

**REPORT
OF
INITIAL SITE ASSESSMENT
ESPLANADE CORRIDOR SAFETY AND ACCESSIBILITY IMPROVEMENT
PROJECT
CHICO, CALIFORNIA
CAPITAL IMPROVEMENT PROJECT NO. 50355;
FEDERAL PROJECT NO. ATPCML-5037(037)**

PREPARED FOR:

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OCTOBER 14, 2019



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October 14, 2019

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Subject: Initial Site Assessment
Esplanade Corridor Safety and Accessibility Improvement Project
Capital Improvement Project NO. 50355; Federal Project No. ATPCML-5037(037)
Chico, CA 95669
Burleson Project Number 3900

Dear Ms. Bromund:

Burleson Consulting, Inc. (Burleson) is pleased to submit this draft report of our Initial Site Assessment for the Esplanade Corridor Safety and Accessibility Improvement Project in Chico, California. The purpose of our services was to characterize the project area right-of-way conditions relative to environmental contamination concerns and to identify obvious, actual, and potential concerns. Our scope of services was described in our proposal dated June 20, 2019.

This report is intended for use only by ICF, the City of Chico, and the California Department of Transportation. Our services have been performed under mutually agreed upon terms and conditions. If other parties wish to rely on this report, please have them contact us so that a mutual understanding and agreement of the terms and conditions for our services can be established prior to their use of this information.

The findings contained herein are based upon the data that was reviewed and documented in this report along with our experience on similar projects. The discovery of any additional information concerning the environmental conditions at the site should be reported to us for our review so that we can reassess potential environmental impacts and modify our conclusions, if necessary.

We appreciate the opportunity to be of service to you. Please call me at 916-984-4651, extension 111 if you have any questions or if we may be of further service.

Sincerely,

Gregory J. Reller, P.G.
Professional Geologist

TABLE OF CONTENTS

EXECUTIVE SUMMARY	ES-1
1.0 INTRODUCTION	1
1.1 Purpose	2
1.2 Scope of Services.....	2
1.3 Exceptions, Deviations, and Limitations	2
2.0 SITE DESCRIPTION.....	3
2.1 Location and Legal Description.....	3
2.2 Site and Vicinity Characteristics.....	3
2.3 Description of Structures, Roads, and Other Site Improvements	3
2.4 Area Geology and Hydrogeology	4
3.0 RECORDS REVIEW	5
3.1 Regulatory Listed Facilities	6
3.2 Summary of Listed Records of Concern to the Project	6
4.0 HISTORICAL REVIEW	10
4.1 PREVIOUS SITE USE	10
4.2 PREVIOUS SURROUNDING SITE USE	14
4.3 SUMMARY OF PREVIOUS ENVIRONMENTAL INVESTIGATIONS.....	15
5.0 SITE AND AREA RECONNAISSANCE	15
5.1 Site Reconnaissance.....	16
5.2 Interview	17
5.3 Known Current and Past Uses of the Site and Adjoining Properties.....	17
5.4 Utilities and PCBs.....	17
6.0 DATA GAP ANALYSIS.....	17
7.0 FINDINGS.....	18
8.0 CONCLUSIONS	20
9.0 RECOMMENDATIONS.....	20
10.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS	21
11.0 REFERENCES.....	22

TABLES

Table 1 – Summary of Physical Setting
Table 2 – Soils Characteristics
Table 3 – Regulatory Listed Facilities within the Project Corridor
Table 4 – Historical Resources Reviewed

APPENDICES

Appendix A – Figures
Appendix B – Site Photographs
Appendix C – EDR Report (located on CD)
Appendix D – Site Reconnaissance Data Forms

List of Acronyms and Abbreviations

ASTM	American Society of Testing and Materials
Burleson	Burleson Consulting Inc.
CA FID	California Facility Inventory Database
CERCLA	Comprehensive Environmental Response and Compensation Liability Act
CERS	California Environmental Reporting System
CIWQS	California Integrated Water Quality System Project
CPS-SLIC	Cleanup Program Sites – Spills, Leaks, Investigations, and Cleanups
CSU	California State University
CUPA	Certified Unified Program Agency
ECHO	Enforcement and Compliance History Online
EDR	Environmental Data Resources
FINDS	Facility Index System
HAZNET	Hazardous Waste Information System
HIST Cal-Sites	Historic Cal-Sites
HIST CORTESE	Historic CORTESE
HREC	Historic Recognized Environmental Conditions
ISA	Initial Site Assessment
LUST	Leaking Underground Storage Tank
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
PCE	Tetrachloroethylene
RCRA-SQG	Resource Conservation and Recovery Act - Small Quantity Generators
REC	Recognized Environmental Conditions
SR	State Route
SWEEPS	Statewide Environmental Evaluation and Planning System
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile organic compounds

EXECUTIVE SUMMARY
Initial Site Assessment
Esplanade Corridor Safety and Accessibility Improvement Project
Chico, California

ICF retained Burleson Consulting, Inc. (Burleson) to perform an Initial Site Assessment (ISA) of Esplanade Corridor Safety and Accessibility Project, Chico, California within the County of Butte, California. Our services were provided in general accordance with Burleson's June 20, 2019 proposal. As part of the assessment, Burleson reviewed the site geology and hydrogeology, the site history, environmental regulatory lists, and information obtained during site reconnaissance.

Purpose, Scope, and Deviations

The purpose of Burleson's services was to identify the presence of potential current and historical Recognized Environmental Conditions (RECs) or environmental concerns resulting from practices and activities that currently or historically occurred within the project area. During this assessment, no subsurface investigation was performed. The assessment was conducted in general accordance with the American Society of Testing and Materials, ASTM E 1527-05 "*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*", which meets the objectives of: satisfying the innocent land owner defense under the Comprehensive Environmental Response and Compensation Liability Act (CERCLA), and identifying environmental risk associated with the project area. The following deviations from the ASTM standard include: inspections of structure interiors within the project corridor were not conducted and interviews of property owners were not conducted.

Site Description

The project area consists of approximately 2.5 miles of right-of-way within the Chico city limits (Appendix A; Figure 1). The project is located within an urban area consisting of residential, commercial, and industrial development. The project area extends northwest along Esplanade Road from Memorial Way to East 11th Avenue; northeast along East 10th Avenue to Oleander Avenue; southeast along Oleander Avenue to Memorial Way; and southwest along Memorial Way to Esplanade Road (Appendix A; Figure 2). These road segments are referred to as the 'project corridor' or 'area' within this report. The Esplanade Corridor Safety and Accessibility Improvement Project includes closing gaps in bicycle lanes and sidewalks, new traffic signals, improvements to signals and signs, and construction of a new roundabout. Based on Burleson's historical review and site reconnaissance, the project area has been developed for residential, commercial, and industrial use since the 1940s (Appendix B; Site Photographs). Before development the area was grassland used for ranching and agriculture.

Records Review and Historic Review

Burleson contracted Environmental Data Resources (EDR) to perform database search queries of information published by the state and federal regulatory agencies for the project area, adjacent, and surrounding properties. The database search was completed in accordance with ASTM E 1527-05. The database query included search radii up to 1 mile from the project corridor. Based on EDR database records, 43 listings occur within project area. Of the 43 listed, seven facilities or events contain current or historical potential environmental concerns to the project. The remaining EDR records have been determined to be low risk to project activity. The EDR report is located in Appendix C.

Burleson's review of historic aerial photographs and topographic maps indicate that the project area was primarily open cattle range and agricultural land prior to 1900. The project area and surrounding properties began to transition to urban residential parcels post 1900. By 1941, the Esplanade corridor contained primarily commercial and industrial properties including a hospital, California State University (CSU) Chico, a high school, and several private and government business enterprises. The Oleander Avenue corridor has remained primarily single and multifamily residential properties with the exception of a Junior High School located at the southern end of the corridor.

Historical aerial photographs reviewed document features or properties along the project area over a long period of time. Historical aerial photographs reviewed include the years 1941, 1947, 1952, 1969, 1973, 1975, 1984, 1998, 2006, 2009, 2012, and 2016, with the longest gap in coverage being 17 years (between 1952 and 1969). Burleson reviewed historical topographic maps of the project area and adjoining properties for the following years: 1891, 1893, 1885, 1912, 1948, 1949, 1950, 1960, 1978, and 2012 with the longest gap in coverage being 36 years (between 1912 and 1948).

Site and Area Reconnaissance

The site and area reconnaissance was performed to identify obvious visual indications of present or past activities that have or could impact the project area. Site reconnaissance was conducted on foot. The site and area reconnaissance was conducted by Burleson Principal Geologist, Greg Reller, and Michael Burleson, Environmental Scientist, on September 20, 2019.

