(E) OVERHEAD POWER (TYP)

APN: 069-231-30

APPROXIMATE PARCEL BOUNDARY

APN: 069-231-35

(E) FENCING (TYP)

(E) GRAVEL

(E) GRAVELED ENTRANCE

STATE HWY 1

APN: 069-231-34

(E) CHAIN GATE

(E) CONCRETE

(E) BERM

(E) AC PAVING

(E) WELL ASSEMBLY

(E) BASIN

(E) GRAVEL

APN: 069-231-21

APN: 069-231-39

NO FENCING THIS SIDE

(E) INFILTRATION LOWPOINT

"BRUSH"

(E) 30' EASEMENT

(E) FENCING (TYP)

APPROXIMATE PARCEL BOUNDARY

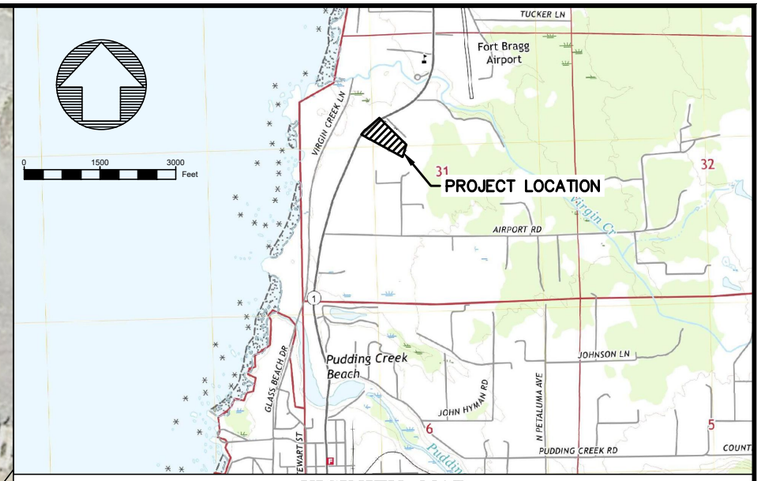
(E) CONCRETE

APN: 069-231-26

APN: 069-231-28

0 60 120 Feet

1' CONTOUR INTERVAL



VICINITY MAP

NO.	DATE	REVISIONS	BY	CHK

PROJECT NO: 022047.00	PROJECT ID:	ORIGINAL SCALE IN INCHES 0 1 2	
DRAWN BY: J. BEERS	SCALE: 1" = 30'		
ENGINEER: D. BROWN	DATE:		
CHECKED BY:	DATE:		

LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

FORT BRAGG FREIGHT TERMINAL

1280 NORTH MAIN, LLC
1280 NORTH MAIN STREET
FORT BRAGG, CA

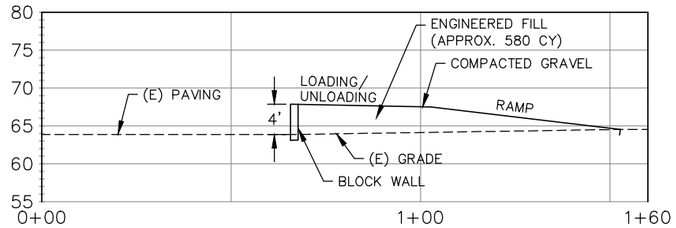
EXISTING CONDITIONS

DRAWING: FIGURE 1
SHEET: OF
DATE: 8/3/2022

p:\022047_waste_connections_ft_bragg\exist_cond.dwg J.R.B. 8/3/2022

SHEET NOTES: (1)

1. RE-PAVE EXISTING DRIVEWAY (ENCROACHMENT PERMIT REQUIRED BY CALTRANS FOR RE-PAVING).
2. INSTALL FENCING AS SHOWN. ALL NEW FENCING SHALL BE 2-INCH MESH AT LEAST 5-FEET IN HEIGHT WITH T-POST (OR SIMILAR) SUPPORTS AT 10-FOOT INTERVALS.
3. EXISTING BIOLOGICAL RESOURCES INTENTIONALLY NOT SHOWN IN DETAIL ON THIS DOCUMENT, REFER TO BIOLOGICAL RESOURCE REPORT.
4. NEW LOADING RAMP TO BE CONSTRUCTED IN THE SIZE AND LOCATION SHOWN. RAMP SHALL INCLUDE A SLOPED RAMP ON THE SOUTHEAST SIDE, THEN AN UPPER LEVEL "UNLOADING" AREA. PEDESTRIAN HANDRAIL SHALL BE PROVIDED ON THE TWO SIDES OF THE RAMP WITH NO RAILING AT THE UNLOADING/LOADING TRANSITION.
5. NEW GATED ENTRY TO BE COORDINATED WITH ADJACENT OWNER. ANTICIPATE CHAIN LINK SWING GATE WITH SLATS.



SCALE: H– 1" = 20'
V– 1" = 10'

SECTION A – A' (THROUGH LOADING AREA)

(E) OVERHEAD POWER (TYP)
STATE HWY 1
APPROXIMATE PARCEL BOUNDARY
(N) GATE
CONNECT TO (E) FENCE
(E) GRAVEL
(N) AUTOMATED SWING ENTRY GATE (NO PUBLIC ACCESS)
(E) FENCING (TYP)
PAVE (E) DRIVEWAY, ENCROACHMENT PERMIT THROUGH CALTRANS
(N) ADDRESS/MONUMENT SIGN
(N) FENCING TO PROTECT/ SCREEN (E) VEGETATION
REMOVE (E) GATE, INSTALL CONCRETE V–DITCH ACROSS ROAD
BMP–1 BIORETENTION (700 SF)
BMP–2 BIORETENTION (720 SF)
(N) INFILTRATION TRENCH / BASIN (3,000 SF TOTAL)
(N) TRUCK PARKING (10 TOTAL SPACES)
(E) CONCRETE
LOADING/UNLOADING AREA
(E) AC PAVING
60'
(E) WELL ASSEMBLY
TRAILER STAGING
61'
90'
(N) FENCE
PERIMETER BLOCK WALL
RAMP
SLOPE
(E) PARKING (UNCHANGED)
(N) FENCING
(E) GRAVEL
(N) EMPLOYEE PARKING (13 TOTAL, 1 ADA)
FENCE LAYOUT TO COORDINATE WITH ADJACENT OWNER THIS LOCATION
REMOVE BRUSH AND PLACE GRAVEL
(E) 30' EASEMENT
(E) FENCING (TYP)
APPROXIMATE PARCEL BOUNDARY
N
E
W
S
0
60
120
Feet
1' CONTOUR INTERVAL

