

WEST PINE STREET IMPROVEMENTS PROJECT

DRAFT
MITIGATED NEGATIVE DECLARATION AND
INITIAL STUDY

CITY OF BISHOP, INYO COUNTY, CA



PREPARED FOR:
City of Bishop (Lead Agency)
Department of Public Works
377 West Line Street
Bishop, CA 93514
Phone Number
Contact: Mr. David Grah, P.E.,
Director
(760) 873-8458

PREPARED BY:
TIERRA Environmental Services
9915 Businesspark Avenue, Suite C
San Diego, CA 92131
Contact: Brooke E. Peterson, AICP
(858) 578-9064

February 10, 2009

TABLE OF CONTENTS

Section 1 Introduction	1-1
1.1 Purpose	1-1
1.2 Project Location	1-1
1.3 Project Description	1-1
1.4 Project Proponent	1-2
1.5 Intended Uses of this Document	1-2
1.6 General Plan Designation	1-3
1.7 Zoning Category	1-3
1.8 Environmental Setting	1-3
1.9 Other Agency Approval	1-4
Section 2 Environmental Checklist/Initial Study	2-1
Section 3 Discussion of Environmental Evaluation	3-1
3.1 Aesthetics	3-1
3.2 Agricultural Resources	3-2
3.3 Air Quality	3-2
3.4 Biological Resources	3-3
3.5 Cultural Resources	3-4
3.6 Geology and Soils	3-5
3.7 Hazards and Hazardous Materials	3-6
3.8 Hydrology and Water Quality	3-6
3.9 Land Use and Planning	3-7
3.10 Mineral Resources	3-7
3.11 Noise	3-7
3.12 Population and Housing	3-8
3.13 Public Services	3-8
3.14 Recreation	3-8
3.15 Transportation/Traffic	3-8
3.16 Utilities and Service Systems	3-9
3.17 Mandatory Findings of Significance	3-10
3.18 Project Alternatives – 187 West Pine Street	3-10
Section 4 References	4-1

Appendix A – Pavement Design and Earthwork and Grading Recommendations

LIST OF FIGURES

Figure 1 - Regional Location Map	1-5
Figure 2 - Project Location Map	1-6
Figure 3 - Project Location Aerial	1-7
Figure 4 - West Pine Street Improvements Project Alignment	1-8
Figure 5 - City of Bishop Zoning Map	1-9
Figure 6 - Existing West Pine Street Conditions	1-10

SECTION 1 INTRODUCTION

1.1 PURPOSE

The purpose of the proposed project is to address the issues of deteriorated pavement, poor drainage, deteriorated curb and gutter, substandard or lack of sidewalk, curb returns not accessible to the disabled, and needed replacement and upgrades to utility infrastructure along West Pine Street, from Main Street to Home Street. The existing sidewalk does not meet City of Bishop (City) standards and is not continuous. Parking, drainage, and pavement conditions present mobility problems for pedestrians, disabled persons, and bicyclists. Utility infrastructure replacement and upgrades are necessary to ensure safe and reliable water and sewer service to the community.

1.2 PROJECT LOCATION

The project is located in Inyo County in the City of Bishop, California (*Figures 1 and 2*). The project area is in the NE ¼ of the NE ¼ of Section 7, T.7S, R.33E, Mount Diablo Baseline and Meridian (MDB&M), in the western central portion of the City of Bishop, California (*Figure 3*). Specifically, the project site consists of the right-of-way for West Pine Street, from Main Street to Home Street (*Figure 4*). The proposed project area of potential effect (APE) may also extend short distances within the rights-of-way to cross streets (Hobson Street, Schley Street, Fowler Street, Hammond Street, and Warren Street). The proposed project is located at an elevation of approximately 4,153 feet above mean sea level (AMSL).

1.3 PROJECT DESCRIPTION

The proposed project would occur within the West Pine Street right-of-way and short distances within the rights-of-way of cross streets. Street improvements would be occur primarily along West Pine Street while the APE located within rights-of-way of cross streets would provide for construction staging areas, match grades and meet other construction design consistency needs. Construction staging areas would be located in close proximity to the project and located on existing public-owned property(ies) outside of the rights-of-way to the maximum extent possible.

Several fences along West Pine Street have been constructed and in some cases this fencing extends into the right-of-way. Fencing may need to be removed as a result of the proposed project if they are not permitted to be located within the City's right-of-way. Relocation would be the responsibility of the property owner. Property owners would receive notice that fences be moved by a specified date.

Street improvements would be constructed to conform to City standards to the maximum extent possible. Improvement widths would be limited in some areas due to the available right-of-way width and would therefore be constructed to less than City standards in those respective areas.

The proposed project consists of the following improvements:

- Remove and replace street pavement;
- Remove existing curb, deteriorated curb and gutter, and curb on poor grade and replace with curb and gutter;
- Construct concrete cross gutters at Hobson Street, Schley Street, North Fowler Street, Hammond Street, North Warren Street, and North Main Street;
- Remove existing deteriorated sidewalk and sidewalk that does not comply with Americans with Disabilities Act (ADA) requirements;
- Construct continuous ADA compliant sidewalk. Sidewalk will be five feet wide in residential zones and ten (10) feet wide in commercial zones *except* where features will be narrower than City standards due to narrower right-of-way. Further, sidewalk adjacent to Bishop High School will be retained/replaced at existing width.
- Construct ADA compliant curb ramps;
- Remove seven trees that conflict with proposed sidewalk;
- Provide replacement trees to affected residents/business owners that comply with the City's guidelines for street trees;
- Improve intersections with Hobson Street, Schley Street, North Fowler Street, Hammond Street, and North Warren Street as necessary to address drainage problems and grade issues (improvements at North Warren Street in conjunction with North Warren Street Improvements project);
- Construct storm water treatment at inlets to storm drains;
- Consider bulb-outs at intersections to provide enhanced pedestrian refuge, traffic calming, and context sensitive elements; and
- Replace and upgrade water and sewer utility infrastructure to ensure safe and reliable water and sewer service to the community.

All components of the project are anticipated to be completed in one phase.

1.4 PROJECT PROPONENT

City of Bishop, Department of Public Works
377 West Line Street
Bishop, California 93514
Telephone: 760-873-8458
Contact: David B. Grah, P.E., Director of Public Works

1.5 INTENDED USES OF THIS DOCUMENT

The City will use this Environmental Initial Study to identify any potential environmental constraints associated with the proposed improvement of pavement, sidewalks, curbs, and gutters along West Pine Street, between Home Street and Main Street, and to solicit input regarding the project from

agencies and the general public. This Environmental Initial Study will also be used in support of a Mitigated Negative Declaration when considering the approval of the West Pine Street Improvements Project.

1.6 GENERAL PLAN DESIGNATION

The project is proposed within the West Pine Street right-of-way and the right-of-way of cross streets. The General Plan land designations along West Pine Street include: Medium High Residential (10-22 dwelling units (DU)/acre) west of North Fowler Street; Low Density Residential (2-5 DU/ac), High Density Residential (22.1-35 DU/acre), and General Commercial between Fowler Street and Hammond Street; and General Commercial between Hammond Street and Main Street (*Figure 5*). The City of Bishop High School is also located on the south side of West Pine Street between Home Street and Hobson Street.

1.7 ZONING CATEGORY

The project is proposed within the West Pine Street right-of-way and the right-of-way of cross streets. The zoning categories along West Pine Street include: Medium Density Residential west of North Fowler Street (R-2000); Low Density Residential (R-1), High Density Residential (R-3-P) and General Commercial and Retail (C-1) between Fowler Street and Hammond Street; and General Commercial and Retail (C-1) between Hammond Street and Main Street.

1.8 ENVIRONMENTAL SETTING

The City of Bishop is located in Inyo County at the northern end of Owens Valley. The City covers an area of approximately 1.8 square miles and has a population of approximately 3,575 (U.S. Census 2000). The population is expected to remain relatively steady as the City is surrounded by Native American and public lands. The City of Bishop was incorporated in 1903 and the oldest residential properties along West Pine Street were constructed in the early 1900's.

The Owens River, which is located east of the City of Bishop, flows to the south down the valley. The City is surrounded by the Sierra Nevada mountain range to the west and the White Mountains to the east.

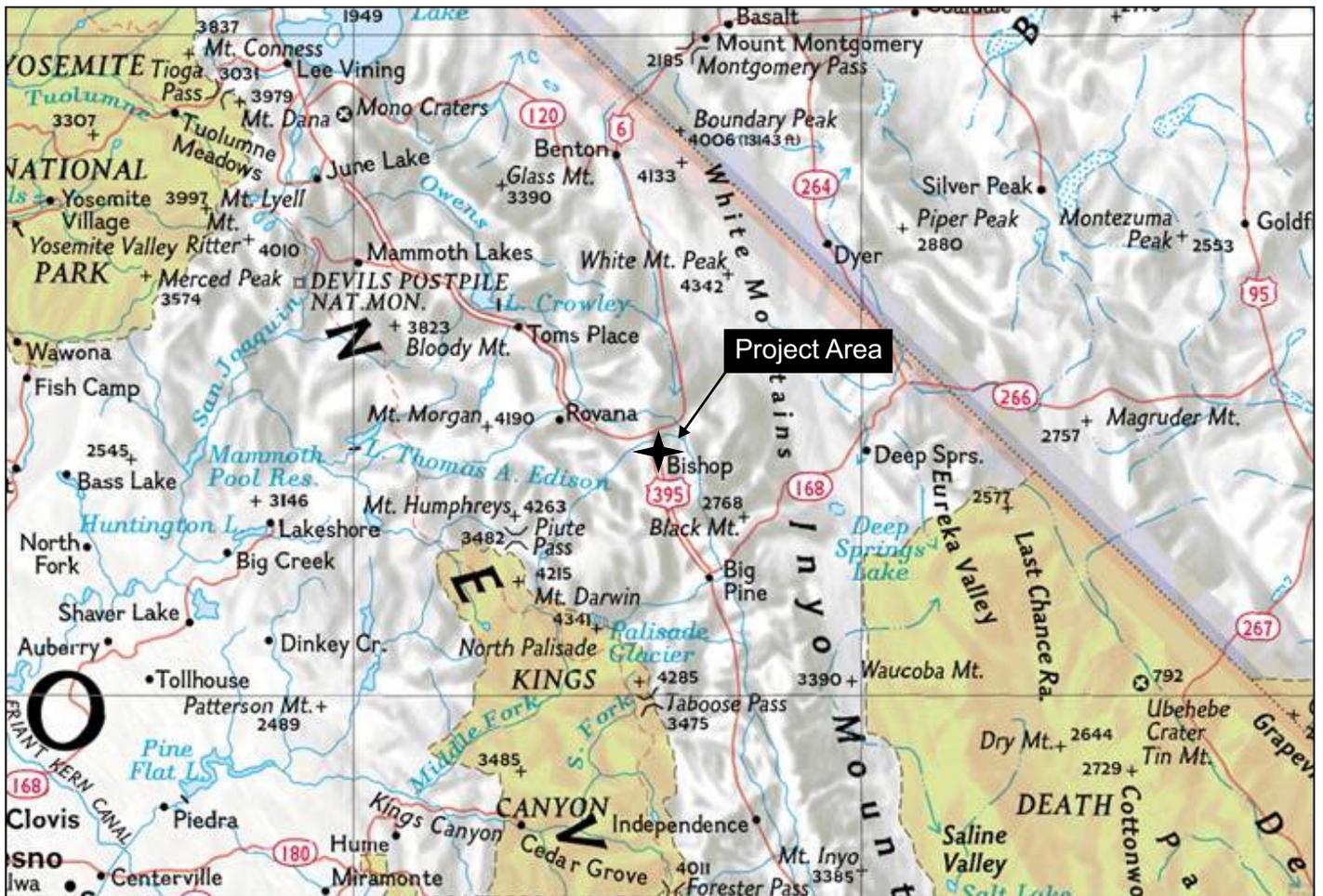
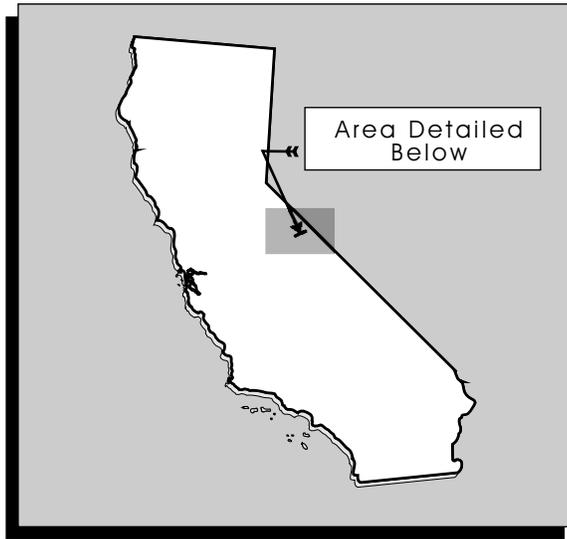
The City is located within the rain shadow of the Sierra Nevada. The warmest month of the year is July with an average maximum temperature of approximately 98 degrees Fahrenheit. Temperature variations between night and day are over 40 degrees during the summer and over 30 degrees during the winter. The annual average precipitation in the City is five inches. The wettest month of the year is February with an average rainfall of one inch.

Over time, some curbs and some sidewalks have been constructed along West Pine Street. Much of the existing sidewalk, however, does not meet current City standards or Americans with Disabilities Act (ADA) standards. Large trees are growing in several locations of the right-of-way intended for

sidewalks. These trees are in many cases quite old and provide much shade during summer months. Many of these trees also have roots that have damaged curb, pavement, sewers, and other improvements and impede street drainage (*Figure 6*). A large portion of the proposed project improvements will take place within the right-of-way adjacent to the City of Bishop High School.

1.9 OTHER AGENCY APPROVAL

The proposed project does not require approval by any other agency.