Site reconnaissance included pedestrian surveys of approximately 2.5 miles of right-of-way within the Chico city limits. Reconnaissance confirmed the corridor is located within an urban area consisting of residential, commercial, and industrial development. Inspections were conducted from public rights-of-way. Structure interior inspections were not conducted. Based on the EDR report and records survey, several specific sites of concern were identified and inspected during the site reconnaissance. Identified and inspected sites include Cash Oil, Vanella Oil Inc. Bulk Plant, Enloe Hospital, Esplanade Cleaners, Nichols

Family Trust, and an abandoned parking lot near Vanella Oil Inc. Site reconnaissance locations are presented in Appendix A (Figure 2) and field data forms are in Appendix D.

Data Gaps, Findings, Conclusions, and Recommendations

Interviews were not included in the scope of work for this ISA. Lack of interviews does not appear to present a significant data gap because of the availability of other information to support the necessary evaluations.

Burleson identified four potential low risk RECs and five low risk historical RECs within the project area with the potential to impact project activity. In addition, Burleson has identified the potential for elevated lead in soil originating from aerial deposition and/or associated with lead-based paint in runoff from adjacent structures.

Burleson recommends that the City of Chico notify the selected contractors and subcontractors that subsurface impacts including petroleum hydrocarbon, volatile organic chemical, and/or lead contaminated soils could potentially be present within the construction area of the project corridor. The contractors should be prepared to notify all personnel working within the project that impacted soil may be encountered during project construction. Project personnel should be prepared to segregate, document, and dispose of impacted material in compliance with the applicable laws and regulations. Lead testing of soil by the contractor for accumulation of lead associated with aerial deposition and/or lead based paint should be conducted prior to construction activity if the need to haul excavated soil off-site for disposal is anticipated. Testing for petroleum hydrocarbon and/or volatile organic chemicals may also be necessary if discolored soil or chemical odors attributed to soil are recognized during construction. Implementation of proper measures to prevent worker and public exposure to affected soil should be conducted if tests indicate contamination levels above noncompliance thresholds.

1.0 INTRODUCTION

ICF retained Burleson Consulting, Inc. (Burleson) to perform an Initial Site Assessment (ISA) of the Esplanade Corridor Safety and Accessibility Improvement Project (project), located in the City of Chico, California within Butte County, California (Appendix A; Figure 1). Our services were provided in general accordance with Burleson's June 20, 2019 proposal. As part of the assessment, we reviewed the site geology and hydrogeology, the site history, environmental regulatory lists, and additional information obtained during our site and area reconnaissance.

Caltrans and the City of Chico, California, propose to conduct mobility, connectivity, safety, and accessibility improvements along an approximate 1.25-mile segment of the Esplanade within the City of Chico between Memorial Way and East 11th Avenue, along Oleander Avenue between Memorial Way and East 10th Avenue, along East 10th Avenue between Esplanade and Oleander Avenue, and along Memorial Way between Esplanade and approximately 335 feet east of the Memorial Way and Oleander Avenue intersection. The project is in the "Chico, CA" United States Geological Survey (USGS) Quadrangle, Section 12, of Township 22 North, Range 1 East (Appendix A; Figure 2).

The City of Chico proposes to create a separated and paved Class I multi-use bicycle/pedestrian path along the Esplanade corridor, connecting downtown; California State University, Chico; Chico Junior and Senior High Schools; a regional hospital; and neighborhoods adjacent to the existing Airport Class I multi-use path at 11th Avenue. The parallel street to the east of the Esplanade, Oleander Avenue, would receive signage, sidewalk, signal, and stop control improvements between 10th Avenue and Memorial Way. A roundabout would be installed at the intersection of Oleander Avenue and Memorial Way adjacent to Chico Junior High School. Two traffic signals are proposed to be installed at the intersections of Oleander Avenue/1st Avenue and West Sacramento Avenue/Esplanade.

Existing traffic signals would be outfitted with pedestrian signal crossing equipment (now absent), updated detection equipment, an associated traffic signal timing plan to accommodate the added pedestrian phases, and pedestrian refuge islands where applicable. Appropriate American with Disabilities ramps and sidewalks would be added.

Typical construction equipment would include pneumatic jack hammers, excavators, grading equipment, paving equipment, concrete equipment, striping equipment, generators, and other similar devices. The maximum grading and excavation depth needed for most of the project is approximately 3 inches. However, for the roundabout, excavation to depths of 3 to 4 feet may be necessary. The project would be constructed in one phase. It is currently anticipated that the proposed improvements would be constructed over an approximate nine-month period starting in early spring of 2022.

1.1 Purpose

The purpose of this ISA was to identify the presence of current or historic Recognized Environmental Conditions (REC) or environmental concerns resulting from practices and activities that have occurred within the project area or adjacent sites that could potentially impact the corridor. Unless otherwise noted, no subsurface investigation was performed as a part of this assessment.

1.2 Scope of Services

The ISA is a non-intrusive, general characterization of environmental concerns to the project corridor, based on readily available information and visual observations. The assessment was conducted in general accordance with the American Society of Testing and Materials, ASTM E 1527-05 "*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*", which meets the objectives of: satisfying the innocent land owner defense under the Comprehensive Environmental Response and Compensation Liability Act (CERCLA), and identifying environmental risk associated with the project. The scope of services provided by Burleson are summarized below.

1. Performed a site and area reconnaissance and reviewed available topographic maps, published soils reports, geology and hydrogeology information of the target property and/ or general vicinity to assist in characterizing the area surface and subsurface drainage;
2. Reviewed readily available historical documents, including maps, aerial photographs, and previous environmental studies conducted at the site;
3. Reviewed readily available environmental reports published by others, and by state and federal agencies, to determine if the target property or nearby properties are listed as having a present or past REC or environmental condition, are under investigation or are regulated by state, federal, or local environmental regulatory officials;
4. Performed a site and surrounding area reconnaissance to identify obvious indications of present or past activities that have or could have contaminated the site. Any assessment of issues identified as "additional issues" in ASTM E 1527-05 such as asbestos, lead in paint, radon, and lead in drinking water were not performed as part of this assessment; and
5. Prepared this report to present the findings, conclusions, and recommendations.

Burleson's scope of services did not include sampling of the soil and groundwater or other materials in the project area.

1.3 Exceptions, Deviations, and Limitations

The following deviations from the ASTM standard occurred:

- Inspections of structure interiors within the project corridor were not conducted.
- Interviews of property owners were not conducted.

2.0 SITE DESCRIPTION

A consideration of hydrology and hydrogeology are of interest because they provide an indication of the direction that contaminants, if present, could be transported. Burleson reviewed the following information regarding the physical settings and hydrogeology of the project area and the surrounding area:

Table 1. Summary of Physical Setting

Information/Resource	Description
Topographic Map	USGS 7.5-minute series Topographic Map of the 2012 Chico CA Quadrangle
Topographic Map Location	Section 12, Township 22N, Range 01E, Mount Diablo Meridian
Environmental Data Resources, Inc (EDR)	Overview, detail and physical setting mapping and supporting soils and hydrogeological information for the target property, as presented by EDR. The EDR Map with GeoCheck®. Chico Esplanade, Chico, CA 95926. Inquiry Number 5764035.2s August 23, 2019.

2.1 Location and Legal Description

The project area is located in the City of Chico, Butte County, California. The project is located west of State Route (SR) 99 and east of SR 32 adjacent to the California State University (CSU) Chico. The project contains an approximate 1.25-mile segment of the Esplanade corridor within the City of Chico between Memorial Way and East 11th Avenue, along Oleander Avenue between Memorial Way and East 10th Avenue, along East 10th Avenue between Esplanade and Oleander Avenue, and along Memorial Way between Esplanade and approximately 335 feet east of the Memorial Way and Oleander Avenue intersection.

2.2 Site and Vicinity Characteristics

The project is in the “Chico, CA” USGS Quadrangle, Section 12, of Township 22 North, Range 1 East. Topographic maps indicate the project site elevation is approximately 200 feet above mean sea level sloping slightly downhill from east to west. The project area occurs between two perennial creeks, Big Chico Creek to the southeast and Lindo Channel (Sandy Gulch) to the northwest. The area is dominated by residential, commercial, and industrial properties including a hospital, CSU Chico, a high school, and several private and government business enterprises.

2.3 Description of Structures, Roads, and Other Site Improvements

The project area occurs within a developed urban area (Appendix B; Site Photographs). The Esplanade contains four lanes in a north and south direction accompanied by two frontage streets. The corridor contains no designated bicycle or pedestrian infrastructure. As a result, the City of Chico proposes to

create a separated and paved Class I multi-use bicycle/pedestrian path along the Esplanade corridor. Oleander Avenue, would receive signage, sidewalk, signal, and stop control improvements between 10th Avenue and Memorial Way. A roundabout would be installed at the intersection of Oleander Avenue and Memorial Way adjacent to Chico Junior High School. Two traffic signals are proposed to be installed at the intersections of Oleander Avenue/1st Avenue and West Sacramento Avenue/Esplanade.

