Department of Development Services

Tim Snellings, Director
Pete Calarco, Assistant Director

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buttecounty.net/dds

BUTTE COUNTY PLANNING COMMISSION
NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION AND NOTICE OF PUBLIC HEARING
CONDITIONAL USE PERMT UP19-0003

NOTICE IS HEREBY GIVEN that the Butte County Planning Commission will hold a public hearing to consider Conditional Use Permit UP19-0003 for Franklin Construction, Inc. on **August 22, 2019, at 9:00 a.m.** or shortly thereafter, in the Butte County Board of Supervisors' Room, County Administration Center, 25 County Center Drive, Oroville, California as follows:

Project: Conditional Use Permit UP19-0003 (Franklin Construction, Inc.)

Location: The project site is located in unincorporated Butte County, approximately eight miles south of the City of Chico. The project site is located along the north side of Neal Road, ½ mile east of the intersection of State Highway 99 and Neal Road.

APN: 040-600-081

Proposal: A request to amend Conditional Use Permit (UP17-0009) to allow for the construction and operation of a stationary hot mix asphalt batch plant at an existing concrete and asphalt recycling facility and construction yard. Plant operations will produce hot mix asphalt for retail sales for government and private applications, as well as for use by the applicant at off-site road construction and maintenance projects. Production capacity of the plant is 200/tons per hour with the applicant estimated to produce up to 60,000 tons annually. The proposed amendment will also permit construction of a 3,000 to 5,000 square foot building to store contractor tools and supplies. The project site is located on a 50.59 acre property situated within the HI-RW (Heavy Industrial – Neal Road Recycling, Energy, and Waste Facility Overlay) zone.

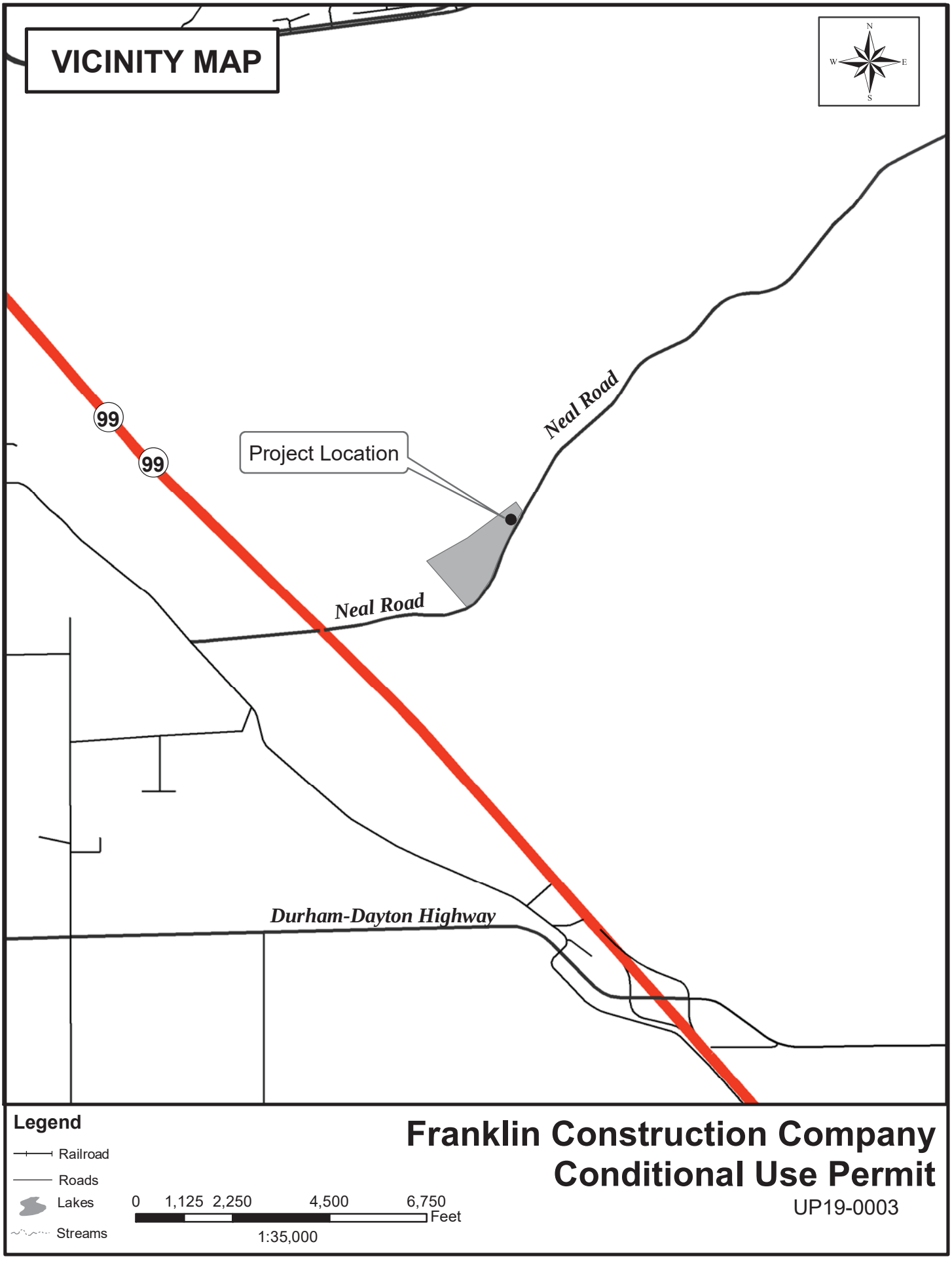
In compliance with the California Environmental Quality Act, this notice discloses that there are no listed toxic sites present on or near the project site. Butte County has prepared a Subsequent Initial Study to the Initial Study/Mitigated Negative Declaration adopted for the original conditional use permit (SCH No. 2018042028). Butte County is considering adoption of a Mitigated Negative Declaration for the proposed project pursuant to CEQA. The Subsequent Initial Study/Mitigated Negative Declaration and reference documents for the project are on file for public review and comment starting **Monday, July 22, 2019 through Tuesday, August 20, 2019**, at the Butte County Planning Division, 7 County Center Drive, Oroville, CA. The IS/MND is also available for review on the County website at http://www.buttecounty.net/dds/Planning/CEQA.aspx. All persons are invited to review the documents.

Comments may be submitted in writing to the Planning Division at the above address at any time prior to the hearing or orally at the meeting listed above, or as may be continued to a later date. If you challenge the above application in court, you may be limited to raising only those issues you or someone else raised at the public hearing or in written correspondence delivered to the Planning Commission at, or prior to the public hearing.

For information, please contact Senior Planner Rowland Hickel, Butte County Development Services Department, Planning Division at (530) 552-3684 or rhickel@buttecounty.net.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in the hearing, please contact us at (530) 552-3663. Notification at least 72 hours prior to the hearing will enable staff to make reasonable arrangements.

BUTTE COUNTY PLANNING COMMISSION
TIM SNELLINGS, DIRECTOR OF DEVELOPMENT SERVICES


VICINITY MAP
N
W
E
S
99
99
Project Location
Neal Road
Neal Road
Durham-Dayton Highway
Legend
Railroad
Roads
Lakes
Streams
0 1,125 2,250 4,500 6,750
Feet
1:35,000
Franklin Construction Company
Conditional Use Permit
UP19-0003

SUBSEQUENT INITIAL STUDY AND ENVIRONMENTAL REVIEW CHECKLIST

California Environmental Quality Act (CEQA)

PROJECT INFORMATION

1. Project Title: Franklin Construction Company (UP19-0003)

2. Lead Agency Name and Address: Butte County – Department of Development Services
Planning Division
7 County Center Drive
Oroville, CA 95965

3. Contact Person and Phone Number: Rowland Hickel, Senior Planner
530.552.3684
rhickel@buttecounty.net

4. Project Location: The project site is located in unincorporated Butte County, approximately eight miles south of the City of Chico. The project site is located along the north side of Neal Road, ½ mile east of the intersection of State Highway 99 and Neal Road. The project site is located within the boundary of assessor's parcel number (APN): 040-600-081.

5. Project Sponsor's Name and Address: Franklin Construction Company
217 Flume Street, Suite 200
Chico, CA 95928

6. General Plan Designation: Industrial (I)

7. Zoning: HI-RW (Heavy Industrial – Neal Road Recycling, Energy, and Waste Facility Overlay)

8. Introduction and CEQA Compliance:

This Subsequent Initial Study (IS) and Mitigated Negative Declaration (MND) assesses the environmental impacts of the proposed amendment (UP19-0003) to an approved Conditional Use Permit (UP17-0009). Conditional Use Permit UP17-0009 was approved by the Butte County Planning Commission on May 10, 2018. The approved use permit allows the applicant to operate a construction equipment storage, maintenance and repair facility, and a concrete and asphalt rubble, dirt and aggregate recycling facility. An IS/MND was previously prepared for the approved permit and certified by the Butte County Planning Commission (SCH No. 2018042028). A copy of the previous document is included as Appendix C for reference.

CEQA Guidelines Section 15162(b) states that if changes to a project or its circumstances occur or new information becomes available after adoption of the a negative declaration, the lead agency shall prepare a subsequent negative declaration if required under subdivision (a); otherwise the lead agency shall determine whether to prepare a subsequent negative declaration, an addendum, or no further documentation.

CEQA Guidelines Section 15162, Subsequent EIRs and Negative Declarations, states the following with respect to a Subsequent Negative Declaration:

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

(b) If changes to a project or its circumstances occur or new information becomes available after adoption of a negative declaration, the lead agency shall prepare a subsequent EIR if required under subdivision (a). Otherwise the lead agency shall determine whether to prepare a subsequent negative declaration, an addendum, or no further documentation.

The potential environmental impacts of the proposed amendment to the existing project site have been analyzed in this Subsequent IS/MND. The proposed changes are substantial and require revisions to the adopted IS/MND. The analysis in this Subsequent IS/MND indicates all potential project-related environmental impacts can be reduced to less than significant levels with the incorporation of mitigation measures. The mitigation measures included in this Subsequent IS/MND are designed to reduce or eliminate the potentially significant environmental impacts.

9. Characteristics of the Project Revisions:

   Franklin Construction, Inc. is requesting approval to amend an approved Conditional Use Permit (UP17-0009) to allow for the construction and operation of a stationary hot mix asphalt batch plant at the existing concrete and asphalt recycling facility and construction yard. The plant components include feed bins, storage silos, asphalt oil storage tank, power center, screen decks, conveyors, control center, baghouse, etc. Plant operations will produce hot mix asphalt for retail sales for government and private applications, as well as for use by the applicant at off-site road construction and maintenance projects. The production capacity of the plant is 200/tons per hour, with the applicant estimated to produce up to 60,000 tons annually. The proposed facility will replace the existing asphalt batch plant facility located at 1480 Skyway, which is located within the incorporated city of Chico, California. The proposed amendment will also permit construction of a 3,000 to 5,000 square foot building to store contractor tools and supplies.

Raw Aggregate Storage and Handling

Raw or virgin aggregate would be transported to the proposed project site by truck and stockpiled before being deposited into the feed bins. Aggregate would be transferred from the feed bins by conveyor to the drum (rotary) dryer. The aggregate would be blended by percentage from the individual bins to meet the desired mix design. The mixed aggregate would then be transported by conveyor across a scalping screen used to discharge any foreign objects or trash from the aggregate before it is conveyed to the drum dryer.

Recycled (or Reclaimed) Asphalt Product Storage and Handling

Recycled asphalt product (RAP) is currently delivered to the project site and stockpiled, as allowed under the existing conditional use permit (UP17-0009). A front end wheel loader would transfer the RAP from the storage area to a feed hopper, which would deposit the materials onto a conveyor for transfer to a scalping screen. The scalping screen sorts the materials by size. Suitably sized product is conveyed from the screen to the dryer drum.

Asphalt Oil Storage and Handling

Asphalt oil would be transported to the proposed project site by tanker truck. The asphalt oil storage system would consists of one vertical tank with a storage capacity of approximately 35,000-gallons.

Hot Mix Asphalt Production and Storage System

Hot mix asphalt (HMA) would be produced in the dryer drum. The raw aggregate and RAP would be added to the dryer drum at the same time. The raw aggregate would be heated in the dryer drum by a burner fueled by liquid propane. The RAP would be added to the dryer drum at a location where the two materials come together. The RAP is not heated by the burner but heats up and dries out upon coming in contact with the aggregate.

The blended materials would be discharged into the mixer where the asphalt oil would be metered in from the asphalt oil storage tank and the combined materials would be mixed together in a continuous process. The mixer would be capable of producing HMA with a content of up to 50 percent RAP.

A bag house would be used as an air pollution control device for the dryer drum and burner. The bag house is a large air filter that removes particular matter from the aggregate drying process, which uses a large fan to pull in dust laden air from the drying drum and into the filter unit. Filtered air is released into the atmosphere through the exhaust stack. Collected dust is periodically removed from the bags and conveyed to the mixer to be added to the asphalt pavement mixture.

The HMA silo storage system would consist of two 14-foot diameter silos, each with a storage capacity of 200 tons and a total height of 85 feet. The silos would be supported by silo 'legs' approximately 14 feet in length to provide ample clearance for trucks to park beneath the silos for filling.

Control/Electrical Building

The control/electrical building would be a prefabricated building and a single-level control center. The process control room would have a state-of-the-art controls system with integrated computer-based control system with programmable logic controller (PLC) that provides centralized control and monitoring of HMA production. All plant activity would be graphically depicted on the computer screen in real–time.

Fueling Island

A fueling island would be constructed at the project site. The fueling island will include two 10,000-gallon above-ground diesel fuel storage tanks. All hazardous materials stored at the facility will be subject to California's hazardous materials handling regulations (California Code of Regulations (CCR) Title 19, Division 2, Chapter 4).

Hours of Operation

The proposed batch plant requires the flexibility to operate 24 hours a day, 7 days a week. However, typical operating hours for the plant will be Monday through Friday 6:00 am to 5:00 pm, with only occasional weekend

and nighttime operations to occur, depending on the needs of the specific construction project. Peak operations typically occur between June and October.

Employees

The existing facility currently employs 5 full-time personnel who work a single shift of 8 to 10 hours. An additional 2 to 4 full-time personnel would be used to operate the HMA plant during peak operations (June to October).

Project Construction

Construction is anticipated to begin in the Fall of 2019 and completed by April 2020. Construction activities would include a variety of equipment and vehicles that would be used for site preparatory work, rough grading, temporary construction worker parking, and establishment of laydown areas for construction materials and equipment. Construction activities will occur during daytime hours, Monday through Friday. Construction of the off-site road improvements are anticipated to be deferred until Spring 2021 due to the heavy truck traffic associated with the Camp Fire debris clean-up operations.

Off-Site Improvements

The project includes construction of an off-site westbound right turn declaration lane and an eastbound left turn land on Neal Road to serve the primary entrance to the facility. The westbound right turn lane will include 200 feet of a striped pocket plus 105 foot deceleration area (full lane width) plus 180 foot taper. The eastbound left turn lane will include 200 foot striped pocket plus 105 foot deceleration area plus 180 foot deceleration taper and 300 foot approach taper.

10. Surrounding Land Uses and Setting:

    See 2018 Initial Study, Appendix C.

11. Other public agencies whose approval is required: (e.g., permits, financing approval, or participation agreement)

    - Butte County Department Development Services: Building Permits (Future Construction)
    - State Water Boards (General Permit for Storm Water Discharges Associated with Construction and Land Disturbances; National Pollution Discharge Elimination System (NPDES) General Permit for Industrial Activities)
    - Butte County Environmental Health Division (Hazardous Materials Business Plan)
    - Butte County Air Quality Management District (Authority to Construct Permit; Authority to Operate Permit)
    - Butte County Public Works Department (Road Improvement Plans; Encroachment Permit)

12. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

    See Discussion 1.18

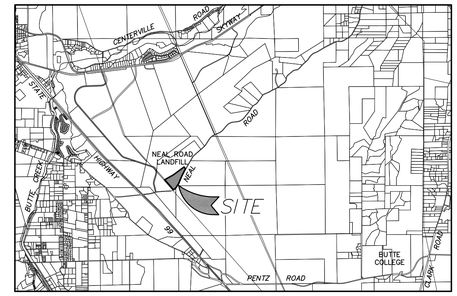
APPENDICES

A. Traffic Impact Study, Headway Transportation – April 15, 2019
B. Archaeological Inventory Survey – August 7, 2018
C. Final Initial Study/Mitigated Negative Declaration (SCH No. 2018042028) for Condition Use Permit UP17-0009 – Adopted May 10, 2018

SCALE: 1" = 100'

GENERAL NOTES

1. CONTOUR DATA DERIVED FROM AN AERIAL SURVEY COMPLETED IN 1990 AND BASED OFF USGS BENCHMARK NO. 177, A BRASS DISK STAMPED (BWS 30 177 1941) LOCATED IN THE TOP OF A LARGE ROCK 340 FEET NORTH OF THE JUNCTION OF NEAL ROAD AND ORO-CHICO HIGHWAY AND 93 FEET EAST OF THE CENTER LINE OF ORO-CHICO HIGHWAY, ELEVATION = 177.68.
2. LAYOUT OF STOCKPILES, BUILDING, ROADS AND DRIVEWAY LOCATIONS PROVIDED BY OWNER.
3. EROSION CONTROL BMP'S SHALL BE INSTALLED AROUND THE PERIMETER OF DISTURBED AREAS. DISTURBED AREAS SHALL BE HYDROSEEDED WITH NATIVE GRASSES UPON COMPLETION OF WORK.
4. ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE COUNTY OF BUTTE ON FILE IN THE OFFICE OF THE DIRECTOR OF PUBLIC WORKS, BUTTE COUNTY, CALIFORNIA.
5. THE EXISTENCE AND LOCATION OF ALL UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
6. CALL BUTTE COUNTY DEPARTMENT OF PUBLIC WORKS AT 538-7681 TO SCHEDULE INSPECTION AT LEAST 24 HOURS PRIOR TO CONSTRUCTION.
7. REMOVAL AND PLACEMENT OF MORE THAN 50 CUBIC YARDS OF GRADED MATERIAL FROM ONE PARCEL TO ANOTHER WITHIN THE UNINCORPORATED AREA OF BUTTE COUNTY IS SUBJECT TO THE REQUIREMENTS OF A GRADING PERMIT.
8. CONSTRUCTION AND COMPACTION OF EARTHEN BERMS SHALL CONFORM WITH THE PROJECT GEOTECHNICAL REPORT.
9. SEDIMENT TRAPS SHALL BE INSPECTED ON A YEARLY BASIS BY THE OWNER.
10. REGULAR MAINTENANCE OF SEDIMENT TRAPS SHALL BE PERFORMED TO MAINTAIN REQUIRED STORM WATER RUNOFF VOLUMES.
11. PHASE 2 PROPOSES THE CONSTRUCTION OF A LEFT TURN POCKET ON NEAL ROAD AT THE PRIMARY SITE ENTRANCE TO THE SITE. THE LAYOUT AND DESIGN OF THE TURN POCKET AND ROADWAY WIDENING WILL BE PERFORMED AT A LATER DATE.
12. THE SECONDARY SITE ENTRANCE AND GATE WOULD BE OPENED AS REQUIRED TO ACCOMMODATE SITE TRAFFIC.

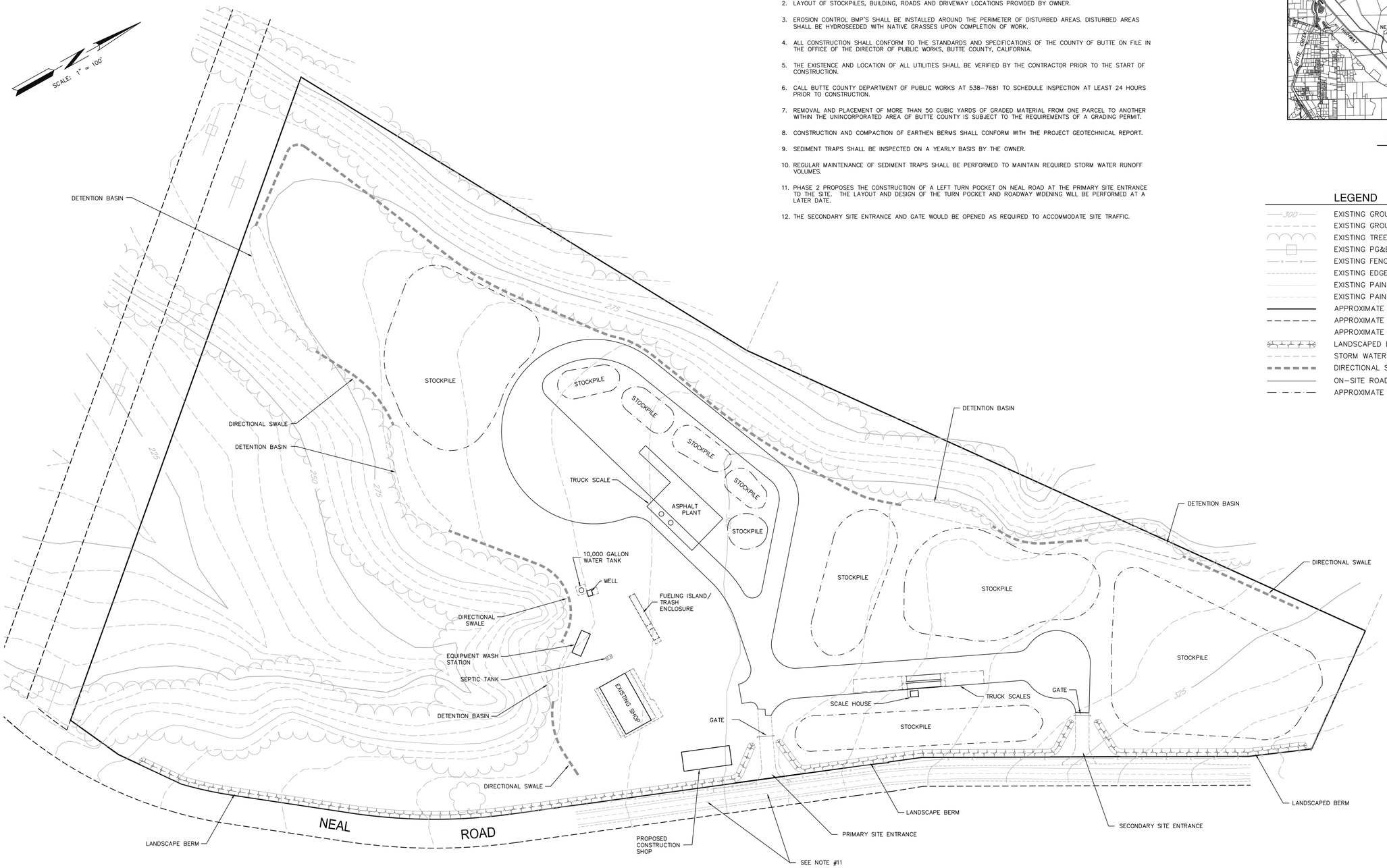


LOCATION MAP

NO SCALE

LEGEND

- EXISTING GROUND CONTOUR (25' INTERVAL)
- EXISTING GROUND CONTOUR (5' INTERVAL)
- EXISTING TREE AND SHRUB LINE
- EXISTING PG&E TRANSMISSION LINES
- EXISTING FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAINTED EDGE STRIPE
- EXISTING PAINTED CENTERLINE STRIPE
- APPROXIMATE PROPERTY LINE
- APPROXIMATE EXISTING R.O.W LINE
- APPROXIMATE LOCATION OF EXISTING ONSITE ROAD
- LANDSCAPED BERM
- STORM WATER DETENTION POND
- DIRECTIONAL SWALE
- ON-SITE ROADWAY
- APPROXIMATE STOCKPILE LIMITS



DRAFT

REGISTERED PROFESSIONAL ENGINEER
PAUL W. RAE
No. 72209
CIVIL
State of California

APPROVED

DATE APRIL, 2019

PREPARED FOR :

FRANKLIN CONSTRUCTION, INC.

RAR
ROLLS ANDERSON & ROLLS
CIVIL ENGINEERS
115 YELLOWSTONE DRIVE · CHICO, CALIFORNIA 95973-5811 · TELEPHONE 530-895-1422

NEAL ROAD SITE PLAN PHASE 2

A.P.N. 040-600-081

DESIGNED	
DRAWN	
CHECKED	
DRAWING NO.	1 OF 1
JOB NO.	17100

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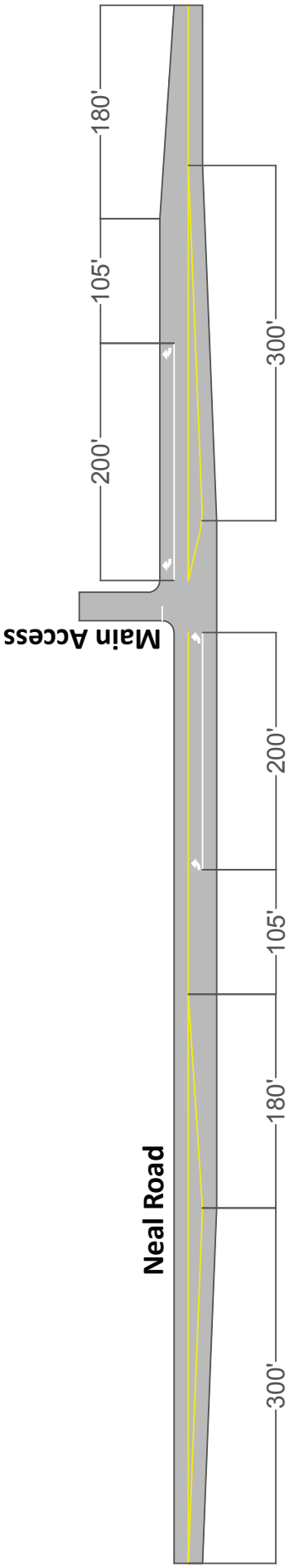
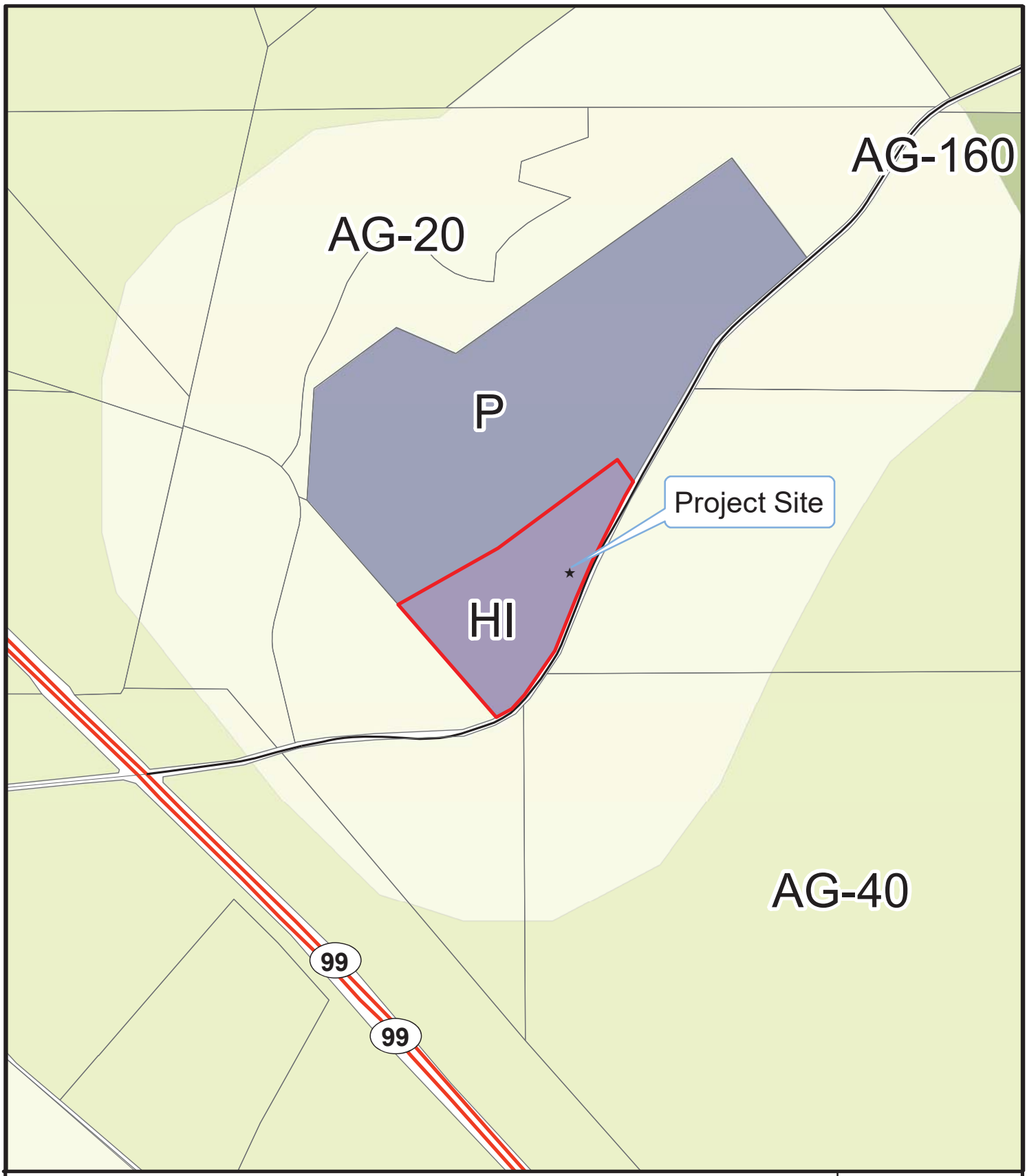


HEADWAY TRANSPORTATION

NO SCALE

Figure 8
Neal Road Asphalt Plant
Traffic Impact Study
Recommended Main Access Configuration



Butte County Zone Districts

0 700 1,400 2,800 4,200 5,600 7,000 Feet

Supervisorial District #4

Applicant/Owner: Franklin Construction	**Zoning:** Heavy Industrial-Neal Road Overlay (HI-RW)
Request: Use Permit	**Assessor Parcel No:** 040-600-081

File: UP19-0003

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages. Where checked below, the topic with a potentially significant impact will be addressed in an environmental impact report.

☒	Aesthetics	☐	Agriculture and Forest Resources	☒	Air Quality
☒	Biological Resources	☒	Cultural Resources	☐	Energy
☐	Geology / Soils	☒	Greenhouse Gas Emissions	☒	Hazards / Hazardous Materials
☒	Hydrology / Water Quality	☐	Land Use / Planning	☐	Mineral Resources
☐	Noise	☐	Population / Housing	☐	Public Services
☐	Recreation	☐	Transportation	☐	Tribal Cultural Resources
☐	Utilities / Service Systems	☐	Wildfire	☒	Mandatory Findings of Significance
		☐	None	☐	None with Mitigation Incorporated

DETERMINATION (To be completed by the Lead Agency)

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 measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** 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.

Rowland Hickel, Senior Planner — July 19, 2019

Prepared by: — Date

Reviewed by: Charles Thistlethwaite, Planning Manager — July 19, 2019

Date

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 "Earlier Analyses," as described in (5) below, 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.

1.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics.				
Except as provided in Public Resources Code section 21099 (where aesthetic impacts shall not be considered significant for qualifying residential, mixed-use residential, and employment centers), would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

Discussion

a) Have a substantial adverse effect on a scenic vista?

Less than significant impact. The project would introduce an asphalt batch plant with a footprint of approximately 1.5 to 2 acres to the project site that has been extensively disturbed by the development associated with UP17-0009. The site is also located immediately adjacent to the Neal Road Recycling and Waste Facility which has existing urban features encompassing 78 acres, which further diminishes the scenic qualities of the project area. Therefore, the added project features would not have a significant adverse effect on a scenic vista.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No impact. No scenic resources have been identified on the project site. The project site is also not located adjacent to a state-designated or county-designated scenic highway. Therefore, the project would not damage or degrade scenic resources within a state scenic highway.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than significant impact. The presence of the Neal Road Recycling and Waste Facility in the immediate vicinity of the project site dominates the visual character of the area. As a result, the introduction of urban

features associated with the project would not substantially change or degrade the character or quality of the site or surroundings.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than significant impact with mitigation incorporated. New exterior lighting from the project has the potential to generate adverse impacts on day and nighttime views from along area roadways and residential uses in the surrounding area. Mitigation Measure AES-1 is recommended to minimize to a less than significant level any adverse daytime or nighttime view impacts from light or glare that the project may introduce to the areas.

Mitigation Measures

~~Mitigation Measure #1 (Exterior Lighting)~~
Mitigation Measure AES-1

A lighting plan shall be submitted for approval prior to building permit issuance. Any new outdoor lighting shall be consistent with Chapter 24, Article 14 or the Butte County Code, and not adversely affect night time views. Lighting shall be designed to ensure that no direct offsite spill of light or glare will occur.

Plan Requirements: A lighting plan shall be submitted for approval by the Planning Division of the Department of Development Services prior to issuance of building permits. This note shall also be placed on all building and site development plans.

Timing: Requirements of the condition shall be adhered to throughout the life of the project.

Monitoring: The Butte County Department of Development Services shall ensure that the note is placed on all development plans. The Department shall respond to nuisance complaints.

1.2 AGRICULTURE AND FOREST RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agriculture and Forest Resources.				
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, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:				
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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Regulatory Setting

Williamson Act/Land Conservation Act (LCA) Contracts

The California Land Conservation Act of 1965, commonly known as the Williamson Act, was established based on numerous State legislative findings regarding the importance of agricultural lands in an urbanizing society. Policies emanating from those findings include those that discourage premature and unnecessary conversion of agricultural land to urban uses and discourage discontinuous urban development patterns, which unnecessarily increase the costs of community services to community residents. The Williamson Act authorizes each County to establish an agricultural preserve. Land that is within the agricultural preserve is eligible to be placed under a contract between the property owner and County that would restrict the use of the land to agriculture in exchange for a tax assessment that is based on the yearly production yield. The contracts have a 9-year term that is automatically renewed each year, unless the property owner or county requests a non-renewal or the contract is cancelled.

Farmland Mapping and Monitoring Program

The California Farmland Mapping and Monitoring Program (FMMP) develops statistical data for analyzing impacts to California's agricultural resources. The FMMP program characterizes "Prime Farmland" as land with the best combination of physical and chemical characteristics that are able to sustain long-term production of agricultural crops. "Farmland of Statewide Importance" is characterized as land with a good combination of physical and chemical characteristics for agricultural production, but with less ability to store soil moisture than prime farmland. "Unique Farmland" is used for production of the state's major crops on soils not qualifying as prime farmland or of statewide importance. The FMMP also identifies "Grazing Land", "Urban and Built-up Land", "Other Land", and "Water" that is not included in any other mapping category.

California Public Resources Code Section 4526

"Timberland" means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis.

California Public Resources Code Section 12220(g)

"Forest land" is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

Butte County Right to Farm Ordinance

Butte County has adopted a Right to Farm Ordinance (Butte County Code Chapter 35, Protection of Agricultural Land). This ordinance protects properly conducted agricultural operations in the unincorporated County against nuisance lawsuits, and requires annual disclosure to all property owners within the County of the right to farm. In addition, the ordinance requires disclosure to buyers of real property and as part of development approvals. While the County Right-to-Farm Ordinance specifically applies to commercial agricultural operations within the unincorporated area, all commercial agricultural operations that comply with agricultural standards currently are protected from nuisance claims under State law (Section 3482.5 of the California Civil Code), whether located within cities or unincorporated areas.

Agricultural Buffer Policy

Pursuant to Policy AG-P5.3 from the General Plan 2030, Butte County has adopted Article 17 of the Butte County Zoning Ordinance which requires a 300-foot buffer between lands zoned agriculture and new residential development. This ordinance applies to parcels where residential structures are to be developed in the following areas of the county: (1) all lands zoned Agriculture; (2) in other zones within 300 feet of the boundary of Agriculture zones; (3) areas inside and within 300 feet of sphere of influence boundaries for incorporated cities, where the boundary abuts parcels zoned Agriculture; and, (4) areas within 300 feet of a Williamson Act Contract. Exceptions to the 300-foot agricultural buffer setback requirement may be requested by the project applicant through an Unusual Circumstances Review application process.

Agricultural/Residential Buffer Implementation Guidelines

The existing Butte County Zoning Ordinance requires a 300-foot buffer between agricultural and non-agricultural uses. To implement this requirement, and to provide guidance regarding requests for a determination of unusual circumstances, Butte County has prepared Agricultural/Residential Buffer Implementation Guidelines. The buffer must physically separate agricultural and nonagricultural uses and help to minimize potential conflicts. The County may make a determination of unusual circumstances based on criteria outlined in the Guidelines, in which case the buffer may take other forms or be of a lesser distance.

Residential Setback from Orchards and Vineyards in Residential Zones

The Butte County Zoning Ordinance Section 24-56.1 requires a minimum 25-foot setback to be established between new residential development and existing, active orchards and vineyards that are located in Residential zones. Proposed land divisions adjacent to an active orchard or vineyard shall be reviewed by the Agricultural

Commissioner, in consultation with the Development Services Department, to determine an appropriate setback width, which shall be publicity noticed and reviewed by the hearing body.

Discussion

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?

No impact. The California Farmland Mapping and Monitoring Program designates the project parcel as "Grazing Land", which contains land on which the existing vegetation, whether grown naturally or through management, is suitable for grazing or browsing of livestock. Only lands categorized as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance (if adopted by the county) are designated as Important Farmland. The proposed project is not located on lands designated as Important Farmland in the Farmland Mapping and Monitoring Program, and would not result in the conversion of Important Farmland to a non-agricultural use.

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

Less than significant impact. The project site is not under a Williamson Act Contract. And, there are no parcels under a Williamson Act Contract within 300 feet of the project site.

The project site is not zoned Agriculture. The project is zoned HI-RW (Heavy Industrial-Neal Road Recycling, Energy, and Waste Facility Overlay). This zone allows for a full range of uses that are compatible with the Neal Road Recycling and Waste Facility, including agricultural uses such as grazing and crop cultivation. The project site has been extensively disturbed by the uses and development associated with UP17-0009, and would not be suitable for agricultural grazing activities. However, eight acres situated on the western portion of the project site is undisturbed and would continue to be available for agricultural pursuits.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No impact. The project site and surrounding area is not classified as forestland, as defined in Public Resources Code Section 12220(g), or as timberland, as defined in Public Resources Code Section 4526. The project site is not zoned or designated for forest or timber resource uses.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No impact. The project site is located in the foothill region of Butte County, immediately adjacent to the Sacramento Valley. The site does not contain trees or timber resources classified as forestland, as defined in Public Resources Code Section 12220(g), or as timberland, as defined in Public Resources Code Section 4526. Therefore, the proposed project would not result in loss or conversion of forest land to a non-forest use.

e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No impact. The project site is designated as "Grazing Land" under the California Farmland Mapping and Monitoring Program. Lands within 300 feet of the project site are designated "Grazing Land and "Other". No prime, unique or farmland of statewide importance occurs on the project site, or in the immediate vicinity of the project site. Therefore, the project would not result in the conversion of Farmland to a non-agricultural use.

1.3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality.				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations.				
Are significance criteria established by the applicable air district available to rely on for significance determinations?		☒ Yes		☐ No
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
b) 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?	☐	☒	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Environmental Setting

Butte County is located within the Sacramento Valley Air Basin (SVAB), comprising the northern half of California's 400-mile long Great Central Valley. The SVAB encompasses approximately 14,994 square miles with a largely flat valley floor (excepting the Sutter Buttes) about 200 miles long and up to 150 miles wide, bordered on its east, north and west by the Sierra Nevada, Cascade and Coast mountain ranges, respectively.

The SVAB, containing 11 counties and some two million people, is divided into two air quality planning areas based on the amount of pollutant transport from one area to the other and the level of emissions within each. Butte County is within the Northern Sacramento Valley Air Basin (NSVAB), which is composed of Butte, Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba Counties.

Emissions from the urbanized portion of the basin (Sacramento, Yolo, Solano, and Placer Counties) dominate the emission inventory for the Sacramento Valley Air Basin, and on-road motor vehicles are the primary source of emissions in the Sacramento metropolitan area. While pollutant concentrations have generally declined over the years, additional emission reductions will be needed to attain the State and national ambient air quality standards in the SVAB.

Seasonal weather patterns have a significant effect upon regional and local air quality. The Sacramento Valley and Butte County have a Mediterranean climate, characterized by hot, dry summers and cool, wet winters. Winter weather is governed by cyclonic storms from the North Pacific, while summer weather is typically subject to a high pressure cell that deflects storms from the region.

In Butte County, winters are generally mild with daytime average temperatures in the low 50s°F and nighttime temperatures in the upper 30s°F. Temperatures range from an average January low of approximately 36°F to an average July high of approximately 96°F, although periodic lower and higher temperatures are common. Rainfall between

October and May averages about 26 inches but varies considerably year to year. Heavy snowfall often occurs in the northeastern mountainous portion of the County. Periodic rainstorms contrast with occasional stagnant weather and thick ground or "tule" fog in the moister, flatter parts of the valley. Winter winds generally come from the south, although north winds also occur.

Diminished air quality within Butte County largely results from local air pollution sources, transport of pollutants into the area from the south, the NSVAB topography, prevailing wind patterns, and certain inversion conditions that differ with the season. During the summer, sinking air forms a "lid" over the region, confining pollution within a shallow layer near the ground that leads to photochemical smog and visibility problems. During winter nights, air near the ground cools while the air above remains relatively warm, resulting in little air movement and localized pollution "hot spots" near emission sources. Carbon monoxide, nitrogen oxides, particulate matters and lead particulate concentrations tend to elevate during winter inversion conditions when little air movement may persist for weeks.

As a result, high levels of particulate matter (primarily fine particulates or PM2.5) and ground-level ozone are the pollutants of most concern to the NSVAB Districts. Ground-level ozone, the principal component of smog, forms when reactive organic gases (ROG) and nitrogen oxides (NOx) – together known as ozone precursor pollutants – react in strong sunlight. Ozone levels tend to be highest in Butte County during late spring through early fall, when sunlight is strong and constant, and emissions of the precursor pollutants are highest (Butte County CEQA Air Quality Handbook 2014).

Air Quality Attainment Status

Local monitoring data from the BCAQMD is used to designate areas a nonattainment, maintenance, attainment, or unclassified for the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). The four designations are further defined as follows:

Nonattainment – assigned to areas where monitored pollutant concentrations consistently violate the standard in question.

Maintenance – assigned to areas where monitored pollutant concentrations exceeded the standard in question in the past but are no longer in violation of that standard.

Attainment – assigned to areas where pollutant concentrations meet the standard in question over a designated period of time.

Unclassified – assigned to areas were data are insufficient to determine whether a pollutant is violating the standard in question.

Table 1.3-1. Federal and State Attainment Status of Butte County

POLLUTANT	STATE DESIGNATION	FEDERAL DESIGNATION
1-hour ozone	Nonattainment	-
8-hour ozone	Nonattainment	Nonattainment
Carbon monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
24-Hour PM10	Nonattainment	Attainment
24-Hour PM2.5	No Standard	Attainment
Annual PM10	Attainment	No Standard
Annual PM2.5	Nonattainment	Attainment

Source: Butte County AQMD, 2018

Sensitive Receptors

Sensitive receptors are frequently occupied locations where people who might be especially sensitive to air pollution are expected to live, work, or recreate. These types of receptors include residences, schools, churches, health care facilities, convalescent homes, and daycare centers. The project site is located in a rural area with residential uses on parcel sizes between 5 and 40 acres. Table 1.3-2 lists sensitive receptors that were identified in the project vicinity and the distances from the project site.

Table 1.3-2. Sensitive Receptors in the Project Vicinity

SENSITIVE RECEPTORS	DISTANCE FROM PROJECT SITE TO RECEPTOR
Residence (1195 Oroville-Chico Hwy)	5,500 feet southwest
Residence (1251 Oroville-Chico Hwy)	5,530 feet southwest
Residence (1269 Oroville-Chico Hwy)	5,580 feet southwest
Residence (1375 Oroville-Chico Hwy)	6,110 feet southwest
Residence (Unknown)	5,180 feet southeast

Source: Butte County Geographical Information System/Google Earth imagery

Butte County Air Quality Management District

The Butte County Air Quality Management District (BCAQMD) is the local agency with primary responsibility for compliance with both the federal and state standards and for ensuring that air quality conditions are maintained. They do this through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues.

Activities of the BCAQMD include the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, issuance of permits for stationary sources of air pollution, inspection of stationary sources of air pollution and response to citizen complaints, monitoring of ambient air quality and meteorological conditions, and implementation of programs and regulations required by the FCAA and CCAA.

According to the State CEQA Guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make significance determinations for potential impacts on environmental resources. BCAQMD is responsible for ensuring that state and federal ambient air quality standards are not violated within Butte County. Analysis requirements for construction and operation-related pollutant emissions are contained in BCAQMD's *CEQA Air Quality Handbook: Guidelines for Assessing Air Quality and Greenhouse Gas Impacts for Projects Subject to CEQA Review*. Established with these guidelines are screening criteria to determine whether or not additional modeling for criteria air pollutants is necessary for a project. The CEQA Air Quality Handbook also contains thresholds of significance for construction-related and operation-related emissions: ROG, NOx and PM10. The screening criteria listed in Table 1.3-4 were created using CalEEMod version 2013.2.2 for the given land use types. To determine if a proposed project meets the screening criteria, the size and metric for the land use type (units or square footage) should be compared with that of the proposed project. If a project is less than the applicable screening criteria, then further quantification of criteria air pollutants is not necessary, and it may be assumed that the project would have a less than significant impact for criteria air pollutants. If a project exceeds the size provided by the screening criteria for a given land use type then additional modeling and quantification of criteria air pollutants should be performed (Butte County Air Quality Management District 2014).

Table 1.3-4. Screening Criteria for Criteria Air Pollutants

LAND USE TYPE	MAXIMUM SCREENING LEVELS FOR PROJECTS
Single-Family Residential	30 Units
Multi-Family (Low Rise) Residential	75 Units
Commercial	15,000 square feet
Educational	24,000 square feet
Industrial	59,000 square feet
Recreational	5,500 square feet
Retail	11,000 square feet
Source: Butte County AQMD, CEQA Air Quality Handbook, 2014	

Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than significant impact with mitigation incorporated. The proposed project would replace the existing asphalt plant located in the incorporated city of Chico, which has been operating for many years with outdated technology and equipment, and without modernized technology. The proposed plant would operate more efficiently and would be required to meet more stringent emission standards.

The proposed plant is required to comply with all BCAQMD rules and regulations associated with construction and operations, such as Rule 430 (New Source Review), Rule 200 (Nuisance), Rule 205 (Fugitive Dust Emissions), and Rule 202 (Particulate Matter), as well as implementation of BCAQMD's basic Construction Emission Control Practices (**Mitigation Measure AIR-1**). These rules includes the requirement that the proposed facility obtain a Permit to Operate from BCAQMD for each piece of stationary equipment to be operated on the project site, which would ensure that stationary sources use Best Available Control Technology (BACT), offsets and have an analysis of air quality impacts to ensure that the operation of such sources does not interfere with the attainment or maintenance of ambient air quality standards. Compliance with the BCAQMD's permitting process would ensure that emission associated with the processing equipment would be minimized, and the project would not violate any air quality standards or contribute to an existing air quality violation.

b) 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?

Less than significant impact with mitigation incorporated. The proposed project has the potential to impact air quality primarily in two ways: (1) the project would generate emissions associated with the operation of the proposed project, and (2) construction activities associated with the proposed project would generate fugitive dust (PM10) from grading activities, construction exhaust emissions (PM10, NOx), and evaporative emissions of reactive organic gases (ROG or VOC) from paving activities and architectural coatings.

Operational emissions are primarily produced from an increase in motor vehicle traffic and from energy use associated with the project. Construction-related emissions are generally created throughout the course of project implementation, and would originate from construction equipment exhaust, employee vehicle exhaust, dust from grading the land, exposed soil eroded by wind, and ROGs from architectural coating and asphalt paving. Construction-related emissions would vary substantially depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content.

Mitigation Measure AIR-1, as recommended in *Appendix C of BCAQMD's CEQA Handbook (2014)* includes a number of feasible emission control measures that, when implemented, would reduce construction and operational emissions to a less than significant level.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than significant impact with mitigation incorporated. Sensitive receptors in the project area and their distances from the project site area described in Table 1.3-2. Based on the information provided in section b.), above, the proposed project would not result in the violation of any air quality standards or contribute substantially to an existing or projected air quality violation with the implementation of **Mitigation Measure AIR-1**, which would reduce potential cumulative emission impacts to a less than significant level.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than significant impact. Operation of the proposed project would result in fugitive dust and combustion emissions from the drum dryer, which would not include odorous compounds at the low concentrations expected with the project. Operations would also generate evaporative ROG emissions from the HMA storage silo and truck loadout. The odor emissions, if any, are generally related to its intensity with the distance between the source and the sensitive receptor. With surrounding sensitive receptors more than 5,000 feet away from the project site, odor emissions would be unlikely to cause a nuisance to any sensitive receptors.

Mitigation Measures

~~Mitigation Measure #2 (Construction Air Emissions)~~
Mitigation Measure AIR-1

The following best practice measures to reduce impacts to air quality shall be incorporated by the project applicant, subject property owners, or third-party contractors during construction activities on the project site. These measures are intended to reduce criteria air pollutants that may originate from the site during the course of land clearing and other construction operations.

Diesel PM Exhaust from Construction Equipment and Commercial On-Road Vehicles Greater than 10,000 Pounds

- All on- and off-road equipment shall not idle for more than five minutes. Signs shall be posted in the designated queuing areas and/or job sites to remind drivers and operators of the five-minute idling limit.
- Idling, staging and queuing of diesel equipment within 1,000 feet of sensitive receptors is prohibited.
- All construction equipment shall be maintained in proper tune according to the manufacturer's specifications. Equipment must be checked by a certified mechanic and determined to be running in proper condition before the start of work.
- Install diesel particulate filters or implement other CARB-verified diesel emission control strategies.
- Shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5 minutes at any location when within 100 feet of a restricted areas.
- To the extent feasible, truck trips shall be scheduled during non-peak hours to reduce perk hour emissions.

Operational TAC Emissions

- All mobile and stationary Toxic Air Contaminants (TACs) sources shall comply with applicable Airborne Toxic Control Measures (ATCMs) promulgated by the CARB throughout the life of the project (see http:www.arb.ca.gov/toxics/atcm/atcm.htm).
- Stationary sources shall comply with applicable District rules and regulations.

Fugitive Dust

Construction activities can generate fugitive dust that can be a nuisance to local residents and businesses near a construction site. Dust complaints could result in a violation of the District's "Nuisance" and "Fugitive Dust" Rules 200

and 205, respectively. The following is a list of measures that may be required throughout the duration of the construction activities:

- Reduce the amount of the disturbed area where possible.
- Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. An adequate water supply source must be identified. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible.
- All dirt stockpile areas should be sprayed daily as needed, covered, or a District approved alternative method will be used.
- Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities.
- Exposed ground areas that will be reworked at dates greater than one month after initial grading should be sown with a fast-germinating non-invasive grass seed and watered until vegetation is established.
- All disturbed soil areas not subject to re-vegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the Butte County Air Quality Management District.
- All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
- All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with local regulations.
- Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site.
- Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible.
- Post a sign in prominent location visible to the public with the telephone numbers of the contractor and the Butte County Air Quality Management District - (530) 332-9400 for any questions or concerns about dust from the project.

All fugitive dust mitigation measures required should be shown on grading and building plans. In addition, the contractor or builder should designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend period when work may not be in progress. The name and telephone number of such persons shall be provided to the District prior to land use clearance for map recordation and finished grading of the area.

Please note that violations of District Regulations are enforceable under the provisions of California Health and Safety Code Section 42400, which provides for civil or criminal penalties of up to $25,000 per violation.

Plan Requirements: The note shall be placed on a separate document which is to be recorded concurrently with the map or on an additional map sheet. This note shall also be placed on all building and site development plans.

Timing: Requirements of the condition shall be adhered to throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services and the Public Works Department shall ensure that the note is placed on a separate document which is to be recorded concurrently with the map or on an additional map sheet. Building inspectors shall spot check and shall ensure compliance on-site. Butte County Air Pollution Control District inspectors shall respond to nuisance complaints.

1.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources.				
Would the project:				
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 Wildlife or the U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
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 native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Environmental Setting

See Initial Study, Appendix C.

Discussion

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 Wildlife or the U.S. Fish and Wildlife Service?

No impact. The project is located on an area of the property that that has been extensively disturbed by uses and development associated with UP17-0009. No special–status plants or wildlife species, or their habitats, would be impacted by the project.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

No impact. The project site does not contain any riparian habitat or designated Sensitive Natural Community.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less than significant impact with mitigation incorporated. Construction activities have been designed to completely avoid 0.101 acres of wetlands present within the northeast corner of the project site. Any potential impacts to these wetland features have been mitigated under the UP17-0009 IS/MND (see Mitigation Measures BIO-1 through BIO-4, below), which includes a series of measures to replace and protecting these features. Standard best management practices (BMPs) will be used where applicable including the use of silt fencing and/or straw wattles to prevent silt from entering adjacent jurisdictional waters and orange barrier fencing to prevent inadvertent impacts to adjacent biological resources such as avoided trees and wetlands. Further, construction activities will be conducted during the dry season when no flowing or ponded water is anticipated to be present in any of the jurisdictional features.

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 native wildlife nursery sites?

Less than significant impact. The project site is not located within Butte County migratory deer corridors. No major migratory routes or corridors have been designated through the project site, and the existing developed components of the project area (i.e., roads, land fill, fenced parcels) preclude use of the area as a migratory wildlife corridor for large mammals. However, the site may facilitate home range and dispersal movement of resident wildlife species, including birds, small mammals and other wildlife. Development of the proposed project would follow the existing pattern of development found in the area, and would continue to allow for limited resident wildlife species movement.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No impact. The project would not conflict with any local policies or ordinances protecting biological resources and is consistent with goals and policies identified in Butte County General Plan 2030.

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?

No impact. The Butte Regional Conservation Plan (BRCP) is a joint Habitat Conservation Plan (HCP)/National Community Conservation Plan (NCCP) that is currently being prepared for the western half of the Butte County. In the event the BRCP is adopted, individual projects and development that occur in the BRCP planning area would need to be coordinated with the Butte County Association of Governments to ensure that the project does not conflict with the BRCP. As the plan has not been adopted, the proposed project will not conflict, nor interfere with, the attainment of the goals of the proposed plan.

Mitigation Measures

~~Mitigation Measure #3 (Construction staging, storage, and parking areas)~~
Mitigation Measure BIO-1

Construction staging, storage, and parking areas shall be located 500 feet from streams and wetlands. All refueling, fuels, and equipment maintenance shall occur 500 feet from wetlands and streams. Vehicle travel adjacent to wetland and riparian areas shall be limited to existing roads and designated temporary access roads. Sensitive natural communities (i.e., wetlands, ephemeral drainages and oak woodlands) shall be conspicuously marked in the field (including suitable buffer zones) to minimize impacts on these communities, and work activities shall be limited to outside the marked areas.

Plan Requirements: The above-referenced mitigation shall be included on project improvement and building plans.

Timing: Requirements of the condition shall be adhered to prior to construction activities, and throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services and the Public Works Department shall ensure that the above-referenced mitigation shall be included on project improvement and building plans. Department of Development Services shall ensure the condition is met at the time of development and during construction activities.

~~Mitigation Measure #4 (Section 404 permit)~~
Mitigation Measure BIO-2

Prior to any construction activities that would disturb protected wetlands and/or jurisdictional areas, the project applicant shall obtain the appropriate state and federal authorizations (Streambed Alteration Agreement, Section 404 Permit, Section 401 water quality certification). During construction the project applicant shall comply with the requirements of these authorizations throughout the project.

Plan Requirements: Obtain appropriate State and federal authorizations and permits prior to activities that would impact resources under their jurisdiction. The above-referenced mitigation shall be included on project improvement and building plans.

Timing: Requirements of the condition shall be adhered to prior to construction activities, and throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services and the Public Works Department shall ensure that the above-referenced mitigation shall be included on project improvement and building plans. The Department of Development Services shall ensure the condition is met prior to site disturbing activities that would impact resources under the jurisdiction of State and federal agencies.

