and departs at 8:00 AM
- ◆ Route 3 – Arrives/departs transfer hub at 7:55 AM and 8:29 AM
- ◆ Route 4 – Arrives/departs transfer hub at 7:35 AM
- ◆ Route 10 – Arrives transfer hub at 7:48 AM and departs at 8:00 AM
- ◆ Route 11 – Arrives transfer hub at 7:47 AM and departs at 8:00 AM
- ◆ Route 12 – Arrives transfer hub at 7:49 AM and departs at 8:00 AM

With the extension of Dam Road Extension, Route 11 will access the site via the north. Routes 10 and 12 can be routed to access Dam Road Extension from Lake Street to the south. This leaves 3 buses under the current schedule that will be making the left turn from Dam Road on to Dam Road Extension between 7:35 AM and 7:55 AM. Route 1 already travels in this direction so only 2 new buses will be making the left turn. It is likely that most parents will be making the same left turn from Dam Road on to Dam Road Extension to drop off their children at school between 8:00 AM and 8:10 AM. By

this time, LTA buses will be departing the transfer hub and travelling the opposite direction on Dam Road Extension to make a right turn on to Dam Road. As the peak times of bus activity and parent drop-off activity differ, traffic impacts associated with the change in bus movements will not be significant.

By providing parallel access to the Walmart shopping center area from the “Avenues” neighborhood, the Dam Road Ext. extension project will reduce local traffic using SR 53 between 18th Avenue and Dam Road. In turn this could reduce congestion at the Dam Road Ext. and Dam Road intersection. Over the long-term, there may be a roundabout constructed at the Dam Road/Dam Road Extension intersection. As part of environmental work conducted for the construction of a new transfer hub, a traffic evaluation of the Dam Road/Dam Road Extension intersection during both AM and PM peak hours should be prepared.

Along the same lines, the Konocti Education Center school bus staging area is located directly across the street from the preferred transfer hub location creating the potential for conflicts between transit buses and school buses turning in/out of their respective staging areas. The mid-block site configuration would provide a greater distance between where LTA buses and school buses access Dam Road Extension. With proper coordination and training of both school bus drivers and LTA bus drivers, these conflicts could be mitigated.

ALTERNATIVE SITE

Recent discussions with stakeholders have indicated that the City intends to focus redevelopment projects more in the southern portion of the City of Clearlake as opposed to the northern portion of the City. There is particular interest in redeveloping the old Airport site.

Site 1 (Old Airport) shares many of the same advantages as Site 7 such as:

- Minimal increase in LTA operating costs
- Location is not adjacent to homeless camps
- Low acquisition costs
- Potential for a Park and Ride Lot
- Low environmental impact

However, in order to maximize convenience for transit passengers and encourage ridership, a transfer hub should be located near multiple transit activity generators such as shopping opportunities and employment opportunities. If a scenario occurs where the preferred Site 7 cannot be used as the new transfer hub and redevelopment of the old Airport has occurred, the Study Team recommends constructing the new transit center at Site 1.

BACKUP SITE

In a scenario where Site 7 cannot be utilized as the new transfer hub location and redevelopment is not likely to occur at the Old Airport (Site 1), then Site 5 (Burns Valley Shopping Center) would be the backup site location. Although convenient to existing transit activity centers, the primary challenge with Site 5 would be acquisition of the nearly 20 parcels required to build a transit center.

POTENTIAL FUNDING SOURCES

At this point in the study, funding has not been identified for engineering work, environmental study or construction of a new transfer hub. The discussion below lists a variety of funding sources which could be potential funding sources for the project: Many of these funding sources give priority to disadvantaged communities. For programs which use proceeds from California's Cap and Trade Program, a disadvantage community is defined by the CalEPA and includes communities which are disproportionately burdened by and vulnerable to multiple sources of pollution. Because of the low level of pollution in Lake County, there are no communities in the region which have been identified by CalEPA as disadvantaged.

- ◆ **FTA Section 5311 Public Transportation for Rural Areas** – Federal transit funding for rural areas (population of less than 50,000) is currently provided through the FTA Section 5311 Nonurbanized Area Formula Program. In California, an 11.47 percent local match is required for capital projects and a 44.67 percent match for operating expenditures. These funds, administered by Caltrans, are segmented into “apportioned” and “discretionary” programs. The bulk of the funds are apportioned directly to rural counties based on population levels. The remaining funds are distributed by Caltrans on a discretionary basis and are typically used for capital purposes. This could include transfer hub facilities.
- ◆ **FTA 5311(f) Intercity Bus Services** – 15 percent of the FTA 5311 funding sources is dedicated to funding operating and capital transit projects which provide meaningful connections from rural areas to the intercity transportation network (Amtrak and Greyhound). Three LTA routes receive FTA 5311(f) funding as they connect Lake County residents to intercity transportation services.
- ◆ **FTA 5339 Bus and Bus Facilities Grants** – Eligible activities include capital projects to replace, rehabilitate and purchase buses, vans, and related equipment, and to construct bus-related facilities (such as a transit center), including technological changes or innovations to modify low or no emission vehicles or facilities. This is a competitive grant program which requires a 20 percent match.
- ◆ **Low Carbon Transit Operations Program (LCTOP)** - This is one of several programs that are part of the Transit, Affordable Housing, and Sustainable Communities Program established by the California Legislature in 2014 by Senate Bill 862. The LCTOP provides operating and capital assistance for transit agencies to reduce greenhouse gas emission and improve mobility, with a priority on serving

disadvantaged communities. SB 862 established LCTOP as a noncompetitive, formulaic program, with 5% of annual auction proceeds being continually appropriated at the beginning of 2015. Moneys from the program must be expended to provide transit operating or capital assistance that meets any of the following:

1. Expenditures that directly enhance or expand transit service by supporting new or expanded bus or rail services, new or expanded water-borne transit, or expanded intermodal transit facilities, and may include equipment acquisition, fueling, and maintenance, and other costs to operate those services or facilities.
2. Operational expenditures that increase transit mode share.
3. Expenditures related to the purchase of zero-emission buses, including electric buses, and the installation of the necessary equipment and infrastructure to operate and support zeroemission buses.

Eligible projects include expanding intermodal transit facilities, as long as the project reduces greenhouse gas emissions.

- ◆ **The Transit and Intercity Rail Capital Program (TIRCP)** is funded through California's Cap and Trade program. The objective of the program is to provide grants from the Greenhouse Gas Reduction Fund to fund transformative capital improvements that will modernize California's intercity, commuter, and urban rail systems, and bus and ferry transit systems to reduce emissions of greenhouse gases by reducing congestion and vehicle miles traveled throughout California. Successful awards in 2016 included the acquisition of zero emission vehicles and the construction of transit stations which will link transit lines and activity centers or which will allow for an increase in frequency of service. Typically, more urban transit agencies have received funding through this program in the past.
- ◆ **Strategic Growth Council's Affordable Housing and Sustainable Communities (AHSC)** Program provides grants and affordable housing loans for compact transit-oriented development and related infrastructure and programs that reduce greenhouse gas emissions. The goal of the programs is to fund projects which:
 - Result in the reduction of greenhouse gas emissions and vehicle miles travelled (VMT).
 - Increase accessibility of housing, employment centers and key destinations through low-carbon transportation options such as walking, biking and transit.

This funding source could be viable if the transit agency partnered with an affordable housing project. Although most previous successful award applicants are more urban areas, the Town of Truckee in rural Eastern Nevada County received a grant for a mixed use village project with transit improvements.

- ◆ **State Transportation Improvement Program (STIP)** – Although primarily used for roadway projects, STIP funds derived from sales tax revenues on diesel fuel can be used to construct transit facilities.
- ◆ **Regional Surface Transportation Program (RSTP)** is one of the main sources of flexible funding available for transit or highway purposes. RSTP provides the greatest flexibility in the use of funds. These funds may be used (as capital funding) for public transportation capital improvements, car and vanpool projects, fringe and corridor parking facilities, bicycle and pedestrian facilities, and intercity or intracity bus terminals and bus facilities.
- ◆ **Active Transportation Program (ATP)** - The purpose of this competitive grant program is to encourage increased use of active modes of transportation by achieving the following goals:
 - Increase the proportion of trips accomplished by biking and walking,
 - Increase safety and mobility for non-motorized users,
 - Enhance public health,
 - Ensure that disadvantaged communities fully share in the benefits of the program,
 - Provide a broad spectrum of projects to benefit many types of active transportation users.

This funding source could potentially be used to fund sidewalks and bicycle paths leading to the transit center.

NEXT STEPS

This study represents the preliminary planning work for developing a new transfer hub location for LTA. Below is a discussion of steps to guide LTA and Lake APC through the implementation process.

- ◆ **Negotiate land acquisition** - Under the Preferred Site option, LTA will need to work with Lake County to determine a fair sales price or long-term lease option for the property located on Dam Road Extension and South Center Drive. Under the Alternative Site option, LTA will need to make similar negotiations with the City. If the Back up Site is used, LTA will need to purchase the land from the multiple property owners.
- ◆ **Complete Grant Applications for Funding** – Obtaining funding for the entire project may be the most difficult step. LTA and Lake APC will need to apply for multiple grant funding sources to finance the project.
- ◆ **Complete Environmental and Engineering Work** – Prior to construction, more in depth engineering and environmental work must be performed. This effort will produce a more detailed cost estimate which can be used for final grant applications.

- ◆ **Request for Bids for Construction** – Once the project has been completely funded, LTA should competitively seek contractors to construct the new transit hub.
- ◆ **Change LTA schedules** – LTA schedules should be adjusted to reroute buses to the new transfer hub location. LTA should keep in mind traffic circulation issues at Dam Road Extension and Dam Road.

Appendix A
Public Input Materials



Re: Lake Transit Authority Transfer Hub Location Study

The Lake Area Planning Council (APC) and Lake Transit Authority (LTA) would like to invite you to participate in a planning charrette to consider a potential passenger transit hub for the Lake Transit system in Clearlake.

An important factor in an effective regional transit network is a transfer point where passengers make connections between routes. The existing primary transfer site at Ray's Food Place in southern Clearlake has several deficiencies, particularly pertaining to security issues such as inadequate lighting and cameras, the ability to circulate buses efficiently and safely, and lack of bicycle and pedestrian facilities and other features such as bike lockers. To address this, the Lake Area Planning Council (APC) has initiated a study of a new and enhanced transit hub. The study is being conducted by a team led by LSC Transportation Consultants Inc.

An initial evaluation of potential locations for a new transfer hub has identified a preferred parcel along the west side of Dam Road Extension and south of S. Center Drive, close to Yuba College, Lake County Mental Health Services and Walmart. The new transfer hub may include loading space for up to eight buses and a small passenger/office building.

You have been identified as a stakeholder who may be interested in providing input on this project. On **May 12th** the Study Team will be holding a charrette and on-site tour of the proposed location to discuss the general design and elements of a new transfer hub in the City of Clearlake. We understand that you are busy, so we hope that you will be able to attend at least a portion of the charrette.

- 10:00 AM – Presentation by REY Engineers/LSC Transportation Consultants
 - o Overview of the study, site selection process and potential transit hub design
- 11:00 AM – On-site visit of existing and preferred site location
- 12:30 PM to 1:30 PM – Return to City Council Chambers for lunch break
- 1:30 – 3:45 PM – Detailed discussion of transit hub design and elements
- 3:45 PM – 4:00 PM – Break
- Public Open House in Lobby from 4:00 PM to 6:00 PM

Lunch will be provided, so please RSVP to Genevieve Evans at genevieve@lsctahoe.com or 530-583-4053 by May 9th.

WE NEED YOUR INPUT!



Lake Transit Authority Transfer Hub Location Study

Lake Area Planning Council and
Lake Transit Authority

Lake Transit Authority is considering relocating the existing transfer hub at Ray's in Clearlake to a vacant parcel just north on Dam Road Extension. The new site will be designed to better accommodate the transit system as well as improve security for passengers.