NO.	DATE	REVISIONS	BY	CHK

PROJECT NO: 022047.00	PROJECT ID:
DRAWN BY: J. BEERS	SCALE: 1" = 30'
ENGINEER: D. BROWN	DATE:
CHECKED BY:	DATE:

ORIGINAL SCALE IN INCHES
0 1 2

LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

FORT BRAGG FREIGHT TERMINAL

1280 NORTH MAIN, LLC
1280 NORTH MAIN STREET
FORT BRAGG, CA

PROPOSED IMPROVEMENTS

DRAWING: FIGURE 2
SHEET: OF
DATE: 9/7/2022

p:\022047_waste_connections_ft_bragg\imp_cond.dwg J.R.B. 9/7/2022

LACO

TECHNICAL MEMORANDUM

Geotechnical Exploration
Proposed Development
1280 North Main Street, Fort Bragg, California

Date: March 4, 2022

Project No.: 9016.05

Prepared For: 1280 N Main, LCC

Prepared By: Kelsey McLaughlin
Associate Geologist

Reviewed By: Edward H. Crump, P.E.
Senior Civil Engineer
P.E. C 055444, EXP 12/31/22

Attachments: Figures:

Figure 1: Vicinity Map
Figure 2: Site Plan
Figure 3: Perimeter Subdrain
Figure 4: Slab-on-Grade Subdrain

Appendix 1: Preliminary Project Plans
Appendix 2: Test Pit Logs
Appendix 3: Laboratory Test Results

1.0 INTRODUCTION

This memorandum presents the results of a geotechnical exploration performed by LACO Associates (LACO) for a proposed new development at 1280 North Main Street, Fort Bragg, California (Assessor's Parcel Number 069-231-21; Site). Coastal zoning maps indicate that the Site is located outside of the Coastal Zone (County of Mendocino, 2016). A vicinity map of the Site location is provided as Figure 1. A Site Plan with exploration locations performed during this evaluation is provided as Figure 2.

1.1 Project Understanding

Based on preliminary project plans prepared by LACO dated December 16, 2021 (Appendix 1), it is our understanding that the proposed project will consist of a customer service office and buy back center, truck scale, loading platform, restroom, and mechanic shop. We anticipate that the structures will be of light-weight metal-framed construction with concrete slab-on-grade floors and steel-reinforced concrete spread footings; and that the project will include asphalt-paved parking and driveway areas. Site grading will be minor and limited to cuts and fills of approximately 3 vertical feet as needed to create level building pads, improve site soils, and provide adequate drainage. Proposed bioretention areas are anticipated throughout the Site (Appendix 1).

1.2 Scope of Services

In accordance with the Engineering Services Agreement Amendment No. 3, dated February 9, 2022, our scope of services was limited to the following:

- Review publicly available geologic reports and topographic maps as well as information in LACO's database.
- Direct the advancement of up to eight test pits to a maximum depth of 10 feet by LACO-provided excavator and operator; log soils encountered in general accordance with ASTM 2488 (Visual Manual Procedures) and collect soil samples for laboratory testing.
- Perform laboratory tests to assess soil classification, resistance (R) value, particle size gradation, and expansion potential, as appropriate. Soil and/or rock testing requirements will be determined by a Professional Geologist, Certified Engineering Geologist, and/or Professional Engineer following fieldwork and after examining soil and rock samples in the lab.
- Perform engineering analyses to develop conclusions and recommendations regarding suitable foundation type, estimates of foundation settlement, design criteria for the recommended foundation type, lateral earth pressures, drainage, and construction considerations that may include the following as applicable:
    - Suitability of on-site material for fill;
    - Asphalt paving recommendations;
    - Fill placement and restrictions;
    - Qualitative liquefaction potential based on mapped zones; and,
    - Construction consideration based on the preceding.
- Assess bearing capacity consistent with current California Building Code or engineering recommendations.
- Evaluation of the potential for geohazards that may include the following: earthquake ground motion, fault rupture hazard, liquefaction, and slope stability.
- Provide seismic coefficients as per Structural Engineers Association of California (SEAOC) and OSHPD Seismic Design Maps.
- Record the results of our exploration and analysis in a technical memorandum.

2.0 EXPLORATION

Our exploration consisted of reviewing published geotechnical reports and maps related to the surface topography and geology of the Site vicinity and performing a subsurface exploration. Documents reviewed are presented in the references section (Section 10.0) of this memorandum. Our subsurface exploration was performed on February 10, 2022, and was limited to excavating eight test pits (TP1 through TP8) to maximum depths ranging from 3.5 to10 feet below ground surface (bgs), at the approximate

locations shown in Figure 2. Test pits were excavated by a LACO-provided excavator and operator, under the direction and observation of a LACO geologist. Our geologist logged the test pits and obtained disturbed soil samples for visual classification and laboratory testing. Soils were logged in general accordance with the American Society for Testing and Materials (ASTM) Test Procedure D2488 Visual-Manual Procedures. Test pit logs are presented in Appendix 2.

2.1 Laboratory Testing

Select soil samples collected during the field exploration were submitted to LACO's materials laboratory and were subjected to the following tests:

- Atterberg Limits (ASTM D4318)
- Percent Finer than #200 sieve (ASTM D1140)
- Resistance (R) Value Test (California Test 301

Laboratory test results are included as Appendix 3 and are summarized in Table 1.

Table 1. Summary of Laboratory Test Results

Test Pit	Depth (feet bgs)	Unified Soil Classification System Soil Type1	ASTM D1140	ASTM D4318		CA Test 301
			Fines Content Percent	Plasticity Index Percent	Liquid Limit Percent	Resistance Value
TP1	1 to 2	SP	-	-		56
	2 to 3	SP	1.9	Non-plastic		-
TP5	1 to 2	GP-GC	10.7	Non-plastic		64

LACO will archive the soil samples collected for this project for 60 days following the issuance of this Memorandum. Unless directed otherwise by the Client, the samples will be discarded after the 60-day archive period.

3.0 SITE CONDITIONS

3.1 Surface Conditions

The Site is located in the coastal area within the city limits of Fort Bragg. Highway 1, also identified as North Main Street, adjoins the western boundary of the Site. The western portion of the Site is used as parking by the public to access beaches along the Pacific Ocean. The Site is vacant and the central portion is partially vegetated and partially covered in sand dunes. The immediate surrounding area appears to have a low-density development, with residential properties to the west, and commercial and industrial properties to the north, east, and south. Topography is generally flat lying, with the exception of some berms and sand dunes. The Site is located approximately 0.3 miles east of the Pacific Ocean, and 0.2 miles south of Virgin Creek, a tributary to the Pacific Ocean. No drain inlets were observed; however, stormwater is anticipated to drain via sheet flow to the west towards the Pacific Ocean. Precipitation is anticipated to infiltrate the ground surface in unpaved locations.