~~Mitigation Measure #5 (Wetlands)~~
Mitigation Measure BIO-3

The project applicant shall compensate for any direct impacts to protected wetlands and/or jurisdictional areas to ensure no net loss of habitat functions and values. Compensation ratios shall be based on site-specific information and determined through coordination with state, federal, and local agencies as part of the permitting process for the project. Unless determined otherwise by the regulatory/permitting agency, the compensation for wetland creation shall be at a minimum ratio of 1 acre for every 1 acre disturbed, and a minimum of 2 acres of wetland preservation for every 1 acre of wetland disturbed. Compensation may comprise of onsite restoration/creation, off-site restoration, preservation, or mitigation credits (or a combination of these elements). If onsite wetland creation/restoration is proposed, the applicant shall develop and implement a restoration and monitoring plan that describes how the habitat shall be created/restored together with a plan that describes how the habitat shall be monitored over a period of time.

Plan Requirements: Obtain appropriate State and federal authorizations and permits prior to activities that would impact resources under their jurisdiction. The above-referenced mitigation shall be included on project improvement and building plans.

Timing: Requirements of the condition shall be adhered to prior to construction activities, and throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services and the Public Works Department shall ensure that the above-referenced mitigation shall be included on project improvement and building plans. Building and Public Works inspectors shall spot check and shall ensure compliance on-site.

~~Mitigation Measure #6 (ESA Avoidance and Minimization Measures)~~
Mitigation Measure BIO-4

The project applicant shall implement the following measures and practices to prevent inadvertent direct and indirect impacts to onsite biological resources such as oak woodlands and Waters of the United States (WOTUS) including wetlands.

a. The project proponent shall include a copy of the Biological Opinion (BO), as applicable, within its construction documents making the primary contractor responsible for implementing all requirements and obligations included within the BO, and to educate and inform all other contractors involved in the project as to the requirements of the BO.
b. The contractor shall be responsible for understanding and following the guidelines set forth in the Section 404 permit and Section 401 water quality certification and the contractor will avoid and minimize potential construction-related water quality impacts through compliance with the RWQCB by preparing and submitting the following water quality permits and plans.
    I. A National Pollutant Discharge Elimination System (NPDES) storm water permit for general construction activities.
    II. A Notice of Intent to obtain proper coverage under the State Construction General Permit.
c. The contractor shall ensure, when feasible, that activities that are inconsistent with the maintenance of the suitability of vernal pool crustacean habitat and the associated onsite watershed are prohibited. These include, but are not limited to:
    I. The alteration of existing topography that may alter hydrology into habitat for Federally-listed vernal pool crustaceans;
    II. The placement of any equipment within suitable habitat; and
    III. Dumping, burning, and/or burying of rubbish, garbage, or any other wastes and fill materials within 250 feet of habitat.
d. Prior to the commencement of construction activities, high visibility fencing will be erected around the habitats of the federally listed species to identify and protect these Environmentally Sensitive Areas (ESA, e.g. vernal pools) from encroachment of personnel and equipment. These areas shall be avoided by all construction personnel. The

fencing shall be inspected before the start of each work day and maintained by the contractor until completion of the project. The fencing may be removed only when the construction of the project is completed.

e. Construction timing will be confined to the summer and fall months when Waters of the United States and suitable habitat within the project site are dry.
f. During construction activities silt fencing will be erected as necessary to prevent dust from drifting into adjacent WOTUS and suitable habitat.
g. During construction operations, the number of access routes, number and size of staging areas, and the total area of the proposed project activity will be restricted to established roadways to minimize habitat disturbance.
h. During construction operations, stockpiling of construction materials, portable equipment, vehicles and supplies will be restricted to the designated construction staging areas and exclusive of the ESAs.

Plan Requirements: The project applicant shall implement the above-referenced measures and ensure that the measures are included in all construction plans. The above-referenced mitigation shall be included on all project improvement and building plans.

Timing: Requirements of the condition shall be adhered to prior to construction activities, and throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services and the Public Works Department shall ensure that the above-referenced mitigation shall be included on project improvement and building plans. Building and Public Works inspectors shall spot check and shall ensure compliance on-site.

1.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources.				
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Environmental Setting

An Archaeological Inventory Survey was prepared for the original conditional use permit UP17-0009 (see Appendix B) on August 2017. The report included an a search of State databases including all records and documents available at the Northeast Information Center, as well as consultation with the Native American Heritage Commission and local Native American Tribes.

Discussion

a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Less than significant impact with mitigation incorporated. The archaeological records search and pedestrian survey on the project site did not reveal the existence of any historic resources on the project site.

Native American populations used the local region for seasonal and/or permanent settlement, as well as for the gathering of plants, roots, seeds, and seasonal game. Historically, Euro-Americans utilized the region for mining farming, and cattle ranching. With historic use of the project area by prehistoric and historic populations, unanticipated and accidental archaeological discoveries may be encountered during ground-disturbing activities, resulting in potentially significant impacts. To avoid potential impacts to undiscovered prehistoric resources, historic resources, and human remains that may be uncovered during development activities on the project site, **Mitigation Measure CUL-1**, below, is recommended.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less than significant impact with mitigation incorporated. The archaeological records search and pedestrian survey on the project site did not reveal the existence of any archeological resources on the project site or within the project area. The possibility exists that buried archaeological resources that may meet the criteria of a unique archaeological resource is present on the project site. If any buried resources are encountered and damaged during project implementation, the destruction of the archaeological resources would be a potentially significant impact. Implementation of **Mitigation Measure CUL-1** would reduce this impact to a less-than-significant level.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less than significant impact with mitigation incorporated. Indications are that humans have occupied Butte County for over 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, formal burials.

Under CEQA, human remains are protected under the definition of archaeological materials as being "any evidence of human activity." Additionally, *Public Resources Code section 5097.98* has specific stop-work and notification procedures to follow in the event that human remains are inadvertently discovered during project implementation.

The Butte County Conservation Element has established two policies that address the inadvertent discovery of human remains. COS-P16.3 requires human remains discovered during construction to be treated with dignity and respect and to fully comply with the federal Native American Graves Protection and Repatriation Act and other appropriate laws. COS-P16.4 requires work to stop if human remains are found during construction until the County Coroner has been contacted, and, if the human remains are determined to be of Native American origin, the North American Heritage Commission and most likely descendant have been consulted.

Implementation of the **Mitigation Measure CUL-1** would ensure that all construction activities that inadvertently discover human remains implements state required consultation methods to determine the disposition and historical significance of any discovered human remains. **Mitigation Measure CUL-1** would reduce this impact to a less than significant level.

Mitigation Measures

~~Mitigation Measure #7 (Cultural Resources)~~
Mitigation Measure CUL-1

Should grading activities reveal the presence of prehistoric or historic cultural resources (i.e. artifact concentrations, including arrowheads and other stone tools or chipping debris, cans glass, etc.; structural remains; human skeletal remains) work within 50 feet of the find shall immediately cease until a qualified professional archaeologist can be consulted to evaluate the find and implement appropriate mitigation procedures. Should human skeletal remains be encountered, State law requires immediate notification of the County Coroner ((530) 538-6579). Should the County Coroner determine that the remains are in an archaeological context, the Native American Heritage Commission in Sacramento shall be notified immediately, pursuant to State Law, to arrange for Native American participation in determining the disposition of such remains. These provisions shall be followed during all phases of construction, including land clearing, road construction, utility installation, and building site development.

Plan Requirements: In the event that potential cultural resources are found during construction activities, construction personnel shall immediately cease work and contact a qualified professional archaeologist to evaluate the discovery. The landowner or construction personnel shall notify the Planning Division and a professional archaeologist. The Planning Division shall coordinate with the developer and appropriate authorities to avoid damage to cultural resources and determine appropriate action. State law requires the reporting of any human remains. This mitigation shall be noted on all site development and building plans.

Timing: This measure shall be implemented during all site preparation and construction activities.

Monitoring: The Department of Development Services shall ensure the mitigation is noted on all site development and building plans for the subject parcel. Should cultural resources be discovered, the landowner or construction personnel shall notify the Planning Division and a professional archaeologist. The Planning Division shall coordinate with the developer and appropriate authorities to avoid damage to cultural resources and determine appropriate action. State law requires the reporting of any human remains.

1.6 ENERGY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Energy.				
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Discussion

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than significant impact. The proposed project would consume energy primarily in two ways: (1) construction activities would consume energy through the operation of heavy off-road equipment, trucks, and worker traffic, and (2) asphalt batch uses and activities would cause long-term energy consumption from electricity and propane gas consumption, energy used for water conveyance, and vehicle operations to and from the project site.

Construction energy consumption would largely occur from fuel consumption by heavy equipment during grading activities associated with road and building site clearance; trucks transporting construction materials to the site during development; and, worker trips to and from the job site. Energy consumption during construction related activities would vary substantially depending on the level of activities, length of the construction period, specific construction operations, types of equipment, and the number of personnel. Despite this variability in the construction activities, the overall scope of the anticipated construction at the project site is relatively minor, and would be complete within a few weeks, and therefore, would not require a substantial amount of fuel to complete construction. Additionally, increasingly stringent state and federal regulations on engine efficiency combined with local, state, and federal regulations limiting engine idling times and recycling of construction debris, would further reduce the amount of transportation fuel demand during project construction. Considering the minimal amount of construction activities associated with the project, the proposed project would not result in the wasteful and inefficient use of energy resources during construction and impacts would be less than significant.

Long-term energy consumption would occur after build-out of the project. Proposed uses would consume electricity and/or propane gas to operate the HMA plant. Whereas, electricity would primarily be used for lighting, appliances, water conveyance and other activities within the home. The project would also generate additional vehicle trips, which would result in the consumption of transportation fuel associated with the delivery of the final product and virgin aggregates, as well as from employees traveling to and from the site.

State and federal regulatory requirements addressing fuel efficiency are expected to increase fuel efficiency over time as older, less fuel-efficient vehicles are retired, and therefore would reduce vehicle fuel energy consumption rates over time. Therefore, energy impacts related to fuel consumption/efficiency during project operations would be less than significant.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

Less than significant impact. Many of the state and federal regulations regarding energy efficiency are focused on increasing building efficiency and renewable energy generation, as well as reducing water consumption and Vehicles Miles Traveled. The proposed project includes energy conservation measures to meet and exceed the regulatory requirements, including reducing idling time of heavy equipment during construction activities (see Mitigation Measure AIR-1 and GHG-1), prewiring new non-residential structures for solar photovoltaic systems, maximizing roof space to accommodate future rooftop solar installations, and prewiring for ground-mounted solar PV systems. Additionally, new non-residential buildings would need to achieve the most recent Title 24 CALGreen building code standards at the time of project construction. Therefore, the proposed project would implement energy reduction design features and comply with the most recent energy building standards and would not result in wasteful or inefficient use of nonrenewable energy sources.

1.7 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Geology and Soils.				
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
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 California Geological Survey Special Publication 42.)	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Discussion

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

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 California Geological Survey Special Publication 42.)

Less than significant impact. There are no known active faults underlying, or adjacent to, the project site. The Cleveland Hill fault is the only active fault zone in Butte County identified in the most recent Alquist-Priolo Earthquake Fault Zoning Map. The Cleveland Hill fault is located east of Dunstone Drive and Miners Ranch Road, between North Honcut Creek and Mt. Ida Road, approximately 4± miles southeast of the City of Oroville. Because the nearest active fault is located a considerable distance from the project site, the likelihood of a surface rupture at the project site is very low, and would not be a design consideration for future development.

ii) Strong seismic ground shaking?

Less than significant impact. Ground shaking at the project site could occur due to the earthquake potential of the regions active faults. However, active faults are relatively distant from the project site, and would result in low to moderate intensity ground shaking during seismic events. Future development on the project site would be subject to the California Building Code (CBC). The CBC would provide minimum standards to safeguard life or limb, health, property and public welfare by regulating the design, construction, quality of materials, use and occupancy, location, and maintenance of buildings and structures within Butte County. Adherence to the CBC during building construction would ensure that potential impacts are less than significant.

iii) Seismic-related ground failure, including liquefaction?

Less than significant impact. According to Butte County General Plan 2030, areas that are at risk for liquefaction can be found on the valley floor, especially near the Sacramento and Feather Rivers, and their tributaries, which have a higher potential to contain sandy and silty soils. The California Building Code (CBC) regulates the construction of structures, which may be constructed with approval of the proposed project. Adherence to CBC standards at the time of development of the resultant parcels would ensure that new structures are adequately sited and engineered to reduce impacts related to seismic ground failure, including liquefaction, are less than significant.

iv) Landslides?

Less than significant impact. The project area is primarily level with 0-4% slopes on the ridgetop, with slopes increasing to ±20% at the woodland tree line, and then back to 3-8% slopes west of the tree line. The proposed project would be located on the ridgetop where slopes are generally level. As a result, the landslide potential for the project site and surrounding area is low. Though the potential for landslides are generally low, shallow slope failures can occur in virtually any sloping terrain during construction activities. Avoidance of potentially sensitive slopes and/or implementation of appropriate engineering and construction measures at the time of development would avoid or reduce potential impacts of landslides to a less than significant level.

b) Result in substantial soil erosion or the loss of topsoil?

Less than significant impact. According to Figure 4.6-4 of Butte County General Plan 2030, the project site has a slight potential of soil erosion. Nevertheless, surface soil erosion and loss of topsoil has the potential to occur in any area of the county from disturbances associated with the construction-related activities. Construction activities could also result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at the construction site and staging areas.

During construction-related activities, specific erosion control and surface water protection methods for each construction activity would be implemented on the project site. The type and number of measures implemented would be based upon location-specific attributes (i.e., slope, soil type, weather conditions). These control and protection measures, or BMPs, are standard in the construction industry and are commonly used to minimize soil erosion and water quality degradation.

Additionally, construction activities are subject to the National Pollutant Discharge Elimination System (NPDES) General Construction Activities Storm Water permit program. This program requires implementation of erosion control measures during and immediately after construction that are designed to avoid significant erosion during the construction period. In addition, the project operation would be subject to State Water Resources Control Board requirements for the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) to control pollution in stormwater runoff from the project site, including excessive erosion and sedimentation. The SWPPP, if required, must be obtained prior to any soil disturbance activities. Implementation of standard erosion control BMP's during future construction-related activities, together with adherence to State requirements regarding grading activities, would ensure that potential erosion impacts are less than significant.

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?

Less than significant impact. According to Butte County General Plan 2030, the project site is not located in an area prone to landslides, subsidence or liquefaction. However, destabilization of natural or constructed slopes could occur as a result of future construction activities. Excavations, grading, and fill operations associated with the proposed development could alter existing slope profiles making them unstable as a result of over-excavation of slope material, steepening of the slope, or increased loading. Standard engineering design features and construction procedures would be implemented to maintain stable slopes and excavations during construction, reducing impacts of unstable slopes to a less than significant level.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?

Less than significant impact. According to Figure 4.6-3 of Butte County General Plan 2030, the project site is located in an area with a low to moderate potential to have expansive soils. Expansive soils can cause structural damage particularly when concrete structures are in direct contact with the soils. Appropriate design features to address expansive soils may include excavation of potentially problematic soils during construction and replacement with engineered backfill, ground-treatment processes, direction of surface water and drainage away from foundation soils, and the use of deep foundations such as piers or piles. Implementation of these standard engineering methods and adherence to California Building Code (CBC) standards at the time of development of the resultant parcels would ensure that any impacts associated with expansive soils would remain less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No impact. An existing wastewater disposal system had been installed on the project site with the build-out of the initial phase, under permit no. EHS18-0250. The proposed project (Phase 2) would add 1 to 2 additional employees to the project site. According to the Butte County Environmental Health Division, the existing septic is adequately sized to accommodate the additional load to the system. No impacts are anticipated.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than significant impact. The project is classified as a Pliocene-age Tuscan Formation (Unit B). The Tuscan Formation consists of volcanic mudflows, tuff, breccia, and sandstone deposited on the site by streams and mudflows between two and four million years ago. The mudflows had spread out over the area, burying older rock, filling low areas, and gradually building a flat subdued landscape. The Tuscan Formation is characterized by near horizontal layers within the formation with a four-million-year-old volcanic ash horizon at the bottom of the formation. The maximum thickness of conglomerate layers is about 15 meters. The total thickness of the unit is about 130 meters (Geology of the Northern California Sacramento Valley, 2014).

No previously recorded fossil sites has been identified within this geologic type. Therefore, it is not likely that unique paleontological resources would be found during excavations. Further, the discovery of fossils, and the subsequent opportunity for data collection and study, is a rare event that could occur from construction grading activities associated with development. As a result, the probability of encountering fossils on the project site is low, and would have a less than significant impact on previously unknown paleontological resources.

1.8 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Greenhouse Gas Emissions.				
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☒	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Environmental Setting

The Butte County Climate Action Plan (CAP) was adopted on February 25, 2014. The Butte County CAP provides goals, policies, and programs to reduce GHG emissions, address climate change adaptation, and improve quality of life in the county. The Butte County CAP also supports statewide GHG emission-reduction goals identified in AB 32 and SB 375. Programs and actions in the CAP are intended to help the County sustain its natural resources, grow efficiently, ensure long-term resiliency to a changing environmental and economic climate, and improve transportation. The Butte County CAP also serves as a Qualified GHG Reduction Strategy under CEQA, simplifying development review for new projects that are consistent with the CAP.

A 2006 baseline GHG emission inventory was prepared for unincorporated Butte County. The inventory identified the sources and the amount of GHG emissions produced in the county. The leading contributors of GHG emissions in Butte County are agriculture (43%), transportation (29%), and residential energy (17%). The Climate Action Plan (CAP) adopted by the County provides a framework for the County to reduce GHG emissions while simplifying the review process for new development. Measures and actions identified in the CAP lay the groundwork to achieve the adopted General Plan goals related to climate change, including reducing GHG emissions to 1990 levels by 2020.

New projects are evaluated to determine consistency with the CAP and to identify which GHG emission reduction measures would be implemented with project approval. These measures may include expansion of renewable energy systems for new residential development by prewiring future development for photovoltaic systems; reduction of construction equipment idling time; and, installation of electric vehicle charging outlets in the garage or the exterior of the home.

Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. GHG emissions increases would occur during proposed project construction and operation. GHG from project construction would include emissions from fuel combustion in construction equipment, haul trucks, and worker commute vehicles. For proposed project operation, GHG emissions from fuel combustion in the drum dryer and oil heater would contribute to the direct GHG emissions from onsite equipment. Indirect GHG emissions associated with the plant operation would include the emissions due to power generation for the proposed plant power needs. GHG emissions would also result from fuel combustion in the haul trucks used for material and product delivery.

The proposed project would be required to implement **Mitigation Measure GHG-1**, which reduces project emissions of heavy-duty diesel-powered equipment during construction and long-term GHG emissions

associated with the proposed uses. Implementation of this measure would minimize project-related GHG emissions to the extent feasible, consistent with AB 32 GHG reduction goals, and would therefore result in a less than significant impact.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact. The project is subject to compliance with AB 32 greenhouse gas emission reduction goals, which are to reduce statewide GHG emissions to 1990 levels by 2020. Additionally, development of the proposed storage building would be subject to Title 24, California Building Code, which includes CalGreen standards. These standards include mandatory measures that address planning and design, energy efficiency, water efficiency/conservation, material conservation and resource efficiency, and environmental quality. Implementation of **Mitigation Measure GHG-1** would mitigated project-generated GHG emissions through programmatic-level measures established through the Butte County CAP. The project's compliance with the applicable policies and measures in the CAP would in turn meet the statewide GHG emission reduction goals.

Mitigation Measures

~~Mitigation Measure #8 (Greenhouse Gas Emissions):~~
Mitigation Measure GHG-1

The project applicant shall implement the following measures to reduce construction-related and operational greenhouse gas emissions generated by the project. These measures will be enforced prior to building permit issuance for on-site structures and during construction activities:

- Achieve CAL Green Tier 1 standards for energy efficiency, water conservation, and passive design for non-residential uses.
- Prewire new non-residential development for solar PV systems and maximize roof space to accommodate future rooftop solar installation.
- Prewire the facility for ground-mounted solar PV systems.
- Improve fuel efficiency from construction equipment by limiting idling time for all construction equipment to three minutes or less.
- Use clean or alternative fuel equipment, if available.

Plan Requirements: The mitigation shall be noted on all site development and building plans for the subject parcel. Measures shall be implemented prior to issuance of building permits for new non-residential buildings. Construction-related measures shall be adhered to throughout all grading and construction periods. These measures shall be noted on all building and site development plans.

Timing: Prior to issuance of building permits for new non-residential buildings. Construction-related measures shall be adhered to throughout all grading and construction periods.

Monitoring: The Department of Development Services shall ensure the mitigation is noted on all site development and building plans for the subject parcel and will review building permit and development plans to ensure the measures have been incorporated into the project design, and perform onsite inspections during construction activities.

1.9 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hazards and Hazardous Materials.				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
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 result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than significant impact. Asphalt is considered hazardous by the Occupational Safety and Health Administration (OSHA). The hazards associated with asphalt include eye and skin burns from contact with the hot material and fumes from hot asphalt can cause skin, eye and respiratory irritation. Asphalt oil used in the production of asphalt is also considered hazardous.

Operation of the proposed project involves the routine transportation of asphalt oil to the proposed project site and asphalt from the site to construction sites. To ensure routine transportation of asphalt oil and asphalt

does not pose a significant risk to the public or the environment, the trucks are enclosed and equipped with safety features including warning devices. The asphalt oil trucks have additional safety features such as fuel pump relief valve protection and immediate shut off and reverse flow capability. Drivers are trained and certified to operate the trucks and respond to emergency situations should they arise. The trucks are required to be fitted with labels identifying the hazardous materials to responders in the event of an emergency. These safety features, along with driver operation and emergency response training would ensure that operation of the proposed project would have a less than significant impact on the public under accident or upset conditions.

Large quantities of other hazardous materials including diesel fuel, liquid propane and waste oil would also be permanently stored or used within the project site. Hazardous materials, including hazardous substances and waste that is stored in large quantities at the project site, and that would be potentially injurious to persons or the environment requires that the owner obtain a Hazardous Materials Business Plan (HMBP). The HMBP is a document that contains details about the hazardous materials at the facility, emergency response plans and procedures in the event of an accidental release, employee training of safety procedures, and a site map identifying storage and handling areas.

Project construction and/or grading associated with the proposed project is not expected to create a hazard to the public through accidental release of hazardous materials. The use of materials during the construction phase that is considered hazardous would be limited to the fuels, oils, and solvents contained in construction vehicles. All other materials stored or stockpiled in the staging area would be inert and are not considered hazardous. Any potential impacts that could occur as a result of project construction would be further minimized and contained through implementation of standard best management practices and measures of the project's Stormwater Pollution Prevention Plan (SWPPP) and the Spill Prevention, Control, and Countermeasure (SPCC) Plan, created as part of the NPDES General Construction Permit.

Compliance with existing State regulations including obtaining a HMBP for the permanent storage of hazardous materials on the property, and obtaining a NPDES General Construction Permit, would ensure impacts related to the handling, storage and transport of hazardous materials are less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?

Less than significant impact. The proposed project involves transportation of asphalt and asphalt oil which are hazardous materials and could pose a health and safety hazard. However, through compliance with management plans and applicable rules and regulations governing storage, transport, disposal, and abatement of hazardous materials it is not anticipated that construction or operation would pose a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, the proposed project would have a less than significant impact.

Hazardous materials, including diesel fuel and other motor lubricants would also be used during construction and operational activities. As previously discussed, the handling and transport of all hazardous materials onsite would be performed in accordance with applicable laws and regulations. It's not anticipated that construction or operations would create a significant hazard to the environment or to the public due to the accidental release of hazardous materials into the environment. Accidental release of hazardous materials routinely used during construction activities are addressed in section a.), above.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No impact. No existing or proposed schools have been identified within one-quarter mile of the project site.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No impact. A review of regulatory agency databases, which included lists of hazardous materials sites compiled pursuant to California Government Code Section 65962.5, did not identify a contamination site within, or in the vicinity of, the project site.

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 result in a safety hazard or excessive noise for people residing or working in the project area?

No impact. The proposed project site is not located within an airport land use plan or within 2 miles of a public airport or public use airport. The Paradise Airport is located approximately 6.3 miles northeast from the project site. Therefore, no safety hazard associated with proximity to an airport is anticipated for the proposed project and there would be no impact.

The proposed project is located outside the compatibility zones for the area airports, and therefore, would not result in a safety hazard to people working and residing on the project site.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than significant impact. Construction activities within the road right-of-way may temporarily restrict vehicular traffic. Prior to construction activities, a traffic control plan would be required in conjunction with a Butte County Encroachment Permit, and will be reviewed by the Public Works Department. The traffic control plan would implement appropriate measures to facilitate the safe passage of vehicles through or around any temporary road closures, ensuring that roadways and intersections would continue to operate at an acceptable level of service during an emergency.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Less than significant impact. The project site has been designated as a very high fire hazard by the State Department of Forestry and Fire Protection. The project site is also within a designated State Responsibility Area (SRA), which means that the State has fiscal responsibility for preventing and suppressing wildfires. Due to the heightened risk of wildfire and increased potential for damage or loss in SRAs, development within these areas must comply with special building requirements established in Chapter 7A of the California Building Code and Chapter 47 of the California Fire Code. SRAs are also regulated by Public Resources Code 4290 and 4291, which establish standards for access, signage, maintenance of defensible space and vegetation management. These standards will be included as conditions of approval and implemented at the time of development. Implementation these standards, as well as oversight by Butte County Fire/Cal Fire, would ensure the proposed project would not expose people or structures to a significant risk or loss, injury or death involving wildland fires.

1.10 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Hydrology and Water Quality.				
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial on- or offsite erosion or siltation;	☐	☐	☒	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii) 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; or	☐	☐	☒	☐
iv) Impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Discussion

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less than significant impact. Butte County General Plan 2030 identifies the soil conditions of the project site has a slight potential to erode. Though the potential for erosion is low, site development would require grading, excavation and general site preparation activities, which could result in erosion of on-site soils and sedimentation during storm or high wind events. Erosion of on-site soils may temporarily impact surface water quality and water quality within nearby waterways. Downstream impacts from erosion may include increased turbidity and suspended sediment concentrations in waterways. Eroded soils also contains nitrogen,

phosphorous and other nutrients, that when deposited in water bodies, can trigger algal blooms that reduce water clarity, deplete oxygen, and create odors.

The proposed Project would be constructed and operated in accordance a National Pollutant Discharge Elimination System (NPDES) Permit. The project would require preparation of a Stormwater Pollution Prevention Plan (SWPPP), which includes specific erosion control and surface water protection measures for the construction activity and the operation of the facility. The type and number of measures implemented at the site would be based upon location-specific attributes (i.e., slope, soil type, weather conditions), and would be implemented on the project site by the applicant. A condition of approval reflecting the requirement of the applicant to obtain a NPDES permit, prior to grading activities, will be included with project approval, and would ensure potential impacts are less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than significant impact. Domestic water to existing site and planned project would be provided by groundwater extraction via an individual well. General Plan 2030 and the associated Environmental Impact Report included several actions and policies to address groundwater supplies within the County and how to sustain groundwater resources. One of these action has been the adoption of the Butte County Integrated Water Resources Plan and Butte County Groundwater Management Plan, which included an analysis of long-term water usage and supplies with the 2001 Butte County Water Inventory and Analysis. The findings contained in these reports together with the application of existing policies and plans led Butte County to conclude that the growth anticipated with General Plan 2030 would have a less than significant impact to groundwater supplies.

The proposed project would have a minimal net increase in impervious surfaces added to the project site from the proposed development. The projected increase would not cause a measureable reduction in surface infiltration or a decrease in deep percolation to the underlying aquifers largely because the surface consists of an impervious layer of volcanic tuff. However, areas west of the project site would be free from development and would provide open areas to allow for runoff infiltration.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in substantial on- or offsite erosion or siltation;

Less than significant impact. The drainage concept for the proposed project would generally maintain the same flow pattern as the existing condition. The area of the proposed project site where the proposed plant is located would be regraded in a way that generally maintains the existing drainage pattern of the site, and avoid areas of ponding. The majority of runoff from the development area would drain to a series of swales and detention basins, which would capture any sediment-laden runoff.

During construction-related activities, specific erosion control and surface water protection methods for each construction activity would be implemented on the project site by construction personnel. The type and number of measures implemented would be based upon location-specific attributes (i.e., slope, soil type, weather conditions) defined in the site's SWPPP. Application of BMPs administrated during the construction process would minimize the potential increase of surface runoff from erosion.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

Less than significant impact. The amount of impervious surface area from the proposed project would be generally similar to the existing site conditions due to the geologic conditions consisting of lava cap. Prior to development of the proposed project, Butte County Public Works will review grading and drainage plans to ensure detention basins are adequately sized to accommodate any potential increase in runoff from the decrease of absorption rates of the site.

iii) 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; or

Less than significant impact. The proposed project would neither create nor contribute a substantial amount of polluted runoff because, as detailed in the sections above, the existing drainage conditions would be designed to accommodate the new flows.

iv) Impede or redirect flood flows?

Less than significant impact. The floodplain mapping of the project area identifies the project site being located within the X (shaded) zone. The X (shaded) zone is defined by the Federal Emergency Management Agency (FEMA) as areas between the limits of the 100-year base flood and the 0.2-percent-annual-chance (or 500-year) flood.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No impact. The floodplain mapping of the project area identifies the project site being located within the X (shaded) zone. The X (shaded) zone is defined by FEMA as areas between the limits of the 100-year base flood and the 0.2-percent-annual-chance (or 500-year) flood. The project site is not located in an area that would be impacted by a seiche, tsunami, or mudflows.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No impact. The project site is not located in an area subject to a water quality control plan or sustainable groundwater management plan.

1.11 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Land Use and Planning.				
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Environmental Setting

See Initial Study, Appendix C.

Discussion

a) Physically divide an established community?

No impact. The project is located within the boundaries of the subject property, and does not include features such as a highway, above-ground infrastructure, or an easement that would cause a permanent disruption to an established community or would otherwise create a physical barrier within an established community. Therefore, the project would not physically divide an established community.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less than significant impact. The project site is located within the HI-RW (Heavy Industrial-Neal Road Recycling and Waste Facility Overlay) zone. *Manufacturing and Processing* uses, which includes asphalt batch plants, are permitted with the approval of a Conditional Use Permit. The proposed project must be found consistent with several applicable development standards, as well as General Plan policies.

The proposed project is consistent with the uses permitted under the General Plan land use and zoning designations for the project site and, as detailed throughout this Initial Study, the General Plan's applicable goals, policies and actions. In addition, all impacts to the environment resulting from the proposed project are subject to applicable mitigation and local, State and/or federal regulations, which would reduce those impacts to less than significant levels. Therefore, impacts related to conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to General Plan 2030, specific plan, Airport Land Use Compatibility Plan or County ordinances) adopted for the purpose of avoiding or mitigating an environmental effect are less than significant.

1.12 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Mineral Resources.				
Would the project:				
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Discussion

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?

Less than significant impact. There are no known economically viable sources of rock materials in the immediate vicinity of the project site, and mineral resource extraction is not proposed with this project. Further, no mining operations have occurred on the project site or surrounding area, and the project would not preclude future extraction of available mineral resources. However, the project would use raw aggregates and recycled asphalt (RAP) as part of the asphalt batching process, as well as in the construction of structures and access roads. Aggregates make up the primary component of an asphalt mixture at approximately 90 percent of the total weight. At this rate, approximately 54,000 tons of aggregates would be used per year if an estimated 60,000 tons of asphalt is produced at the facility. The total amount of aggregates used at the proposed facility would be offset from the closure of the existing asphalt batch plant in the city of Chico. Therefore, the project is not anticipated to result in the loss of a substantial amount of aggregates in the region.

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?

No impact. The project site is not within or near any designated locally-important mineral resource recovery site.

1.13 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII.Noise.				
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or 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?	☐	☐	☐	☒

Environmental Setting

According to the Butte County General Plan 2030, noise is a concern throughout Butte County, but especially in rural areas and in the vicinity of noise-sensitive uses such as residences, schools, and churches. Noise is discussed in the Health and Safety Chapter of the Butte County General Plan 2030. Tables HS-2 and HS-3 in the County General Plan (included as Tables 1.13-1 and 1.13-2 below) outline the maximum allowable noise levels at sensitive receptor land uses.

Table 1.13-1. Maximum Allowable Noise Exposure Transportation Noise Sources

	Exterior Noise Level Standard for Outdoor Activity Areas[a]		Interior Noise Level Standard	
LAND USE	L_{dn}/CNEL, dB	L_{eq}, dBA[b]	L_{dn}/CNEL, dB	L_{eq}, dBA[b]
Residential	60[c]	-	45	-
Transient Lodging	60[c]	-	45	-
Hospitals, nursing homes	60[c]	-	45	-
Theaters, auditoriums, music halls	-	-	-	35
Churches, meeting halls	60[c]	-	-	40
Office Buildings	-	-	-	45
Schools, libraries, museums	-	70	-	45
Playgrounds, neighborhood parks	-	70	-	-

Source: Table HS-2, Butte County General Plan 2030

[a] Where the location of outdoor activity areas is unknown, the exterior noise-level standard shall be applied to the property line of the receiving land use.

[b] As determined for a typical worst-case hour during periods of use.

[c] Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed, provided that available exterior noise-level reduction measures have been implemented and interior noise levels are in compliance with this table.

Table 1.13-2. Maximum Allowable Noise Exposure Non-Transportation Noise Sources

	Daytime 7 am - 7 pm		Evening 7 pm - 10 pm		Night 10 pm - 7 am	
NOISE LEVEL DESCRIPTION	Urban	Non-Urban	Urban	Non-Urban	Urban	Non-Urban
Hourly Leq (dB)	55	50	50	45	45	40
Maximum Level (dB)	70	60	60	55	55	50

Source: Table HS-3, Butte County General Plan 2030

Notes:

1. "Non-Urban designations" are Agriculture, Timber Mountain, Resource Conservation, Foothill Residential and Rural Residential. All other designations are considered "urban designations" for the purposes of regulating noise exposure.

2. Each of the noise levels specified above shall be lowered by 5 dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g. caretaker dwellings).

3. The County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.

4. In urban areas, the exterior noise level standard shall be applied to the property line of the receiving property. In rural areas, the exterior noise level standard shall be applied at a point 100 feet away from the residence. The above standards shall be measured only on property containing a noise sensitive land use. This measurement standard may be amended to provide for measurement at the boundary of a recorded noise easement between all affected property owners and approved by the County.

Table 1.13.1, above, identifies the maximum allowable noise exposure to a variety of land uses from transportation sources, including from roadways, rail and airports. Table 1.13-2 identifies the maximum allowable noise exposure from non-transportation sources. In the case of transportation noise sources, exterior noise level standards for residential outdoor activity areas are 60 dB (Ldn/CNEL). However, where it is not possible to reduce noise in an outdoor activity area to 60 dB Ldn /CNEL or less using a practical application of the best-available noise-reduction measures, an exterior noise level of up to 65 dB may be allowed, provided that available exterior noise-level reduction measures have been implemented and interior noise levels are in compliance with applicable standards.

Butte County Noise Ordinance

Chapter 41A, Noise Control, of the Butte County Code of Ordinance applies to the regulation of noise. The purpose of the noise ordinance is to protect the public welfare by limiting unnecessary, excessive, and unreasonable noise. Section 41A-7 specifies the exterior noise limits that apply to land use zones within the County, which are provided in Table 1.13-2.

The Butte County Noise Ordinance provides the County with a means of assessing complaints of alleged noise violations and to address noise level violations from stationary sources. The ordinance includes a list of activities that are exempt from the provisions of the ordinance; however, some noise-generating activities associated with future residential uses would not be considered to be exempt from the Noise Ordinance. Relevant information related to the exterior and interior noise limits set out by the Butte County Noise Ordinance are included below.

Chapter 41A-9 Exemptions

The following are exempted activities identified in Chapter 41A-9 that are applicable to the proposed project:

(f) Noise sources associated with construction, repair, remodeling, demolition, paving or grading of any real property or public works project located within one thousand (1,000) feet of residential uses, provided said activities do not take place between the following hours:

- Sunset to sunrise on weekdays and non-holidays;
- Friday commencing at 6:00 p.m. through and including 8:00 a.m. on Saturday, as well as not before 8:00 a.m. on holidays;
- Saturday commencing at 6:00 p.m. through and including 10:00 a.m. on Sunday; and,
- Sunday after the hour of 6:00 p.m.

Provided, however, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work into the hours delineated above and to operate machinery and equipment necessary to complete the specific work in progress until that specific work can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner;

(g) Noise sources associated with agricultural and timber management operations in zones permitting agricultural and timber management uses;

(h) All mechanical devices, apparatus or equipment which are utilized for the protection or salvage of agricultural crops during periods of adverse weather conditions or when the use of mobile noise sources is necessary for pest control;

(i) Noise sources associated with maintenance of residential area property, provided said activities take place between 7:00 a.m. to sunset on any day except Saturday, Sunday, or a holiday, or between the hours of 9:00 a.m. and 5:00 p.m. on Saturday, Sunday, or a holiday; and, provided machinery is fitted with correctly functioning sound suppression equipment;

Chapter 41A-8 Butte County Interior Noise Standards

Interior noise standards discussed in Chapter 41A apply to all noise sensitive interior area within Butte County. The maximum allowable interior noise level standards for residential uses is 45 dB Ldn/CNEL, which is designed for sleep and speech protection. The typical structural attenuation of a residence from an exterior noise is 15 dBA when windows facing the noise source is open. When windows in good condition are closed, the noise attenuation factor is around 20 dBA for an older structure and 25 dBA for a newer dwelling.

Table 1.13-3. Maximum Allowable Interior Noise Standards

NOISE LEVEL DESCRIPTION	Daytime 7 am - 7 pm	Evening 7 pm - 10 pm	Nighttime 10 pm - 7 am
Hourly L_{eq} (dB)	45	40	35
Maximum Level (dB)	60	55	50
Source: Butte County Code Chapter 41A-8, Interior Noise Standards			

Discussion

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?

Less than significant impact. The proposed project would contribute additional noise to the surrounding area. However, the nearest existing sensitive receptors to the project site are located approximately one mile from the site. At this distance, together with the intervening topography, noises generated by the project would not exceed the County noise standards for residential uses. Vacant properties located to the south and west (outside the Neal Road Recycling and Waste Facility Overlay Zone) may potentially be constructed with a residential use. However, without knowing the specific locations or designs of the future residential uses, a project specific analysis of the noise impacts to these uses cannot be reliably accomplished. In the event that residential uses are established near the project site in the future, Butte County Code would provide future occupants a means to report alleged noise violations.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than significant impact. The proposed project may involve temporary sources of groundborne vibration and groundborne noise during construction from the operation of heavy equipment. However, since the duration of any groundborne vibrations would be infrequent, and only occur during less sensitive daytime hours (i.e., between 7:00 a.m. and 7:00 p.m.), the impact from groundborne vibration and groundborne noise would be less than significant.

c) For a project located within the vicinity of a private airstrip or 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?

No impact. No public use airports have been identified to be located within the vicinity of the project site. The Paradise Airport is located approximately 6.3 miles northeast from the project site. The proposed project is located outside the compatibility zones for the area airports, and therefore, would be outside the 60 dBA CNEL noise contour for the airport. The proposed project would not expose people residing or working in the project area to excessive noise levels from a public use airport or private airstrip.

1.14 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Population and Housing.				
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less than significant impact. The proposed project does not involve the creation of housing and would not introduce any new residents to the project area. A minimal number of employees (approximately 2-4) would be required to operate the proposed facility during its full capacity. Employees would generally be drawn from the existing workforce of the company, or hired from the local area. Therefore, no substantial population growth to the area is anticipated with the proposed project. Construction activities associated with development the proposed project would not involve construction of additional public roadways or infrastructure such as wastewater treatment facilities so as to indirectly induce population growth. Since housing and population generated by the proposed project would not exceed local and regional growth projections described in General Plan 2030, growth generated by the proposed project would not be substantial.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No impact. The proposed project is located completely within the boundaries of the project site. No existing housing is located within the project site or the vicinity of the project site. Therefore, the proposed project would not result in the loss of existing housing, or cause a significant increase in the local population that would displace existing residents, necessitating the construction of additional housing.

1.15 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Public Services.				
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

Discussion

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:

Fire protection?

Less than significant impact. The proposed project would replace an aged, existing asphalt plant located in the city of Chico with a modernized facility at the project site. The new facility would utilize the same number of personnel for its operation. The new machinery and methods would comply with existing health and safety regulations, which is expected to increase safety of workers compared to the machinery and methods used at the existing facility. Additionally, Butte County Code requires the payment of fire protection impact fees to help offset the impacts that new non-residential development has on the fire protection services. Such fees would be used to fund capital costs associated with acquiring land for new fire stations, constructing new fire stations, purchasing fire equipment, and providing for additional staff as needed. Fire protection impact fees would be paid at the time of building permit issuance for a new dwelling unit.

Police protection?

Less than significant impact. The Butte County Sheriff's Office provides law enforcement service to the site. Implementation of the proposed project could increase service calls with the increase in the number of employees at the site. An increased in population in rural areas impacts the ability of the Sheriff's Department to adequately provide services to outlying areas. It is anticipated that project implementation would not require any new law enforcement

facilities or the alteration of existing facilities to maintain acceptable performance objectives. The project's increase in demand for law enforcement services would be partially offset through project-related impact fees.

Schools?

Less than significant impact. The project site is located within the Durham Unified School District. Proposed development at the site would be subject to development impact fees for school facilities, which will be assessed at the time of development. Impact fees would partially offset any potential impact to area school facilities. While school districts maintain that these fees do not fully mitigate the impacts of a project, the County is precluded from imposing additional fees or mitigation by State legislation.

Parks?

Less than significant impact. The project site is located within the Durham Recreation and Park District. The increase in demand for parks recreational facilities is directly attributable to an increase in the population in the service area. No increase in the local population is anticipated with the project. The 2 to 4 additional employees brought to the site to operate the plant will be drawn from the local workforce.

Other public facilities?

Less than significant impact. The project does not require the extension of any public infrastructure, such as roads, water, or sewer systems. The project would result in added need for County services, such as law enforcement, fire protection and road maintenance due to the increase in the employees at the site. However, Butte County collects various types of development impact fees to partially offset the cost and impacts associated with new non-residential units. These fees vary depending on the dwelling type, and are collected at the time of development.

1.16 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Recreation.				
Would the project:				
a) 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?	☐	☐	☐	☒
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Environmental Setting

The project site is located within the Durham Recreation and Park District (DRPD). The district covers an area of 182 square miles, and includes the unincorporated areas of Durham, Nelson, Dayton, and a large unincorporated rural area. The district operates and maintains approximately 34 acres of developed parkland to serve a population of approximately 6,354 residents. Park facilities include the Durham Community Park, four neighborhood parks, one mini-park, and the Dwight Brinson Swim Center. Other recreational opportunities within the district boundaries, but not maintained by the District, include the Sacramento River and the Llano Seco Wildlife Refuge.

Discussion

a) 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?

No impact. Increase in the demand for recreational facilities is typically associated with substantial increases in population. As discussed in Section 1.14 - Population and Housing, the proposed project is not anticipated to generate growth in the local population, because minimal number of employees added to the site would be drawn from the local workforce, and would not facilitate the construction of additional housing.

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

No impact. The proposed project does not include plans for additional recreational facilities nor would it require expansion of existing recreational facilities. Therefore, the proposed project would not result in any adverse physical effects on the environment from construction or expansion of recreational facilities.

1.17 TRANSPORTATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Transportation.				
Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
c) Result in inadequate emergency access?	☐	☐	☒	☐

Environmental Setting

A Traffic Impact Study was prepared for the project by Headway Transportation on April 15, 2019, and is included as Appendix A. The study evaluated the potential impacts to the local roadways and intersections located near the proposed project. Based on the study, the project is anticipated to generate approximately 192 daily vehicle trips, which includes 35 AM peak hour trips and 35 PM peak hour trips on peak production days. The majority of the trips will be trucks and heavy vehicles from asphalt sales and importing of materials, with the remaining trips consisting of employee commutes to and from the project site.

Discussion

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less than significant impact. The proposed project is not expected to conflict with any applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. The study intersections are expected to operate at acceptable levels of service during the AM and PM peak hours with the addition of project traffic. Therefore, this is considered a less than significant impact.

The project site is located in a rural area with no existing transit or pedestrian facilities located on, or in the vicinity of, the project site. However, Neal Road has an existing Class II Bike Lane along the frontage of the project site. The bike lane is designed to connect the Paradise Memorial Trailway to State Highway 99, and then to Oroville-Chico Highway. The Class II Bike Lane provides a restricted on-street right-of-way designated for the exclusive or semi-exclusive use of bicycles while allowing through travel by motor vehicles and pedestrians, roadside vehicle parking, and crossflows by motorists and pedestrians.

The project would not have long-term impacts on alternative transportation facilities due to having no long-term increase in population in the project area. Construction activities associated with development may generate short-term disruption to area roadways from an anticipated increase in traffic levels that may temporarily affect alternative transportation uses. However, construction activities associated with the proposed project would be completed in compliance with a Butte County Encroachment Permit, which would require the implementation of traffic control measures, if needed.

b) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than significant impact. The proposed project would involve the construction of new turn lanes at the main entrance to the project site, which would increase the road safety of Neal Road. The proposed project would not introduce types of vehicles that are not already traveling on Neal Road, which is a major road that regularly has truck traffic to and from nearby industrial land uses. Turn lanes and the driveway entrance to the facility would be constructed in accordance with Butte County standards, and no hazards would be created by incompatible uses. Therefore, potential impacts are less than significant.

c) Result in inadequate emergency access?

Less than significant impact. The project site has two existing access points to provide adequate means of ingress and egress. Driveway entrances have been constructed in compliance with State and local standards.

1.18 TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Tribal Cultural Resources.				
Has a California Native American Tribe requested consultation in accordance with Public Resources Code section 21080.3.1(b)?	☒ Yes		☐ No	
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☐	☐	☐	☒
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☐	☐	☒

Environmental Setting

Tribal Cultural Resources are defined as a site feature, place, cultural landscape, sacred place or object, which is of cultural value to a Tribe and is either on or eligible for the California Historic Register, a local register, or a resource that the lead agency, at its discretion, chooses to treat as such (Public Resources Code Section 21074 (a)(1)).

Butte County contains a rich diversity of archaeological, prehistoric and historical resources. The General Plan 2030 EIR observes that the "archaeological sensitivity of Butte County is generally considered high, particularly in areas near water sources or on terraces along water courses" (Butte County General Plan EIR, 2010, p. 4.5-7).

A substantial adverse change upon a historically significant resource would be one wherein the resource is demolished or materially altered so that it no longer conveys its historic or cultural significance in such a way that justifies its inclusion in the California Register of Historical Resources or such a local register (CEQA Guidelines Section 15064.5, sub. (b)(2)). Cultural resources include prehistoric and historic period archaeological sites; historical features, such as rock walls, water ditches and flumes, and cemeteries; and architectural features. Cultural resources consist of any human-made site, object (i.e., artifact), or feature that defines and illuminates our past. Often such sites are found in foothill areas, areas with high bluffs, rock outcroppings, areas overlooking deer migratory corridors, or near bodies of water.

Per AB 52 Notification Request, Public Resources Code Section 21080.3(b), the County received two letters for notification. One was from the Torres Martinez Cahuilla Indians, located in southern California near the Salton Sea, and the other was from United Auburn Indian Community, located near the City of Auburn. It was determined through discussion with the Torres Martinez Cahuilla Indians that they do not identify lands within Butte County within their

geographic area of traditional and cultural affiliation. The United Auburn Indian Community provided a map of their area of traditional and cultural affiliation, which did not include the project site.

Discussion

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

No impact. A cultural resources assessment prepared for the previous project (UP17-0009) did not identify any buildings or features including objects, sites, or landscapes that could be considered as having cultural value to California Native American tribes, or making the site eligible for listing on the California Register of Historic Resources, or in a local register of historical resources.

Native American populations used the local region for seasonal and/or permanent settlement, as well as for the gathering of plants, roots, seeds, and seasonal game. Historically, Euro-Americans utilized the region for mining farming, and cattle ranching. With historic use of the project area by prehistoric and historic populations, unanticipated and accidental archaeological discoveries may be encountered during ground-disturbing activities, resulting in potentially significant impacts. Implementation of Mitigation Measure CUL-1, discussed in Section 1.5 – Cultural Resources, would avoid potential impacts to undiscovered prehistoric resources, historic resources, and human remains that may be uncovered during development activities.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

No impact. A search of the State databases, including all records and documents available at the Northeast Information Center, failed to identify prehistoric or historic-era resources within or immediately adjacent to the project site. Further, consultation with the Native American Heritage Commission and local Native American Tribes failed to identify sacred lands, traditional cultural resources, or any concerns. An intensive-level pedestrian survey did not identify any historic properties within the site. Given the project site's geological/topographical setting, it is unlikely that buried cultural resources are located within the site. Based on the findings contained within the archeological inventory, no significant historical resources/unique archaeological resources/historic properties will be affected by the proposed project. Though, no impacts are anticipated, future construction activities may potentially uncover unknown historic or prehistoric cultural resources located below the surface. In the event of accidental discovery of cultural artifacts or human remains during construction activities, Mitigation Measure CUL-1, identified and discussed in Section 1.5 – Cultural Resources, is recommended.

1.19 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. Utilities and Service Systems.				
Would the project:				
a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider that 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?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

Environmental Setting

Solid Waste

Most municipal wastes are hauled to the Neal Road Recycling and Waste Facility, which is owned by Butte County and managed by the Butte County Department of Public Works. The Neal Road Facility is located at 1023 Neal Road, one mile east from State Highway 99, and seven miles southeast of Chico, on 190 acres owned by Butte County. The Neal Road Facility is permitted to accept municipal solid waste, inert industrial waste, demolition materials, special wastes containing nonfriable asbestos, and septage. Hazardous wastes, including friable asbestos, are not accepted at the Neal Road Facility or any other Butte County disposal facility, and must be transported to a Class I landfill permitted to receive untreated hazardous waste. The Facility has a design capacity of 25,271,900 cubic yards, and is permitted to accept 1,500 tons per day; however, the average daily disposal into the landfill is approximately 466 tons. As of November 2017, the remaining capacity of the Neal Road Facility is approximately 15,449,172 cubic yards, which would give the landfill a service life to the year 2048 (Neal Road Recycling & Waste Facility, 2017).

Discussion

a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?

No impact. The project site is currently served by electric power (PG&E) and wireless phone service. The project would not result in the relocation or construction of new or expanded infrastructure including water services, wastewater treatment, stormwater drainage, natural gas, or telecommunication facilities.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than significant impact. Domestic water to the proposed uses would be provided by groundwater extraction from an existing well. Total water consumption for the project varies based on the level of activities occurring at the time. However, maximum daily water consumption is anticipated to be approximately 500 gallons per day when the site is operating at full capacity during the peak season. Little data is currently available regarding the groundwater levels within the underlying, unconfined, aquifer. However, water usage is not expected to cause a substantial depletion of groundwater supplies in the area.

c) Result in a determination by the wastewater treatment provider that 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?

No impact. Wastewater disposal for the proposed project would be provided by an existing private, on-site septic system. No wastewater treatment provider currently serves the project area.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less than significant impact. The facility would have adequate capacity to accommodate solid waste generated by the project because only a minor increase in the stream of solid waste being deposited in the Neal Road Recycling and Waste Facility would occur with the project due to the minimal increase in the number of employees added to the project site. No solid waste would be generated from asphalt plant operations.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No impact. The proposed project would comply with statues and regulations related to solid waste. Waste generated by the proposed project would consist only of domestic refuse, which would be collected in approved trash bins and removed from the project site by a waste hauler or by the residents.

1.20 WILDFIRE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Wildfire.				
Is the project located in or near state responsibility areas or lands classified as high fire hazard severity zones?		☒ Yes		☐ No
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Environmental Setting

The project site has been designated as a very high fire hazard by the State Department of Forestry and Fire Protection. The project site is also within a designated State Responsibility Area (SRA), which means that the State has fiscal responsibility for preventing and suppressing wildfires.

Discussion

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No impact. The proposed project would involve the construction of new turn lanes at the main entrance to the project site, which may cause temporary traffic delays along Neal Road. However, no permanent lane closures would be involved that would constrict emergency access or interfere with an emergency evacuation plan. Construction activities associated with the proposed turn lanes would be completed in compliance with a Butte County Encroachment Permit, which would require the implementation of traffic control measures, if needed.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less than significant impact. The project site is located in an area that is susceptible to wildland fires. However, fires in the area have been extinguished quickly and contained to a relatively small area due to the conditions of the area. No conditions or factors have been identified in the project area that would exacerbate wildfire risks.

c) Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less than significant impact. The proposed project includes road improvements to Neal Road to add turn lanes into the main entrance of the project site. The project and proposed road improvements would be subject to Public Resources Code 4290 and 4291, which establish standards for access, signage, maintenance of defensible space and vegetation management during and after road improvements. Therefore, proposed road construction would not exacerbate a fire risk.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No impact. The project site is located within grassland and oak woodland habitat in the foothill region of the County, with an average slope between 2 and 9 percent. The project area does not exhibit flooding potential (see discussion Section 1.10.d – Hydrology and Water Quality) or landslide potential (see discussion Section 1.7.a – Geology Soils). Therefore, no impacts from post-fire instability or drainage changes has been identified.

1.21 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Mandatory Findings of Significance.				
a) Does the project have the potential to substantially 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, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
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.)	☐	☒	☐	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion

a) Does the project have the potential to substantially 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, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?

Less than significant impact with mitigation incorporated. The proposed project's impacts to biological resources and cultural resources were analyzed in this Initial Study, and all direct, indirect, and cumulative impacts were determined to have no impact, a less than significant impact, or reduced to a less than significant impact with implementation of mitigation. No special status species were identified on the proposed development areas. Development of the proposed project would not cause fish or wildlife populations to drop below self-sustaining levels or restrict the movement/distribution of a rare or endangered species. Potential impacts to special-status species habitat would be mitigated to less than significant levels with implementation of **Mitigation Measure BIO-1 through BIO-4**.

Development of the proposed project would not affect known historic, archaeological, or paleontological resources. There are no known unique ethnic or cultural values associated with the project site, nor are known religious or sacred uses associated with the project site. **Mitigation Measure CUL-1** has been identified to confirm the presence or absence of subsurface cultural resources on the project site. Additionally, the project

applicant is required to comply with *California Code of Regulations (CCR) Section 15064.5(e)*, *California Health and Safety Code Section 7050.5*, and *Public Resources Code (PRC) Section 5097.98* as a matter of policy in the event human remains are encountered at any time. Adherence to **Mitigation Measures CUL-1**, as well as regulations governing human remains, would reduce potential impacts to cultural and paleontological resources to less than significant with implementation of mitigation.

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.)

Less than significant impact with mitigation incorporated. The proposed project has either no impact, a less than significant impact, or a less than significant impact with mitigation incorporated with respect to all environmental issues pursuant to CEQA. Due to the limited scope of direct physical impacts to the environment associated with the proposed project, the project's impacts are primarily project-specific in nature.

The proposed project site is located within an area has been designated by the County for industrial uses. Short-term construction-related air quality impacts that would result from construction of the site improvements and build-out of the project site will be reduced to less than significant levels with implementation of **Mitigation Measure AIR-1**. **Mitigation Measure GHG-1**, identified in this Initial Study, would reduce potential impacts from the generation of greenhouse gas emissions to less than significant levels.

The cumulative effects resulting from build out of the Butte County General Plan 2030 were previously identified in the General Plan EIR. The type, scale, and location of the proposed project is consistent with County's General Plan and zoning designation and is compatible with the pattern of development on adjacent properties. Because of this consistency, the potential cumulative environmental effects of the proposed project would fall within the impacts identified in the County's General Plan EIR.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Less than significant impact with mitigation incorporated. There have been no impacts discovered through the review of this application demonstrating that there would be substantial adverse effects on human beings either directly or indirectly. However, the proposed project has the potential to cause both temporary and future impacts to the area by project-related impacts relating to aesthetics, air emissions, biological resources, greenhouse gas emissions and cultural resources. With implementation of mitigation measures included in this Initial Study and the previous Initial Study (SCH No. 2018042028), these impacts would be effectively mitigated to a less than significant level.

Authority for the Environmental Checklist: Public Resources Code Sections 21083, 21083.5.

Reference: Government Code Sections 65088.4.
Public Resources Code Sections 21080, 21083.5, 21095; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

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APPENDIX - A

TRAFFIC IMPACT STUDY

FOR

Neal Road Asphalt Plant

April 15, 2019

PREPARED FOR:

Franklin Construction

PREPARED BY:

HEADWAY TRANSPORTATION

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EXECUTIVE SUMMARY

Why did you perform this study?