Existing traffic signals would be outfitted with pedestrian signal crossing equipment (now absent), updated detection equipment, an associated traffic signal timing plan to accommodate the added pedestrian phases, and pedestrian refuge islands where applicable. Appropriate American with Disabilities ramps and sidewalks would be added.

2.4 Area Geology and Hydrogeology

According to the USGS Topographic map reviewed for the project corridor, the elevation of the target property is about 195 to 200 feet above mean sea level. Topographic maps reviewed indicate the site has a general gradient to the southwest. Surface water drainage is expected to flow to the southwest, and is likely controlled by a storm drain system (DTSC 2015).

According to the EDR report reviewed, the project area is located on a Cenozoic alluvial fan. According to the City of Chico General Plan Update (2010) the project area is underlain by the Modesto and Tuscan Formations. The Tuscan Formation consists of a series of layers deposited by streams and mudflows between two and four million years ago. The mudflows spread out over the area, burying older rock, filling low areas, and gradually building a flat subdued landscape. The Tuscan Formation is characterized by near horizontal layers within the formation and four-million-year-old volcanic ash horizon at the bottom of the formation. The Modesto Formation overlies the Tuscan Formation and is of Pleistocene age, consisting of gravelly sand, silt, and clay. Recent alluvium consisting of sand and gravel is also present along Big Chico Creek. The soil types expected within the project corridor were obtained from the United States Department of Agriculture Natural Resource Conservation Service (NRCS 2019) and are described in the table below.

Table 2. Soils Characteristics

Soil Component Name	Description
Almendra loam	Almendra loam: Moderate infiltration rates. Deep, well drained soils with medium textures. The soil does not meet the requirements for a hydric soil. Soil texture class from 0-52 inches is expected to be loam; fine sandy loam from 52 to 86 inches.
Vina fine sandy loam	Vina fine sandy loam: Moderate infiltration rates. Deep, well drained soils with moderately coarse textures. The soil does not meet the requirements for a hydric soil. Soil texture class from 0-11 inches is expected to be fine sandy loam; sandy loam from 11-50 inches; loamy coarse sand from 50-54 inches; and coarse sand from 54-80 inches.

The City of Chico is located in the Sacramento River Valley and is approximately 10 miles east of the Sacramento River. The Sacramento River flows in a south/southeasterly direction through the Sacramento River Valley. The City of Chico is located in the north central portion of the Sacramento River Hydrologic Region and the Big Chico Creek watershed and the Little Chico Creek/Butte Creek watershed. Groundwater in this portion of the Sacramento Valley Groundwater Basin is contained primarily within the pore spaces of the reworked sand and gravel layers of the Tuscan Formation, with much of the groundwater being confined under pressure by layers of impermeable clays, mudflows, or tuff breccia (City of Chico, 2010). Groundwater also occurs in the Modesto Formation.

The project area is located in the Vina sub basin of the Sacramento Valley Groundwater Basin (City of Chico 2010). The aquifer system underlying Chico supplies the municipal and agricultural water demands of the city. Approximately 60 percent of the groundwater pumped for the city and most of the stormwater runoff from impervious development returns to either the groundwater system as recharge or the surface water system as runoff.

According to the hydrologic data provided by EDR, two wells are located within the project corridor north of the intersection of Esplanade with West 6th Avenue. One well is reported to be a USGS monitoring well with a depth of 777 feet, and the other well is reported to be a California Water Service Company supply well (No. 8-01) no well construction details are reported for this supply well. Shallow groundwater occurs at a depth of about 10 to 20 feet below ground surface, and flow is shown to be southwesterly in shallow groundwater in the vicinity of Mangrove Avenue to the east of the project corridor (URS 2015).

3.0 RECORDS REVIEW

Burleson contracted EDR to perform a database search of information published by the state and federal regulatory agencies for the target property and adjacent and surrounding properties. The database search was completed in accordance with ASTM E 1527-05. EDR's complete report dated September 2019 is included as Appendix C.

Regulatory listings are limited and include only those sites that are known to the regulatory agencies at the time of publication to be contaminated or in the process of evaluation for potential contamination. A copy of the regulatory data obtained and reviewed for this project and a plotted site map of the regulated facilities prepared by EDR is provided in Appendix C.

3.1 Regulatory Listed Facilities

The database search included search radii up to 1 mile from the project corridor. Due to the size of the target property, Burleson requested the search radii to be extended. Since the search radii presented in the EDR report extend from approximately the center of the target property, some of the listed facilities are not accurately described within the EDR report.

3.2 Summary of Listed Records of Concern to the Project

Based on EDR database records, 43 listings occur within project area. Of the 43 listed, seven facilities or events contain current or historical potential impacts to the project. The remaining EDR records have been determined to be low risk to project activity. Potential database results of concern that occur within the project corridor are summarized in Table 3, and discussed below.

Table 3. Regulatory Listed Facilities within the Project Corridor

Site Name	Site Address	Databases	Site Summary
Nichols Family Trust	750 Esplanade	SWEEPS UST, CA FID UST, CUPA	Location of 500-gallon gasoline storage tank.
Esplanade Cleaners	164 East 2 nd Ave	RESPONSE, ENVIROSTOR, HIST Cal-Sites, CERS HAZ WASTE CORTESE CUPA DRYCLEANERS CERS	Dry Cleaner
Vanella Oil Inc. Bulk Plant	2150 Esplanade East 11 th and Esplanade	UST, SWEEPS UST, CA FID UST	Gasoline and Diesel
Chico Senior High	901 Esplanade	LUST, CERS HAZ WASTE, CUPA Listings HIST CORTESE, NPDES, CIWQS, CERS	Heating Oil Storage, Case Closed
Enloe Hospital	120 W 6th Ave.	LUST, CERS	Diesel leak, Case Closed

Property			
Cash Oil	111 W 11 th Ave.	LUST	Gasoline leak, Case Closed
Chico Groundwater	Chico Area Groundwater-Central Plume	RESPONSE, ENVIROSTOR, HIST Cal-Sites DEED, Cortese, HIST CORTESE	Tetrachloroethylene (PCE) contamination

CA FID	=	California Facility Inventory Database
CERS	=	California Environmental Reporting System
CIWQS	=	California Integrated Water Quality System Project
CPS-SLIC	=	Cleanup Program Sites – Spills, Leaks, Investigations, and Cleanups
CUPA	=	Certified Unified Program Agency
DEED	=	Deed List
ECHO	=	Enforcement and Compliance History Online
FINDS	=	Facility Index System
HAZNET	=	Hazardous Waste Information System
HIST Cal-Sites	=	Historic Cal-Sites
HIST CORTESE	=	Historic CORTESE
LUST	=	Leaking Underground Storage Tank
NPDES	=	National Pollutant Discharge Elimination System
RCRA-SQG	=	Resource Conservation and Recovery Act - Small Quantity Generators
SWEEPS	=	Statewide Environmental Evaluation and Planning System
UST	=	Underground Storage Tank

Nichols Family Trust

Nichols Family Trust was listed in the following EDR databases:

- SWEEPS UST
- CA FID UST
- CUPA

The listed site is located at 750 Esplanade, at the corner of Esplanade and Lincoln Avenue and within the project area. The regulatory information reported a 500-gallon regular unleaded fuel tank. Data regarding tank status or condition is not reported. No evidence of a tank or remedial activity was observed during site reconnaissance.

Esplanade Cleaners

Esplanade Cleaners was listed in the following EDR databases:

- RESPONSE
- ENVIRONSTOR
- HIST Cal-Sites
- CERS HAZ WASTE

- CORTESE
- CUPA
- DRYCLEANERS
- CERS

The listed site is located at 164 East 2nd Avenue, between the Esplanade and Oleander Avenue corridors and occurs within the project area. EDR databases report the site as a tetrachloroethylene (PCE) source of groundwater contamination in the Central Chico plume. According to the database records, the owner was dumping small amounts of PCE fluid waste into the sewer. Records indicate the case is currently active. Site reconnaissance observed a monitoring well near the facility on Lincoln Avenue.

Vanella Oil Inc. Bulk Plant

Vanella Oil Inc. Bulk Plant was listed in the following EDR databases:

- UST
- SWEEPS UST
- CA FID UST

The listed site is located at 2140 Esplanade at East 11th and occurs within the project area. EDR databases report the site containing underground petroleum tanks with several compliance violations but no contamination documented. Site reconnaissance shows that the site contains several buildings currently utilized as an agricultural packing plant and propane distribution facility.