3.2 Geologic Setting

The Site is located in the California Coast Ranges Geomorphic Province. This province is seismically active and geologically complex due to historic and ongoing tectonic deformation that is characterized by northwest-trending faults and topographic and geologic features. The California Coast Ranges Province extends west to the Pacific Ocean, east to the Great Valley, north to Oregon, and south to the Transverse Ranges. The complex structure of the Coast Ranges Geomorphic Province began with a period of plate convergence during late Jurassic which involved eastward thrusting of oceanic crust beneath the coastal crust and was characterized by the accretion of material to the continent and the formation of east-dipping thrust and reverse faults. Beginning in the mid-Cenozoic and continuing to the present, the plate boundary was dominated by right-lateral, strike-slip deformation which was superimposed on the existing structures. This is characterized by the northwest-trending nearly vertical faults of the San Andreas system.

The oldest bedrock units in the Coast Ranges Geomorphic Province are those of the Jurassic-Cretaceous Franciscan Complex and the Great Valley Sequence. Younger bedrock units consist of the Tertiary-aged Sonoma Volcanic Group, the Plio-Pleistocene-age Clear Lake Volcanics, and Sedimentary rock formations such as the Petaluma, Wilson Grove, and Huichica. Quaternary-aged alluvium generally covers the bedrock in the valleys and low-lying areas.

Published geologic mapping indicates the Site is underlain by Quaternary-aged marine terrace deposits that are described as generally consisting of well-sorted quartz sand with minor gravel and having coarser textures near major drainages (Kilbourne, 1983).

3.3 Subsurface Conditions

Our test pits indicate the Site is blanketed by undocumented fill underlain by heterogeneous alluvial deposits that extended to the maximum depths explored of 10 feet bgs. Undocumented fill was encountered up the upper 12 inches of test pit TP1 on the western portion of the site and between 1.5 to 3 feet bgs in the eastern portion of the Site (TP5 through TP8). The fill consists of poorly to well graded gravel or sand. In the area of test pits TP2 and TP3, loose poorly graded sands were encountered to a depth of 2 feet bgs. Underlying the fill and loose poorly graded sands, layers of medium dense to dense poorly graded sand, medium dense clayey sand and medium stiff sandy lean clay were encountered to the total depths explored. Groundwater was encountered in test pits TP2 and TP3 at depths of 5.5 feet and 7 feet bgs, respectively.

4.0 GEOLOGIC HAZARDS

4.1 Slope Instability

Our site evaluation observed no historical or ongoing slope stability concerns at the project site. The project site is relatively flat and new construction is not anticipated to steepen slopes on or around the Site. Provided the project is constructed according to the recommendations of this report, we consider the potential impact to the proposed development from slope instability is low.

4.2 Seismicity

The Site is in a seismically active region where large earthquakes may be expected to occur during the economic lifespan (50 years) of the structures due to the seismic activity of the northern section of the San

Andreas fault. The nearest potentially active fault is the north coast section of the San Andreas fault zone, which is located approximately 7 miles west of the Site in the Pacific Ocean. The north coast section of the San Andreas fault zone is an approximately 150 miles long right-lateral strike-slip fault with an average strike and dip of North 36° West and 90°, respectively (Bryant and Lundberg, 2002). The next nearest fault is the Maacama Fault Zone, located approximately 22 miles east of the Site. The Maacama Fault is a 100-mile-long right-lateral strike-slip fault with an average strike and dip of North 24° West and 90°, respectively (Hart and Bryant, 2001).

The Site is not mapped in a special studies zone per the Alquist-Priolo Earthquake Fault Zoning Act and thus the likelihood of surface rupture from a potentially active fault is low (CDC, 2016a). Using an estimated Vs_{30} of 468 meters per second (based on existing mapped velocities; CDC, 2016b), the 2008 Ground Motion Interpolator indicates that within 50 years, the Site has a 2 percent probability of experiencing peak ground accelerations up to 0.723 times the acceleration of gravity (Branum, et al., 2016).

4.3 Lurching

Seismic slope failure, or lurching, is a phenomenon that occurs during earthquakes when slopes or man-made embankments yield and displace in the unsupported direction. Provided foundations are installed following the recommendations presented within this memorandum, we consider the potential for impact to the proposed development from lurching is low.

4.4 Liquefaction

Liquefaction is a phenomenon that results in a loss of shear strength and potential soil volume reduction in loose, saturated sandy/silty soils below the groundwater table as a result of earthquake shaking. It is dependent on many factors, including the intensity and duration of ground shaking, the soil age, density, particle size distribution, and position of the groundwater table. Geologic hazards maps related to liquefaction susceptibility are not available for the Site or vicinity; however, based on the classification and density of the soils observed at the Site, the loose poorly graded sands in the upper 2 feet located in the areas of test pits TP2 and TP3 have liquefaction susceptibility. Provided these near surface deposits are improved by site grading according to the recommendations of this report, we consider the potential for liquefaction to negatively impact the proposed development to be low. Evaluation of the liquefaction potential beyond the maximum depths explored is beyond the scope of this report.

4.5 Flooding

The Site is not mapped within the 100-year FEMA flood zone (FEMA, 2017) or the tsunami inundation zone (State of California, 2021). Therefore, the potential for impact to the Site from flooding or tsunami is low.

4.6 Soil Swelling or Shrinkage Potential

Expansive soils tend to undergo volume changes (shrink or swell) with changes in moisture content. They generally consist of cohesive fine-grained clay soils and represent a significant structural hazard to structures founded on them. Based on soil classification and our laboratory testing, Site soils have a low potential to shrink (or swell) during seasonal moisture variations. Therefore, we consider the potential for soil expansion to detrimentally affect the proposed development at the Site to be low.

5.0 CONCLUSIONS

The results of our exploration program indicate the project is feasible from a geotechnical standpoint. The primary concern at the Site is the presence of undocumented fill and the loose poorly graded sands that were present within the upper approximately 2 feet in the area of test pits TP2 and TP3. Undocumented fill is prone to settlement and/or collapse when subjected to structural loading. To minimize these potentially detrimental effects, undocumented fill beneath planned structural elements should be removed and replaced with select engineered fill following recommendations presented in Section 6.1 of this memorandum. Structures can be supported on standard steel-reinforced concrete spread footings bearing entirely on select engineered fill. If designed and constructed per the recommendations of this memorandum, we estimate total settlement under the loads anticipated will be less than ½ inch and differential settlement will be less than ¼ inch over distances of 20 feet.