This Traffic Impact Study evaluates the potential traffic impacts associated with the proposed asphalt batch plant on Neal Road in Butte County, CA. This study of potential transportation impacts was undertaken for planning purposes and to assess the potential impacts to the local roadway network associated with the project.

What does the project consist of?

The project consists of an asphalt batch plant with approximately 5-7 on-site employees producing roughly 50,000 tons of asphalt concrete per year. Franklin Construction is completely closing the existing batch plant at 1480 Skyway Road and intends to relocate that operation to the Neal Road site.

How much traffic will the project generate?

The project is anticipated to generate approximately 192 Daily, 35 AM peak hour, and 35 PM peak hour trips on a peak production day. The majority of the project trips will be trucks/heavy vehicles. Since the existing batch plant is relocating, VMT would not be expected to increase by more than 188.6 vehicle miles per day.

Are there any traffic impacts?

All study intersections are projected to operate at acceptable level of service conditions with the addition of project traffic. Hence, no project specific mitigation measures are recommended since no significant traffic impacts were identified through this analysis.

Are any improvements recommended?

Due to the high percentage of truck traffic turning into and out of the project's main access point, the project should construct a westbound right turn deceleration lane and an eastbound left turn lane on Neal Road.

The following lengths are recommended (See **Figure 8**):

- Westbound right turn lane – 200' striped pocket plus 105' deceleration area (full lane width) plus 180' taper
- Eastbound left-turn lane – 200' striped pocket plus 105' deceleration area plus 180' deceleration taper and 300' approach taper

LIST OF FIGURES

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INTRODUCTION

This report summarizes the results of a Traffic Impact Study completed to assess the potential impacts to the local roadway network associated with an asphalt batch plant on Neal Road in Butte County, CA.

Study Area and Evaluated Scenarios

The proposed project is located on the north side of Neal Road approximately one-half mile east of the Neal Road / Highway 99 intersection as shown on **Figure 1**. The project consists of an asphalt batch plant with approximately 5-7 on-site employees producing roughly 50,000 tons of asphalt concrete per year.

Study Intersections

- Neal Road / Highway 99
- Neal Road / Main Access
- Neal Road / Secondary Access

Study Scenarios

This study includes analysis of intersections during the weekday AM and PM peak hours as these are the periods of time in which peak traffic is anticipated to occur. The evaluated development scenarios are:

- Existing Conditions – evaluates existing traffic conditions
- Existing Plus Project Conditions – evaluates existing conditions with the proposed project
- 2040 Background Conditions - evaluates future conditions with increased regional traffic
- 2040 Background Plus Project Conditions – evaluates future conditions with the proposed project

The 2040 study scenarios include 21 years of background traffic volume growth on Highway 99 and Neal Road.

ANALYSIS METHODOLOGY

Level of service (LOS) is a term commonly used by transportation practitioners to measure and describe the operational characteristics of intersections, roadway segments, and other facilities. This term equates seconds of delay per vehicle at intersections to letter grades “A” through “F” with “A” representing optimum conditions and “F” representing breakdown or over capacity flows.

Intersections

The complete methodology for intersection level of service analysis is established in the *Highway Capacity Manual (HCM) 2010*, published by the Transportation Research Board (TRB). **Table 1** presents the delay thresholds for each level of service grade at signalized and unsignalized intersections.

Table 1: Level of Service Definition for Intersections

Level of Service	Brief Description	Average Delay (seconds per vehicle)	
		Signalized Intersections	Unsignalized Intersections
A	Free flow conditions.	< 10	< 10
B	Stable conditions with some affect from other vehicles.	10 to 20	10 to 15
C	Stable conditions with significant affect from other vehicles.	20 to 35	15 to 25
D	High density traffic conditions still with stable flow.	35 to 55	25 to 35
E	At or near capacity flows.	55 to 80	35 to 50
F	Over capacity conditions.	> 80	> 50

Source: Highway Capacity Manual (2010), Chapters 18 through 21

Level of service calculations were performed for the signalized and stop controlled study intersections using the Vistro 7.0 software package with analysis and results reported in accordance with the current *HCM 2010* methodology.

Level of Service Policy

Caltrans and Butte County have established level of service criteria standards and thresholds for the study area.

Butte County established county-wide level of service criteria standards and thresholds in the Butte County General Plan 2030. Circulation Policy CIR-P6.1 is most applicable to this project location.

> CIR-P6.1 The level of service for County-maintained roads within the unincorporated areas of the county but outside municipalities' sphere of influences (SOIs) shall be level of service (LOS) C or better during the PM peak hour. Within a municipality's SOI, the level of service shall meet the municipality's level of service policy.

Therefore, the trigger requiring traffic mitigation on Neal Road is crossing the threshold between LOS "C" and LOS "D".

As stated in the 2030 Butte County General Plan, "The Concept Level of Service Caltrans has set for State facilities in Butte County are generally LOS D in rural areas and LOS E in urban areas". However, some heavily congested route segments now have a Concept LOS "E" or "F" because the improvements required to bring the LOS to "D" are not feasible due to environmental, right of way, financial, and other constraints."

Therefore, the trigger for traffic mitigation in this analysis on Highway 99 is crossing the threshold between LOS "D" and LOS "E". LOS "D" is an acceptable operating condition.

EXISTING CONDITIONS

Roadway Facilities

A brief description of the key roadways in the study area is provided below.

Highway 99 – Highway 99 is a primary thoroughfare in Butte County and the City of Chico running generally in the north-south direction. It is classified as a "Principal Arterial" according to Caltrans Functional Classification and a "State Highway" in the 2030 Butte County General Plan. Within the study area, the posted speed limit is 65 mph for passenger vehicles and 55 mph for heavy vehicles.

Neal Road – This east-west roadway intersects Highway 99 west of the project site. It is classified as a "Minor Collector" according to Caltrans Functional Classification and a "Major Roadway" in the 2030 Butte County General Plan.

Alternative Travel Modes

No sidewalks are present on any of the roadways in the study area and Class II bike lanes were recently constructed on Neal Road. Additionally, pedestrians and bicycles are discouraged on Highway 99 since it is a freeway type facility. B-Line Route #20 operates along Highway 99 between Chico and Oroville but does not provide any stops near the project site. The proposed project would not create any notable demand for transit, pedestrian, or bicycle facilities.

Existing Intersection Level of Service

Existing traffic volumes were determined by conducting new video counts at the Neal Road/Highway 99 intersection on an average mid-week day in March 2019. Current traffic signal timing was obtained from Caltrans. Note that the east/west approaches operate under split phasing. The existing traffic volumes, lane configurations and intersection controls are shown in **Figure 2**, attached. **Table 2** shows the existing conditions intersection level of service results at the Neal Road / Highway 99 intersection. Technical calculations are provided in **Appendix A**.

Table 2: Existing Conditions Intersection Level of Service Results

ID	Intersection	Intersection Control	Movement	Existing			
				AM Peak Hour		PM Peak Hour	
1	Neal Road / Hwy 99	Signal	Overall	B	15.8	B	19.4

Source: Headway Transportation, 2019

As shown in table, the Neal Road / Highway 99 intersection currently operates at acceptable levels of service.

2040 BACKGROUND CONDITIONS

The future year analysis estimates operating conditions in the year 2040.

2040 Traffic Volume Forecasts

2040 traffic volume forecasts were developed using information from BCAG's regional travel demand model. Base year (2020) and future year (2040) model daily volumes were used to develop growth rates for the study area roadway segments. Based on the model volume outputs, the growth on Highway 99 is estimated at approximately 1.5% per year. It is important to note that the model shows lower volumes on Neal Road east of Highway 99 in the 2040 scenario than in the 2020 scenario. To be conservative, a 1.0% per year growth rate on Neal Road east of Highway 99 was used in this analysis.

To develop 2040 peak hour turning movements, Turns W32, a turning movement volumes balancing tool that incorporates NCHRP 255 procedures, was used. 2040 peak hour turning movements were developed based on existing turning movement counts and the growth rates obtained through the daily volume forecasts. Turns W32 calculates future year turning movement volumes and balances future turning movement distribution based on current turning movement counts and the growth rates on all the approaches of intersection.

2040 Background Intersection Level of Service Analysis

2040 Background conditions intersection level of service analysis was performed using Vistro 7.0 analysis software, with reporting based on *HCM 2010* methodology. The 2040 background traffic volumes and controls are shown in **Figure 3**, attached. **Table 3** shows the 2040 Background Conditions intersection level of service results at the study intersections assuming the traffic volume forecasts. Technical calculations are provided in **Appendix B**.

Table 3: 2040 Background Intersection Level of Service Results

ID	Intersection	Intersection Control	Movement	2040 Background			
				AM Peak Hour		PM Peak Hour	
1	Neal Road / Hwy 99	Signal	Overall	D	44.9	C	26.1

Source: Headway Transportation, 2019

As shown in the table, the Neal Road / Highway 99 intersection is anticipated to operate at acceptable levels of service under 2040 Background conditions.

PROPOSED PROJECT

Trip Generation

The *Trip Generation Manual, 10th Edition* published by the Institute of Transportation Engineers (ITE) does not provide trip generation estimates for the proposed land use. Therefore, trip generation was estimated

based on historic operations data. To be conservative, the trip generation used in this study considers a busy day during the peak construction season. The proposed project is expected to generate far fewer trips on a typical business day. **Table 4** shows the Daily, AM peak hour, and PM peak hour trip generation estimates for the proposed project during peak activity.

Table 4: Trip Generation Estimates

Element	Trips						
	Daily	AM	AM In	AM Out	PM	PM In	PM Out
Employees	20	7	7	0	7	0	7
Asphalt Sales	100	20	10	10	20	10	10
Import Material	72	8	4	4	8	4	4
Total Trips	**192**	**35**	**21**	**14**	**35**	**14**	**21**

Source: Headway Transportation, 2019

As shown in the table, the proposed project is expected to generate approximately 192 Daily, 35 AM peak hour, and 35 PM peak hour trips. The majority of the project trips will be trucks/heavy vehicles.

Trip Distribution

Project trips were distributed to the adjacent roadway network based on the plant location relative to the urban area and likely areas to which asphalt loads would most commonly be delivered. Project trips are anticipated to be distributed as follows and shown on **Figure 5**:

- 65% to/from the north via Highway 99
- 30% to/from the south via Highway 99
- 5% to/from the east via Neal Road

Vehicle Miles Travelled (VMT) Estimation

With adoption of and implementation of California Senate Bill 743, Vehicle Miles Travelled (VMT) is an important consideration and a key metric of vehicular travel contributions to Green House Gas (GHG) emissions and energy consumption. VMT was estimated by measuring the route length from the asphalt batch plant to nearby urban areas and calculating the difference between the prior Skyway site and the proposed Neal Road site. **Table 5** shows the VMT difference from relocating the project to Neal Road.

Table 5. Project Vehicle Miles Travelled

Location	To Chico	To Oroville	To Paradise
1480 Skyway Road	1.72	20.75	8.74
999 Neal Road	5.79	15.43	7.45
Difference (Miles)	4.07	-5.32	-1.29
Number of Trips	125	58	9
VMT Difference	508.8	-308.6	-11.6

Total Difference	**188.6**

As shown in **Table 5**, the project is estimated to cause an increase in VMT of 188.6 miles per day. Butte County currently does not have any specific thresholds or significance criteria related to VMT, but does have general goals of reducing VMT and GHG emissions.

Project Access

The proposed project includes two access points on Neal Road, as shown on **Figure 4**. The main driveway will be the primary access to the project while the secondary access will occasionally be used under special circumstances. Due to the high percentage of truck traffic and desire for safe deceleration and ingress, the main driveway should constructed with a westbound right turn deceleration lane and an eastbound left turn lane on Neal Road. The following lengths are recommended (see **Figure 8**):

- Westbound right turn lane – 200' striped pocket plus 105' deceleration area (full lane width) plus 180' taper
- Eastbound left-turn lane – 200' striped pocket plus 105' deceleration area plus 180' deceleration taper and 300' approach taper

PLUS PROJECT TRAFFIC OPERATIONS ANALYSIS

Level of service analysis was completed for the Existing Plus Project and the 2040 Background Plus Project conditions using Vistro 7.0 software, with results reported in accordance with *HCM 2010* methodology. This analysis includes the increase in heavy vehicles created by the project.

Existing Plus Project Traffic Volumes

Existing Plus Project traffic volumes were developed by adding the project generated trips (**Figure 5**) to the existing traffic volumes (**Figure 2**) and are shown on **Figure 6**, attached.

Existing Plus Project Level of Service

Table 6 presents the level of service analysis summary for the "Existing Plus Project" scenario. Technical calculations are provided in **Appendix C**.

Table 6: Existing Plus Project Intersection Level of Service

ID	Intersection	Intersection Control	Movement	Existing Plus Project			
				AM Peak Hour		PM Peak Hour	
1	Neal Road / Hwy 99	Signal	Overall	B	17.4	C	20.1
2	Neal Road / Main Access	Side-Street STOP	Southbound Approach	A	9.6	A	9.6
			Eastbound Left	A	8.2	A	8.2
3	Neal Road / Secondary Access	Side-Street STOP	Southbound Approach	A	9.4	A	9.5
			Eastbound Left	A	8.1	A	8.1

Source: Headway Transportation, 2019

As shown in the table, all study movements are anticipated to operate at acceptable levels of service under Existing Plus Project conditions.

2040 Background Plus Project Traffic Volumes

2040 Background Plus Project traffic volumes were developed by adding the project generated trips (**Figure 5**) to the 2040 Background traffic volumes (**Figure 3**) and are shown on **Figure 7**, attached.

2040 Background Plus Project Level of Service

Table 7 presents the level of service analysis summary for the "2040 Background Plus Project" scenario and the technical calculations are provided in **Appendix D**.

Table 7: 2040 Background Plus Project Level of Service

ID	Intersection	Intersection Control	Movement	2040 Plus Project			
				AM Peak Hour		PM Peak Hour	
1	Neal Road / Hwy 99	Signal	Overall	D	47.2	C	28.5
2	Neal Road / Main Access	Side-Street STOP	Southbound Approach	A	9.7	A	9.7
			Eastbound Left	A	8.2	A	8.2
3	Neal Road / Secondary Access	Side-Street STOP	Southbound Approach	A	9.5	A	9.6
			Eastbound Left	A	8.2	A	8.2

Source: Headway Transportation, 2019

As shown in the table, all study movements are anticipated to operate at acceptable levels of service under 2040 Background Plus Project conditions. This project does not create any level of service impacts.

CEQA ENVIRONMENTAL CHECKLIST

The CEQA *Appendix G Environmental Checklist Form* is used to develop significance criteria for key transportation areas. The checklist questions and determination of significant impacts is provided below.

Would the project:

Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

- The proposed project is not expected to conflict with any applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. The study intersections are expected to operate at acceptable levels of service during the AM and PM peak hours with the addition of project traffic. Therefore, this is considered a *less than significant impact*.

Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

- This project would not conflict with any congestion management program. The study intersections are expected to operate at acceptable levels of service during the AM and PM peak hours with the addition of project traffic. Therefore, this is considered a *less than significant impact*.

Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

- The project would not result in a change to air traffic patterns or a change in location for air traffic. Therefore, there would be *no impact*.

Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?

- Neal Road is a Major Roadway with regular truck traffic to/from nearby industrial land uses. Additional truck traffic would not be unexpected or inappropriate. The proposed project access locations will be constructed with accordance with Butte County standards. The project proposes to construct new turn lanes at the main access for safe turning movements. Therefore, this impact is *less than significant*.

Result in inadequate emergency access?

- The project will construct two access points and provide adequate means of ingress and egress in compliance with applicable fire safety codes. Therefore, this impact is *less than significant*.

Conflict with adopted policies, plans, programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

- The project does not include any elements that would significantly increase demand for transit, bicycle, or pedestrian facilities, and is not expected to interfere with existing or planned multi-modal facilities. Therefore, this impact is *less than significant*.

CONCLUSIONS

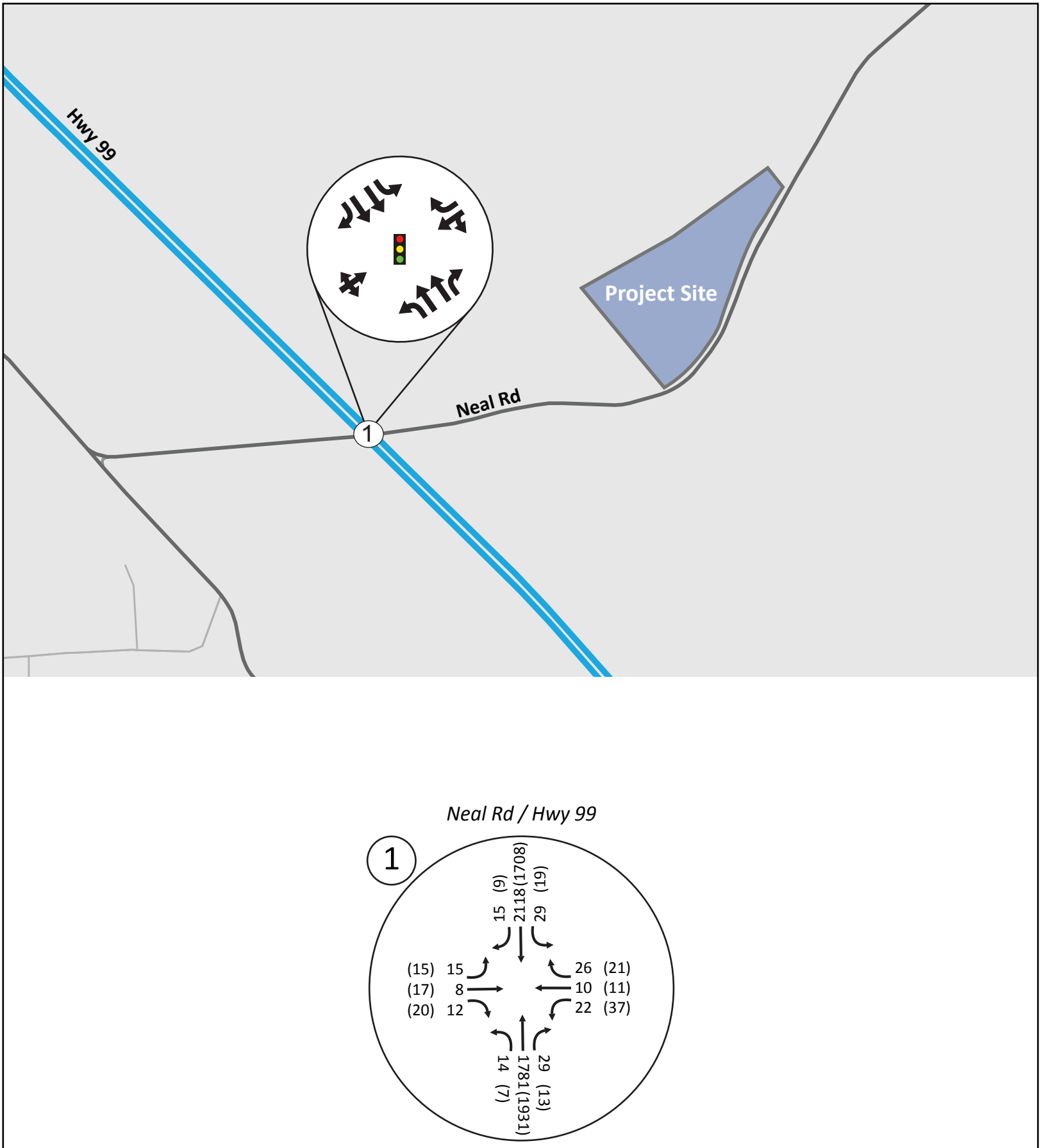
The following is a list of our key findings and recommendations:

- The proposed asphalt batch plant will generate approximately 192 Daily, 35 AM peak hour, and 35 PM peak hour trips on a peak activity day. The majority of the project trips will be trucks/heavy vehicles.
- The project is estimated to cause an increase in VMT of 188.6 miles per day.
- The main driveway will be the primary access to the project while the secondary access will occasionally be used under special circumstances.
- Due to the high percentage of truck traffic, the project should construct the main access with separate left and right turn lanes on Neal Road. It is recommended that the westbound right turn lane is constructed as 200' striped pocket plus 105' deceleration area (full lane width) plus 180' taper and the eastbound left-turn lane as 200' striped pocket plus 105' deceleration area plus 180' deceleration taper and 300' approach taper.
- The study intersections operate at acceptable levels of service under Existing and Existing Plus Project conditions.
- The study intersections operate at acceptable levels of service under 2040 Background and 2040 Background Plus Project conditions.
- No improvements are recommended at the Neal Road / Highway 99 intersection.

HEADWAY TRANSPORTATION

NO SCALE

Figure 1
Neal Road Asphalt Plant
Traffic Impact Study
Project Location

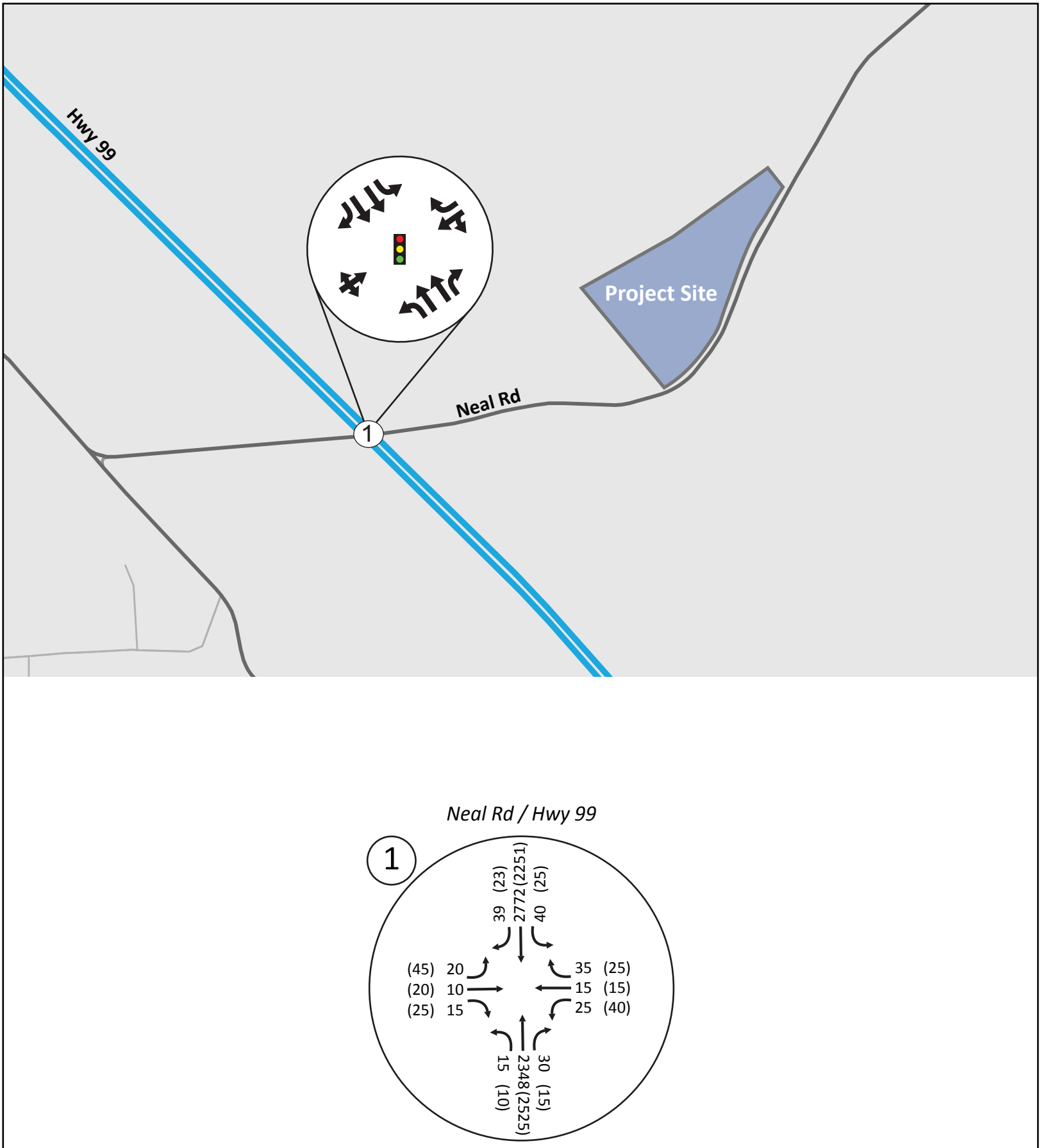


AM Peak Hour Volume (PM Peak Hour Volume)

HEADWAY TRANSPORTATION

NO SCALE

Figure 2
Neal Road Asphalt Plant
Traffic Impact Study
Existing Traffic Volumes, Lane Configurations, and Controls

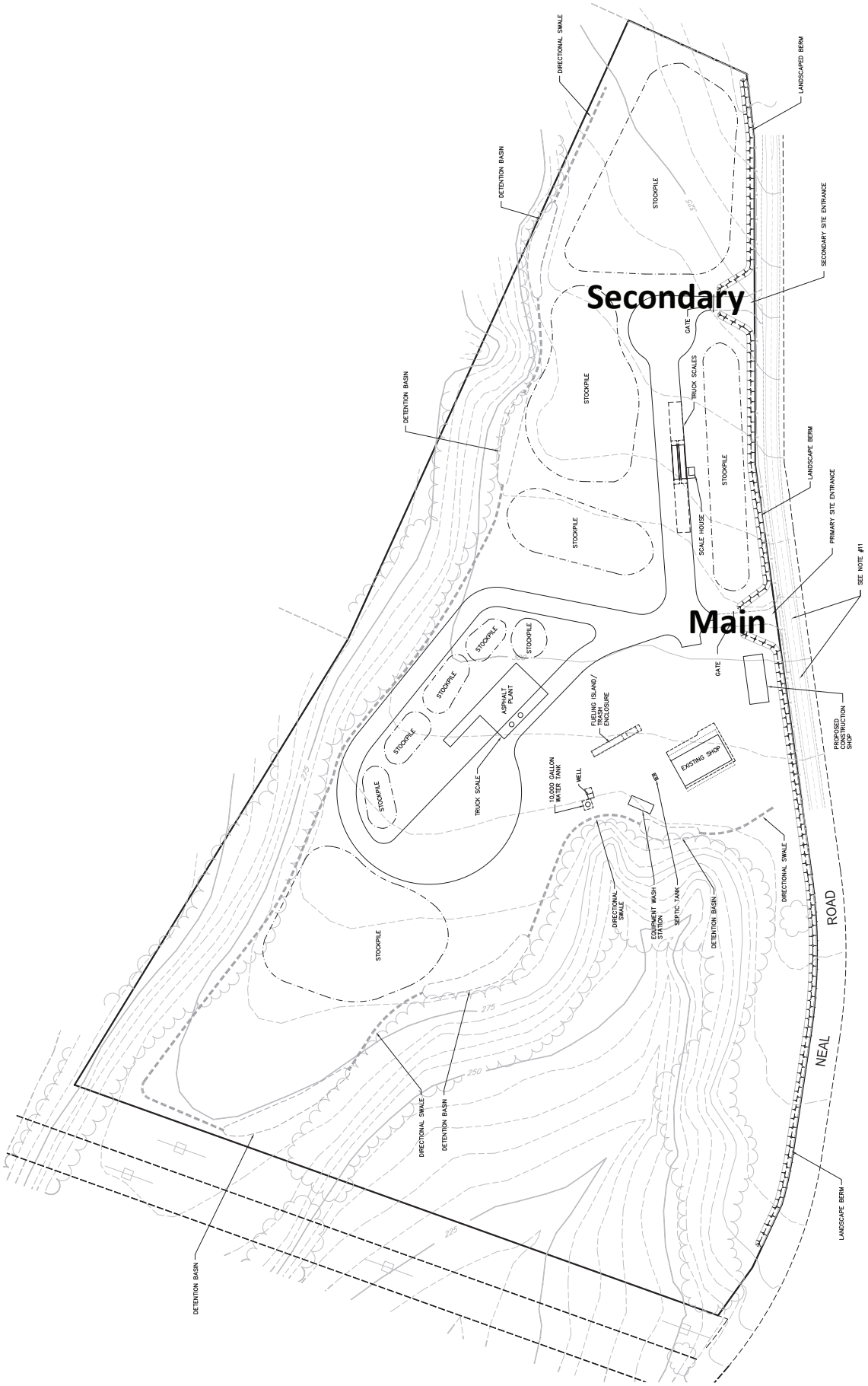


AM Peak Hour Volume (PM Peak Hour Volume)

HEADWAY TRANSPORTATION

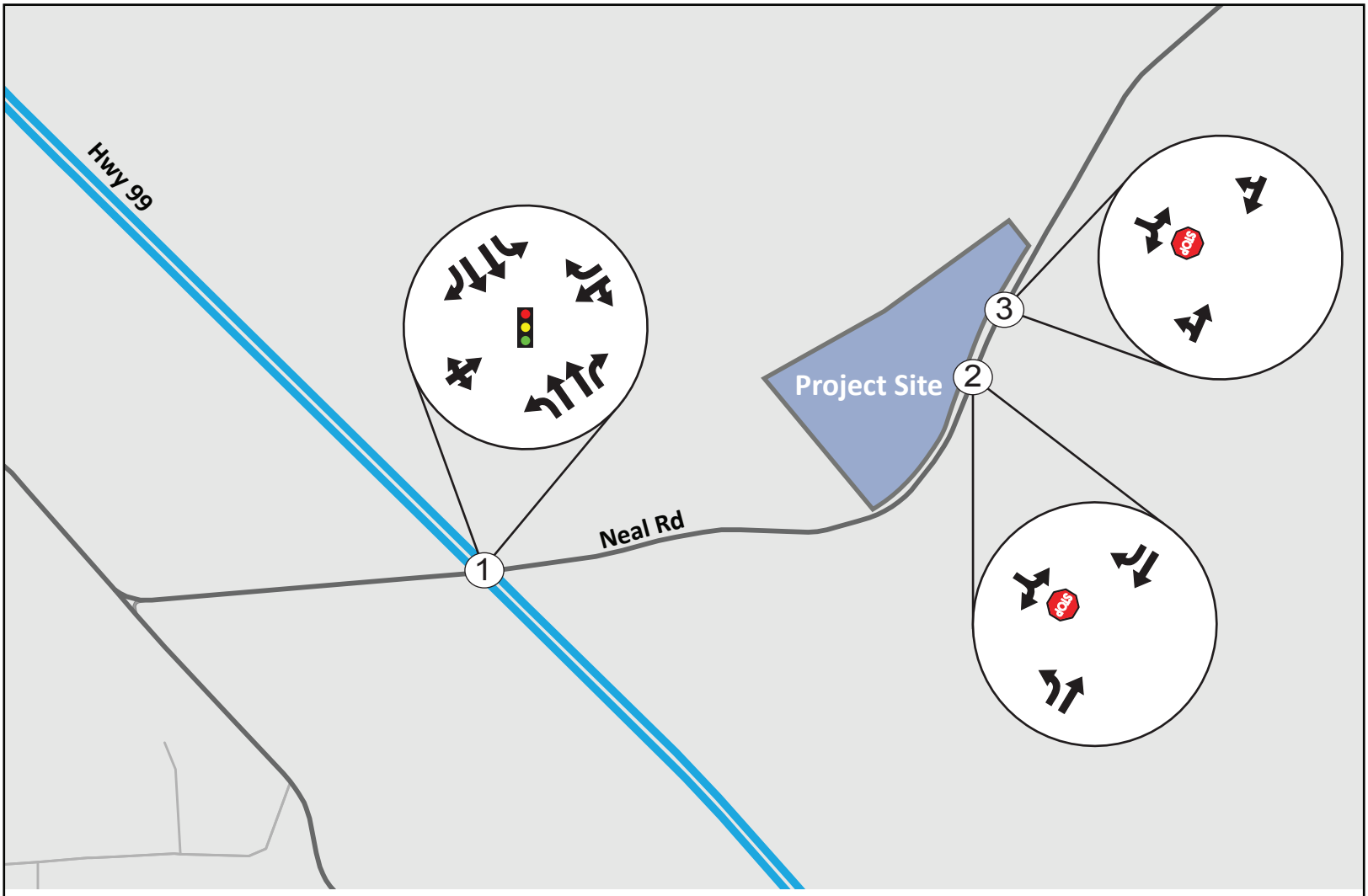
NO SCALE

Figure 3
Neal Road Asphalt Plant
Traffic Impact Study
2040 Background Traffic Volumes, Lane Configurations, and Controls

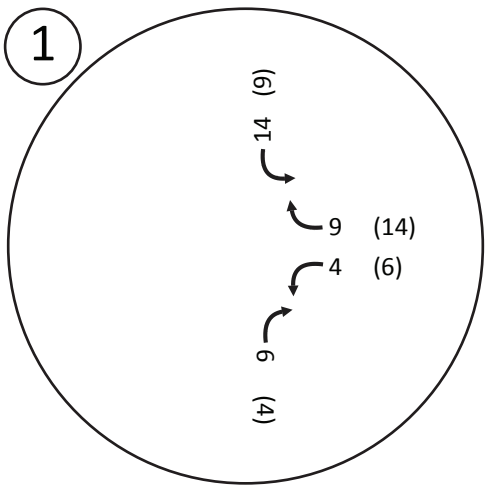


NO SCALE

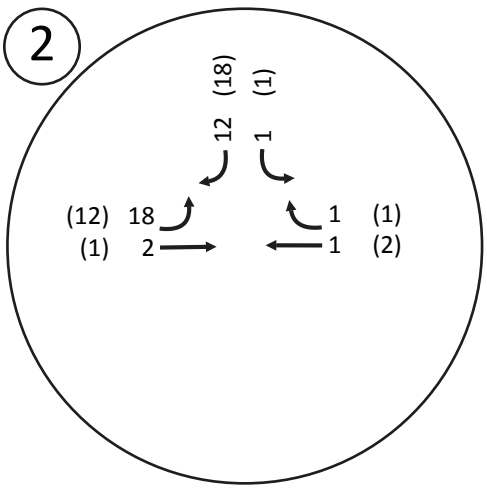
Figure 4
Neal Road Asphalt Plant
Traffic Impact Study
Site Plan



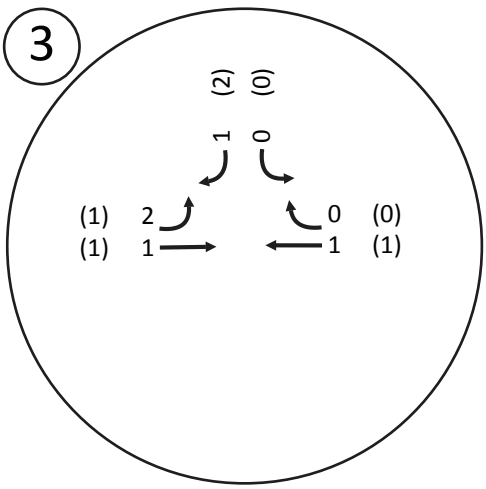
Neal Rd / Hwy 99



Neal Rd / Main Access



Neal Rd / Secondary Access

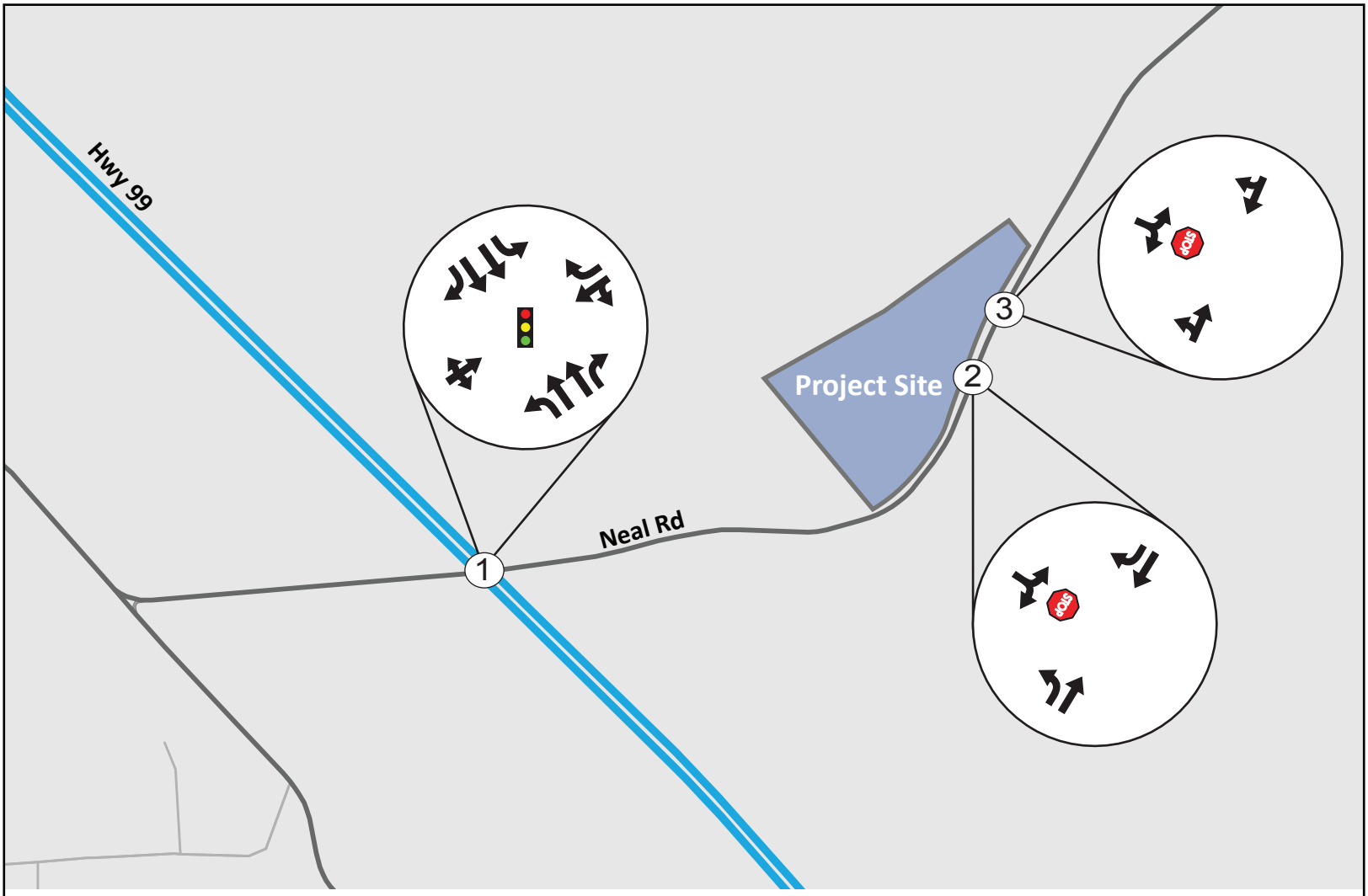


AM Peak Hour Volume (PM Peak Hour Volume)

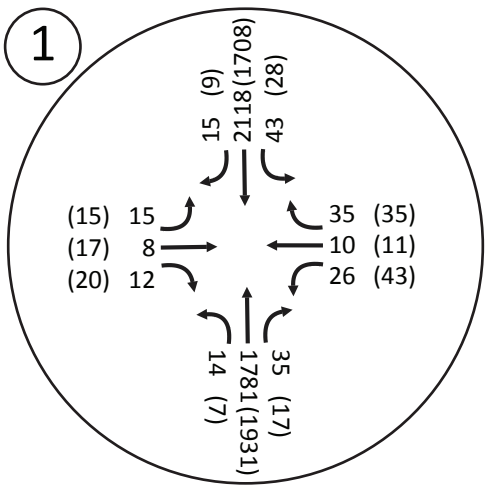
HEADWAY TRANSPORTATION

NO SCALE

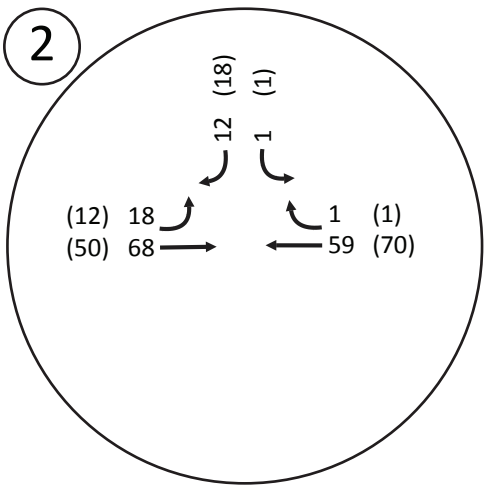
Figure 5
Neal Road Asphalt Plant
Traffic Impact Study
Project Trips



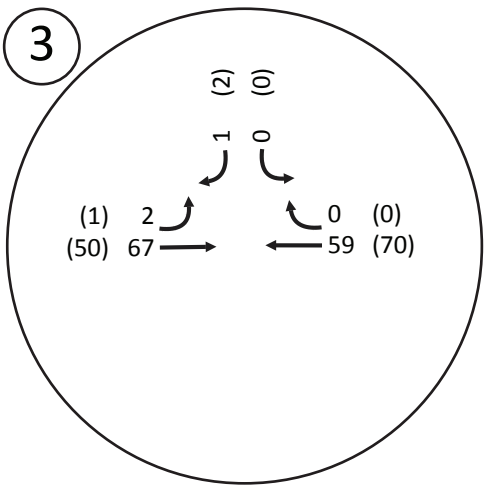
Neal Rd / Hwy 99



Neal Rd / Main Access



Neal Rd / Secondary Access

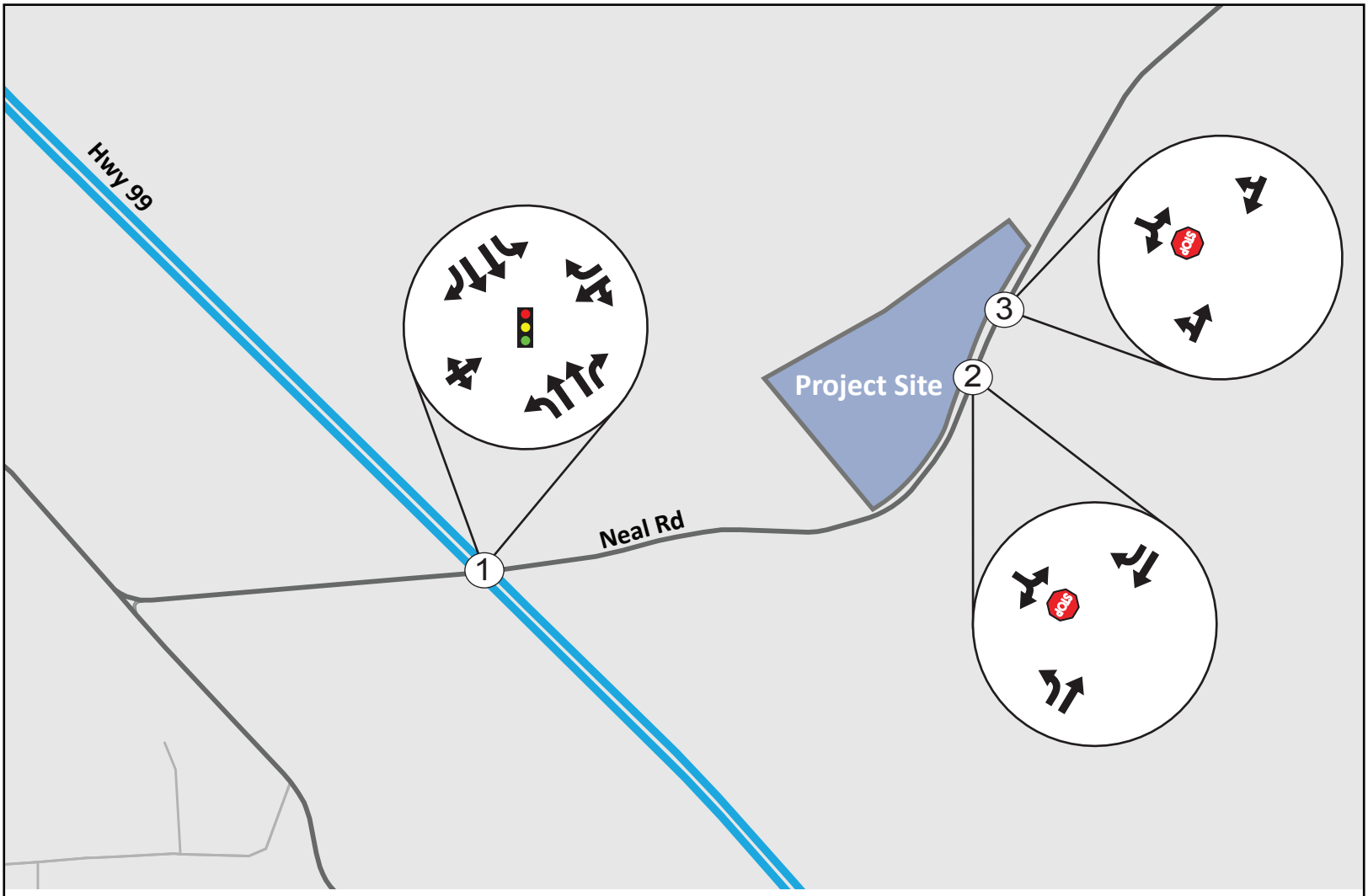


AM Peak Hour Volume (PM Peak Hour Volume)

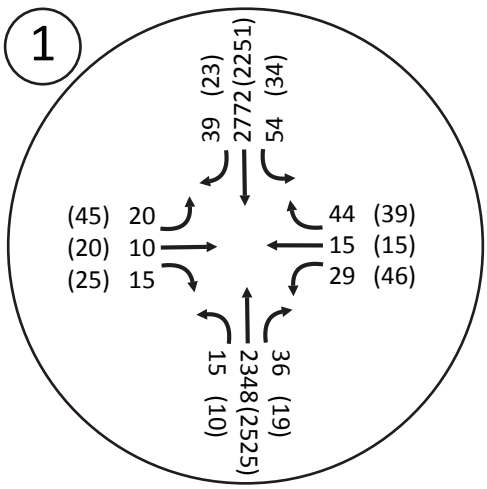
HEADWAY TRANSPORTATION

NO SCALE

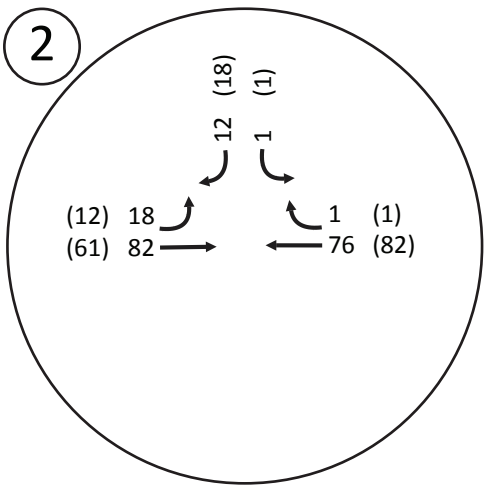
Figure 6
Neal Road Asphalt Plant
Traffic Impact Study
Exisiting Plus Project Traffic Volumes, Lane Configurations, and Controls



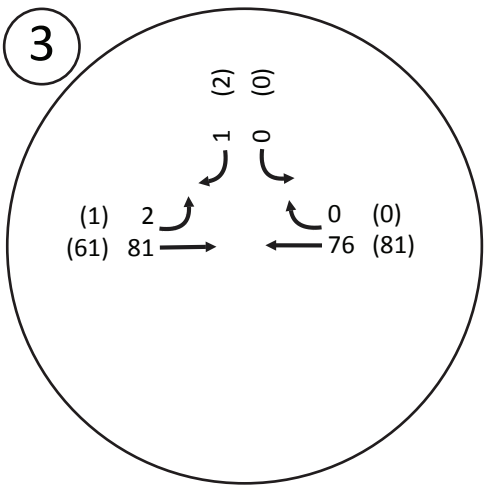
Neal Rd / Hwy 99



Neal Rd / Main Access



Neal Rd / Secondary Access

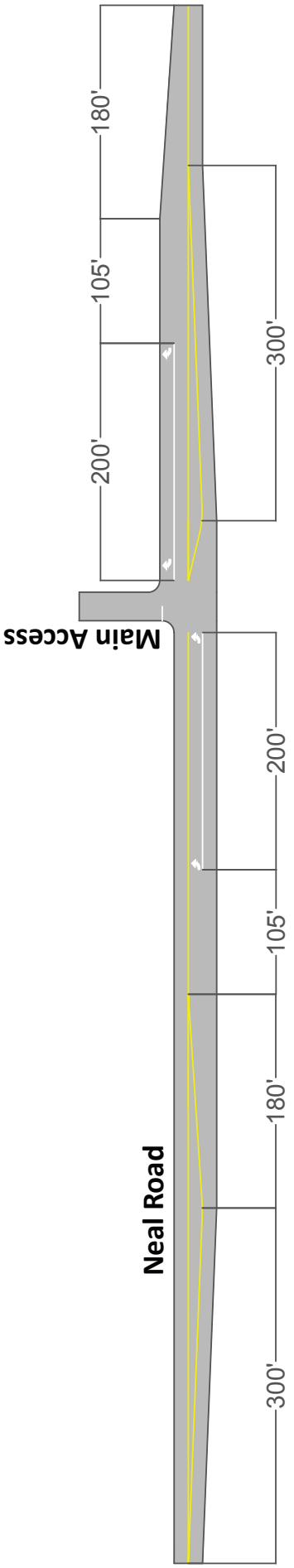


AM Peak Hour Volume (PM Peak Hour Volume)

HEADWAY TRANSPORTATION

NO SCALE

Figure 7
Neal Road Asphalt Plant
Traffic Impact Study
2040 Background Plus Project Traffic Volumes, Lane Configurations, and Controls



HEADWAY TRANSPORTATION

NO SCALE

Figure 8
Neal Road Asphalt Plant
Traffic Impact Study
Recommended Main Access Configuration

Appendix A
Existing Conditions
LOS Calculations

Intersection Level Of Service Report
Intersection 1: Neal Road / Hwy 99

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.749

Intersection Setup

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	1
Pocket Length [ft]	575.00	100.00	575.00	625.00	100.00	425.00	100.00	100.00	100.00	100.00	100.00	75.00
Speed [mph]	55.00			55.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Base Volume Input [veh/h]	14	1781	29	29	2118	15	15	8	12	22	10	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	15	0	0	8	0	0	7	0	0	14
Total Hourly Volume [veh/h]	14	1781	14	29	2118	7	15	8	5	22	10	12
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	512	4	8	609	2	4	2	1	6	3	3
Total Analysis Volume [veh/h]	16	2047	16	33	2434	8	17	9	6	25	11	14
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	15	0	5	15	0	0	5	0	0	5	0
Maximum Green [s]	20	180	0	20	180	0	0	30	0	0	30	0
Amber [s]	4.8	6.0	0.0	4.8	6.0	0.0	0.0	4.8	0.0	0.0	4.8	0.0
All red [s]	1.2	2.0	0.0	1.2	2.0	0.0	0.0	2.2	0.0	0.0	2.2	0.0
Split [s]	26	140	0	26	140	0	0	37	0	0	37	0
Vehicle Extension [s]	2.0	0.5	0.0	2.0	0.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	30	0	0	30	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	6.0	0.0	4.0	6.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	223	223	223	223	223	223	223	223	223
L, Total Lost Time per Cycle [s]	6.00	8.00	8.00	6.00	8.00	8.00	7.00	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00
g_i, Effective Green Time [s]	3	178	178	5	180	180	5	6	6
g / C, Green / Cycle	0.01	0.80	0.80	0.02	0.81	0.81	0.02	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.01	0.59	0.01	0.02	0.70	0.01	0.02	0.02	0.01
s, saturation flow rate [veh/h]	1738	3475	1551	1738	3475	1551	1722	1764	1551
c, Capacity [veh/h]	25	2769	1236	43	2804	1252	42	50	44
d1, Uniform Delay [s]	109.31	11.20	4.65	108.12	13.85	4.17	108.17	107.42	106.18
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.52	0.15	0.00	10.20	0.34	0.00	10.23	6.80	1.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.74	0.01	0.77	0.87	0.01	0.76	0.71	0.32
d, Delay for Lane Group [s/veh]	118.83	11.34	4.65	118.32	14.19	4.17	118.40	114.22	107.68
Lane Group LOS	F	B	A	F	B	A	F	F	F
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.99	21.27	0.14	2.02	32.16	0.06	1.99	2.20	0.83
50th-Percentile Queue Length [ft/ln]	24.67	531.70	3.45	50.44	804.02	1.59	49.87	54.99	20.69
95th-Percentile Queue Length [veh/ln]	1.78	28.83	0.25	3.63	41.46	0.11	3.59	3.96	1.49
95th-Percentile Queue Length [ft/ln]	44.41	720.78	6.22	90.79	1036.53	2.86	89.77	98.99	37.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	118.83	11.34	4.65	118.32	14.19	4.17	118.40	118.40	118.40	114.22	114.22	107.68
Movement LOS	F	B	A	F	B	A	F	F	F	F	F	F
d_A, Approach Delay [s/veh]	12.12			15.54			118.40			112.39		
Approach LOS	B			B			F			F		
d_I, Intersection Delay [s/veh]	15.76											
Intersection LOS	B											
Intersection V/C	0.749											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	111.17	111.17	111.17
l_p,int, Pedestrian LOS Score for Intersection	3.881	3.873	1.811	2.051
Crosswalk LOS	D	D	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1100	1100	250	250
d_b, Bicycle Delay [s]	24.30	24.30	91.88	91.88
l_b,int, Bicycle LOS Score for Intersection	3.287	3.608	1.624	1.665
Bicycle LOS	C	D	A	A

Sequence

Ring 1	1	2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Neal Road / Main Access

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Neal Road		Neal Rd		Main Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Road		Neal Rd		Main Access	
Base Volume Input [veh/h]	0	66	58	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	5.00	5.00	5.00	5.00	5.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	66	58	0	0	0
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	19	17	0	0	0
Total Analysis Volume [veh/h]	0	76	67	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.38	0.00	0.00	0.00	9.27	8.64
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.96	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Neal Road / Secondary Access

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Neal Rd		Neal Rd		Secondary Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Rd		Neal Rd		Secondary Access	
Base Volume Input [veh/h]	0	66	58	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	5.00	5.00	5.00	5.00	5.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	66	58	0	0	0
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	19	17	0	0	0
Total Analysis Volume [veh/h]	0	76	67	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.38	0.00	0.00	0.00	9.27	8.64
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.96	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Neal Road / Hwy 99

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.656

Intersection Setup

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	1
Pocket Length [ft]	575.00	100.00	575.00	625.00	100.00	425.00	100.00	100.00	100.00	100.00	100.00	75.00
Speed [mph]	55.00			55.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Base Volume Input [veh/h]	7	1931	13	19	1708	9	15	17	20	37	11	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	7	0	0	5	0	0	10	0	0	11
Total Hourly Volume [veh/h]	7	1931	6	19	1708	4	15	17	10	37	11	10
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	525	2	5	464	1	4	5	3	10	3	3
Total Analysis Volume [veh/h]	8	2099	7	21	1857	4	16	18	11	40	12	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	15	0	5	15	0	0	5	0	0	5	0
Maximum Green [s]	20	180	0	20	180	0	0	30	0	0	30	0
Amber [s]	4.8	6.0	0.0	4.8	6.0	0.0	0.0	4.8	0.0	0.0	4.8	0.0
All red [s]	1.2	2.0	0.0	1.2	2.0	0.0	0.0	2.2	0.0	0.0	2.2	0.0
Split [s]	26	140	0	26	140	0	0	37	0	0	37	0
Vehicle Extension [s]	2.0	0.5	0.0	2.0	0.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	30	0	0	30	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	6.0	0.0	4.0	6.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	94	94	94	94	94	94	94	94	94
L, Total Lost Time per Cycle [s]	6.00	8.00	8.00	6.00	8.00	8.00	7.00	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00
g_i, Effective Green Time [s]	1	56	56	2	57	57	3	4	4
g / C, Green / Cycle	0.01	0.60	0.60	0.02	0.61	0.61	0.04	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.00	0.59	0.00	0.01	0.52	0.00	0.03	0.03	0.01
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	1589	1763	1801	1589
c, Capacity [veh/h]	18	2132	952	40	2177	972	65	78	68
d1, Uniform Delay [s]	46.16	18.38	7.58	45.33	14.80	7.10	44.63	44.21	43.23
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.31	2.99	0.00	3.87	0.38	0.00	4.81	3.69	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.98	0.01	0.52	0.85	0.00	0.69	0.67	0.16
d, Delay for Lane Group [s/veh]	52.46	21.37	7.58	49.20	15.19	7.10	49.44	47.90	43.64
Lane Group LOS	D	C	A	D	B	A	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.21	17.31	0.05	0.50	11.95	0.02	1.11	1.26	0.25
50th-Percentile Queue Length [ft/ln]	5.15	432.81	1.14	12.46	298.85	0.62	27.78	31.47	6.29
95th-Percentile Queue Length [veh/ln]	0.37	24.14	0.08	0.90	17.62	0.04	2.00	2.27	0.45
95th-Percentile Queue Length [ft/ln]	9.28	603.41	2.05	22.43	440.61	1.11	50.01	56.64	11.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.46	21.37	7.58	49.20	15.19	7.10	49.44	49.44	49.44	47.90	47.90	43.64
Movement LOS	D	C	A	D	B	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	21.44			15.55			49.44			47.16		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	19.44											
Intersection LOS	B											
Intersection V/C	0.656											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	111.17	111.17	111.17
l_p,int, Pedestrian LOS Score for Intersection	3.712	3.705	1.816	2.043
Crosswalk LOS	D	D	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1100	1100	250	250
d_b, Bicycle Delay [s]	24.30	24.30	91.88	91.88
l_b,int, Bicycle LOS Score for Intersection	3.309	3.116	1.650	1.682
Bicycle LOS	C	C	A	A