Chico Senior High School

Chico Senior High School was listed in the following EDR databases:

- LUST
- CERS HAZ WASTE
- CUPA
- HIST CORTESE
- NPDES
- CIWQS
- CERS

This site is located at 901 Esplanade within the project area. EDR databases report the site having contained a leaking heating oil tank. The reports stated the facility received compliance violations and reported the leak may have affected groundwater. Remediation was conducted and the case was closed in 1996.

Enloe Hospital Property

Enloe Hospital property was listed in the following EDR databases:

- LUST
- CERS

This site is located at 120 W 6th Avenue within the project area. EDR databases report the site contained a leaking diesel tank that may have affected groundwater. Remediation was conducted and the case was closed in 2010. No evidence of an UST or monitoring wells were observed. Currently, the site is occupied by a hospital and contains a paved parking lot, stormwater drain, and landscaping.

Cash Oil

The Cash Oil property was listed in the following EDR database:

- LUST

This site is located at 111 W 11th Avenue within the project area. Regulatory databases report the site contained a leaking gasoline tank that may have affected groundwater. The report lists the case as closed. Currently, the site is primarily a vacant paved lot utilized by a mobile food truck and contains a storage shed.

Chico Groundwater – Central Plume

The Chico Groundwater – Central Plume was listed in the following EDR databases:

- RESPONSE
- ENVIROSTOR
- HIST Cal-Sites
- DEED
- CORTESE
- HIST CORTESE

This site does not have a specific address. The central plume is present in groundwater under the project area. Eight areas of contaminated groundwater plumes have been identified in the City of Chico. There are six areas of known groundwater contamination associated with volatile organic compounds (VOCs). The central plume within the project area is associated with PCE contamination from dry-cleaning establishments. Dry-cleaning operations often disposed of PCE by pouring it down the drain. Being highly soluble and heavier than water, leaky sewer pipes allowed PCE to contaminate the shallow, unconfined groundwater aquifer. Groundwater is anticipated to occur at depths of 10 to 20 feet below ground surface at the project corridor.

4.0 HISTORICAL REVIEW

Burleson reviewed the following available information in order to ascertain the historical uses of the project area and the immediate adjacent properties to evaluate activity posing potential environmental concerns:

Table 4. Historical Resources Reviewed

Resource	Scale	Date
Interviews	NA	Interviews were not conducted
Aerial photographs	1"= 875'	1941
	1"= 875'	1947
	1"= 875'	1952
	1"= 875'	1969
	1"= 875'	1973
	1"= 875'	1975
	1"= 875'	1984
	1"= 875'	1998
	1"= 875'	2006
	1"= 875'	2009
	1"= 875'	2012
	1"= 875'	2016
USGS 30-minute series	1:125,000	1891
Topographic Map of the Chico, California Quadrangle	1:125,000	1893
	1:125,000	1895
USGS 15-minute series		
Topographic Map of the Chico, California Quadrangle	1:62,500	1949
USGS 7.5-minute series	1:31,680	1912
Topographic Map of the	1:24,000	1948
Chico/Durham, California	1:24,000	1950
Quadrangle	1:24,000	1969
	1:24,000	1978
	1:24,000	2012
Sanborn Fire Insurance Maps	1" = 150'	1902
	1" = 150'	1909
	1" = 150'	1921
	1" = 150'	1949
	1" = 150'	1970

4.1 PREVIOUS SITE USE

Burleson's review of aerial photographs, topographic maps, and Sanborn Fire Insurance maps depicted the project area transitioning from rural agricultural/residential areas to primarily urban residential and business parcels.

Aerial Photographs. Historical aerial photographs are valuable for the environmental assessor to review features or properties along the project area over a long period of time. Burleson reviewed historical aerial photographs provided by EDR. Historical aerial photograph reviewed include the years 1941, 1947, 1952, 1969, 1973, 1975, 1984, 1998, 2006, 2009, 2012, and 2016, with the longest gap in coverage being 17 years (between 1952 and 1969).

1941. The 1941 aerial photograph depicts the project area as primarily residential urban expansion. The project area includes sections of city roads including Esplanade Road and Oleander Avenue. The project area contains portions of the parcels adjacent to the city roads. The northern section, near Sandy Gulch, contains large wooded parcels with ranch structures (i.e. barns and storage buildings) present. The interior section of the project area is dominated by single family residential parcels intermixed with vacant lots. The southwestern section of the project area appears to be associated with two large schools intermixed with single family residential parcels. The southeastern section, near Big Chico Creek, includes large open space parcels adjacent to a cemetery intermixed with single family residential parcels. A public transportation rail line (SN Railway) was observed within the project area spanning from the northern to the southern end of the project area parallel with Esplanade Road.

1947. The 1947 aerial photograph depicts the same land use as 1941 with the following exceptions: large and vacant parcels within the northern and interior sections appear to be transitioning into single family residential parcels. Development is being conducted within the southeastern open space parcels.

1952. The 1952 aerial photograph depicts the same land use as the 1947 aerial photograph, with the exception that further development is apparent within the southern sections of the project area. The southern open space areas appear to be converted into a business zone based on the presence of parking lot development. An agricultural parcel located at the northern area has been converted into a large warehouse-size building. Vacant lots within the northern and interior sections of the project area continue being converted to single family residential parcels.

1969. The 1969 aerial photograph depicts the surrounding properties similarly to the 1952 aerial photograph with the exception that open parcels located at southern end of the project area have been significantly developed. The developed area includes schools and business zones. Vacant lots within the northern and interior sections of the project area continue being converted to business and single family residential parcels. A school appears to be under construction within the southeastern corner of the project area.

1973. The 1973 aerial photograph depicts the same land use as 1967 with the continuing trend of vacant lots within the northern and interior sections of the project area being converted to single family residential parcels.

1975. The 1975 aerial photograph depicts the same land use as 1973 with additional areas being converted to single family residential parcels.

1984. The 1988 aerial photograph depicts the same land use as 1975 with the exception that some of the single-family residential parcels are being converted to multifamily apartment complexes and commercial structures, especially adjacent to Esplanade Road. The Sacramento Northern (SN) railway appears to be removed from the project area.

1998. The 1998 aerial photograph depicts the same land use as 1984 with the exception of the Esplanade corridor being dominated by businesses and multifamily residences. This transition is evident by an increase in parking lots and larger buildings.

2006. The 2006 aerial photograph depicts the surrounding properties similar to the 1998 aerial photograph.

2009. The 2009 aerial photograph depicts the surrounding properties similar to the 2006 aerial photograph.

2012. The 2012 aerial photograph depicts the surrounding properties similar to the 2009 aerial photograph.

2016. The 2016 aerial photograph depicts the surrounding properties similar to the 2012 aerial photograph.

Topographic Maps. Historical topographic maps provide an overview of the area relative to potential previous land uses. Burleson reviewed historical topographic maps of the project area and adjoining properties for the following years: 1891, 1893, 1885, 1912, 1948, 1949, 1950, 1960, 1978, and 2012 with the longest gap in coverage being 36 years (between 1912 and 1948). Information from review of these maps is generally consisted with the information gathered in the historic aerial photograph review.

1891. The 1962 30-minute Chico Quadrangle topographic map depicts the project area and surrounding properties as vacant open land with no indication of structures. The project area is located on the edge of a city center. Two waterways are located at the northern and southern extents of the project area labeled

Sandy Gulch (north) and Big Chico Creek (south). The topographic elevation data indicates the project area is primarily level. A freight railway line occurs approximately one mile to the west of the project area.

1893. The 1893 30-minute Chico Quadrangle topographic map depicts the project area and surrounding properties similarly to the 1891 topographic map.

1895. The 1895 30-minute Chico Quadrangle topographic map depicts the project area and surrounding properties similarly to the 1891 topographic map.

1912. The 1912 7.5-minute Durham Quadrangle topographic map indicates the project area and surrounding properties have undergone a signification transition in land use from the 1895 topographic map. Residential structures represented by squares and a network of streets have been established within the project area. Residential structures increase in density from north to south along Esplanade Road and Oleander Avenue. An electric public transportation railway line occurs within the project area, represented by a dashed line, observed spanning from the northern to the southern end of the project area parallel with Esplanade Road. The southern end of the project area contains several open and vacant areas near Big Chico Creek. The map provides more detailed topographic elevation data than previous maps with the project area elevation between 200 to 205 feet.

1948. The 1948 7.5-minute Chico Quadrangle topographic map depicts the project area and surrounding properties similarly to the 1912 topographic map with the exception that the railway is now labeled as the SN Railway. SN Railway was an electrified interurban railroad in California that extended 183 miles from Oakland north to Chico. Properties are no longer represented individually by dots and pertinent large structures are now labeled. A hospital, High School, State College, cemetery, and large church are shown within or adjacent to the project area. Most large structures are located adjacent to Esplanade Road with the exception of the cemetery property located adjacent to Oleander Avenue. Two additional roads had been added to the southern section of the project area.