6.0 RECOMMENDATIONS

6.1 Site Preparation and Grading

Areas to be graded should be stripped of vegetation and topsoil containing organic material. Bushes and designated trees should be removed and their roots grubbed. These materials are not suitable for reuse as select fill. Prior to placement and compaction of engineered fill, undocumented fill and loose soils should be removed to their full depth. We anticipate that excavation of fill may extend up to one foot below existing grade on the western half of the Site (TP1 and TP4); and up to 3 feet below existing grade on the eastern portion of the site (TP5 through TP8). Loose soils are anticipated to extend to 2 feet below existing grade in the area of TP2 and TP3.

Select fill pads intended for foundation support should extend 5 feet beyond the building footprint and extend 30 inches below lowest adjacent grades. Excavation depths should be adjusted such that foundations bearing on fill bear on a minimum of 12 inches of properly placed and compacted engineered fill.

In areas of planned exterior concrete slabs and walkways, select fill should extend a minimum of 3 feet beyond the slab perimeter and extend a minimum of 12 inches subgrade. Prior to placing fill, the exposed soil subgrade should be observed by an appropriately qualified professional, then scarified to a depth of 6 inches, moisture conditioned to near optimum moisture content, and compacted to at least 90 percent relative compaction.[1] Material proposed for use as select fill should be free of organic or other deleterious material and rocks with a maximum dimension greater than 3 inches, and should meet the following criteria:

Fraction Finer than No. 200 Sieve:	Between 5 percent and 60 percent
Plasticity Index:	15 percent or less
Liquid Limit:	35 percent or less

[1] Relative compaction refers to the ratio of the in-place dry density of the soil to the maximum dry density as described in the latest edition of the ASTM D1557 compaction test procedure. Optimum moisture content is the water content as a percentage of the dry weight of the soil corresponding to the maximum dry density.

Our exploration indicates that on-site soils are in general suitable for use as select fill. However, our laboratory testing indicates that portions of the onsite material have low fines content and should be blended onsite with existing suitable material. Following excavation operations, and prior to placement, material proposed fill should be observed tested and approved by an appropriately qualified professional. Fill should be placed in lifts no greater than 6 inches in loose thickness, moisture conditioned to 2 percent wet of optimum moisture content, and compacted to at least 90 percent relative compaction. In areas to receive vehicular loads, the upper 6 inches of soil subgrade should be compacted to at least 95 percent relative compaction and be firm and unyielding when subjected to proof-rolling during construction.

6.2 Foundations

6.2.1 Spread Footings

Structures can be adequately supported on standard spread footings bearing on select engineered fill. Footings for the new structures should be at least 12 inches deep (below finish subgrade elevations) and 18 inches (continuous) or 24 inches (isolated) wide. Footings adjacent to existing utility trenches or other footings should be deepened enough to bear below a 1:1 (horizontal: vertical) plane extending upwards from the bottom edge of utility trench or footing excavation. Additional embedment may be needed to satisfy code and/or structural requirements. On ungraded sloping terrain, footings should be stepped as necessary to produce level tops and bottoms.

The bottoms of all footing excavations should be thoroughly cleaned of loose soils prior to placing reinforcing steel and concrete. This will remove the soils that were disturbed during footing excavations, or restore their adequate bearing capacity, and reduce post-construction settlements. An appropriately qualified professional in the field should observe the footing excavations prior to the placement of reinforcing steel and concrete forms to check that they are founded in suitable bearing materials, have been properly cleaned of loose soil, and the proper moisture condition has been achieved.

6.2.1.1 *Bearing Pressures*

Footings bearing on select engineered fill can be designed using a maximum allowable bearing capacity of 2,000 psf. These values can be increased by one-third when considering wind and/or seismic loads.

6.2.1.2 *Lateral Pressures*

The portion of spread footings extending into select engineered fill may impose a passive equivalent fluid pressure and a friction factor of 150 pcf and 0.25, respectively, to resist sliding. Passive pressure should be neglected within the upper 12 inches unless the soils are confined by concrete slabs or pavements.

6.2.2 Slabs-on-Grade

Interior concrete slab-on-grade floors should be supported on a minimum of 30 inches of select fill that extends a minimum of 5 feet beyond the edge of the slab. The fill pad thickness may be refined in the field, dependent on conditions encountered. Exterior slabs and/or concrete flatwork can be supported entirely on a minimum of 12 inches of select fill that extends a minimum of 3 feet beyond the edge of the slab.

Prior to slab construction, the subgrade should be scarified to a depth of 6 inches, compacted following the recommendations presented in the Site Preparation and Grading section (Section 6.1) of this Memorandum, and maintained in a wet-of-optimum moisture content condition. To provide a capillary moisture break between the slab and the supporting soil/rock, we recommend a 4-inch-thick layer of

crushed rock be placed on the prepared subgrade. The crushed rock should be placed as soon as possible after slab subgrade preparation to reduce the potential for drying and cracking of the moisture-conditioned subgrade material.

Where the risk of moisture vapor movement through the slab may be detrimental to the intended use of the slab, the capillary break material should be covered by an impermeable membrane consisting of 15-mil Stego® Wrap sheeting, or equivalent, installed in accordance with the manufacturer's recommendations.

Special precautions should be taken during the placement and curing of all concrete slabs. Excessive slump (high water-cement ratio) of the concrete and/or improper curing procedures used during either hot-or cold-weather conditions could lead to excessive shrinkage, cracking, or curling of the slabs. High water-cement ratio and/or improper curing also greatly increase the water vapor permeability of concrete. We recommend concrete placement and curing operations be performed in accordance with the American Concrete Institute (ACI) manual.

6.3 Asphalt Pavement

The following asphalt pavement section is provided for the proposed parking lot and driveway. The upper 6 inches of soil subgrade in pavement areas should be compacted to 95 percent relative compaction and be firm and unyielding when subjected to proof-rolling as observed by an appropriately qualified professional. To estimate a minimum pavement section thickness, an R-value of 56 was selected based on laboratory tests (Table 1). Minimum pavement section thicknesses are presented in Table 2 below.