**For more information please attend
a public workshop:**

**Thursday, May 12th
from 4:00 PM to 6:00 PM**

In the lobby of the Clearlake City Hall Council of Chamber
14050 Olympic Drive
Clearlake, CA 95422

For questions, contact -

GENEVIEVE EVANS
LSC TRANSPORTATION CONSULTANTS, INC.
Email: Genevieve@lsctahoe.com
530-583-4053



Lake Transit Hub Location Plan Charrette/Security Meeting

Stakeholder Invitee List - Page 1 of 2

Position	Name	Contact Email	Other Contact Info	Charrette	RSVP	Security Meeting	RSVP
Government Officials							
City of Clearlake - City Council Members and Mayor	Gina Fortino Dickson	gfortinodickson@clearlake.ca.us	group 1	Invited 05/02		Invited 10/21	
	Joyce Overton	overton@hotmail.com	group 1	Invited 05/02		Invited 10/21	
	Russel Purdock	rperdock@clearlake.ca.us	group 1	Invited 05/02	yes	Invited 10/21	
	Bruno Sabatier	bsabatier@clearlake.ca.us	group 1	Invited 05/02	yes	Invited 10/21	
	Nick Bennet	nbennett@clearlake.ca.us nbennett@ips.net					Invited 10/21 Invited 10/21
Lake County - Board of Supervisors	Jim Comstock	Jim.Comstock@lakecountyca.gov	group 1	Invited 05/02		Invited 10/21	
	Jeff Smith	Jeff.Smith@lakecountyca.gov	group 1	Invited 05/02		Invited 10/21	
	Jim Steele	Jim.Steele@lakecountyca.gov	group 1	Invited 05/02		Invited 10/21	
	Anthony Farrington	Anthony.Farrington@LakeCountyCA.gov	group 1	Invited 05/02		Invited 10/21	
	Rob Brown	Rob.Brown@LakeCountyCA.gov	group 1	Invited 05/02		Invited 10/21	
Lake APC Board	Chuck Leonard	Raiderscharlie@netzero.net	group 1	Invited 05/02	Yes	Invited 10/21	
	Stacey Mattina	smattina@cityoflakeport.com	group 1	Invited 05/02		Invited 10/21	
	Martin Scheel	mscheel@cityoflakeport.com	group 1	Invited 05/02	Yes	Invited 10/21	
	Marc Spillman	mcsppcc@yahoo.com	group 1	Invited 05/02		Invited 10/21	
Fire Department	Willie Sapeta	Fire Chief	fdchf700@yahoo.com			invited 10/24	yes
	Charlie Diener	Fire Marshall				Asked Willie to invite	
Lake Transit Authority							
Mobility Manager Contractor manager (per Wanda)	Karl Parker						
	Wanda Gray	wandagrav@mchsi.com	separate	emailed invite and public workshop flyer to distribu		Invited 10/21	
	Bill McIntyre	bill_mcintyre@mediacombb.net	separate email			Invited 10/21	yes
Tribal Entities							
Big Valley Rancheria	Anthony Jack	ajack@big-valley.net	707-263-3924	Invited 5/10			
Habematolel Pomo of Upper Lake	Sherry Treppa	sherrybridges@sbcgolbal.net	707-275-0737	Invited 5/10			
Lower Lake Rancheria of Koi Nation	Darin Beltran		707-575-5586	Invited 5/10			
Middletown Rancheria Band of Pomo Indians	Jose Simon III	jsimon@middletownrancheria.com	707-987-3670	Invited 5/10			
Elem Indian Colony	Agustin Garcia	a.garcia@elemindiancolony.org	707-533-6347	Invited 5/10			
Robinson Rancheria	EJ Crandall		707-275-0527	Invited 5/10			
Scotts Valley Band of Pomo Indians	Gabriel Ray	westlake@adironack.com	707-263-4220	Invited 5/10			
Government Staff							
City of Clearlake - City Manager	Greg Folsom	gfolsom@clearlake.ca.us	Group Lake APC TAC	Invited 05/02		Invited 10/21	
City of Clearlake - Public Works	Doug Herren	dherren@clearlake.ca.us	Lake Transit Stakeholder Staff	Invited 05/02	yes	Invited 10/21	
City of Clearlake - Engineer	Bill Clemans	bclemans@clearlake.ca.us	Group Lake APC TAC	Invited 05/02	yes	Invited 10/21	
City of Clearlake - Community Development	Julie Burrow (Assistant Planner, no	jborrow@clearlake.ca.us	Lake Transit Stakeholder Staff	Invited 05/02	yes	Invited 10/21	
City of Clearlake - Police Department	Craig Clausen	cclausen@clearlakepd.org	x				
City of Clearlake - Finance	Chris Becnel	financ52@sonic.net					
Tim Celli	tcelli@clearlakepd.org	707-994-8251 x313	Emailed separately	Invited 05/02	Yes/no lunch	Invited 10/24	meeting at 2 pm at project site
Lake County - CAO	Carol Huchingson	Carol.Huchingson@lakecountyca.gov	Lake Transit Stakeholder Staff	Invited 05/02		Invited 10/21	
Lake County - Social Services	Audrey Knight	Audrey.Knight@lakecountyca.gov	Lake Transit Stakeholder Staff	Invited 05/02		Invited 10/21	
Lake County - Superior Court	Krista D. LeVier	krista.levier@lake.courts.ca.gov	spoke with and emailed	4-May	http://www.lake.courts	Invited 10/21	
Lake County Sheriff	Brian Martin	707-262-4091					
	Chris Macido	707-262-4201	Left voicemail for Undersheriff Chris Macido			Left voicemail for Undersheriff Chris Macido	

Lake Transit Hub Location Plan Charrette/Security Meeting
Stakeholder Invitee List - Page 2 of 2

Position	Name	Contact Email	Other Contact Info	Charrette	RSVP	Security Meeting	RSVP
Neighboring Uses							
Yuba College	Steven Wylie, Director of Campus C	swylie@yccd.edu	Lake Transit Neighbor	Invited 05/03	No	at conference	can meet at 3:30, Yes
St. Helena Hospital		dandre.campbell@ah.org	Lake Transit Neighbor	Invited 05/03	no	at conference	Invited 10/21
Konocti USD - Konocti Education Center 4 - 12	Jeff Dixon, Director	Jeff.Dixon@KonoctiUSD.org	Lake Transit Neighbor	Invited 05/03	no	at conference	
	Claudine Graf, Secretary	Claudine.Graf@KonoctiUSD.org	Lake Transit Neighbor	Invited 05/03	no		Invited 10/21
	Donna Becnel	donna.becnel@konoctiUSD.org			yes		Can meet at 3:30 PM (Yes
Property owner for old Sears store (Bay Sierra Lakeridge Properties)	General Email	info@baysierra.com	Lake Transit Neighbor	Invited 05/03			Invited 10/21
Clearlake Masonic Building Association	Robert Hipkiss	clearlakecallayomi@hotmail.com	Lake Transit Neighbor	Invited 05/03	yes	707-995-9568	Invited 10/21
Rays	Roni England, Store Manager	mar36@ckmarket.com	Lake Transit Neighbor	05/03			Invited 10/21
Walmart	Steven Fraedrich, Asst Store Manager	steven.fraedrich@gmail.com	Lake Transit Neighbor	Invited 05/03			Invited 10/21
	Travis attending				yes		
Other							
Chamber of Commerce	Melissa Fulton	ceo@lakecochamber.com	separate	Invited 05/02			Invited 10/21
Social Services Transportation Advisory Council							
Potential Transit User (PTU), 60+ Years	Paul Branson	shapingmobility@gmail.com	Lake SSTAC	Invited 05/02	no		Invited 10/21
PTU, Handicapped	Kaye Bohren	k.bohren@me.com	Lake SSTAC	Invited 05/02			Invited 10/21
Area Agency on Aging of Lake and Mendocino Counties	Todd Metcalf	tmetcalf@dss.co.lake.ca.us	Lake SSTAC	Invited 05/02			Invited 10/21
Live Oak Senior Center Seniors and Live Oak Transportation Project	Tracy Thomas	liveoak8@mchsi.com	Lake SSTAC	Invited 05/02			Invited 10/21
Lake County United Veterans Council	Frank Parker	parkerhouse@mchsi.com	Lake SSTAC	Invited 05/02			Invited 10/21
People Services	Ilene Dumont	ldumont@rocketmail.com	Lake SSTAC	Invited 05/02			Invited 10/21
Lake County Department of Social Services	Michele Dibble	mdibble@dss.co.lake.ca.us	Lake SSTAC	Invited 05/02			Invited 10/21
Lake Transit Manager	Mark Wall	mwaconsulting@comcast.net	--				
County/City Area Planning Council							
Board of Supervisor	Jim Comstock	jcomstock@co.lake.ca.us	group 1	Invited 05/02			Invited 10/21
	Jeff Smith	jeff_s@co.lake.ca.us	group 1	Invited 05/02			Invited 10/21
Member at Large	Rachelle Damiaata	rdamiaata97@gmail.com	group 1	Invited 05/02			Invited 10/21
	Chuck Leonard	raderscharlie@netzero.net	group 1	Invited 05/02			Invited 10/21
City of Clearlake	Gina Fortino Dickson	gfortinodickson@clearlake.ca.us	group 1	Invited 05/02			Invited 10/21
	Russell Perdock	rperdock@clearlake.ca.us	group 1	Invited 05/02			Invited 10/21
City of Lakeport	Stacey Mattina	smattina@cityoflakeport.com	group 1	Invited 05/02			Invited 10/21
	Martin Scheel	mscheel@cityoflakeport.com	group 1	Invited 05/02			Invited 10/21
Technical Advisory Committee							
CHP	Hector Paredes	hparedes@chp.ca.gov	Group Lake APC TAC	Invited 5/2			Invited 10/21
County DPW	Scott DeLeon	scottd@co.lake.ca.us	Group Lake APC TAC	Invited 05/02			Invited 10/21
County Planning	Mireya Turner	mireya.turner@lakecountycva.gov	Group Lake APC TAC	Invited 05/02			Invited 10/21
Lakeport DPW	Doug Grider	dgrider@cityoflakeport.com	Group Lake APC TAC	Invited 05/02			Invited 10/21
Lakeport Planning	Kevin Ingram	kingram@cityoflakeport.com	Group Lake APC TAC	Invited 05/02			Invited 10/21
Clearlake DPW	Bill Clemens	enqr@clearlake.ca.us	Group Lake APC TAC	Invited 05/02			Invited 10/21
Clearlake Planning	Greg Folsom	gfolson@clearlake.ca.us	Group Lake APC TAC	Invited 05/02			Invited 10/21
Caltrans Representative & Lake APC Staff							
Caltrans	Dave Carstensen	dave.carstensen@dot.ca.gov	Group Lake APC TAC	Invited 05/02	Yes	Until 2:30 PM	Invited 10/21
Executive Director, Davey-Bates Consulting	Lisa Davey-Bates	ldaveybates@dbcteam.net	--				yes
Principle, Dow & Associates	Phil Dow	dow@dow-associates.com					Invited 10/24

Lake Transit Hub Location Plan

Charrette Agenda

May 12, 2016

Clearlake City Council Chambers

Stakeholder Group

- 10:00 AM – Presentation by REY Engineers/LSC Transportation Consultants
 - o Overview of the study
 - o Existing transfer site deficiencies
 - o Opportunities for a new facility
 - o Candidate sites
 - o Concept for preferred site
- 11:00 AM – Walking tour of existing and preferred site location
- 12:30 PM to 1:30 PM – Return to City Council Chambers for lunch break
- 1:30 – 3:45 PM – Detailed discussion of transit hub design and elements
- 3:45 PM – 4:00 PM - Break

Public Open House in Lobby from 4:00 PM to 6:00 PM

Lake Transit Hub Location Plan Charrette Notes

May 12, 2016

City of Clearlake Council Chambers

Ray's is economic source for panhandlers

Look at security at adjacent uses to transit center site.

Academy kids don't ride bus, unless they miss it.

Objective of the project is to improve security.

Dam Rd Ext. project is crucial part of making transit center work. Project is one of the top 3 projects in the county.

People walk down from the "Avenues" to the project area.

Concerns – Across street from school, sex offenders .
Some minors go to Yuba College.

Have purchased security equipment for Rays site

Academy staff thinks airport site would be better.

What do we need to do to accommodate school.

Restroom at the transit center would attract homeless. See a lot of drug use at bus stop. Still have dead end. Concerned that it is going to bleed over into campus.

Would leave stop at Ray's but maybe served by one bus.

Important to have transit staff on site at new transit center.

Feel that losing business by not going to Shopping centers.

Four way stop?

Burns Valley Mall Site - Putting the transit center at the vacant lot near Safeway would eliminate school problem.

However, site is privately owned so it would be more expensive to purchase if there is a willing seller.

Site is centrally located, near library, shopping, movie theater etc.

Yuba College is called Woodland College now.

Panhandlers go where food and money is.

Potential for new city ordinances which would make it easier to clear homeless camps.

The general impression is that bus stops and bus hubs are no different in terms of security.

Input from Lake Transit: Ray's Food Place can't be used as a transfer site forever, Clearlake has the most ridership so it makes the most sense for the new transfer hub to be in Clearlake.

Moving the transfer site to near Safeway could lead to same issues as the Ray's location.

Potential Site at Old Airport – This would only work once redevelopment has gone in. May need an overpass over SR 53 for passengers to reach social services and retail uses near Walmart and Rays. The old water park is owned by the bank. The old airport is owned by the City.

In terms of circulation: may need to widen Old SR 53 to 3 lanes and need two access points.

Konacti Education Center – New school located at old Highlands Academy, 350 students up to 575 students in 2 years. 4 – 8th grade is School for the Arts. 7 -12th grade is health magnet school. Students do internships at the hospital.

Already outgrown campus. Need more parking

School will include an Events Center – Full professional theater with CCTV. Can seat 200 for dinner theater and 400 for a performance.

Potential circulation conflicts with transit center when school buses are dropping off/picking up students

No walking paths between hospital and school

There is a goat herder nearby so have some animal control issues.

Public Works would prefer that buses don't travel on inner city roads

County HHS is interested in office space at the new transit center

What do we agree on?

- We need a new transfer hub
- Roll down doors on the breezeway
- Staffed facility is crucial
- Lighting is important

Park and Ride - Add more parking to the project. Would help school

Midblock option – Public Works prefers but doesn't like bulb out with 18th street extension.

Masonic lodge likes this option but not strongly opposed to other one.

Corner option – School prefers as the crosswalk is more direct to Mental Health and away from the school



Lake Transit Hub Location Plan Workshop

Addressing Security Concerns

November 7th, 2016

Agenda

2:00 PM – Meeting with Lt. Tim Celli of Clearlake PD (Acting Police Chief) –

Where: Preferred Project Site on the corner of Dam Rd Extension and S. Center Dr.