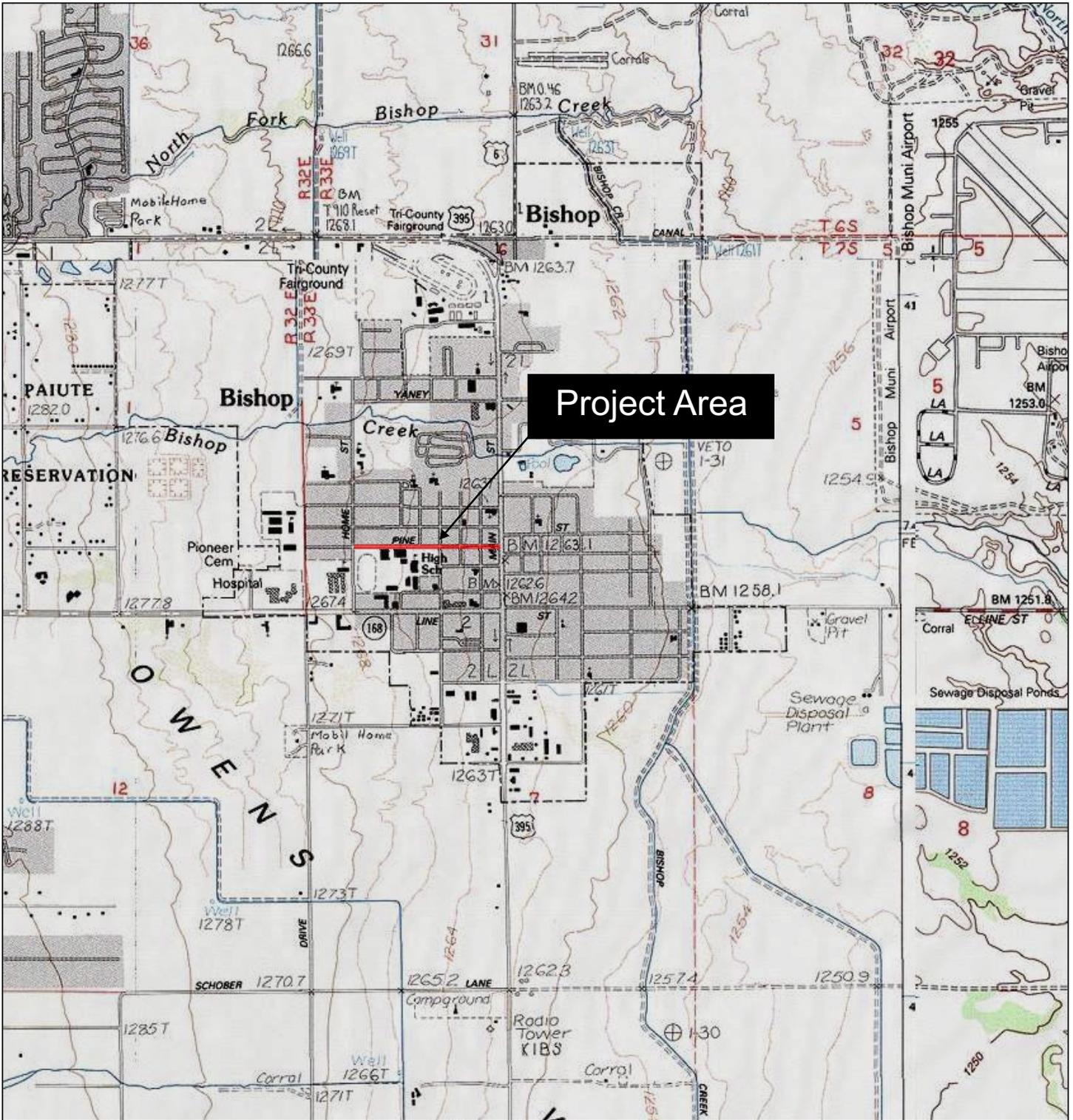
Map created with TOPO!© ©2003 National Geographic (www.nationalgeographic.com/topo)

Elevations shown are in measurements of meters

Figure 1
Regional Location Map



TIERRA
ENVIRONMENTAL SERVICES

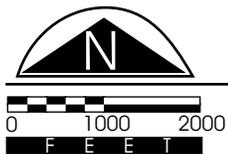


Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

USGS Bishop 7.5' Quadrangle

Elevations shown are in measurements of meters

Figure 2
Project Location Map



TIERRA
ENVIRONMENTAL SERVICES



Source: Google Maps 2009

Figure 3
Project Location Aerial



TIERRA
ENVIRONMENTAL SERVICES

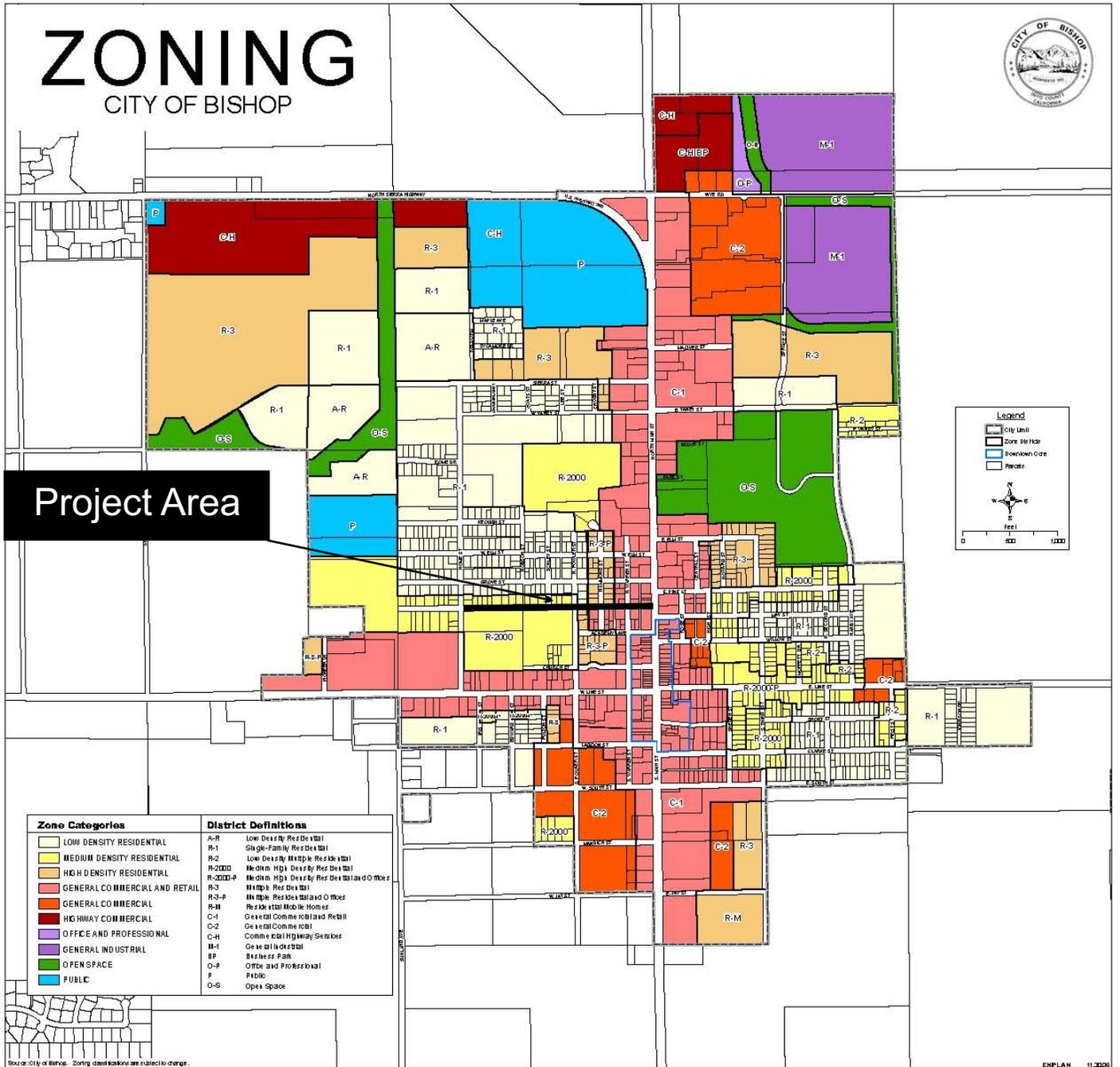


Source: Google Maps 2009

Figure 4
West Pine Street Improvements Project Alignment



TIERRA
ENVIRONMENTAL SERVICES



Source: City of Bishop

Figure 5
City of Bishop Zoning Map





Intersection of West Pine Street and North Warren Street, Looking East



Intersection of West Pine Street and North Warren Street, Looking West

Figure 6a. Site Photos - Existing West Pine Street Conditions



TIERRA
ENVIRONMENTAL SERVICES

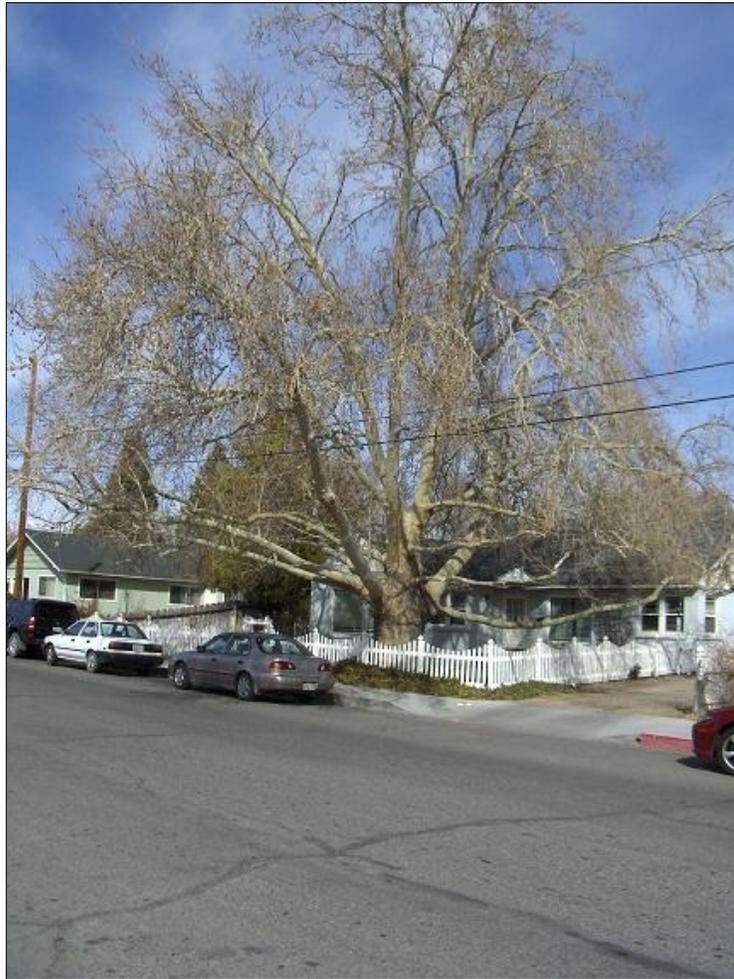


Intersection of West Pine Street and Schley Street, Looking East



Intersection of West Pine Street and Hammond Street, Looking East

Figure 6b. Site Photos - Existing West Pine Street Conditions



West Pine Street

Figure 6c. Site Photo - Existing West Pine Street Conditions



TIERRA
ENVIRONMENTAL SERVICES

Environmental Factors That Could Result in a Potentially Significant Impact		
The environmental factors listed below are not checked because the proposed project would not result in a “potentially significant impact” as indicated by the preceding checklist and supported by substantial evidence provided in this document.		
<input checked="" type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture Resources	<input type="checkbox"/> Air Quality
<input checked="" type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Cultural Resources	<input type="checkbox"/> Geology/Soils
<input type="checkbox"/> Hazards & Hazardous Materials	<input type="checkbox"/> Hydrology/Water Quality	<input type="checkbox"/> Land Use/Planning
<input type="checkbox"/> Mineral Resources	<input type="checkbox"/> Noise	<input type="checkbox"/> Population/Housing
<input type="checkbox"/> Public Services	<input type="checkbox"/> Recreation	<input type="checkbox"/> Transportation/Traffic
<input type="checkbox"/> Utilities/Services Systems	<input type="checkbox"/> Mandatory Findings of Significance	

Environmental Determination

On the basis of this initial evaluation:

- I find that the proposed project could not have a significant effect on the environment, and a **Negative Declaration** will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **Mitigated Negative Declaration** will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an **Environmental Impact Report** is required.
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measure based on the earlier analysis as described on attached sheets. An **Environmental Impact Report (EIR)** is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** or **Negative Declaration** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **Negative Declaration**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signed: 
 Brooke E. Peterson, ICP
 Principal Planner
 TIERRA Environmental Services

Date: February 10, 2009

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a. Earlier Analysis Used. Identify and state where they are available for review.
 - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a. The significance criteria or threshold, if any, used to evaluate each question; and
 - b. The mitigation measure identified, if any, to reduce the impact to less than significance.

SECTION 2 ENVIRONMENTAL CHECKLIST/INITIAL STUDY

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1. Aesthetics				
<i>Would the project:</i>				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Agriculture Resources				
<i>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.</i>				
<i>Would the project:</i>				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Air Quality				
<i>Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.</i>				
<i>Would the project:</i>				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Biological Resources <i>Would the project:</i>				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Cultural Resources <i>Would the project:</i>				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Geology and Soils				
<i>Would the project:</i>				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Hazards and Hazardous Materials				
<i>Would the project:</i>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located within one-quarter mile of a facility that might reasonably be anticipated to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Be located on a site of a current or former hazardous waste disposal site or solid waste disposal site unless wastes have been removed from the former disposal site; or 2) that could release a hazardous substance as identified by the State Department of Health Services in a current list adopted pursuant to Section 25356 for removal or remedial action pursuant to Chapter 6.8 of Division 20 of the Health and Safety Code?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be located on land that is, or can be made, sufficiently free of hazardous materials so as to be suitable for development and use as a school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
8. Hydrology and Water Quality				
<i>Would the project:</i>				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. Land Use and Planning				
<i>Would the project:</i>				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Mineral Resources <i>Would the project:</i>				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. Noise <i>Would the project result in:</i>				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. Population and Housing <i>Would the project:</i>				

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. Public Services				
<i>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</i>				
a) Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14. Recreation				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15. Transportation/Traffic				
<i>Would the project:</i>				
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16. Utilities and Service Systems				
<i>Would the project:</i>				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17. Mandatory Findings of Significance				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SECTION 3

DISCUSSION OF ENVIRONMENTAL EVALUATION

3.1 AESTHETICS

West Pine Street is lined with older homes, Bishop High School, and a few commercial buildings. Several large trees are located within or immediately adjacent to the street right-of-way. These trees provide extensive shade in some areas. Some of these trees however, have also caused extensive damage to sidewalks, curbs, gutters, and street paving. Further, some trees cause significant damage to sewer infrastructure and are not appropriate for planting in proximity to the street or utility infrastructure. The proposed project would require the removal of up to seven mature trees along West Pine Street. The loss of these trees would be considered to represent a negative aesthetic impact.

Sidewalk construction would conform to City of Bishop (City) standards for residential streets in some areas and would include a five-foot wide planter strip between the curb and sidewalk in front of residential properties and a 10-foot wide sidewalk with no planter strip in front of commercial properties. Irrigation would be installed in constructed planter strips. The planter strips may be landscaped by the adjacent property owners and this landscaping may include trees selected from the City's list of approved trees. In some areas, where practical and desirable to adjacent residents and property owners, "bulb-outs" would be constructed that increase the planter space up to 13 feet. These bulb-out locations could provide adequate space for planting larger replacement trees. In areas where sidewalk construction would not conform to City standards, design would include a five-foot wide planter strip between the curb and sidewalk in front of residential properties and an eight-foot wide sidewalk with no planter strip in front of commercial properties.

Almost all project construction would be within the City's right-of-way. The construction would impact few adjacent properties. The construction of new sidewalks, curbs, and gutters, combined with the repaving of West Pine Street, is expected to improve the aesthetics of the street and neighborhood. Further, a large portion of the proposed street improvements will occur in the right-of-way adjacent to Bishop High School and will notably improve aesthetics along the school street front and safety in a high pedestrian and bicyclist flow area. Therefore, with mitigation included for the loss of mature street trees, the impacts to aesthetics as a result of the proposed West Pine Improvements Project would be less than significant.

Mitigation Measure

The following mitigation measure would reduce potential impacts however to aesthetic resources to below a level of significance:

Aes M-1. Three replacement trees will be provided to property owners for each tree removed. Replacement trees should be planted in conformance with the City of Bishop's approved Street Tree list current at time of construction.

3.2 AGRICULTURAL RESOURCES

The project proposes the improvement of pavement, curbs, gutters, and sidewalks within an existing public right-of-way within the City of Bishop. There are no agricultural lands or land uses within or adjacent to the project site, there is no Prime Farmland, and there is no land under a Williamson Act contract. Therefore, impacts to agricultural resources as a result of the West Pine Street Improvements Project would be less than significant.