Table 2. Minimum Recommended Pavement Section Thicknesses with Corresponding Traffic Index

Traffic Index (TI)	HMA Thickness (Inches)	Class 2 Aggregate Base Thickness (Inches)
5	2.5	6.0
6	3.0	6.0
7	3.5	7.0
8	4.5	7.5

HMA-Hot Mix Asphalt

Hot mix asphalt (HMA) and Class 2 aggregate base materials should meet the requirements specified in the latest edition of the CalTrans Standard Specifications. The Class 2 aggregate base should be compacted to at least 95 percent relative compaction prior to HMA placement and compaction.

6.4 Seismic Design Parameters

Earthquake design parameters presented herein are based on the California Building Code (CBC) and the standard "Minimum Design Loads and Associated Criteria for Buildings and Other Structures," (ASCE 7-16), which, in turn, is based on a maximum considered earthquake ground motion, defined as the motion caused by an event with a 2-percent probability of exceedance within a 50-year period (recurrence interval of approximately 2,500 years). We used the site location (39.468533, -123.802040), site class D (stiff soil), and risk level II, as project input to Seismic Design Maps tool co-developed by the Structural Engineers

Association of California (SEAOC) and California's Office of Statewide Health Planning and Development (OSHPD) (SEAOC and OSHPD, 2019). Values of those inputs and model outputs are presented in Table 3.

We refer the building designer to the exemptions listed in ASCE 7-16 to determine whether a site-specific ground motion analysis is required.

Table 3. Summary of Seismic Design Parameters

Site Class	F_a	F_v	S_s	S_1	S_{MS}	S_{M1}	S_{DS}	S_{D1}	T_s
D	1.5	1.7	1.0	0.6	1.5	1.02	1.0	0.68	0.68

* F_v, S_{M1}, and S_{D1} may only be used for calculation of T_s.

The factors are defined as follows:

- S_s - Mapped spectral response acceleration, 5 percent damped, at 0.2 second period (times g).
- S_1 - Mapped spectral response acceleration, 5 percent damped, at 1.0 second period (times g).
- F_a – Short period coefficient to modify 0.2 second period of mapped spectral response accelerations.
- F_v – Long-period coefficient to modify 1.0 second period of mapped spectral response accelerations.
- S_{MS} – Maximum considered earthquake spectral response acceleration, 5 percent damped, at 0.2 seconds (times g).
- S_{M1} – Maximum considered earthquake spectral response acceleration, 5 percent damped, at 1.0 second period (times g).
- S_{DS} – Design spectral response acceleration, 5 percent damped, at 0.2 second period (times g).
- S_{D1} – Design spectral response acceleration, 5 percent damped, at 1.0 second period (times g).
- T_s S_{D1}/S_{DS}.

6.5 Utility Trench Backfill

Trench backfill quality and compaction should generally conform to the requirements of the Site Preparation and Grading section (Section 6.1) of this Memorandum. Where trenches closely parallel a shallow foundation element and the trench bottom is within a 2:1 plane projected outward and downward from the foundation, concrete slurry (two-sack minimum) should be used to backfill that portion of the trench below this plane. The use of slurry backfill is not required where a narrow trench crosses a footing at or near a right angle.

7.0 CONSTRUCTION CONSIDERATIONS

7.1 Groundwater

Shallow groundwater was encountered between 5.5 and 7 feet bgs during our exploration. Seasonal groundwater levels fluctuate and may rise above the depths explored. Provided construction is performed during the dry months of summer or early fall, it may not be a concern. If groundwater accumulates in foundation excavations, it should be pumped out prior to concrete placement.

7.2 Surface Drainage

The Site should generally be graded to provide positive surface drainage away from foundations and away from structures. A minimum gradient of 3 percent should be maintained for hardscape areas within 5 feet of a structure where this does not conflict with Americans with Disabilities Act (ADA) design requirements. A minimum 5 percent gradient should be maintained for landscaped areas not designed to receive foot traffic within 5 feet of a structure. The grading or landscaping design and construction should not allow water to pond on the Site within 10 feet of any engineered structure nor to migrate beneath any structure. Runoff from hardscaped areas, roofs, patios, and other impermeable surfaces should be contained, controlled, and directed into the Site storm drainage or infiltration systems.

7.3 Subsurface Drainage

Subdrains should be considered where the migration of moisture through concrete slab-on-grade floors would be detrimental, such as interior living space areas, slab subdrains should be installed to dispose of surface and/or groundwater that may seep and collect in the slab rock. At a minimum, subdrains should be constructed and routed away from foundations. Subdrains should be constructed as shown in Figures 3 and 4.

7.4 Temporary Slopes and Trench Excavations

Contractor is responsible for the stability of temporary slopes and trenches excavated at the Site and the design and construction of any required shoring. Shoring and bracing should be provided in accordance with all applicable local, state, and federal safety regulations, including the current Occupational Safety and Health Administration (OSHA) excavation and trench safety standards. Because of the potential for variable soil conditions, field modifications of temporary cut slopes may be necessary. Unstable materials encountered on the slopes during the excavation should be removed.

8.0 FUTURE GEOTECHNICAL SERVICES

To check for conformance with specific recommendations contained in this memorandum and to confirm assumptions made in the preparation of this memorandum, an appropriately qualified professional should be retained to perform the following:

- Review project plans and specifications;
- Observe subdrain installations;
- Observe Site grading activities and check exposed grades prior to placement of fill;
- Observe foundation excavations prior to placement of any forms or reinforcing steel; and,
- Observe placement of fill and perform in-place field density tests to check the required relative compaction is achieved.

9.0 LIMITATIONS

This memorandum has been prepared for the exclusive use of 1280 N Main, LCC Construction, their contractors, consultants, and appropriate public authorities for specific application to the planned new development. LACO has exercised a standard of care equal to that generated for this industry, so the information contained in this memorandum is current and accurate. The opinions presented in this memorandum are based upon information obtained from subsurface excavations, a Site reconnaissance, review of geologic maps and data available to us, and upon local experience and engineering judgment, and have been formulated in accordance with generally accepted geotechnical engineering practices

that exist in California at the time of this memorandum. In addition, geotechnical issues may arise that are not apparent at this time. No other warranty, expressed or implied, is made or should be inferred.

Data generated for this memorandum represent information gathered at that time and at the widely spaced locations indicated. Subsurface conditions may be highly variable and difficult to predict. As such, the recommendations included in this memorandum are based, in part, on assumptions about subsurface conditions that may only be observed and/or tested during subsequent project earthwork. Accordingly, the validity of these recommendations is contingent upon review of the subsurface conditions exposed during construction in order to check that they are consistent with those characterized in this memorandum. Upon request, LACO can discuss the extent of (and fee for) observations and tests required to check the validity of the recommendations presented herein.