Who: LSC, WRLDCO, LTA, Lake APC

3:30 PM – Group Meeting

Where: Clearlake City Hall Council Chambers

Confirmed Attendees:

1. Genevieve Evans, LSC
2. Mark Wall, LTA
3. Lisa Davey-Bates, Lake APC
4. Walt Diangson – WRLDCO
5. Dave Carstensen – Caltrans
6. Bill McIntyre – Transit
7. Fire Department Representative
8. Police Department Representative
9. Donna Becnel – Konocti Education Center
10. Steve Wylie – Woodland College

Agenda

- Introductions
- Security Analysis Peer Review (LSC)
- Alternative Sites Overview (LSC, with input by LTA)
- Strategies to Increase Security at New Transfer Hub (WRLDCO)
- Address Public Concerns

Notes of Tour and Discussion of Konocti Education Center and Lake County Campus of Woodland Community College

11/8/16

Toured with: Donna Becnel, Superintendent, Konocti Unified School District

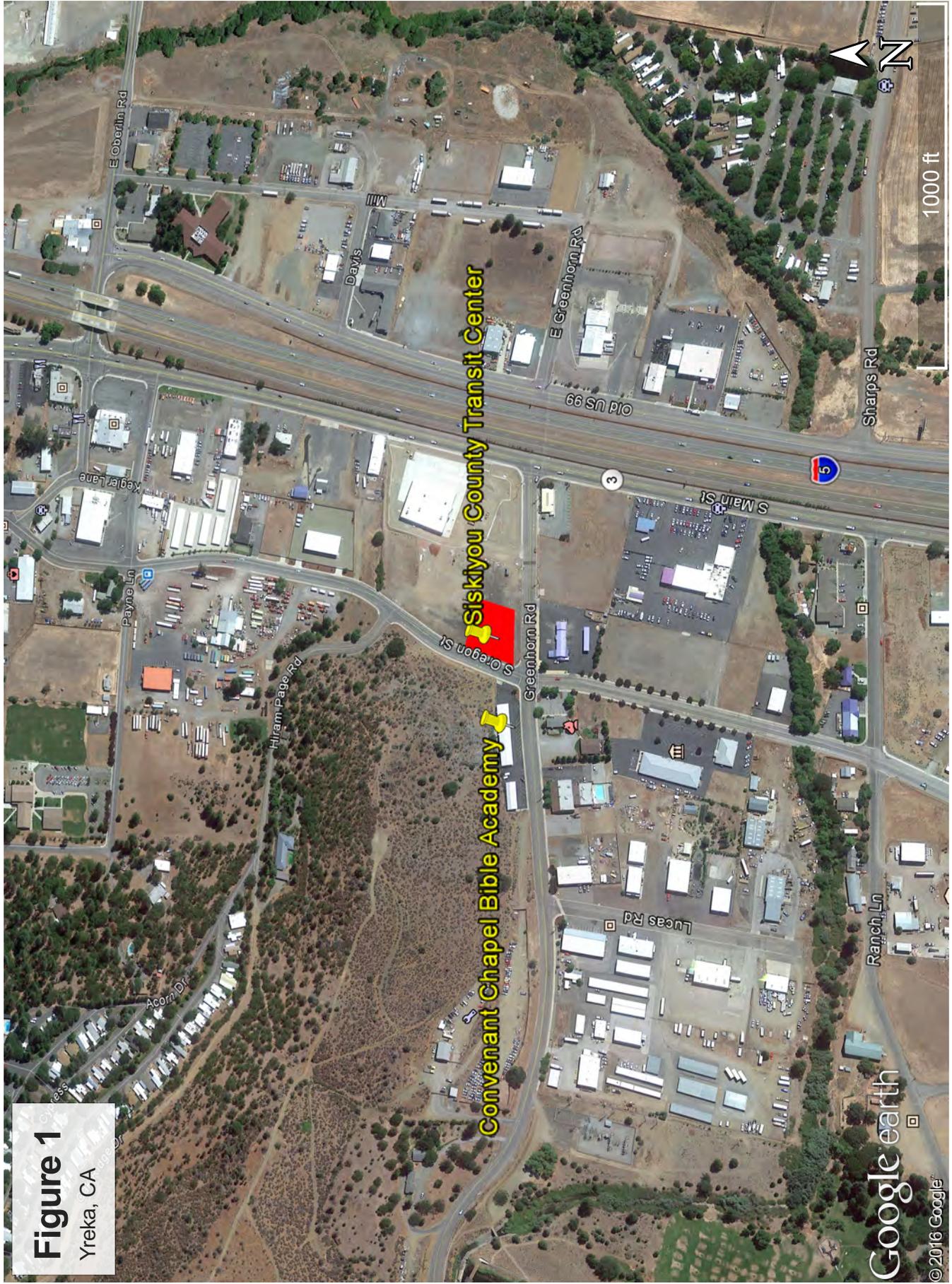
- Konocti Unified School District on behalf of Konocti Education Center (KEC) is concerned about the proximity of the transit hub mainly because of the pedestrian traffic that may come into and through the KEC campus and grounds.
- Homeless living in the brush north and south of the school already cause security concerns for the school, including:
 - Trespassing on school grounds, mainly on the upper athletic fields and perimeter building along the access road to the athletic field and down across LCC to Walmart;
 - Transients have stolen irrigation system components from the school's garden along the access road (Garden has been taken out by the school);
 - Observation: KEC maintenance staff leaves gate open at beginning of access road to upper field;
 - Transients have cut holes in the school's chain link fence on the north side of the athletic field. They get repaired only to be cut open repeatedly; and
 - The school ground perimeter is littered with trash from the homeless in the area.
- Residents living in the Avenues Area (18th Street to the north), used to drive their vehicles on the dirt roads above the school and onto the field access road. The county has promised to put a permanent barrier to prevent this. What is there now is piled boulders to serve as the barrier. However, it is believed that some residents still use the dirt roads to access Walmart to the south.
- Other concerns:
 - Loitering at the Hub could be a major issue for the KEC and school district;
 - There is no closed gate at the entry to the school off Dam Road to prevent people from entering the school grounds;
 - There could be people coming to the school to use a phone or get change for bus fares;
 - The school only has funds for one security person;
 - School buses line up in the morning to deliver children to the front of the school and again to pick the children up in the afternoon. The LT buses might cause problems for the school busing procedures;
 - The traffic at the intersection of Dam Road Ext. and Dam Road off of Hwy 53 is already an issue;
- Discussed and toured LCC area:

- Path from KEC athletic field access road onto LCC;
- Footpath to Walmart – fencing it off;
- Homeless pedestrian flow in proximity to child care center;
- Discussed Transit Hub project improvements that may help address the school's concerns:
 - Financial assistance in new fencing and gates (possibly added security lighting);
 - Staffing the hub with LT employees moving from the LT maintenance facilities on Hwy 53 up to Hub offices for –
 - Eyes on the transfer center, loitering and the entrance to KEC;
 - Assisting the KEC admin. staff and security person if anyone should wander into the schoolgrounds from the transit center;
 - Adding no entry, no loitering etc. signage on the KEC side as well;
 - Proper lighting and security cameras at the Hub;
 - Possibly moving the Hub further west, back from Dam Rd. Ext. & the school's entrance;
 - Providing extra parking at the Hub for overflow parking for the KEC and special events;
 - Extension of Dam Rd. Ext, to 18th

Appendix B
Security Review Maps

Figure 1

Yreka, CA



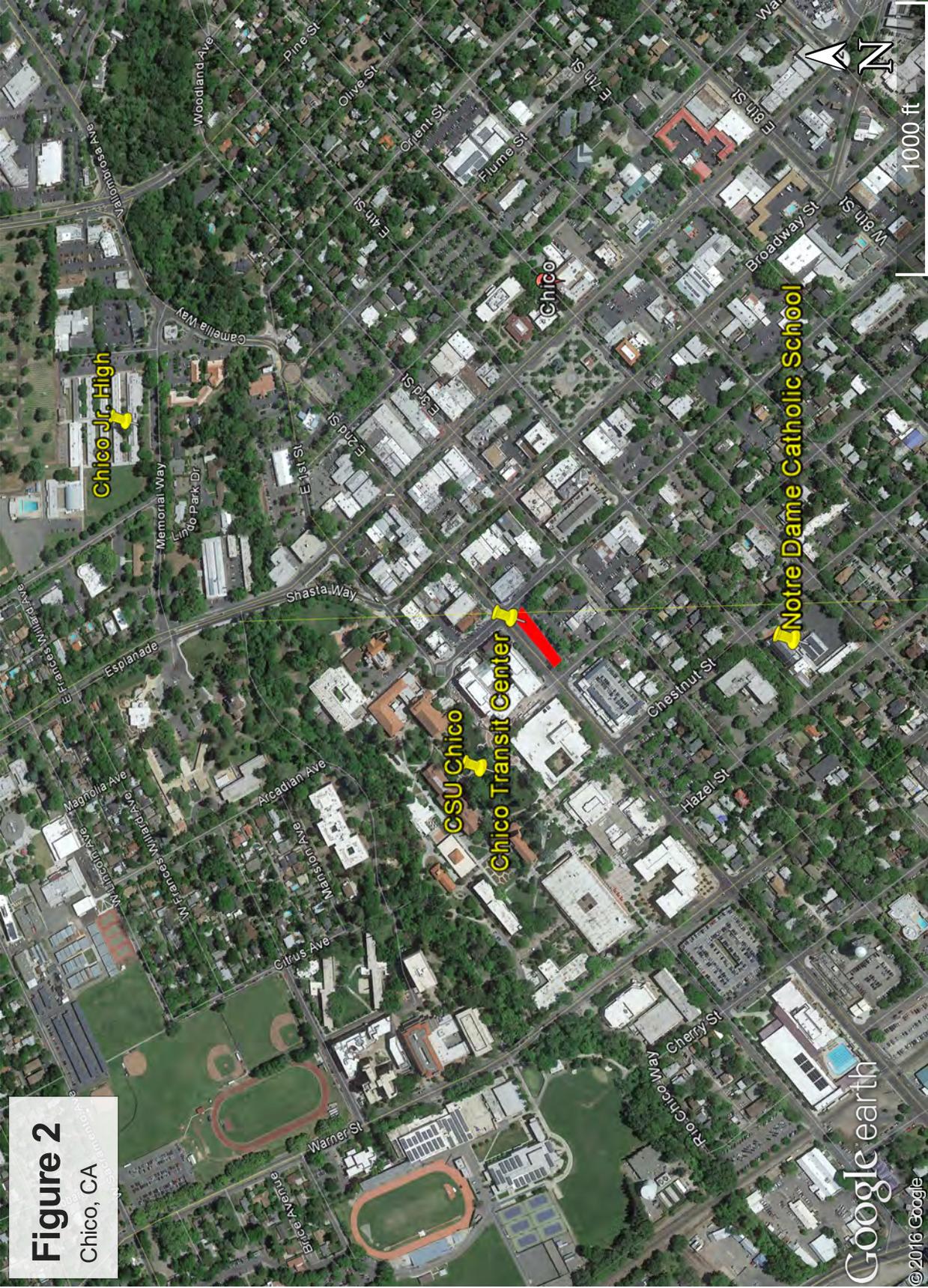
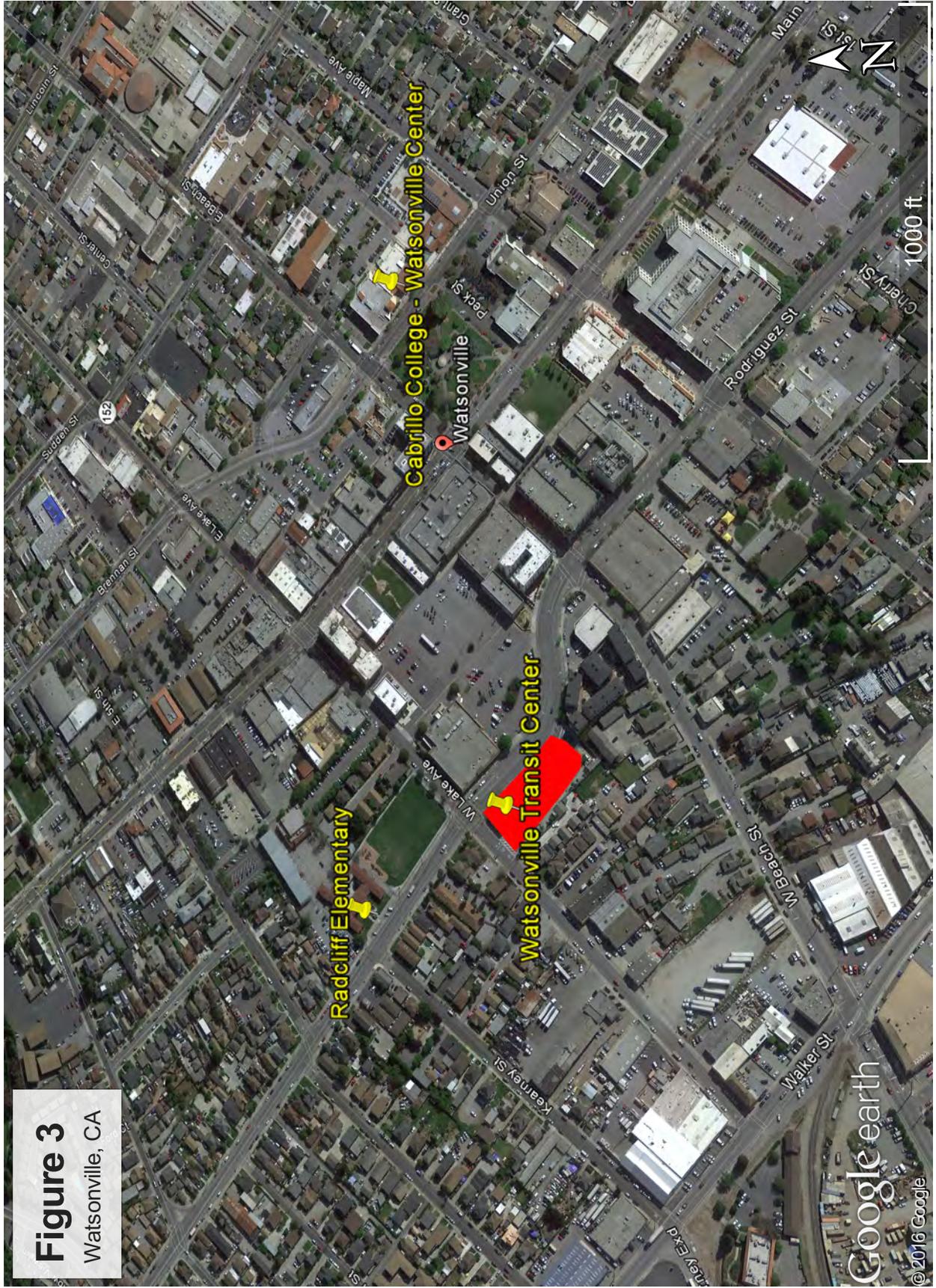