3.3 AIR QUALITY

Air Quality within the City of Bishop and surrounding Inyo County is monitored and regulated by the Great Basin Unified Air Pollution Control District. Inyo County is listed as attainment (i.e., within allowable limits) for the following criteria pollutants: ozone; carbon monoxide; nitrogen dioxide; sulfur dioxide; sulfates; hydrogen sulfide; and vinyl chloride. Inyo County is listed as non-attainment for the state standard for PM-10 air emissions, which include chemical emissions and other inhalable particulate matter with an aerodynamic diameter of less than 10 microns.

The proposed project would not generate long-term traffic or result in long-term impacts to air quality. Air quality impacts resulting from the proposed project would be limited to temporary emissions from construction equipment used to construct the proposed street improvements. The air quality impacts associated with the West Pine Street improvements would occur for a period of approximately two months. The short duration of the proposed construction, combined with existing regulations regarding motor vehicle fuels and emissions, would result in potential air quality impacts being well within what is expected from construction projects within the air basin and well below any state or federal significance criteria.

The proposed project does not include the use of any materials or construction techniques that would result in odors that would be objectionable to the general public.

PM-10 emissions during construction would be controlled through the implementation of Best Management Practices (BMPs) to limit PM-10 emission such as regular use of a water truck to keep potential dust-producing surfaces damp.

In the short term, removal of mature trees would decrease the amount of carbon dioxide absorbed and the amount of oxygen released by trees along West Pine Street. This may be partially offset by

increased pedestrian and bicycle traffic along the street following construction. Further, three replacement trees would be provided for every tree removed. The absorption of carbon dioxide and production of oxygen by these trees would increase over time. Therefore, impacts to air quality as a result of the West Pine Street Improvements Project would be less than significant.

3.4 BIOLOGICAL RESOURCES

The project area would occur within West Pine Street right-of-way and a short distance within the rights-of-way on cross streets. This includes an existing paved street and adjacent sidewalks or disturbed vegetation. Biological resources within the proposed project area are limited to street trees and lawn areas used for landscaping. No critical habitat or special status species, sensitive species, or species of special concern have been identified along West Pine Street. Nesting birds protected by the Migratory Bird Treaty Act may nest in trees that are to be cut down. It is possible that the tree removal associated with the street improvements may result in impacts to nesting birds. This would be considered a significant impact and mitigation would be required.

Two special status wildlife species have a low potential for occurring in the project area. These species are the silver-haired bat (no state or federal listing) and the spotted bat, a California Department of Fish and Game (CDFG) species of concern. Both bat species are designated as medium priority species by the Western Bat Working Group (WBWG 2005), which specifies that closer evaluation, research, and conservation actions of both the species and possible threats in warranted (WBWG 2005). These species could be located in trees and up to seven mature trees would be removed as a result of the proposed project. Removal of the trees could have a significant impact on individual bats if bats are found roosting in the trees. However, West Pine Street is not ideal habitat for these bats, therefore removal of non-native trees is not anticipated to have a significant impact on bat habitat. However, mitigation would be required to ensure impacts to sensitive bat species as a result of the proposed project are below a level of significance.

The City of Bishop General Plan Area does not include habitat, natural community, or other conservation plans. Therefore, no conflicts could occur.

Therefore, with mitigation included for potential impacts to nesting birds and sensitive bat species, impacts to biological resources as a result of the West Pine Street Improvements Project would be less than significant.

Mitigation Measures

The following mitigation measures would reduce potential impacts however to biological resources to below a level of significance:

Bio M-1. All tree removal would be conducted prior to March 1 or after September 15 (outside the bird-breeding and bat-roosting season) to avoid potential impacts to nesting birds and roosting bats; **OR**

Bio M-2. A pre-construction survey (within seven days of tree removal) shall be conducted by a qualified biologist to determine the presence or absence of active bird nests within or adjacent to the project site. The purpose of the survey is to avoid impacts to nesting birds. If no breeding or nesting activities of birds protected by the Migratory Bird Treaty Act within 200 feet of the proposed work area is found, tree removal may proceed during the nesting season (March 15-September 30). A biological monitor shall conduct a survey for species/nesting birds of the site and vicinity on a weekly basis to ensure that specimens do not appear onsite during tree removal and that all activities are restricted to the authorized project impact area. If breeding or nesting activity is confirmed, work within 200 feet of the active nest shall be delayed until the young birds have fledged and left the nest.

Bio M-3. A pre-construction survey (within 30 days of tree removal) shall be conducted by a qualified biologist to determine the presence or absence of roosting sensitive bat species within or adjacent to the project site. The purpose of the survey is to avoid impacts to sensitive bat species. If no roosting activities of sensitive bat species within the proposed work area are found, tree removal may proceed during the roosting period (June 1 – July 31). If roosting activity is confirmed, trees shall not be removed during the roosting period.

3.5 CULTURAL RESOURCES

The project area would occur within West Pine Street right-of-way and a short distance within the rights-of-way on cross streets. A TIERRA archaeologist inspected the West Pine Street right-of-way and determined that no intact cultural resources are likely to be present or have been previously recorded. All excavation would occur in previously disturbed areas. However, since the time when previous excavation of the area last occurred is unknown, there is a remote potential to unearth undiscovered cultural resources. Implementation of mitigation would reduce potential impacts to cultural resources to a level below significance.

There are several older homes and aging sidewalks located along the West Pine Street right-of-way. Some structures or sidewalk materials may qualify as historic resources. All excavation would occur in previously disturbed areas. It is possible however, that the required grading and excavation may result in disturbance of historic resources. This would be considered a significant impact and mitigation would be required.

However, with mitigation included, impacts to cultural resources as a result of the West Pine Street Improvements Project would be less than significant.

Mitigation Measures

The following mitigation measure would reduce potential impacts however to cultural resources to below a level of significance:

Cultural M-1. If cultural resources are encountered during excavation or site preparation, such work shall be halted immediately in the area of discovery and the construction manager shall immediately notify the City of Bishop Public Works Director of the discovery. The City shall be required to retain the services of a qualified archaeologist for the purpose of evaluating, recording, protecting, or curating the discovery as appropriate. The archaeologist shall prepare a Cultural Resources Management Plan that outlines the findings and mitigation methods of curation and/or protection of the resources in accordance with the state and federal regulations.

Cultural M-2. A pre-construction survey of the project area and vicinity shall be conducted by a qualified archaeologist to determine the presence of historic resources within or adjacent to the project site. The purpose of the survey is to avoid impacts to historic resources. If historic resources are found within the proposed work area, a resource preservation program to mitigate impacts shall be prepared by the archaeologist and approved by the City, then carried out using professional historian methods.

3.6 GEOLOGY AND SOILS

A Natural Resources Conservation Service (NRCS) soil survey for soils within the West Pine Street right-of-way indicates that soils consist of Dehy loam, 0 to 2 percent slopes. These soils are not considered to be expansive and are suitable for the subgrade of roadways and the installation of utility pipelines (*Appendix A*).

The proposed project would require grading of the native soils and the placement of base materials beneath the sidewalks. There are no geologic hazards or conditions that would prevent the safe installation or maintenance of the proposed street and sidewalk improvements.

The Bishop area is located in Seismic Zone 4. West Pine Street is not located within an Alquist-Priolo Special Studies Zone. No special measures are required to address potential seismic activity in

the area during construction. Therefore, impacts to geology and soils as a result of the West Pine Street Improvements Project would be less than significant.

3.7 HAZARDS AND HAZARDOUS MATERIALS

The construction and use of the West Pine Street improvements would not pose any significant hazard to the public or the environment. In fact, a long-term benefit of the project is to provide improved sidewalks, pavement, and drainage facilities along West Pine Street. Construction of the project would involve the short-term use of hazardous materials such as diesel fuel, coolant, hydraulic fluid, and grease for the construction equipment. These materials and hazards, however, are not substantially different from the existing conditions. Refueling and equipment maintenance would be conducted off-site or within a contained area so as to avoid soil contamination on the project site. No long-term use of hazardous materials is foreseeable as a result of the project.

The project also involves work along Main Street/ Highway 395, which is a major regional arterial with high traffic flow. The soils along Highway 395 have the potential to be contaminated with petroleum hydrocarbons so there is a very low risk of contaminated soils at the intersection of Highway 395/Main Street and West Pine Street. Exposure to contaminated soils could pose a hazard to children, pedestrians, and workers. Further, soils within the commercial area of West Pine Street would also be tested for contaminants. If the soils are found to be contaminated, removed soils would be contained and disposed of at a proper facility that accepts hydrocarbon and lead wastes such as Bishop-Sunland Landfill.

A site inspection of the West Pine Street right-of-way and review of adjacent land uses did not identify any potential sources of hazards or hazardous materials, with the exception of an auto repair business at Warren Street. There was no evidence of the improper use, storage, or disposal of hazardous materials within the West Pine Street right-of-way at this location. Therefore, impacts to hazards or hazardous materials as a result of the West Pine Street Improvements Project would be less than significant.

3.8 HYDROLOGY AND WATER QUALITY

The project site is nearly level and the potential for erosion is low. In fact, “ponding” of water on West Pine Street is the greatest water-related issue within the West Pine Street right-of-way. The proposed project would create a very small increase in storm water run-off into the existing storm drain system and would improve drainage from the street and sidewalks.

The project includes the installation of water/oil separators in the storm drains at Fowler Street which would help improve the quality of water reaching Bishop Canal. Further, the selected contractor would employ BMPs for the containment of construction related materials.

The proposed project area is not within a 100-year flood area (FEMA 2008) and does not include the construction of any structures. The project would therefore place housing or structures within a 100-year flood zone.

Therefore, impacts to hydrology and water quality as a result of the West Pine Street Improvements Project would be less than significant. In fact, the proposed project would provide a notable increase in overall water quality.

3.9 LAND USE AND PLANNING

The entire West Pine Street right-of-way is owned by the City of Bishop. City street rights-of-way are not zoned. The General Plan land designations along West Pine Street include: Medium High Residential (10-22 dwelling units (DU)/acre) west of North Fowler Street; Low Density Residential (2-5 DU/ac), High Density Residential (22.1-35 DU/acre), and General Commercial between Fowler Street and Hammond Street; and General Commercial between Hammond Street and Main Street (*Figure 5*). The City of Bishop High School is also located on the south side of West Pine Street between Home Street and Hobson Street. All proposed improvements are consistent with existing and proposed land uses in the area. Irrigation would be installed in the public right-of-way to provide for landscaping. Landscaping in the public right-of-way would be completed by the adjacent property owners and would be recommended to be implemented according to the City's Standards for Landscaping Within the Rights of Way (*current at time of construction*). The improvements along Main Street/ Highway 395 would be completed in accordance with Caltrans's Construction manual, Section 4-73 to ensure quality of gutter and sidewalk installations, aesthetics, and conformity with existing elements. Therefore, impacts to land use or planning as a result of the West Pine Street Improvements Project would be less than significant.

3.10 MINERAL RESOURCES

There are no recoverable minerals present within the existing West Pine Street right-of-way. The project site is located within a residential and commercial area of a city where mineral extraction would not be appropriate. There are no known minerals of economic value within the West Pine Street right-of-way. In addition, the City would allow for the use of recycled pavement in the structural portion of the project and would thereby decrease the need for extraction of off-site mineral resources. Therefore, impacts to mineral resources as a result of the West Pine Street Improvements Project would be less than significant.

3.11 NOISE

The City of Bishop Municipal Code defines noise as “load, unnecessary, or unusual.” The proposed project would result in temporary noise associated with the demolition of existing pavement and sidewalks and the grading and paving of the street, and construction of new sidewalks, curbs, gutters, and water and sewer lines. However, the construction noise would be variable, temporary, and short-term in nature (approximately 45 days) and construction would be limited to 7:00 a.m. – 7:00 p.m. and the noise would not be excessive. Therefore, impacts to noise as a result of the West Pine Street Improvements Project would be less than significant.

3.12 POPULATION AND HOUSING

The proposed project would improve existing pavement, curbs, gutters, and sidewalks within the West Pine Street right-of-way. No existing housing would be lost and no new housing would be constructed as a direct or indirect effect of the proposed project. There would also not be a division of an established community. Therefore, impacts on the population of Bishop or the housing opportunities within the City of Bishop as a result of the West Pine Street Improvements Project would be less than significant.

3.13 PUBLIC SERVICES

The proposed project would improve the City of Bishop’s street system and, with the exception of the removal and disposal of construction debris, would not require any other public services. Solid waste including demolition materials and construction debris would be transported to Bishop-Sunland Landfill (Landfill). The Landfill does have capacity to accept the additional waste but deposit loads would need to comply with the Landfill’s daily tonnage limit. The City would allow for the use of recycled pavement the structural sections of the project however, which would reduce the amount of disposal materials deposited at the landfill. Therefore, impacts to public services as a result of the West Pine Street Improvements Project would be less than significant.

3.14 RECREATION

Recreation areas or facilities located along West Pine Street include the athletic facilities for Bishop High School and the existing substandard and incomplete sidewalks that may be used for walking and jogging. The proposed project would improve the sidewalks and would allow for improved access by all citizens, particularly disabled persons. Therefore, the proposed project would improve the opportunities for recreation and impacts to recreation as a result of the West Pine Street Improvements Project would be less than significant.

3.15 TRANSPORTATION/TRAFFIC

Road Closures/Access

Construction of the project would require road segment closures which would result in short-term impacts to traffic flow on West Pine Street during construction. Access to driveways would be limited and through-traffic detours would be necessary. Closures would be short term and would occur in one-block segments and/or short segments of cross streets to minimize impacts. A traffic control plan would be implemented however, that would include roadway and sidewalk detour signage for residences and businesses. Further, project construction is anticipated to occur during the summer months while school is not in session. This will minimize potential impacts to vehicular, bicycle, and pedestrian traffic.

Parking

There would be a short-term loss of on street parking during construction of the proposed project for adjacent residences and businesses, including the AAA office at 187 West Pine Street. However, West Pine Street and associated cross streets are residential streets with low traffic volume except for peak periods of morning and afternoon traffic associated with Bishop High School. Project construction is anticipated to occur during the summer months when school is not in session in order to avoid potential impacts associated with road and sidewalk closures and reduced on-street parking.

A traffic control plan would be implemented to identify parking areas for affected residents and business in close proximity to their destination and detour signage that would safely direct pedestrian, bicycle, and motor vehicle traffic around the construction site. The traffic control plan would ensure that peak hour traffic, freight deliveries, and other needed access would continue to occur during construction. Therefore, with the anticipated construction schedule and implementation of the traffic control plan, impacts to transportation and traffic as a result of the West Pine Street Improvements Project would be less than significant. The proposed project would enhance the City's transportation system, including pedestrian and bicycle travel such that the long-term impact to transportation and traffic would be positive.

3.16 UTILITIES AND SERVICE SYSTEMS

The proposed West Pine Street Improvements Project includes improvements to existing water, sewer, and drainage facilities within the West Pine Street right-of-way and the rights-of-way a short distance along intersecting streets. In addition, the relocation of some overhead and underground private utilities such as power, phone, and cable is anticipated. The relocation of utilities is to improve existing operations and accessibility for future maintenance and to provide for access ramps required for ADA compliance.

The project includes installation of irrigation system connectors for private property owners who would maintain the turf and trees planted in the landscape strips. Water supplies to individual homes

are adequate to support the small amount of additional irrigation associated wither water demand for the landscape strips.