The opinions presented in this memorandum are valid as of the present date for the property evaluated. Changes in the condition of the property can occur over time, whether due to natural processes or the works of man, on this or adjacent properties. In addition, changes in applicable standards of practice can occur, whether from legislation or the broadening of knowledge. Accordingly, the opinions presented in this memorandum may be invalidated, wholly or partially, by changes outside our control. Therefore, this memorandum is subject to review and should not be relied upon after a period of three years, nor should it be used, or is it applicable, for any property other than that evaluated. This memorandum is valid solely for the purpose, Site, and project described in this document. Any alteration, unauthorized distribution, or deviation from this description will invalidate this memorandum. LACO assumes no responsibility for any third-party reliance on the data presented. Additionally, the data presented should not be utilized by any third party to represent data for any other time or location.

10.0 REFERENCES

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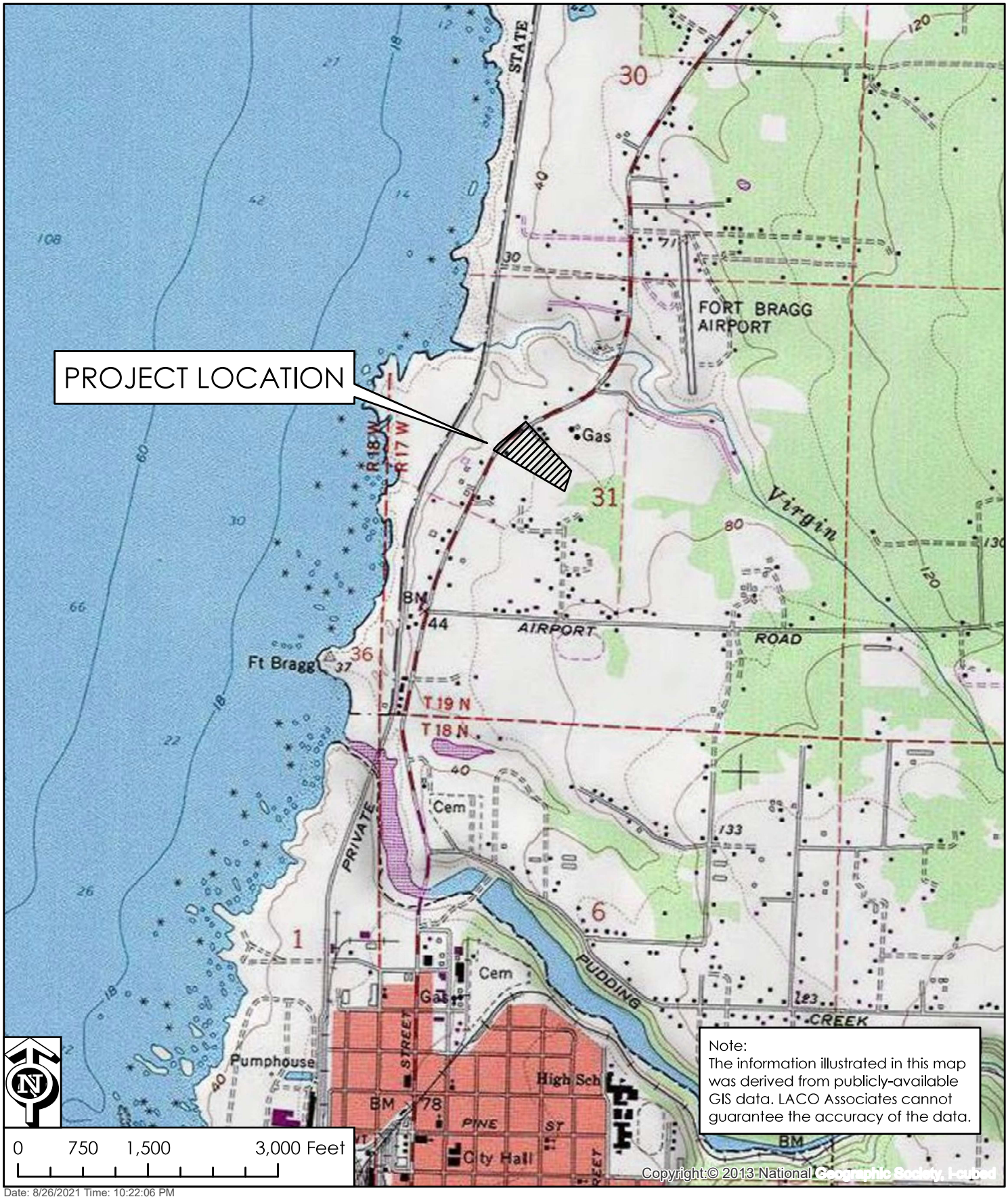
FIGURES

LACO	PROJECT	1280 N. MAIN, LLC: PHASE I ESA	BY CRP	FIGURE 1
EUREKA • UKIAH • SANTA ROSA	CLIENT	1280 N. MAIN, LLC	CHECK RD/KD	
1-800-515-5054 www.lacoassociates.com	LOCATION	1280 N. MAIN ST. FORT BRAGG, CA	DATE 6/23/2021	JOB NO. 9016.05
		LOCATION MAP		



Date: 8/26/2021 Time: 10:22:06 PM
Path: P:\9000\9016 Yulupa Investments, LLC\9016.05 1280 N Main St Fort Bragg Planning Services\12 Figures_Maps\GIS\Figure 1 - Location (modified AAA).mxd

APPENDIX 2

Test Pit Logs

TEST PIT NUMBER TP1

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GP) Light Brown Gravel with Sand [FILL] dry, medium dense medium sand, subangular gravel up to 1.5 inch diameter, grass covered with fine roots in upper 6 inches	GB										
		(SP) Light Brown Poorly Sorted Sand dry, medium dense medium grained sand				R value = 56							
2.5			GB							NP	NP	NP	2
		(CLS) Brown motted Yellow Sandy Lean Clay moist, medium stiff medium grained sand	GB										
5.0													
		(CLS) Light Gray mottled Orange Sandy Lean Clay moist, medium stiff medium grained sand											
7.5			GB										

Bottom of test pit at 9.0 feet.

TEST PIT NUMBER TP2

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
▽ **AT TIME OF EXCAVATION** 5.50 feet
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SP) Light Brown Poorly Sorted Sand dry, loose to medium dense medium grained sand	GB										
2.5		(SP) Light Brown Poorly Sorted Sand with Clay dry, medium dense medium grained sand	GB										
5.0		(SP) Light Gray Poorly Sorted Sand wet to Saturated, medium dense medium grained sand, refusal due to hole collapsing, groundwater at 5.5 feet bgs ▽											

Bottom of test pit at 6.5 feet.