Figure 2
Chico, CA

Figure 3

Watsonville, CA



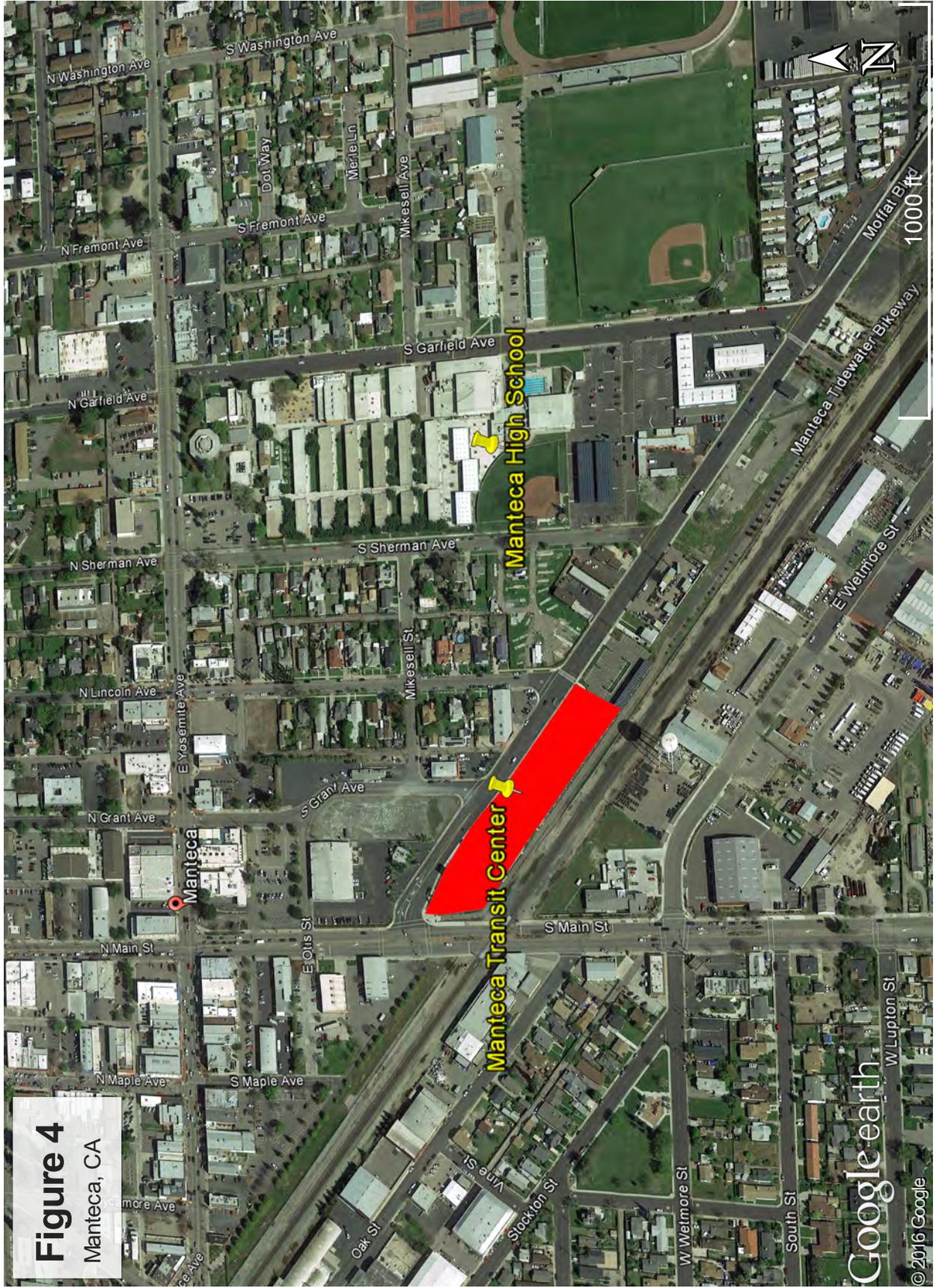
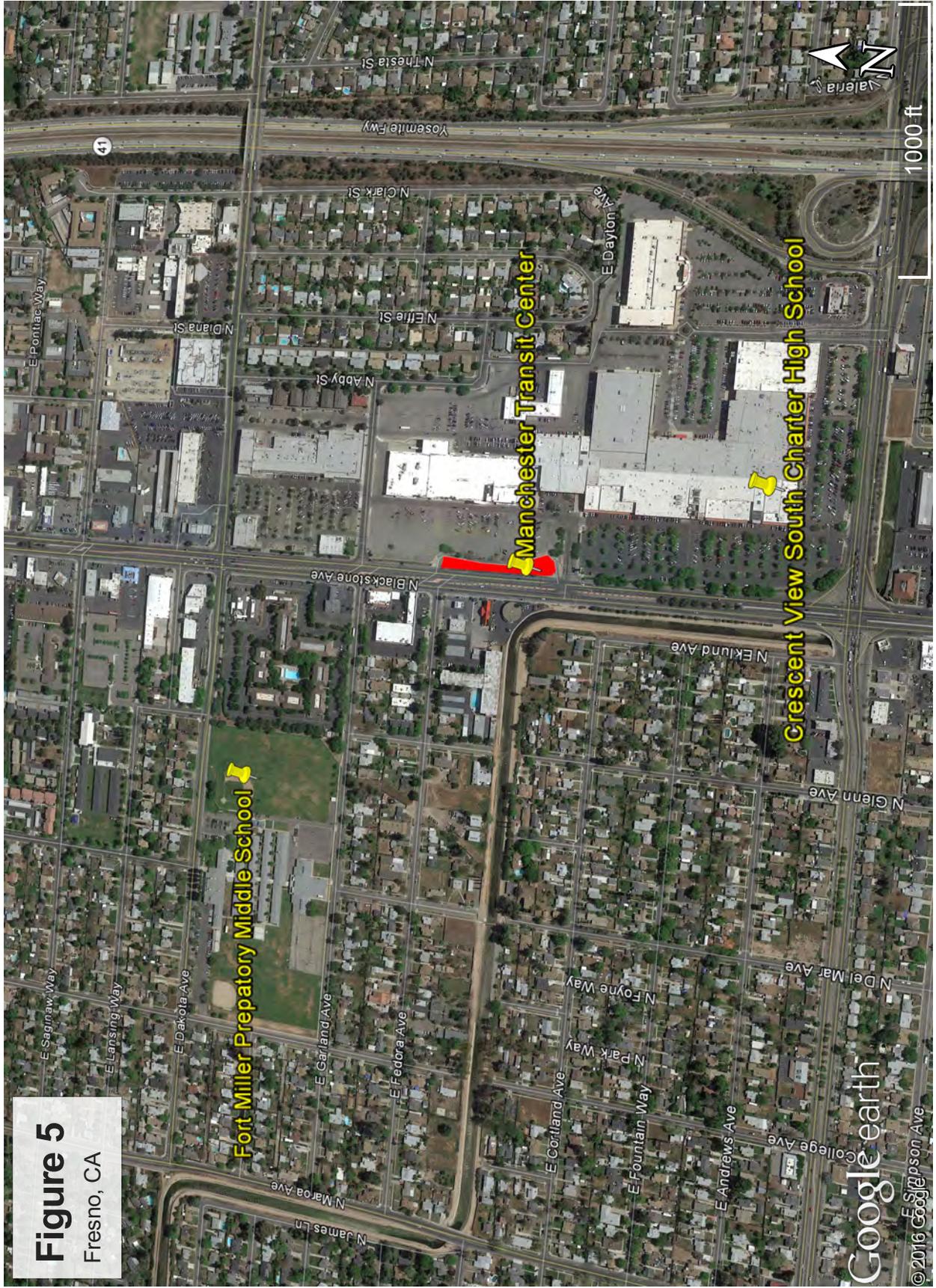