Short-term outages of phone, power, cable, water, and sewer are anticipated. The city would coordinate with service providers and all residents would be notified at least 30 days in advance of the planned outage times in order to limit the potential impacts to residents and/or businesses. The anticipated outages would be temporary and less than significant and would not include a hospital. Therefore, impacts to utilities and service systems as a result of the West Pine Street Improvements Project would be less than significant.

3.17 MANDATORY FINDINGS OF SIGNIFICANCE

Project impacts would be mostly short-term and minor. Temporary impacts would be limited to aesthetics related to removal of trees, and air quality, noise, and traffic related to project construction. The proposed project would not result in any potential permanent impacts. The proposed project would not cause any potential impacts to the environment that could result in a mandatory finding of significance.

3.18 PROJECT ALTERNATIVES – 187 WEST PINE STREET

Parking at 187 West Pine Street is currently positioned perpendicular to the street, partially within the right-of-way. Motor vehicles either block access to pedestrian traffic when parked or create a safety hazard during ingress and egress. The two alternatives for improvements along 187 West Pine Street are as follows:

Easement Alternative

Under the *Easement Alternative*, the owner of 187 West Pine Street would dedicate an easement to the City to allow construction on the property. An easement to the City would allow for a modified sidewalk design that would follow around the parking area, adjacent to the existing structure, and then back to the right-of-way, thereby improving pedestrian safety. Parking would be positioned diagonal to the street. This is the preferred project alternative as it maximizes the number of parking spaces available to the business located at 187 West Pine Street while improving pedestrian access and safety.

No Easement Alternative

Under the *No Easement Alternative*, an easement would not be granted to the City by the owner of 187 West Pine Street. The sidewalk and planter strip would then be constructed contiguous to West Pine Street rather than adjacent to the property's structure and parking would be eliminated as a result of the proposed project. Though approximately eight parking spaces would be eliminated as a result

of the *No Easement Alternative*, parallel parking along West Pine Street would provide some replacement parking and there would be remaining existing spaces on the property such that the impact to parking would be less than significant.

SECTION 4 REFERENCES

Bishop, City of

2007 Website –

<http://www.ca-bishop.us/PublicWorks/CityofBishopPublicWorks.htm>

1993 General Plan for the City of Bishop. [http://www.ca-](http://www.ca-bishop.us/PublicWorks/Planning/GeneralPlan/CoverthroughIntroduction.pdf)

[bishop.us/PublicWorks/Planning/GeneralPlan/CoverthroughIntroduction.pdf](http://www.ca-bishop.us/PublicWorks/Planning/GeneralPlan/CoverthroughIntroduction.pdf). Accessed July 2008 and January 2009.

1993 City of Bishop Standards for Landscaping Within the Public Rights of Way

2006 Zoning Map, November 30

Grah, David.

Personal communications with Brooke Peterson of Tierra Environmental Services. February 2, 2009.

MACTEC Engineering and Consulting, Inc.

2006 MacIver Street Improvement Project Initial Study. December.

Natural Resources Conservation Service (NRCS)

2008 <http://websoilsurvey.nrcs.usda.gov>

Nolte Engineering

2007 West Pine Street Improvements Geotechnical Report

2008 30% Draft Plan and Profile Drawings – City of Bishop Street Improvement Plans, West Pine Street.

Sierra Geotechnical Services Inc.

2008 Pavement Design and Earthwork and Grading Recommendations, West Pine Street

USGS

Bishop Topographic Map

**APPENDIX A - PAVEMENT DESIGN AND EARTHWORK AND GRADING
RECOMMENDATIONS**

SIERRA GEOTECHNICAL SERVICES INC.
SGSI

June 30, 2008

Project No. 3.30861

Nolte Associates, Inc.
15070 Avenue of Science, Suite 100
San Diego, CA 92128-3412

Attention: Mr. Scott Vinton

Subject: **PAVEMENT DESIGN AND EARTHWORK AND GRADING
RECOMMENDATIONS**
Bishop Roadway Projects – WEST PINE SDB0446WP-07-SIER
Inyo County, California

Dear Mr. Vinton:

In accordance with our Proposal for Geotechnical Services dated September 24, 2007, we herein submit pavement design and earthwork and grading recommendations for the proposed West Pine Street improvement project (Figure 1).

The pavement sections and recommendations are provided based upon the results of a subsurface field investigation and laboratory testing which included: field mapping, excavation and logging of six exploratory test pits excavated within the alignment of the existing road, in-place moisture and density testing, and laboratory testing of representative soil samples obtained during the field investigation.

Reconstruction of the proposed roadway is feasible from a geotechnical standpoint. No geologic hazards were observed. A DG fill with variable thickness of 5½" to 15" and a R-value of 82.5 was encountered throughout the road section. We recommend removing and replacing only up to 5" of this material with Class II Base. Groundwater seepage was not encountered however groundwater is known to be very shallow in the Bishop area and a moisture increase relative to the other test pits was noted in test pit TP-6 @ 8½". Recommendations for groundwater seepage mitigation are included in this report.

Detailed plans for construction and grading are currently not available. SGSI should review grading and plans prior to construction in order to assure that they are in conformance with this report; some of the geotechnical recommendations contained herein may need to be revised after reviewing.

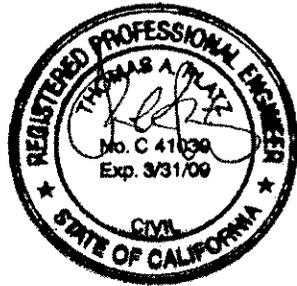
The conclusions and recommendations presented herein are considered site specific and should not be extrapolated to other areas or used for other projects

We appreciate the opportunity to be of service to you. Should you have any questions regarding this report, please do not hesitate to contact us.

Respectfully,

SIERRA GEOTECHNICAL SERVICES, INC.

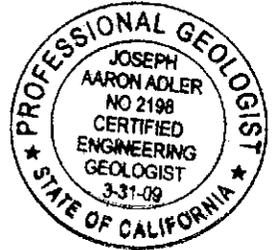
Thomas A. Platz
President
PE C41039



(2) Addressee

A handwritten signature in black ink, appearing to read "Joseph A. Adler".

Joseph A. Adler
Principal Geologist
CEG 2198



Detailed plans for construction and grading are currently not available. SGSI should review grading and plans prior to construction in order to assure that they are in conformance with this report; some of the geotechnical recommendations contained herein may need to be revised after reviewing.

The conclusions and recommendations presented herein are considered site specific and should not be extrapolated to other areas or used for other projects

We appreciate the opportunity to be of service to you. Should you have any questions regarding this report, please do not hesitate to contact us.

Respectfully,

SIERRA GEOTECHNICAL SERVICES, INC.

Thomas A. Platz
President
PE C41039

Joseph A. Adler
Principal Geologist
CEG 2198

(2) Addressee

PURPOSE AND SCOPE

The scope of this investigation included a review of stereoscopic aerial photographs, readily available published and unpublished geologic literature, a subsurface field investigation, laboratory testing of representative soil samples obtained during our field investigation, geologic and geotechnical evaluation and analysis of the collected field and laboratory data, and preparation of this report presenting the results of our findings, conclusions, geotechnical recommendations and construction considerations for the proposed project.

The field investigation was performed on April 17th, 2008, and included the excavation of six test pits within the proposed construction areas. A geologist from our office logged the excavations as they were advanced. In-place densities and bulk samples of the soils encountered were obtained during the field investigation. Approximate locations of the exploratory test pits are shown on the Subsurface Location Plan (Figures 2A and 2B). Details of the laboratory testing are presented in Appendix B.

PROPOSED DEVELOPMENT

It is our understanding that the proposed improvements will include the replacement of the existing pavement, replacement of curb and gutter, replacement of non ADA compliant sidewalks, construction of concrete cross gutters, intersection improvement, and possible storm drainage water treatment.

Grading will likely include minor cuts and fills as well as shallow removals of unsuitable soils. As previously noted, this project is in the design process and detailed plans for construction are currently not available. SGSI should review grading plans prior to construction in order to assure that they will be in conformance with our recommendations.

AERIAL PHOTOGRAPHIC REVIEW

Prior to our field investigation, we reviewed aerial photographs to assist in our evaluation of geomorphic features that could be indicative of geologic hazards within the site area. Details from the earliest available photographs did not show any evidence of lineations, scarps, or other ground-surface fault, or landslide related features.



CITY LIMITS BOUNDARY

WYE ROAD

TRI-COUNTY
FAIR GROUNDS

CALTRANS
COMPOUND

MAPLE AVENUE
SYCAMORE DRIVE

MAG LIVER ST

SIERRA

STREET

EAST YANEY STREET

WHITE MTN.
U.S.F.S.
COMPOUND

CANEL

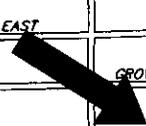
WEST YANEY STREET

FORK BISHOP CK

ROME DRIVE

BISHOP CITY PARK

SITE



KEOUGH STREET

EAST ELM STREET

EAST ELM STREET

GROVE ST

AVENUE

WEST GROVE ST

GENERAL STREET

HOME ST

HOWARD STREET

SO. H. ST

ROSE ST

CHURCH ST

HIGH ST

ACADEMY ST

WILLOW STREET

EDWARD STREET

STREET

IRIS STREET

SHORT STREET

EDWARD STREET

CLARKE STREET

EDWARD STREET

SHORT STREET

PROJECT:		REGIONAL MAP	
		WEST PINE STREET	
SCALE:	N.T.S	DATE:	6/2008
DRAWING:		DRAWN BY:	JAA
JOB NO.:	3.30861	FIGURE:	FIGURE 1

Sierra Geotechnical Services



SUBSURFACE CONDITIONS

As observed during our investigation two general soil types underlie the site consisting of fill - decomposed granitic soil (DG), and Alluvium. Logs of the subsurface conditions encountered in exploratory test pits are provided in Appendix A. Generalized descriptions of the materials encountered during this investigation follow.

Fill (Decomposed Granitic Soil - DG)

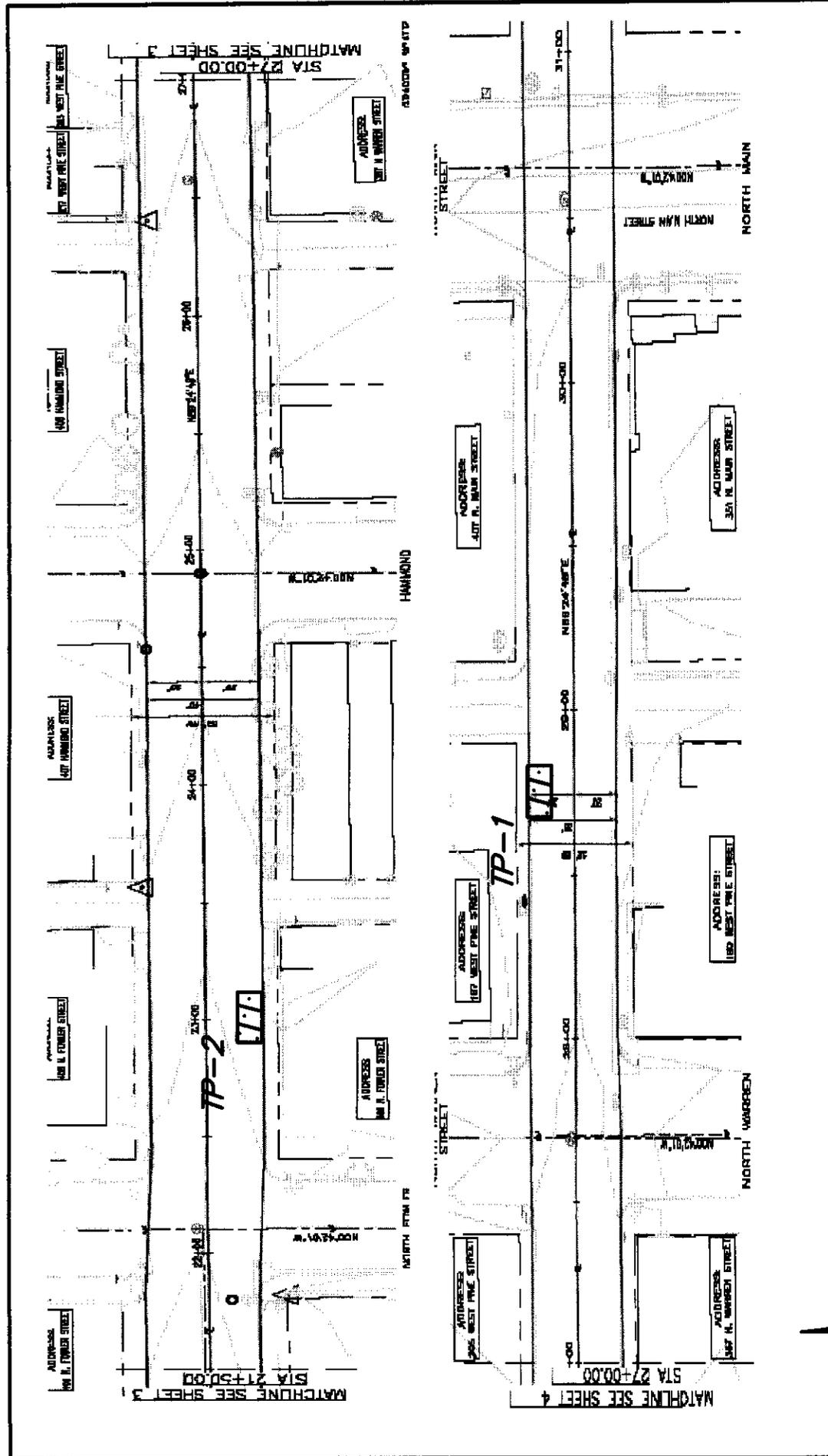
Fill soils were encountered in all test pits to an approximate maximum depth of 22" below existing grade. In general, the fill consisted of a reddish-brown, moist, dense, silty, fine to coarse SAND (Unified Soil Classification Symbol: SP-SM). The majority of this material should be left in place, and only the upper 5" removed and replaced with Class II Base (for drainage). The DG has an excellent resistance value and is suitable for use as subgrade below the base provided it is "conditioned" in accordance with the earthwork recommendations contained herein.

Alluvium

Alluvial deposits were encountered within all the test pits below the DG. Where encountered the alluvium generally consisted of a dark brown to black, medium-dense, moist, silty to clayey, very fine to medium grained SAND (SM and SC-SM). The total thickness of the alluvium was not determined during this investigation.

Groundwater

Groundwater seepage was not encountered during this field investigation. However, an increase of moisture was observed in TP-6 at approximately 8½" below grade. The depths to groundwater reflect site conditions at the time of this investigation. Groundwater conditions often fluctuate seasonally, and the depths recorded may not necessarily be reflective of groundwater elevations during construction. If groundwater and/or saturated soils are encountered during site grading, excavations within the removal areas will need to be stabilized prior to fill placement. Once removals are complete clean crushed aggregate or cobble should be placed within the excavation to at least 6-inches above the high water line. The aggregate areas should then be covered by a filter fabric (Mirafi 140 or equivalent), prior to soil fill placement.