Sequence

Ring 1	1	2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Neal Road / Main Access

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Neal Road		Neal Rd		Main Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Road		Neal Rd		Main Access	
Base Volume Input [veh/h]	0	49	69	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	80.00	2.00	2.00	80.00	80.00	80.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	49	69	0	0	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	13	19	0	0	0
Total Analysis Volume [veh/h]	0	53	75	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.14	0.00	0.00	0.00	10.06	9.46
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.76	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Neal Road / Secondary Access

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Neal Rd		Neal Rd		Secondary Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Rd		Neal Rd		Secondary Access	
Base Volume Input [veh/h]	0	49	69	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	80.00	2.00	2.00	80.00	80.00	80.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	49	69	0	0	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	13	19	0	0	0
Total Analysis Volume [veh/h]	0	53	75	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.14	0.00	0.00	0.00	10.06	9.46
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.76	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Appendix B
2040 Background
LOS Calculations

Intersection Level Of Service Report
Intersection 1: Neal Road / Hwy 99

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.752

Intersection Setup

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	1
Pocket Length [ft]	575.00	100.00	575.00	625.00	100.00	425.00	100.00	100.00	100.00	100.00	100.00	75.00
Speed [mph]	55.00			55.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Base Volume Input [veh/h]	14	1781	29	29	2118	15	15	8	12	22	10	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	5.00	7.00	7.00	5.00	5.00	5.00	5.00	5.00	7.00	5.00	7.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	6	14	0	0	0	0	0	4	0	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	15	0	0	8	0	0	7	0	0	14
Total Hourly Volume [veh/h]	14	1781	20	43	2118	7	15	8	5	26	10	21
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	512	6	12	609	2	4	2	1	7	3	6
Total Analysis Volume [veh/h]	16	2047	23	49	2434	8	17	9	6	30	11	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	15	0	5	15	0	0	5	0	0	5	0
Maximum Green [s]	20	180	0	20	180	0	0	30	0	0	30	0
Amber [s]	4.8	6.0	0.0	4.8	6.0	0.0	0.0	4.8	0.0	0.0	4.8	0.0
All red [s]	1.2	2.0	0.0	1.2	2.0	0.0	0.0	2.2	0.0	0.0	2.2	0.0
Split [s]	26	140	0	26	140	0	0	37	0	0	37	0
Vehicle Extension [s]	2.0	0.5	0.0	2.0	0.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	30	0	0	30	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	6.0	0.0	4.0	6.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	224	224	224	224	224	224	224	224	224
L, Total Lost Time per Cycle [s]	6.00	8.00	8.00	6.00	8.00	8.00	7.00	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00
g_i, Effective Green Time [s]	3	175	175	8	180	180	5	7	7
g / C, Green / Cycle	0.01	0.78	0.78	0.04	0.80	0.80	0.02	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.01	0.59	0.02	0.03	0.70	0.01	0.02	0.02	0.02
s, saturation flow rate [veh/h]	1738	3475	1526	1709	3475	1551	1722	1761	1526
c, Capacity [veh/h]	25	2718	1194	62	2794	1247	42	57	49
d1, Uniform Delay [s]	109.74	12.91	5.38	107.07	14.36	4.32	108.58	107.35	106.52
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.58	0.16	0.00	8.29	0.35	0.00	10.25	6.34	2.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.75	0.02	0.79	0.87	0.01	0.76	0.72	0.49
d, Delay for Lane Group [s/veh]	119.32	13.07	5.39	115.36	14.70	4.32	118.83	113.69	109.30
Lane Group LOS	F	B	A	F	B	A	F	F	F
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.99	23.64	0.22	2.96	33.14	0.07	2.00	2.50	1.43
50th-Percentile Queue Length [ft/ln]	24.78	591.11	5.55	74.04	828.44	1.64	50.06	62.60	35.86
95th-Percentile Queue Length [veh/ln]	1.78	31.62	0.40	5.33	42.58	0.12	3.60	4.51	2.58
95th-Percentile Queue Length [ft/ln]	44.60	790.48	9.98	133.27	1064.45	2.95	90.12	112.68	64.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	119.32	13.07	5.39	115.36	14.70	4.32	118.83	118.83	118.83	113.69	113.69	109.30
Movement LOS	F	B	A	F	B	A	F	F	F	F	F	F
d_A, Approach Delay [s/veh]	13.80			16.65			118.83			112.07		
Approach LOS	B			B			F			F		
d_I, Intersection Delay [s/veh]	17.40											
Intersection LOS	B											
Intersection V/C	0.752											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	111.17	111.17	111.17
l_p,int, Pedestrian LOS Score for Intersection	3.884	3.881	1.811	2.063
Crosswalk LOS	D	D	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1100	1100	250	250
d_b, Bicycle Delay [s]	24.30	24.30	91.88	91.88
l_b,int, Bicycle LOS Score for Intersection	3.293	3.621	1.624	1.690
Bicycle LOS	C	D	A	A

Sequence

Ring 1	1	2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Neal Road / Main Access

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Neal Road		Neal Rd		Main Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Road		Neal Rd		Main Access	
Base Volume Input [veh/h]	0	66	58	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	80.00	5.00	5.00	80.00	80.00	80.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	2	1	1	1	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	68	59	1	1	12
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	20	17	0	0	3
Total Analysis Volume [veh/h]	21	78	68	1	1	14
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	8.18	0.00	0.00	0.00	10.70	9.50
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.06	0.00	0.00	0.00	0.06	0.06
95th-Percentile Queue Length [ft/ln]	1.39	0.00	0.00	0.00	1.43	1.43
d_A, Approach Delay [s/veh]	1.73		0.00		9.58	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.72					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Neal Road / Secondary Access

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Neal Rd		Neal Rd		Secondary Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Rd		Neal Rd		Secondary Access	
Base Volume Input [veh/h]	0	66	58	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	80.00	5.00	5.00	80.00	80.00	80.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	1	1	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	67	59	0	0	1
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	19	17	0	0	0
Total Analysis Volume [veh/h]	2	77	68	0	0	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.12	0.00	0.00	0.00	10.23	9.42
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.13	0.13	0.00	0.00	0.09	0.09
d_A, Approach Delay [s/veh]	0.21		0.00		9.42	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.17					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Neal Road / Hwy 99

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.665

Intersection Setup

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	1
Pocket Length [ft]	575.00	100.00	575.00	625.00	100.00	425.00	100.00	100.00	100.00	100.00	100.00	75.00
Speed [mph]	55.00			55.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Base Volume Input [veh/h]	7	1931	13	19	1708	9	15	17	20	37	11	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	4.00	4.00	2.00	2.00	2.00	2.00	2.00	4.00	2.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	4	9	0	0	0	0	0	6	0	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	7	0	0	5	0	0	10	0	0	11
Total Hourly Volume [veh/h]	7	1931	10	28	1708	4	15	17	10	43	11	24
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	525	3	8	464	1	4	5	3	12	3	7
Total Analysis Volume [veh/h]	8	2099	11	30	1857	4	16	18	11	47	12	26
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	15	0	5	15	0	0	5	0	0	5	0
Maximum Green [s]	20	180	0	20	180	0	0	30	0	0	30	0
Amber [s]	4.8	6.0	0.0	4.8	6.0	0.0	0.0	4.8	0.0	0.0	4.8	0.0
All red [s]	1.2	2.0	0.0	1.2	2.0	0.0	0.0	2.2	0.0	0.0	2.2	0.0
Split [s]	26	140	0	26	140	0	0	37	0	0	37	0
Vehicle Extension [s]	2.0	0.5	0.0	2.0	0.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	30	0	0	30	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	6.0	0.0	4.0	6.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	97	97	97	97	97	97	97	97	97
L, Total Lost Time per Cycle [s]	6.00	8.00	8.00	6.00	8.00	8.00	7.00	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00
g_i, Effective Green Time [s]	1	58	58	3	60	60	4	5	5
g / C, Green / Cycle	0.01	0.60	0.60	0.03	0.62	0.62	0.04	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.00	0.59	0.01	0.02	0.52	0.00	0.03	0.03	0.02
s, saturation flow rate [veh/h]	1781	3560	1564	1752	3560	1589	1763	1798	1564
c, Capacity [veh/h]	18	2132	936	50	2198	981	64	87	76
d1, Uniform Delay [s]	47.88	19.08	7.89	46.69	14.88	7.14	46.36	45.54	44.79
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.35	3.01	0.00	4.17	0.35	0.00	5.16	3.40	0.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.98	0.01	0.60	0.84	0.00	0.70	0.68	0.34
d, Delay for Lane Group [s/veh]	54.24	22.08	7.89	50.86	15.24	7.14	51.52	48.94	45.78
Lane Group LOS	D	C	A	D	B	A	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.21	18.31	0.08	0.74	12.36	0.03	1.16	1.47	0.62
50th-Percentile Queue Length [ft/ln]	5.35	457.85	1.90	18.39	308.97	0.64	28.99	36.83	15.59
95th-Percentile Queue Length [veh/ln]	0.39	25.33	0.14	1.32	18.12	0.05	2.09	2.65	1.12
95th-Percentile Queue Length [ft/ln]	9.63	633.31	3.42	33.10	453.11	1.15	52.18	66.29	28.07

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.24	22.08	7.89	50.86	15.24	7.14	51.52	51.52	51.52	48.94	48.94	45.78
Movement LOS	D	C	A	D	B	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	22.13			15.79			51.52			47.97		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	20.08											
Intersection LOS	C											
Intersection V/C	0.665											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	111.17	111.17	111.17
l_p,int, Pedestrian LOS Score for Intersection	3.716	3.712	1.816	2.055
Crosswalk LOS	D	D	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1100	1100	250	250
d_b, Bicycle Delay [s]	24.30	24.30	91.88	91.88
l_b,int, Bicycle LOS Score for Intersection	3.313	3.124	1.650	1.718
Bicycle LOS	C	C	A	A

Sequence

Ring 1	1	2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Neal Road / Main Access

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Neal Road		Neal Rd		Main Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Road		Neal Rd		Main Access	
Base Volume Input [veh/h]	0	49	69	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	80.00	2.00	2.00	80.00	80.00	80.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	1	2	1	1	18
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	50	71	1	1	18
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	14	19	0	0	5
Total Analysis Volume [veh/h]	13	54	77	1	1	20
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	8.18	0.00	0.00	0.00	10.46	9.60
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft/ln]	0.86	0.00	0.00	0.00	2.03	2.03
d_A, Approach Delay [s/veh]	1.59		0.00		9.64	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.86					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Neal Road / Secondary Access

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Neal Rd		Neal Rd		Secondary Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Rd		Neal Rd		Secondary Access	
Base Volume Input [veh/h]	0	49	69	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	80.00	2.00	2.00	80.00	80.00	80.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	1	1	0	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	50	70	0	0	2
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	14	19	0	0	1
Total Analysis Volume [veh/h]	1	54	76	0	0	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.14	0.00	0.00	0.00	10.11	9.48
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.07	0.07	0.00	0.00	0.19	0.19
d_A, Approach Delay [s/veh]	0.15		0.00		9.48	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.20					
Intersection LOS	A					

Appendix C
Existing Plus Project
LOS Calculations

Intersection Level Of Service Report
Intersection 1: Neal Road / Hwy 99

Control Type:	Signalized	Delay (sec / veh):	44.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.924

Intersection Setup

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	1
Pocket Length [ft]	575.00	100.00	575.00	625.00	100.00	425.00	100.00	100.00	100.00	100.00	100.00	75.00
Speed [mph]	65.00			65.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Base Volume Input [veh/h]	15	2348	30	40	2772	39	20	10	15	25	15	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	16	0	0	20	0	0	8	0	0	18
Total Hourly Volume [veh/h]	15	2348	14	40	2772	19	20	10	7	25	15	17
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	638	4	11	753	5	5	3	2	7	4	5
Total Analysis Volume [veh/h]	16	2552	15	43	3013	21	22	11	8	27	16	18
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	15	0	5	15	0	0	5	0	0	5	0
Maximum Green [s]	20	180	0	20	180	0	0	30	0	0	30	0
Amber [s]	4.8	6.0	0.0	4.8	6.0	0.0	0.0	4.8	0.0	0.0	4.8	0.0
All red [s]	1.2	2.0	0.0	1.2	2.0	0.0	0.0	2.2	0.0	0.0	2.2	0.0
Split [s]	26	140	0	26	140	0	0	37	0	0	37	0
Vehicle Extension [s]	2.0	0.5	0.0	2.0	0.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	30	0	0	30	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	6.0	0.0	4.0	6.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	227	227	227	227	227	227	227	227	227
L, Total Lost Time per Cycle [s]	6.00	8.00	8.00	6.00	8.00	8.00	7.00	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00
g_i, Effective Green Time [s]	3	177	177	7	181	181	7	7	7
g / C, Green / Cycle	0.01	0.78	0.78	0.03	0.80	0.80	0.03	0.03	0.03
(v / s)_i Volume / Saturation Flow Rate	0.01	0.73	0.01	0.02	0.87	0.01	0.02	0.02	0.01
s, saturation flow rate [veh/h]	1738	3475	1551	1738	3475	1551	1720	1769	1551
c, Capacity [veh/h]	25	2718	1214	55	2778	1240	52	58	51
d1, Uniform Delay [s]	111.34	20.25	5.43	109.18	22.74	4.62	109.31	108.86	107.46
k, delay calibration	0.04	0.04	0.04	0.04	0.07	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.38	0.79	0.00	8.99	39.08	0.00	9.25	6.93	1.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.94	0.01	0.79	1.08	0.02	0.79	0.75	0.36
d, Delay for Lane Group [s/veh]	121.72	21.04	5.43	118.17	61.82	4.62	118.57	115.79	109.04
Lane Group LOS	F	C	A	F	F	A	F	F	F
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.00	44.65	0.14	2.63	71.52	0.17	2.58	2.67	1.08
50th-Percentile Queue Length [ft/ln]	25.04	1116.31	3.51	65.75	1788.06	4.35	64.49	66.76	26.99
95th-Percentile Queue Length [veh/ln]	1.80	55.61	0.25	4.73	92.37	0.31	4.64	4.81	1.94
95th-Percentile Queue Length [ft/ln]	45.07	1390.29	6.31	118.35	2309.18	7.83	116.07	120.17	48.59

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	121.72	21.04	5.43	118.17	61.82	4.62	118.57	118.57	118.57	115.79	115.79	109.04
Movement LOS	F	C	A	F	F	A	F	F	F	F	F	F
d_A, Approach Delay [s/veh]	21.58			62.22			118.57			113.80		
Approach LOS	C			E			F			F		
d_I, Intersection Delay [s/veh]	44.95											
Intersection LOS	D											
Intersection V/C	0.924											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	111.17	111.17	111.17
l_p,int, Pedestrian LOS Score for Intersection	4.513	4.537	1.832	2.065
Crosswalk LOS	E	E	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1100	1100	250	250
d_b, Bicycle Delay [s]	24.30	24.30	91.88	91.88
l_b,int, Bicycle LOS Score for Intersection	3.704	4.115	1.640	1.690
Bicycle LOS	D	D	A	A

Sequence

Ring 1	1	2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Neal Road / Main Access

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Neal Road		Neal Rd		Main Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Road		Neal Rd		Main Access	
Base Volume Input [veh/h]	0	80	75	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	5.00	5.00	5.00	5.00	5.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	80	75	0	0	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	22	20	0	0	0
Total Analysis Volume [veh/h]	0	87	82	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.41	0.00	0.00	0.00	9.42	8.71
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.07	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Neal Road / Secondary Access

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Neal Rd		Neal Rd		Secondary Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Rd		Neal Rd		Secondary Access	
Base Volume Input [veh/h]	0	80	75	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	5.00	5.00	5.00	5.00	5.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	80	75	0	0	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	22	20	0	0	0
Total Analysis Volume [veh/h]	0	87	82	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.41	0.00	0.00	0.00	9.42	8.71
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.07	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Neal Road / Hwy 99

Control Type:	Signalized	Delay (sec / veh):	26.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.839

Intersection Setup

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	1
Pocket Length [ft]	575.00	100.00	575.00	625.00	100.00	425.00	100.00	100.00	100.00	100.00	100.00	75.00
Speed [mph]	55.00			55.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Base Volume Input [veh/h]	10	2525	15	25	2251	23	45	20	25	40	15	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	8	0	0	12	0	0	13	0	0	13
Total Hourly Volume [veh/h]	10	2525	7	25	2251	11	45	20	12	40	15	12
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	664	2	7	592	3	12	5	3	11	4	3
Total Analysis Volume [veh/h]	11	2658	7	26	2369	12	47	21	13	42	16	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	15	0	5	15	0	0	5	0	0	5	0
Maximum Green [s]	20	180	0	20	180	0	0	30	0	0	30	0
Amber [s]	4.8	6.0	0.0	4.8	6.0	0.0	0.0	4.8	0.0	0.0	4.8	0.0
All red [s]	1.2	2.0	0.0	1.2	2.0	0.0	0.0	2.2	0.0	0.0	2.2	0.0
Split [s]	26	140	0	26	140	0	0	37	0	0	37	0
Vehicle Extension [s]	2.0	0.5	0.0	2.0	0.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	30	0	0	30	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	6.0	0.0	4.0	6.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	230	230	230	230	230	230	230	230	230
L, Total Lost Time per Cycle [s]	6.00	8.00	8.00	6.00	8.00	8.00	7.00	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00
g_i, Effective Green Time [s]	3	176	176	4	178	178	12	9	9
g / C, Green / Cycle	0.01	0.76	0.76	0.02	0.77	0.77	0.05	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.01	0.75	0.00	0.01	0.67	0.01	0.05	0.03	0.01
s, saturation flow rate [veh/h]	1781	3560	1589	1781	3560	1589	1769	1805	1589
c, Capacity [veh/h]	20	2723	1216	34	2751	1228	96	73	64
d1, Uniform Delay [s]	113.24	25.09	6.39	112.39	17.75	5.99	107.88	109.46	106.82
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.03	1.84	0.00	12.94	0.32	0.00	7.49	7.13	0.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.98	0.01	0.77	0.86	0.01	0.85	0.80	0.20
d, Delay for Lane Group [s/veh]	122.27	26.93	6.39	125.33	18.07	5.99	115.36	116.59	107.38
Lane Group LOS	F	C	A	F	B	A	F	F	F
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.70	58.38	0.08	1.67	37.28	0.13	5.08	3.65	0.78
50th-Percentile Queue Length [ft/ln]	17.60	1459.43	1.94	41.72	931.96	3.18	127.11	91.14	19.40
95th-Percentile Queue Length [veh/ln]	1.27	70.91	0.14	3.00	47.29	0.23	8.78	6.56	1.40
95th-Percentile Queue Length [ft/ln]	31.68	1772.69	3.49	75.10	1182.29	5.73	219.56	164.06	34.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	122.27	26.93	6.39	125.33	18.07	5.99	115.36	115.36	115.36	116.59	116.59	107.38
Movement LOS	F	C	A	F	B	A	F	F	F	F	F	F
d_A, Approach Delay [s/veh]	27.27			19.17			115.36			114.91		
Approach LOS	C			B			F			F		
d_I, Intersection Delay [s/veh]	26.10											
Intersection LOS	C											
Intersection V/C	0.839											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	111.17	111.17	111.17
l_p,int, Pedestrian LOS Score for Intersection	4.036	4.050	1.850	2.052
Crosswalk LOS	D	D	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1100	1100	250	250
d_b, Bicycle Delay [s]	24.30	24.30	91.88	91.88
l_b,int, Bicycle LOS Score for Intersection	3.774	3.555	1.715	1.698
Bicycle LOS	D	D	A	A

Sequence

Ring 1	1	2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Neal Road / Main Access

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Neal Road		Neal Rd		Main Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Road		Neal Rd		Main Access	
Base Volume Input [veh/h]	0	60	80	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	80.00	2.00	2.00	80.00	80.00	80.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	60	80	0	0	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	16	22	0	0	0
Total Analysis Volume [veh/h]	0	65	87	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.17	0.00	0.00	0.00	10.24	9.54
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.89	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Neal Road / Secondary Access

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Neal Rd		Neal Rd		Secondary Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Rd		Neal Rd		Secondary Access	
Base Volume Input [veh/h]	0	60	80	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	80.00	2.00	2.00	80.00	80.00	80.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	60	80	0	0	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	16	22	0	0	0
Total Analysis Volume [veh/h]	0	65	87	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.17	0.00	0.00	0.00	10.24	9.54
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.89	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Appendix D
2040 Background Plus Project
LOS Calculations

Intersection Level Of Service Report
Intersection 1: Neal Road / Hwy 99

Control Type:	Signalized	Delay (sec / veh):	47.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.927

Intersection Setup

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	1
Pocket Length [ft]	575.00	100.00	575.00	625.00	100.00	425.00	100.00	100.00	100.00	100.00	100.00	75.00
Speed [mph]	65.00			65.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Base Volume Input [veh/h]	15	2348	30	40	2772	39	20	10	15	25	15	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	5.00	7.00	7.00	5.00	5.00	5.00	5.00	5.00	7.00	5.00	7.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	6	14	0	0	0	0	0	4	0	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	16	0	0	20	0	0	8	0	0	18
Total Hourly Volume [veh/h]	15	2348	20	54	2772	19	20	10	7	29	15	26
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	638	5	15	753	5	5	3	2	8	4	7
Total Analysis Volume [veh/h]	16	2552	22	59	3013	21	22	11	8	32	16	28
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	15	0	5	15	0	0	5	0	0	5	0
Maximum Green [s]	20	180	0	20	180	0	0	30	0	0	30	0
Amber [s]	4.8	6.0	0.0	4.8	6.0	0.0	0.0	4.8	0.0	0.0	4.8	0.0
All red [s]	1.2	2.0	0.0	1.2	2.0	0.0	0.0	2.2	0.0	0.0	2.2	0.0
Split [s]	26	140	0	26	140	0	0	37	0	0	37	0
Vehicle Extension [s]	2.0	0.5	0.0	2.0	0.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	30	0	0	30	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	6.0	0.0	4.0	6.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	232	232	232	232	232	232	232	232	232
L, Total Lost Time per Cycle [s]	6.00	8.00	8.00	6.00	8.00	8.00	7.00	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00
g_i, Effective Green Time [s]	3	179	179	10	185	185	7	8	8
g / C, Green / Cycle	0.01	0.77	0.77	0.04	0.80	0.80	0.03	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.01	0.73	0.01	0.03	0.87	0.01	0.02	0.03	0.02
s, saturation flow rate [veh/h]	1738	3475	1526	1709	3475	1551	1720	1766	1526
c, Capacity [veh/h]	24	2678	1176	72	2776	1239	52	63	55
d1, Uniform Delay [s]	113.72	22.95	6.18	110.12	23.31	4.75	111.63	110.76	109.76
k, delay calibration	0.04	0.04	0.04	0.04	0.08	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.51	1.04	0.00	8.11	39.66	0.00	9.16	6.73	2.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.95	0.02	0.82	1.09	0.02	0.78	0.76	0.51
d, Delay for Lane Group [s/veh]	124.23	23.99	6.19	118.23	62.97	4.75	120.78	117.49	112.50
Lane Group LOS	F	C	A	F	F	A	F	F	F
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	1.02	49.69	0.23	3.66	73.59	0.18	2.63	3.04	1.73
50th-Percentile Queue Length [ft/ln]	25.59	1242.27	5.75	91.38	1839.77	4.51	65.81	75.93	43.22
95th-Percentile Queue Length [veh/ln]	1.84	61.25	0.41	6.58	94.91	0.32	4.74	5.47	3.11
95th-Percentile Queue Length [ft/ln]	46.06	1531.29	10.34	164.48	2372.74	8.12	118.46	136.68	77.80

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	124.23	23.99	6.19	118.23	62.97	4.75	120.78	120.78	120.78	117.49	117.49	112.50
Movement LOS	F	C	A	F	F	A	F	F	F	F	F	F
d_A, Approach Delay [s/veh]	24.46			63.63			120.78			115.65		
Approach LOS	C			E			F			F		
d_I, Intersection Delay [s/veh]	47.22											
Intersection LOS	D											
Intersection V/C	0.927											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	111.17	111.17	111.17
l_p,int, Pedestrian LOS Score for Intersection	4.517	4.546	1.832	2.078
Crosswalk LOS	E	E	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1100	1100	250	250
d_b, Bicycle Delay [s]	24.30	24.30	91.88	91.88
l_b,int, Bicycle LOS Score for Intersection	3.710	4.128	1.640	1.715
Bicycle LOS	D	D	A	A

Sequence

Ring 1	1	2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Neal Road / Main Access

Control Type:	Two-way stop	Delay (sec / veh):	10.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Neal Road		Neal Rd		Main Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Road		Neal Rd		Main Access	
Base Volume Input [veh/h]	0	80	75	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	80.00	5.00	5.00	80.00	80.00	80.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	2	1	1	1	12
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	82	76	1	1	12
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	22	21	0	0	3
Total Analysis Volume [veh/h]	20	89	83	1	1	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	8.22	0.00	0.00	0.00	10.90	9.60
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.05	0.00	0.00	0.00	0.05	0.05
95th-Percentile Queue Length [ft/ln]	1.34	0.00	0.00	0.00	1.37	1.37
d_A, Approach Delay [s/veh]	1.51		0.00		9.69	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.45					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Neal Road / Secondary Access

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Neal Rd		Neal Rd		Secondary Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Rd		Neal Rd		Secondary Access	
Base Volume Input [veh/h]	0	80	75	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	80.00	5.00	5.00	80.00	80.00	80.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	1	1	0	0	1
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	81	76	0	0	1
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	22	21	0	0	0
Total Analysis Volume [veh/h]	2	88	83	0	0	1
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.17	0.00	0.00	0.00	10.43	9.52
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.13	0.13	0.00	0.00	0.09	0.09
d_A, Approach Delay [s/veh]	0.18		0.00		9.52	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.15					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Neal Road / Hwy 99

Control Type:	Signalized	Delay (sec / veh):	28.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.848

Intersection Setup

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	1
Pocket Length [ft]	575.00	100.00	575.00	625.00	100.00	425.00	100.00	100.00	100.00	100.00	100.00	75.00
Speed [mph]	55.00			55.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Hwy 99			Hwy 99			Neal Road			Neal Road		
Base Volume Input [veh/h]	10	2525	15	25	2251	23	45	20	25	40	15	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	4.00	4.00	2.00	2.00	2.00	2.00	2.00	4.00	2.00	4.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	4	9	0	0	0	0	0	6	0	14
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	8	0	0	12	0	0	13	0	0	13
Total Hourly Volume [veh/h]	10	2525	11	34	2251	11	45	20	12	46	15	26
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	664	3	9	592	3	12	5	3	12	4	7
Total Analysis Volume [veh/h]	11	2658	12	36	2369	12	47	21	13	48	16	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	240
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	5	2	0	1	6	0	0	7	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	15	0	5	15	0	0	5	0	0	5	0
Maximum Green [s]	20	180	0	20	180	0	0	30	0	0	30	0
Amber [s]	4.8	6.0	0.0	4.8	6.0	0.0	0.0	4.8	0.0	0.0	4.8	0.0
All red [s]	1.2	2.0	0.0	1.2	2.0	0.0	0.0	2.2	0.0	0.0	2.2	0.0
Split [s]	26	140	0	26	140	0	0	37	0	0	37	0
Vehicle Extension [s]	2.0	0.5	0.0	2.0	0.5	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	30	0	0	30	0	0	25	0	0	25	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	6.0	0.0	4.0	6.0	0.0	0.0	5.0	0.0	0.0	5.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	R	C	C	R
C, Cycle Length [s]	236	236	236	236	236	236	236	236	236
L, Total Lost Time per Cycle [s]	6.00	8.00	8.00	6.00	8.00	8.00	7.00	7.00	7.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	6.00	6.00	4.00	6.00	6.00	5.00	5.00	5.00
g_i, Effective Green Time [s]	3	179	179	6	182	182	13	10	10
g / C, Green / Cycle	0.01	0.76	0.76	0.03	0.77	0.77	0.05	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.01	0.75	0.01	0.02	0.67	0.01	0.05	0.04	0.02
s, saturation flow rate [veh/h]	1781	3560	1564	1752	3560	1589	1769	1802	1564
c, Capacity [veh/h]	20	2696	1184	46	2751	1228	96	79	69
d1, Uniform Delay [s]	116.31	27.49	7.02	114.38	18.27	6.16	110.82	111.97	109.89
k, delay calibration	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.10	2.64	0.00	10.08	0.32	0.00	7.60	7.04	1.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.99	0.01	0.78	0.86	0.01	0.85	0.81	0.39
d, Delay for Lane Group [s/veh]	125.40	30.13	7.02	124.46	18.59	6.16	118.42	119.02	111.24
Lane Group LOS	F	C	A	F	B	A	F	F	F
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	Yes	No
50th-Percentile Queue Length [veh/ln]	0.72	63.41	0.14	2.33	38.70	0.13	5.23	4.13	1.67
50th-Percentile Queue Length [ft/ln]	18.08	1585.31	3.61	58.24	967.45	3.30	130.64	103.15	41.75
95th-Percentile Queue Length [veh/ln]	1.30	76.47	0.26	4.19	48.90	0.24	8.97	7.43	3.01
95th-Percentile Queue Length [ft/ln]	32.54	1911.80	6.50	104.83	1222.50	5.95	224.36	185.67	75.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	125.40	30.13	7.02	124.46	18.59	6.16	118.42	118.42	118.42	119.02	119.02	111.24
Movement LOS	F	C	A	F	B	A	F	F	F	F	F	F
d_A, Approach Delay [s/veh]	30.42			20.11			118.42			116.71		
Approach LOS	C			C			F			F		
d_I, Intersection Delay [s/veh]	28.53											
Intersection LOS	C											
Intersection V/C	0.848											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	111.17	111.17	111.17	111.17
l_p,int, Pedestrian LOS Score for Intersection	4.039	4.058	1.850	2.064
Crosswalk LOS	D	D	A	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1100	1100	250	250
d_b, Bicycle Delay [s]	24.30	24.30	91.88	91.88
l_b,int, Bicycle LOS Score for Intersection	3.778	3.564	1.715	1.731
Bicycle LOS	D	D	A	A

Sequence

Ring 1	1	2	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Neal Road / Main Access

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Neal Road		Neal Rd		Main Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Road		Neal Rd		Main Access	
Base Volume Input [veh/h]	0	60	80	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	80.00	2.00	2.00	80.00	80.00	80.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	1	2	1	1	18
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	61	82	1	1	18
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	17	22	0	0	5
Total Analysis Volume [veh/h]	13	66	89	1	1	20
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	8.22	0.00	0.00	0.00	10.65	9.68
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft/ln]	0.87	0.00	0.00	0.00	2.06	2.06
d_A, Approach Delay [s/veh]	1.35		0.00		9.72	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.64					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 3: Neal Road / Secondary Access

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Neal Rd		Neal Rd		Secondary Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Neal Rd		Neal Rd		Secondary Access	
Base Volume Input [veh/h]	0	60	80	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	80.00	2.00	2.00	80.00	80.00	80.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	1	1	0	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	61	81	0	0	2
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	17	22	0	0	1
Total Analysis Volume [veh/h]	1	66	88	0	0	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.18	0.00	0.00	0.00	10.29	9.55
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.07	0.07	0.00	0.00	0.19	0.19
d_A, Approach Delay [s/veh]	0.12		0.00		9.55	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.17					
Intersection LOS	A					

APPENDIX - B

ARCHAEOLOGICAL INVENTORY SURVEY

Neal Road Materials Storage Project
circa 51-acres
Butte County, California.

Prepared for

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Keywords *for Information Center Use:*
Archaeological Inventory Survey, circa 51-acres, Butte County, CEQA?NHPA, USGS Hamlin Canyon, Ca. 7.5' Quadrangle, No Significant Historical Resources, No Unique Archaeological Resources, No Historic Properties

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GENESIS SOCIETY

ARCHAEOLOGICAL - HISTORICAL - CULTURAL RESOURCE MANAGEMENT SERVICES

ABSTRACT

This report details the results of an archaeological inventory survey for the proposed Neal Road Materials Storage Project involving approximately 51-acres located adjacent to the northwest side of Neal Road, and the south side of the Neal Road Landfill, approximately 0.5 miles east of State Route 99, in Butte County, California.

The project would involve development of the property for materials (soils, rock, demolition, etc.) storage related to construction activities.

A search of State databases, including all records and documents available at the Northeast Information Center, failed to identify prehistoric or historic-era resources within or immediately adjacent to the subject APE. Further, consultation with the Native American Heritage Commission and local Native American Tribes failed to identify sacred lands, traditional cultural resources, or any concerns. An intensive-level pedestrian survey failed to identity any historic properties within the APE. Given the APE's geological/topographic setting, it is unlikely that buried cultural resources are located within the APE.

Based on the findings of the present archaeological inventory, no significant historical resources/unique archaeological resources/historic properties will be affected by the undertaking, as presently proposed.

CONTENTS

1. INTRODUCTION

Project Background

This report details the results of an archaeological inventory survey for the proposed Neal Road Materials Storage Project involving approximately 51-acres located adjacent to the northwest side of Neal Road, and the south side of the Neal Road Landfill, approximately 0.5 miles east of State Route 99, in Butte County, California (see ***Project Location Map***).

The project would involve development of the property for materials (soils, rock, demolition, etc.) storage related to construction activities.

Since the proposed project will involve physical disturbance to ground surface and sub-surface components throughout the project area, the potential exists to impact cultural resources located within the APE. In this case, the APE consists of the 51-acre parcel. Evaluation of the project's potential effects to cultural resources must be undertaken in conformity with Butte County rules and regulations, and in compliance with requirements of the California Environmental Quality Act of 1970, Public Resources Code, Section 21000, et seq. (CEQA), and The California CEQA Environmental Quality Act Guidelines, California Administrative Code, Section 15000 et seq. (Guidelines as amended).

Additionally, since the project will involve federal permitting, the project must also conform with federal guidelines for assessing effects to cultural resources, including in particular Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR Part 800), Section 2(b) of Executive Order 11593, Section 101(b)(4) of the National Environmental Policy Act, the Archaeological Resources Protection Act, and other rules and regulations.

Scope of Work

At the most general level, compliance with CEQA requires completion of projects in conformity with the standards contained in Section 15064.5 of the CEQA Guidelines, as amended. Based on this and other relevant Sections of the Guidelines, the following specific tasks were considered an adequate and appropriate Scope of Work for the present project:

- Conduct a records search at the Northeast Information Center of the California Historical Resources Information System at CSU-Chico, and review state data bases and other relevant background information. The goals of the records search and data base review are to determine (a) the extent and distribution of previous archaeological surveys, (b) the locations of known archaeological sites and any previously recorded archaeological districts, and (c) the relationships between known sites and environmental variables. This step is designed to ensure that, during subsequent field survey work, all archaeological and historical sites considered significant per CEQA are discovered, correctly identified, fully documented, and properly interpreted.

- Conduct a pedestrian field survey of the project area. Based on map review, a complete coverage intensive survey was considered appropriate, given the presence of high archaeological sensitivity throughout the project area. The purpose of the pedestrian survey is to ensure that any previously recorded sites identified during the records search are re-located and existing evaluations updated based on current site and field conditions. For previously undocumented sites identified which might qualify as "cultural resources" per CEQA, the field survey would involve formally recording these on DPR-523 Forms.

- Upon completion of the records search and pedestrian survey, prepare an archaeological inventory survey report that identifies project effects and recommends appropriate mitigation measures for any prehistoric or historic sites recommended significant under CEQA and which might be affected by the project.

The remainder of the present document constitutes the Final Report for this project, detailing the results of the records search and field survey and containing recommendations for treatment of significant sites that could be impacted by the project. All field survey procedures followed guidelines provided by the State Historic Preservation Office (Sacramento) and conform to accepted professional standards.

2. Location, Environmental and Cultural Context

Location

The proposed Neal Road Materials Storage project is located adjacent to the northwest side of Neal Road, and the south side of the Neal Road Landfill, approximately 0.5 miles east of State Route 99, in Butte County, California. The undertaking will affect approximately 51 acres located within a portion of Sections 14, 15, 22 and 23 of Township 21 North, Range 2 East, as shown on the USGS Hamlin Canyon, California, 7.5' series quadrangle (see attached ***Figure 1 Map***).

Environment

The project area is located at the interface of the Northern Sacramento Valley with the lower reaches of the northern Sierra Nevada (Bateman and Wahrhaftig 1966), near the southern margins of volcanic flows emanating from the Cascade Range. Volcanic deposits emanating from the latter have capped some lands around Chico, forming numerous buttes (Klaseen and Ellison 1974). Tertiary placer deposits are also exposed throughout the area east and southeast of Chico (Clark 1970), and were discovered early in 1849 resulting in a substantial influx of Euroamericans seeking gold, followed almost immediately by a whole series of landscape modifications as miners churned and sifted every inch of every creek and river bottom in the County, including the ephemeral stream courses located in the vicinity of the project area.

Prior to disturbance associated with mining, vegetation was dominated by a Foothill-Woodland Community, with small meadows and meadow margins containing both Valley and Blue Oaks, and stream margins dominated by willow, native sycamore, dense blackberry thickets, and a variety of brush species (Barbour and Major 1977; Kuchler 1977).

Well watered and containing an abundance of both plant and animal resources, the Chico area was intensively utilized and densely populated during prehistoric times. Small overhang shelters and caves have formed under the hard lava cap at many locations east of Chico, and most of them were utilized for at least temporary habitation. Elsewhere, benches and flats flanking the Big Chico Creek, Little Chico Creek, Butte Creek and tributary streams were utilized for open-air camps and villages.

Native vegetation still dominates portions of the Chico area, although urban expansion during the past 100 years has substantially fragmented most of the eco-zones, and today native vegetation is typically restricted to small patches of oak-park woodland and riparian associations, particularly along major water courses such as the Big Chico Creek and Butte Creek and their major tributaries.

Most of the land in this area has been utilized for ranching, beginning around the middle of the 19th Century, giving way to commercial activities (landfill) during the latter portion of the 20th century. Collectively, historic through contemporary activities have resulted in impacts, in varying degrees, to the ground surface and subsurface components throughout the project area.

Elevation within the project area ranges from approximately 220-330 feet above mean sea level (AMSL). The most important natural surface water sources in the immediate vicinity of the project area are ephemeral drainages that flow generally northeast-southwest, both north and south of the APE.

Overall and based upon map review and the results of previous archaeological surveys in the vicinity, the project area appeared to contain lands ranging from moderate to high in archaeological sensitivity for both prehistoric and historic-period sites and features.

Prehistory

The earliest residents in the Great Central Valley and adjacent lands along the Valley margin are represented by the Fluted Point and Western Pluvial Lakes Traditions, which date from about 11,500 to 7,500 years ago (Moratto 2004). Within portions of central California, fluted projectile points have been found at Tracy Lake (Heizer 1938) and around the margins of Buena Vista Lake in Kern County. Similar materials have been found to the north, at Samwel Cave near Shasta Lake and near McCloud and Big Springs in Siskiyou County. These early peoples are thought to have subsisted using a combination of generalized hunting and lacustrine exploitation (Moratto 2004).

These early cultural assemblages were followed by an increase in Native population density after about 7,500 years ago. One of the most securely dated of these assemblages in north-central California is from the Squaw Creek Site located north of Redding. Here, a charcoal-based C-14 date suggests extensive Native American presence around 6,500 years ago, or 4,500 B.C. Most of the artifactual material dating to this time period has counterparts further south, with clear evidence around Borax (Clear) Lake west-southwest of Chico, and the Farmington Area in a Valley setting east of Stockton. Important artifact types from this era include large wide-stemmed projectile points and manos and metates.

In the Central Valley of California and adjacent foothills of the Sierra Nevada around Oroville, aboriginal populations continued to expand between 6,500 and 4,500 years ago, with the possibility that arriving Macro-Penutian-speaking people (including Miwok, Yokuts and Nisenan to the south, and Maidu at Chico) introduced more extensive use of bulbs and other plant foods, animal and fishing products more intensively processed with mortars and pestles, and perhaps the bow and arrow and associated small stemmed- and corner-notched projectile points (Ragir 1972).

Ethnography

As noted above, the project area is located within territory occupied by the Northwestern Maidu, or Konkow Indians (Dixon 1905; Kroeber 1925; Riddell 1978: Figure 1). The basic social unit for the Maidu and other northern Sacramento Valley and foothill Indian groups was the family, although the village may also be considered a social, political and economic unit. Villages were usually located on flats adjoining streams, and were inhabited mainly in the winter as it was necessary to go out into the hills and higher elevation zones to establish temporary camps during food gathering seasons (i.e., spring, summer and fall). Villages typically consisted of a scattering of bark houses, numbering from four or five to several dozen in larger villages, each house containing a single family of from three to seven people. Larger villages, with from twelve to fifteen or more houses, might also contain an earth lodge.

As with all northern California Indian groups, economic life for the Maidu revolved around hunting, fishing and the collecting of plant foods, with deer, acorns, and salmon representing primary staples. The collection and processing of these various food resources was accomplished with the use of a wide variety of wooden, bone and stone artifacts. Moreover, these people were very sophisticated in terms of their knowledge of the uses of local animals and plants, and of the availability of raw material sources that could be used in manufacturing an immense array of primary and secondary tools and implements. However, only fragmentary evidence of their material culture remains, due in part to perishability, and in part to the impacts to archaeological sites resulting from later (historic) land uses.

Based on the results of previous survey work in vicinity of Chico (e.g., Jensen 1997, 1999, 2000; Markley 1975; Ritter 1970), the range of prehistoric/Native American site types documented within this area generally include the following:

- Surface scatters of lithic artifacts and debitage associated with midden deposits and other surface features, resulting from villages or seasonal encampments.
- Surface scatters of lithic artifacts and debitage without associated middens, resulting from short-term occupation and/or specialized economic activities.
- Bedrock milling stations, including both mortar holes and metate slicks, at bedrock outcrops or on isolated boulders, especially along stream courses.
- Cupped or pitted boulders related to ritual and ceremonial activity.
- Low rock alignments utilized as hunting blinds or drive walls.
- Overhanging boulders or natural overhangs along lava escarpments utilized for habitation and related activities.

- Isolated finds of aboriginal artifacts and flakes.

It was not expected that all of these sites would be encountered during the present survey, but rather that these would be the most likely site *types* to be encountered, based on the background information available and the results of previous surveys in the vicinity.

Historic Context

Early Spanish expeditions arrived in the Great Central Valley of California from Bay Area missions as early as 1804. By the mid-1820's, literally hundreds of fur trappers were annually traversing the Valley on behalf of the Hudson's Bay Company (Maloney 1945), some with devastating consequences for the local Maidu and other valley populations (Cook 1955). By the late 1830's and early 1840's, several small permanent European American settlements had emerged in the Valley and adjacent foothill lands, including ranchos in what are now Shasta, Tehama and Butte Counties. Chico's founder, General John Bidwell, eventually acquired one of these.

Bidwell arrived in California in 1841 as a member of the first band of Americans to cross the Sierra Nevada for the purpose of settlement (McGie 1983:33). In the spring of 1843 a party of settlers headed north for Oregon from Sutter's Fort, which included John Bidwell, Peter Lassen and James Bruheim (ibid:34). On this trip, Bidwell was clearly impressed by the beauty of the region around Chico, and on his return from Oregon, Bidwell mapped the rivers and streams and the lay of the land at Chico (ibid:34). This map later formed the basis of several of the grants made by Micheltorena, the Mexican Governor of California.

The Rancho Arroyo Chico Grant of November 7, 1844 had been made by Micheltorena on behalf of the Mexican government to William Dickey. Dickey settled on the north side of Big Chico Creek and later sold the ranch to John Bidwell. Bidwell managed this land grant of approximately 22,200 acres, including lands now Bidwell Park, for many years from his home at Arroyo del Chico. As early as 1847 he maintained experimental orchards and fields alongside extensive farming operations (McGie 1983: 35), some of which bordered Lindo Channel and other natural surface water sources in the area, including lands along Chico Creek.

Following the 1849 California Gold Rush, one of the important objectives of 19th Century entrepreneurs was linking the burgeoning San Francisco and Sacramento Valley population and industry with the gold- and timber-producing counties to the north and east. To this end, voters approved bonds in 1862 to construct the California Northern Railroad, linking Marysville with Oroville. Later in the decade the line was acquired and expanded by Western Pacific, with the two systems merging with one another near Palermo, south of Oroville.

3. RECORDS SEARCH and SOURCES CONSULTED

Several sources of information were considered relevant to evaluating the types of archaeological sites and site distribution that might be encountered within the project area. The information evaluated prior to conducting pedestrian field survey includes soil types and

geomorphological features (discussed above), data maintained by the Northeast Information Center at CSU-Chico, and review of available published and unpublished documents relevant to regional prehistory, ethnography, and early historic developments (already discussed).

Northeast Information Center (NEIC)

Prior to conducting the pedestrian field survey, the official Butte County archaeological records maintained by the Northeast Information Center were examined for any existing recorded prehistoric or historic sites I.C. File # W17-105, dated July 27, 2017). These records document the following existing conditions for a ¼-mile search radius surrounding the 51-acre project APE:

Previous Archaeological Survey: None of the project area has been formally surveyed for cultural resources. Three investigations have been conducted on lands immediately adjacent to the present APE. Offermann and Orlins (1980) conducted an investigation for the Cottonwood-Elverta electrical transmission line immediately adjacent to the present APE's southwestern property line (Report # 000407). Davy, Calicher and Shapiro (2007) conducted an investigation along the same corridor examined in 1980 (Report # 013255). Finally, Jensen (2000) conducted an archaeological survey on lands immediately adjacent to the north side of the present APE (Report # 3440). However, there does not appear to be any overlap of these previous surveys into the present APE.

Documented Sites: No sites have been formally recorded or otherwise identified within or adjacent to the subject property. However, one prehistoric occupation site was identified and recorded by Jensen (2000) approximately 0.3 miles north of the present APE.

Other Sources Consulted

In addition to examining records at the Northeast Information Center at CSU-Chico, the following sources were also reviewed by the Information Center, or separately:

- The National Register of Historic Places.
- The California Register of Historical Resources.
- The California Inventory of Historic Resources (State of California 1976).
- The California Historical Landmarks (State of California 1996).
- The California Points of Historical Interest (May 1992 and updates).
- The Historic Property Data File (OHP 4-5-2012).
- Archaeological Determinations of Eligibility (OHP 4-5-2012).
- The CALTRANS State and Local Bridge Survey (1989 and updates).
- GLO Plats and Historic County Maps.
- Published and unpublished documents relevant to environment, ethnography, prehistory and early historic developments in the vicinity, providing context for assessing site types and distribution patterns for the project area (summarized above under ***Location, Environmental*** and ***Cultural Context***).

4. ARCHAEOLOGICAL SURVEY and CULTURAL INVENTORY

Survey Coverage

All of the circa 51-acre APE was subjected to intensive pedestrian survey by means of walking parallel transects spaced at 20 meter intervals.

In searching for cultural resources, the surveyor took into account the results of background research and was alert for any unusual contours, soil changes, distinctive vegetation patterns, exotic materials, artifacts, feature or feature remnants and other possible markers of cultural sites.

Fieldwork was undertaken by Sean Michael Jensen and Sutter Jensen on August 4, 2017. Mr. Jensen is a professional archaeologist, historian and architectural historian, with 31 years experience in archaeology, history and architectural history, who meets the Secretary of Interior's Standards for Professional Qualification, as demonstrated in his listing on the California Historical Resources Information System list of qualified archaeologists and historians. No special problems were encountered and all survey objectives were satisfactorily achieved.

General Observations

Field work identified the following general conditions within the project area. Disturbance to the ground surface throughout the property has been minimal, primarily resulting from past cattle ranching. As well, an electrical transmission line corridor defines the APE's southwestern boundary, while fencing surrounds the remainder of the property.

Prehistoric Resources

No evidence of prehistoric occupation or utilization was observed within the APE. The best explanation for the absence of such materials is the presence of know prehistoric occupation sites located less than ½-mile north of the APE, and one mile northeast of the APE.

Historic-Era Resources

Examination of the BLM's GLO records failed to identify any land patents within the present APE. Examination of the NETR USGS (1944, 1952, 1958, 1963, 1966, 1969, 1970) and Aerial (1947, 1951, 1969, 1998, 2005, 2009, 2010 and 2012) images did provide a visual historic context for the APE. No structures or other historic-era features are depicted within the APE on any of the examined maps.

No evidence of historic-era use or occupation was observed within the APE.

It seems unlikely that buried cultural materials related to prehistoric occupation are present within the APE. Although the presence of buried cultural material is always a possibility, in

the present case the foregoing conclusion is based on the results of previous archaeological survey on lands in the vicinity and the geological/topographical setting for the APE. The only prehistoric sites documented within the general project area are rock shelter habitation sites, linked directly to the lava escarpments that comprise the valley floor/foothill transition zone. Soils within the present APE are relatively shallow, and comprise of a thin venire covering the massive volcanic batholith underlayment. Additionally, adjacent road construction and maintenance have not identified archaeological resources within or near the APE. Geotechnical boring was not undertaken as a component of this project, and none is foreseen. Consequently, the likelihood of encountering intact, buried, prehistoric deposits at this locale appears to be unlikely.

5. PROJECT EFFECTS

A project may have a significant impact or adverse effect on significant historical resources/unique archaeological resources/historic properties if the project will or could result in the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance or values of the historic resource would be materially impaired. Actions that would materially impair a cultural resource or historic property are actions that would alter or diminish those attributes of a site that qualify the site for inclusion in State site registers or the National Register of Historic Places.

Based on the specific findings detailed above under ***Pedestrian Survey and Inventory***, no significant historical resources/unique archaeological resources/historic properties are present within the project area and no historic properties will be affected by the undertaking, as presently proposed.

6. NATIVE AMERICAN CONSULTATION

An information request letter was delivered to the NAHC requesting a review of their Sacred Lands Files (SLF), and a list of Native American Contacts for the APE. The NAHC responded on August 2, 2017, indicating that a search of the Sacred Lands Files produced negative results.

The consultation list from the NAHC included the following:

- Dennis E. Ramirez, Mechoopda Indian Tribe
- Kyle Self, Greenville Rancheria
- Gary Archuleta, Mooretown Rancheria of Maidu Indians
- Wallace Clark-Wilson, KonKow Valley Band of Maidu
- Glenda Nelson, Estom Yumeka Maidu Tribe of Enterprise Rancheria
- Grayson Coney and Don Ryberg, Tsi Akim Maidu.

Letters were delivered on August 2, 2017 to all representatives on the NAHC contact list, and all those contacted were requested to supply any information they might have concerning prehistoric sites or traditional use areas within, adjacent or near the project area.

As no prehistoric cultural material was identified during either the records search or pedestrian survey, no additional consultation was undertaken.

7. PROJECT SUMMARY

This report details the results of an archaeological inventory survey for the proposed Neal Road Materials Storage Project involving approximately 51-acres located adjacent to the northwest side of Neal Road, and the south side of the Neal Road Landfill, approximately 0.5 miles east of State Route 99, in Butte County, California (see ***Project Location Map***).

The project would involve development of the property for materials (soils, rock, demolition, etc.) storage related to construction activities.

A search of State databases, including all records and documents available at the Northeast Information Center, failed to identify prehistoric or historic-era resources within or immediately adjacent to the subject APE. Further, consultation with the Native American Heritage Commission and local Native American Tribes failed to identify sacred lands, traditional cultural resources, or any concerns. An intensive-level pedestrian survey failed to identity any historic properties within the APE. Given the APE's geological/topographic setting, it is unlikely that buried cultural resources are located within the APE.

Based on the findings of the present archaeological inventory, no significant historical resources/unique archaeological resources/historic properties will be affected by the undertaking, as presently proposed. Despite these negative findings, the following general provisions are considered appropriate:

1) ***Consultation in the event of inadvertent discovery of human remains***: Evidence of human burial or scattered human remains related to prehistoric occupation of the area could be inadvertently encountered anywhere within the project area during future construction activity or other actions involving disturbance to the ground surface and subsurface components. In the event of such an inadvertent discovery, the County Coroner would have to be informed and consulted, per State law. Ultimately, the goal of consultation is to establish an agreement between the most likely lineal descendant designated by the Native American Heritage Commission and the project proponent(s) with regard to a plan for treatment and disposition of any human remains and artifacts which might be found in association. Such treatment and disposition may require reburial of any identified human remains/burials within a "preserve" or other designated portion of the development property not subject to ground disturbing impacts.

2) ***Consultation in the event of inadvertent discovery of cultural material***: The present evaluation and recommendations are based on the findings of an inventory-level surface survey only. There is always the possibility that significant unidentified cultural materials could be encountered on or below the surface during the course of future development or construction activities. This caveat is particularly relevant considering the constraints generally to archaeological field survey, and particularly where substantial ground disturbance has occurred. In the event of an inadvertent discovery of previously unidentified cultural material, archaeological consultation should be sought immediately.

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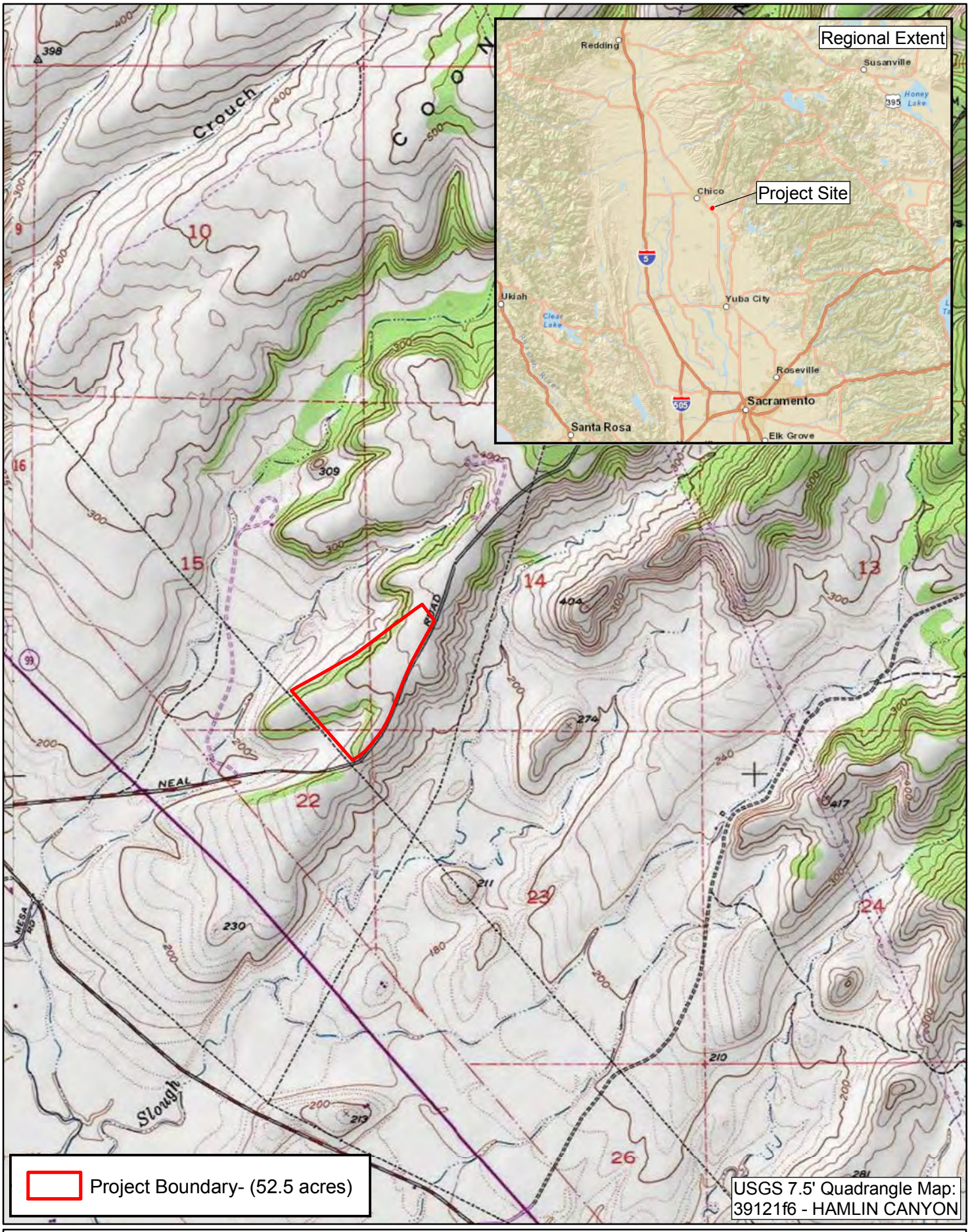
ARCHAEOLOGICAL INVENTORY SURVEY

Neal Road Materials Storage Project
circa 51-acres
Butte County, California.