1950. The 1949 7.5-minute Chico Quadrangle topographic map depicts the project area and surrounding properties similar to the 1948 topographic map.

1969. The 1969 7.5-minute Chico Quadrangle topographic map depicts the project area and surrounding properties similar to the 1950 topographic map with the additions of a Jr. High School and several large buildings at the southern end of the project area.

1978. The 1978 7.5-minute Chico Quadrangle topographic map depicts the project area and surrounding properties similar to the 1969 topographic map.

2012. The 2012 7.5-minute Chico Quadrangle topographic map depicts the project area and surrounding properties similar to the 1978 topographic map with the exception that the SN Railway is not shown or labeled in the project area. A fire station is labeled near the hospital adjacent to the Oleander Avenue corridor near the center section of the project area.

Sanborn Fire Insurance Maps. Sanborn Fire Insurance Maps were originally created to allow fire insurance companies to assess their total liability in urbanized areas of the United States. These maps contain detailed information about properties and individual buildings and are invaluable for documenting changing uses through time. Burleson reviewed the Sanborn maps provided by EDR. Review of the Sanborn maps provided information consistent with review of the topographic maps and aerial photographs regarding increasing residential, commercial, and light industrial activity through time along the project corridor. In addition the Sanborn Maps identify two properties not included in the regulatory lists:

- Heating oil storage was identified on the 1949 map at the southeast corner of 7th Avenue and Esplanade.
- A petroleum company with gasoline tanks and garages was identified on the 1949 and 1970 maps along 8th Avenue between Esplanade and Oleander.

4.2 PREVIOUS SURROUNDING SITE USE

Review of aerial photographs and topographic maps of the surrounding area depicted similar site use as within the project area. Historically, the surrounding area transitioned from rural agricultural/residential areas to primarily urban residential and business parcels. Based on historic topographic maps, the surrounding area transitioned from rural properties to urban expansion in the early 1900s. Topographic maps from 1891, 1893, and 1895 depict the small town of Chico located to the south of the project area with limited urban infrastructure. The maps show two labeled waterways, Sandy Gulch and Big Chico Creek located to the north and south of the project area. The topographic elevation data indicates the surrounding area is primarily level. A freight railway line occurs approximately one mile to the west of the project area.

The 1912 topographic map indicates that substantial urban expansion occurred within the surrounding area. Urban expansion is depicted in the form of residential structures and street networks. According to aerial and topographic maps, by 1941 the area developed into primarily residential, commercial, and industrial properties including hospitals, schools, Ranchoero airport, and several private and government business enterprises. Urban expansion primarily occurred to the west, east, and south of the project area with the area north of Sandy Gulch dominated by rural properties. By the early 1970s, topographic and aerial

imagery show urban infrastructure dominating the entire area including the location of SR 99 to the east of the project area. By 1984 and remaining currently, the area contains little to no open land or agricultural enterprises.

4.3 SUMMARY OF PREVIOUS ENVIRONMENTAL INVESTIGATIONS

Chico Senior High School

Chico Senior High School is located at 901 Esplanade and occurs within the project area. EDR databases report the site having contained a leaking heating oil tank. According to the California Regional Water Quality Control Board (Central Valley Region), the site received a Remedial Action Completion Certification (1996) following a site investigation and remedial action in response to their leaking underground 550-gallon steel tank (GeoTracker 2019). Records indicate that contaminated soil was transported to the Chico Unified School District's Corporation Yard on Carmichael Drive. The soil was treated and disposed of. Petroleum hydrocarbon concentrations in groundwater were less than laboratory detection limits due to remedial activity.

Enloe Hospital Property

Enloe Hospital Property is located at 120 W 6th Avenue within the project area. EDR databases report the site contained a leaking diesel tank. According to the California Regional Water Quality Control Board (Central Valley Region), the site received a No Further Action Required Memo (2010) after completion of a site investigation and remedial action in response to the leaking underground tank (GeoTracker 2019). Records indicate that the tank was removed and the contaminated soil was removed. The soil was treated and disposed of. Petroleum hydrocarbon concentrations in groundwater were less than laboratory detection limits due to remedial activity.

5.0 SITE AND AREA RECONNAISSANCE

The site and area reconnaissance was performed to identify obvious visual indications of present or past activities that have or could impact the project area. Site reconnaissance was conducted on foot. The site and area reconnaissance was conducted by Burleson Principal Geologist Greg Reller and Michael Burleson, Environmental Scientist, on September 20, 2019. Maps, which illustrate the general location and configuration of the site are located in Appendix A and presented as Figures 1 and 2. Inspected locations are included on Figure 2. Site and area reconnaissance photographs are provided in Appendix B.

5.1 Site Reconnaissance

Site reconnaissance included pedestrian surveys of approximately 2.5 miles of right-of-way within the Chico city limits. The project area is located within an urban area consisting of residential, commercial, and industrial development. Inspections were conducted from public rights-of-way. Building interiors were not inspected. Some exterior areas, not readily visible from the public right-of-way, were not inspected. Based on the EDR report and reconnaissance observation, several specific sites of concern were identified and inspected during the site reconnaissance and included the following locations:

- Nichols Family Trust, located at 750 Esplanade: Property is currently a private residence. Site contained a potential polychlorinated biphenyls electrical transformer and no evidence of underground storage tank was observed (Appendix B; Photograph 6). EDR results show the property contained a 500-gallon gasoline storage tank;
- Esplanade Cleaners, located at 164 East 2nd Avenue: Property is an active dry-cleaning facility. Site contained a potential polychlorinated biphenyls electrical transformer, marked monitoring well, and roof-mounted swamp cooler (Appendix B; Photographs 4 and 5). EDR results show the property is part of an active remedial investigation. The owner was found to be disposing PCE into the sewer system. The facility has been identified as a source of groundwater contamination in the Central plume;
- Vanella Oil Inc. Bulk Plant, located at 2150 Esplanade at East 11th and Esplanade: Former petroleum distributor with UST, site currently contains three buildings including a propane distributor and an agriculture packing facility. The site contains little exposed soil and is mostly paved (Appendix B; Photograph 2);
- Chico Senior High located at 901 Esplanade: High school was in-session; site reconnaissance did not entail walking the school grounds. The EDR record search indicated a leaking heating oil storage tank (case closed).
- Enloe Hospital Property, located at 120 W 6th Avenue: Property is currently a medical center containing several businesses. Site contained a heating, ventilation, and air conditions system and a stormwater drain in the parking lot (Appendix B; Photograph 3). EDR results indicate a diesel LUST (case closed);
- Cash Oil, located at 111 W 11th Avenue: Former gas station containing a parked food truck, trash can, storage shed, and stormwater drain with dark stains (possible oil) near a drainage inlet at Esplanade (Appendix B; Photograph 1). EDR results show the property had a leaking underground storage tank;

- Parking lot near the Vanella Oil Inc. Bulk Plant site, located at the intersection of Oleander Avenue and 10th Street: Property appeared to be previously associated with the current agricultural packing facility. Currently, the property is roped off with no trespassing signs and a large soil stockpile in the northwest corner of the property (Appendix B; Photograph 7); and
- Chico Area Groundwater Plume-Central Plume: No visual evidence for the groundwater plume was observed.

5.2 Interview

Interviews with property owners were not included in the scope of this ISA.

5.3 Known Current and Past Uses of the Site and Adjoining Properties

The project area was historically rural with very few residences prior to the development of urban expansion of the City of Chico. After the early 1900s, an increase in commercial and residential development occurred with gradual urban development occurring. The area currently consists of a mixed residential, commercial, and industrial city center. Portions of the corridor have been subject to traffic for over 80 years. As a result, aerial deposition of lead from leaded gasoline may be present in surface soils adjacent to the corridor roadways. In addition, the age of structures along the project corridor indicates that lead-based paint may be present in shallow soil. It is possible that soils encountered during the project could contain elevated lead.

5.4 Utilities and PCBs

Typical municipal utilities such as water, sewer, electrical, telecommunications cable, and residential gas are present as above ground and below ground utilities. Several pole-mounted transformers were observed along the project corridor. While no evidence for leaking was observed, the possibility that transformers containing PCBs may have been present within the area exists (markings related to PCB content were not visible).

6.0 DATA GAP ANALYSIS

ASTM E 1527-05 requires ISA documents to list potential data gaps encountered during investigation efforts. The standards include identification of all data gaps that affect the validity of the investigative conclusions and discussion of the significance of the gaps. For this project, the following items may constitute a data gap as defined by ASTM:

- Lack of property owner interviews

Interviews were not included in the scope of work for this ISA. Lack of interviews does not present a significant data gap because of the availability of other information to support the necessary evaluations.