Figure 4
Manteca, CA

Figure 5

Fresno, CA



Fort Miller Preparatory Middle School

Manchester Transit Center

Crescent View South Charter High School

Google earth

© 2016 Google

1000 ft

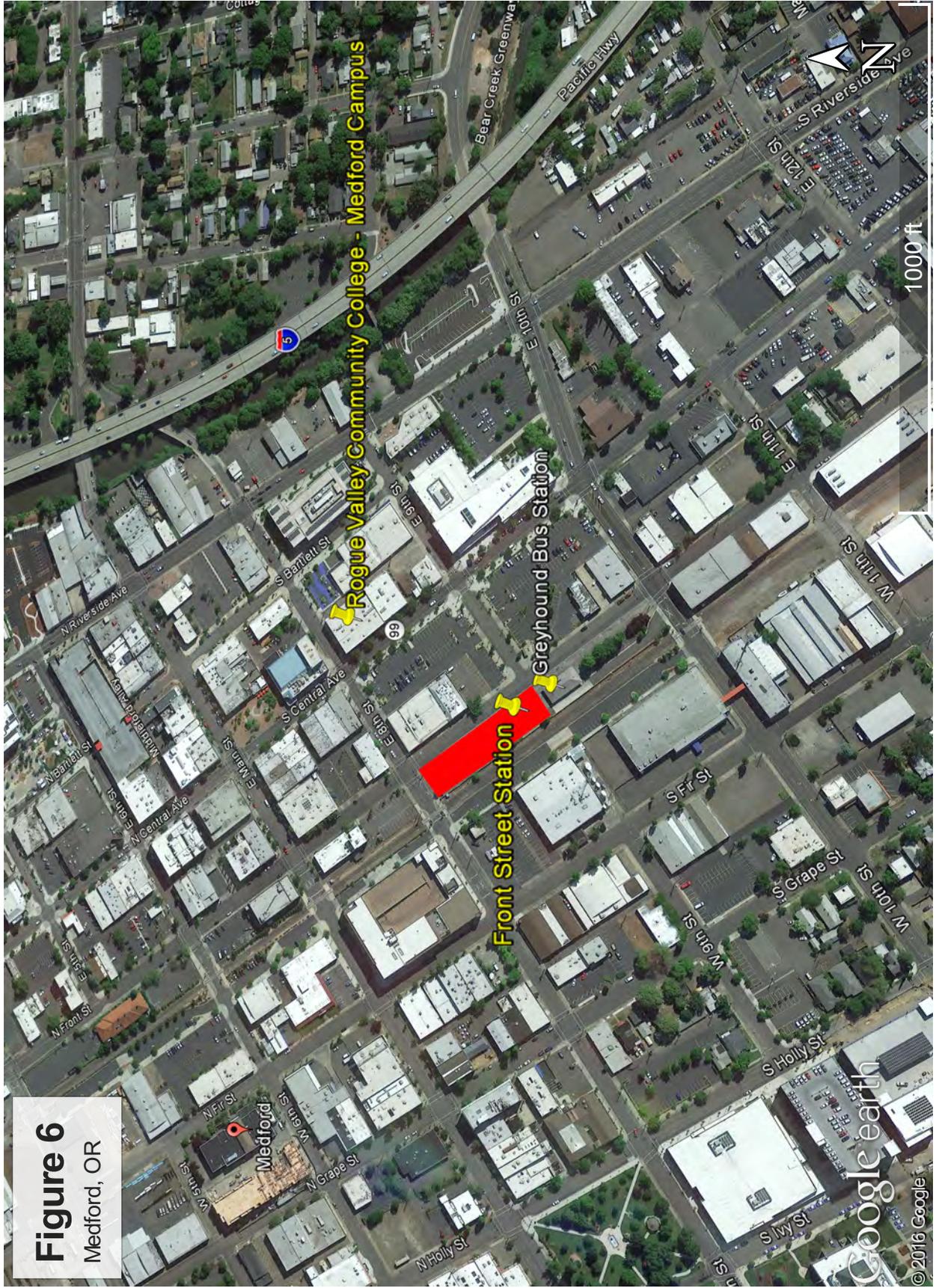
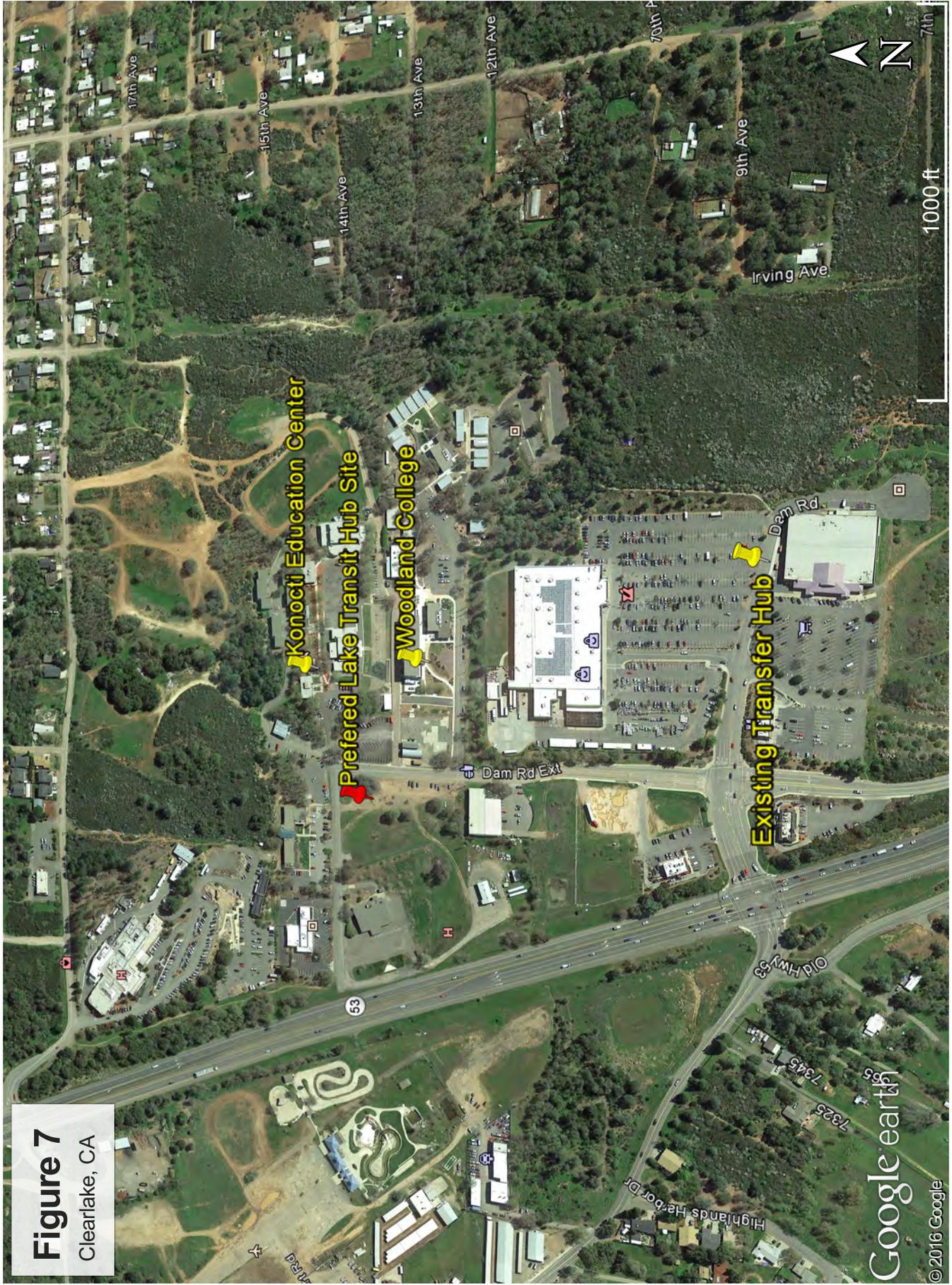


Figure 6
Medford, OR

Figure 7

Clearlake, CA



Appendix C

Security Review Interviews



LSC TRANSPORTATION CONSULTANTS, INC.

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Lake Transit Hub Location Study – Peer Review

Lake Transit provides public transit service throughout Lake County, including Lakeport, Clearlake, and Lower Lake, as well as providing connections to Napa County and Mendocino County. The existing transfer site for Lake Transit includes several deficiencies, particularly pertaining to security issues, inadequate size (requiring turnaround on private land), poor public image, and a lack of control over land and utilities. LSC Transportation Consultants Inc. has been hired by the Lake County/City Area Planning Council to study potential locations and general design of a new transfer site.

At this point in the study, the Consultant Team has recommended a potential new transfer center location in the City of Clearlake. However, concerns were raised as part of public input regarding the location adjacent to the Clearlake campus of Woodland Community College and the Konocti Education Center (charter school for grades 4 – 8. To address these concerns, LSC would like to review the security conditions in similar “peer” settings and include the results in our study.

Your transit agency has been identified as having a transit center near a school or college. We hope that you may have a few minutes to answer the questions below:

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?
2. If so, could you provide any details on the type of incidents, the location of the incidents, etc.?
3. Have any steps been taken to address security concerns due to the presence of the transit center near the schools? (Such as additional patrolling, security equipment, fencing, etc.)
4. If the transit center was recently constructed, has it changed security conditions at the school? If so, how?
5. Overall, do you believe the presence of the transit center near the school is a net benefit to the school, or a detriment?
6. Do you have any suggestions or thoughts that you would like to share with school administrators considering a transit center near their school site?
7. Are there others that you believe we should contact to gain additional information on this issue?

Thank you in advance for you input.

Sincerely,

Genevieve Evans
Planner
LSC Transportation Consultants Inc.
530-583-4053
genevieve@lsctahoe.com

Lake Transit Hub Location Study – Responses

Chico B Line, Chico – Steve Birnell

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

Transit center located across from Chico State, Middle School is within 2 blocks. Don't have any issues with student's safety. Have a large homeless population in town. So complaints are with respect to homeless. The homeless tend to congregate at the transit center, the nearby park and several agencies nearby. City provides homeless with a monthly bus pass but for the most part don't have any issues. Mostly middle school students they think they are older can get a bit belligerent with drivers. No violence on buses. Schools pay for bus pass for students and they have a student rate. Haven't had problems students being picked on. No building at transit center, only a little kiosk. Transients are there all the time but they don't panhandle much.

Chico Police, Chico – Lt. Marefield

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

No issues, no safety concerns, don't have too much interaction between Jr. High and transit center. University is across the street but not issues there. Homeless population finds the transit center a convenient place to get out of the sun but could say that about any place in town. Transit center was remodeled a couple years ago and is a great addition to downtown.

CSU Chico Police, Chico – Officer Korine

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

We see fights, people are drunk in the street. Campus police is across the street but city police is one mile away. So even since transit center is out of jurisdiction, people run into the campus police office. Some officers will not park vehicle near the transit center as homeless population does not respect property. Lots of transients. Not hugely concerning and the transit center is convenient but one must be mindful of safety while waiting for the bus. Bad people will find a way to take advantage of an easy situation. Main concern is not to park near the transit center. Many car burglaries because homeless move into parking garage for shelter from the sun. Parking garage is across the street. More folks venture on campus who would not venture on campus because of the transit center, often to charge phones or look for water. Sometimes they spread out all their belongings while charging phone and block ADA walkways.

Lessons learned: Be mindful of where power outlets are and are they blocking ADA walkways. What are specific laws of behavior restricted on campus that would not be restricted in public? Make these known on the college campus.

Parking is hardest thing. Not a huge a problem. Anything that increases the opportunity for crime will increase crime. Double edged sword as the transit center also provides many other benefits. People are not committing armed robbery or raping people, it is more small time crime. However, the transit center has increased crime a little.

Notre Dame Catholic School, Chico

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

Not that I am aware of. We do occasionally have problems with transients, or homeless individuals, but I can't know if it is directly related to the transit center.

2. Have any steps been taken to address security concerns due to the presence of the transit center near the schools? (Such as additional patrolling, security equipment, fencing, etc.)

We have experienced a greater degree of transients in the area, but I am not sure that it is related to the transit center. We have constructed a new fence with a buzzer system for access during the school day, and have added security cameras in the last few years.

3. Overall, do you believe the presence of the transit center near the school is a net benefit to the school, or a detriment?

I do not see it as a benefit or detriment.

4. Do you have any suggestions or thoughts that you would like to share with school administrators considering a transit center near their school site?

I would honestly be concerned, even though I can't be sure that it causes problems here at NDS. Our transit center is very small, so I am not sure if it is comparable.

FAX, Fresno – Jeff Long

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

Not that I have heard of. Used to have some pedestrian issues. Charter school is on same side of street as transit center so no issues there. The way routes are designed is that so don't drop people off on wrong side of street. This used to be an issue for Jr. High though. Jr. High kids are invincible so problems, they cross the street anywhere. As a result the City is putting in pedestrian signal at north end of transit center. In the past there has been pedestrian fatalities here when people would cross the street in front of the bus. There are 6 lines that meet at Manchester. Caution to other transit agencies is to put a convenient protective crossing from transit center to school or other transit activity center.

As with safety of students from transit passengers, Fresno has a bit of a gang problem. Did have some problems for a while at the transit center so Fresno PD stepped up patrol. Contracts for 4 transit police officers now to monitor transit center. Haven't had any issues since then. Haven't heard of "undesirables" going into the schools. Jr high isn't directly across the street so that helps. Lot of jr high students use transit but this transit center is not on path to other high schools.

Fort Miller Middle School, Fresno – Mike Jones, Principle

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

I did look at the survey. We really don't have problems with the transit hub. More problems behind Manchester Center. Blackstone is an attendance boundary with a rival middle school. We haven't had any issues for over a year.

Fresno Police, Fresno – Lt. Gomez

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

Have had problems at the shopping center near the transit center but not at the transit center. The transit department pays for police officers to monitor the transit agency during transit hours. Fresno Police will be adding a police sub-station near the transit center. Transit center is a benefit for those without a vehicle.

Manteca High School, Manteca – Frank Gonzales, Principal

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

This center is a beautiful building that has added to the overall outlook of the area. The negative impact it has had it attracted the homeless. We have seen a slight increase in their numbers which results in more incidents during school and after hours.

2. If so, could you provide any details on the type of incidents, the location of the incidents, etc.?

Trespassing, property damage, and theft.

3. Have any steps been taken to address security concerns due to the presence of the transit center near the schools? (Such as additional patrolling, security equipment, fencing, etc.)

Yes, adding additional time patrolling around the campus. We also added some fencing around different things to protect from theft.

4. If the transit center was recently constructed, has it changed security conditions at the school? If so, how?

See above statements.

5. Overall, do you believe the presence of the transit center near the school is a net benefit to the school, or a detriment?

Detrimental

6. Do you have any suggestions or thoughts that you would like to share with school administrators considering a transit center near their school site?

Prepare your school for more homeless traffic and do an overall assessment of school to help prevent from theft.

7. Are there others that you believe we should contact to gain additional information on this issue?

NO

City of Manteca, Manteca – Georgia Berger

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

Manteca Transit Center – This is a multi-modal facility near railroad and tidewater bike path. Seen kids use bike path. No safety concerns from parents or safety issues with respect to school children. The transit center was welcomed by the community. The big issue for the transit agency and the city is the homeless population. This has created a lot of work and headaches. Drug use, prostitution, graffiti, broken windows and broken kiosks are issues. The trash enclosure and the alcove between the train and the transit center became a dwelling. To combat this issue, the City implemented new trespassing ordinances. So now people leave temporarily and then come back later. Constant battle. Lessons

learned: Different architectural designs which limit “cozy places” to sleep. It is a nice building, but a lot to maintain. Forced to shut down public restrooms because of illicit activities. Drivers have separate restrooms and break rooms. Have community rooms that rent out for private events. No issues from Johanna will call.

Manteca Police Department, Manteca – Jason Downs

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

The Manteca Transit Center is far enough away from the High School that it isn't a problem. There are a couple blocks of residential and commercial uses in between. Have not had a problem with “runaways” skipping school and riding the bus. Maybe if it were closer that would be a problem. The transit center is in a low income neighborhood across the street from two “roach motels”. The site used to be a trailer park with high crime and drug use that was only partially rented. It used to be difficult to safely get into the trailer park to patrol. Now these problems have been removed so it is an improvement. Of course, construction of the transit center deployed transients who used to live in the trailer park to streets but it is easier than dealing with them there.

The Manteca Transit center is on a major thorough fare so police pass by every hour. Some officers take advantage of sheltered parking to do reports in car. The transit center was also a City project so it tends to receive “special attention” from the police department. Transit employees will call if they see a problem. It is a city building so city functions occur there. This increases security.

Suggestions: Construct the transit center a good safe distance form a school, maybe two to three city blocks and out of sight line.