ATTACHMENTS

- Archaeological Survey Area Map
- Records Search from Northeast Information Center
- Consultation letter to the Native American Heritage Commission (NAHC)
- Response from the NAHC
- Consultation letters to parties listed by the NAHC
- Communications log documenting consultation efforts



NORTH

1:24,000
0 1,000 2,000 Feet

Data Sources: USGS (Base Map), Advanced Septic Solutions

Neal Road Property
Regional Location
Figure 1

gallaway ENTERPRISES

GE: #15-183 Map Date: 12/07/15

Northeast Center of the California Historical Resources Information System

BUTTE
GLENN
LASSEN
MODOC
PLUMAS
SHASTA
SIERRA
SISKIYOU
SUTTER
TEHAMA
TRINITY

123 West 6th Street, Suite 100
Chico CA 95928
Phone (530) 898-6256
neinfocntr@csuchico.edu

ACCESS AGREEMENT

I.C. File #: W17-105

I, the undersigned, have been granted access to historical resources information on file at the Northeast Information Center of the California Historical Resources Information System.

SJ I understand that any CHRIS Confidential Information I receive shall not be disclosed to individuals who do not qualify for access to such information, as specified in Section III (A-E) of the CHRIS Information Center Rules of Operation Manual, or in publicly distributed documents without written consent of the Information Center Coordinator.

SJ I agree to submit historical Resource Records and Reports based in part on the CHRIS information released under this Access Agreement to the Information Center within sixty (60) calendar days of completion.

SJ I agree to pay for CHRIS services provided under this Access Agreement within sixty (60) calendar days of receipt of billing.

SJ I understand that failure to comply with this Access Agreement shall be grounds for denial of access to CHRIS Information.

Print Name: Sean Jensen Date: 7/27/17 Signature: S Jensen

Affiliation: GENESIS SOCIETY

Address: 7053 MOLOKAI DRIVE City/State/Zip: PARADISE, CA 95969

Billing Address (if different): _____

Office#: _____ Cell#: 530-680-6170 Email: seanjensen@comcast.net

Project Name: NEAL ROAD MATERIALS STORAGE

Purpose of Access: PROJECT PLANNING

County: BUTTE Township/Range/Section: T21N, R2E, SECS. 14, 15, 22, 23

USGS 7.5' Quad: HAMLIN CANYON

STAFF USE ONLY

Time:
IN: 12:00
OUT: 12:40

Information Center Staff

Backlog ( ) _____

In-House Fees:	1 hours @ $100.00/hour	$100.00
Staff Charges:	___ hours @ $40.00/hour	$
Photocopy Charges:	8 copies @ $0.15/page	$1.20
Other:	_____	$
TOTAL:		$101.20

*** THIS IS NOT AN INVOICE ***

GENESIS SOCIETY

a Corporation Sole

7053 MOLOKAI DRIVE
PARADISE, CALIFORNIA 95969
(530) 680-6170 VOX
seanjensen@comcast.net

July 26, 2017

Native American Heritage Commission

1550 Harbor Boulevard,
West Sacramento, California 95691

Subject: ***Neal Road Materials Storage Project, circa 51-acres, Butte County, California.***

Dear Commission:

We have been requested to conduct the archaeological survey, for the above-cited project, and are requesting any information you may have concerning archaeological sites or traditional use areas for this area. Any information you might supply will be used to supplement the archaeological and historical study being prepared for this project.

Project Name:	Neal Road Materials Storage Project, 51-acres
County:	Butte
Maps:	USGS Hamlin Canyon, 7.5'
Location:	Portion of Sections 14, 15, 22 & 23 of T21N, R2E.

Thanks in advance for your assistance.

Regards,

Sean Michael Jensen

Sean Michael Jensen, Administrator

NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-5471

August 2, 2017

Sean Michael Jensen
Genesis Society

Email to: seanjensen@comcast.net

RE: Neal Road Materials Storage Project, Butte County

Dear Mr. Jensen,

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not preclude the presence of cultural resources in any project area. Other sources for cultural resources should also be contacted for information regarding known and/or recorded sites.

Enclosed is a list of Native Americans tribes who may have knowledge of cultural resources in the project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these tribes, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at steven.quinn@nahc.ca.gov.

Sincerely,

Steven Quinn
Program Analyst

Native American Heritage Commission
Native American Contacts
8/2/2017

Mechoopda Indian Tribe
Dennis E. Ramirez, Chairperson
125 Mission Ranch Blvd
Chico , CA 95926
dramirez@mechoopda-nsn.gov
(530) 899-8922
(530) 899-8517 - Fax
Mechoopda Maidu
Concow

Estom Yumeka Maidu Tribe of the Enterprise Rancheria
Glenda Nelson, Chairperson
2133 Monte Vista Avenue
Oroville , CA 95966
info@enterpriserancheria.org
(530) 532-9214

(530) 532-1768 Fax
Maidu

Greenville Rancheria
Kyle Self, Chairperson
P.O. Box 279
Greenville , CA 95947
kself@greenvillerancheria.com
(530) 284-7990
(530) 284-6612 Fax
Maidu

Tsi Akim Maidu
Grayson Coney, Cultural Director
P.O. Box 510
Browns Valley , CA 95918
tsi-akim-maidu@att.net
530-274-7497
Maidu

Mooretown Rancheria of Maidu Indians
Gary Archuleta, Chairperson
#1 Alverda Drive
Oroville , CA 95966
frontdesk@mooretown.org
(530) 533-3625

(530) 533-3680 Fax
Maidu
KonKow / Concow

Tsi Akim Maidu
Don Ryberg, Chairperson
P.O. Box 510
Browns Valley , CA 95918
tsi-akim-maidu@att.net
(530) 274-7497
(530) 559-8595
Maidu

KonKow Valley Band of Maidu
Wallace Clark-Wilson, Chairperson
PO Box 5850
Oroville , CA 95966
(530) 533-1504
KonKow / Concow
Maidu

Berry Creek Rancheria of Maidu Indians
James Edwards, Chairperson
5 Tyme Way
Oroville , CA 95966
jedwards@berrycreekrancheria.com
(530) 534-3859

(530) 534-1151 Fax
Tyme Maidu

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessments for the proposed Neal Road Materials Storage Project, Butte County.

GENESIS SOCIETY

a Corporation Sole

7053 MOLOKAI DRIVE
PARADISE, CALIFORNIA 95969
(530) 680-6170 VOX
seanjensen@comcast.net

August 2, 2017

Native American Individuals, Groups and Tribes

Subject: ***Neal Road Materials Storage Project, circa 51-acres, Butte County, California.***

Dear Interested Native Americans:

Enclosed is a USGS topo-based map showing the location for a materials storage project within Butte County, California.

We have been requested to conduct the archaeological survey, and are requesting any information you may have concerning archaeological sites or traditional use areas for this area. Any information you might supply will be used to supplement the archaeological and historical study being prepared for this project.

Project Name:	Neal Road Materials Storage Project, 51-acres
County:	Butte
Map:	USGS Hamlin Canyon, 7.5'
Location:	Portion of Sections 14, 15, 22 & 23 of T21N, R2E.

Thanks for your help. Please call with any questions.

Regards,

Sean Michael Jensen

Sean Michael Jensen, Administrator

COMMUNICATIONS LOG, NEAL ROAD MATERIALS STORAGE PROJECT

Contacted Party	Date	Medium	Comments
Estom Yumeka Maidu Tribe of the Enterprise Rancheria, Glenda Nelson and Creig Marcus	August 2, 2017 August 7, 2017	Email Telephone	Delivered email containing consultation letter and project map. Mr. Marcus did not express any concerns.
Mechoopda Indian Tribe, Dennis Ramirez and Vance Kelly	August 2, 2017 August 7, 2017	Email Telephone	Delivered email containing consultation letter and project map. Mr. Kelley did not express any concerns.
Greenville Rancheria, Kyle Self	August 2, 2017 August 7, 2017	Email Telephone	Delivered email containing consultation letter and project map. Detailed telephone message left with no response.
KonKow Valley Band of Maidu, Wallace Clark-Wilson	August 2, 2017 August 7, 2017	United States Postal Service Telephone	Delivered hard copies of consultation letter and project map. Detailed telephone message left with no response.
Mooretown Rancheria of Maidu Indians, Gary Archuleta and Benjamin Clark	August 2, 2017 August 7, 2017	Email Telephone	Delivered email containing consultation letter and project map. Detailed telephone message left with no response.
Tsi Akim Maidu, Grayson Coney and Don Ryberg	August 2, 2017 August 7, 2017	Email Telephone	Delivered email containing consultation letter and project map. Detailed telephone message left with no response.

APPENDIX - C

Department of Development Services

Tim Snellings, Director
Pete Calarco, Assistant Director

7 County Center Drive
Oroville, California 95965

T: 530.552.3700
F: 530.538.7785

buttecounty.net/dds

BUTTE COUNTY PLANNING COMMISSION
NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION AND NOTICE OF PUBLIC HEARING
CONDITIONAL USE PERMT UP17-0009

NOTICE IS HEREBY GIVEN that the Butte County Planning Commission will hold a public hearing to consider Conditional Use Permit UP17-0009 for Franklin Construction Company on **May 10, 2018, at 9:00 a.m.** or shortly thereafter, in the Butte County Board of Supervisors' Room, County Administration Center, 25 County Center Drive, Oroville, California as follows:

Project Information:

Project: Conditional Use Permit UP17-0009 (Franklin Construction Company)

Location: The project site is located in unincorporated Butte County, approximately eight miles south of the City of Chico. The project site is located along the north side of Neal Road, ½ mile east of the intersection of State Highway 99 and Neal Road.

APN: 040-600-081

Proposal: A request to establish a construction equipment storage, maintenance and repair facility, and an aggregate/dirt recycling facility on a 50.59 acre property situated within the HI-RW (Heavy Industrial – Neal Road Recycling, Energy, and Waste Facility Overlay) zone. The proposed facility will include the construction of a new 6,600 square foot metal building that would be used for equipment repair and maintenance activities of company-owned equipment. The proposed aggregate/dirt recycling facility includes importing and temporary stockpiling of dirt, aggregate, concrete and asphalt rubble materials, which will ultimately be processed and exported by truck to off-site construction projects. Processing of materials will involve combinations of screening, crushing, and sorting.

The California Environmental Quality Act (CEQA) requires this notice to disclose whether any listed toxic sites are present on the project site. The project site does not contain a listed toxic site.

Butte County has prepared an Initial Study and is considering adoption of a Mitigated Negative Declaration pursuant to CEQA. The Initial Study/Mitigated Negative Declaration (IS/MND) and reference documents for the project are on file for public review and comment starting **Monday, April 9, 2018 through Tuesday, May 8, 2018**, at the Butte County Planning Division, 7 County Center Drive, Oroville, CA. The IS/MND is also available for review on the County website at http://www.buttecounty.net/dds/Planning/CEQA.aspx. All persons are invited to review the documents.

Comments may be submitted in writing to the Planning Division at the above address at any time prior to the hearing or orally at the meeting listed above, or as may be continued to a later date. If you challenge the above application in court, you may be limited to raising only those issues you or someone else raised at the public hearing or in written correspondence delivered to the Planning Commission at, or prior to the public hearing.

For information, please contact Senior Planner Rowland Hickel, Butte County Development Services Department, Planning Division at (530) 552-3684 or rhickel@buttecounty.net.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in the hearing, please contact us at (530) 552-3663. Notification at least 72 hours prior to the hearing will enable staff to make reasonable arrangements.

BUTTE COUNTY PLANNING COMMISSION
TIM SNELLINGS, DIRECTOR OF DEVELOPMENT SERVICES

DEVELOPMENT SERVICES DEPARTMENT

BUTTE COUNTY

INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION

CONDITIONAL USE PERMIT UP17-0009
(Franklin Construction Company)

FINAL REVISION – May 10, 2018

COUNTY OF BUTTE
DEPARTMENT OF DEVELOPMENT SERVICES
INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION
FOR
CONDITIONAL USE PERMIT UP17-0009
(FRANKLIN CONSTRUCTION COMPANY)

This Draft Initial Study/Mitigated Negative Declaration was circulated for review from April 11, 2018 through May 10, 2018. The document has been revised to correct errors, or to provide clarification, that had been identified during the review. Underline text represents language that has been added. Text with ~~strikethrough~~ has been deleted. These revisions do not constitute a substantial revision and do not require recirculation, pursuant to CEQA Guidelines §15073.5.

1.0 PROJECT INFORMATION

A. **Applicant/Owner:** Franklin Construction Company

B. **Staff Contact:** Rowland Hickel, Senior Planner; (530) 552-3684, rhickel@buttecounty.net

C. **Project Name:** Conditional Use Permit UP17-0009 (Franklin Construction Company)

D. **Project Location:** The project site is located in unincorporated Butte County, approximately eight miles south of the City of Chico. The project site is located along the north side of Neal Road, ½ mile east of the intersection of State Highway 99 and Neal Road. The project site is located within the boundary of assessor's parcel number APN: 040-600-081.

E. **Type of Application:** Conditional Use Permit

F. **Assessor Parcel Number:** 040-600-081

G. **Project Site Size:** 50.59 acre property

H. **Current Zoning:** HI-RW (Heavy Industrial – Neal Road Recycling, Energy, and Waste Facility Overlay)

I. **General Plan Designation:** Industrial (I)

J. **Environmental Setting:**

The project site encompasses 50.59 acres situated in the foothill region of the Northern Sacramento Valley, at an elevation between 220 to 330 feet above mean sea level (msl). The topography is comprised of a ridge top with mound-swale features which drops off to the valley floor. The vegetation predominately consists of annual grasslands with a narrow band of blue oak woodland habitat occurring along the northern and western edges of the ridgetop.

The ridgetop contains a 4 percent slope down toward the northwest which increases rapidly at the vertical rock cliffs along the edge of the bluff to the west. Slopes west of the cliff edge are approximately 3 to 8 percent down toward the west

The project site is primarily undeveloped except for wire cattle fencing around the perimeter of the property. Neal Road, a County-maintained road, borders the southern property line. High-voltage power lines border the entire western property line. The Neal Road Recycling and Waste Facility borders the northern property line, with the primary entrance to the facility located on the eastern side of the subject property.

The annual grassland habitat is composed of an herbaceous layer dominated by long-beak stork's bill (*Erodium botrys*) and soft chess (*Bromus hordeaceus*). Wildlife species use grassland habitat for foraging but often require some other habitat characteristic such as rocky out crops, cliffs, caves or ponds in order to find shelter and cover for escapement. Common species that breed in annual grasslands include a variety of ground nesting avian species and small mammals.

Several vernal pools and swales occur as a component of the annual grassland habitat. Five (5) wetland features consisting of vernal pools, vernal swales and seasonal swales were identified within the mound-swale topography of the project site. An ephemeral drainage channel is located on the valley portion of the property, west of the proposed development area. A formal Delineation of Water of the U.S. was performed on November 17 and 24, and December 4, 2015 by Gallaway Enterprises and was submitted to the U.S. Army Corps of Engineers (Corps) for a Jurisdictional Determination on December 7, 2015. A Jurisdictional Determination letter for the Project site was provided by the Corps on December 14, 2015 (SPK-2015-01-080).

The Blue Oak Woodland habitat is characterized by a dominate overstory of blue oak trees, with a typical understory composed of an extension of annual grassland vegetation and spare shrubs.

Soils on the project site is comprised of three map units, as classified in the National Cooperative Soil Survey database. 69.7% of the property contains Doemill-Jokerst complex, 0 to 3 percent slopes (614) and 11% Doemill-Jokerst complex, 3 to 8 percent slopes (615). These soil types are generally not known to support federally and State listed Butte County meadowfoam (*Limnanthes floccosa ssp. Californica*).

The zoning of the project site is HI-RW (Heavy Industrial – Neal Road Recycling, Energy, and Waste Facility Overlay).

The purpose of the Heavy Industrial (HI) zone is to allow for a full range of industrial uses, including operations that necessitate the storage of large volumes of hazardous or unsightly materials, or which produce dust, smoke, fumes, odors, or noise at levels that would affect surrounding uses. Uses permitted in the HI are similar to the GI zone, except that heavy industrial uses are permitted either as-of-right or with a Conditional Use Permit, and retail, personal service and restaurant uses are not allowed. The maximum permitted floor area ratio in the HI zone is one-half (0.5).

The Neal Road Recycling, Energy, and Waste Facility (-RW) overlay zone promotes compatible development around the Neal Road Recycling and Waste Facility. The -RW overlay zone also ensures adequate separation between the Neal Road Recycling and Waste Facility and land uses that are potentially incompatible with landfill activities. This overlay helps to promote the diversion of solid wastes into appropriate recycling facilities, energy generation, and other uses that add value and benefit to the local economy.

The project site is not listed on the California Department of Toxic Substances Control (DTSC) Hazardous Waste and Substances Site List (Cortese List) and is not located near any sites or sites known or suspected to contain hazardous materials.

K. **Surrounding Land Uses:** The project site is primarily surrounded by large-lot agricultural lands used for cattle grazing. The Neal Road Recycling and Waste Facility is the predominate development within the immediately area, and is located adjacent the northern boundary of the project site. Other development in the area includes: Neal Road, which borders the southern/eastern boundary of the project site; the Earthworm Soil Facility, a green waste recycling and compost facility, is located south of the project site; and, State Highway 99, which is located ¼ mile to the southwest. No residences are located in the vicinity of the project site.

Direction	General Plan Designation	Zoning	Existing Land Use(s)
North	Public	P-RW	Neal Road Recycling and Waste Facility
South	Agriculture	AG-20-RW	Grazing/Composting Facility/Wireless Communication Facility
East	Agriculture	AG-20-RW	Grazing Land
West	Agriculture	AG-20-RW	Grazing Land

L. **Project Description**

Franklin Construction Company is requesting a Conditional Use Permit to establish a construction equipment storage, maintenance and repair facility, and an aggregate/dirt recycling facility, on vacant property situated within the HI-RW zone.

The proposed facility will be relocated from two separate existing locations within the County. A maintenance and equipment storage yard is currently located at 1480 Skyway, in the City of Chico city limits. An

aggregate/dirt recycling facility is currently on the north side of Southgate Avenue, ¼ mile west from State Highway 99, in unincorporated Butte County, approximately ½ mile from the City of Chico.

The proposed facility will include the construction of a new 6,600 square foot metal building that would be used for equipment repair and maintenance activities of company-owned equipment. The maintenance building will be a 60' x 111' pre-engineered building that consists of a large shop area, two restrooms, two offices, a breakroom, parts room and tool room. Company-owned heavy equipment and vehicles will be stored outdoors in an uncovered area approximately 200' x 250' (1.14 acres) in size, situated directly north of the proposed maintenance building.

The proposed aggregate/dirt recycling facility will utilize approximately 9 acres of the site, in five (5) separate processing and stockpile areas. The recycling facility includes importing and temporary stockpiling of dirt, aggregate, concrete and asphalt rubble materials, which will ultimately be processed and exported by truck to off-site construction projects. Processing of materials will involve combinations of screening, crushing, and sorting. During winter (November-February) there will be minimal activities on the property. A mobile crusher will be brought to the site approximately 1 to 2 times a year to process concrete/asphalt rubble. Crushing activities will be limited to weekdays (Monday-Friday) between the hours of 7 am and 4 pm.

The facility will have between 2 to 4 full time employees with normal business hours. 1 to 2 additional employees will be brought to the site to operate recycling operations.

An on-site wastewater septic system will be constructed for the proposed maintenance building. The septic tank will be located immediately adjacent to the proposed building, with the leach field located off the ridgetop, approximately 750 feet west from the building.

Two separate gated entrances will provide access to the facility. Both entrances will be situated off Neal Road, and will require approval of a Butte County Encroachment Permit. Gravel roads within the site are proposed to access the maintenance building and stockpile areas from the two entrances.

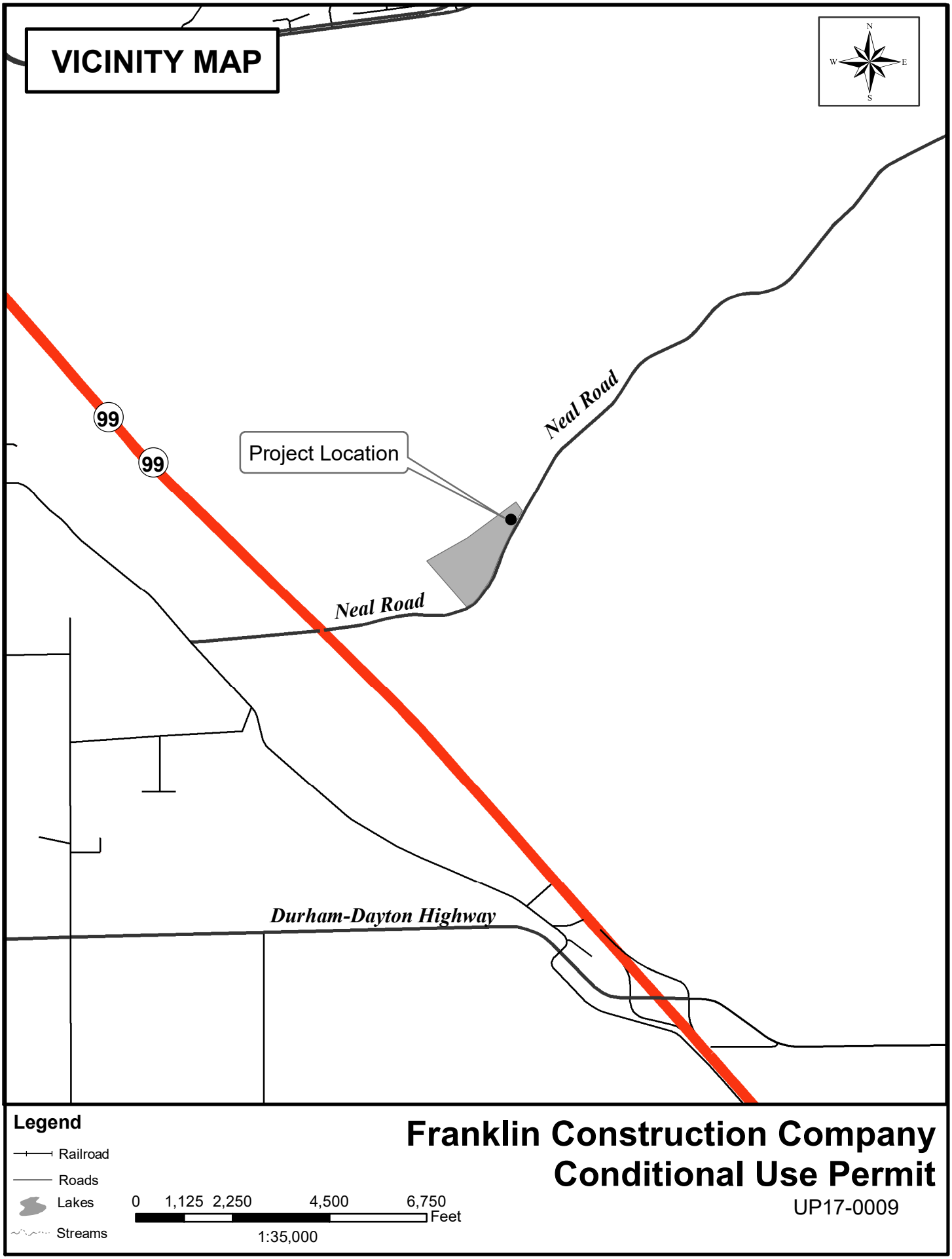
A landscaped berm will be constructed along the property's frontage of Neal Road, from the eastern property line to within 50 feet of the ridgetop's western edge. The berm will be approximately 2 feet tall and 15 feet wide, and will include a 6 feet tall chain-link fence and native, drought-tolerant landscaping between the road and fence.

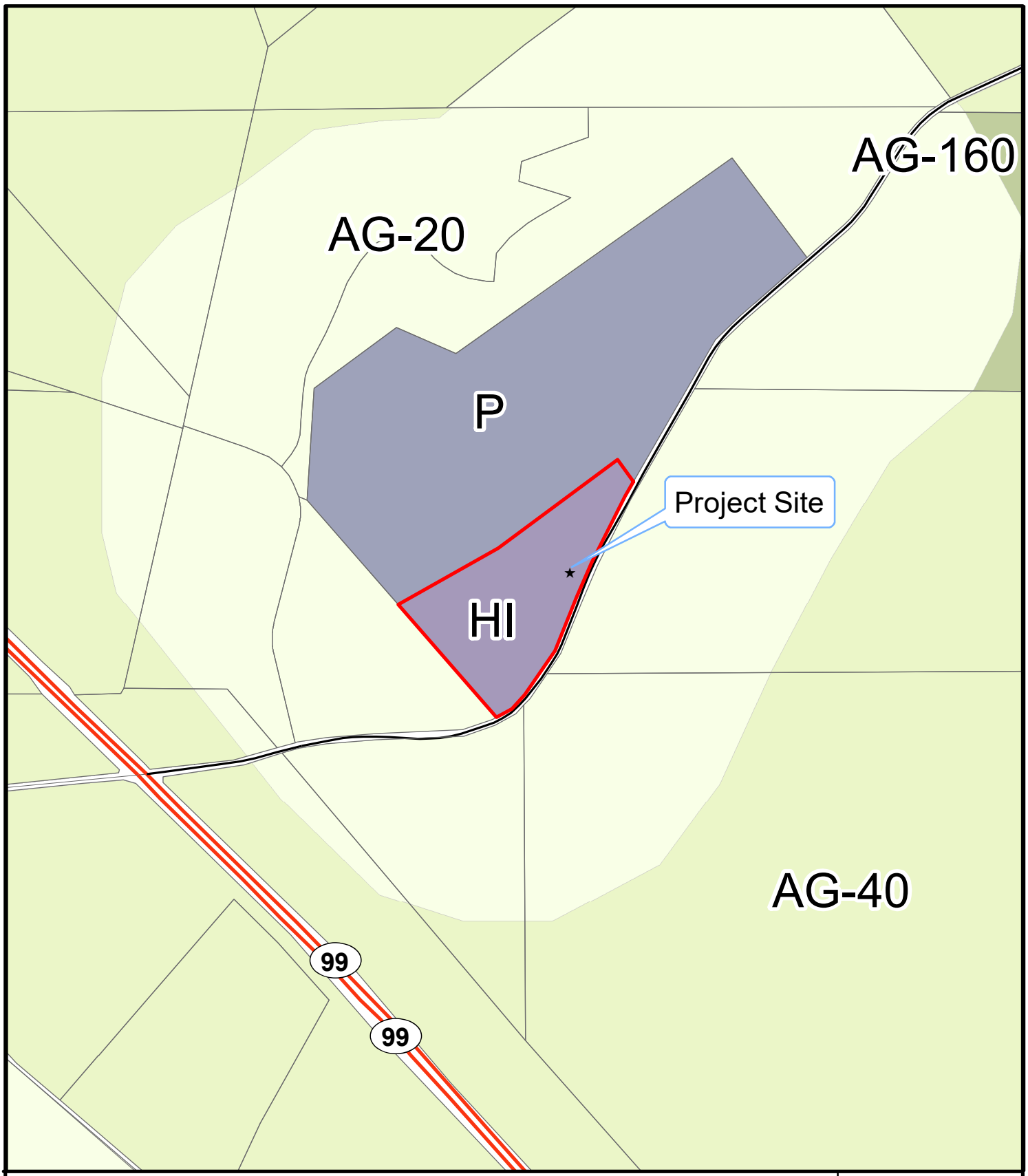
Approximately four (4) separate storm water runoff and sediment detention areas will be constructed along the northwesterly edge of the ridgetop. The detention areas will be constructed by creating low-lying berms approximately 1 foot tall, and will sized appropriately to contain estimated runoff.

The applicant has expressed an intent to establish an asphalt plant at the site at a future undetermined time. Approval of the asphalt batch plant will be subject to a Conditional Use Permit amendment, and separate analysis under CEQA, and is not considered in this Initial Study-Mitigated Negative Declaration review.

M. <u>Public Agency Approvals</u>:

- Butte County Department of Development Services (Conditional Use Permit; Building Permit)
- Butte County Environmental Health Division (On-Site Wastewater Disposal Permit; Small Well Permit)
- Butte County Public Works Department (Encroachment Permit)
- State Water Boards (National Pollution Discharge Elimination System (NPDES) Construction General Permit; NPDES Industrial General Permit)
- Butte County Air Quality Management District (Authority to Construct Permit; Authority to Operate Permit)


VICINITY MAP
N
W
E
S
99
99
Project Location
Neal Road
Neal Road
Durham-Dayton Highway
Legend
Railroad
Roads
Lakes
Streams
0 1,125 2,250 4,500 6,750
Feet
1:35,000
Franklin Construction Company
Conditional Use Permit
UP17-0009



Butte County Zone Districts

0 700 1,400 2,800 4,200 5,600 7,000 Feet

Supervisorial District #4

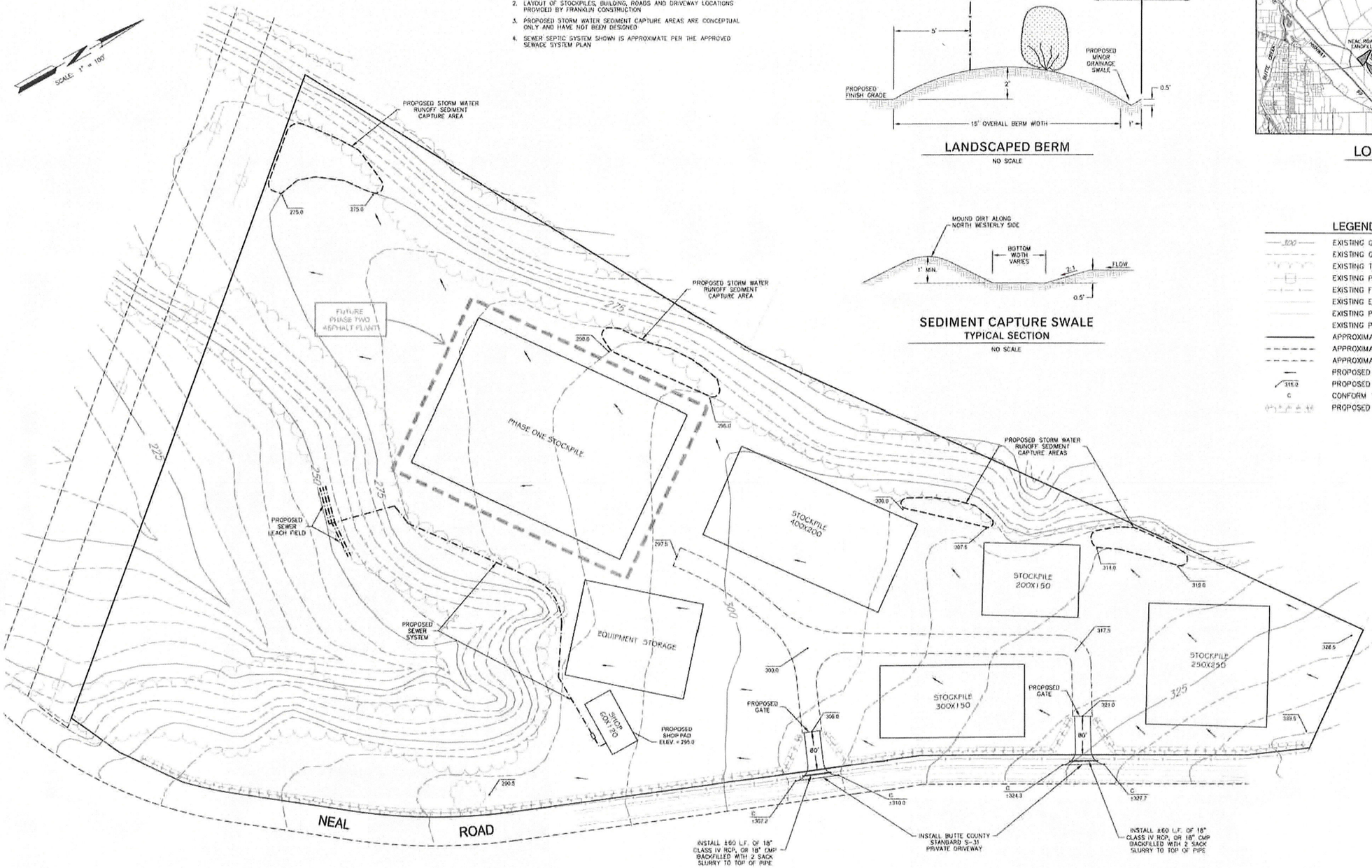
Applicant/Owner: Franklin Construction	**Zoning:** Heavy Industrial-Neal Road Overlay (HI-RW)
Request: Use Permit	**Assessor Parcel No:** 040-600-081

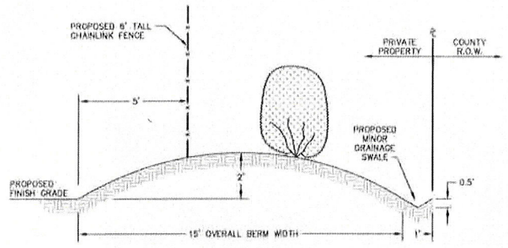
File: UP17-0009

GENERAL NOTES

1. CONTOUR DATA DERIVED FROM AERIAL SURVEY COMPLETED IN 1990 AND BASED OFF USGS BENCHMARK NO. 177
2. LAYOUT OF STOCKPILES, BUILDING, ROADS AND DRIVEWAY LOCATIONS PROVIDED BY FRANKLIN CONSTRUCTION
3. PROPOSED STORM WATER SEDIMENT CAPTURE AREAS ARE CONCEPTUAL ONLY AND HAVE NOT BEEN DESIGNED
4. SEWER SEPTIC SYSTEM SHOWN IS APPROXIMATE PER THE APPROVED SEWAGE SYSTEM PLAN

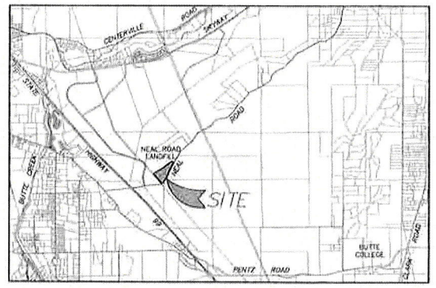
SCALE: 1" = 100'





LANDSCAPED BERM
NO SCALE

SEDIMENT CAPTURE SWALE
TYPICAL SECTION
NO SCALE



LOCATION MAP
NO SCALE

LEGEND

- EXISTING GROUND MAJOR CONTOUR (25' INTERVAL)
- EXISTING GROUND MINOR CONTOUR (5' INTERVAL)
- EXISTING TREE AND SHRUB LINE
- EXISTING PG&E TRANSMISSION LINES
- EXISTING FENCE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAINTED EDGE STRIPE
- EXISTING PAINTED CENTERLINE STRIPE
- APPROXIMATE PROPERTY LINE
- APPROXIMATE R.O.W LINE
- APPROXIMATE LOCATION OF PROPOSED ONSITE ROAD
- PROPOSED DIRECTION OF SURFACE FLOW
- 315.0 PROPOSED FINISH GRADE ELEVATION
- C CONFORM TO EXISTING SURFACE
- PROPOSED LANDSCAPED BERM

BUTTE COUNTY
OCT 10 2017
DEVELOPMENT SERVICES

REGISTERED PROFESSIONAL ENGINEER
PAUL W. RABO
No. 12209
CIVIL
State of California

9-29-17

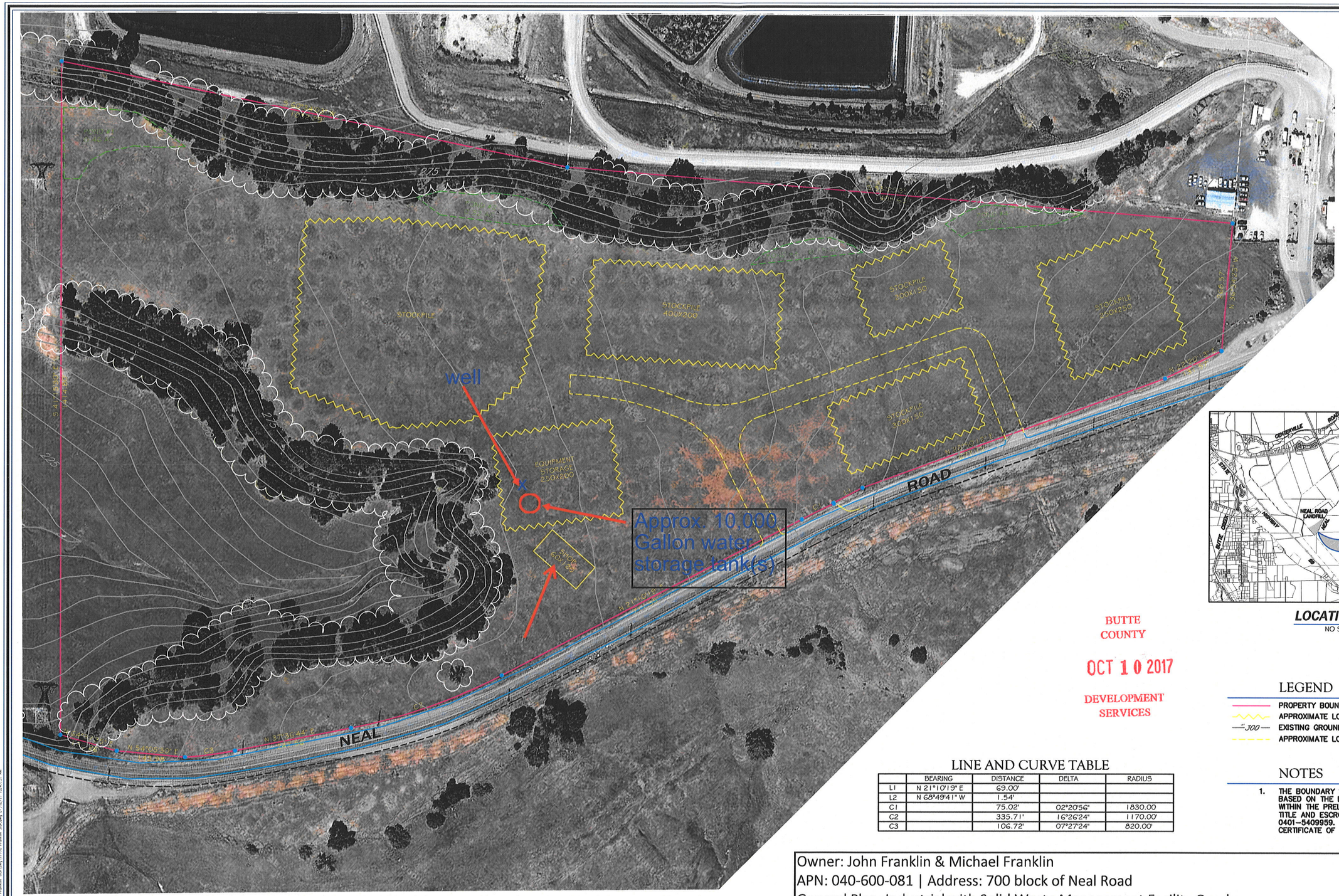
APPROVED Paul W. Rabo
DATE SEPTEMBER, 2017

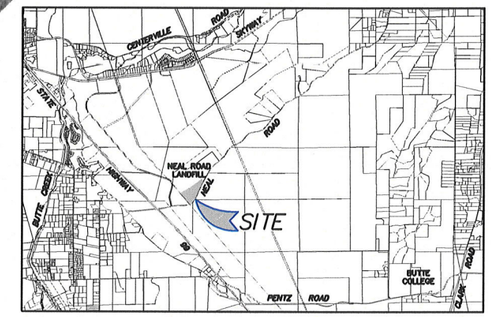
PREPARED FOR:
FRANKLIN CONSTRUCTION, INC.

RAR
ROLLS ANDERSON & ROLLS
CIVIL ENGINEERS
115 YELLOWSTONE DRIVE · CHICO, CALIFORNIA 95973-5811 · TELEPHONE 530-895-1422

NEAL ROAD SITE AND GRADING PLAN
A.P.N. 040-600-081

DESIGNED	JIR
DRAWN	JIR
CHECKED	PWR
DRAWING NO.	1 OF 1
JOB NO.	17100





LOCATION MAP
NO SCALE

BUTTE COUNTY
OCT 10 2017
DEVELOPMENT SERVICES

LEGEND

- PROPERTY BOUNDARY
- APPROXIMATE LOCATION OF FUTURE STOCKPILES
- 300 EXISTING GROUND CONTOUR
- APPROXIMATE LOCATION OF NEW ROAD

LINE AND CURVE TABLE

	BEARING	DISTANCE	DELTA	RADIUS
L1	N 21°10'19" E	69.00'		
L2	N 68°49'41" W	1.54'		
C1		75.02'	02°20'56"	1830.00
C2		335.71'	16°26'24"	1170.00'
C3		106.72'	07°27'24"	820.00'

NOTES

1. THE BOUNDARY SHOWN ON THIS SITE PLAN IS BASED ON THE LEGAL DESCRIPTION CONTAINED WITHIN THE PRELIMINARY REPORT BY MID VALLEY TITLE AND ESCROW COMPANY, ORDER NUMBER 0401-5409959. THE CREATION DEED OR CERTIFICATE OF COMPLIANCE WAS NOT PROVIDED.

Owner: John Franklin & Michael Franklin
APN: 040-600-081 | Address: 700 block of Neal Road
General Plan: Industrial with Solid Waste Management Facility Overlay
Zoning: Heavy Industrial with Recycling and Waste Facility Overlay | Gross Acres: 50.59

LICENSED LAND SURVEYOR HERBERT L. WOLVIN No. 8043 State of California

APPROVED

DATE JUNE, 2017

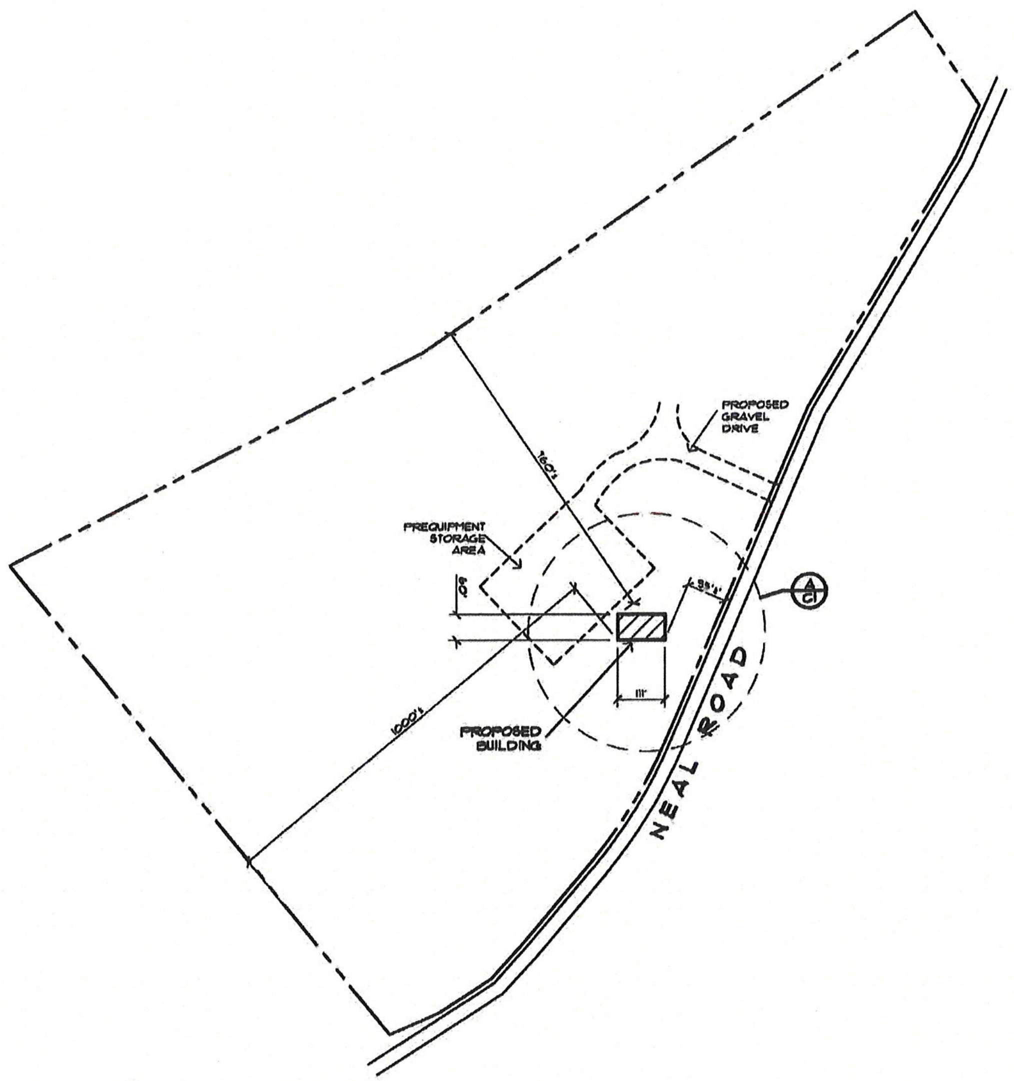
PREPARED FOR :
FRANKLIN CONSTRUCTION

RAR ROLLS ANDERSON & ROLLS
CIVIL ENGINEERS
115 YELLOWSTONE DRIVE · CHICO, CALIFORNIA 95973-5811 · TELEPHONE 530-895-1422

NEAL ROAD SITE PLAN
A.P.N. 040-600-081

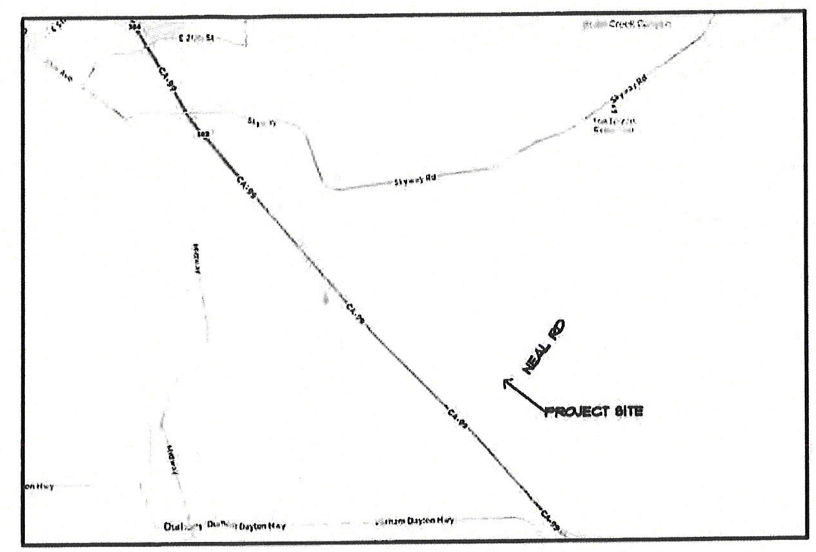
DESIGNED	
DRAWN	HJV
CHECKED	HLV
DRAWING NO.	1 OF 1
JOB NO.	17100

S:\Land Projects 2017\17100 Franklin Site\dwg\17100 Franklin Site.dwg 07/10/17 10:47:31 AM

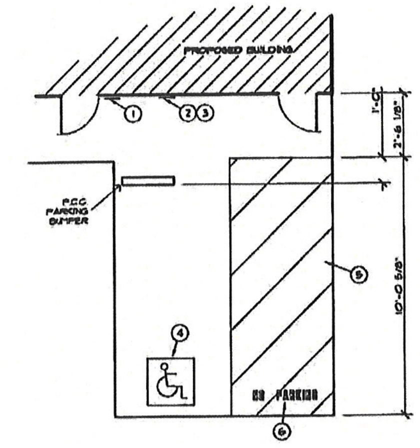


SITE PLAN: 1" = 200'±

NOTE:
THIS SITE PLAN IS BASED ON RECORD INFORMATION ONLY. NO SURVEY OF THE SITE WAS PERFORMED NOR IS IMPLIED.



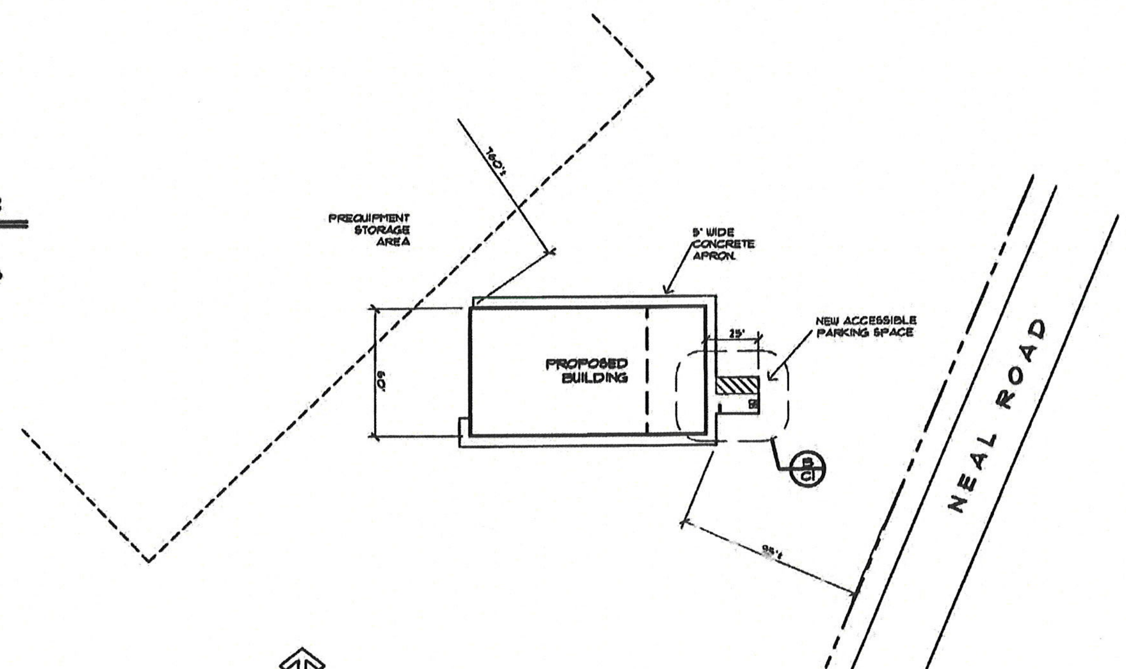
VICINITY MAP: N.T.S.



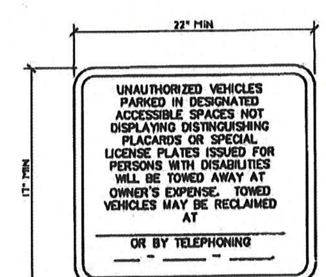
DETAIL C1/A1(2)

ACCESSIBLE PARKING SPACE SIGNS & MARKINGS

1. INTERNATIONAL SYMBOL OF ACCESSIBILITY SIGN INDICATING PUBLIC ENTRANCE. CBC 11B-103.1
2. ACCESSIBLE PARKING SPACE IDENTIFICATION SIGN PER CBC 11B-502.6 MOUNTED AT 80" ABOVE FG WITH 'VAN ACCESSIBLE" SIGN MOUNTED IMMEDIATELY BELOW THE WHEELCHAIR SYMBOL. SEE D/C1
3. SIGN CONFORMING WITH CBC 11B502.8 STATING "UNAUTHORIZED VEHICLES ... MAY BE TOWED AT OWNER'S EXPENSE. . . ." SEE E/C1
4. 36"X36" WHITE INTERNATIONAL SYMBOL OF ACCESSIBILITY ON SQUARE BLUE BACKGROUND. CBC 11B-502.6.4.
5. PAVEMENT SURFACE MARKING - BLUE BORDER WITH BLUE OR WHITE HATCH AT 36" O.C. CBC 11B-502.3.3
6. PAVEMENT SURFACE MARKING - PAINT 'NO PARKING' IN 12" HIGH WHITE LETTERS. CBC 11B-502.3.3

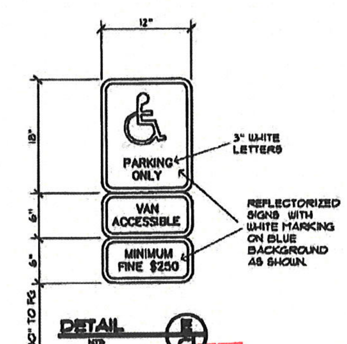


DETAIL A/C1
3/16"=1'-0"



BLANK SPACES TO BE FILLED IN WITH APPROPRIATE INFORMATION AS PERMANENT PART OF SIGN.