TEST PIT NUMBER TP3

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
▽ **AT TIME OF EXCAVATION** 7.00 feet
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SP) Light Brown Poorly Sorted Sand dry to moist, loose medium grained sand, fine to medium roots to 2 feet bgs	GB										
2.5		(SC) Reddish Brown mottled Gray Clayey Sand moist, medium dense medium grained sand, medium roots to 5 feet bgs	GB										
5.0		(SP) Light Gray Poorly Sorted Sand moist to wet, medium dense medium grained sand	GB										
		(SP) Light Gray Poorly Sorted Sand moist to wet, dense medium grained sand, partially cemented, groundwater at 7 feet bgs, refusal due to hole collapsing											
7.5		Bottom of test pit at 8.0 feet.											

TEST PIT NUMBER TP4

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GP) Brown Gravel with Sand [FILL] dry to moist, medium dense fine to medium grained sand, thin layer of concrete-like material, fine roots to 12 foot bgs, grass covered	GB										
		(SP) Light Brown Poorly Graded Sand moist, medium dense medium grained sand, sand collapsing											
2.5			GB										
5.0		(SP-SC) Brown Sand with Clay moist medium dense (more firm than layer above) medium sand	GB										
		(SW) Reddish Brown Gravelly Sand wet, medium dense medium grained sand, subrounded gravel up to 1 inch diameter	GB										
7.5		(SP) Light Gray Poorly Sorted Sand moist to wet, dense medium grained sand, partially cemented, groundwater at 7 feet bgs	GB										

Bottom of test pit at 8.0 feet.

TEST PIT NUMBER TP5

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GP) Gravel with Sand [FILL] moist, dense subangular gravel											
		Concrete											
		(GP-GC) Brown Poorly Gravel with Sand and Clay [FILL] dry to moist, very dense angular to subangular gravel	GB			R value of 64				NP	NP	NP	11
2.5													
		(SP) Gray mottled Orange Poorly Gravel Sand moist, medium dense medium grained sand	GB										
5.0			GB										
7.5		(SC) Black Clayey Sand moist, medium dense organic smell, refusal due to hole collapsing/ undercutting fill											

Bottom of test pit at 9.0 feet.

TEST PIT NUMBER TP6

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GP) Brown Gravel [FILL] dry to moist, dense angular to rounded gravel, fine to medium sand	GB										
2.5		(SP) Light Brown Poorly Graded Sand moist, medium dense medium grained sand, more firm at 3.5 feet bgs, medium roots to 4 feet bgs, collapsing	GB										
5.0													
7.5			GB										
10.0		(CL) Dark Brown Clay moist, stiff organic smell, minor organic matter, refusal due to hole collapsing/ undercutting fill	GB										

Bottom of test pit at 10.0 feet.

TEST PIT NUMBER TP7

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(SP) Red Sand [Fill] dry, dense medium sand											
		(GP) Gravel [Fill] dry, dense subangular to subrounded up to 1 inch diameter											
		Well Graded Sand [Fill] dry, very dense medium sand, cemented, possibly lime treated, difficulty digging											
2.5		(SP) Light Brown Poorly Graded Sand moist, medium dense medium grained sand, refusal due to overlying layer											
		Bottom of test pit at 3.5 feet.											

TEST PIT NUMBER TP8

LACO

CLIENT 1280 N Main, LLC
PROJECT NAME Proposed Development
PROJECT NUMBER 9016.05
PROJECT LOCATION 1280 N Main St, Fort Bragg, CA 95437
DATE STARTED 2/10/22 **COMPLETED** 2/10/22
GROUND ELEVATION _____ **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR LACO Provided Contractor
GROUND WATER LEVELS:
EXCAVATION METHOD Excavator
AT TIME OF EXCAVATION ---
LOGGED BY JRG **CHECKED BY** JNK
AT END OF EXCAVATION ---
NOTES

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	TESTS AND REMARKS	Pocket Penetrometer (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS (%) LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	FINES CONTENT (%)
0.0		(GP) Brown Gravel [Baserock Fill] dry to moist, dense angular to rounded gravel, fine to medium sand											
		(SP) Well Graded Sand [Fill] dry, very dense medium sand, cemented, possibly lime treated, difficulty digging											
2.5		(SP) Light Brown Poorly Graded Sand moist, medium dense medium grained sand, more firm at 3.5 feet bgs, medium roots to 4 feet bgs, collapsing	GB										
5.0			GB										
		(CL) Dark Brown Clay moist, stiff organic smell, minor organic matter, refusal due to hole collapsing/ undercutting fill	GB										

Bottom of test pit at 6.5 feet.

APPENDIX 3

Laboratory Test Results

LACO

FINER THAN #200 SIEVE
ASTM C117/ASTM D-1140

PROJECT	Proposed Development	JOB NO.	9016.00	SHEET	
CLIENT	1280 N Main LLC	SAMPLE ID	231	1 of 1	
LOCATION	Fort Bragg, CA	TEST BY	GF	DATE	2/24/22
		CHECKED BY	GF	CHECK DATE	2/25/22

TP1 @ 2'-3' (SP)

(B)	Net sample (Dry)	362.6	gms
(C)	Dry sample after washing	355.8	gms
	Total Material finer than 200 sieve	6.8	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**1.9%**	

TP5 @ 1'-2' (GP-GC)

(B)	Net sample (Dry)	1926.6	gms
(C)	Dry sample after washing	1720.7	gms
	Total Material finer than 200 sieve	205.9	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**10.7%**	

0

(B)	Net sample (Dry)	0.0	gms
(C)	Dry sample after washing	0.0	gms
	Total Material finer than 200 sieve	0.0	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**#DIV/0!**	

0

(B)	Net sample (Dry)	0.0	gms
(C)	Dry sample after washing	0.0	gms
	Total Material finer than 200 sieve	0.0	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**#DIV/0!**	

0

(B)	Net sample (Dry)	0.0	gms
(C)	Dry sample after washing	0.0	gms
	Total Material finer than 200 sieve	0.0	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**#DIV/0!**	

0

(B)	Net sample (Dry)	0.0	gms
(C)	Dry sample after washing	0.0	gms
	Total Material finer than 200 sieve	0.0	gms
(A)	% Material finer than 200 sieve A=[(B-C)/B]X100	**#DIV/0!**	

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ATTERBERG LIMITS
ASTM D-4318

PROJECT	Proposed Development			JOB NO. 9016.05	SHEET 1 of 1
CLIENT	1280 N Main LLC			SAMPLE ID 231	
SOURCE	TP5 @ 1'-2'	TEST BY	GF	DATE	2/24/22
SOIL TYPE	Dk Brn Gravel W/ Clay & Sand (GP-GC)	CHECKED BY	GF	CHECK DATE	2/25/22

ASTM D4318 ATTERBERG LIMITS

LIQUID LIMIT = ***N/A**
PLASTIC LIMIT = **N/A**
PLASTIC INDEX = **NON PLASTIC**

COMMENTS: Unable to cut groove without tearing or keep from sliding in cup.