Medford Police Department, Medford

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

Transit center does attract transients, intoxicated individuals and drug use. Have trespassing agreement with city so police can force homeless to move along. Police does put a lot of effort into cracking down on this. Lots of college students in and out of the transit center but not aware of any issues. Not many drug deals. Big presence from police is important.

Rogue Valley Community College Medford Campus, Medford – Director Jean

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

Transit center is part of overall downtown scene which has usual urban downtown problems. Have not had any issues or problems that can be tied to the transit center.

Rogue Valley Transit District, Medford - Paige Townsend

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

No. Any issues are not with students. The problems are with homeless or transient population. Transit station is in downtown so it has all the “downtown problems”. RVTDD has security on sight from 7 AM – 7 PM. RVTDD has joint security with the nearby community college. This is important because security officers would move homeless from the transit center during the day then they would wander

toward Community college in the evening or vice versa. The security guard would recognize the same person moving between the two locations and would then ask them to leave the downtown area. RVTD has a high school bus pass program and 9% of riders are between 16 – 18 years old . No issues with passengers just “Downtown issues”. It is important to stay on top of the homeless problem. Biggest problems are from Greyhound. RVTD went in partnership 9 years ago with Greyhound and they have a bus terminal at the Front Street Station. RVTD saw a huge escalation in drug trafficking and vandalizing after Greyhound moved in. Staff doesn’t get the sense that students feel threatened by folks hanging out at the transit center.

Radcliff Elementary, Watsonville - Ulli Kammerow, Principle

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

Neighborhood isn’t best neighborhood so transit center is the least of school concerns. Parents have not expressed any concerns. Transit center is well lit and police is a block and a half away. This is important. Across the street there is transitional housing so get more issues from that than the transit center.. Well lit, monitored helps. Teachers take kids on field trips on the bus so a nearby transit center is a plus.

Cabrillo College, Watsonville – Laura, Office of Student Services Olga - Marketing

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

Just passed registration fee which pays for student bus pass. Nobody feels threatened. Hear lots of reports from students and faculty but nobody has expressed concern about the transit center. Many students use the bus.

Olga – We haven’t really heard any complaints. The transit center is a few blocks from the College so it is not completely convenient for students, although many students ride the bus. Have asked for a specific stop at the college. Students walking to the transit center must travel around or through the downtown plaza and down a not well lit street. This can make some students feel uncomfortable. More signage on/near campus directing students to the transit center would be useful.

Santa Cruz Metro, Watsonville – Angela Aiken

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

Been at the transit agency for 10 years and no issues or complaints about student’s safety. Important things to consider: Make certain that there are crosswalks from buses and across streets that border transit center. Near the school there should be signs on each side of crosswalk with flashers. Posted 25 mph or under signs are important. Santa Cruz Metro hires a security guard to patrol the transit center from 5 AM to 1 PM on weekends and 6 AM to 1 AM on weekdays, as there are illegal dealings in the area. The transit agency has also partnered with City Police and has a satellite office in transit center as substation. The transit agency encourages police to park vehicles at the transit center anytime. There is a large CVS parking lot across the street so some people park and hang out there. Another issue to consider is that people will use garbage cans and trees and bushes as stash holes for “transactions”. So Santa Cruz Metro took out planter boxes. Cactus gardens or rock gardens are pretty and prevent folks from stashing drugs or other things there.

Watsonville Police Department, Watsonville – Jason

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

Not aware of anything.

Yreka Police, Yreka

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

Haven't heard of any problems with students. There is a problem with transients hanging out at the transit center, leaving syringes, etc.

Covenant Chapel Bible Academy, Yreka – Reverend Hill

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

Transit Center is literally on other side of street. Transit headquarters is there is well which is important as several transit agency staff have students or have had students enrolled in the school. So if staff sees any problems, they immediately do something about it. One time someone came in to ask for money. After we told them no, they went away and haven't had any problems with that. Nobody hanging out on the school property or sleeping here. Transit Agency is very observant. Had a bus stop over there before the transit center. Doesn't seem any different from having just a bust stop there. Also a benefit to students. A couple students ride public transit to school so with the transit center they are able to wait in an enclosed waiting area.

Transit System Representative, Yreka – Melissa Cummins

1. Has the presence of the transit center resulted in any security issues with school students? With school staff?

No. There is a small private Christian School across the street from the new transit center which was completed in December 2015. Transit Manager's son graduated from there so she takes a special interest in watching for any trouble. No public opposition to location of transit center. Although heard that County was trying to put juvenile hall on this facility and that received significant opposition. There is an indoor waiting area and outside public restrooms.

2. Have any steps been taken to address security concerns due to the presence of the transit center near the schools? (Such as additional patrolling, security equipment, fencing, etc.)

Made some adjustments so people are not pestering kids. Positioned waiting area so that passengers are on opposite corner from school. Administrative offices are located at the transit center so people are always watching. Also have multiple cameras on site and signs warning of 24 hour surveillance. All red curbed so nobody can park at the transit center.

3. Do you have any suggestions or thoughts that you would like to share with school administrators considering a transit center near their school site?

There is a conference room on one side of facility which has a plug on the outside of the building. Found out that a transient was charging his ankle bracelet here on weekends so called police to have him move along. Suggestion: Make sure any plugs on exterior of building have lock on outlet cover. Siskiyou Design Group did a fantastic job of designing this facility. Would recommend them.

Appendix D

Full Security Review Report

Security Report on Lake Transit Hub

for LSC Transportation Consultants, Inc

By Walt Diangson, WRLDCO Consulting
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(714) 227-7068

March 2, 2017

Slide Set 1

Konocti Education Center (KEC) & Lake County Campus of
Woodland Community College (LCC) Inspection (11/8/16) &
Recommended Security Improvements (3/2/17)

Walt Diangson, WRLDCO Consulting

Overview

- The attached aerial photographs and the on-the-ground photographs are of various elements of the security concerns of both the Konocti Education Center (KEC) & Lake County Campus of Woodland Community College (LCC).
- The identified security issues are related to pedestrian traffic from unauthorized individuals crossing the facilities of both the education center and the college. Illustrated on Aerial 1
- At present, such unauthorized traffic is generated by homeless individuals that are camped in undeveloped areas to the north, east and south of the two institutions.
- In addition, the KEC has indicated that unauthorized vehicle traffic also came from the undeveloped areas to the north and from the neighborhood referred to as “The Avenues.” The vehicle traffic is now barred or hindered by a boulder barrier installed by the county across the main dirt road from the KEC athletic field access road and 18th Avenue to the north. However, it is believed that pedestrian traffic still originates from “The Avenues” going to the Clearlake Shopping Center and the Walmart store.
- The same pedestrian traffic from the northern encampments and “The Avenues” crosses through the LCC campus as well in route to the shopping center.
- The KEC reported that property damage to the center largely consisted of cutting of chain link fencing on the northern property line for access, litter and trash, and the theft of sprinkler components from their fenced vegetable garden on campus along the athletic field access road.

Overview Continued

- Besides the pedestrian traffic coming from the northern encampments and “The Avenues,” the LCC is also impacted by unauthorized pedestrian traffic from encampments on its eastern border.
- The college identified the breach in the chain link fence, which is constantly repaired, but re-cut by unauthorized individuals. (See X1 on Aerial 1 right bottom quadrant.)
- Starting from this breach at the upper parking lot perimeter, paths to Walmart lead down the slopes through the campus to the beginning of the bottom of the Walmart pathway adjacent to the child care center (X2, near center of Aerial 1),
- Aerial 4 illustrates options for treating the pathway to Walmart:
 - Add additional fencing to the Walmart outdoor storage area to limit pedestrian traffic to the main trail;
 - Install a solid wall to the college’s eastern perimeter in order to deter entry onto the campus. This option may only lead individuals to cut a new hole elsewhere along the fence line;
 - Cut a new trail or footpath along the southern fence line to steer individuals away from the campus; and
 - Block or close-off the primary pathway along the east side of Walmart.

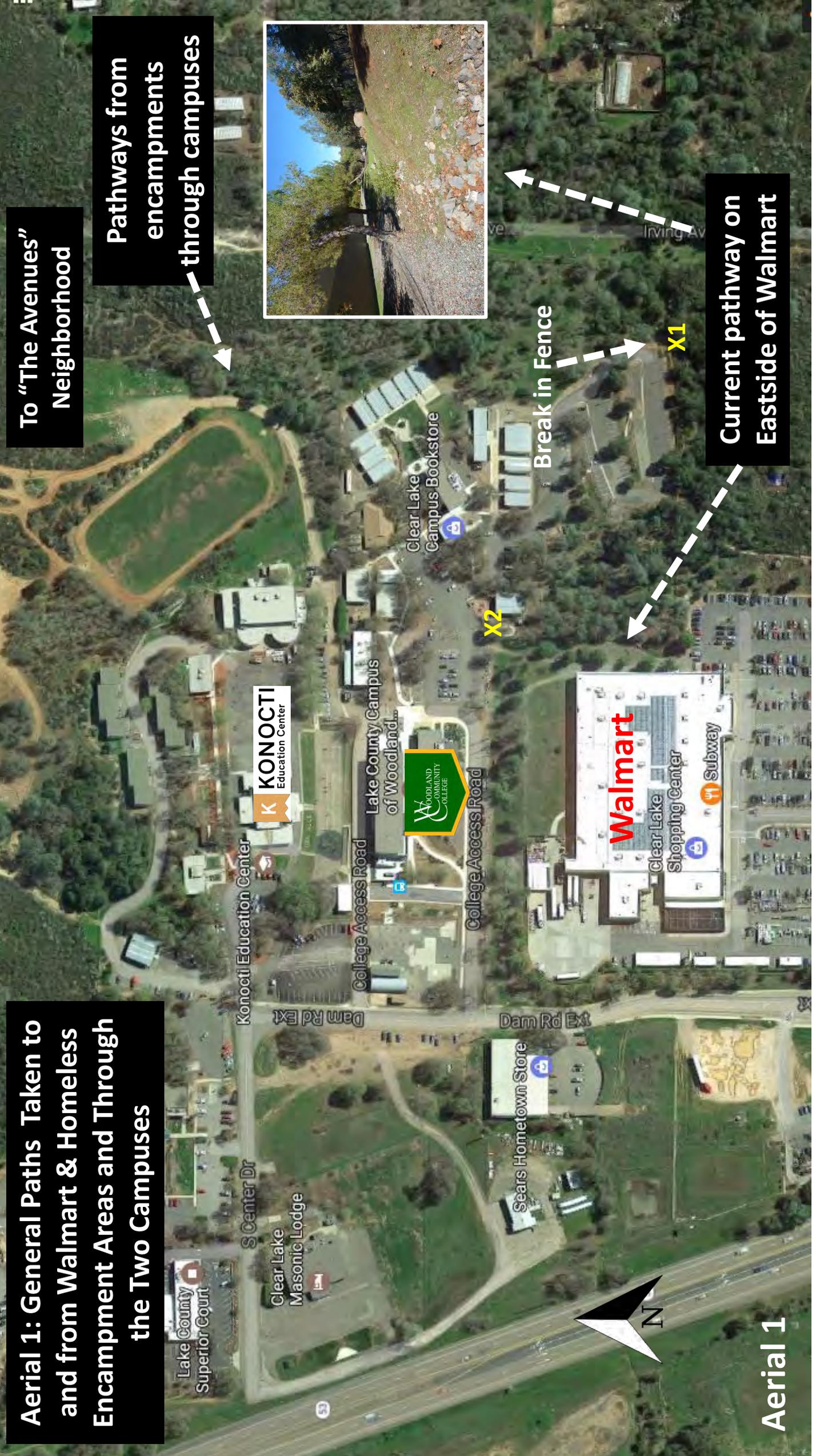
Aerial 1: General Paths Taken to and from Walmart & Homeless Encampment Areas and Through the Two Campuses

To "The Avenues" Neighborhood

Pathways from encampments through campuses

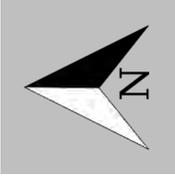
Current pathway on Eastside of Walmart

Break in Fence



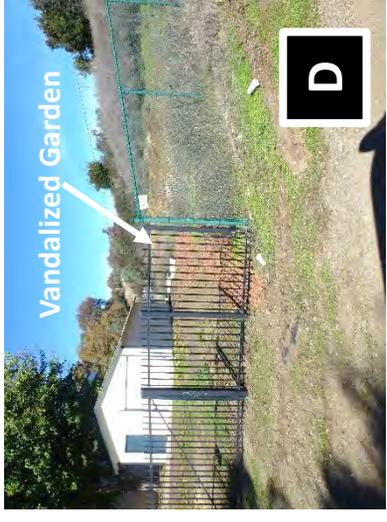
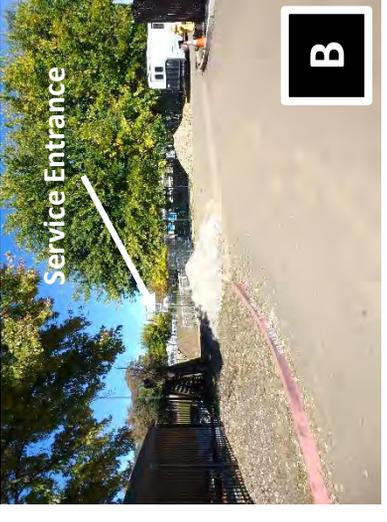
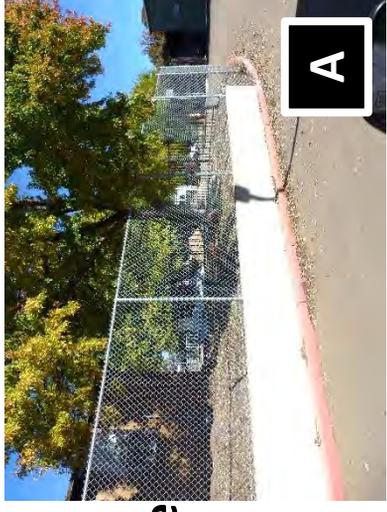
Aerial 1