7.0 FINDINGS

Burleson conducted this ISA of a proposed project corridor occurring northwest along Esplanade Road from Memorial Way to East 11th Avenue; northeast along East 10th Avenue to Oleander Avenue; southeast along Oleander Avenue to Memorial Way; and southwest along Memorial Way to Esplanade Road. The ISA was performed and prepared in general compliance with the scope and limitations of ASTM Practice E 1527-05. All modifications or exceptions to the general compliance are described previously in this report.

Burleson identified nine properties as areas of potential environmental concern. Of the nine properties, four were identified as recognized environmental conditions (RECs) and ~~three~~ were identified as historic recognized environmental conditions (HRECs). The following descriptions of these sites and issues as follows:

- Nichols Family Trust, located at 750 Esplanade, at the corner of Esplanade and Lincoln Avenue is a residential property adjacent to the project area. A 500-gallon gasoline storage tank was reported at this site. Regulatory records indicate no compliance violations have occurred, leaks reported, or activity or condition status. No evidence of a tank or remedial activity was observed during site reconnaissance inspections. Due to historic and current evidence, proximity to construction activity, and the level of ground disturbing activity anticipated as part of the project in this vicinity (3-inch depth), Burleson has identified the site as a **low-risk REC**;
- Esplanade Cleaners located at 164 East 2nd Avenue, between the Esplanade and Oleander Avenue corridors is an active dry cleaner adjacent to the project area. The site has an extensive regulatory record of compliance violations, remedial activity, and has been identified as a PCE source contributor to the Central Chico groundwater plume that extends beneath the project corridor. Site reconnaissance observed a monitoring well in front of the facility within the paved section of E 2nd Avenue. Due to historic and current evidence, distance from the anticipated construction activity, and the level of ground disturbing activity anticipated in the vicinity (3-inch depth), Burleson has identified the site as a **low-risk REC**.

- Vanella Oil Inc. Bulk Plant located at 2140 Esplanade, at East 11th and Esplanade is a site containing three large industrial buildings and occurs adjacent to the project area. Historic aerial imagery indicate that the site has been active since the 1940s. The site is currently being utilized by an agricultural packing facility and propane distribution facility. The site contains petroleum storage tanks with an extensive regulatory record of compliance violations but no contamination or remedial activity documented. Due to historic and current evidence, proximity to construction activity, and the level of ground-disturbing activity anticipated as part of the project in this vicinity (3-inch depth), Burleson has identified the site as a **low-risk REC**.
- Chico Senior High School located at 901 Esplanade is an active public high school adjacent to the project area. Historic topographic and aerial imagery indicate that the site has been active since the early 1900s. The site contained a leaking heating oil tank with extensive regulatory record of compliance violations, remedial activity, and the case was closed in 1996. Due to historic and current evidence, proximity to construction activity, and the level of ground disturbing activity anticipated as part of the project in this vicinity (3-inch depth), Burleson has identified the site as a **low-risk HREC**.
- Enloe Hospital property is an active medical business center located at 120 W 6th Avenue adjacent to the project area. The site contained a leaking diesel tank. that received remedial efforts and the case was closed in 2010. Due to historic evidence, proximity to construction activity, and the level of ground-disturbing activity anticipated as part of the project in this vicinity (3-inch depth), Burleson has identified the site as a **low-risk HREC**.
- The Cash Oil property located at 111 W 11th Avenue is within the project area. The site is primarily a vacant paved lot utilized by mobile food vehicles and contains a storage shed structure. The site contained a leaking gasoline tank that received remedial efforts and the case was closed. Due to historic and current evidence, proximity to construction activity, and the level of ground-disturbing activity anticipated as part of the project in this vicinity (3-inch depth), Burleson has identified the site as a **low-risk HREC**.
- The Chico Groundwater – Central Plume does not have a specific address but is indicated as an area spanning from Mangrove Avenue to SR 32. The plume extends beneath the project area primarily along the southern Esplanade section and is associated with PCE contamination from dry cleaning establishments. Due to historic and current evidence, proximity to construction activity, and the level of ground-disturbing activity anticipated as part of the project in this vicinity (3-inch depth), Burleson has identified the site as a **low-risk REC**.

- Heating oil storage was identified on the 1949 Sanborn map at the southeast corner of 7th Avenue and Esplanade. This property was not identified in other historical records reviewed. Due to proximity to construction activity, and the level of ground disturbing activity anticipated as part of the project in this vicinity (3-inch depth), Burleson has identified the site as a **low-risk HREC**.
- A petroleum company with gasoline tanks and garages was identified on the 1949 and 1970 Sanborn maps along 8th Avenue between Esplanade and Oleander. Due to proximity to construction activity, and the level of ground-disturbing activity anticipated as part of the project in this vicinity (3-inch depth), Burleson has identified the site as a **low-risk HREC**.

8.0 CONCLUSIONS

Burleson identified four potential low risk RECs and five low risk HRECs within the project area with the potential to impact project activity. In addition, Burleson has identified the potential for elevated lead in soil originating from aerial deposition and/or associated with lead-based paint in runoff from adjacent structures. The findings and results of this ISA concludes with the following statement required by ASTM E 1527-05:

Burleson has performed an Initial Site Assessment in general conformance with the scope and limitations of ASTM E 1527-05 of the project area, defined an approximate 1.25-mile segment of the Esplanade within the City of Chico between Memorial Way and East 11th Avenue, along Oleander Avenue between Memorial Way and East 10th Avenue, along East 10th Avenue between Esplanade and Oleander Avenue, and along Memorial Way between Esplanade and approximately 335 feet east of the Memorial Way and Oleander Avenue intersection. The project is in the "Chico, CA" USGS Quadrangle, Sections 22 and 27, of Township 22 North, Range 1 East. Any exceptions to or deletions from these practices are described in previous sections of this report. This report has revealed evidence of RECs in connection with the project corridor.

9.0 RECOMMENDATIONS

Recommendations pertaining to this ISA have been developed by investigative procedures described in *Scope of Services, Exceptions, Deviations, and Limitations* sections of this report.

Burleson recommends that the City of Chico notify the selected contractors and subcontractors that subsurface impacts including petroleum hydrocarbon, volatile organic chemical, and/or lead contaminated

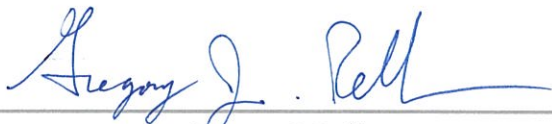
soils could potentially be present within the construction area of the project corridor. The contractors should be prepared to notify all personnel working within the project that impacted soil may be encountered during project construction. Project personnel should be prepared to segregate, document, and dispose of impacted material in compliance with the applicable laws and regulations. Lead testing of soil by the contractor for accumulation of lead associated with aerial deposition and/or lead based paint should be conducted prior to construction activity if the need to haul excavated soil off-site for disposal is anticipated. Testing for petroleum hydrocarbon and/or volatile organic chemicals may also be necessary if discolored soil or chemical odors attributed to soil are recognized during construction. Implementation of proper measures to prevent worker and public exposure to affected soil should be conducted if tests indicate contamination levels above noncompliance thresholds.

10.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

Burleson declares, due to our professional knowledge, we meet the definition of environmental professional as defined in Section 312.10 of 42 C.F.R. Part 312. This ISA was conducted under the supervision of a qualified environmental professional.

We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. Burleson developed and performed all service in conformance with standards and practices set forth in 40 C.F.R. Part 312.

The preceding report has been prepared in general conformance with standard industry practice including the applicable portions of the investigation procedures codified in ASTM E 1527-05, *Standard Practice for Environmental Site Assessments: Environmental Site Assessment Process*. The end user of this report may rely on the contents, findings, and conclusions to be accurate within the limitations stated in this report and in the ASTM standard. The report also complies with specific requirements supplied by the client.



Gregory J. Reller
Principal Geologist
Burleson Consulting Inc.



Michael Burleson
Environmental Scientist
Burleson Consulting Inc.

11.0 REFERENCES

ASTM Practice E 1527-05. 2005. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

City of Chico. 2010. General Plan Update Draft Environmental Impact Report: Chapter 4.8 Geology and Soils. September.

City of Chico. 2010. General Plan Update Draft Environmental Impact Report: Chapter 4.9 Hydrology and Water Quality. September.