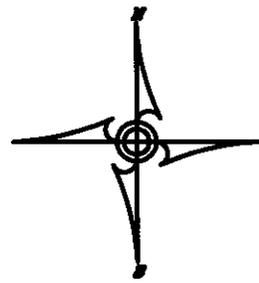
PROJECT: SUBSURFACE LOCATION MAP BISHOP PAUTE ROADS	
DATE: 6/2008	DRAWN BY: JAA
21+50 TO 31+00	DRAWING: FIG2DWG
JOB NO: 3.30861	FIGURE: FIGURE 2A

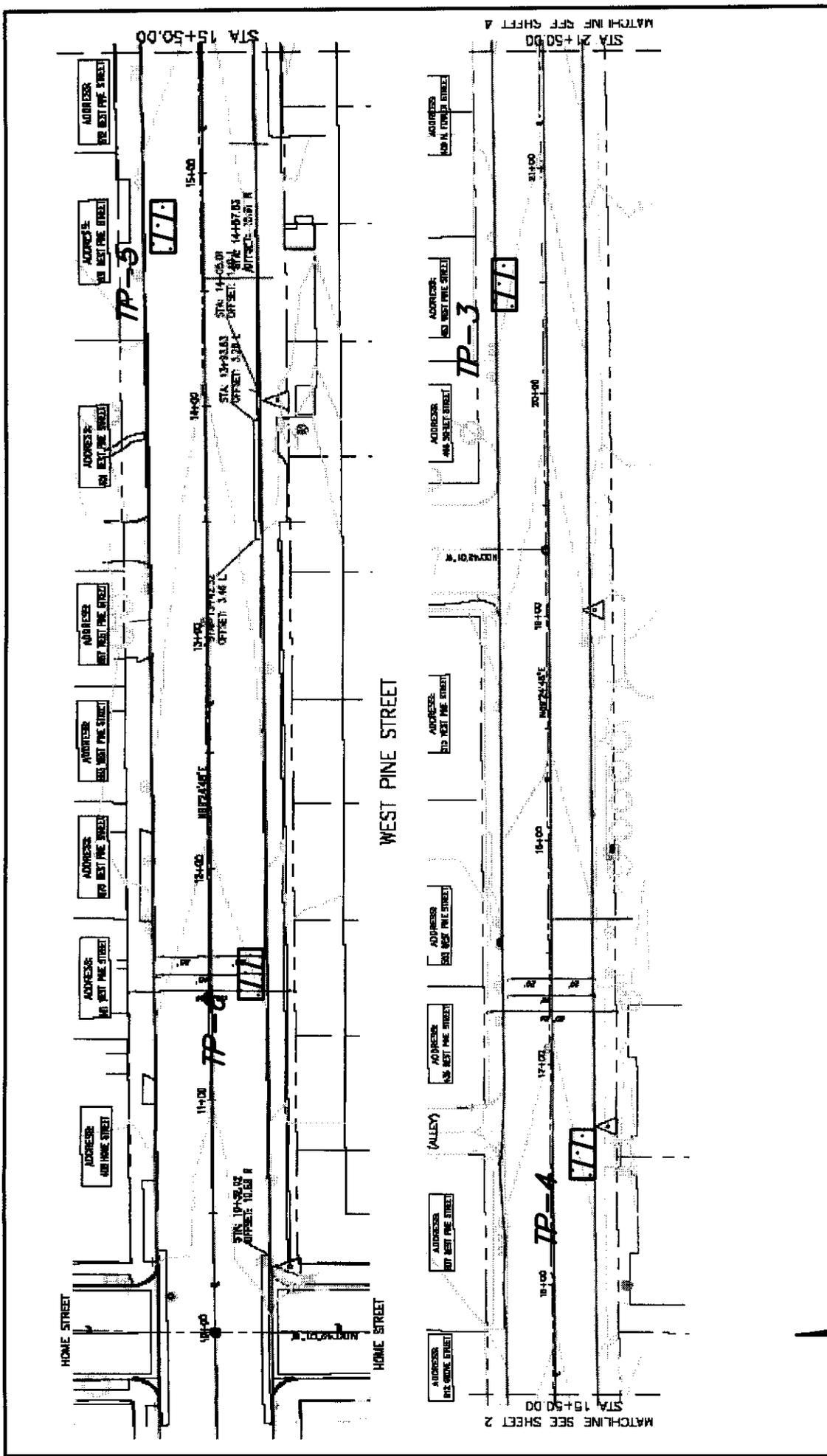
LEGEND

TP-1 TO TP-2



APPROXIMATE LOCATION OF EXPLORATORY TEST PIT





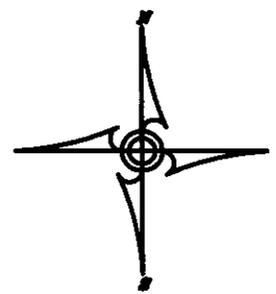
PROJECT: SUBSURFACE LOCATION MAP WEST PINE STREET	
10+00 TO 21+50	DATE: 6/2008
FIG2DWG	DRAWN BY: JAA
3.30861	FIGURE: FIGURE 2B

LEGEND

TP-3 to TP-6



APPROXIMATE LOCATION OF
EXPLORATORY TEST PIT



CONCLUSIONS

Reconstruction of the proposed road is feasible from a geotechnical standpoint, provided the following conclusions and recommendations contained herein are accounted for and incorporated into the new design and construction.

- Evidence of past soil failures, or active faulting on the site was not encountered.
- Site soils encountered during our field investigation generally consist of sands, with silts and minor clays.
- Groundwater was not encountered during our investigation, however an increase of moisture content was observed in TP-6 versus other test pits. Groundwater conditions often fluctuate seasonally, and the depths recorded may not necessarily be reflective of groundwater elevations during construction.
- Considering the R-values of the DG and Alluvium up to only 5" of DG (depending on TI) should be removed and replaced with Class II Base. Grading and earthwork recommendations are provided herein.
- Excavations will be achievable using standard earthmoving equipment.

PRELIMINARY PAVEMENT RECOMMENDATIONS

Pavement sections were determined using the Caltrans method for design of flexible pavements. Traffic Indices utilized in this method of design are based on estimated equivalent axle loads over a period of 20 years.

AC Pavement Section Thickness

Traffic Index	Asphaltic-Concrete (AC) Thickness (inches)	Class II AB (R=78) Thickness (inches)
5	3	4
7	4	4
8	5	5

Class II aggregate base should conform to Section 26 of the State of California, Department of Transportation, Standard Specifications. Concrete cross gutters or other traffic areas should be reinforced at a minimum with 6x6-10/10 welded-wire mesh at slab mid-height. Asphalt Concrete, Portland Cement Concrete, and base materials should conform to, and be placed in accordance with the 2006 Edition of the "Greenbook", Standard Specifications for Public Works Construction.

The upper 12-inches of subgrade soils should be moisture conditioned and compacted to at least 95-percent relative compaction based on ASTM Test Method D1557 prior to placement of road base. The base layer should be compacted to at least 95-percent relative compaction as determined by ASTM Test Method D1557.

The pavement sections were designed for the assumed traffic loading and environmental conditions. Based upon our experience, environmental conditions such as freeze-thaw and thermal cracking will most likely govern the life of the pavement. Therefore, a 3-inch AC section is the minimum recommended.

We recommend that any sidewalks, curbs and/or gutters be designed by a civil engineer or structural engineer. For any proposed sidewalks, and curbs and gutters, a minimum 4-inch paving section of reinforced concrete (minimum 3,000 psi) may be used. Minimum reinforcement shall consist of welded-wire mesh. We suggest control joints, at appropriate intervals, as determined Inyo County Standards and the project civil or structural engineer, be considered.

If pavement areas are adjacent to heavily watered landscape areas, some deterioration of the subgrade load bearing capacity may result. We recommend some measures of moisture control (such as deepened curbs or other moisture barrier materials) be provided to prevent the subgrade soils from becoming saturated.

EARTHWORK AND GRADING SPECIFICATIONS EARTHWORK

Earthwork should be conducted in accordance with applicable grading ordinances, the current California Building Code, and the recommendations of this letter. The following recommendations are provided regarding specific aspects of the proposed earthwork construction. These recommendations should be considered subject to revision based on field conditions observed by the geotechnical consultant during construction.

Geotechnical Consultant of Record

Prior to commencement of work, the owner shall employ the Geotechnical Consultant of Record. The Geotechnical Consultant shall be responsible for reviewing the approved geotechnical report(s) and accepting the adequacy of the preliminary geotechnical findings, conclusions, and recommendations prior to the commencement of grading or construction.

During grading and earthwork operations, the Geotechnical Consultant shall observe, map, and document the subsurface exposures to verify the geotechnical design assumptions. If the observed conditions are found to be significantly different than the interpreted assumptions during the design phase, the Geotechnical Consultant shall inform the owner, recommend appropriate changes in design to accommodate the observed conditions, and notify the review agency where required. Subsurface areas to be geotechnically observed, mapped, elevations recorded, and/or tested include natural ground, after it has been cleared for receiving fill but before it has been placed, bottoms of all "remedial removal areas, all key bottoms, and benches made on sloping ground to receive fill.

The Geotechnical Consultant shall observe the moisture-conditioning and processing of the subgrade and fill materials and perform relative compaction testing of fill to determine the attained level of compaction. The Geotechnical Consultant shall provide the test results to the owner and the contractor on a routine and frequent basis.

The Earthwork Contractor

The Earthwork Contractor shall be solely responsible for performing the grading in accordance with the plans and specifications. The Earthwork Contractor shall review and accept the plans, geotechnical report(s) and these Specifications prior to the commencement of grading. The Earthwork Contractor shall have the sole responsibility to provide adequate equipment and methods to accomplish the earthwork in accordance with applicable grading codes and agency ordinances, these Specifications, and the recommendations in the approved geotechnical report(s) and grading plan(s). If, in the opinion of the Geotechnical Consultant unsatisfactory conditions, such as unstable soil, improper moisture condition, inadequate compaction, adverse weather, etc... are resulting in a quality of work less than required in these

Specifications, the Geotechnical Consultant shall reject the work and may recommend to the owner that construction be stopped until the conditions are rectified.

Site Preparation

General: Site preparation includes removal of deleterious materials, unsuitable materials, and existing improvements from areas where new improvements or new fills are planned. Deleterious materials, which include vegetation, trash, and debris, should be removed from the site and legally disposed of off-site. Unsuitable materials include loose or disturbed soils, undocumented fills, contaminated soils, or other unsuitable materials. The Geotechnical Consultant shall evaluate the extent of these removals depending on specific site conditions. Earth fill material shall not contain more than 1-percent of organic materials (by volume). No fill lift shall contain more than 5-percent of organic matter. Nesting of the organic materials shall not be allowed.

If potentially hazardous materials are encountered, the contractor shall stop work in the affected area, and a hazardous material specialist shall be informed immediately for proper evaluation and handling of these materials prior to continuing to work in that area.

As presently defined by the State of California, most refined petroleum products (gasoline, diesel fuel, motor oil, grease, coolant etc...) have chemical constituents that are considered to be hazardous waste. As such, the indiscriminate dumping or spillage of these fluids onto the ground may constitute a misdemeanor, punishable by fine and/or imprisonment and shall not be allowed.

Any existing subsurface utilities that are to be abandoned should be removed and the trenches backfilled and compacted. If necessary, abandoned pipelines may be filled with grout or slurry cement as recommended by, and under the observation of, the Geotechnical Consultant.

Excavation

Excavations, as well as over-excavation for remedial purposes, shall be evaluated by the Geotechnical Consultant during grading. Remedial removal depths included within this report are estimates only. **The actual extent of removal shall be determined by the Geotechnical Consultant based on the field evaluation of exposed conditions during grading.** Where fill-over-cut slopes are to be graded, the cut portion of the

slope shall be made, evaluated, and accepted by the Geotechnical Consultant prior to placement of materials for construction of the fill portion of the slope, unless otherwise recommended by the Geotechnical Consultant.

In addition to removals and overexcavations recommended in the approved geotechnical report(s) and the grading plan, soft, loose, dry, saturated, spongy, organic-rich, highly fractured, or otherwise unsuitable ground shall be overexcavated to competent ground as evaluated by the Geotechnical Consultant during grading.

All areas to receive fill, including removal and processed areas, key bottoms, and benches, shall be observed, mapped, elevations recorded, and/or tested prior to being accepted by the Geotechnical Consultant as suitable to receive fill. The Contractor shall obtain a written acceptance from the Geotechnical Consultant prior to fill placement. A licensed surveyor shall provide the survey control for determining elevations of processed areas, keys, and benches.

Fill Compaction and Compaction

All fill should be relatively free of organics, any oversized rock (greater than 6-inches in diameter) and any deleterious materials. Any import soils shall be tested for suitability in advance by the project Geotechnical Engineer. Earth fill material shall not contain more than 1-percent of organic materials (by volume). No fill lift shall contain more than 5-percent of organic matter. Nesting of the organic materials shall not be allowed.

After making the recommended removals and prior to fill placement, the exposed ground surface should be scarified to a depth of approximately 12-inches, moisture conditioned as necessary, and compacted to at least 95-percent of the maximum dry density obtained using ASTM 1557 as a guideline. The upper 12-inches of subgrade material along with the Class II Aggregate Base and the Asphaltic concrete shall also be compacted to a minimum of 95-percent of the materials maximum dry density.

All fill and backfill to be placed in association with the proposed construction should be accomplished at slightly over optimum moisture content using equipment that is capable of producing a uniformly compacted product throughout the entire fill lift. Fill materials at less than optimum moisture should have water added and the fill mixed to result in material that is uniformly above optimum moisture content. Fill materials that are too wet can be aerated by blading or other satisfactory methods until the moisture

content is as required. The wet soils may be mixed with drier materials in order to achieve an acceptable moisture content.

The fill and backfill should be placed in horizontal lifts at a thickness appropriate for equipment spreading, mixing, and compacting the material, but generally should not exceed eight inches in thickness. No fill soils shall be placed during unfavorable weather conditions. When work is interrupted by rains or snow, fill operations shall not be resumed until the field tests by the geotechnical engineer indicate that the moisture content and density of the fill are as previously specified.

Utility Trench Backfill

Exterior trenches, paralleling a footing and extending below a 1:1 plane projected from the outside bottom edge of the footing, shall be compacted to a minimum of 95-percent per ASTM 1557. All trenches in structural areas and under concrete flatwork shall be compacted to a minimum of 95-percent per ASTM 1557. All trenches in non-structural areas shall be compacted to a minimum of 85-percent per ASTM 1557.

All material used for backfill shall be approved by the Geotechnical Engineer prior to placement. All bedding and backfill of utility trenches shall be done in accordance with the applicable provisions of Standard Specifications of Public Works Construction. Bedding material shall have a Sand Equivalent greater than 30 ($SE > 30$). The bedding shall be placed to 1-foot over the top of the conduit and densified by jetting. Backfill shall be placed and densified to a minimum of 95-percent of maximum from 1-foot above the top of the conduit to the surface.

Lift thickness of backfill shall not exceed those allowed in the Standard Specifications of Public Works Construction unless the Contractor can demonstrate to the Geotechnical Consultant that the fill lift can be compacted to the minimum relative compaction by his alternative equipment and method.

Regulations of the governing agency may supersede the above, and all trench excavations should conform to all applicable safety codes. The Contractor shall follow all OSHA and Cal/OSHA requirements for safety of trench excavations.

Temporary Excavations

All excavations should comply with the requirements of the California Construction and General Industry Safety Orders and the Occupational Safety and Health Act and other public agencies having jurisdiction.