DETAIL D/C1
NTS



DETAIL E/C1
NTS

BUTTE COUNTY
OCT 10 2017
DEVELOPMENT SERVICES

INDEX OF PRELIMINARY DRAWINGS

A1	SITE PLAN
A2	FLOOR PLAN
	ELEVATIONS & SECTION

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS:

DATE	MARK	NOTE

NVBS BUTLER
NORTH VALLEY BUILDING SYSTEMS INCORPORATED
#30 SEVILLE CT.
CHICO, CA 95928
PHONE (530) 345-7296

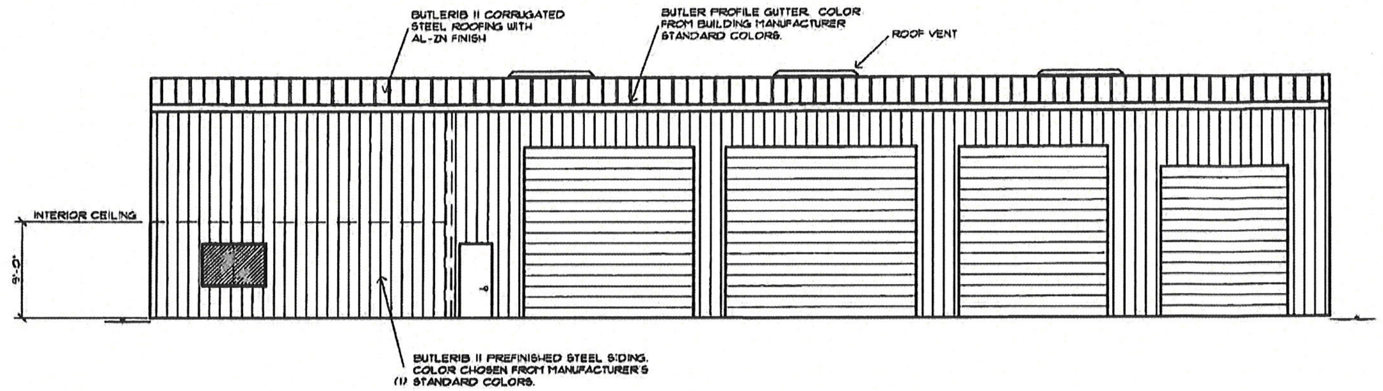
TITLE: EQUIPMENT REPAIR & STROAGE BUILDING FOR FOR FRANKLIN CONSTRUCTION. BUTTE CO. APN 040-600-081 (NEAL ROAD)
SITE PLAN

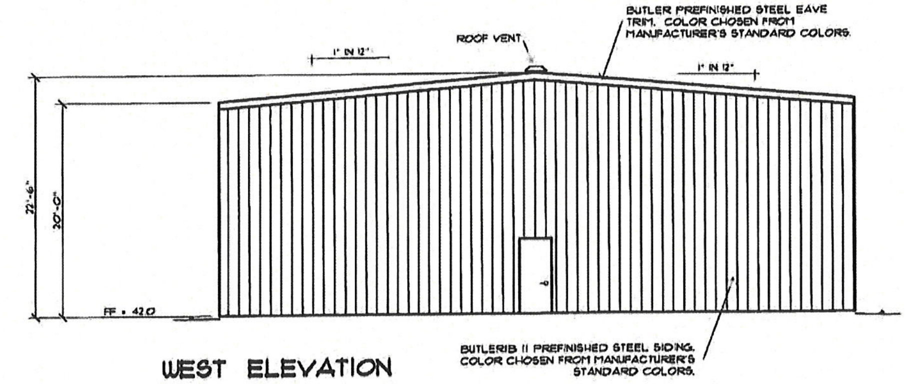
CRANDALL ENGINEERING
5448 Merrill Mill Road
Mariposa, CA
Phone: (209) 966-4844

SCALE: 1/8"=1'-0"
JOB NO:
FILE:

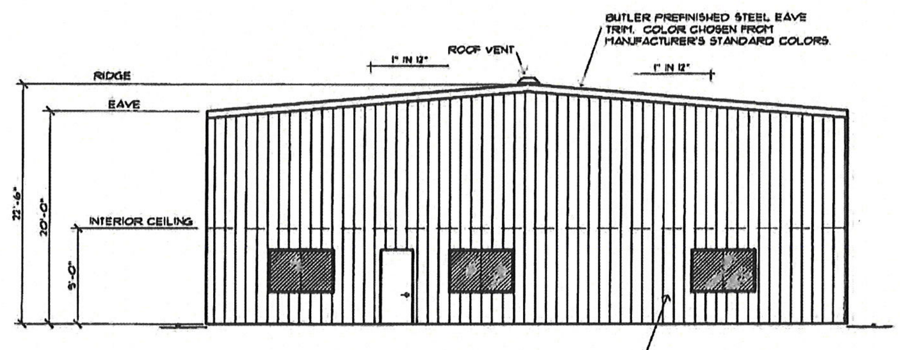
REGISTERED PROFESSIONAL ENGINEER J. ANDREW CRANDALL C 32834 EXP. 9/30/18 CIVIL STATE OF CALIFORNIA
8/9/2017

SHEET C1 OF 3

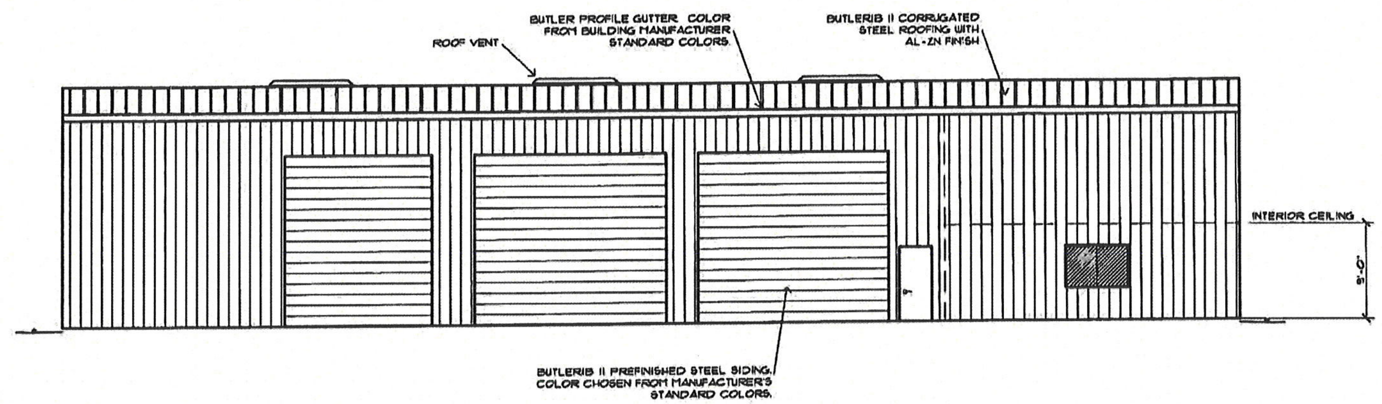


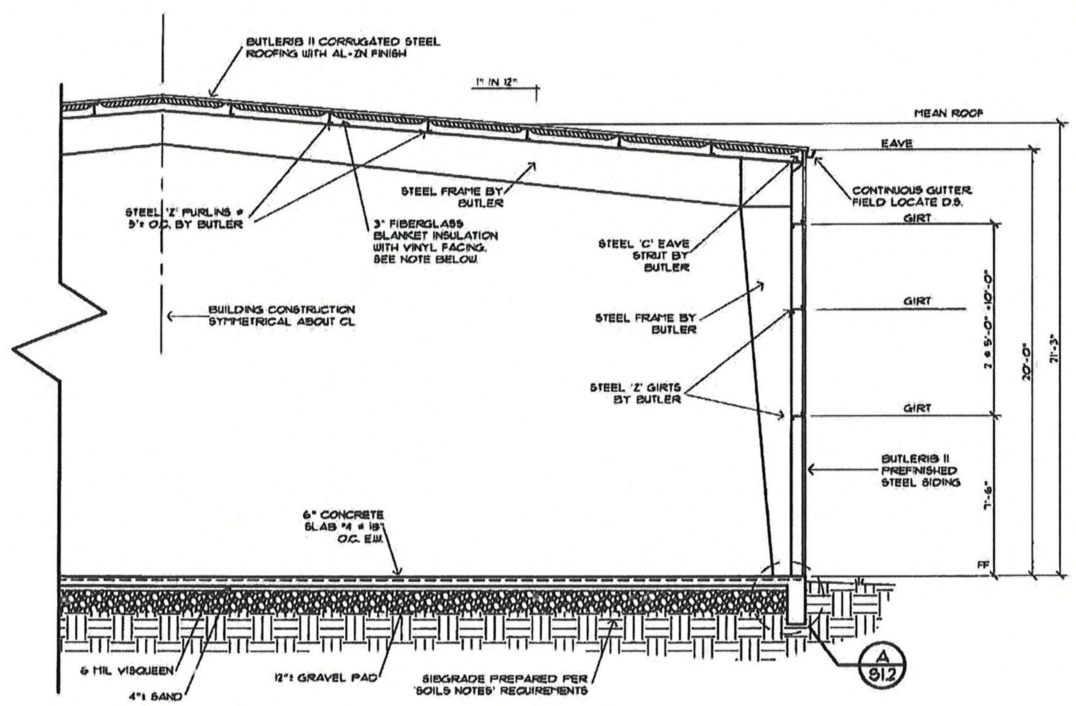


WEST ELEVATION



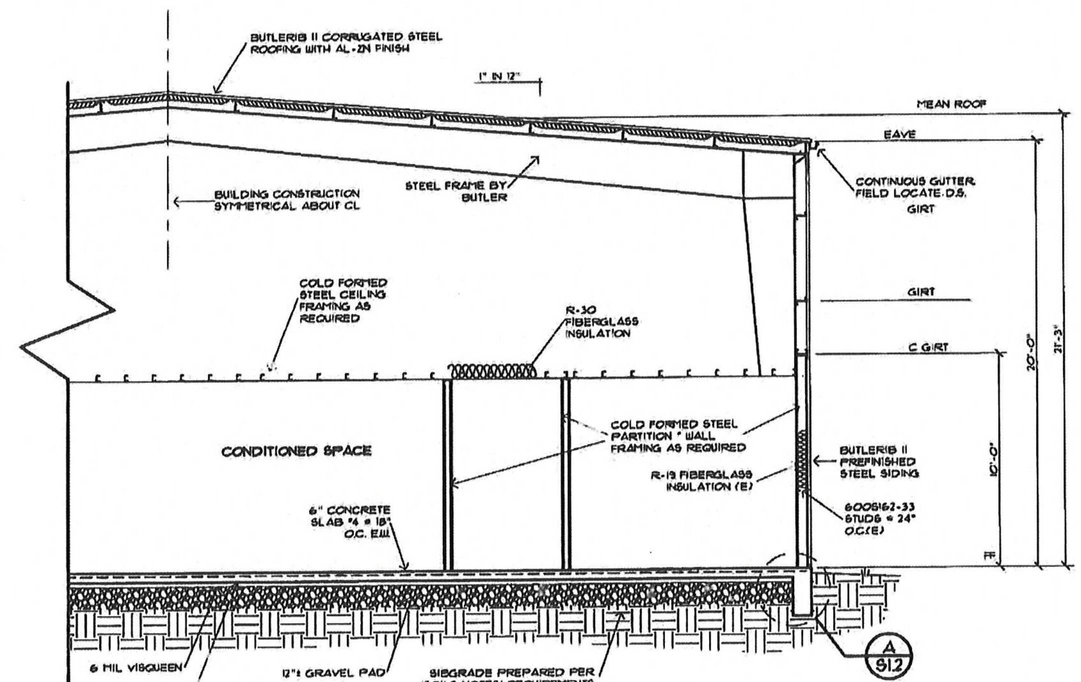
WEST ELEVATION





SECTION A/A3
3/16"=1'-0"

INSULATION FACING:
VINYL INSULATION BACKING SHALL HAVE A FLAME SPREAD INDEX OF 25 OR LESS AND SMOKE DEVELOPMENT INDEX OF 450 OR LESS WHEN TESTED PER ASTM E84 OR UL 723.



SECTION B/A3
3/16"=1'-0"

PRELIMINARY
NOT FOR CONSTRUCTION

BUTTE COUNTY
OCT 10 2017
DEVELOPMENT SERVICES

REVISIONS:

DATE	MARK	NOTE
29/11/17	NA	BAY 4 DOOR

NORTH VALLEY BUILDING SYSTEMS
430 SEVILLE CT.
CHICO, CA 95928
PHONE (530) 345-7298

TITLE: EQUIPMENT REPAIR & STROAGE BUILDING FOR FOR FRANKLIN CONSTRUCTION BUTTE CO. APN 040-600-051 (NEAL ROAD)

ELEVATIONS & SECTIONS

CRANDALL ENGINEERING
5443 Merrill Mill Road
Mariposa, CA
Phone: (209) 966-4944

SCALE: 1/8"=1'-0"
JOB NO: 17073
FILE:

REGISTERED PROFESSIONAL ENGINEER J. ANDREW CRANDALL C 33934 EXP. 6/30/18 CIVIL STATE OF CALIFORNIA

8/9/2017

SHEET A2 OF 3

2.0 POTENTIALLY SIGNIFICANT EFFECTS CHECKLIST SETTING

Environmental Factors Potentially Affected:

Project impacts to the environmental factors checked below could be potentially significant; however, with the incorporation of mitigation measures, project related impacts are reduced to a "less than significant" level (CEQA Guidelines 15382).

☐	Aesthetics	☐	Agriculture & Forestry Resources	☒	Air Quality
☒	Biological Resources	☒	Cultural Resources	☐	Geology /Soils
☒	Greenhouse Gas Emissions	☐	Hazards & Hazardous Materials	☒	Hydrology / Water Quality
☐	Land Use / Planning	☐	Mineral Resources	☐	Noise
☐	Population / Housing	☐	Public Services	☐	Recreation
☐	Transportation/Traffic	☐	Tribal Cultural Resources	☐	Utilities / Service Systems
☐	Mandatory Findings of Significance.				

3.0 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 measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT 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.

Prepared by: Rowland Hiddel, Senior Planner — Date 4/4/18

Reviewed by: Chuck Thistlethwaite, Planning Manager — Date April 4, 2018

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

4.0 ENVIRONMENTAL IMPACTS

4.1 Aesthetic/Visual Resources:

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒	☐
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐☒	☐	☐

Impact Discussion:

a.) **Less than significant impact.** The project site does not contain scenic resources, and is not located in an area designated as a scenic resource or vista, and is not visible from any state-designated scenic highways. The Neal Road Recycling and Waste Facility is located immediately northeast of the project site, and is the dominate feature of the landscape at 78 acres.

Proposed uses would substantially alter approximately 23 acres of the existing natural setting of the ridgetop into an urbanized setting that will include a pre-fabricated metal building, heavy equipment and vehicle storage, aggregate stockpiles, fencing and gravel roads. These introduced features would largely be visible by travelers along Neal Road, a public roadway. The nearest residences with views of the site are located to the south and over a mile from the project site. There are no nearby residences that have direct views of the project site.

Views of the proposed project area from travelers along State Highway 99 will almost be entirely screened due to site topography and the presence of the band of oak woodland trees along the western boundary of the project site, and the sites elevation above State Highway 99. However, portions of the project site is partially visible from distant (approximately one mile) locations south of the project site.

The applicant proposes to construct a short berm with landscaping along the property's frontage with Neal Road, between the proposed development and the roadway. The berm and landscaping would only provide partial screening of the development from Neal Road because the elevation of the site is a few feet higher than the roadway, and because the height of stockpiles and the building would be greater than the roadway. Though the berm and landscaping would not fully screen the site, the landscaping would help to reduce the negative effects of the urban features.

Though the project would introduce urban features to an undeveloped area containing grassland and woodland habitat, the facility is located immediately adjacent to the Neal Road Recycling and Waste Facility which has existing urban features encompassing 78 acres, diminishing the scenic attributes the project site currently provides. With the project site's close proximity to the Neal Road Facility, together with the proposed addition of the landscaped berm, potential impacts are less than significant.

b.) **No impact.** No scenic resources or unique features have been identified on the project site. In addition, no scenic highways exist in the vicinity of the project site.

c.) **Less than significant impact.** See discussion 4.1 (a), above. The presence of the Neal Road Recycling and Water Facility in the immediate vicinity of the project site dominates the visual character of the area. As a result, the introduction of urban features associated with the project would not substantially change or degrade the character or quality of the site or surroundings.

d.) Less than significant impact with mitigation incorporated. Exterior lighting in the project area is primarily associated with the Neal Road Recycling and Waste Facility. Exterior lighting for safety and security could potentially be added to the building, equipment storage yard, and at the entrances. Exterior lighting added to the facility for safety and security would be minimal, as the facility would only operate during typical daytime hours. In the event lighting is added in the future, the following measures shall be implemented to ensure proposed lighting does not become a substantial source of light or glare that adversely affects daytime or nighttime views.

Mitigation Measure #1 (Exterior Lighting):
A lighting plan shall be submitted for approval prior to building permit issuance. Any new outdoor lighting shall be consistent with Chapter 24, Article 14 or the Butte County Code, and not adversely affect night time views. Lighting shall be designed to ensure that no direct offsite spill of light or glare will occur.

Plan Requirements: A lighting plan shall be submitted for approval by the Planning Division of the Department of Development Services prior to issuance of building permits. This note shall also be placed on all building and site development plans.

Timing: Requirements of the condition shall be adhered to throughout the life of the project.

Monitoring: The Butte County Department of Development Services shall ensure that the note is placed on all development plans. The Department shall respond to nuisance complaints.

4.2 Agriculture Resources:

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
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?	☐	☐	☐	☒	☐
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☒	☐	☐
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒	☐
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒	☐
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☒	☐	☐

Impact Discussion:

a.) No impact. The California Farmland Mapping and Monitoring Program designates the project parcel as "Grazing Land", which contains land on which the existing vegetation, whether grown naturally or through management, is suitable for grazing or browsing of livestock. Only lands categorized as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance (if adopted by the county) are designated as Important Farmland. The project site is not designated as Important Farmland in the Farmland Mapping and Monitoring Program, and would not result in the conversion of Important Farmland to a non-agricultural use.

b.) **Less than significant impact.** The project site is not zoned *Agriculture*, and not encumbered by an existing Williamson Act contract. The project is zoned HI-RW (Heavy Industrial-Neal Road Recycling, Energy, and Waste Facility). This zone allows for a full range of industrial uses that are compatible with the Neal Road Recycling and Waste Facility, including agricultural uses such as grazing and crop cultivation. The project would convert approximately 23 acres of annual grasslands that are suitable for agricultural grazing activities. However, approximately 8 acres at the western portion of the project site would continue to be available for agricultural pursuits.

c.) **No impact.** The project site and surrounding area is not classified as forestland, as defined in Public Resources Code Section 12220(g), or as timberland, as defined in Public Resources Code Section 4526.

d.) **No impact.** The project site is not classified as forest land, and therefore, the proposed project would not result in loss or conversion of forest land to a non-forest use.

e.) **Less than significant impact.** The project site is not zoned *Agriculture*, and not designated as *Farmland* in the Farmland Mapping and Monitoring Program. The proposed project would result in the conversion of approximately 23 acres of grazing land. However, the conversion of grazing lands would not result in the conversion of Farmland because grazing lands are not designated as *Farmland*.

Mitigation Measure: None required.

4.3 Air Quality:

Would the proposal:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**	**Reviewed Under Previous Document**
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐	☐
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)?	☐	☒	☐	☐	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐	☐

Setting:

Butte County is located within the Northern Sacramento Valley Air Basin (NSVAB). Summer conditions in the NSVAB are typically characterized by high temperatures and low humidity, with temperatures averaging from approximately 90 degrees Fahrenheit during the day and 50 degrees Fahrenheit at night. During the summer months, the prevailing winds are typically from the south. Winter conditions are characterized by occasional rainstorms interspersed with stagnant and sometimes foggy weather. The daytime average temperatures is in the low 50s^{o}F and nighttime temperatures average in the upper 30s^{o}F. During winter, winds predominate from the south, but north winds frequently occur. Rainfall occurs mainly from late October to early May, with an average of 17.2 inches per year, but this amount can vary significantly each year.

Dispersion of local pollutant emissions are predominately affected by the prevailing wind patterns and inversions that often occur in the NSVAB. Within the NSVAB, two types of inversions can occur. During the summer months, sinking air forms a "lid" over the region and confines pollution to a shallow layer near the ground, which can contribute to photochemical smog problems. During winter nights, air near the ground cools while the air aloft remains warm,

which can cause localized air pollution "hot spots" near emission sources (Butte County General Plan EIR; BCAQMD, 2014).

Current Ambient Air Quality

Federal and state standards have been established for six criteria pollutants, including ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulates less than 10 microns and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$), and lead (Pb). The Butte County Air Quality Management District (BCAQMD) is the primary agency responsible for assuring that the federal and state ambient air quality standards are attained and maintained in Butte County. The BCAQMD operates a network of ambient air monitoring stations throughout Butte County. Depending on whether the standards for a particular criteria air pollutant has been met or exceeded, the local air basin is classified as being in "attainment" or "nonattainment." Based on the most recent monitoring data, Butte County is a nonattainment area for both state and federal ozone standards, the state and federal $PM_{2.5}$ standards, and the state PM_{10} standards. Butte County is in attainment for the state and federal standards for sulfur dioxide, nitrogen dioxide, and carbon monoxide (BCAQMD, 2014).

Table 4.3-1 Butte County - State and Federal Ambient Air Quality Attainment Status

POLLUTANT	STATE DESIGNATION	FEDERAL DESIGNATION
1-hour ozone	Nonattainment	-
8-hour ozone	Nonattainment	Nonattainment
Carbon monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
24-Hour PM10	Nonattainment	Attainment
24-Hour PM2.5	No Standard	Nonattainment
Annual PM10	Attainment	No Standard
Annual PM2.5	Nonattainment	Attainment

Source: Butte County AQMD, 2014

Air Quality Planning

The California Clean Air Act requires air districts to prepare a plan for air quality improvement for criteria pollutants for which the District is in nonattainment. The BCAQMD's Air Quality Attainment Plan was first adopted in 1991 and updated in 1994, 1997, 2000 and 2003. In 2006, the District collaborated with other air pollution control districts in the NSVAB to prepare a joint Air Quality Attainment Plan. That joint plan has been updated in 2006, 2009 and 2012 as the Northern Sacramento Valley Planning Area Triennial Air Quality Attainment Plan. The attainment plan is the basis for an air district's functional strategy to meet federal and state ambient air quality standards.

The BCAQMD, in its role of insuring that projects are properly evaluated for consistency with ambient air quality standards and the Northern Sacramento Valley Planning Area Triennial Air Quality Attainment Plan, have prepared guidelines to assist applicants and lead agencies in evaluating potential air quality and greenhouse impacts that may occur with a proposed project. Established with these guidelines are screening criteria to determine whether or not additional modeling for criteria air pollutants is necessary for a project. The screening criteria listed in Table 4.3-2 were created using CalEEMod version 2013.2.2 for the given land use types. To determine whether or not a proposed project meets the screening criteria, the size and metric for the land use type (units or square footage) should be compared with that of the proposed project. If a project meets the applicable screening criteria, then further quantification of criteria air pollutants is not necessary, and it may be assumed that the project would have a less than significant impact for criteria air pollutants. If a project exceeds the size provided by the screening criteria for a given land use type then additional modeling and quantification of criteria air pollutants should be performed (BCAQMD, 2014).

Table 4.3-2 Screening Criteria for Criteria Air Pollutants

LAND USE TYPE	MAXIMUM SCREENING LEVELS FOR PROJECTS
Single Family Unit Residential	30 units
Multi-Family (Low Rise) Residential	75 units
Commercial	15,000 square feet
Educational	24,000 square feet
Industrial	59,000 square feet
Recreational	5,500 square feet
Retail	11,000 square feet

Source: Butte County AQMD, CEQA Air Quality Handbook, 2014

Impact Discussion:

a.) Less than significant impact with mitigation incorporated. Construction of the proposed project is assumed to occur in 2018 and would consist of constructing the maintenance building, utilities, internal driveways, detention basins, driveway encroachments, and the landscaped berm. During construction of the project, various types of equipment and vehicles would temporarily operate on the project site. Construction exhaust emissions would be generated from construction equipment, vegetation clearing and earth movement activities, construction workers' commute, and construction material hauling during the construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants.

Operational emissions of criteria pollutants would be generated by the proposed project from both mobile and stationary sources. Daily activities include employee vehicle trips, sorting imported and processed materials by heavy equipment, and from trucks importing and exporting to the project site. The project is estimated to generate an increase of 10 to 15 trips per day. Emission would also occur from stationary sources such as the mechanical equipment (e.g., portable power screens, portable crushing machines) used on-site for materials processing.

The project is required to comply with all BCAQMD rules and regulations associated with construction and operations, such as Rule 430 (New Source Review), Rule 200 (Nuisance), Rule 205 (Fugitive Dust Emissions), and Rule 202 (Particulate Matter), as well as implementation of BCAQMD's basic Construction Emission Control Practices (Mitigation Measure #2). These rules includes the requirement that the application obtain a Permit to Operate from BCAQMD for each piece of stationary equipment to be operated on the site project site, which would ensure that stationary sources use Best Available Control Technology (BACT), offsets and analysis of air quality impacts to ensure that the operation of such sources does not interfere with the attainment or maintenance of ambient air quality standards. Compliance with the BCAQMD's permitting process would ensure that emission associated with the processing equipment would be minimized, and the project would not violate any air quality standards or contribute to an existing air quality violation.

b.) Less than significant impact with mitigation incorporated. The proposed project would generate emissions of criteria pollutants within the air district that are currently in non-attainment with, including one-hour ozone, 8-hour ozone, 24-hour PM10, 24-hour PM2.5, and annual PM2.5. Construction activities and operations associated with the project would emit various levels of these pollutants. Implementation of Mitigation Measure #2 (below) together with enforcement of the BCAQMD's rules and regulations, including obtaining an Authority to Operate Permit for all stationary sources, together with the implementation of control measures, identified in Appendix C of BCAQMD's CEQA Handbook (2014), would reduce potential construction-related and operation air emission impacts to a less than significant level.

c.) Less than significant impact with mitigation incorporated. Based on the information provided in section b.), above, the proposed project would not result in the violation of any air quality standards or contribute substantially to an existing or projected air quality violation, except for potential fugitive dust emission during construction activities.

Fugitive dust emissions generated during construction have the potential to contribute cumulatively to the region's non-attainment of PM_{10} and $PM_{2.5}$ emissions. Implementation of Mitigation Measure #2 would reduce potential cumulative fugitive dust emission impacts to a less than significant level.

d.) Less than significant impact with mitigation incorporated. The proposed project would not introduce new sensitive receptors to the area. The nearest existing residences are located along Oroville-Chico Highway, approximately one mile west of the project site. Two additional single-family residences are located approximately one-mile to the south. At these distances, and with the existing intervening natural topography of the area and the implementation of Mitigation Measure #2, suspended and inhalable particulate matter and equipment exhaust emissions generated from proposed construction grading activities and operational activities would have a less than significant impact on sensitive receptors.

e.) Less than significant impact. The proposed use will not create any objectionable odors. However, construction and operational activities could include objectionable odors from tailpipe diesel emissions and from solvents in adhesives, paints, caulking materials, and new asphalt. Since odor impacts would be localized around the project site, odors would not impact a substantial number of people.

Mitigation Measure #2 (Construction Air Emissions)

The following best practice measures to reduce impacts to air quality shall be incorporated by the project applicant, subject property owners, or third-party contractors during construction activities on the project site. These measures are intended to reduce criteria air pollutants that may originate from the site during the course of land clearing and other construction operations.

Diesel PM Exhaust from Construction Equipment and Commercial On-Road Vehicles Greater than 10,000 Pounds

- All on- and off-road equipment shall not idle for more than five minutes. Signs shall be posted in the designated queuing areas and/or job sites to remind drivers and operators of the five-minute idling limit.
- Idling, staging and queuing of diesel equipment within 1,000 feet of sensitive receptors is prohibited.
- All construction equipment shall be maintained in proper tune according to the manufacturer's specifications. Equipment must be checked by a certified mechanic and determined to be running in proper condition before the start of work.
- Install diesel particulate filters or implement other CARB-verified diesel emission control strategies.
- Shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5 minutes at any location when within 100 feet of a restricted areas.
- To the extent feasible, truck trips shall be scheduled during non-peak hours to reduce perk hour emissions.

Operational TAC Emissions

- All mobile and stationary Toxic Air Contaminants (TACs) sources shall comply with applicable Airborne Toxic Control Measures (ATCMs) promulgated by the CARB throughout the life of the project (see http:www.arb.ca.gov/toxics/atcm/atcm.htm).
- Stationary sources shall comply with applicable District rules and regulations.

Fugitive Dust

Construction activities can generate fugitive dust that can be a nuisance to local residents and businesses near a construction site. Dust complaints could result in a violation of the District's "Nuisance" and "Fugitive Dust" Rules 200 and 205, respectively. The following is a list of measures that may be required throughout the duration of the construction activities:

- Reduce the amount of the disturbed area where possible.
- Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. An adequate water supply source must be identified. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible.
- All dirt stockpile areas should be sprayed daily as needed, covered, or a District approved alternative method will be used.
- Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities.
- Exposed ground areas that will be reworked at dates greater than one month after initial grading should be sown with a fast-germinating non-invasive grass seed and watered until vegetation is established.
- All disturbed soil areas not subject to re-vegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the Butte County Air Quality Management District.
- All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
- All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with local regulations.
- Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site.

- Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible.
- Post a sign in prominent location visible to the public with the telephone numbers of the contractor and the Butte County Air Quality Management District - (530) 332-9400 for any questions or concerns about dust from the project.

All fugitive dust mitigation measures required should be shown on grading and building plans. In addition, the contractor or builder should designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend period when work may not be in progress. The name and telephone number of such persons shall be provided to the District prior to land use clearance for map recordation and finished grading of the area.

Please note that violations of District Regulations are enforceable under the provisions of California Health and Safety Code Section 42400, which provides for civil or criminal penalties of up to $25,000 per violation.

Plan Requirements: This note shall also be placed on all building and site development plans.

Timing: Requirements of the condition shall be adhered to throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services shall ensure that the note is placed on all development plans. Building inspectors shall spot check and shall ensure compliance on-site. Butte County Air Pollution Control District inspectors shall respond to nuisance complaints.

4.4 Biological Resources:

Would the proposal:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**	**Reviewed Under Previous Document**
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?	☐	☐	☒	☐	☐
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?	☐	☐	☐	☒	☐
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 or the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means)?	☐	☒	☐	☐	☐
d. Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒	☐
e. Conflict with any local policies or ordinances protecting biological resources such as a tree preservation policy ordinance?	☐	☐	☐	☒	☐
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?	☐	☐	☐	☒	☐

Setting:

A Biological Assessment (BA) was prepared for the project by Gallaway Enterprises dated August 2017 and is attached to this study as Appendix A. The purpose of the BA is to document any endangered, threatened, sensitive and rare species, and their critical habitats that occur in the 52.5 acre project site, identified as the Action Area in the assessment. Habitats identified within the project site consist of annual grassland, blue oak woodland, vernal pool, seasonal and vernal swales, and ephemeral drainages. There are no critical habitat designations within the project site however, the vernal pools and swales present within the project site did exhibit marginally suitable habitat for Butte County meadowfoam (*Limnanthes floccosa ssp. Californica*).

A complete list of all sensitive natural communities and special-status species with a potential for occurrence at the project site is presented in the Biological Assessment in Attachment A. Recommendations to avoid or minimize impacts, and mitigation measures for special-status species and their habitats are provided it the BA and incorporated into mitigation measures herein.

Jurisdictional Waters of the United States, including Wetlands

Waters of the United States (U.S.), including wetlands, are broadly defined to include navigable waterways, and tributaries of navigable waterways, and adjacent wetlands. Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface water or groundwater, supporting vegetation adapted to life in saturated soil. Jurisdictional wetlands are vegetated areas that meet specific vegetation, soil, and hydrologic criteria defined by the U.S. Army Corps of Engineers (USACE). The USACE holds sole authority to determine the jurisdictional status of waters of the U.S., including wetlands. Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages, lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. Wetland and waters of the U.S. provide critical habitat components, such as nest sites and reliable source of water for a wide variety of wildlife species.

A formal Delineation of Waters of the United States was prepared on November 17 and 24, and December 4, 2015 by Gallaway Enterprises and was submitted to the U.S. Army Corps of Engineers for a Jurisdiction Determination on December 7, 2015. A Jurisdictional Determination letter for the project site was provided by the USACE on December 14, 2015 (SPK-2015-01-080). A total of 0.28 acres of Other Waters of the U.S. and 0.13 acres of wetland features were identified on the project site, as shown on Figure 2 of the BA. Jurisdictional wetlands are further described in the BA as follows:

Palustrine *(Vernal Pools and Swales)*

There are several northern hardpan vernal pools and swales distributed throughout the project site. Northern hardpan vernal pools are the most common classification of vernal pool in the Northwest Sacramento Valley Region. Pools consist of a shallow soil layer with an impermeable hardpan bottom, most often within mima-mound topography. These types of vernal pools are often small and are inundated with water for a short period of time. Species that specialize in vernal pools ecosystems include the vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*) and several rare botanical species. Rapid dry down caused by steep slopes, together with shallow soils, result in marginal habitat for vernal invertebrates on-site.

Riverine *(Ephemeral Drainages)*

There is one ephemeral branched stream channel that flows northeast to the southwest parallel to the southeastern boundary of the project site. This drainage is an unnamed tributary which flows offsite to the southwest into a series of tributaries to Butte Creek. Ephemeral drainages do not convey water year round. They dry up seasonally and play an important role of conveying and filtering seasonal runoff into larger perennial riverine systems.

Special-Status Species

Many species of plants and animals within the State of California have low populations, limited distributions, or both. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. A sizable number of native species and animals have been formally designated as threatened or endangered under State and Federal endangered species legislation. Others have been designated as "Candidates" for such listing and the California Department of Fish and Wildlife (CDFW) have designated others as "Species of Special Concern". The California Native Plant Society (CNPS) has developed its own lists of native plants considered rare, threatened or endangered. Collectively, these plants and animals are referred to as "special status species."

Various direct and indirect impacts to biological resources may result from the small amount of development enabled by the project, including the loss and/or alteration of existing undeveloped open space that may serve as habitat. Increased vehicle trips to and from the project site can result in wildlife mortality and disruption of movement patterns within and through the project vicinity. Disturbances such as predation by pets (e.g., cats and dogs) and human residents may also occur at the human/open space interface, while conversion of land from lower to higher density residential use can lead to a predominance of various urban-adapted wildlife species (e.g., coyotes, raccoons, ravens and blackbirds) that have been observed to displace more sensitive species.

California Environmental Quality Act Guidelines Section 15065 requires a mandatory finding of significance for projects that have the potential to substantially degrade or reduce the habitat of a threatened or endangered species, and to fully disclose and mitigate impacts to special status resources. For the purposes of this Initial Study, the California Environmental Quality Act (Sections 21083 and 21087, Public Resources Code) defines mitigation as measure(s) that:

- Avoids the impact altogether by not taking a certain action or parts of an action.
- Minimizes impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifies the impact by repairing, rehabilitating, or restoring the impacted environment.
- Reduces or eliminates the impact over time by preservation and maintenance operations during the life of the project.
- Compensates for the impact by replacing or providing substitute resources or environments.

To assess the potential for impacts to special-status species within and in the vicinity of the project site, Gallaway Enterprises consulted special-status species lists from the California Natural Diversity Database (CNDDB). The search included all special-status species and critical habitat within a five (5) mile radius of the project site (Figure 4 of the BA). Other sources of information regarding occurrences included the USFWS IPAC Trust Resource Report and Official Species List for the Project site, the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California, the 2015 Draft Delineation of Water of the U.S. prepared by Gallaway Enterprises, field visits conducted on November 17 and 24, and December 4, 2015, and the 2017 Rare Plant Survey for Butte County meadowfoam. The complete list of species identified within the assessment area are contained within the BA (Appendix A), with the following species considered to have the potential to occur within the project site:

Botanical Species

Butte County Meadowfoam

Butte County meadowfoam (*Limnanthes floccosa ssp. Californica*) is federally and State listed as endangered. Butte County meadowfoam is a winter annual herb. Butte County meadowfoam typically begins flowering in March, and if conditions are suitable may continue into April or May. Butte County meadowfoam is restricted to a narrow 28-mile strip along the eastern margin of the Sacramento Valley from central Butte County to near the northern border of Butte County. Plants are sometimes found at the edges of vernal pools, but they are primarily found in the deepest parts of vernal swales that connect vernal pools. The extent of the range has not changed substantially since it was identified as a distinct subspecies, but the number of populations, the area occupied, and the extent of available habitat within its range have declined significant over the last 30 years. Only twenty one (21) occurrences of BCM are presumed to still exist.

The project site consists of thin soils or areas that were sloped that did not support wetland features, and thus, did not support habitat for BCM. However, the few scattered vernal pools and swales present did contain habitat that was marginally suitable for BCM. The soils within the annual grassland habitat present in the project site are the Doemill-Jokerst soil map unit 614 and 615 which are not generally known to support habitat for BCM. Known populations of BCM occur approximately 4 miles to the north/northwest of the project site. The project site is not within the USFWS designated critical habitat for BCM, and no past occurrences of BCM or other rare plant species have been identified within the project site. Further, no BCM plants were observed within the project site during the protocol-level survey conducted by Gallaway Enterprises on March 28, 2017.

Wildlife Species

Vernal Pool Fairy Shrimp

Vernal pool fairy shrimp (*Branchinecta lynchi*) are federally listed as threatened and are widespread but not abundant. Known populations occur in California to southern Oregon. The geographic range of this species encompasses most of the Central Valley from Shasta County to Tulare County and the central coast range from northern Solano County to Santa

Barbra County, California. Additional disjunctive occurrences have been identified in western Riverside County, California, and in Jackson County, Oregon, near the City of Medford. The vernal pool fairy shrimp occupies a variety of different vernal pool habitats, from small, clear, sandstone rock pools to large, turbid, alkaline, grassland valley floor pools. Occupied habitats range in size from rock outcrops pools as small as one square meter to large vernal pools up to 12 acres. Smaller vernal pools are the most commonly occupied and are found more frequently in grass or mud bottomed swales, or basalt flow depression pools in unplowed grasslands. The species rely on the topography and interconnecting vernal features to disperse to different areas. Vernal pool fairy shrimp have been collected from early December to early May (USFWS 2004).

No protocol-level surveys for branchiopods were conducted within the project site; however, known CNDDB occurrences of vernal pool fairy shrimp were identified approximately 7.5 miles southeast of the project site in 2003 and the vernal features within the project site provide marginally suitable habitat. As such, vernal pool fairy shrimp are assumed to be present within the vernal features present in the project site.

Vernal Pool Tadpole Shrimp

Vernal pool tadpole shrimp (*Lepidurus packardi*) are federally endangered species. They are small crustacean in the Triopsidae family. The vernal pool tadpole shrimp is known from 18 populations in the Central Valley, ranging from east of Redding in Shasta County, south to the San Luis National Wildlife Refuge in Merced County, and from a single vernal pool complex on the San Francisco Bay National Wildlife Refuge in the City of Fremont, Alameda County. They inhabit vernal pools containing clear to highly turbid water, ranging in size from 54 square feet in the former Mather Air Force Base area of Sacramento County, to the 89-acre Olcott Lake at Jepson Prairie. Their diet consists of organic debris and living organisms, such as fairy shrimp and other invertebrates.

No protocol-level surveys for branchiopods were conducted within the project site. A known CNDDB occurrence of vernal pool tadpole shrimp was identified 3.5 miles southeast of the project site in 2009, and the vernal features within the project site provide marginally suitable habitat. As such, vernal pool tadpole shrimp are assumed to be present within the vernal features present in the project site.

Impact Discussion:

a.) Less than significant impact. Only three special-status species: Butte County Meadowfoam, Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp had been identified as potentially having habitat available within the project site. During a protocol-level survey conducted on March 28, 2017, no BCM plants were observed within the project site. And, the habitats for Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp are limited to the vernal features present at the site. The 0.029 acres of wetlands proposed to be impacted is marginal habitat for these species. Disturbance of this feature would be subject to a Section 404 Permit, and would be evaluated at the time of application.

b.) No impact. The project site is not identified as containing riparian or other sensitive natural communities.

c.) Less than significant impact with mitigation. Construction activities have been designed to completely avoid 0.101 acres of wetlands present within the project site, but will cause permanent impacts to approximately 0.029 acres of wetlands. The impacts to these wetland features will be mitigated (see **Mitigation Measure #3,** below) by replacing/protecting. Standard best management practices (BMPs) will be used where applicable including the use of silt fencing and/or straw wattles to prevent silt from entering adjacent jurisdictional waters and orange barrier fencing to prevent inadvertent impacts to adjacent biological resources such as avoided trees and wetlands. Further, construction activities will be conducted during the dry season when no flowing or ponded water is anticipated to be present in any of the jurisdictional features.

d.) No impact. The project site has no aquatic habitat that can support native resident or migratory fish species. The project is also not located within any identified wildlife movement corridor and does not function as a wildlife nursery site.

e.) No impact. The proposed project would not conflict with any Butte County General Plan policies established for the protection of biological resources. Further, the project would not affect the regulation of development or cause the re-designation of land within the County, and would not result in the loss of sensitive wildlife habitat.

f.) No impact. The Butte Regional Conservation Plan (BRCP) is a joint Habitat Conservation Plan (HCP)/National Community Conservation Plan (NCCP) that is currently being prepared for the western half of the Butte County. The project site is located within the proposed plan area of the BRCP. After the BRCP is adopted, individual

projects that occur in the BRCP planning area would need to be coordinated with the Butte County Association of Governments to ensure that the project does not conflict with the BRCP. As the plan has not been adopted, the proposed project will not conflict, nor interfere with, the attainment of the goals of the proposed plan. Regardless, the small scale of development generated by the proposed project would not be expected to have significant impacts upon sensitive biological resources that may require mitigation under the future habitat conservation plan.

Mitigation Measure #3 (Construction staging, storage, and parking areas)
Construction staging, storage, and parking areas shall be located 500 feet from streams and wetlands. All refueling, fuels, and equipment maintenance shall occur 500 feet from wetlands and streams. Vehicle travel adjacent to wetland and riparian areas shall be limited to existing roads and designated temporary access roads. Sensitive natural communities (i.e., wetlands, ephemeral drainages and oak woodlands) shall be conspicuously marked in the field (including suitable buffer zones) to minimize impacts on these communities, and work activities shall be limited to outside the marked areas.

Plan Requirements: The above-referenced mitigation shall be included on project improvement and building plans.

Timing: Requirements of the condition shall be adhered to prior to construction activities, and throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services and the Public Works Department shall ensure that the above-referenced mitigation shall be included on project improvement and building plans. Department of Development Services shall ensure the condition is met at the time of development and during construction activities.

Mitigation Measure #4 (Section 404 permit)
Prior to any construction activities that would disturb protected wetlands and/or jurisdictional areas, the project applicant shall obtain the appropriate state and federal authorizations (Streambed Alteration Agreement, Section 404 Permit, Section 401 water quality certification). During construction the project applicant shall comply with the requirements of these authorizations throughout the project.

Plan Requirements: Obtain appropriate State and federal authorizations and permits prior to activities that would impact resources under their jurisdiction. The above-referenced mitigation shall be included on project improvement and building plans.

Timing: Requirements of the condition shall be adhered to prior to construction activities, and throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services and the Public Works Department shall ensure that the above-referenced mitigation shall be included on project improvement and building plans. The Department of Development Services shall ensure the condition is met prior to site disturbing activities that would impact resources under the jurisdiction of State and federal agencies.

Mitigation Measure #5 (Wetlands)
The project applicant shall compensate for any direct impacts to protected wetlands and/or jurisdictional areas to ensure no net loss of habitat functions and values. Compensation ratios shall be based on site-specific information and determined through coordination with state, federal, and local agencies as part of the permitting process for the project. Unless determined otherwise by the regulatory/permitting agency, the compensation for wetland creation shall be at a minimum ratio of 1 acre for every 1 acre disturbed, and a minimum of 2 acres of wetland preservation for every 1 acre of wetland disturbed. Compensation may comprise of onsite restoration/creation, off-site restoration, preservation, or mitigation credits (or a combination of these elements). If onsite wetland creation/restoration is proposed, the applicant shall develop and implement a restoration and monitoring plan that describes how the habitat shall be created/restored together with a plan that describes how the habitat shall be monitored over a period of time.

Plan Requirements: Obtain appropriate State and federal authorizations and permits prior to activities that would impact resources under their jurisdiction. The above-referenced mitigation shall be included on project improvement and building plans.

Timing: Requirements of the condition shall be adhered to prior to construction activities, and throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services and the Public Works Department shall ensure that the above-referenced mitigation shall be included on project improvement and building plans. Building and Public Works inspectors shall spot check and shall ensure compliance on-site.

Mitigation Measure #6 (ESA Avoidance and Minimization Measures)

The project applicant shall implement the following measures and practices to prevent inadvertent direct and indirect impacts to onsite biological resources such as oak woodlands and Waters of the United States (WOTUS) including wetlands.

a. The project proponent shall include a copy of the Biological Opinion (BO), as applicable, within its construction documents making the primary contractor responsible for implementing all requirements and obligations included within the BO, and to educate and inform all other contractors involved in the project as to the requirements of the BO.
b. The contractor ~~will~~ shall be responsible for understanding and following the guidelines set forth in the Section 404 permit and Section 401 water quality certification and the contractor will avoid and minimize potential construction-related water quality impacts through compliance with the RWQCB by preparing and submitting the following water quality permits and plans.
    I. A National Pollutant Discharge Elimination System (NPDES) storm water permit for general construction activities.
    II. A Notice of Intent to obtain proper coverage under the State Construction General Permit.
c. The contractor shall ensure, when feasible, that activities that are inconsistent with the maintenance of the suitability of vernal pool crustacean habitat and the associated onsite watershed are prohibited. These include, but are not limited to:
    I. The alteration of existing topography that may alter hydrology into habitat for Federally-listed vernal pool crustaceans;
    II. The placement of any equipment within suitable habitat; and
    III. Dumping, burning, and/or burying of rubbish, garbage, or any other wastes and fill materials within 250 feet of habitat.
d. Prior to the commencement of construction activities, high visibility fencing will be erected around the habitats of the federally listed species to identify and protect these Environmentally Sensitive Areas (ESA, ~~i.e.~~e.g. vernal pools) from encroachment of personnel and equipment. These areas ~~will~~ shall be avoided by all construction personnel. The fencing shall be inspected before the start of each work day and maintained by the contractor until completion of the project. The fencing may be removed only when the construction of the project is completed.
e. Construction timing will be confined to the summer and fall months when Waters of the United States and suitable habitat within the project site are dry.
f. During construction activities silt fencing will be erected as necessary to prevent dust from drifting into adjacent WOTUS and suitable habitat.
g. During construction operations, the number of access routes, number and size of staging areas, and the total area of the proposed project activity will be restricted to established roadways to minimize habitat disturbance.
h. During construction operations, stockpiling of construction materials, portable equipment, vehicles and supplies will be restricted to the designated construction staging areas and exclusive of the ESAs.

Plan Requirements: The project applicant shall implement ~~that~~ the above-referenced measures and ensure that the measures are included in all construction plans. The above-referenced mitigation shall be included on all project improvement and building plans.

Timing: Requirements of the condition shall be adhered to prior to construction activities, and throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services and the Public Works Department shall ensure that the above-referenced mitigation shall be included on project improvement and building plans. Building and Public Works inspectors shall spot check and shall ensure compliance on-site.

4.5 Cultural Resources:

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐	☐
d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐	☐

Setting:

An archaeological report was prepared for the proposed project on August 7, 2017. The report details the result of an archaeological inventory survey for the project site, which included a search of State databases, all records and documents available at the Northeast Information Center, consultation with the Native American Heritage Commission, local Native American Tribes, and an intensive-level pedestrian survey.

Impact Discussion:

a-d.) Less than significant impact with mitigation incorporated. A search of the State databases, including all records and documents available at the Northeast Information Center, failed to identify prehistoric or historic-era resources within or immediately adjacent to the project site. Further, consultation with the Native American Heritage Commission and local Native American Tribes failed to identify sacred lands, traditional cultural resources, or any concerns. An intensive-level pedestrian survey failed to identify any historic properties within the site. Given the project site's geological/topographical setting, it is unlikely that buried cultural resources are located within the site. Based on the findings contained within the archeological inventory, no significant historical resources/unique archaeological resources/historic properties will be affected by the proposed project. Though, no impacts are anticipated, future construction activities may potentially uncover unknown historic or prehistoric cultural resources located below the surface. In the event of accidental discovery of cultural artifacts or human remains during construction activities, **Mitigation Measure #7**, is recommended.

Mitigation Measure #7 (Cultural Resources)

Should grading activities reveal the presence of prehistoric or historic cultural resources (i.e. artifact concentrations, including arrowheads and other stone tools or chipping debris, cans glass, etc.; structural remains; human skeletal remains) work within 50 feet of the find shall immediately cease until a qualified professional archaeologist can be consulted to evaluate the find and implement appropriate mitigation procedures. Should human skeletal remains be encountered, State law requires immediate notification of the County Coroner ((530) 538-6579). Should the County Coroner determine that the remains are in an archaeological context, the Native American Heritage Commission in Sacramento shall be notified immediately, pursuant to State Law, to arrange for Native American participation in determining the disposition of such remains. These provisions shall be followed during all phases of construction, including land clearing, road construction, utility installation, and building site development.

Plan Requirements: In the event that potential cultural resources are found during construction activities, construction personnel shall immediately cease work and contact a qualified professional archaeologist to evaluate the discovery. The landowner or construction personnel shall notify the Planning Division and a professional archaeologist. The Planning Division shall coordinate with the developer and appropriate authorities to avoid damage to cultural resources and determine appropriate action. State law requires the reporting of any human remains. This mitigation shall be noted on all site development and building plans.

Timing: This measure shall be implemented during all site preparation and construction activities.

Monitoring: The Department of Development Services shall ensure the mitigation is noted on all site development and building plans for the subject parcel. Should cultural resources be discovered, the landowner or construction personnel shall notify the Planning Division and a professional archaeologist. The Planning Division shall coordinate

with the developer and appropriate authorities to avoid damage to cultural resources and determine appropriate action. State law requires the reporting of any human remains.

4.6 Geologic Processes:

Would the proposal:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**	**Reviewed Under Previous Document**
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
1. 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.	☐	☐	☒	☐	☐
2. Strong seismic ground shaking?	☐	☐	☒	☐	☐
3. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐	☐
4. Landslides?	☐	☐	☒	☐	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	☐
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?	☐	☐	☐	☒	☐
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?	☐	☐	☒	☐	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal system where sewers are not available for the disposal or waste water?	☐	☐	☒	☐	☐

Impact Discussion:

a1.) Less than significant impact. There are no known active faults underlying, or adjacent to, the project site. The Cleveland Hill fault is located approximately 20± miles southeast of the project site. Because the nearest active fault is located a considerable distance from the project site, the likelihood of a surface rupture at the project site is very low, and would not be a design consideration.

a2.) Less than significant impact. Ground shaking at the project site could occur due to the earthquake potential of the regions active faults. However, active faults are relatively distant from the project site. As a result, ground shaking due to seismic events is expected to have low to moderate intensities at the project site. Future development on the project site would be subject to the California Building Code (CBC). The CBC would provide minimum standards to safeguard life or limb, health, property and public welfare by regulating the controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of buildings and structures within Butte County. Among the provisions of the CBC are building design criteria for earthquake conditions in Butte County. Adherence to the CBC during building construction would ensure that potential impacts are less than significant.

a3.) Less than significant impact. The project site is identified as being located within an area considered "Generally Low" in respect to liquefaction potential. The California Building Code (CBC) regulates the construction of structures, which may be constructed with approval of the proposed project. Adherence to CBC standards at the time of development would ensure that any impacts from an unstable geologic unit or soil are less than significant.

a4.) Less than significant impact. The project area is primarily level with 0-4% slopes on the ridgetop, with the slopes increasing to ±20% at the woodland tree line, before leveling again to 3-8% west of the tree line. All development associated with the project is concentrated on the ridgetop where slopes are generally level. As a result, potential impacts associated with the project is low. Though, the potential for landslides are generally low, shallow slope failures can occur in virtually any sloping terrain during construction activities. Avoidance of potentially sensitive slopes and/or implementation of appropriate engineering and construction measures at the time of development would avoid or reduce potential impacts of landslides to a less than significant level.

b.) Less than significant impact. There is slight potential for soil erosion on the project site according to Figure HS-5, Erosion Potential Map of the Health and Safety Element of the County General Plan. The site is generally level, also reducing the likelihood of erosion.

c.) No impact. The project is not located on an unstable geologic unit or soil and will not cause instability that would result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

d.) Less than significant impact. Figure HS-3 of the General Plan Health and Safety Element indicates that the project site has a low to moderate expansive soil potential. Expansive soils can cause structural damage particularly when concrete structures are in direct contact with the soils. Appropriate design features to address expansive soils may include excavation of potentially problematic soils during construction and replacement with engineered backfill, ground-treatment processes, direction of surface water and drainage away from foundation soils, and the use of deep foundations such as piers or piles. Implementation of these standard engineering methods would ensure that impacts associated with expansive soils would remain less than significant.

e.) Less than significant impact. Wastewater disposal on the project site would be handled by new, individual, on-site septic systems. General Plan 2030 includes a number of policies in the Water Resources Element and the Public Facilities Services Element both to address existing septic systems in areas with poor soils and to ensure the safety of future septic systems. To ensure the safety of new septic systems, Policy PUB-P13.2 requires new development to demonstrate the availability of a safe, sanitary, and environmentally sound wastewater system. Similarly, Policy PUB-P13.3 requires applicants of projects that will rely on on-site wastewater systems to provide detailed plans demonstrating that the system will be adequate to serve the project (Butte County General Plan 2030 EIR). .

The applicant completed a pre-application review with Butte County Department of Environmental Health, in accordance with Chapter 19 of Butte County Code (On-Site Wastewater Systems). As part of the review, an initial septic area on the project site was evaluated and determined to have adequate soil conditions to allow for future development of an on-site wastewater system. Future development with a septic system is required to receive an On-Site Wastewater System Construction Permit from Butte County Environmental Health Division. Application for an On-site Wastewater System Construction Permit will include detailed plans prepared by a Certified Installer or Certified Designer, and will demonstrate compliance with County regulations and the County's On-Site Wastewater Manual.

Mitigation Measure: None required.

4.7 Greenhouse Gas Emissions:

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☒	☐	☐	☐

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒	☐

Setting:

The Earth's atmosphere naturally contains a number of gases, including (but not limited to) carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), which are collectively referred to as greenhouse gases (GHGs). GHG emissions are generally numerically depicted (when applicable) as carbon dioxide equivalents (CO_2e). CO_2e represents CO_2 plus the additional warming potential from CH_4 and N_2O. The common unit of measurement for carbon dioxide equivalents is in metric tons ($MTCO_2e$).

These gases trap some amount of solar radiation and the earth's own radiation, preventing it from passing through earth's atmosphere and into space. GHG are vital to life on earth; without them, Earth would be an icy planet. For example, CO_2 is an element that is essential to the cycle of life. In general, CH_4 and N_2O have 21 and 310 times the warming potential of CO_2, respectively. Human-made emissions of GHG occur through the combustion of fuels, as well as a variety of other sources.

Increasing GHG concentrations are believed to be warming the planet. As the average temperature of the earth increases, weather may be affected, including changes in precipitation patterns, accumulation of snow pack, and intensity and duration of spring snowmelt. Climate zones may change, affecting the ecology and biological resources of a region. There may also be changes in fire hazards due to the changes in precipitation and climate zones.

While scientists have established a connection between increasing GHG concentrations and increasing average temperatures, important scientific questions remain about how much warming would occur, how fast it would occur, and how the warming would affect the rest of the climate system. At this point, scientific efforts are unable to quantify the degree to which human activity impacts climate change. The phenomenon is worldwide, yet it is expected that there would be substantial regional and local variability in climate changes. It is not possible with today's science to determine the effects of global climate change in a specific locale, or whether the effect of one aspect of climate change may be counteracted by another aspect of climate change, or exacerbated by it.

Section 15183.5(b) of Title 14 of the California Code of Regulations states that a GHG Reduction Plan, or a Climate Action Plan, may be used for tiering and streamlining the analysis of GHG emissions in subsequent CEQA project evaluation provided that the CAP does the following:

A. Quantify greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;

B. Establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable;

C. Identify and analyze the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area;

D. Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;

E. Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels; and

F. Be adopted in a public process following environmental review.

A 2006 baseline GHG emission inventory was prepared for unincorporated Butte County. The inventory identified the sources and the amount of GHG emissions produced in the county. Within Butte County, the leading contributors of GHG emissions are agriculture (43%), transportation (29%), and residential energy (17%).

A Climate Action Plan (CAP) was adopted by Butte County on February 25, 2014. The CAP provides a framework for the County to reduce GHG emissions while simplifying the review process for new development. Measures and actions identified in the CAP lay the groundwork to achieve the adopted General Plan goals related to climate change, including reducing GHG emissions to 1990 levels by 2020.

Impact Discussion:

a.) **Less than significant impact with Mitigation Incorporated.** The new facility would be of a similar operational intensity as the two existing facilities currently operating in the Chico area. Therefore, the proposed project would not result in an increase of operational emissions, and further operational emission analyses are not warranted. However, the proposed project would contribute GHG emissions during construction activities, as improvements are made to the facility. These GHG emission would be generated from engine exhaust from worker trips, on-road hauling of materials, and off-road equipment use. The total amount of emissions generated by construction activities was not evaluated; however, given the minimal amount of improvements and the existing disturbances of site, minimal emissions are anticipated.

The Butte County Climate Action Plan includes several measures to off-set GHG emissions generated during construction activities, or if new non-residential buildings are constructed, including:

- Prewiring new non-residential development for solar PV systems and maximize roof space to accommodate future rooftop solar installation;
- Prewire the facility for ground-mounted solar PV systems;
- Limit the maximum idling time for all construction equipment to three minutes or less;
- Use clean or alternative fuel equipment; and
- Achieve CALGreen Tier 1 standards for energy efficiency, water conservation, and passive design for non-residential uses.

Implementation of the measures identified in **Mitigation Measure #8** (below) would result in the reduction of GHG emission through the advancement of vehicle and equipment efficiency, as a result of federal and state regulations, as well as more stringent building energy efficiency and green building standards, and other GHG off-setting measures. Each applicable measure identified in the CAP would be utilized for the proposed project, which would reduce potential impacts to a less than significant level. .

b.) **No impact.** The Butte County General Plan and Butte County Climate Action Plan establish numerous policies relative to greenhouse gases (identified in Section 4.7.a.). These measures, when applied to the proposed project, would reduce potential GHG emissions generated by the project. Therefore, the project would not conflict with the applicable with policies adopted for the purpose of reducing GHG emissions.