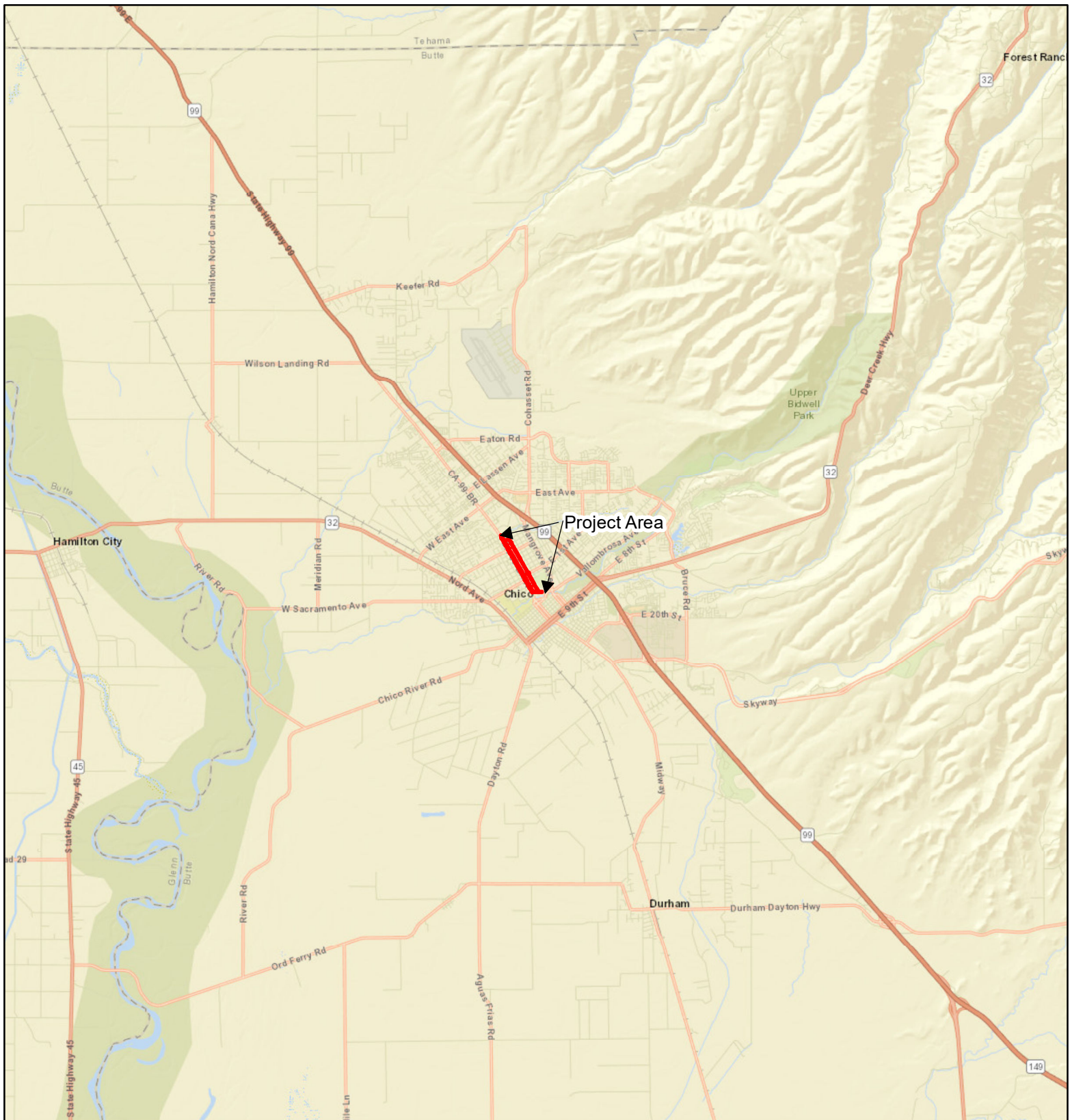
Department of Toxic Substance Control (DTSC). 2015. *Central Plume Shallow Zone Aquifer Chico, California Treatability Study Implementation Report*. California Environmental Protection Agency Department of Toxic Substances Control

Environmental Data Resources, Inc., Report. 2019. *Chico Esplanade*. The EDR DataMap Corridor Study, Inquiry Number 5764035.2s. August 23, 2019.

Natural Resource Conservation Service (NRCS) [U.S. Department of Agriculture]. 2019. Soil Survey of Butte Area, California, Parts of Butte and Plumas Counties.

Appendix A

Figures



 Project Area

0 1.25 2.5 5 Miles
1 inch = 2.5 miles



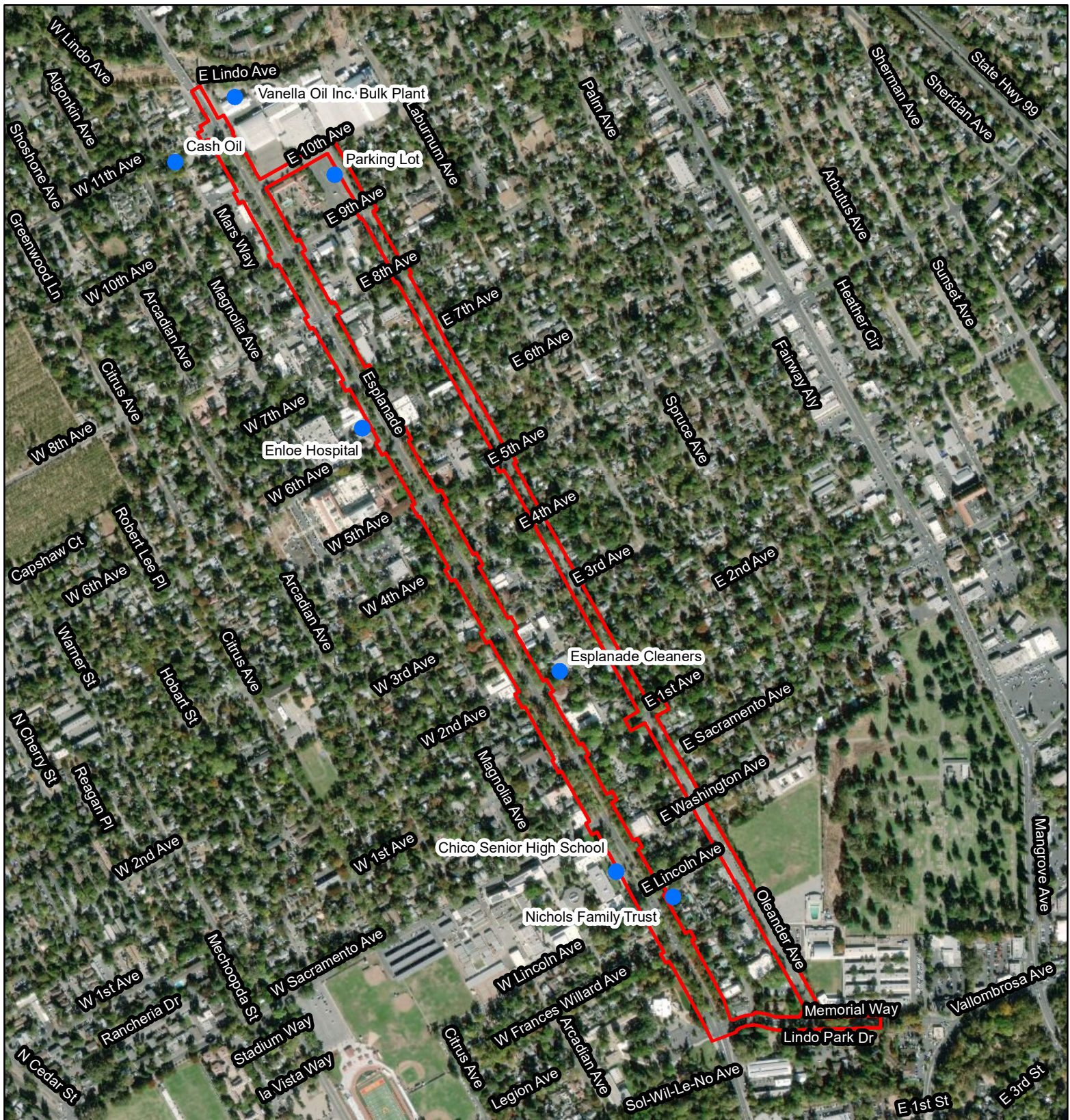
Figure 1 - Project Area Location

**ISA
Esplanade Corridor Safety
and Accessibility Improvement Project**

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, INCREMENT P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Burleson Consulting, Inc.