LIMITATIONS

This report has been prepared for the sole use and benefit of our client. The conclusions of this report pertain only to the site investigated. The intent of the report is to advise our client of the geologic and geotechnical recommendations relative to the future development of the proposed project. It should be understood that the consulting provided and the contents of this report are not perfect. Any errors or omissions noted by any party reviewing this report, and/or any other geotechnical aspects of the project, should be reported to this office in a timely fashion. The client is the only party intended by this office to directly receive this advice. Unauthorized use of or reliance on this report constitutes an agreement to defend and indemnify Sierra Geotechnical Services Incorporated from and against any liability, which may arise as a result of such use or reliance, regardless of any fault, negligence, or strict liability of Sierra Geotechnical Services Incorporated.

Conclusions and recommendations presented herein are based upon the evaluation of technical information gathered, experience, and professional judgment. Other consultants could arrive at different conclusions and recommendations. Final decisions on matters presented are the responsibility of the client and/or the governing agencies. No warranties in any respect are made as to the performance of the project.

The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings within this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

APPENDIX A

EXPLORATORY TEST PIT LOGS

A field investigation was performed on April 17th, 2008 that included the excavation of six exploratory test pits with a Case backhoe equipped with a 24-inch bucket, and hand labor. A geologist from our office logged the excavations as they were advanced. Logs of the exploratory test pits are presented herein. The approximate locations of the exploratory test pits are shown on the Subsurface Location Map (Figure 2).

In-place nuclear density tests and bulk samples of the soils encountered were obtained during the field investigation. Results of the in-place nuclear density tests are presented on the logs of the exploratory test pits. Details of the laboratory testing are presented in Appendix B.

TEST PIT LOGS

JOB NO: <u>3.30861</u>						PROJECT: <u>West Pine Street</u>
DATE: <u>4/17/2008</u>						LOGGED BY: <u>P. Stone</u>
LOC: <u>N. side of road STA 28+75</u>						
TEST PIT	DEPTH (FT)	USCS SYMBOL	SAMPLE DEPTH	PERCENT MOISTURE	DRY DENSITY (pcf)	DESCRIPTION
1	0 - 4½"					Asphalt 3" relatively recent overlay on top of older 1½" section.
	4½ - 15½"	SP-SM				Fill Reddish-brown, moist, medium dense, silty, fine to coarse SAND (DG).
	15½ - 18"	SC-SM	16"	8.7	121.0	Alluvium Black, moist, medium dense, silty to clayey, very fine to fine SAND.
----- Total depth = 18". No groundwater encountered. Backfilled 4/17/2008.						

JOB NO: <u>3.30861</u>						PROJECT: <u>West Pine Street</u>
DATE: <u>4/17/2008</u>						LOGGED BY: <u>P. Stone</u>
LOC: <u>S. side of road STA 23+00</u>						
TEST PIT	DEPTH (FT)	USCS SYMBOL	SAMPLE DEPTH	PERCENT MOISTURE	DRY DENSITY (pcf)	DESCRIPTION
2	0 - 5"					Asphalt 3" relatively recent overlay on top of older 2" section.
	5 - 20"	SP-SM				Fill Reddish-brown, damp, dense, silty, fine to coarse SAND (DG), with few gravels and cobbles.
	20 - 22"					Cobble layer, few fines.
	22 - 25"	SC-SM	22"	6.5	124.9	Alluvium Black, moist, medium dense, silty to clayey, very fine to fine SAND.
----- Total depth = 25". No groundwater encountered. Backfilled 4/17/2008.						

TEST PIT LOGS

JOB NO: <u>3.30861</u>		PROJECT: <u>West Pine Street</u>				
DATE: <u>4/17/2008</u>		LOGGED BY: <u>P. Stone</u>				
LOC: <u>N. side of road @ STA 20+50</u>						
TEST PIT	DEPTH (FT)	USCS SYMBOL	SAMPLE DEPTH	PERCENT MOISTURE	DRY DENSITY (pcf)	DESCRIPTION
3	0 - 5½"					Asphalt 2½" relatively recent overlay on top of older 3" section.
	5½ - 11½"	SM				Fill Reddish-brown, damp, dense, silty, fine to coarse SAND (DG).
	11½ - 17"	SM	12"	8.9	118.0	Alluvium Black, moist, medium dense, silty, very fine to medium SAND. ----- Total depth = 17". No groundwater encountered. Backfilled 4/17/2008.

JOB NO: <u>3.30861</u>		PROJECT: <u>West Pine Street</u>				
DATE: <u>4/17/2008</u>		LOGGED BY: <u>P. Stone</u>				
LOC: <u>S. side of road @ STA 17+50</u>						
TEST PIT	DEPTH (FT)	USCS SYMBOL	SAMPLE DEPTH	PERCENT MOISTURE	DRY DENSITY (pcf)	DESCRIPTION
4	0 - 2½"					Asphalt 1½" relatively recent overlay on top of older 1" section.
	2½ - 8"	SP-SM				Fill Reddish-brown, damp, dense, silty, fine to coarse SAND (DG), with few gravels and cobbles.
	8 - 24"	SC-SM	12"	5.4	121.9	Alluvium Dark brown to olive gray, moist, medium dense, silty to clayey, very fine to medium SAND. ----- Total depth = 24". No groundwater encountered. Backfilled 4/17/2008.

SIERRA GEOTECHNICAL SERVICES INC.

P.O. BOX 5024
MAMMOTH LAKES, CA 93546
(760) 934-3992

Appendix A**TEST PIT LOGS**

JOB NO: <u>3.30861</u>						PROJECT: <u>West Pine Street</u>
DATE: <u>4/17/2008</u>						LOGGED BY: <u>P. Stone</u>
LOC: <u>N. side of road @ STA 14+75</u>						
TEST PIT	DEPTH (FT)	USCS SYMBOL	SAMPLE DEPTH	PERCENT MOISTURE	DRY DENSITY (pcf)	DESCRIPTION
5	0 - 4½"					Asphalt 3" relatively recent overlay on top of older 1½" section.
	4½ - 10½"	SP-SM	4½"	8.4	117.4	Fill Reddish-brown, damp, dense, silty, fine to coarse SAND (DG).
	10½ - 23"	SM	12"	13.3	112.6	Alluvium Black to medium gray, moist, medium dense, silty, very fine to medium SAND.
----- Total depth = 23". No groundwater encountered. Backfilled 4/17/2008.						

JOB NO: <u>3.30861</u>						PROJECT: <u>West Pine Street</u>
DATE: <u>4/17/2008</u>						LOGGED BY: <u>P. Stone</u>
LOC: <u>S. side of road @ STA 11+50</u>						
TEST PIT	DEPTH (FT)	USCS SYMBOL	SAMPLE DEPTH	PERCENT MOISTURE	DRY DENSITY (pcf)	DESCRIPTION
6	0 - 3½"					Asphalt 3½" relatively recent overlay.
	3½ - 8½"	SP-SM	3½"	7.5	116.1	Fill Reddish-brown, damp, dense, silty, fine to coarse SAND (DG), with few gravels and cobbles.
	8½ - 21"	SC-SM	12"	19.5	98.4	Alluvium Black, moist, medium dense, silty to clayey, very fine to medium SAND. Moisture increases at 8½".
----- Total depth = 21". No groundwater encountered. Backfilled 4/17/2008.						

APPENDIX B

LABORATORY TESTING

Laboratory tests were performed on representative test samples to provide a basis for development of design parameters. Soil materials were classified according to the Unified Soil Classification standards. Selected samples were tested for the following parameters: classification and grain size, maximum dry density, and R-value. The results of our laboratory testing along with summaries of the testing procedures are presented herein.

LABORATORY TESTING

Classification or Grain Size Tests: Typical materials were subjected to mechanical grain-size analysis by sieving from U.S. Standard brass screens (ASTM Test Method C136). The data was evaluated in determining the classification of the materials. The grain-size distribution curves are presented in the test data and the Unified Soil Classification (USCS) is presented in both the test data and the boring and/or trench logs.

Maximum Density Tests: The maximum dry density and optimum moisture content of typical materials were determined in accordance with ASTM Test Method D1557. The results of these tests are presented in the table below:

Sample Location	Sample Description	Maximum Dry Density (pcf)	Optimum Moisture Content (%)
TP-1 @ 4½ - 15½"	Reddish-brown, silty, fine to coarse SAND	130.5	7.5
TP-4 @ 8-24"	Dark brown to olive gray, silty to clayey, very fine to medium SAND	117.5	11.5
TP-6 @ 8½ - 21"	Black, silty to clayey, very fine to medium SAND	120.5	10.5

Moisture and Density Determination Tests: In-place moisture content and density determinations were obtained from within the test pits using a nuclear density gauge. The results of these tests are presented in the boring log.

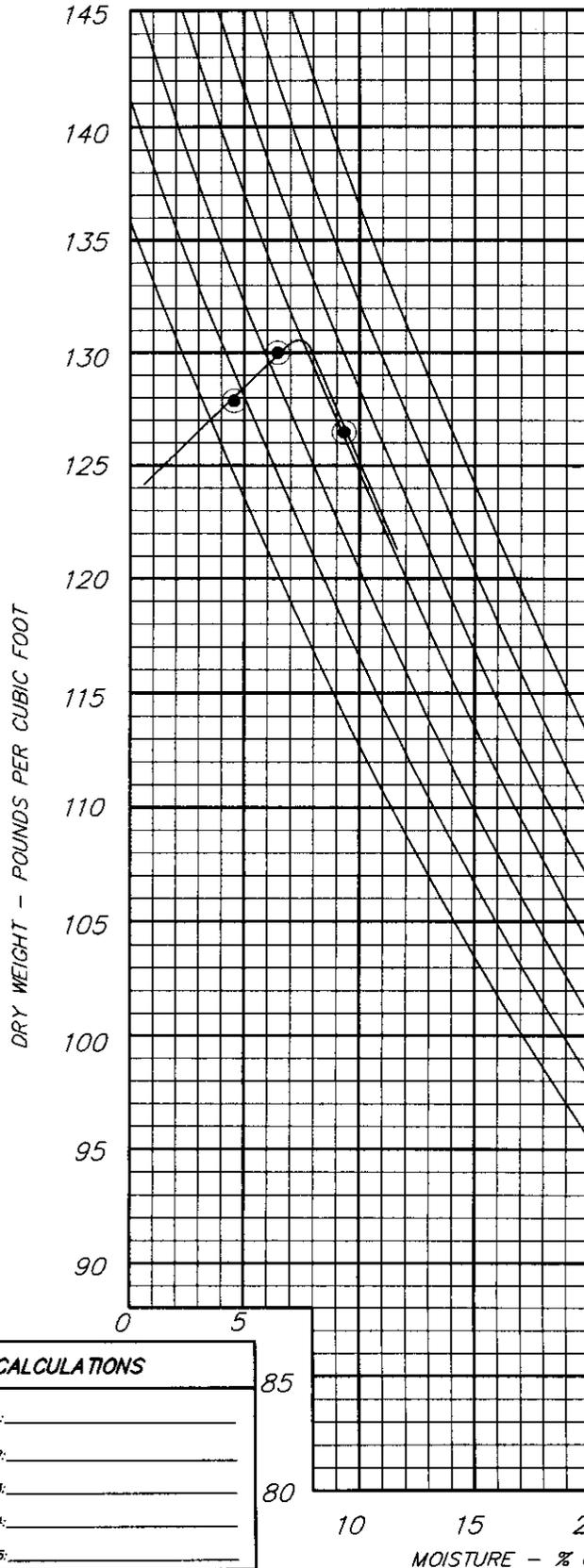
"R"-Value: The resistance "R"-value was determined ASTM D2844. The graphically determined "R"-value at exudation pressure of 300 psi is summarized in the table below:

Sample Location	Sample Description	R-Value
TP-1 @ 15½ - 18"	Black, silty to clayey, very fine to medium SAND	33.4
TP- 4 @ 2½-8"	Reddish-brown, silty, fine to coarse SAND	84.6
TP-6 @ 8½ - 21"	Black, silty to clayey, very fine to medium SAND	54.7

MAXIMUM DENSITY CURVE

PER ASTM TEST METHOD 1557-00 AND CTM 231-01

JOB NUMBER: 3.30861 DATE: 5/21/2008
 PROJECT: WEST PINE STREET
 SAMPLED BY: PS TESTED BY: PS
 EXCAVATION: TP-1 DEPTH (FT.): 4.5-15.5"
 SOIL CLASSIFICATION: SP-SM
 DESIGNATION: FILL



TEST #	1	2	3	4	5
WEIGHT OF SOIL AND MOLD	6406	6420	6474		
WEIGHT OF MOLD	4381	4381	4381		
NET WET WEIGHT OF SOIL	2025	2089	2093		
WET DENSITY LBS./CU.FT.	133.9	138.2	138.4		
DRY DENSITY LBS./CU.FT.	127.9	130.0	126.7		

MOISTURE DETERMINATION					
WET WEIGHT SOIL	489	492	486		
TARE (WT. OF PAN)					
DRY WEIGHT SOIL	467	463	445		
WEIGHT OF MOISTURE	22	29	41		
PERCENT MOISTURE	4.7	6.3	9.2		

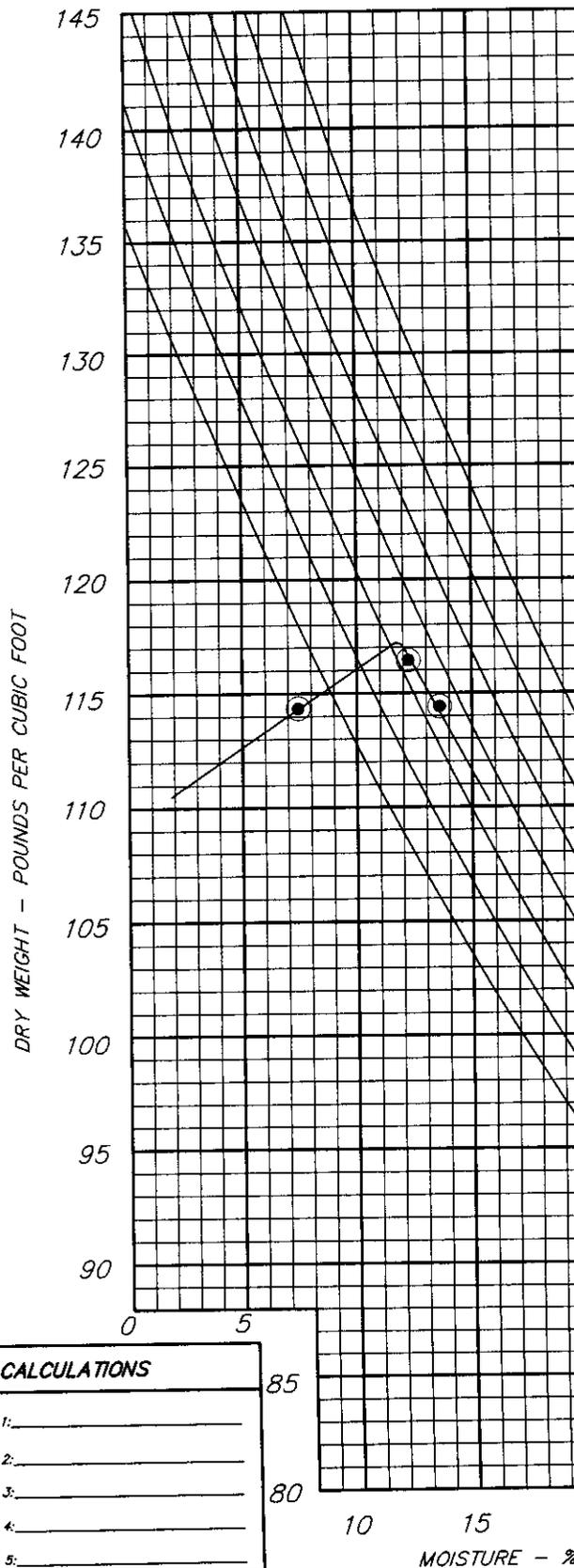
ROCK CORRECTION	
A	TOTAL SAMPLE WEIGHT
B	+ 3/4" WT. IN AIR (gm)
C	+ 3/4" WT. IN WATER (gm)
D	+ 3/4" VOLUME (cc) (B-C)
E	% + 3/4" 100(B/A)
F	% - 3/4" (100-E)
G	DENSITY OF + 3/4" (B/D)
H	% + 3/4" / DENSITY OF + 3/4"
I	% - 3/4" / DENSITY OF - 3/4"
J	SUM OF H AND I
K	ADJUSTED DENSITY gm/cc (100/J)