Aerial 1 Legend

- Assumed & observed pedestrian, homeless paths
- Photo reference **A** 
- Konocti Education Center  = **KEC**
- LCC Campus  = **LCC**
- LCC fence breach **X1**
- Childcare center and beginning of path along & to Walmart **X2**
- North Arrow 

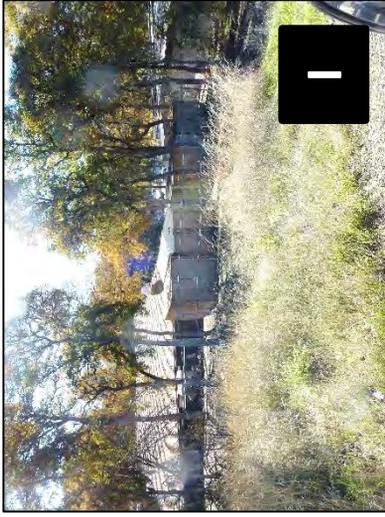
Aerial 2: Photo Guide of Konocti Education Center (KEC) Southern & Eastern Perimeters

- A.** North College Access Road going east
- B.** KEC athletic field access road & KEC service entrance
- C.** KEC service entrance
- D.** Fencing between KEC & athletic field access road
- E.** KEC & athletic field & fencing (pedestrian opening)
- F.** KEC athletic field locked vehicle gate
- G.** Dirt road & parking area above athletic field
- H.** Closed road to vehicles between Avenues & field



Konocti Education Center (KEC) Southern & Eastern Perimeters

- I. North fence of college along KEC athletic field access road on south side of road
- J. North fence of college along KEC athletic field access road on south side of road
- K. Exiting KEC athletic field access road onto College Access Road & college campus



Aerial 2: Konocti Education Center (KEC) Southern & Eastern Perimeters



Homeless
Encampment Areas

KEC Athletic Field

KEC Athletic Field
Access Road

Konocti Education Center

College Access Road



Leake County Campus

H

G

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E

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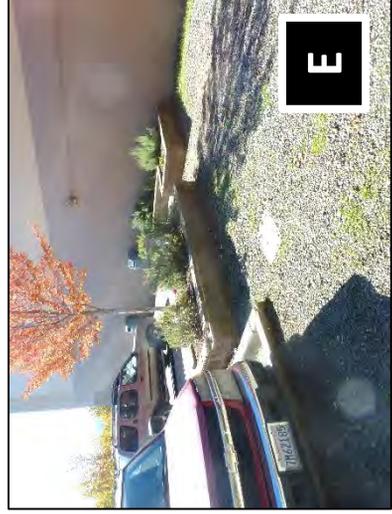
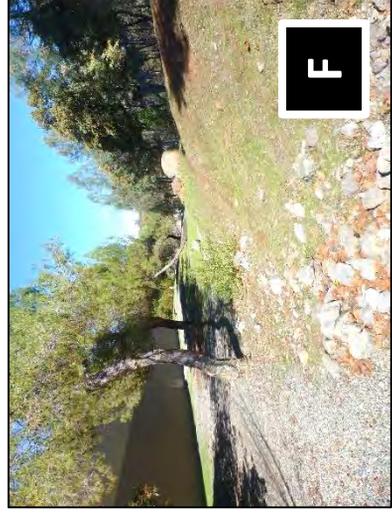
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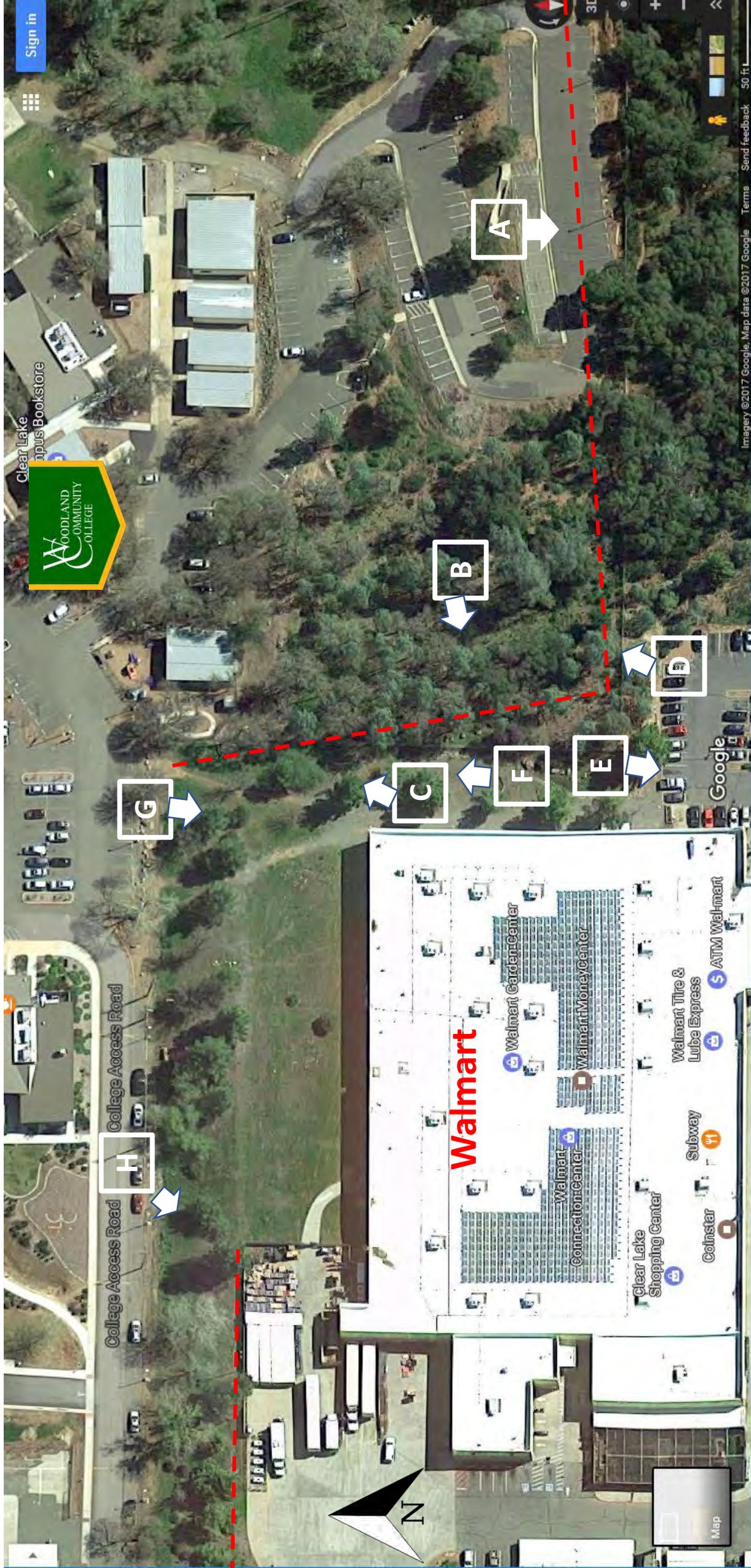
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Aerial 3: Photo Guide to Walmart & College Campus Pathway & Fencing

- A.** Upper campus parking lot south fence
- B.** Campus west fence looking towards Walmart
- C.** West fence looking down & north to college
- D.** College south fence from Walmart parking lot
- E.** South end of path at Walmart parking lot
- F.** Path looking north towards college
- G.** Bottom of path on college looking up to Walmart
- H.** Rear fence of Walmart delivery & storage area



Aerial 3 Walmart-Campus & College Perimeter Fencing Close to Walmart



Aerial 3 Legend

- Existing LCC perimeter chain link fence 
- Photo reference 
- LCC Campus 

Aerial 4: Pathway to Walmart Options

Pedestrian Paths



Extend Walmart Rear Fencing

Option: Fence-off pathway to college

Strengthen Fencing or Build Solid Wall

Existing College Fencing

Pedestrian Paths

Cut a new trail to Walmart

Walmart



Aerial 4 Legend

- Assumed & observed pedestrian, homeless paths
- Proposed new trail or footpath
- Proposed new barrier, fencing, wall from extended Walmart fence to LCC existing fence 
- Existing LCC perimeter chain link fence 
- Proposed extension of Walmart rear fence 
- Photo reference 

Aerial 4 Guide to Photos of Pathway to Walmart

- A.** Bottom of path on college campus, note perimeter fence, which ties into childcare center fence
- B.** Path to Walmart
- C.** Childcare center
- D.** Walmart storage area and existing fencing
- E.** Top of path at Walmart parking lot
- F.** Path looking north towards college



Aerial 5: KEC Improvement Options



- Lock gates 
- Repair & reinforce fencing 
- Install added security lighting 
- Install gate across front of access rd. 

Aerial 5 Legend

- Lock gates 
- Repair & reinforce fencing 
- Install added security lighting 
- Install gate across front of access rd. 

Slide Set 2:
**Security Review of Primary Proposed LT Transit Hub Site
& Improvements Related to KEC Security Concerns**

Walt Diangson, WRLDCO Consulting, 3/2/17

Overview

- A major concern of the KEC is the current unauthorized pedestrian traffic from the homeless encampments to the north and east of the school to Walmart, as illustrated on Aerial 1.
- Slide 6 illustrates the likely path that the homeless may take to and from the LT Hub through the KEC and the LCC.
- The future extension of Dam Road Ext. to the north should also help divert some of the unauthorized pedestrian traffic along the north side of the KEC.
- Also illustrated on Aerial 6 are the possible paths riders and homeless may take to Walmart and the transit hub.
- Aerial 7 illustrates the relationship of the proposed improved site to the KEC and LCC.
- Aerial 8 serves to guide the following photos along Dam Road Ext. and the KEC,
- Aerial 9 illustrates to recommended transit hub security improvements on the conceptual site plan. Those recommendations illustrated by the graphic include:
 - Staffing the Hub offices, with supervision;
 - Direct sight lines from the Hub dispatch office of the KEC entrance and adjacent grounds, including the KEC school bus staging area, including vehicle ingress and egress;

Overview Continued

- Twenty-four (24) hour security camera system with signage warning of recording;
- Faculty security lighting
- Facility lighting throughout the complex, included solar powered lighting for the bus shelters on the perimeter;
- Supervisory walk-arounds and observations of any riders walking towards and through the KEC, accompanied with working relationship with the KEC administrative staff and security personnel at the school in the event of calls for assistance with trespassing bus riders;
- Regular police patrolling;
- Signage for no loitering, accompanied by a city ordinance, and signs for no unauthorized entry for the KEC; and
- Fencing or screening surrounding the waiting area under the breezeway, in the event of any homeless taking shelter at the facility becomes a major problem after service ours (See examples on Slide 29 below). Gates would remain open during operating hours.
- Not easily illustrated on this site plan are other recommendations, which include those learned in the *Lake Transit Hub Location Security Analysis Peer Review of October 27, 2016* by LSC. These include the following adapted survey recommendations:
 - Secure with locking caps on all electrical outlets;
 - Install speed limit signs on Dam Road Ext. Ext. for turning LT buses and KEC school children (25 MPH);

Overview Continued

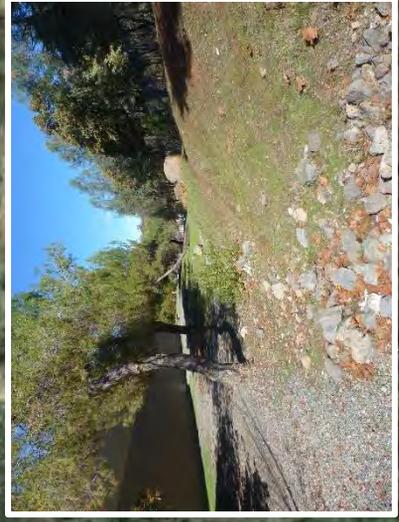
- Design the facility without alcoves or “cozy” corners that could be occupied as sleeping areas for homeless or for other undesirable use;
- Use rock or desert gardens for landscaping to avoid “stash holes” for controlled substances or other items;
- Do not provide public restrooms for waiting riders or homeless; and
- Contain water outlets within locked boxes to discourage homeless access. This is actually a problem Walmart in the Lake County Shopping Center (See photo below of the front wall of Walmart, as well as adjacent signage).