- Project Area
- Inspected Facilities
- Roads

0 400 800 1,600 Feet
1 inch = 800 feet

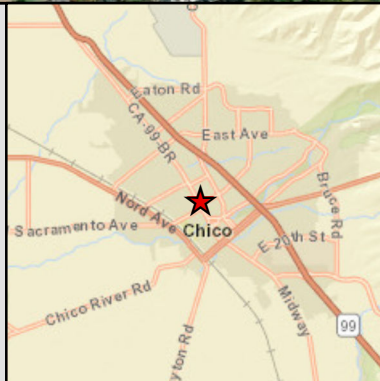


Figure 2 - Project Area

ISA Esplanade Corridor Safety and Accessibility Improvement Project

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community




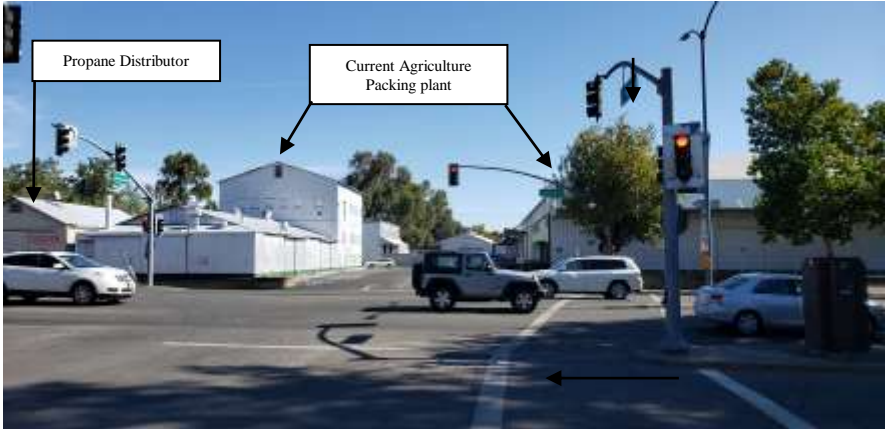
Burleson Consulting, Inc.





Appendix B






Site Photographs




Appendix B

Site Photographs

Viewing Direction ↑=NORTH	Photo Description	Photo
↘	1. View of the historic Cash Oil site showing a change in pavement type, food vehicle, and storage structure.	
→	2. View of the Vanella Oil Inc. Bulk Plant site. Image showing agriculture industrial and propane distribution facilities.	

Viewing Direction ↑=NORTH	Photo Description	Photo
	<p>3. View of the Enloe Hospital site showing the stormwater drain inlet located at the facility parking lot.</p>	
	<p>4. View of the Esplanade Cleaners site showing the front of the building that indicates that business is currently active.</p>	

Viewing Direction  =NORTH	Photo Description	Photo
	<p>5. View of the Esplanade Cleaners potential monitoring well location. The well is located on 2nd Avenue in front of the facility.</p>	
	<p>6. View of the Nichols Family Trust Site. The photograph shows that the location is currently an active residential property.</p>	

Viewing Direction  =NORTH	Photo Description	Photo
	<p>7. View of the vacant parking lot near the Vanella Oil Inc. Bulk Plant site. The photograph shows the large soil stockpile.</p>	

Appendix C

EDR Report (located on CD+

Appendix D

Site Reconnaissance Data Forms

Site Name: 111 W - 11TH CASH OIL

September 20, 2019

Staff: GJR, MB

On-Site Conditions/ Appurtenances	Observed	Proximity to Corridor and Other Comments
Underground Storage Tanks	N	
Aboveground Storage Tanks	N	
Hazardous Materials and Wastes	N	
Solid Waste	Y	TRASH CAN AT TACO TANK
Potential Polychlorinated Biphenyls containing equipment	N	
Water Wells	N	
Waste Water Sewage Disposal/Septic	N	
Odors	N	
Pits, Ponds, Lagoons and Other Surface Waters	N	A FEW PONDINGS
HVAC	N	
Staining and Corrosion	Y	AT DRAINAGE INLET AT S CORNER ALONG ESPRESSO: OIL STAINING IN SOIL
Drains, Sumps and Dry Wells	N	
Stained Soils or Pavements	Y	SEE ABOVE, FILL SOIL AT WEST SIDE TWO CONC. PADS
Stressed Vegetation		
Oil and Gas Wells / Mine Shafts	N	
Structures	Y	SHED AT S END OF SITE

Site Name: VANILLA OIL GULF PLANT "3150" ESPLANADE

September 20, 2019

Staff: GJR/MB

On-Site Conditions/ Appurtenances	Observed	Proximity to Corridor and Other Comments
Underground Storage Tanks	N	
Aboveground Storage Tanks	N	
Hazardous Materials and Wastes	N	
Solid Waste	N	
Potential Polychlorinated Biphenyls containing equipment	N	
Water Wells	N	
Waste Water Sewage Disposal/Septic	N	
Odors	N	
Pits, Ponds, Lagoons and Other Surface Waters	N	ADJ. TO BANY GULCH
HVAC	N	
Staining and Corrosion	N	
Drains, Sumps and Dry Wells	N	
Stained Soils or Pavements	N	
Stressed Vegetation	N	
Oil and Gas Wells / Mine Shafts	N	
Structures	YES	SITE IS OCCUPIED BY 3 BLOBS 'HUNT' PROPOSE' ENTIRE SITE PAVED

Site Name: ENLOS MED. PROP. 120 W 6TH

September 20, 2019

Staff: GJR/MB

On-Site Conditions/ Appurtenances	Observed	Proximity to Corridor and Other Comments
Underground Storage Tanks	N	
Aboveground Storage Tanks	N	
Hazardous Materials and Wastes	N	
Solid Waste	N	
Potential Polychlorinated Biphenyls containing equipment	N	
Water Wells	N	
Waste Water Sewage Disposal/Septic	N	
Odors	N	
Pits, Ponds, Lagoons and Other Surface Waters	N	
HVAC	Y	SW CORNER OF BLDG ON GRASS
Staining and Corrosion	N	
Drains, Sumps and Dry Wells	Y	DI IN PARKING LOT OFF W 6TH
Stained Soils or Pavements	N	PAVED/LANDSCAPED
Stressed Vegetation	N	
Oil and Gas Wells / Mine Shafts	N	
Structures	Y	MED. BLDGS

Site Name: ESPLANADE CLEANERS 164 E 2ND

September 20, 2019

Staff: GJR/MB

On-Site Conditions/ Appurtenances	Observed	Proximity to Corridor and Other Comments
Underground Storage Tanks	N	
Aboveground Storage Tanks	N	
Hazardous Materials and Wastes	N	
Solid Waste	N	
Potential Polychlorinated Biphenyls containing equipment	Y	POLE MOUNTED TRANSFORMER NE END OF 170 E 2ND
Water Wells	Y	MONITORING WELL IN STREET
Waste Water Sewage Disposal/Septic	N	
Odors	N	
Pits, Ponds, Lagoons and Other Surface Waters	N	
HVAC	Y	ROOF MOUNT SMART COOLER
Staining and Corrosion	N	
Drains, Sumps and Dry Wells	N	
Stained Soils or Pavements	N	ALL PAVED
Stressed Vegetation	N	LANDSCAPE
Oil and Gas Wells / Mine Shafts	N	
Structures	Y	COMMERCIAL DEV.

Site Name: NICHOLS FAMILY TRUST 750 ESPANADE

September 20, 2019

Staff: GJR/MS

On-Site Conditions/ Appurtenances	Observed	Proximity to Corridor and Other Comments
Underground Storage Tanks	N	
Aboveground Storage Tanks	N	
Hazardous Materials and Wastes	N	
Solid Waste	N	
Potential Polychlorinated Biphenyls containing equipment	# Y	POLE MOUNT TRANSFORMER AT CORNER w/ E-LINCOLN
Water Wells	N	
Waste Water Sewage Disposal/Septic	N	
Odors	N	
Pits, Ponds, Lagoons and Other Surface Waters	N	
HVAC	N	
Staining and Corrosion	N	
Drains, Sumps and Dry Wells	N	
Stained Soils or Pavements	N	
Stressed Vegetation	N	LANDSCAPE
Oil and Gas Wells / Mine Shafts	N	
Structures	Y	RESIDENCE - SINGLE FAMILY

Site Name: OLGADE + 10TH - SW CORNER

September 20, 2019

Staff: GJR/MB

On-Site Conditions/ Appurtenances	Observed	Proximity to Corridor and Other Comments
Underground Storage Tanks	N	
Aboveground Storage Tanks	N	
Hazardous Materials and Wastes	N	
Solid Waste	Y	LARGE SOIL PILE AT NW CORNER OF PROPERTY w/ AC FLAGS
Potential Polychlorinated Biphenyls containing equipment	Y	POLE MOUNTED TRANSFORMER ALONG OLGADE
Water Wells	N	
Waste Water Sewage Disposal/Septic	N	
Odors	N	
Pits, Ponds, Lagoons and Other Surface Waters	N	
HVAC	N	
Staining and Corrosion	N	
Drains, Sumps and Dry Wells	N	
Stained Soils or Pavements	N	
Stressed Vegetation	N	NO VEG: GRAVEL SURFACE, SIGN: CHICAGO NUT CO. PARKING (IDENTICAL TO PARKING AT NUT PLANT)
Oil and Gas Wells / Mine Shafts	N	
Structures	N	