RESULTS	
MOLD VOLUME:	_____
SIEVE USED:	_____
MAX. DENSITY (LBS./FT ³):	<u>130.5</u>
OPT. MOISTURE (% DRY WT.):	<u>7.5</u>

CALCULATIONS	
1:	_____
2:	_____
3:	_____
4:	_____
5:	_____

MAXIMUM DENSITY CURVE PER ASTM TEST METHOD 1557-00 AND CTM 231-01

JOB NUMBER: 3.30861 DATE: 5/21/2008
 PROJECT: WEST PINE STREET
 SAMPLED BY: PS TESTED BY: PS
 EXCAVATION: TP-4 DEPTH (FT.): 8-24"
 SOIL CLASSIFICATION: SC-SM
 DESIGNATION: ALLUVIUM



TEST #	1	2	3	4	5
WEIGHT OF SOIL AND MOLD	6238	6361	6351		
WEIGHT OF MOLD	4381	4381	4381		
NET WET WEIGHT OF SOIL	1857	1980	1970		
WET DENSITY LBS./CU.FT.	122.8	130.9	130.3		
DRY DENSITY LBS./CU.FT.	114.3	116.8	114.6		

MOISTURE DETERMINATION					
WET WEIGHT SOIL	496	491	491		
TARE (WT. OF PAN)					
DRY WEIGHT SOIL	462	438	432		
WEIGHT OF MOISTURE	34	53	59		
PERCENT MOISTURE	7.4	12.1	13.7		

ROCK CORRECTION	
A	TOTAL SAMPLE WEIGHT
B	+ 3/4" WT. IN AIR (gm)
C	+ 3/4" WT. IN WATER (gm)
D	+ 3/4" VOLUME (cc) (B-C)
E	% + 3/4" 100(B/A)
F	% - 3/4" (100-E)
G	DENSITY OF + 3/4" (B/D)
H	% + 3/4" / DENSITY OF + 3/4"
I	% - 3/4" / DENSITY OF - 3/4"
J	SUM OF H AND I
K	ADJUSTED DENSITY gm/cc (100/J)

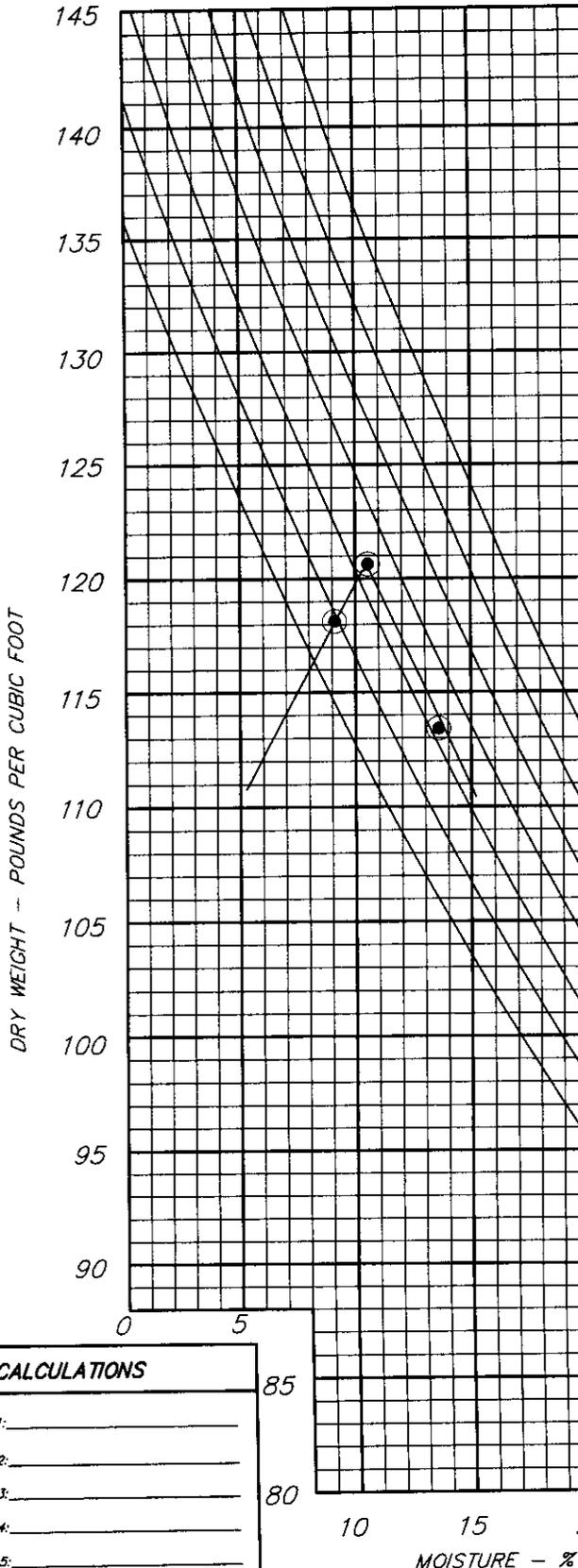
RESULTS

MOLD VOLUME: _____
 SIEVE USED: _____
 MAX. DENSITY (LBS./FT³): 117.5
 OPT. MOISTURE (% DRY WT.): 11.5

CALCULATIONS	
1:	_____
2:	_____
3:	_____
4:	_____
5:	_____

MAXIMUM DENSITY CURVE PER ASTM TEST METHOD 1557-00 AND CTM 231-01

JOB NUMBER: 3.30861 DATE: 5/22/2008
 PROJECT: WEST PINE
 SAMPLED BY: PS TESTED BY: PS
 EXCAVATION: TP-6 DEPTH (FT.): 8.5-21"
 SOIL CLASSIFICATION: SC-SM
 DESIGNATION: ALLUVIUM



TEST #	1	2	3	4	5
WEIGHT OF SOIL AND MOLD	6329	6401	6333		
WEIGHT OF MOLD	4381	4381	4381		
NET WET WEIGHT OF SOIL	1948	2020	1952		
WET DENSITY LBS./CU.FT.	128.8	133.6	129.1		
DRY DENSITY LBS./CU.FT.	118.1	120.6	113.6		

MOISTURE DETERMINATION					
WET WEIGHT SOIL	478	487	494		
TARE (WT. OF PAN)					
DRY WEIGHT SOIL	438	440	435		
WEIGHT OF MOISTURE	40	47	53		
PERCENT MOISTURE	9.1	10.7	13.6		

ROCK CORRECTION	
A	TOTAL SAMPLE WEIGHT
B	+ 3/4" WT. IN AIR (gm)
C	+ 3/4" WT. IN WATER (gm)
D	+ 3/4" VOLUME (cc) (B-C)
E	% + 3/4" 100(B/A)
F	% - 3/4" (100-E)
G	DENSITY OF + 3/4" (B/D)
H	% + 3/4" / DENSITY OF + 3/4"
I	% - 3/4" / DENSITY OF - 3/4"
J	SUM OF H AND I
K	ADJUSTED DENSITY gm/cc (100/J)

RESULTS	
MOLD VOLUME:	_____
SIEVE USED:	_____
MAX. DENSITY (LBS./FT³):	<u>120.5</u>
OPT. MOISTURE (% DRY WT.):	<u>10.5</u>

CALCULATIONS	
1:	_____
2:	_____
3:	_____
4:	_____
5:	_____

SIERRA GEOTECHNICAL SERVICES INC.

P.O. BOX 5024, MAMMOTH LAKES, CALIFORNIA 93546
 (760) 934-3992; (760) 934-8832 Fax

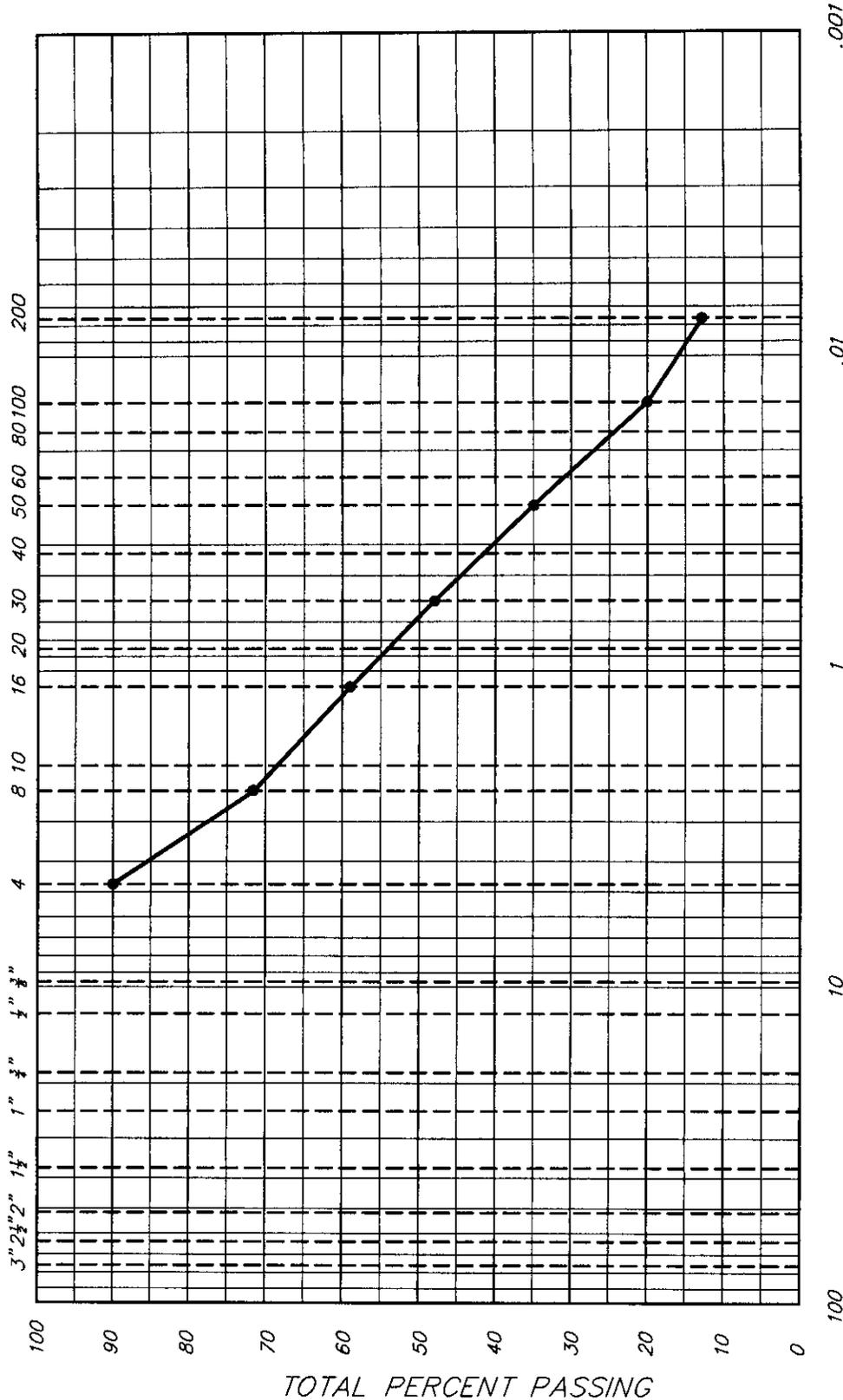
SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES Per ASTM C136

Project:	West Pine	Job No.:	3.30861
Client:	Triad/Holmes Associates	Tested by:	PS
Sampled by:	PS	Delivered by:	PS
Sample Date/time:	4/17/2008	Delivered Date/time:	
Sample Location:	TP # 3 @ 5½ - 11½"	Test Date:	5/9/2008
Description:	Silty, fine to coarse SAND - DG (SM)		

Sieve Size			#4 Minus Dry Wt. (g): 545			% Passing by Dry Weight:				
Inches	mm	Mesh	Fine Wt. Ret.	% Ret.	% Pass.	Coarse Wt. Ret.	% Ret.	% Pass.	Coarse + Fine	Specified
2.0	50.0	2"								
1.5	37.5	1 1/2"								
1.0	25.0	1"								
0.750	19.0	3/4"								
0.500	12.7	1/2"								
0.250	6.3	1/4"								
0.187	4.75	#4	54	10	90					
0.0937	2.36	#8	100	18	72					
0.0469	1.18	#16	76	14	58					
		#20								
0.0234	0.60	#30	59	11	47					
		#40								
0.0117	0.30	#50	68	12	35					
		#80								
0.0059	0.15	#100	80	15	20					
0.0029	0.075	#200	36	7	13					
PAN			72	13						
TOTAL			545	100						

Remarks: Wash Sieve

US STANDARD SIEVE SIZES



COBBLES	GRAVEL	COARSE	FINE	COARSE	MEDIUM	SAND	FINE	SILTS/CLAYS

USCS GROUP: SM
 TEST PIT: TP-3
 DEPTH: 5.5 - 11.5"
 CLASSIFICATION: SILTY, FINE TO COARSE GRAINED SAND

GRNSIZE.DWG



PROJECT

WEST PINE STREET
 NOLTE ASSOCIATES

GRAIN SIZE DISTRIBUTION

DATE: 6/2008

PLOTTED BY: JAA

JOB NO.: 3.30861

PLATE NO.

SIERRA GEOTECHNICAL SERVICES INC.

P.O. BOX 5024, MAMMOTH LAKES, CALIFORNIA 93546
 (760) 934-3992; (760) 934-8832 Fax

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES Per ASTM C136

Project:	West Pine	Job No.:	3.30861
Client:	Triad/Holmes Associates	Tested by:	PS
Sampled by:	PS	Delivered by:	PS
Sample Date/time:	4/17/2008	Delivered Date/time:	
Sample Location:	TP # 6 @ 8½-21"	Test Date:	5/9/2008
Description:	Silty to clayey, very fine to medium SAND (SC-SM)		

Sieve Size			#4 Minus Dry Wt. (g):						% Passing by Dry Weight:	
Inches	mm	Mesh	Fine Wt. Ret.	% Ret.	% Pass.	Coarse Wt. Ret.	% Ret.	% Pass.	Coarse + Fine	Specified
2.0	50.0	2"								
1.5	37.5	1 1/2"								
1.0	25.0	1"								
0.750	19.0	3/4"								
0.500	12.7	1/2"								
0.250	6.3	1/4"								
0.187	4.75	#4	0	0	100					
0.0937	2.36	#8	28	6	94					
0.0469	1.18	#16	43	9	85					
		#20								
0.0234	0.60	#30	49	11	74					
		#40								
0.0117	0.30	#50	55	12	62					
		#80								
0.0059	0.15	#100	52	11	51					
0.0029	0.075	#200	16	4	47					
PAN			218	47						
TOTAL			461	100						

Remarks: Wash Sieve

SIERRA GEOTECHNICAL SERVICES INC.