Mitigation Measure #8 (Greenhouse Gas Emissions):
The project applicant shall implement the following measures to reduce construction-related and operational greenhouse gas emissions generated by the project. These measures will be enforced prior to building permit issuance for on-site structures and during construction activities:

- Achieve CAL Green Tier 1 standards for energy efficiency, water conservation, and passive design for non-residential uses.
- Prewire new non-residential development for solar PV systems and maximize roof space to accommodate future rooftop solar installation.
- Prewire the facility for ground-mounted solar PV systems.
- Improve fuel efficiency from construction equipment by limiting idling time for all construction equipment to three minutes or less.
- Use clean or alternative fuel equipment, if available.

Plan Requirements: The mitigation shall be noted on all site development and building plans for the subject parcel. Measures shall be implemented prior to issuance of building permits for new non-residential buildings. Construction-related measures shall be adhered to throughout all grading and construction periods. These measures shall be noted on all building and site development plans.

Timing: Prior to issuance of building permits for new non-residential buildings. Construction-related measures shall be adhered to throughout all grading and construction periods.

Monitoring: The Department of Development Services shall ensure the mitigation is noted on all site development and building plans for the subject parcel and will review building permit and development plans to ensure the measures have been incorporated into the project design, and perform onsite inspections during construction activities.

4.8 Hazards and Hazardous Materials:

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
a. Create a significant hazard to the public or the environment through the routine transport use, or disposal of hazardous materials?	☐	☐	☒	☐	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed schools?	☐	☐	☐	☒	☐
d. Be located on a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒	☐
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 result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒	☐
f. 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?	☐	☐	☐	☒	☐
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐	☐
h. Expose people or structures to a significant risk or loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐	☐

Impact Discussion:

a.) Less than significant impact. Construction of the proposed project would involve the temporary use of heavy equipment for grading, hauling, and handling materials. The equipment expected to be used during construction includes: mobile cranes; excavators; graders; loaders; backhoes; and bulldozers. This construction equipment may require the use of fuels and other common liquids that have hazardous properties (e.g. fuels, oils, fluids that are flammable). These materials would be used in accordance with all applicable laws and regulations, and as described in the Spill Prevention Control and Countermeasure Plan prepared for the project, which, if used properly, would not present a hazard to people, animals, plants or sensitive areas on or near the project site.

Operation and maintenance of proposed project would also involve the transport, use, storage, and disposal of small quantities of hazardous materials (e.g., cleaners, fuels, lubricants, hydraulic fluids). Any business with hazardous materials storage, use, handling or disposal is required to comply with federal, State, and local requirements for managing hazardous materials and wastes. Businesses that use hazardous materials are required to submit a Hazardous Materials Business Plan (HMBP) to the local Certified Unified Program Agency (CUPA), which performs inspections to ensure compliance with hazardous materials labeling, training and storage regulations.

The project proponent will be required obtain, and comply with, all existing safety regulations involving the use, storage, and handling of hazardous materials, which would minimize the hazard to the public and the

environment. Further, construction and operation of the project would require compliance with the Uniform Fire Code and local building codes for the storage of hazardous materials and construction of structures containing hazardous materials. To ensure that the project proponent receives all the necessary approves from State and local agencies, conditions of approval will be incorporated into the proposed use permit. Therefore, potential impacts associated with the transport, use, storage, handling and disposal of hazardous materials during operation of the proposed project would be less than significant.

b.) **Less than significant impact.** Hazardous materials, including diesel fuel and other motor lubricants would also be used during construction and operational activities. As previously discussed, the handling and transport of all hazardous materials onsite would be performed in accordance with applicable laws and regulations.

c.) **No impact**. No existing or proposed schools have been identified within one-quarter mile of the project site.

d.) **No impact.** A review of regulatory agency databases, which included lists of hazardous materials sites compiled pursuant to California Government Code Section 65962.5, did not identify any sites at or adjacent to the project site that have used, stored, disposed of, or released hazardous materials.

e.) **No impact.** No public use airports have been identified to be located within two miles of the project site. The proposed project is located outside the compatibility zones for any airports, and therefore, would not result in safety impacts to people residing on the project site.

f.) **No impact.** No known private airstrips have been identified to be located within two miles of the project site. As a result, no safety hazards associated with airport operations are anticipated to affect people working or residing on the project site.

g.) **Less than significant impact.** The proposed project would not physically interfere with any emergency response or emergency evacuation plans. Construction activities within the road right-of-way that may temporarily restrict vehicular traffic would be required to implement appropriate measures to facilitate the safe passage of vehicles through or around any temporary road closures. Any traffic control plans would be prepared in conjunction with a Butte County Encroachment Permit and reviewed by the Butte County Public Works Department. Roadways and intersections would continue to operate at an acceptable level of service.

h.) **Less than significant impact.** The project site is located in a High Fire Hazard Severity Zone and State Responsibility Area. The proposed project is subject to the State's Fire Safe Regulations, PRC 4290, which establishes standards for access, signage, and clearance around structures to reduce the threats of wildfire. These standards will be included as conditions of approval. Implementation these standards, as well as oversight by Butte County Fire/Cal Fire, would ensure the proposed project would not expose people or structures to a significant risk or loss, injury or death involving wildland fires.

Mitigation Measure: None required.

4.9 Hydrology and Water Quality:

Would the proposal:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**	**Reviewed Under Previous Document**
a. Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐	☐
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 preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐	☐

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
c. Substantially alter the existing drainage pattern of the site or 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?	☐	☐	☒	☐	☐
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?	☐	☐	☒	☐	☐
e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐	☐
f. Otherwise substantially degrade water quality?	☐	☐	☒	☐	☐
g. Place housing within a 100-year flood hazard area as mapped by Federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map?	☐	☐	☐	☒	☐
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒	☐
i. Expose people or structures to a significant risk or loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒	☐
j. Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒	☐

Impact Discussion:

a.) Less than significant impact. As discussed in Section 4.6 – Geologic Processes, the physical characteristics of the soil at the project site indicate that susceptibility to erosion is slight. During construction-related activities, specific erosion control and surface water protection methods for each construction activity would be implemented on the project site. The type and number of measures implemented would be based upon location-specific attributes (i.e., slope, soil type, weather conditions). These control and protection measures, or BMPs, are standard in the construction industry and are commonly used to minimize soil erosion and water quality degradation. Additionally, future construction activities may be subject to the National Pollutant Discharge Elimination System (NPDES) General Construction Activities Storm Water permit program if one acre or more of land is disturbed. Construction activities that result in a land disturbance of less than one acre, but which are part of a larger common plan of development also require a permit. This program requires implementation of erosion control measures during and immediately after construction that are designed to avoid significant erosion during the construction period. Project operations that are under a NPDES permit would also be subject to State Water Resources Control Board requirements for the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) to control pollution in stormwater runoff from the project site. A condition of approval reflecting the requirement of the applicant to obtain a NPDES permit, prior to grading activities, will be included with project approval.

b.) Less than significant impact. Domestic water to the proposed use would be provided by groundwater extraction from a proposed well. Construction activities, including construction of the proposed well, would require minimal amounts of water for dust control activities. Water required during construction would be transported to the project site by water trucks or tanks, and stored on-site during the construction period, or until the proposed well is operational. Groundwater usage during construction would be of a short duration and minor, and would not substantially deplete groundwater resources nor interfere with groundwater recharge capabilities.

Once operational, the proposed project would use water for domestic needs (e.g. drinking, waste disposal, sanitation, landscaping, etc.), equipment maintenance activities, and for dust control during aggregate processing and stockpiling. Total water consumption for the project is not expected to reach a level that would result in lowering of the water table, or result in changes in production levels of area wells.

The proposed project has the potential to result in a net increase in impervious surfaces on the project site from the construction of new structures and from new surfacing. Future development would result in only a minor increase in impervious surfaces, and would not cause a measureable reduction in surface infiltration or a decrease in deep percolation to the underlying aquifers.

c.) **Less than significant impact.** Proposed ground disturbance during construction activities may alter existing drainage pathways, expose surface soils to become more susceptible to erosive forces (i.e., overland flow) and/or generate enough increased runoff through removal/clearing of existing vegetation to increase surface erosion. Application of the BMPs during construction activities, in association with the NPDES General Construction Permit, together with the level terrain of the project site, would control the discharge of sediments to the greatest extent possible, and reduce water quality impacts to a less than significant level.

d.) **Less than significant impact.** Construction activities associated with build-out of the project site and would not substantially alter drainage patterns such that it would cause on- or off-site flooding. Some vegetation removal and soil disturbance would occur during clearing of the site and access road, resulting in the potential for increased stormwater runoff. However, implementation of BMPs would minimize the potential for surface runoff and reduce any potential for flooding.

The minor increase in impervious surface area from project build-out is not anticipated to be enough to substantially alter existing drainage patterns or cause offsite flooding. While some increase in stormwater runoff may be expected due to the reduced absorption rate created from new impervious surfaces (structures, driveways, and hardscape), the development footprint of the project is minimal to the overall size of the subject property, and no net increase in stormwater runoff would leave the project site.

e.) **Less than significant impact.** The proposed project is likely to generate a minor increase in runoff from the development of the project. The anticipated minor increase in runoff would be retained on-site, and likely be negligible in terms of the capacity of any existing stormwater drainage systems serving the project area.

f.) **Less than significant impact.** The proposed project would not result in potential surface water pollution beyond the issues discussed in section a.), above. Therefore, the proposed project would not otherwise degrade water quality beyond the issues previously addressed.

g.) **No impact.** According to floodplain mapping of the project area, the project site is located within the X (unshaded) zone. The X zone is defined by FEMA as areas of minimal flood hazard from the principal source of flood in the area and determined to be outside of the 0.2 percent annual chance floodplain. As a result, proposed improvements and future development on the project site would not be subject to the County's Flood Hazard Prevention Ordinance, or expose people or structures significant flood risk.

h.) **No impact.** See discussion 4.19(g) – Hydrology and Water Quality.

i.) **No impact.** The project site is not identified as being located in the inundation zone for any dam or levee.

j.) **No impact.** Although located within a seismically-active region, the project site is not located in an area that would be impacted by a seiche, tsunami, or mudflows.

Mitigation Measure: None required.

4.10 Land Use:

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
a. Physically divide an established community?	☐	☐	☐	☒	☐

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
b. Conflict with an applicable land use plan, policy, or regulations 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?	☐	☐	☒	☐	☐
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒	☐

Setting:

Butte County General Plan

The General Plan represents the basic community values, ideals and aspirations with respect to land use, development, transportation, public services, and conservation policy that will govern Butte County through 2030. The land use element of the general plan designates the land use of areas within the county, and includes a description of the characteristics and intensity of each land use category. The land use designation for the project site is *Industrial*.

Industrial (I)

This designation allows the processing, manufacturing, assembly, packaging, storage, and distribution of goods and commodities. It also allows for warehouses, storage, logistics centers, trucking terminals, and railroad facilities. Alternative energy facilities are allowed in the Industrial designation, subject to permit requirements. In addition, this designation allows hazardous waste management facilities where it can be demonstrated that potential environmental impacts can be mitigated. Industrial uses are allowed by right where applicants can demonstrate that adequate existing services are already available. This designation allows for a maximum FAR of 0.5.

Butte County Zoning Ordinance

The Zoning Ordinance implements the goals and policies of the Butte County General Plan by regulating the uses of the land and structures within the County. The zoning designations of the project site and their intended use are as follows:

Heavy Industrial (HI)

The purpose of the Heavy Industrial (HI) zone is to allow for a full range of industrial uses, including operations that necessitate the storage of large volumes of hazardous or unsightly materials, or which produce dust, smoke, fumes, odors, or noise at levels that would affect surrounding uses. Uses permitted in the HI are similar to the GI zone, except that heavy industrial uses are permitted either as-of-right or with a Conditional Use Permit, and retail, personal service and restaurant uses are not allowed. The maximum permitted floor area ratio in the HI zone is one-half (0.5).

Neal Road Recycling, Energy, and Waste Facility Overlay Zone (-RW)

The Neal Road Recycling, Energy, and Waste Facility (-RW) overlay zone promotes compatible development around the Neal Road Recycling and Waste Facility. The -RW overlay zone also ensures adequate separation between the Neal Road Recycling and Waste Facility and land uses that are potentially incompatible with landfill activities. This overlay will help to promote the diversion of solid wastes into appropriate recycling facilities, energy generation, and other uses that add value and benefit to the local economy.

Butte County Code §24-222 (Conditional Use Permit - Findings)

A. The proposed use is allowed in the applicable zone.

B. The location, size, design, and operating characteristics of the proposed use will be compatible with the existing and future land uses in the vicinity of the subject property.

C. The proposed use will not be detrimental to the public health, safety, and welfare of the County.

D. The proposed use is properly located within the County and adequately served by existing or planned services and infrastructure.

E. The size, shape, and other physical characteristics of the subject property are adequate to ensure compatibility of the proposed use with the existing and future land uses in the vicinity of the subject property.

Impact Discussion:

a.) No impact. The physical division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair the mobility within an existing community, or between a community and outlying areas. The proposed project is located on an undeveloped property, and would not include any structures or uses that would affect the condition of Neal Road or other access that would result in physically dividing a community.

b.) No impact. The project site is located within the HI-RW (Heavy Industrial-Neal Road Recycling and Waste Facility) zone. Under the zone, *Construction, Maintenance and Repair Services* and *Manufacturing and Processing* uses are permitted with the approval of a Conditional Use Permit. The project must be consistent with several development standards (discussed below), and must be supported with the findings located in Butte County Code §24-222.

Compliance with Heavy Industrial Zone Development Standards

Table 4.10.1 Butte County Development Standards, Heavy Industrial-Neal Road Recycling , Energy, and Waste Facility Overlay Zone

Development Standard	Applicable Code Reference	Requirement	Proposed	Consistent?
Land Use Permit	BCC 24-43.D.5	Conditional Use Permit	Conditional Use Permit	Yes
Minimum Parcel Size	BCC 24-43.E.	2.5 acres	50.59 acres	Yes
Structure Setback (min.)				
Front	BCC 24-27.B.	None, except 50 ft. when adjacent to a residential zone.	≥ 60 ft.	Yes
Interior Side	BCC 24-27.B.	None, except 50 ft. when adjacent to a residential zone.	≥ 990 ft.	Yes
Street Side	BCC 24-27.B.	None, except 50 ft. when adjacent to a residential zone.	N/A	N/A
Rear	BCC 24-27.B.	None, except 50 ft. when adjacent to a residential zone.	≥ 1,400 ft.	Yes
Heigh (max.)	BCC 24-27.B.	50 ft.	20 ft.	Yes
Floor Area Ratio	BCC 24-27.A.	0.5, or 50%	0.003%	Yes
Perimeter Fencing Type	BCC 24-60	Fences and wall shall consist of decorative masonry, ornamental metal, or wood. Other materials may be considered with approval, if compatible with adjacent structures and neighborhood.	Chain Link	Yes, subject to finding of combatibility.
Perimeter Fencing Height (max.)	BCC 24-59	8 ft., 10 ft. with an Administrative Permit.	6 ft.	Yes
Perimeter Fencing Hazard	BCC 24-60	No hazards, such as nails, spikes, wire other sharp objects may protrude from or upon the fence.	None	Yes
On-Site Parking	BCC 24-93	1 sp. / 300 sq. ft. of floor area	No parking is shown on site plan. However, sufficient area exists to conform with requirements.	Yes (Final Parking Plan to be filed with the building permit.)
Disabled Access Parking	BCC 24-94	1 sp / 25 parking spaces	No parking is shown on site plan. However, sufficient area exists to conform with requirements.	Yes (Final Parking Plan to be filed with the building permit.)

Source: Butte County Zoning Ordinance - Chapter 24, Amended September 26, 2017

Planning Commission approval of the Conditional Use Permit, together with the project's compliance with applicable development standards (discussed above), would ensure the project is consistent with adopted policies and regulations, and would not create a significant impact.

c.) **No impact.** The proposed project is not located in the jurisdiction of a habitat conservation plan or natural community conservation plan. As such, there would be no impact.

Mitigation Measure: None required.

4.11 Mineral Resources:

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
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?	☐	☐	☒	☐	☐
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?	☐	☐	☐	☒	☐

Impact Discussion:

a.) **Less than significant impact.** There are no known economically viable sources of rock materials in the immediate vicinity of the project site. No mining operations have occurred on the project site or surrounding area and the project would not preclude future extraction of available mineral resources. Mineral resource extraction is not proposed with this project. However, development of the proposed project would use mineral resources for site improvements. The amount of resources used for the anticipated development is minor and would not result in the loss of its availability.

b.) **No impact.** The project site is not located in an area currently used for, or known to have, locally-important mineral resources.

Mitigation Measure: None required.

4.12 Noise:

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
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?	☐	☐	☒	☐	☐
b. Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	☒	☐	☐
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	☐
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐	☐
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 proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
would the project expose people residing or working in the project area to excessive noise levels?					
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?	☐	☐	☐	☒	☐

Setting:

The existing ambient noise levels in the project area primarily occur from traffic along Neal Road and State Highway 99, and from existing operations at the Neal Road Recycling and Waste Facility located to the north of the project site.

The Butte County General Plan identifies the maximum allowable noise exposure levels to a variety of land uses from transportation sources (e.g. roadways, railroads, airports), as well as the maximum allowable noise exposure from non-transportation sources. In the case of transportation noise sources, exterior noise level standards for residential outdoor activity areas are 60 decibels (dB), as measured in the day/night sound level (Ldn) and the Community Noise Equivalent Level (CNEL). However, where it is not possible to reduce noise in an outdoor activity area to 60 dB Ldn /CNEL or less using a practical application of the best-available noise-reduction measures, an exterior noise level of up to 65 dB may be allowed, provided that available exterior noise-level reduction measures have been implemented and interior noise levels are in compliance with applicable standards. The maximum allowable interior noise level standards for residential uses is 45 dB Ldn/CNEL, which is designed for sleep and speech protection. The typical structural attenuation of a residence from an exterior noise is 15 dBA when windows facing the noise source is open. When windows in good condition are closed, the noise attenuation factor is around 20 dBA for an older structure and 25 dBA for a newer dwelling.

The Butte County Noise Control Ordinance provides the County with a means of assessing complaints of alleged noise violations and to address noise level violations from stationary sources. The ordinance includes a list of activities that are exempt from the provisions of the ordinance. Construction-related noise within 1,000 feet of residential uses are included among the exempted activities, provided construction activities do not take place:

- From sunset to sunrise on weekends and non-holidays;
- Fridays commencing at 6:00 pm through and including 8:00 am on Saturday;
- Before 8:00 am on holidays; or
- Saturday commencing at 6:00 pm through and including 10:00 am on Sunday; and Sunday after 6:00 pm.

Impact Discussion:

a.) Less than significant impact. Noise levels contributed by the proposed project would include aggregate and rubble processing operations, the periodic use of the portable crusher, the use of heavy equipment to facilitate processing operations, and from motor vehicle and truck traffic entering and exiting the project site. Additional short-term noise would also be generated by construction activities during site improvements. The majority of the noise generated by these activities would be intermittent, only occurring when the site is actively processing and transporting products, and during the initial construction activities.

The nearest existing residences to the project site are located approximately one mile west, on the opposite side of State Highway 99, with two additional residences located over a mile to the south from the project site. At this distance, together with the intervening topography, noises generated by the project would not exceed the County noise standards for residential uses. Properties located to south and west could be developed with residential uses in the future, which could conceivably be impacted by noises generate by the proposed project. However, without knowing the specific locations or designs of future residential uses, a project-specific analysis of the noise impacts to these uses cannot be reliably accomplished. In the event that residential uses are established near the project site in the future, Butte County Code would provide future occupants a means to report alleged noise violations.

b.) Less than significant impact. The use of blasting and/or pile drivers during construction activities would not be included as part of the proposed project. The proposed project may involve temporary sources of groundborne

vibration and groundborne noise during construction from the operation of heavy equipment, or from the intermittent use of portable crushing equipment. However, since the duration of any groundborne vibrations would be infrequent, and only occur during less sensitive daytime hours (i.e., between 7:00 a.m. and 7:00 p.m.), the impact from groundborne vibration and groundborne noise would be less than significant.

c.) **Less than significant impact.** Permanent noise sources introduced to the existing noise environment by the proposed project primarily includes vehicle traffic delivering products to and from the site, and from employees accessing the site. Due to the minimal amount of employees at the site, the minimal intensity of product deliveries, and the lack of noise-sensitive land uses in the project area, introduced noises would not exceed noise level standards.

d.) **Less than significant impact.** The proposed project would introduce temporary or periodic noises to the existing noise environment. Typical noises generated from the use of heavy equipment range from 70 to 90 dB at a distance of 50 feet. Noise dissipates at a rate of six dB per doubling of distance, and would be reduced to imperceptible levels at 1,000 to 2,000 feet from the project site. Since there are no noise-sensitive land uses within a mile from the project site, the temporary include in ambient noise levels in the project vicinity would be less than significant.

e.) **No impact.** No public use airports have been identified to be located within two miles of the project site. The proposed project is located outside the compatibility zones for the area airports, and therefore, would not result in noise impacts to people residing on the project site.

f.) **No impact.** No known private airstrips have been identified within the vicinity of the project site. As a result, no noise impacts associated with the airport operations are anticipated to affect people working or residing within the project site.

Mitigation Measure: None required.

4.13 Population and Housing:

Would the proposal:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**	**Reviewed Under Previous Document**
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒	☐
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐

Impact Discussion:

a.) **No impact.** The new facility would consolidate the two existing facilities currently operating in the Chico area and be of a similar operational intensity. The proposed project does not involve the creation of housing and would not introduce any new residents to the project area. A minimal number of employees would be required to operate the facility during its full capacity. Employees would generally be drawn from the existing workforce of the company, or hired from the local area. Therefore, no substantial population growth to the area is anticipated with the proposed project.

b.) **No impact.** No existing housing is located on the project site or in the vicinity of the project site. Therefore, the project would not result in the displacement of substantial number of people or housing.

c.) **No impact.** No existing residences are located in the vicinity of the project site that may be displaced by the project, or cause a need for replacement housing.

Mitigation Measure: None required.

4.14 Public Services:

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
a. Would the project result in substantial adverse physical impacts associated with the provision of or 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:					
1. Fire protection?	☐	☐	☐	☒	☐
2. Police Protection?	☐	☐	☐	☒	☐
3. Schools?	☐	☐	☐	☒	☐
4. Parks?	☐	☐	☐	☒	☐
5. Other public services?	☐	☐	☐	☒	☐

Impact Discussion:

a1.) **No impact.** Butte County Code requires the payment of fire protection impact fees to help offset the impacts that new development has on the fire protection services. Fire protection impact fees would be paid at the time of building permit issuance for commercial development.

a2.) **No impact.** The Butte County Sheriff's Office provides law enforcement service to the project area. The proposed project does not specifically create an environment generally associated with unlawful activities requiring additional law enforcement service calls.

a3.) **No impact.** No housing units or added employment is proposed that would directly create an increase in the number of students for the area school district. Employees for the facility would be relocated from the two other Chico facilities, or obtained from the local workforce.

a4.) **No impact.** See discussion 4.15 – *Recreation*.

a5.) **No impact.** The project would not result in the added need for County services, such as law enforcement, fire protection, general services, recreational facilities, libraries, and roads because the project would require a small number of employees to operate the facility, which would be drawn from existing operations within the county, or from the local workforce available in the area. Additionally, future construction of the proposed building would be subject to the collection of various development impact fees, which would offset the cost and impacts associated with new development. These fees vary depending on the dwelling type, and are collected at the time of development.

Mitigation Measure: None required.

4.15 Recreation:

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
a. 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?	☐	☐	☐	☒	☐
b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒	☐

Impact Discussion:

a.) **No impact.** Increase in the demand for recreational facilities is typically associated with substantial increases in population. As discussed in Section 4.13 - *Population and Housing*, the proposed project would use its existing employees from the company to staff the proposed facility, or hire additional employees from the local area. No substantial increase in population is anticipated with the project.

b.) **No impact.** The proposed project does not include plans for additional recreational facilities nor would it require expansion of existing recreational facilities. Therefore, the proposed project would not result in any adverse physical effects on the environment from construction or expansion of recreational facilities.

Mitigation Measure: None required.

4.16 Transportation/Traffic:

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐	☐
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐	☐
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒	☐
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐	☐

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
e. Result in inadequate emergency access?	☐	☐	☒	☐	☐
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities	☐	☐	☒	☐	☐

Setting:

The project site is located on the north side of Neal Road, which provides sole access to the site. Neal Road is a Major 2-lane rural collector road that is County-maintained. The road is approximately 9 miles long and provides intra-county access between the Town of Paradise (Skyway) and State Highway 99. The road is 18-20 feet in width, with 4-feet wide paved shoulders and roadside drainage swales, and an all-weather surface. Neal Road is designated as a Class II bike facility (bike lanes), which includes signage. The Butte County Association of Governments has existing 2013/2014 traffic counts for Neal Road. The outcomes of the traffic counts show a peak hour weekday morning (7:00 to 9:00 AM) traffic count of 337 and a peak hour weekday evening (4:00 to 6:00 PM) count of 346. Average daily traffic volume is 3812. Based on the result of the peak hour traffic counts, Neal Road maintains a C Level of Service (LOS). The Butte County General Plan describes LOS C roads as having stable traffic flows, but it is in the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.

State Route 99 (identified as State Highway 99 from State Route 149 (SR149) through Chico) is a primary north-south route through Butte County, and is designated as part of the National Highway System. Beginning at SR149, the highway is a 4 lane roadway through Chico, to the intersection with Garner Road. 2016 traffic counts of State Highway 99, at the Neal Road intersection, estimate bi-directional Peak Hour volume of 3,700, with an Annual Average Daily Traffic (AADT) of 37,900, north of the Neal Road intersection. Bi-directional Peak Hour volume south of the Neal Road Intersection is estimated to be 3,300, with an AADT of 33,200 (Cal Trans, 2018).

Impact Discussion:

a.) Less than significant impact. The proposed project will generate an estimated 10 to 100 trucks trips per day during operational times, with the highest traffic counts estimated to occur only when large-scale, off-site, construction projects generate a need for materials. Maximum project traffic trips are estimated to occur approximately 5 to 15 days per year, and between 2 to 5 days in length. Absent the times when large construction projects are necessitating a substantial amount of aggregate materials from the site, daily traffic trip rates are estimated between 10 to 20 trips, with employee commuter trips accounting for the majority of these daily trips. Based on peak hour LOS volume thresholds detailed in the Butte County General Plan 2030, the peak hour LOS for a Major 2-Lane Collector begins to reduce from a level C to a level D when traffic levels reach 551 vehicles per peak hour. Because the latest peak hour traffic volumes for Neal Road are 346, even with the addition of the maximum anticipated truck trips generated by the project, no reduction of the LOS is anticipated.

The majority of vehicles trips generated by the project are anticipated to use the SR99 / Neal Road intersection, with 50 percent of trips on Highway 99 estimated to turn north and 50 percent of trips to turn south. During times of peak demand for materials from the site, trips turning south on SR99 may experience a larger delay at the intersection. However, Neal Road provides sufficient lane length to accommodate backed-up traffic, and is not expected to cause a permanent decrease in the LOS, at the intersection or along both directions of the highway.

Approval of the project would result in the eventual phasing out of the existing rubble stockpile and recycling facility located on the west side of State Highway 99. As a result, the vehicle trips generated from the Southgate facility will be transferred to the Neal Road facility, and would partially offset the increase in vehicle trips from the project site. Additionally, removal of the traffic trips from the Southgate facility would relieve existing congestion at SR99/Southgate intersection, improving upon the existing LOS at the intersection.

Construction activities associated with proposed improvements has the potential to generate short-term changes to traffic volumes on the area road network. Daily vehicle trips would be generated with the arrival and departure

of construction workers. Heavy truck trips would be required for hauling equipment and materials to and from the construction site. However, future construction activities would be small scale and of short duration.

The roadway would be adequate to handle all future forecasted traffic volumes without reducing the current level of service, and impacts would be less than significant.

b.) Less than significant impact. See discussion 4.16(a) - *Transportation/Traffic*.

c.) No impact. No public use airports have been identified to be located within the vicinity of the project site. The proposed project is located outside the compatibility zones for the area airports, and therefore, would not result in a change in air traffic patterns, including increase air traffic levels or safety hazards.

d.) Less than significant impact. The proposed project would not change the configuration (alignment) of area roadways, and would not introduce types of vehicles that are not already traveling on area roads. However, construction of the driveway to the project site will require encroachment improvements to the frontage road. Future encroachments to a county roadway would be designed in accordance with a Butte County Public Works Encroachment Permit, ensuring that any potential safety and compatibility issues are addressed.

e.) Less than significant impact. The project site would be accessed via a private driveway off Neal Road, a County-maintained road. Driveways and approach aprons (encroachments) would be designed and constructed to meet all applicable State and local development standards, ensuring that access is adequate to provide emergency ingress and egress.

f.) Less than significant impact. There are no existing pedestrian located near the project site. However, there is sufficient shoulder width along Neal Road that could allow for adequate pedestrian access. Neal Road has an existing Class II Bike Lane along the frontage of the project site. The bike lane is designed to connect the Paradise Memorial Trailway to State Highway 99, and then to Oroville-Chico Highway. A Class II Bike Lane provides a restricted on-street right-of-way designated for the exclusive or semi-exclusive use of bicycles while allowing through travel by motor vehicles and pedestrians, roadside vehicle parking, and crossflows by motorists and pedestrians.

The proposed project does not include road improvements or roadway widening, except for driveway encroachment improvements. Additionally, the project would not have long-term impacts on alternative transportation facilities due to having no long-term increase in population in the project area. Construction activities associated with development may generate short-term disruption to area roadways from an anticipated increase in traffic levels that may temporarily affect alternative transportation uses. However, construction activities associated with the proposed project would be completed in compliance with a Butte County Encroachment Permit, which would require the implementation of traffic control measures, if needed.

Mitigation Measure: None required.

4.17 Tribal Cultural Resources:

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and this is:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**	**Reviewed Under Previous Document**
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☐	☐	☐	☒	☐

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and this is:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**	**Reviewed Under Previous Document**
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American tribe.	☐	☐	☐	☒	☐

Setting:

Tribal Cultural Resources are defined as a site feature, place, cultural landscape, sacred place or object, which is of cultural value to a Tribe and is either on or eligible for the California Historic Register, a local register, or a resource that the lead agency, at its discretion, chooses to treat as such (Public Resources Code Section 21074 (a)(1)).

Pursuant to Public Resources Code Section 21080.3(b), the County received two letters for notification requesting consultation on potential tribal cultural resources. One was from the Torres Martinez Cahuilla Indians and the other was from United Auburn Indian Community. It was determined that discussion with the Torres Martinez Cahuilla Indians, they do not identify lands within Butte County within their geographic area of traditional and cultural affiliation. The United Auburn Indian Community provided a map of their area of traditional and cultural affiliation, which did not include the project site area.

As noted in Section 4.5 Cultural Resources, consultation with the Native American Heritage Commission and local Native American Tribes as part of the archaeological report was prepared for the proposed project on August 7, 2017 failed to identify sacred lands, traditional cultural resources, or any concerns.

Impact Discussion:

a.) **No impact.** The project site is undeveloped and does not contain any known buildings or features including objects, sites, or landscapes that could be considered as having cultural value to California Native American tribes, or making the site eligible for listing on the California Register of Historic Resources, or in a local register of historical resources.

b.) **No impact.** A search of the State databases, including all records and documents available at the Northeast Information Center, failed to identify prehistoric or historic-era resources within or immediately adjacent to the project site. Further, consultation with the Native American Heritage Commission and local Native American Tribes failed to identify sacred lands, traditional cultural resources, or any concerns. An intensive-level pedestrian survey failed to identify any historic properties within the site. Given the project site's geological/topographical setting, it is unlikely that buried cultural resources are located within the site. Based on the findings contained within the archeological inventory, no significant historical resources/unique archaeological resources/historic properties will be affected by the proposed project. Though, no impacts are anticipated, future construction activities may potentially uncover unknown historic or prehistoric cultural resources located below the surface. In the event of accidental discovery of cultural artifacts or human remains during construction activities, Mitigation Measure #7, identified and discussed in Section 4.5-*Cultural Resources*, is recommended.

Mitigation Measure: None required.

4.18 Utilities and Service Systems:

Would the proposal:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Reviewed Under Previous Document
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐	☐
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?	☐	☐	☐	☒	☐
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?	☐	☐	☒	☐	☐
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒	☐
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?	☐	☐	☐	☒	☐
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐	☐
g. Comply with federal, state, and local statutes, and regulations related to solid waste?	☐	☐	☒	☐	☐

Impact Discussion:

a.) Less than significant impact. Wastewater disposal on the project site would be handled by new, individual, on-site septic systems. The applicant completed a pre-application review with Butte County Department of Environmental Health, in accordance with Chapter 19 of Butte County Code (On-Site Wastewater Systems). As part of the review, an initial septic area was evaluated and determined to have adequate soil conditions to allow for future development of an on-site wastewater system. Future development requiring wastewater disposal is required to receive an On-Site Wastewater System Construction Permit from Butte County Environmental Health Division. Application for a Construction Permit will include detailed plans of the proposed wastewater system, prepared by a Certified Installer or Certified Designer, which will demonstrate compliance with County regulations and the County's On-Site Wastewater Manual, and to ensure a safe, sanitary, and environmentally sound wastewater system. No additional wastewater treatment requirements by the California Regional Water Quality Control Board are required.

b.) No impact. See discussion 4.18(a) – *Utilities and Service Systems*.

c.) Less than significant impact. The project site is located outside planned drainage areas, and no existing storm water drainage facilities are located near the project site except for the roadside drainage swale along Neal Road. A stormwater drainage system will be constructed for the proposed project, which will consist of a series of surface detention basins and drainage swales. The drainage system will be designed in accordance with Butte County improvement standards and a National Pollution Discharge Elimination Permit, Industrial General Order, administered through the State Regional Water Quality Control Board. The proposed system will be located on the ridgetop, which has sufficient areas to construct the system while avoiding all identified sensitive habitat areas.

d.) No impact. Domestic water to the proposed uses would be provided by groundwater extraction from an existing well. The proposed project would use water for domestic needs (e.g. drinking, waste disposal, sanitation, landscaping, etc.), equipment maintenance activities, and for dust control during aggregate processing and

stockpiling. Total water consumption for the project varies based on the level of activities occurring at the time. However, maximum daily water consumption is anticipated to be approximately 10,000 gallons when the site is operating at full capacity during the summer. Little data is currently available regarding the groundwater levels within the underlying, unconfined, aquifer. However, water usage would not be expected to cause a substantial depletion of groundwater supplies in the area.

e.) No impact. See discussion 4.18(a) – *Utilities and Service Systems*. The proposed project area is not served by a wastewater treatment provider.

f.) Less than significant impact. Operation of the proposed facility would produce a similar amount of solid waste that is currently being produced at the existing facilities to be replaced. Construction activities may result in a short-term increase in of solid waste beyond what is normally produced by the facility. However, since no building demolition would be required at the project site, as well as the minimal amount of site improvements, additional construction waste would not be significant.

g.) Less than significant impact. See discussion 4.18(f) – *Utilities and Service Systems.*

Mitigation Measure: None required.

4.19 Mandatory Findings of Significance:

Would the proposal:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**	**Reviewed Under Previous Document**
a. Have the potential to substantially 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?	☐	☒	☐	☐	☐
b. 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)?	☐	☒	☐	☐	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐	☐

Impact Discussion:

a.) Less than significant impact with mitigation incorporated. With the implementation of mitigation measures included in this Initial Study, the proposed project would not degrade the quality of the environment; result in an adverse impact on fish, wildlife, or plant species including special status species, or prehistoric or historic cultural resources. Prehistoric or historic cultural resources would not be adversely affected because no archeological or historic resources are known to exist in the project area and project implementation includes following appropriate procedures for avoiding or preserving artifacts or human remains should they be uncovered during project excavation.

b.) Less than significant impact with mitigation incorporated. This project has the potential to contribute impacts that are individually limited, but cumulatively considerable with respect to air quality, greenhouse gas emissions, and cultural resources. Cumulative impacts to these areas would be mitigated due to the inclusion of the

Mitigation Measures listed below, as itemized under Section 5 – *Mitigation Measures and Monitoring Requirements.*

Past, current, and probable future projects in the vicinity of the project site were reviewed to determine if any additional cumulative impacts may occur with the approval of this project. A two-mile radius was used in determining cumulative impacts. No additional cumulative impacts were discovered.

c.) Less than significant impact with mitigation incorporated. There have been no impacts discovered through the review of this application demonstrating that there would be substantial adverse effects on human beings either directly or indirectly. However, the proposed project has the potential to cause both temporary and future impacts to the area by project-related impacts relating to air, greenhouse gas emissions, and cultural resources. With implementation of mitigation measures included in this Initial Study, these impacts would be effectively mitigated to a less than significant level.

Mitigation Measure: None required.

5.0 Mitigation Measures and Monitoring Requirements

Mitigation Measure #1 (Exterior Lighting):
A lighting plan shall be submitted for approval prior to building permit issuance. Any new outdoor lighting shall be consistent with Chapter 24, Article 14 or the Butte County Code, and not adversely affect night time views. Lighting shall be designed to ensure that no direct offsite spill of light or glare will occur.

Plan Requirements: A lighting plan shall be submitted for approval by the Planning Division of the Department of Development Services prior to issuance of building permits. This note shall also be placed on all building and site development plans.

Timing: Requirements of the condition shall be adhered to throughout the life of the project.

Monitoring: The Butte County Department of Development Services shall ensure that the note is placed on all development plans. The Department shall respond to nuisance complaints.

Mitigation Measure #2 (Construction Air Emissions)
The following best practice measures to reduce impacts to air quality shall be incorporated by the project applicant, subject property owners, or third-party contractors during construction activities on the project site. These measures are intended to reduce criteria air pollutants that may originate from the site during the course of land clearing and other construction operations.

Diesel PM Exhaust from Construction Equipment and Commercial On-Road Vehicles Greater than 10,000 Pounds

- All on- and off-road equipment shall not idle for more than five minutes. Signs shall be posted in the designated queuing areas and/or job sites to remind drivers and operators of the five-minute idling limit.
- Idling, staging and queuing of diesel equipment within 1,000 feet of sensitive receptors is prohibited.
- All construction equipment shall be maintained in proper tune according to the manufacturer's specifications. Equipment must be checked by a certified mechanic and determined to be running in proper condition before the start of work.
- Install diesel particulate filters or implement other CARB-verified diesel emission control strategies.
- Shall not operate a diesel-fueled auxiliary power system (APS) to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5 minutes at any location when within 100 feet of a restricted areas.
- To the extent feasible, truck trips shall be scheduled during non-peak hours to reduce perk hour emissions.

Operational TAC Emissions

- All mobile and stationary Toxic Air Contaminants (TACs) sources shall comply with applicable Airborne Toxic Control Measures (ATCMs) promulgated by the CARB throughout the life of the project (see http:www.arb.ca.gov/toxics/atcm/atcm.htm).
- Stationary sources shall comply with applicable District rules and regulations.

Fugitive Dust

Construction activities can generate fugitive dust that can be a nuisance to local residents and businesses near a construction site. Dust complaints could result in a violation of the District's "Nuisance" and "Fugitive Dust" Rules 200 and 205, respectively. The following is a list of measures that may be required throughout the duration of the construction activities:

- Reduce the amount of the disturbed area where possible.
- Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. An adequate water supply source must be identified. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible.
- All dirt stockpile areas should be sprayed daily as needed, covered, or a District approved alternative method will be used.
- Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible following completion of any soil disturbing activities.
- Exposed ground areas that will be reworked at dates greater than one month after initial grading should be sown with a fast-germinating non-invasive grass seed and watered until vegetation is established.
- All disturbed soil areas not subject to re-vegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the Butte County Air Quality Management District.
- All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
- All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with local regulations.
- Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site.
- Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water should be used where feasible.
- Post a sign in prominent location visible to the public with the telephone numbers of the contractor and the Butte County Air Quality Management District - (530) 332-9400 for any questions or concerns about dust from the project.

All fugitive dust mitigation measures required should be shown on grading and building plans. In addition, the contractor or builder should designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend period when work may not be in progress. The name and telephone number of such persons shall be provided to the District prior to land use clearance for map recordation and finished grading of the area.

Please note that violations of District Regulations are enforceable under the provisions of California Health and Safety Code Section 42400, which provides for civil or criminal penalties of up to $25,000 per violation.

Plan Requirements: This note shall also be placed on all building and site development plans.

Timing: Requirements of the condition shall be adhered to throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services shall ensure that the note is placed on all development plans. Building inspectors shall spot check and shall ensure compliance on-site. Butte County Air Pollution Control District inspectors shall respond to nuisance complaints.

Mitigation Measure #3 (Construction staging, storage, and parking areas)

Construction staging, storage, and parking areas shall be located 500 feet from streams and wetlands. All refueling, fuels, and equipment maintenance shall occur 500 feet from wetlands and streams. Vehicle travel adjacent to wetland and riparian areas shall be limited to existing roads and designated temporary access roads. Sensitive natural communities (i.e., wetlands, ephemeral drainages and oak woodlands) shall be conspicuously marked in the field

(including suitable buffer zones) to minimize impacts on these communities, and work activities shall be limited to outside the marked areas.

Plan Requirements: The above-referenced mitigation shall be included on project improvement and building plans.

Timing: Requirements of the condition shall be adhered to prior to construction activities, and throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services and the Public Works Department shall ensure that the above-referenced mitigation shall be included on project improvement and building plans. Department of Development Services shall ensure the condition is met at the time of development and during construction activities.

Mitigation Measure #4 (Section 404 permit)

Prior to any construction activities that would disturb protected wetlands and/or jurisdictional areas, the project applicant shall obtain the appropriate state and federal authorizations (Streambed Alteration Agreement, Section 404 Permit, Section 401 water quality certification). During construction the project applicant shall comply with the requirements of these authorizations throughout the project.

Plan Requirements: Obtain appropriate State and federal authorizations and permits prior to activities that would impact resources under their jurisdiction. The above-referenced mitigation shall be included on project improvement and building plans.

Timing: Requirements of the condition shall be adhered to prior to construction activities, and throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services and the Public Works Department shall ensure that the above-referenced mitigation shall be included on project improvement and building plans. The Department of Development Services shall ensure the condition is met prior to site disturbing activities that would impact resources under the jurisdiction of State and federal agencies.

Mitigation Measure #5 (Wetlands)

The project applicant shall compensate for any direct impacts to protected wetlands and/or jurisdictional areas to ensure no net loss of habitat functions and values. Compensation ratios shall be based on site-specific information and determined through coordination with state, federal, and local agencies as part of the permitting process for the project. Unless determined otherwise by the regulatory/permitting agency, the compensation for wetland creation shall be at a minimum ratio of 1 acre for every 1 acre disturbed, and a minimum of 2 acres of wetland preservation for every 1 acre of wetland disturbed. Compensation may comprise of onsite restoration/creation, off-site restoration, preservation, or mitigation credits (or a combination of these elements). If onsite wetland creation/restoration is proposed, the applicant shall develop and implement a restoration and monitoring plan that describes how the habitat shall be created/restored together with a plan that describes how the habitat shall be monitored over a period of time.

Plan Requirements: Obtain appropriate State and federal authorizations and permits prior to activities that would impact resources under their jurisdiction. The above-referenced mitigation shall be included on project improvement and building plans.

Timing: Requirements of the condition shall be adhered to prior to construction activities, and throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services and the Public Works Department shall ensure that the above-referenced mitigation shall be included on project improvement and building plans. Building and Public Works inspectors shall spot check and shall ensure compliance on-site.

Mitigation Measure #6 (ESA Avoidance and Minimization Measures)

The project applicant shall implement the following measures and practices to prevent inadvertent direct and indirect impacts to onsite biological resources such as oak woodlands and Waters of the United States (WOTUS) including wetlands.

a. The project proponent shall include a copy of the Biological Opinion (BO), as applicable, within its construction documents making the primary contractor responsible for implementing all requirements and obligations included within the BO, and to educate and inform all other contractors involved in the project as to the requirements of the BO.

b. The contractor ~~will~~ shall be responsible for understanding and following the guidelines set forth in the Section 404 permit and Section 401 water quality certification and the contractor will avoid and minimize potential construction-related water quality impacts through compliance with the RWQCB by preparing and submitting the following water quality permits and plans.
   I. A National Pollutant Discharge Elimination System (NPDES) storm water permit for general construction activities.
   II. A Notice of Intent to obtain proper coverage under the State Construction General Permit.

c. The contractor shall ensure, when feasible, that activities that are inconsistent with the maintenance of the suitability of vernal pool crustacean habitat and the associated onsite watershed are prohibited. These include, but are not limited to:
   III. The alteration of existing topography that may alter hydrology into habitat for Federally-listed vernal pool crustaceans;
   IV. The placement of any equipment within suitable habitat; and
   V. Dumping, burning, and/or burying of rubbish, garbage, or any other wastes and fill materials within 250 feet of habitat.

d. Prior to the commencement of construction activities, high visibility fencing will be erected around the habitats of the federally listed species to identify and protect these Environmentally Sensitive Areas (ESA, ~~i.e.~~ e.g. vernal pools) from encroachment of personnel and equipment. These areas ~~will~~ shall be avoided by all construction personnel. The fencing shall be inspected before the start of each work day and maintained by the contractor until completion of the project. The fencing may be removed only when the construction of the project is completed.

e. Construction timing will be confined to the summer and fall months when Waters of the United States and suitable habitat within the project site are dry.

f. During construction activities silt fencing will be erected as necessary to prevent dust from drifting into adjacent WOTUS and suitable habitat.

g. During construction operations, the number of access routes, number and size of staging areas, and the total area of the proposed project activity will be restricted to established roadways to minimize habitat disturbance.

h. During construction operations, stockpiling of construction materials, portable equipment, vehicles and supplies will be restricted to the designated construction staging areas and exclusive of the ESAs.

Plan Requirements: The project applicant shall implement ~~that~~ the above-referenced measures and ensure that the measures are included in all construction plans. The above-referenced mitigation shall be included on all project improvement and building plans.

Timing: Requirements of the condition shall be adhered to prior to construction activities, and throughout all grading and construction periods.

Monitoring: The Butte County Department of Development Services and the Public Works Department shall ensure that the above-referenced mitigation shall be included on project improvement and building plans. Building and Public Works inspectors shall spot check and shall ensure compliance on-site.

Mitigation Measure #7 (Cultural Resources)

Should grading activities reveal the presence of prehistoric or historic cultural resources (i.e. artifact concentrations, including arrowheads and other stone tools or chipping debris, cans glass, etc.; structural remains; human skeletal remains) work within 50 feet of the find shall immediately cease until a qualified professional archaeologist can be consulted to evaluate the find and implement appropriate mitigation procedures. Should human skeletal remains be encountered, State law requires immediate notification of the County Coroner ((530) 538-6579). Should the County Coroner determine that the remains are in an archaeological context, the Native American Heritage Commission in Sacramento shall be notified immediately, pursuant to State Law, to arrange for Native American participation in determining the disposition of such remains.

Plan Requirements: In the event that potential cultural resources are found during construction activities, construction personnel shall immediately cease work and contact a qualified professional archaeologist to evaluate the discovery. The landowner or construction personnel shall notify the Planning Division and a professional archaeologist. The Planning Division shall coordinate with the developer and appropriate authorities to avoid damage to cultural resources and determine appropriate action. State law requires the reporting of any human remains. This mitigation shall be noted on all site development and building plans.

Timing: This measures shall be implemented during construction activities, including land clearing, road construction, utility installation, and site development.

Monitoring: Butte County Department of Development Services

Mitigation Measure #8 (Greenhouse Gas Emissions):
The project applicant shall implement the following measures to reduce construction-related and operational greenhouse gas emissions generated by the project. These measures will be enforced prior to building permit issuance for on-site structures and during construction activities:

- Achieve CAL Green Tier 1 standards for energy efficiency, water conservation, and passive design for non-residential uses.
- Prewire new non-residential development for solar PV systems and maximize roof space to accommodate future rooftop solar installation.
- Prewire the facility for ground-mounted solar PV systems.
- Improve fuel efficiency from construction equipment by limiting idling time for all construction equipment to three minutes or less.
- Use clean or alternative fuel equipment, if available.

Plan Requirements: The mitigation shall be noted on all site development and building plans for the subject parcel. Measures shall be implemented prior to issuance of building permits for new non-residential buildings. Construction-related measures shall be adhered to throughout all grading and construction periods. These measures shall be noted on all building and site development plans.

Timing: Prior to issuance of building permits for new non-residential buildings. Construction-related measures shall be adhered to throughout all grading and construction periods.

Monitoring: The Department of Development Services shall ensure the mitigation is noted on all site development and building plans for the subject parcel and will review building permit and development plans to ensure the measures have been incorporated into the project design, and perform onsite inspections during construction activities.

Environmental Reference Material

1. Butte County Association of Governments. *Butte Regional Conservation Plan, First Administrative Draft.* Accessed December 27, 2013. Available at http://www.buttehcp.com/BRCP-Documents/1st-Admin-Draft-BRCP/index.html
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7.0 Consulted Agencies

- [x] Environmental Health
- [ ] BCAG
- [x] Assessor
- [x] Air Quality Management District
- [ ] City of Gridley
- [x] Cal Fire
- [ ] Department of Conservation
- [ ] Army Corps of Engineers
- [ ] Butte Co. Farm Bureau
- [ ] El Medio Fire Department
- [ ] PG&E
- [ ] NOAA Fisheries
- [x] Public Works
- [ ] County Counsel
- [x] Development Services
- [ ] City of Chico
- [ ] City of Oroville
- [ ] Caltrans (Traffic)
- [x] CA Dept. of Fish and Wildlife
- [ ] U.S. Fish & Wildlife Service
- [ ] Paradise Unified School Dist.
- [ ] NEIC
- [ ] Pacific Bell
- [ ] City of Biggs
- [x] Building Manager
- [ ] LAFCo
- [ ] Durham Unified School District
- [x] Sheriff
- [ ] Town of Paradise
- [ ] CA Central Reg. Water Quality
- [ ] Highway Patrol
- [x] Agricultural Commissioner
- [ ] Feather River Recreation Dist.
- [ ] LOAPUD
- [ ] Palermo Union School District

8.0 Project Sponsor(s) Incorporation of Mitigation into Proposed Project

I/We have reviewed the Initial Study for the *Franklin Construction, Inc. Conditional Use Permit (UP17-0009)* application and particularly the mitigation measures identified herein. I/We hereby modify the applications on file with the Butte County Planning Department to include and incorporate all mitigations set forth in this Initial Study.

BRET A WOOD

4/02/18

Project Sponsor/Project Agent — Date

Project Sponsor/Project Agent — Date

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BIOLOGICAL ASSESSMENT

For the

NEAL ROAD PROPERTY

August 2017

Prepared for:

Franklin Construction

Attn: Clark Gardner

217 Flume Street, Suite 200

Chico, CA 95928

Prepared by:

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APPENDICES AND EXHIBITS

BIOLOGICAL ASSESSMENT

NEAL ROAD PROPERTY

Location:
Butte County, California
Sections 14, 15, 22, and 23, T21N, R2E
Hamlin Canyon CA 7.5 USGS Quadrangle
August 2017

Contact Person:
Jody Gallaway, Senior Regulatory Biologist — Phone Number: (530) 332-9909
Gallaway Enterprises — Email: jody@gallawayenterprises.com

1 INTRODUCTION

The purpose of this biological assessment (BA) is to review the proposed Neal Road Property (Project) in sufficient detail to determine to what extent the proposed action may affect any of the threatened, endangered, proposed, candidate, or sensitive species and their habitats that have potential to occur within the Project area. This BA was prepared in accordance with legal requirements set forth under Section 7 of the Endangered Species Act (ESA)(16 U.S.C. 15362), and follows the standards established in the National Environmental Policy Act (NEPA), ESA, and by the U.S. Fish and Wildlife Service (USFWS). The U.S. Army Corps of Engineers (Corps) will serve as the federal lead for Section 7 Consultation with the USFWS.

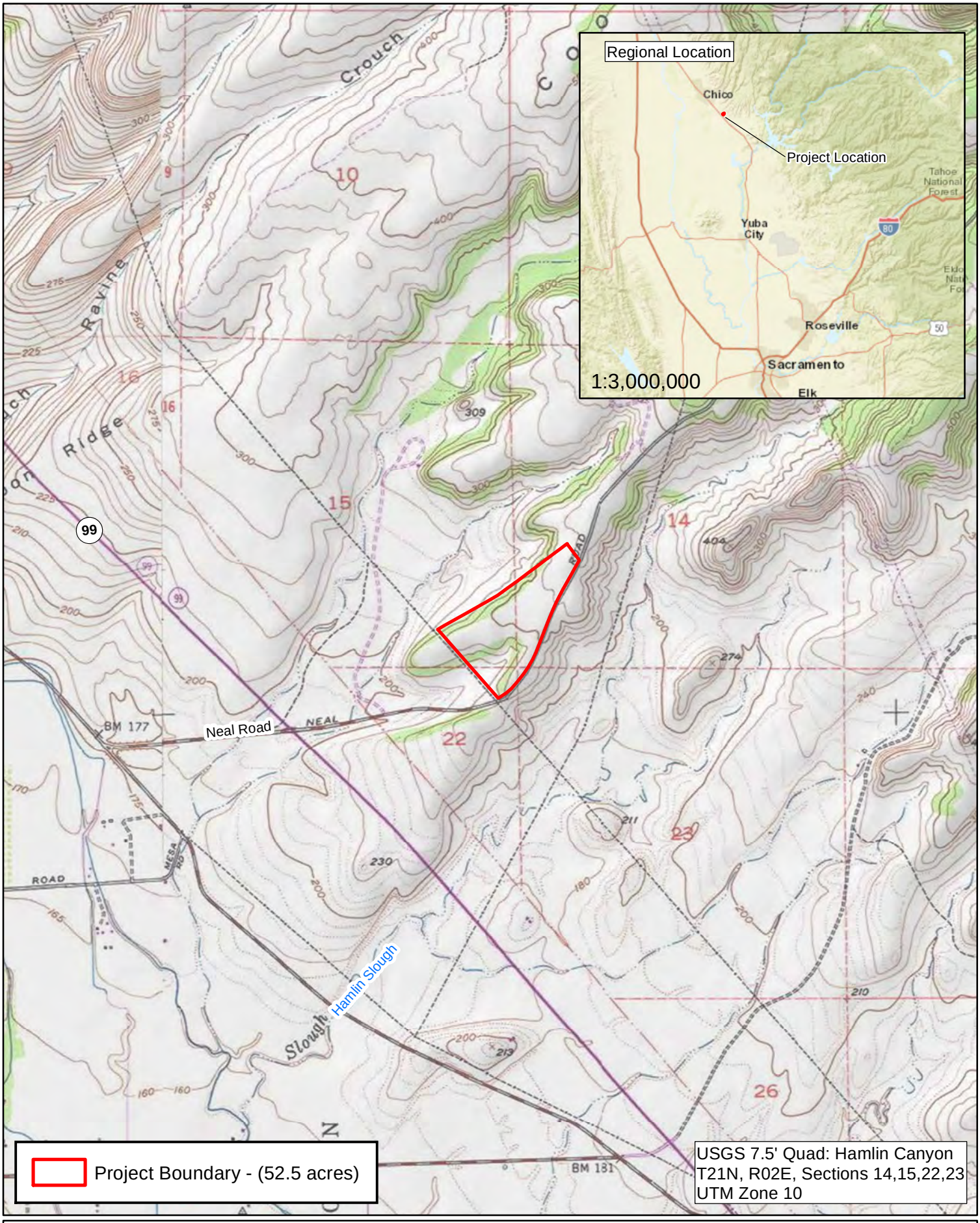
1.1 Project Location

The proposed Project is located within the Hamlin Canyon 7.5' U.S. Geological Survey (USGS) Quadrangle, Sections 14, 15, 22, and 23, Township 21 North, Range 2 East, Mount Diablo Meridian, Latitude 39.67094, Longitude -121.7303, in unincorporated Butte County, California (**Figure 1**). The Project is bordered by the Neal Road Recycling and Waste Facility to the north and northeast and Neal Road to the south and east.

2 PROJECT DESCRIPTION

The proposed Project will consist of the following:

- a 6,000 square foot pre-engineered metal building for equipment repair and maintenance,
- a construction equipment storage yard,
- and aggregate and dirt storage and recycling facilities.



Neal Road Property
Regional Locaiton Map
Figure 1

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GE: #17-012 Map Date: 07/19/2017

The proposed use is consistent with existing land uses on surrounding and adjacent parcels in the area.