**Aerial 6: Possible Paths to
and from Transit Hub &
Homeless Encampment
Areas Around the Two
Campuses**

**To Avenues
Neighborhood**

**Likely pathways
around or
through KEC**



**Current pathway on
Eastside of Walmart**

**Likely pathways
around or
through LCC**

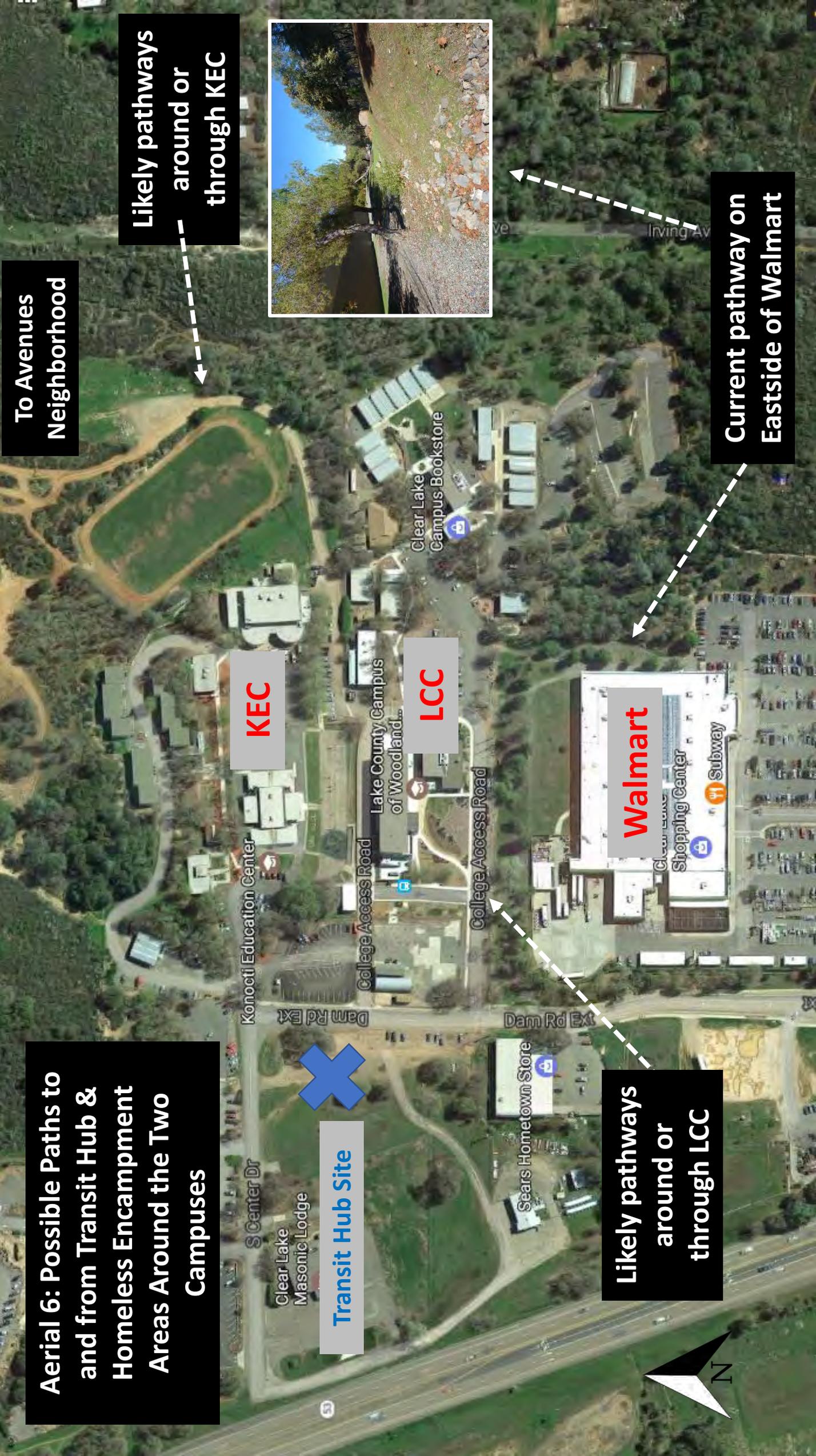
KEC

LCC

Walmart



Transit Hub Site



Aerial 6 Legend

- Pedestrian, homeless paths
- LT Hub Facility 

Aerial 7: Proximity of Hub to KEC & LCC

K **KONOCTI**
Education Center



SOUTH-CENTER DRIVE

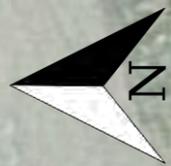
DAM ROAD EXTENSION

DO NOT ENTER

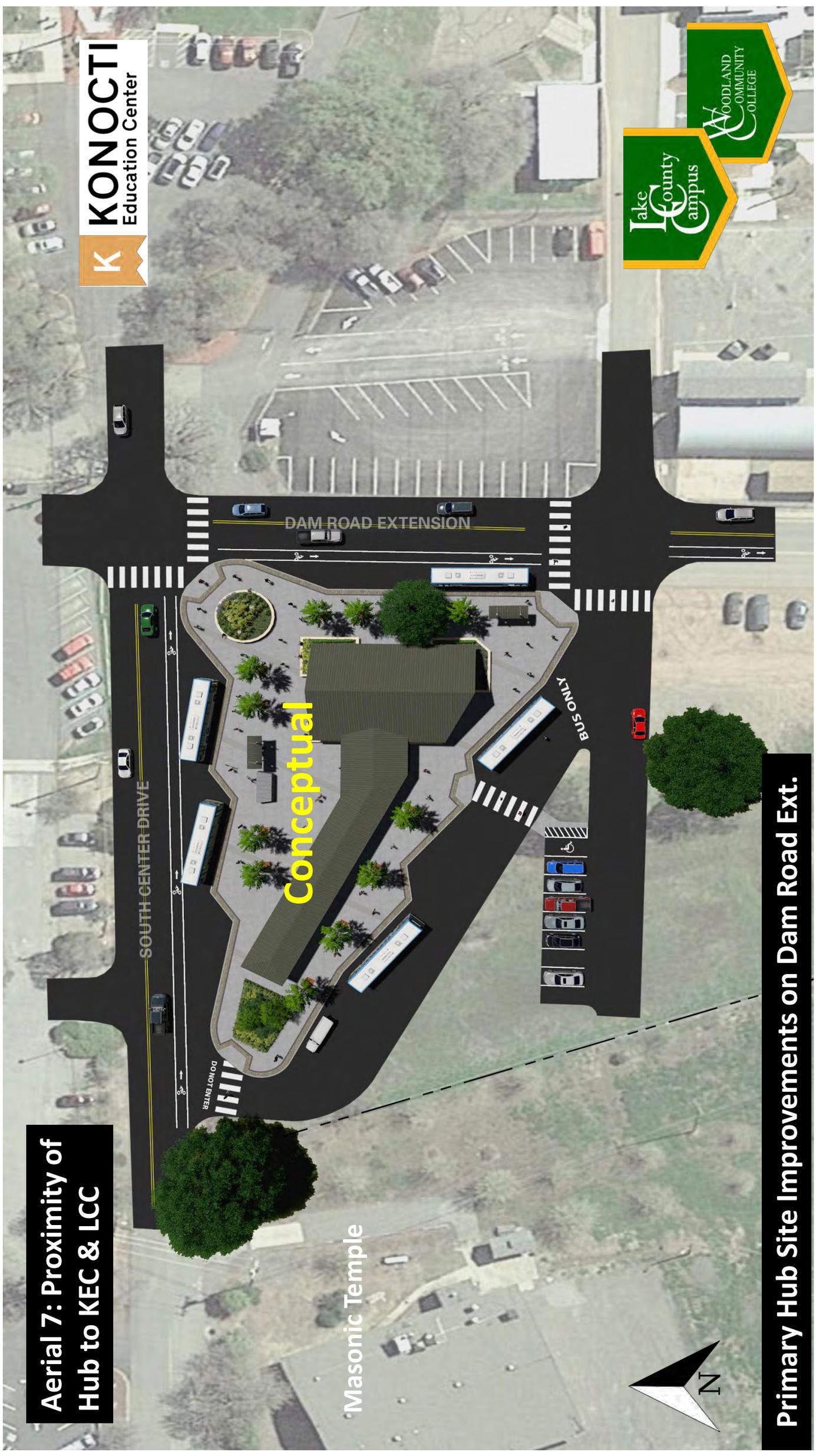
BUS ONLY

Conceptual

Masonic Temple



Primary Hub Site Improvements on Dam Road Ext.



**Aerial 8: Proximity of Hub to
KEC & LCC**



Photo Guide for Aerial East Side of Dam Road Ext.. Opposite KEC & LCC



A. Looking South on Dam Rd.



B. Looking North, School Sign,
Add 25 MPH signs



C. KEC Parking Lot Fencing
& Bus Staging Area

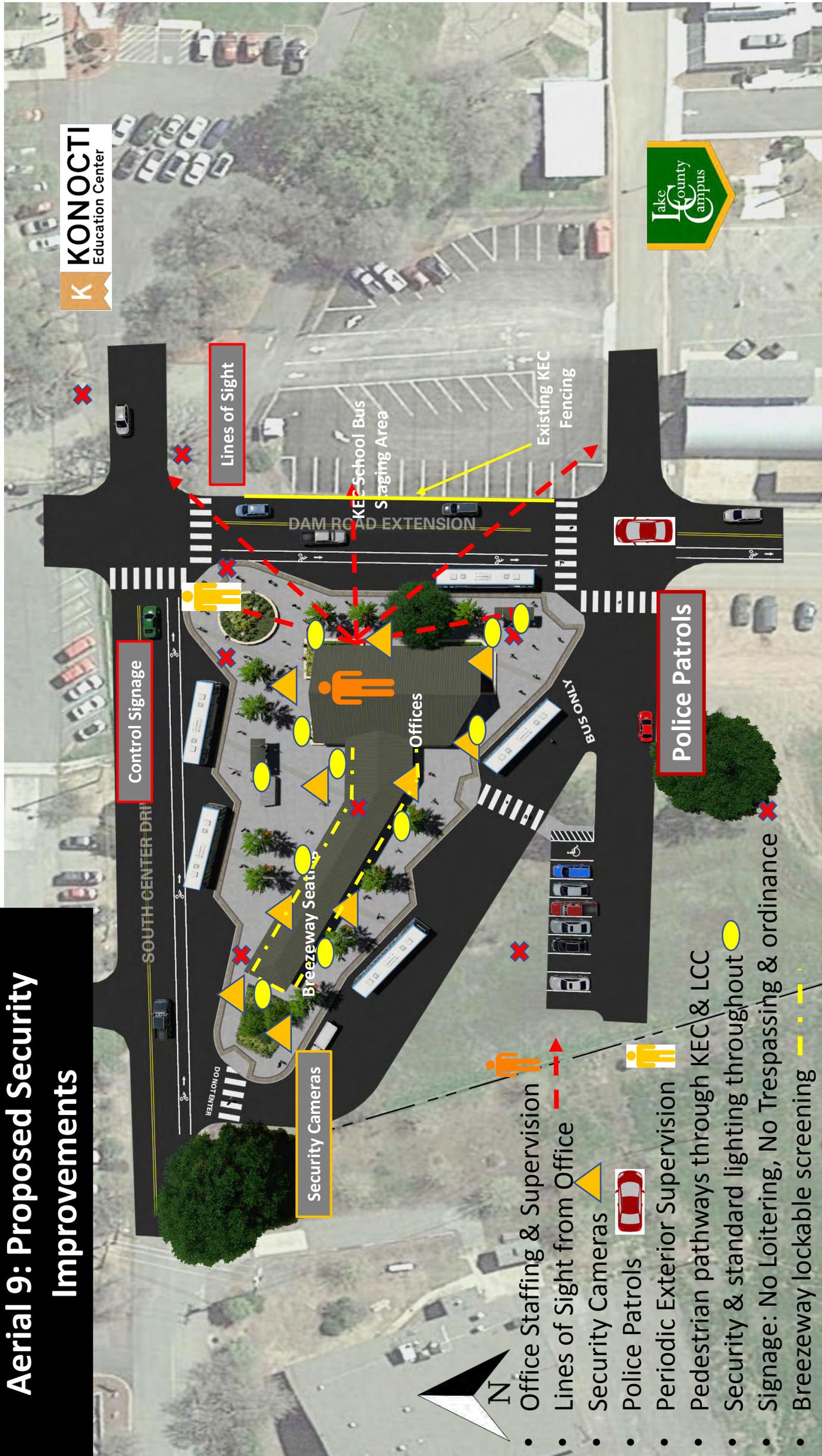


D. KEC Parking Lot Light



E, LCC College Access
Road Light

Aerial 9: Proposed Security Improvements

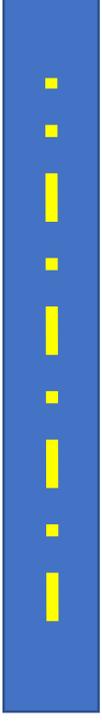


- Office Staffing & Supervision 
- Lines of Sight from Office 
- Security Cameras 
- Police Patrols 
- Periodic Exterior Supervision 
- Pedestrian pathways through KEC & LCC 
- Security & standard lighting throughout 
- Signage: No Loitering, No Trespassing & ordinance 
- Breezeway lockable screening 

Aerial 9 Legend

- Office Staffing & Supervision 
- Lines of Sight from Office 
- Security Cameras 
- Police Patrols 
- Periodic Exterior Supervision 
- Pedestrian pathways through KEC & LCC
- Security & standard lighting throughout 
- Signage: No Loitering, No Trespassing & ordinance 
- Breezeway lockable screening 

Breezeway Evening Security Fencing Examples



Refer to Aeria