P.O. BOX 5024, MAMMOTH LAKES, CALIFORNIA 93546
 (760) 934-3992; (760) 934-8832 Fax

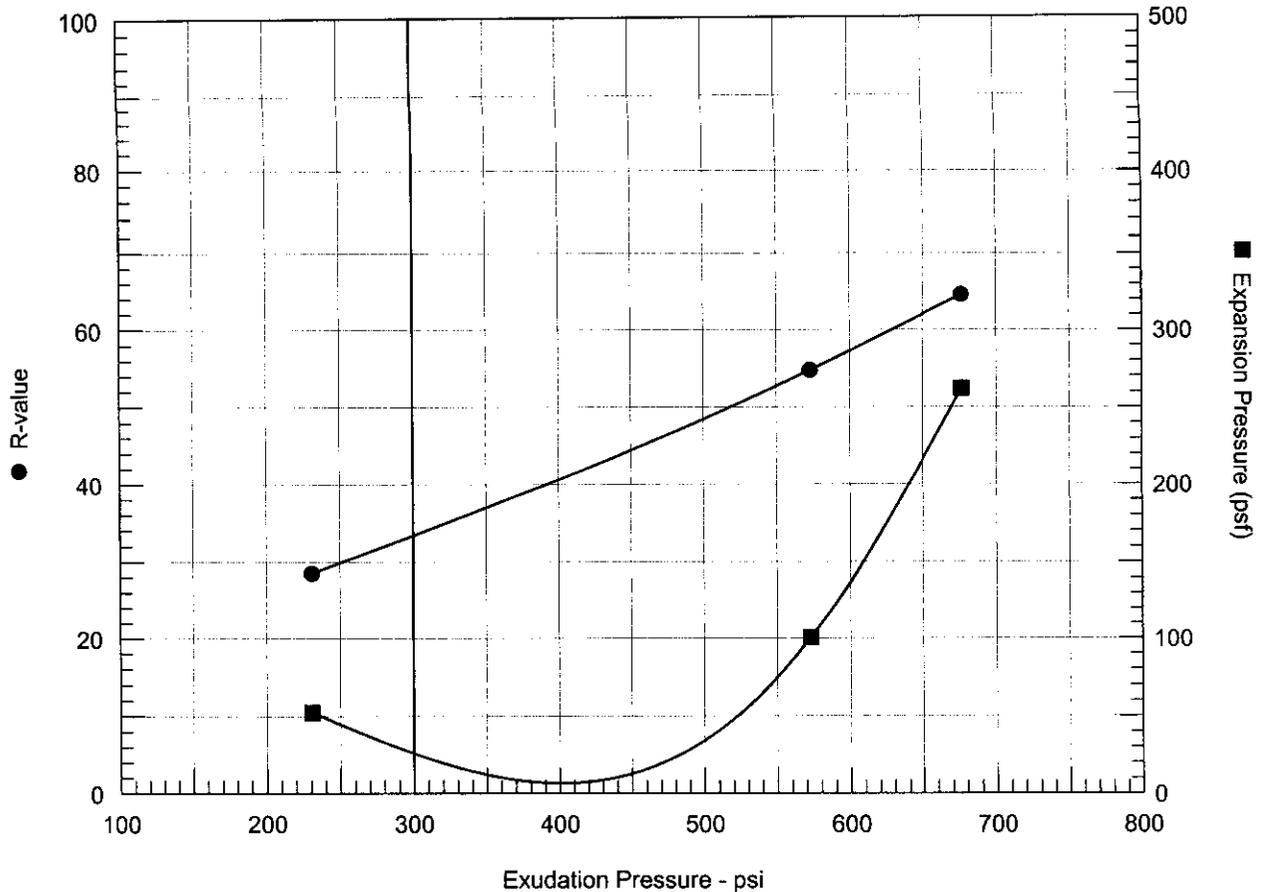
SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES Per ASTM C136

Project:	West Pine	Job No.:	3.30861
Client:	Triad/Holmes Associates	Tested by:	PS
Sampled by:	PS	Delivered by:	PS
Sample Date/time:	4/17/2008	Delivered Date/time:	
Sample Location:	TP # 5 @ 10½-23"	Test Date:	5/9/2008
Description:	Silty, very fine to medium SAND (SM)		

Sieve Size			#4 Minus Dry Wt. (g):				% Passing by Dry Weight:			
Inches	mm	Mesh	Fine Wt. Ret.	% Ret.	% Pass.	Coarse Wt. Ret.	% Ret.	% Pass.	Coarse + Fine	Specified
2.0	50.0	2"								
1.5	37.5	1 1/2"								
1.0	25.0	1"								
0.750	19.0	3/4"								
0.500	12.7	1/2"								
0.250	6.3	1/4"								
0.187	4.75	#4	0	0	100					
0.0937	2.36	#8	28	5	95					
0.0469	1.18	#16	50	10	85					
		#20								
0.0234	0.60	#30	55	11	74					
		#40								
0.0117	0.30	#50	66	13	61					
		#80								
0.0059	0.15	#100	67	13	48					
0.0029	0.075	#200	48	10	38					
PAN			189	38						
TOTAL			203	100						

Remarks: Wash Sieve

R-VALUE TEST REPORT

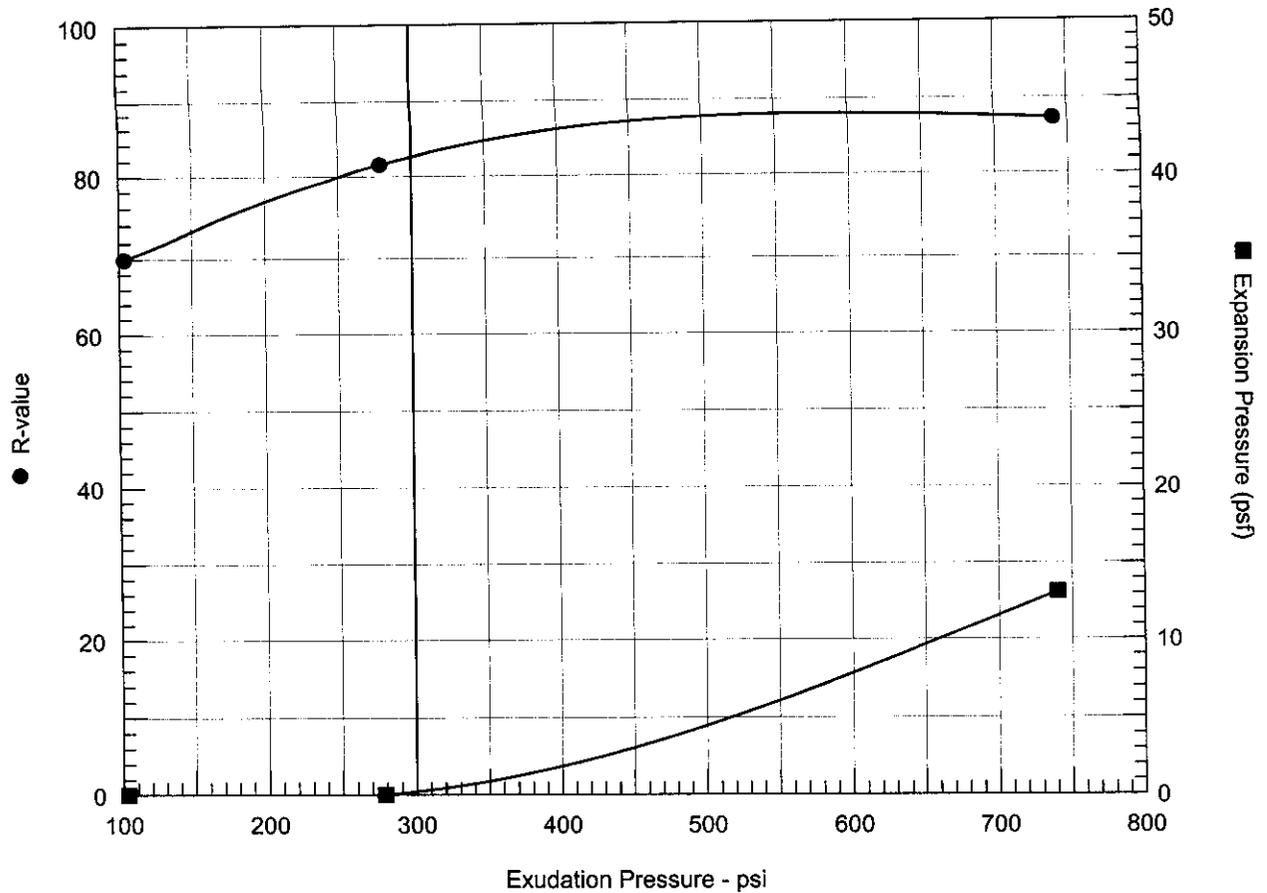


Resistance R-Value and Expansion Pressure - ASTM D 2844

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psf	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	50	112.9	16.5	100	64	2.50	573	54.7	54.7
2	60	108.9	17.6	52	104	2.54	231	28.5	28.5
3	250	116.1	12.3	262	55	2.54	676	64.6	64.6

Test Results	Material Description
<p>R-value at 300 psi exudation pressure = 33.4</p> <p>Exp. pressure at 300 psi exudation pressure = 26 psf</p>	<p>Brown clayey sand (SC)</p>
<p>Project No.: 4437.07-1</p> <p>Project: Sierra Geotechnical Services</p> <p>Location: Native; Pine Street, Test Pit 1</p> <p>Sample Number: 08-186 Depth: 1.0-2.0'</p> <p>Date: 6/5/2008</p>	<p>Tested by:</p> <p>Checked by:</p> <p>Remarks: Nolte Job#3.30861</p>
<p>R-VALUE TEST REPORT</p> <p>PEZONELLA ASSOCIATES, INC.</p>	
<p>Plate _____</p>	

R-VALUE TEST REPORT

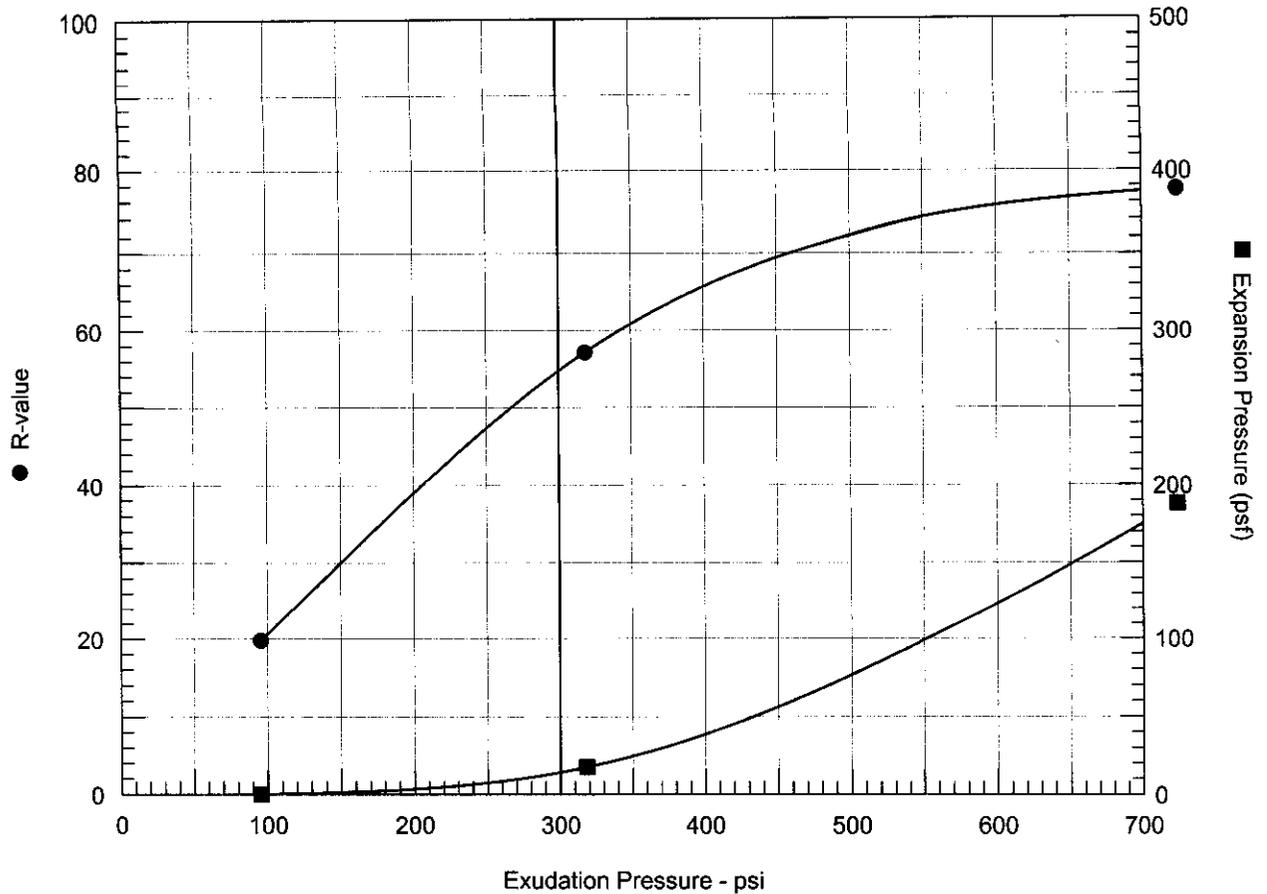


Resistance R-Value and Expansion Pressure - ASTM D 2844

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psf	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	350	123.8	10.8	13	14	2.41	740	87.8	87.1
2	325	125.7	10.3	0	29	2.46	103	69.9	69.9
3	300	127.7	7.6	0	21	2.44	279	82.2	81.5

Test Results	Material Description
<p>R-value at 300 psi exudation pressure = 82.5</p> <p>Exp. pressure at 300 psi exudation pressure = 0 psf</p>	<p>Brown sand (SP-SM) with silt</p>
<p>Project No.: 4437.07-I</p> <p>Project: Sierra Geotechnical Services</p> <p>Location: D.G.; Pine Street, Test Pit 4</p> <p>Sample Number: 08-184 Depth: 0.0-8.0"</p> <p>Date: 6/3/2008</p>	<p>Tested by:</p> <p>Checked by:</p> <p>Remarks: Nolte Job# 3.30861</p>
<p>R-VALUE TEST REPORT</p> <p>PEZONELLA ASSOCIATES, INC.</p>	
<p>Plate _____</p>	

R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - ASTM D 2844

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psf	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	50	110.3	15.4	0	120	2.49	95	19.8	19.8
2	350	116.1	12.5	17	62	2.58	318	55.0	57.1
3	350	117.5	11.5	188	30	2.61	724	75.7	77.6

Test Results	Material Description
<p>R-value at 300 psi exudation pressure = 54.7</p> <p>Exp. pressure at 300 psi exudation pressure = 14 psf</p>	Brown clayey sand (SC)
<p>Project No.: 4437.07-1</p> <p>Project: Sierra Geotechnical Services</p> <p>Location: Native: Pine Street, Test Pit 6</p> <p>Sample Number: 08-185 Depth: 0.5-1.5'</p> <p>Date: 6/3/2008</p>	<p>Tested by:</p> <p>Checked by:</p> <p>Remarks: Nolte Job# 3.30861</p>
<p>R-VALUE TEST REPORT</p> <p>PEZONELLA ASSOCIATES, INC.</p>	
Plate _____	