The maintenance building will be a 60 foot by 120 foot pre-engineered Butler metal building. It will be fully enclosed with four (4) service doors across the front to allow for equipment access. The building will have a small 8 foot by 10 foot restroom and 10 foot by 12 foot office for maintenance records storage. This building will be used solely by Franklin Construction to perform routine maintenance and repairs to their construction equipment. Directly to the north of the proposed maintenance building will be a construction equipment storage area, approximately 200 feet by 250 feet.

The site features 0.28 acres of Other Waters of the U.S. (OW) and 0.13 acres of wetland features according to a delineation of Waters of the U.S. (WOTUS) performed by Gallaway Enterprises, the U.S. Army Corps of Engineers (CORPS) issued a preliminary jurisdictional determination on December 14, 2015 (SPK 2015-01080). Construction activities have been designed to completely avoid the OW present within the site. Construction activities have been designed to avoid 0.101 acre of wetlands present and will cause permanent impacts to approximately 0.029 acre of wetlands. The impacts to these wetland features will be mitigated for at Meridian Ranch Mitigation Bank, located in Butte County. Standard Best Management Practices (BMPs) will be used where applicable including the use of silt fencing and/or straw wattles to prevent silt from entering adjacent jurisdictional waters and orange barrier fencing to prevent inadvertent impacts to adjacent biological resources such as avoided trees and wetlands. Further, the construction activities will be conducted during the dry season when no flowing or ponded water is anticipated to be present in any of the jurisdictional features.

3 ACTION AREA

The Action Area includes all areas to be affected directly or indirectly by the action and not merely the immediate area involved in the action. The Action Area for the proposed Project includes the 52.5-acre site which encompasses all environmental resources that will be affected directly or indirectly (**Figure 2**). Neal Road and Neal Road Recycling and Waste Facility access roads act as topographic barriers on the northern, eastern, and western boundaries of the Project. The branched stream channel present in the southern corner of the Project (**Figure 3**) will be avoided entirely, and standard BMPs will be used to avoid impacts during construction activities. There will be no impacts to federally listed species or their habitat outside the project boundary; therefore, the Action Area is confined to the project boundary.

3.1 Current and Historic Land Use

The Project site and surrounding land are characterized as annual grassland utilized for cattle grazing. A review of historic aerials shows that the land has never been intensively disturbed, and the adjacent Neal Road Recycling and Waste Facility has been present since before 1969.

1:3,800
0 250 500 Feet

NORTH

Data Sources: Esri,USDA NAIP
07/13/2016, Butte County, USGS

Neal Road Property
Action Area
Figure 2

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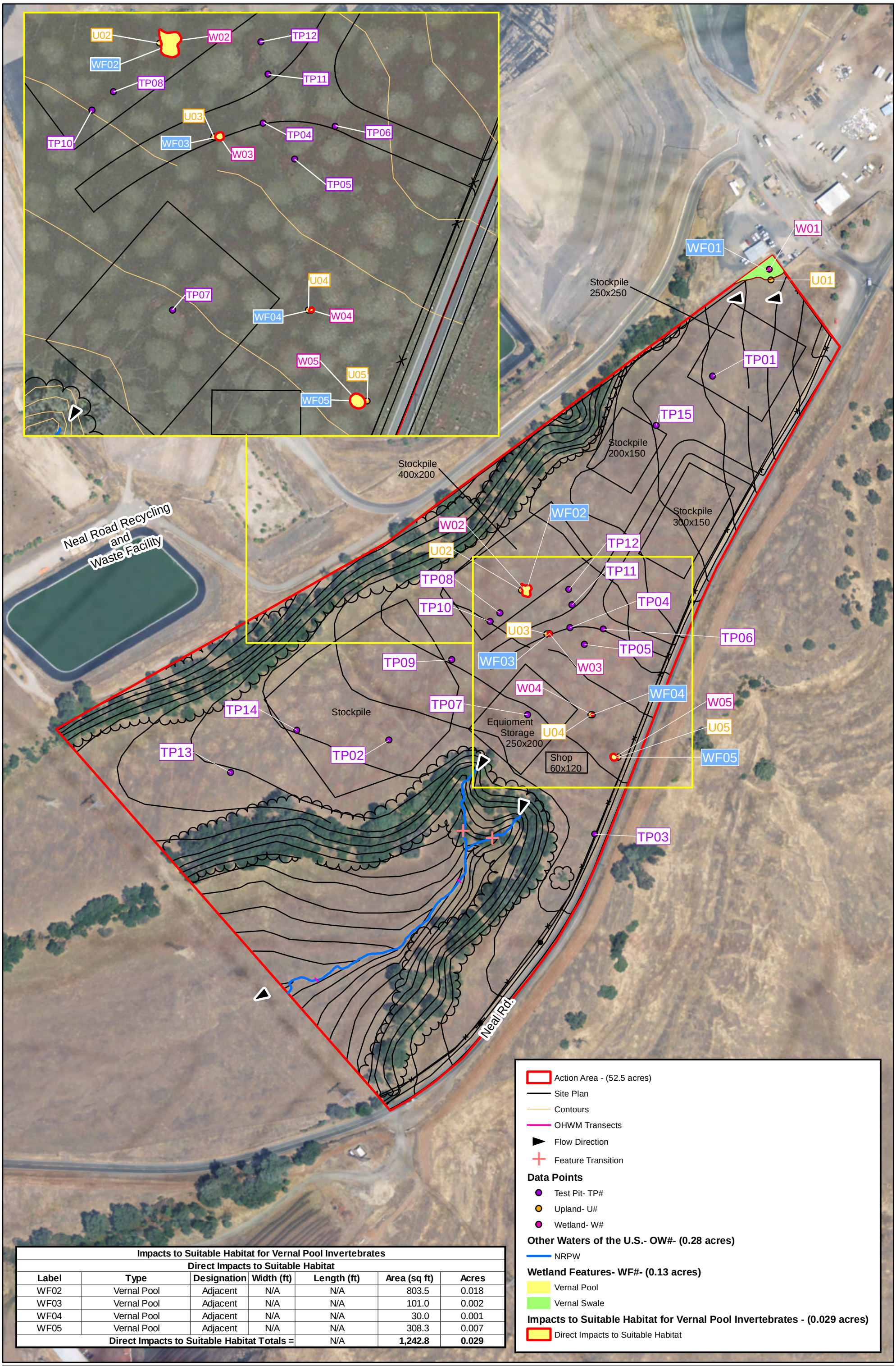
GE: #17-012 Map Date: 07/21/2017



Impacts to Suitable Habitat for Vernal Pool Invertebrates						
Direct Impacts to Suitable Habitat						
Label	**Type**	**Designation**	**Width (ft)**	**Length (ft)**	**Area (sq ft)**	**Acres**
WF02	Vernal Pool	Adjacent	N/A	N/A	803.5	0.018
WF03	Vernal Pool	Adjacent	N/A	N/A	101.0	0.002
WF04	Vernal Pool	Adjacent	N/A	N/A	30.0	0.001
WF05	Vernal Pool	Adjacent	N/A	N/A	308.3	0.007
Direct Impacts to Suitable Habitat Totals =				N/A	**1,242.8**	**0.029**

1:3,000
0 250 500 Feet
NORTH
Data Sources: RAR, Esri USDA NAIP
07/13/16, Butte County, Franklin Construction

Neal Road Property Impacts Assessment
Figure 3

gallaway ENTERPRISES
GE: #17-012 Map Date: 06/28/2017

3.2 Biological Conditions

The Action Area consists of various habitat types. Terrestrial and aquatic habitat types within the Action Area are described below.

3.2.1 Terrestrial Habitat

Annual Grassland

The Action Area is primarily composed of annual grassland with mound-swale topography positioned on the top of a bluff formed due to historic lava flows. Vegetation observed within this habitat type consisted primarily of annual grasses and forbs. The grassland community is composed of an herbaceous layer dominated by long-beak stork's-bill (*Erodium botrys*) and soft chess (*Bromus hordeaceus*). Wildlife species use grassland habitat for foraging but often require some other habitat characteristic such as rocky out crops, cliffs, caves or ponds in order to find shelter and cover for escapement (Mayer and Laudenslayer 1988). Common species that breed in annual grasslands include a variety of ground nesting avian species and small mammals.

Several vernal pools and swales occur as a component of the annual grassland habitat. Within the mound-swale topography of the Action Area, five (5) wetland features were identified. All of the wetlands identified exhibited vernal characteristics and have been typed as vernal pools, vernal swales or seasonal swales. Vernal pools are depressional features that are formed where a shallow hardpan prevents water from draining down though the soil. Vernal and seasonal swales are low drainage pathways that typically connect to vernal pools or other wetland features, creating a complex. These vernal habitat components are further discussed as aquatic habitat in section 3.2.2 below.

Blue Oak Woodland

Within the Action Area oak woodland occurs along the edges of the lava cap, forming a narrow band. Blue oak woodland is characterized by a dominant overstory of blue oak trees, with a typical understory composed of an extension of annual grassland vegetation and sparse shrubs.

3.2.2 Aquatic Habitat

Palustrine

Vernal Pools and Swales

There are several northern hardpan vernal pools and swales distributed throughout the Action Area. Northern hardpan vernal pools are the most common classification of vernal pool in the Northwest Sacramento Valley Region (CDFW 1998). Pools consist of a shallow soil layer with an impermeable hardpan bottom, most often within mima-mound topography. These types of vernal pools are often small and are inundated with water for a short period of time. Species that specialize in vernal pools ecosystems include the vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*) and several rare botanical species. Rapid dry down caused by steep slopes, together with shallow soils, result in marginal habitat for vernal invertebrates on-site.

Riverine

There is one ephemeral branched stream channel that flows northeast to southwest parallel to the southeastern boundary of the Action Area (**Figure 3**). This drainage is an unnamed tributary which flows offsite to the southwest into a series of tributaries to Butte Creek. Ephemeral drainages do not convey water year round. They dry up seasonally and play an important role of conveying and filtering seasonal runoff into larger perennial riverine systems.

3.3 Physical Conditions

3.3.1 Hydrology

Precipitation and localized runoff are the hydrological inputs that support the wetlands identified on the site. The wetlands on the site do not have any direct connectivity to jurisdictional features. The water that pools in WF 02-04 during rain events evaporates several days later, and water from WF 01 sheetflows southwest where it enters the Recycling and Waste Facility (**Figure 3**). Similar to WF 01, precipitation that lands north of test pit 12 sheetflows off the northern Project boundary and onto the Recycling and Waste Facility where it remains until it evaporates. Precipitation that lands south of test pit 12 flows off the southern edge of the ridge top, and is funneled into either OW 03 or OW 04. Other water 04 merges with OW 02 and then flows into OW 01, while OW 03 merges directly with OW 01. Other water 01 flows in a southwesterly direction across the valley floor for approximately 800 feet where it crosses the southern Project boundary. After leaving the Project site OW 01 continues in a southwesterly direction for a mile before converging with an unnamed tributary (locally known as Nance Creek) that then connects with Hamlin Slough. Hamlin Slough is a tributary of Butte Creek.

3.3.2 Topography

The Action Area is comprised of a ridge top with mound-swale topography which drops off into steep slopes leading to the valley floor. Overall, the site is characterized as annual grassland with blue oak woodland occurring along the edge of the ridge top (Mayer and Laudenslayer 1988). The 4 percent slope along the ridge top increases rapidly as it approaches the vertical rock cliffs along the edge of the terrace. Thin soils and sloped topography allow precipitation to drain rapidly from the site. Annual precipitation in the area is 25.66 inches and the average annual temperature is 61° F (WRCC). The project site has an average elevation of 300 feet above sea level.

3.3.3 Soils

Soil observations at various pit locations throughout the site rendered relatively dark soil colors with loamy soil textures dominated by clay. Soil depths within swale-like areas were observed to be shallow with a restrictive layer occurring near the soil surface likely causing a perched water table. The presence of the perched water table, high clay content, and elevated restrictive layer identifies soils with very high rates of evaporation and surface runoff, especially

when considering the sloped terrace landscape position that characterizes the majority of the Action Area.

Three soil map units occur within the Action Area according to a query of the National Cooperative Soil Survey database. 69.7% of the Action Area contains 614-Doemill-Jokerst complex, 0 to 3 percent slopes, soil and 11% contains 615-Doemill-Jokerst complex, 3 to 8 percent slopes, soil, both of which are not generally known to support the federally and State listed Butte County meadowfoam (BCM, *Limnanthes floccosa ssp. californica*) (BCAG 2015). BCM has been positively identified at one location within soil map unit 615 and has never been observed within soil unit 614.

4 SPECIES AND HABITAT CONSIDERED

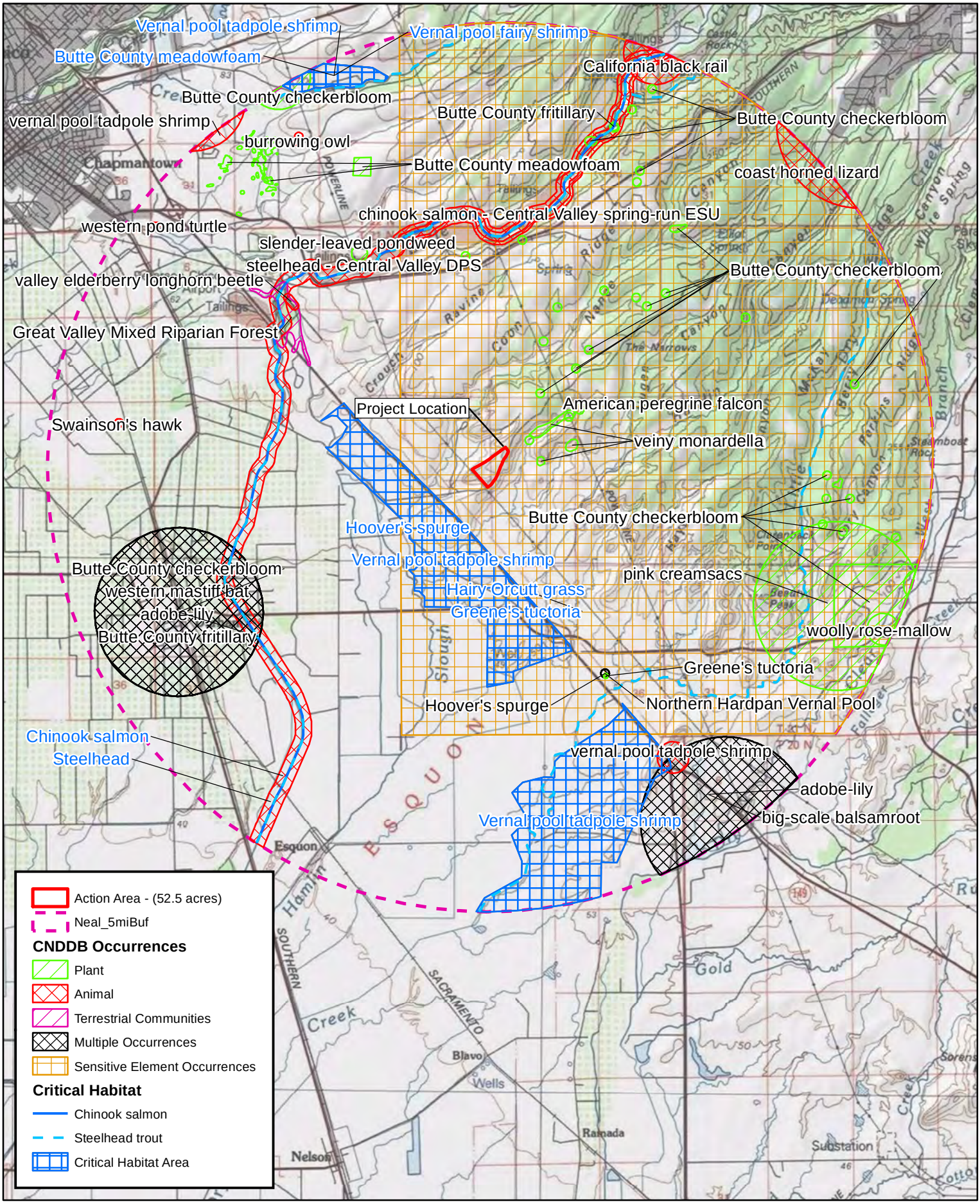
4.1 Consultation to Date

The USFWS online Information for Planning and Conservation (IPaC) was consulted on July 19, 2017, for a list of endangered, threatened, sensitive and rare species, and critical habitats that could potentially occur within the Action Area. A formal Delineation of Waters of the U.S. was performed on November 17 and 24, and December 4, 2015 by Gallaway Enterprises and was submitted to the U.S. Army Corps of Engineers (Corps) for a Jurisdictional Determination on December 7, 2015. A Jurisdictional Determination letter for the Project site was provided by the Corps on December 14, 2015 (SPK-2015-01-080).

References Consulted

Gallaway Enterprises obtained lists of special-status species that occur in the vicinity of the Action Area. The California Natural Diversity Database (CNDDB) Geographic Information System (GIS) database was also consulted and showed special-status species and critical habitat within a five (5) mile radius of the Action Area (**Figure 4**). Other primary sources of information regarding the occurrence of federally listed threatened, endangered, purposed and candidate species, and their habitats within the Action Area used in the preparation of this BA are:

- The USFWS IPAC Trust Resource Report and Official Species List for the Project site (**Appendix A; Species Lists**);
- The results of a species record search of the California Department of Fish and Wildlife (CDFW) CNDDB, RareFind 5, for the Hamlin Canyon and eight (8) surrounding 7.5 minute USGS quadrangles (**Appendix A; Species Lists**);
- The review of the California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California for the Hamlin Canyon and eight (8) surrounding 7.5 minute USGS quadrangles (**Appendix A; Species Lists**);
- Gallaway Enterprises 2015 Draft Delineation of Waters of the U.S.; and



Neal Road Property
CNDDB and Critical Habitat
Figure 4

gallaway ENTERPRISES

GE: #17-012 Map Date: 07/21/2017

- Gallaway Enterprises field visits conducted on conducted on November 17 and 24, and December 4, 2015.

- 2017 Rare Plant Survey for BCM (**Appendix B; Neal Road BCM Survey Results**).

4.2 Species Included in the Analysis

A current species list was obtained from the USFWS stating which threatened, endangered, and proposed species and their critical habitats were likely to occur within the Action Area. RareFind (5v) was used to access recent CNDDB data regarding listed and proposed species potentially occurring within the Project vicinity. This list was compared to similar lists compiled by Gallaway Enterprises biologists and botanists.

After analyzing the distribution and habitat requirements of listed, proposed and candidate species, and the occurrence of habitat-types within the Action Area, the following species are considered to have the potential to occur in the Action Area and are addressed in this BA.

Endangered
Vernal pool tadpole shrimp (*Lepidurus packardi*)
Butte County meadowfoam (*Limnanthes floccosa ssp. californica*)

Threatened
Vernal pool fairy shrimp (*Branchinecta lynchi*)

4.3 Species Excluded from the Analysis

The following species are listed by the USFWS as having potential to occur within the Project site and are presumed to be absent from the Action Area due to unsuitable habitat, lack of habitat connectivity, and absence of recorded observations in the area.

Endangered
Conservancy fairy shrimp (*Branchinecta conservatio*)
Least Bell's vireo (*Vireo bellii pusillus*)
Greene's tuctoria (*Tuctoria greenei*)
Hairy Orcutt Grass (*Orcuttia pilosa*)

Threatened
Hoover's spurge (*Chamaesyce hooveri*)
California red-legged frog (*Rana draytonii*)
Giant garter snake (*Thamnophis gigas*)
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)
Central Valley steelhead (*Oncorhynchus mykiss irideus*)
Central Valley chinook salmon (*Oncorhynchus tshawytscha*)
Delta Smelt (*Hypomesus transpacificus*)

The following describes the reasons for specific species absence in the Action Area.

Conservancy fairy shrimp

Conservancy fairy shrimp are federally listed as endangered. Conservancy fairy shrimp typically occur in large, moderately turbid, deep, cool-water vernal pools that tend to stay ponded until June (USFWS 2005). Although the Project occurs within vernal pool habitat, conservancy fairy shrimp are not expected to occur. The nearest CNDDB population was located in 1981 within the Vina Plains Preserve, which is located approximately 15 miles north of the Project (CNDDB Occurrence #33) near the intersection of Garner Lane and Keefer Road. In addition, the vernal features within the Project site are all small, shallow, and do not have the physical characteristics of vernal pools in which known occurrences have been found. As such, conservancy fairy shrimp are not likely to occur within the Action Area. No impacts to conservancy fairy shrimp will occur as a result of Project activities.

Least Bell's vireo

The least Bell's vireo is federally listed as endangered. It is a riparian forest nester, nesting in extensive riparian forests of willow, cottonwoods, and blackberry, none of which occur within the Action Area. There will be no impacts to least Bell's vireo as a result of Project activities.

Greene's tuctoria

Greene's tuctoria is federally listed as endangered. It occurs in grassland communities associated with vernal pool features. The vernal features present within the Action Area are too shallow and vegetated to support Greene's tuctoria, which prefer sparsely vegetated, deep vernal pools. Plant species typically associated with Greene's tuctoria and deeper vernal pools were not observed in the pools present within the Action Area. The closest known CNDDB record of Greene's tuctoria occurs only 3 miles southeast of the Action Area (CNDDB Occurrence #18), however, the occurrence was observed within a deep vernal pool hydrologically connected to an intermittent stream. No deep vernal pool habitat occurs within the Action Area; therefore, no impacts to Greene's tuctoria will occur due to Project activities.

Hairy Orcutt grass

Hairy Orcutt grass is a federally endangered species. It typically found on high or low stream terraces and alluvial fans in Northern Basalt Flow, Northern Claypan, and Northern Hardpan vernal pools within annual grasslands. (BCAG 2015) Its primary habitat includes large, deep vernal pools that maintain relatively long periods of inundation. The closest known population of hairy Orcutt grass is approximately 22 miles to the northwest of the Action Area on the Vina Plains Preserve (Occurrence #24). Due to the distance of the closest known population and lack of deep vernal features within the Action Area, it is not likely for hairy Orcutt grass to occur within the Action Area. No impacts to hairy Orcutt grass will occur as a result of Project activities.

Hoover's spurge

Hoover's spurge is federally listed as threatened. It is found in the drying beds of vernal pools on remnant alluvial fans and depositional stream terraces. They are usually found in deeper

pools where there is little to no cover from other plants. Vernal pools present within the Action Area were highly vegetated with species such as Mediterranean barley that indicate short ponding durations. The closest CNDDB occurrence of Hoover's spurge occurs approximately 3 miles southeast of the Action Area (CNDDB Occurrence #4). The occurrence was observed in the same deep vernal pool as the Greene's tuctoria occurrence described above. The vernal pools within the Action Area are not on alluvial fans or depositional stream terraces, and do not pond for long enough duration to support Hoover's spurge. There will be no impacts to Hoover's spurge as a result of Project activities.

California red-legged frog (CRLF)

There is no suitable breeding or holding habitat within the Action Area for CRLF. These factors along with the complete lack of documented occurrences in the Central Valley since 1956 make a strong argument for the absence of the CRLF in the Action Area. There will be no impacts to CRLF as a result of Project activities.

Giant garter snake (GGS)

The GGS is a federal and state listed threatened species. The GGS inhabits agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands in the Central Valley. The GGS relies heavily on rice fields in the Sacramento and San Joaquin Valley as a result of the direct loss of its natural environment, but also uses managed marsh areas in federal national wildlife refuges and state wildlife areas (USFWS 2015). The wetlands and drainages in the Action Area are small and seasonal and do not provide suitable aquatic GGS habitat. Without suitable aquatic habitat the grassland habitat within the Action Area would not be utilized as hibernaculum by GGS. Giant garter snakes are unlikely to occur within the Action Area; therefore, will be no impacts to GGS as a result of Project activities.

Valley elderberry longhorn beetle (VELB)

The VELB is federally listed as threatened. The beetle is endemic to riparian systems along the margins of rivers and streams, and in adjacent grassy savannas in California's Central Valley. The VELB carries out its entire life cycle on elderberry shrubs. There were no elderberry bushes observed in the Action Area based on the findings of field surveys conducted by Gallaway Enterprises. There will be no impacts to the VELB as a result of Project activities.

Central Valley steelhead, chinook salmon, and Delta smelt

There is no suitable habitat within the Action Area for anadromous fish. The seasonal stream within the Action Area is too ephemeral and shallow to provide suitable habitat. There will be no impacts to anadromous fish as a result of Project activities.

4.4 Critical Habitat

The action addressed in this BA does not fall within designated critical habitat (**Figure 4**); therefore, the proposed Project activities will have no effect on critical habitat.

5 SPECIES ACCOUNTS

5.1 Wildlife Species

5.1.1 Vernal pool tadpole shrimp

Vernal pool tadpole shrimp are federally endangered species. They are a small crustacean in the Triopsidae family. The vernal pool tadpole shrimp is known from 18 populations in the Central Valley, ranging from east of Redding in Shasta County, south to the San Luis National Wildlife Refuge in Merced County, and from a single vernal pool complex on the San Francisco Bay National Wildlife Refuge in the City of Fremont, Alameda County (USFWS 1996). They inhabit vernal pools containing clear to highly turbid water, ranging in size from 54 square feet in the former Mather Air Force Base area of Sacramento County, to the 89-acre Olcott Lake at Jepson Prairie. Their diet consists of organic debris and living organisms, such as fairy shrimp and other invertebrates (USFWS 1996).

Distribution in Action Area

No protocol-level surveys for branchiopods were conducted within the Action Area. A known CNDDB occurrence of vernal pool tadpole shrimp was identified 3.5 miles southeast of the Action Area in 2009 (CNDDB Occurrence #121), and the vernal features within the Project site provide marginally suitable habitat. As such, vernal pool tadpole shrimp are assumed to be present within the vernal features present in the Action Area.

5.1.2 Vernal pool fairy shrimp

Vernal pool fairy shrimp are federally threatened species. They are widespread but not abundant. Known populations occur in California to southern Oregon. Their geographic range encompasses most of the Central Valley from Shasta County to Tulare County and the central coast range from northern Solano County to Santa Barbra County, California: additional disjunctive occurrences have been identified in western Riverside County, California, and in Jackson County, Oregon, near the city of Medford. The vernal pool fairy shrimp occupies a variety of different vernal pool habitats, from small, clear, sandstone rock pools to large, and turbid, alkaline, grassland valley floor pools. Occupied habitats range in size from rock outcrops pools as small as one square meter to large vernal pools up to 12 acres. Smaller vernal pools are the most commonly occupied and are found more frequently in grass or mud bottomed swales, or basalt flow depression pools in unplowed grasslands. Vernal pool fairy shrimp have been collected from early December to early May (USFWS 2004).

Distribution in Action Area

No protocol-level surveys for branchiopods were conducted within the Action Area; however, known CNDDB occurrences of vernal pool fairy shrimp were identified approximately 7.5 miles southeast of the Action Area in 2003 (CNDDB Occurrence #692) and the vernal features within the Action Area provide marginally suitable habitat. As such, vernal pool fairy shrimp are assumed to be present within the vernal features present in the Action Area.

5.2 Botanical Species

5.2.1 Butte County meadowfoam

Butte County meadowfoam is federally and State listed as endangered. Butte County meadowfoam is a winter annual herb. Butte County meadowfoam typically begins flowering in March, and if conditions are suitable may continue into April or May.

Butte County meadowfoam is restricted to a narrow 28-mile strip along the eastern margin of the Sacramento Valley from central Butte County to near the northern border of Butte County. Plants are sometimes found at the edges of vernal pools, but they are primarily found in the deepest parts of vernal swales that connect vernal pools. The extent of its range has not changed substantially since it was identified as a distinct subspecies, but the number of populations, the area occupied, and the extent of available habitat within its range have declined significantly over the last 30 years. Only twenty-one (21) occurrences of BCM are presumed to still exist. (BCAG 2015)

Distribution in Action Area

Much of the Action Area consisted of thin soils or areas that were sloped that did not support wetland features, and thus, did not support habitat for BCM. However, the few scattered vernal pools and swales present did contain habitat that was marginally suitable for BCM. The soils within the annual grassland habitat present in the Action Area are the Doemill-Jokerst soil map units 614 and 615 which are not generally known to support habitat for BCM. Known populations of BCM occur approximately 4 miles to the north/northwest of the Action Area. The Action Area is not within USFWS designated critical habitat for BCM, and no past occurrences of BCM or other rare plant species have been identified within the Action Area.

No BCM plants were observed within the Action Area during the protocol-level survey conducted by Gallaway Enterprises on March 28, 2017. Due to sub-optimal habitat conditions, BCM is not expected within the Action Area.

5.3 Factors Affecting Vernal Pool Species in Butte County

Vernal pools within the Action Area are remnants of what was formerly a vast, contiguous, pristine vernal pool ecosystem. Fragmentation by a variety of human-caused activities, primarily urban development, water supply/flood control projects and conversion of land to agricultural use has resulted in small isolated vernal pool habitats and vernal pool species populations. Ecological theory predicts that such populations will be highly susceptible to extinction due to chance events, inbreeding depression, or additional environmental disturbance. Other factors have contributed to declines in vernal pool species as well. Vernal pool hydrology can be altered by a variety of activities, including the construction of roads, trails, ditches, or canals which can block the flow of water into, or drain water away from the vernal pools and vernal pool complexes. Vernal pool crustaceans are highly sensitive to the water chemistry of their habitats and contamination of vernal pools may injure or kill them. In addition, vernal pool habitats have declined as a result of a variety of other incompatible land

uses including off-road vehicle use, dumping, and invasion of non-native species, vandalism, erosion and sedimentation. Holland (1978) estimated that between 60 and 85 percent of the habitat that once supported vernal pools, had been destroyed by 1973. Since 1973, a substantial amount of remaining habitat has been converted for human uses. The rate of loss of vernal pool habitat in the state has been estimated at two to three percent per year (Holland and Jain 1988). Rapid urbanization of the Central Valley of California currently poses the most severe threat to the continued existence of the listed vernal pool crustaceans and vernal pool endemic plants.

6 EFFECTS ON SPECIES AND HABITAT

6.1 Direct Effects

Direct effects occur at, or very close to, the time of the action itself. Examples include loss of habitat or sedimentation resulting from construction activities. Direct effects caused by the proposed action are expected to occur when occupied or suitable habitats of the special-status species included in this BA are removed and/or altered by heavy, earth-moving equipment.

6.1.1 Vernal pool tadpole shrimp

The proposed Project will directly impact 0.029 acres of vernal pools within the Action Area that potentially support vernal pool tadpole shrimp (**Figure 3**). Vernal pool tadpole shrimp may be directly impacted by the filling of vernal pools as a result of Project.

6.1.2 Vernal pool fairy shrimp

The proposed Project will directly impact 0.029 acres of vernal pools within the Action Area that potentially support vernal pool tadpole shrimp (**Figure 3**). Vernal pool fairy shrimp may be directly impacted by the filling of vernal pools as a result of Project.

6.1.3 Butte County meadowfoam

Based on the results of the protocol-level survey, there are no known occurrences of BCM within the Action Area. As such, no direct impacts to BCM will occur due to the proposed Project.

6.2 Indirect Effects

Indirect effects are caused by, or result from a proposed action, occur later in time, and are reasonably certain to occur. As a general rule, indirect impacts are typically calculated by mapping all vernal wetlands that represent suitable habitat within 250 feet of proposed construction in which indirect impacts could occur. However, depending on site conditions proposed construction may occur closer than 250 feet from suitable habitat and not result in indirect impacts. The determination of indirect impacts was based on the location of suitable habitat in relation to proposed construction taking into consideration topographic relief, the location of surface obstacles such as roads, large swaths of grassland that separate vernal wetlands and the physical characteristics of wetlands. These site conditions will prevent indirect

impacts such as potential soil erosion generated from construction activities and changes in the hydrology of the suitable habitat from occurring.

6.2.1 Vernal pool tadpole shrimp and vernal pool fairy shrimp

No vernal features with suitable habitat for vernal pool tadpole shrimp or vernal pool fairy shrimp will be indirectly impacted by Project activities. Neal Road and Neal Road Recycling and Waste Facility access roads act as topographic barriers on the northern, eastern, and western boundaries of the Project. The vernal swale present in the northern corner and the branched stream channel present in the southern corner of the Project will be avoided entirely. Standard BMPs will be used to avoid impacts during construction activities, and construction activities will commence during dry months when no water is present in the Project area. Furthermore, the hydrology of WF 01 will not be affected by the Project due to its position upslope of the Project and that it drains in a westerly direction.

6.2.2 Butte County meadowfoam

There are no known occurrences of BCM within the Action Area. As such, no indirect impacts to BCM will occur due to the proposed Project.

6.3 Interrelated and/or Interdependent Effects from Other Projects

Interrelated actions are those that are part of a larger action and depend on the larger action that is under consideration. Interdependent actions are actions having no independent utility apart from the proposed action (50 CFR 402.02).

There are no known interrelated or interdependent projects proposed; however, if an interrelated project occurs at some time in the future, the applicant will complete protocol level resource studies to determine if any impacts will occur and will consult with the USFWS as needed.

6.4 Cumulative Effects

Cumulative effects are those impacts of future state, local and private actions affecting endangered and threatened species that are likely to occur in the Action Area (USFWS 1996). Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to Section 7.

Due to the fact that the special-status vernal pool species covered in this report are endemic to vernal pools in the Central Valley, coastal ranges and a limited number of sites in the transverse range and Santa Rosa plateau of California, the USFWS anticipates that a wide range of activities will be determined to affect these species (USFWS 1996). Such activities include, but are not limited to, urban, water, flood control, highway and utility projects, as well as conversion of vernal pools to agricultural use. Natural occurrences, such as prolonged drought, can also affect vernal pool species. Although the Project area contains vernal pools it is unlikely that impacts to vernal pools within the Project area will have cumulative effects on future or present populations of vernal pool species with the implementation of mitigation measures.

The Project intentionally avoids a vernal swale in the northern corner of the Action Area (**Figure 3**).

7 MITIGATION

7.1 Direct Impacts Mitigation

7.1.1 Vernal pool tadpole shrimp and vernal pool fairy shrimp

To compensate for direct impacts to 0.029 acres of habitat that may support vernal pool tadpole and fairy shrimp, the Project proponent will purchase 0.029 acre of vernal pool creation (1:1 ratio) and 0.058 acre of vernal pool preservation (2:1 ratio) credits at the Meridian Ranch Mitigation Bank or Dove Ridge Conservation Bank. Both mitigation banks service the Project location.

7.1.2 Butte County meadowfoam

No mitigation will be required, since no direct impacts to BCM will occur.

7.2 Indirect Impacts Mitigation

7.2.1 Vernal pool tadpole shrimp and vernal pool fairy shrimp

No mitigation will be required, since no indirect impacts to vernal pool tadpole shrimp or vernal pool tadpole shrimp habitat will occur.

7.2.2 Butte County meadowfoam

No mitigation will be required, since no indirect impacts to BCM habitat will occur.

8 AVOIDANCE AND MINIMIZATION MEASURES

a. The Project proponent shall include a copy of the Biological Opinion (BO), as applicable, within its construction documents making the primary contractor responsible for implementing all requirements and obligations included within the BO, and to educate and inform all other contractors involved in the Project as to the requirements of the BO.

b. The contractor will be responsible for understanding and following the guidelines set forth in the Section 404 permit and Section 401 water quality certification and the contractor will avoid and minimize potential construction-related water quality impacts through compliance with the RWQCB by preparing and submitting the following water quality permits and plans.

    i. A National Pollutant Discharge Elimination System (NPDES) storm water permit for general construction activities.

ii. A Notice of Intent to obtain proper coverage under the State Construction General Permit.

c. The contractor shall ensure, when feasible, that activities that are inconsistent with the maintenance of the suitability of vernal pool crustacean habitat and the associated on-site watershed are prohibited. These include, but are not limited to:
   i. the alteration of existing topography that may alter hydrology into habitat for Federally-listed vernal pool crustaceans;
   ii. the placement of any equipment within suitable habitat; and
   iii. dumping, burning, and/or burying of rubbish, garbage, or any other wastes and fill materials within 250 feet of habitat.

d. Prior to the commencement of construction activities, high visibility fencing will be erected around the habitats of the federally listed species to identify and protect these Environmentally Sensitive Areas (ESA, i.e. vernal pools) from encroachment of personnel and equipment. These areas will be avoided by all construction personnel. The fencing shall be inspected before the start of each work day and maintained by the contractor until completion of the Project. The fencing may be removed only when the construction of the Project is completed.

e. Construction timing will be confined to the summer and fall months when Waters of the United States and suitable habitat within the Project site are dry.

f. During construction activities silt fencing will be erected as necessary to prevent dust from drifting into adjacent WOTUS and suitable habitat.

g. During construction operations, the number of access routes, number and size of staging areas, and the total area of the proposed Project activity will be limited to the minimum necessary. Routes and boundaries will be clearly demarcated. Movement of heavy equipment to and from the Project site will be restricted to established roadways to minimize habitat disturbance.

h. During construction operations, stockpiling of construction materials, portable equipment, vehicles and supplies will be restricted to the designated construction staging areas and exclusive of the ESAs.

9 DETERMINATION

Based on the analysis as documented in this BA, the proposed Neal Road Property Project:

- "will affect, and is not likely to adversely affect" vernal pool tadpole shrimp by directly filling vernal pool habitat that could potentially support this species. However, as part of Project implementation the Project proponent will mitigate impacts to this species by purchasing creation credits at a ratio of 1:1 and preservation credits at a ratio of 2:1 for direct impacts to suitable habitat.
- "will affect, and is not likely to adversely affect" vernal pool fairy shrimp by directly filling vernal pool habitat that could potentially support this species. However, as part of Project implementation the Project proponent will mitigate impacts to this species

by purchasing creation credits at a ratio of 1:1 and preservation credits at a ratio of 2:1 for direct impacts to suitable habitat.

- "will not affect" Butte County meadowfoam, since this species was not observed, nor is it expected to occur within the Action Area.

REFERENCES CONSULTED

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U.S. Fish and Wildlife Service (USFWS). 2005. Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon. Portland, Oregon.

10 LIST OF PREPARERS

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APPENDIX A

Species Lists

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: July 19, 2017
Consultation Code: 08ESMF00-2017-SLI-2650
Event Code: 08ESMF00-2017-E-07270
Project Name: Neal Road Property

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2017-SLI-2650

Event Code: 08ESMF00-2017-E-07270

Project Name: Neal Road Property

Project Type: DEVELOPMENT

Project Description: Proposed industrial development off of Neal Road.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/39.670521259075684N121.73193905367351W

Counties: Butte, CA

Endangered Species Act Species

There is a total of 11 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Reptiles

NAME	STATUS
Giant Garter Snake *(Thamnophis gigas)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *(Rana draytonii)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt *(Hypomesus transpacificus)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened
Steelhead *(Oncorhynchus (=Salmo) mykiss)* Population: Northern California DPS There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1007	Threatened

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle *(Desmocerus californicus dimorphus)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *(Branchinecta conservatio)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *(Branchinecta lynchi)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *(Lepidurus packardi)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Greene's Tuctoria *(Tuctoria greenei)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1573	Endangered
Hairy Orcutt Grass *(Orcuttia pilosa)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2262	Endangered
Hoover's Spurge *(Chamaesyce hooveri)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3019	Threatened

Critical habitats

There are no critical habitats within your project area.

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE **RareFind**

Query Summary:
Quad IS (Hamlin Canyon (3912166) OR Richardson Springs (3912177) OR Paradise East (3912175) OR Paradise West (3912176) OR Chico (3912167) OR Cherokee (3912165) OR Nelson (3912157) OR Shippee (3912156) OR Oroville (3912155))
AND Federal Listing Status IS (Endangered OR Threatened OR Proposed Endangered OR Proposed Threatened OR Candidate)

Print Close

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Branchinecta lynchi	vernal pool fairy shrimp	Crustaceans	ICBRA03030	756	14	Threatened	None	G3	S3	null	IUCN_VU-Vulnerable	Valley & foothill grassland, Vernal pool, Wetland
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	Insects	IICOL48011	271	5	Threatened	None	G3T2	S2	null	null	Riparian scrub
Euphorbia hooveri	Hoover's spurge	Dicots	PDEUP0D150	29	1	Threatened	None	G1	S1	1B.2	null	Vernal pool, Wetland
Lepidurus packardi	vernal pool tadpole shrimp	Crustaceans	ICBRA10010	320	16	Endangered	None	G4	S3S4	null	IUCN_EN-Endangered	Valley & foothill grassland, Vernal pool, Wetland
Limnanthes floccosa ssp. californica	Butte County meadowfoam	Dicots	PDLIM02042	21	19	Endangered	Endangered	G4T1	S1	1B.1	SB_RSABG-Rancho Santa Ana Botanic Garden	Valley & foothill grassland, Vernal pool, Wetland
Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	Fish	AFCHA0209K	31	3	Threatened	None	G5T2Q	S2	null	AFS_TH-Threatened	Aquatic, Sacramento/San Joaquin flowing waters
Oncorhynchus tshawytscha	chinook salmon - Central Valley spring-run ESU	Fish	AFCHA0205A	13	3	Threatened	Threatened	G5	S1	null	AFS_TH-Threatened	Aquatic, Sacramento/San Joaquin flowing waters
Thamnophis gigas	giant gartersnake	Reptiles	ARADB36150	363	9	Threatened	Threatened	G2	S2	null	IUCN_VU-Vulnerable	Marsh & swamp, Riparian scrub, Wetland
Tuctoria greenei	Greene's tuctoria	Monocots	PMPOA6N010	48	2	Endangered	Rare	G1	S1	1B.1	null	Vernal pool, Wetland
Vireo bellii pusillus	least Bell's vireo	Birds	ABPBW01114	479	2	Endangered	Endangered	G5T2	S2	null	IUCN_NT-Near Threatened, NABCI_YWL-Yellow Watch List	Riparian forest, Riparian scrub, Riparian woodland

CNPS California Native Plant Society

Plant List

Inventory of Rare and Endangered Plants

30 matches found. Click on scientific name for details

Search Criteria

California Rare Plant Rank is one of [1A, 1B, 2A, 2B], Found in Quads 3912177, 3912176, 3912175, 3912167, 3912166, 3912165, 3912157 3912156 and 3912155;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Allium jepsonii	Jepson's onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	1B.2	S2	G2
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
California macrophylla	round-leaved filaree	Geraniaceae	annual herb	Mar-May	1B.2	S3?	G3?
Campylopodiella stenocarpa	flagella-like atractylocarpus	Dicranaceae	moss		2B.2	S1?	G5
Cardamine pachystigma var. dissectifolia	dissected-leaved toothwort	Brassicaceae	perennial rhizomatous herb	Feb-May	1B.2	S2	G3G5T2Q
Carex xerophila	chaparral sedge	Cyperaceae	perennial herb	Mar-Jun	1B.2	S2	G2
Castilleja rubicundula var. rubicundula	pink creamsacs	Orobanchaceae	annual herb (hemiparasitic)	Apr-Jun	1B.2	S2	G5T2
Clarkia gracilis ssp. albicaulis	white-stemmed clarkia	Onagraceae	annual herb	May-Jul	1B.2	S2S3	G5T2T3
Clarkia mildrediae ssp. mildrediae	Mildred's clarkia	Onagraceae	annual herb	May-Aug	1B.3	S3	G3T3
Clarkia mosquinii	Mosquin's clarkia	Onagraceae	annual herb	May-Jul(Sep)	1B.1	S2	G2
Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	1B.2	S2?	G2?
Eriogonum umbellatum var. ahartii	Ahart's buckwheat	Polygonaceae	perennial herb	Jun-Sep	1B.2	S3	G5T3
Euphorbia hooveri	Hoover's spurge	Euphorbiaceae	annual herb	Jul-Sep(Oct)	1B.2	S1	G1
Frangula purshiana ssp. ultramafica	Caribou coffeeberry	Rhamnaceae	perennial deciduous shrub	May-Jul	1B.2	S2S3	G4T2T3
Fritillaria pluriflora	adobe-lily	Liliaceae	perennial bulbiferous herb	Feb-Apr	1B.2	S2S3	G2G3
Hibiscus lasiocarpos var. occidentalis	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	Jun-Sep	1B.2	S3	G5T3
Imperata brevifolia	California satintail	Poaceae	perennial rhizomatous herb	Sep-May	2B.1	S3	G4
Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	Juncaceae	annual herb	Mar-Jun	1B.1	S2	G2T2

Layia septentrionalis	Colusa layia	Asteraceae	annual herb	Apr-May	1B.2	S2	G2
Limnanthes floccosa ssp. californica	Butte County meadowfoam	Limnanthaceae	annual herb	Mar-May	1B.1	S1	G4T1
Monardella venosa	veiny monardella	Lamiaceae	annual herb	May,Jul	1B.1	S1	G1
Orcuttia pilosa	hairy Orcutt grass	Poaceae	annual herb	May-Sep	1B.1	S1	G1
Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	Asteraceae	perennial herb	Mar-Jul(Aug-Sep)	1B.2	S2	G4T2
Paronychia ahartii	Ahart's paronychia	Caryophyllaceae	annual herb	Feb-Jun	1B.1	S3	G3
Rhynchospora californica	California beaked-rush	Cyperaceae	perennial rhizomatous herb	May-Jul	1B.1	S1	G1
Rhynchospora capitellata	brownish beaked-rush	Cyperaceae	perennial herb	Jul-Aug	2B.2	S1	G5
Sidalcea robusta	Butte County checkerbloom	Malvaceae	perennial rhizomatous herb	Apr,Jun	1B.2	S2	G2
Stuckenia filiformis ssp. alpina	slender-leaved pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	May-Jul	2B.2	S3	G5T5
Trifolium jokerstii	Butte County golden clover	Fabaceae	annual herb	Mar-May	1B.2	S2	G2
Tuctoria greenei	Greene's tuctoria	Poaceae	annual herb	May-Jul(Sep)	1B.1	S1	G1

Suggested Citation

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 20 July 2017].

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APPENDIX B

Neal Road BCM Survey Results

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117 Meyers Street • Suite 120 • Chico CA 95928 • 530-332-9909

April 14, 2017

Franklin Construction, Inc.
Attn: Clark Gardner
217 Flume Street, Suite 200
Chico, CA 95928

Dear Mr. Gardner;

As requested, Gallaway Enterprises conducted a first-year, protocol-level botanical survey for Butte County meadowfoam (*Limnanthes flocossa* ssp. *californica,* BCM) within the 52.5-acre Neal Road Property survey area (survey area) on March 28, 2017. Butte County meadowfoam is a state and federal endangered species and a California Native Plant Society (CNPS) Rank 1B.1[1] species, therefore, the survey was conducted per U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (DFW) guidelines.

Location

The Property is located in unincorporated Butte County, south of Chico, CA, within the USGS Hamlin Canyon Quadrangle, Sections 14, 15, 22 and 23, Township 21N, Range 2E (-121.73112 W, 39.6708 N). It is located on the north/east side of Neal Road and immediately south of the Neal Road Recycling and Waste Facility. Only the portion of the property proposed for future development was surveyed (survey area, **Figure 1**). The site has had very little human disturbance and is currently used for cattle grazing. The survey area is primarily composed of annual grassland with mound-swale topography positioned on the top of a bluff formed due to historic lava flows. This portion of the survey area contains thin soils, with the lava cap exposed in some areas. Due to the thin soils present, only a few wetland features occur within the survey area. Along the edges of the bluff is a narrow band of blue oak woodland. Within the southwestern portion of the survey area the topography drops off at the edge of the bluff and the land slopes, ranging from 0 to 8 percent slopes, toward the valley below the bluff. The soils within the annual grassland habitat present on the survey area are the Doemill-Jokerst soil map units which are known to support habitat for BCM. Known populations of BCM occur approximately 4 miles to the north/northwest of the survey area. The survey area is not within USFWS designated critical habitat for BCM, and no past occurrences of BCM or other rare plants species have been identified within the survey area.

[1] According to the CNPS Inventory of Rare and Endangered Plants, 1B.1 plants are species that are rare, threatened, or endangered in California and elsewhere; and are seriously endangered in California (over 80% of occurrences threatened /high degree and immediacy of threat).

NORTH

1:5,500
0 250 500 Feet

Data Sources: Esri (Base Map), Butte County, USGS

Neal Road Property
Survey Area Location
Figure 1

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GE: #17-012 Map Date: 04/13/2017

Methodology

The survey for BCM was conducted on March 28, 2017 during the appropriate flowering window of the target species, by botanist Elena Gregg (see **Attachment A** for Botanist Qualifications). The entire survey area was surveyed for BCM. All of the wetlands within the survey area were surveyed and the upland portion of the site was traversed on foot using meandering transects (a total of 6 transects). A Trimble Geo Explorer 6000 Series GPS Receiver was on hand to record any special-status plant occurrences observed. The survey was conducted in accordance with the September 1996 and January 2000 USFWS *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants* and the November 2009 DFW *Protocols for Surveying and Evaluation Impacts to Special Status Native Plant Populations and Natural Communities*. The rainfall and inundation was considered above average during the winter of 2016/2017 according to the National Oceanic and Atmospheric Administration (NOAA), and moisture in the soil had been sufficient to allow for BCM seed germination based on a visit to a BCM reference population. A visit to the BCM reference population at the Meriam Park Preserve in Chico, CA was conducted on March 21, 2017. BCM was observed in the flowering stage during the reference site visit.

Results

Much of the survey area consisted of thin soils or areas that were sloped that did not support wetland features, and thus, did not support habitat for BCM. However, the few scattered vernal pools and swales present did contain habitat that was suitable for BCM. No BCM plants were observed within the survey area during the protocol-level survey conducted. A list of all of the plant species observed during the survey is provided as **Attachment B**.

Although no BCM were observed within the survey area, the USFWS require 2 years of surveys to make a presence/absence determination for BCM. Therefore, a second year of protocol-level BCM surveys will be conducted in 2018.

Should you have any questions, please do not hesitate to contact me at (530) 332-9909 or via email at elena@gallawayenterprises.com.

Sincerely,

Elena Gregg, Senior Botanist
Gallaway Enterprises

Attachment A

Surveyor Qualifications

Elena Gregg, Senior Botanist / ISA Certified Arborist

EDUCATION

- **B.S., Environmental Biology and Management,** 2004
  University of California, Davis

EXPERIENCE 10 Years

- **Gallaway Enterprises (2013-Current)**
  Senior Botanist, ISA Certified Arborist
- **NorthStar Engineering (2009-2013)**
  Senior Botanist, ISA Certified Arborist
- **Gallaway Consulting, Inc. (2006-2008)**
  Botanist, ISA Certified Arborist
- **Jones and Stokes (2005)**
  On-call Field Botanist
- **U.S. Forest Service, Truckee and Sierraville Ranger Districts (2004 and 2005)**
  Botanical Technician

AREAS OF EXPERTISE

- Rare Plant Surveys
- Wetland Delineations
- Habitat Assessments
- Tree Inventories
- State and Federal permit Facilitation
- Endangered Species Act Documentation
- Mitigation Monitoring
- CRAM Assessments
- Arborist Construction Monitoring
- Habitat Restoration
- Environmental Awareness Training

Elena has over nine years of professional experience conducting rare plant surveys, wetland delineations, and habitat assessments in California. She has a working knowledge of CNPS, CDFW, and USFWS survey protocols and holds a CDFW collection permit for listed plant species. Through her ample field experience in a wide array of habitats and eco-regions in Northern California, Mrs. Gregg has gained knowledge of locally invasive plants species as well as rare species. In particular, Mrs. Gregg has surveyed extensively for Butte County meadowfoam, a locally endangered plant species. Mrs. Gregg has a working knowledge of the Clean Water Act regulations and facilitation of local and federal environmental permits. She regularly prepares Caltrans documentation for projects receiving Caltrans Local Assistance. In 2007 Mrs. Gregg gained her Professional Arborist Certification from the International Society of Arboriculture. As a Certified Arborist, Mrs. Gregg conducts tree inventories, tree health assessments, and heritage tree surveys. She also prepares tree preservation plans and has been called upon to monitor trees during construction. Her experience with habitat restoration includes preparing wetland restoration plans, mitigation and monitoring plans, and reclamation plans. Mrs. Gregg also conducts annual monitoring associated with mitigation and re-vegetation projects, and in 2012 was trained in using CRAM to assess riverine and vernal pool systems.

Attachment B

Plant Species Observed

Plant Species Observed within the Neal Road Property March 28, 2017	
Scientific Name	**Common Name**
Achyrachaena mollis	Blow-wives
Aira caryophyllea	Silver hairgrass
Allium amplectens	Clasping onion
Avena barbata	Wild oats
Blenospermma nana	Yellow carpet
Bromus hordeaceous	Soft chess
Bromus madritensis	Red brome
Calandrinia ciliata	Redmaids
Cardamine oligosperma	Western bittercress
Castilleja attenuata	Valley tassels
Cerastium glomeratum	Mouse-eared chickweed
Cicendia quadrangularis	Timwort
Clarkia purpurea	Winecup clarkia
Claytonia perfoliata	Miner's lettuce
Crassula connatum	Pigmyweed
Crassula tillaea	Moss pigmyweed
Cynosurus echinatus	Hedgehog dogtail
Deschampsia danthonoides	Annual hairgrass
Dichelostemma capitatum	Blue dicks
Eleocharis macrostachya	Pale spike-rush
Elymus caput-medusae	Medusahead
Erodium botrys	Long-beaked stork's-bill
Erodium cicutarum	Cut-leaf filaree
Eschscholzia lobbii	Fryingpans
Festuca bromoides	Six-weeks fescue
Festuca microstachys	Small fescue
Festuca perennis	Rye-grass
Frangula californica	California coffeeberry
Geranium molle	Dove's-foot geranium
Gilia tricolor	Bird's eye gilia
Hordeum marinum ssp. *gussoneanum*	Mediterranean barley
Hordeum murinum	Wall hare barley
Hypochaeris glabra	Smooth cat's ear
Juncus bufonius	Toadrush
Lasthenia californica	California goldfields
Layia fremontii	Tidy-tips
Leontodon saxatilis	Hawkbit
Lepidium nitidum	Shinning pepperweed
Leptosiphon bicolor	True babystars
Lithophragma bolanderi	Bolander's woodlandstar
Logfia gallica	Narrowleaf cottonrose
Lupinus nanus	Sky lupine
Medicago polymorpha	Burclover
Micropus californicus var. californicus	Q tips
Microseris douglasii	Douglas' microseris

Scientific Name	Common Name
Mimulus guttatus	Seep monkeyflower
Minuartia californica	Sandwort
Navarretia sp.	Pincushion plant
Pentagramma triangularis ssp. triangularis	Gold-backed fern
Petrorhgia dubia	Grass-pink
Pinus sabiniana	Gray pine
Plagiobothrys austiniae	Austin's popcorn flower
Plagiobothrys fulvus	Common popcorn flower
Plagiobothrys stipitatus var. *micranthus*	Small-flowered popcornflower
Plantago elongata	Prairie plantain
Plantago erecta	Erect plantain
Poa annua	Annual bluegrass
Poa bulbosa	Bulbous bluegrass
Poa secunda	Bluegrass
Pogogyne zizyphoroides	Sacramento Valley pogogyne
Primula clevelandii ssp patula	Lowland shootingstar
Quercus douglasii	Blue oak
Quercus wislizeni	Live oak
Ranunculus muricatus	Prickle-seeded buttercup
Sedella pumila	Dwarf-stonecrop
Selaginella hansenii	Hansen's spikemoss
Senecio vulgare	Old-man-in-the-Spring
Sherardia arvensis	Field-madder
Silybum marianum	Milk thistle
Stellaria media	Common chickweed
Torilis arvensis	Hedge parsley
Toxicodendron diversilobum	Poison oak
Trifolium depauperatum	Cowbag clover
Trifolium dubium	Shamrock clover
Trifolium hirtum	Rose clover
Trifolium microcephalum	Maiden clover
Trifolium varigatum	White-tipped clover
Triteleia hyacinthina	Wild hyacinth
Triteleia lilacina	Foothill triteleia
Tryphisaria ericaria	Johnnytuck
Veronica peregrina ssp. *xalapensis*	Purslane speedwell

APPENDIX C

Project Site Photos

Project Site Photos Taken November 17 and 24, 2015
Neal Road Property

Looking northeast at OW01.

Looking northeast at OW02.

Looking north at WF01, November 17.

Wetland feature 03, November 17.

Wetland feature 03, November 24.

Wetland feature 04, November 17.

Wetland feature 04, November 24.

Wetland feature 05, November 17.

Wetland feature 05, November 24.