* PER ASTM D4318 SECTION 11.4, LIQUID LIMIT COULD NOT BE DETERMINED.

SAMPLE CLASSIFIED AS NON PLASTIC.

LACO

ATTERBERG LIMITS
ASTM D-4318

PROJECT	Proposed Development			JOB NO. 9016.05	SHEET 1 of 1
CLIENT	1280 N Main LLC			SAMPLE ID 231	
SOURCE	TP1 @ 2'-3'	TEST BY	GF	DATE	2/24/22
SOIL TYPE	Brn Sand (SP)	CHECKED BY	GF	CHECK DATE	2/25/22

ASTM D4318 ATTERBERG LIMITS

LIQUID LIMIT = ***N/A**
PLASTIC LIMIT = **N/A**
PLASTIC INDEX = **NON PLASTIC**

COMMENTS: Unable to cut groove without tearing or keep from sliding in cup.

* PER ASTM D4318 SECTION 11.4, LIQUID LIMIT COULD NOT BE DETERMINED.

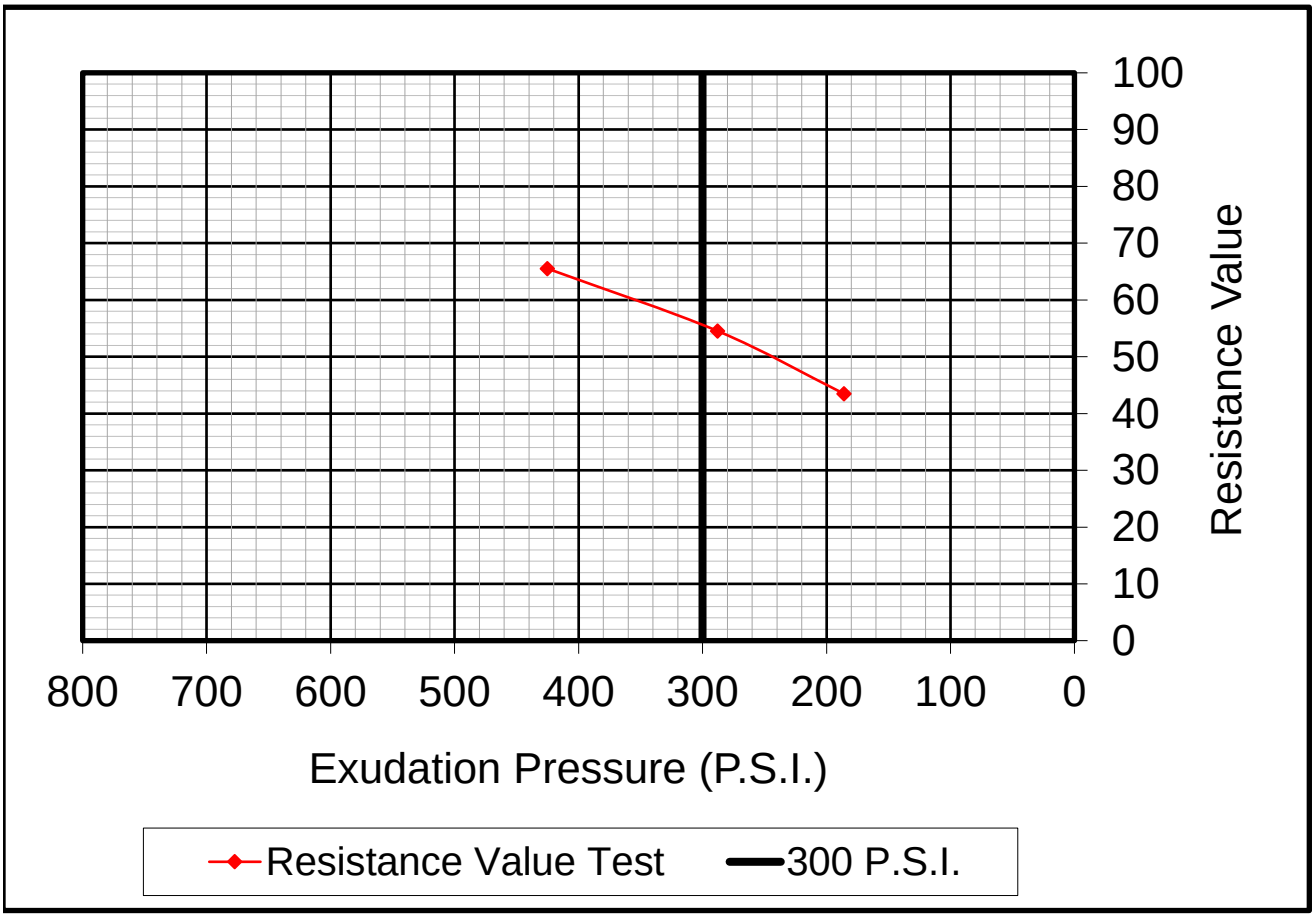
SAMPLE CLASSIFIED AS NON PLASTIC.

Pavement Engineering Inc.
Redding • Sacramento • San Luis Obispo
Concord • Santa Clarita

RESISTANCE (R) VALUE TEST

California Test 301

Laboratory No.: L220271
Project No.: 210169 (LACO Project No.: 9016.05)
Sample Date: February 11, 2022
Report Date: February 28, 2022
Client: LACO Associates
Project Name: 2022 Laboratory Testing (1280 N. Main St. Planning)
Sample Description: Brown Sand
Sample Location: TP-1 @ 1'-2'



Specimen No.	1	2	3
Moisture Content (%)	10.8	9.7	11.4
Dry Density (PCF)	107.1	107.6	106.2
Resistance Value (R)	55	66	43
Exudation Pressure (PSI)	288	425	186
Expansion Pressure	0	0	0
As Received Moisture Content (%)	10.8		

RESISTANCE VALUE AT 300 P.S.I. 56

AASHTO R18

Reviewed By: _____

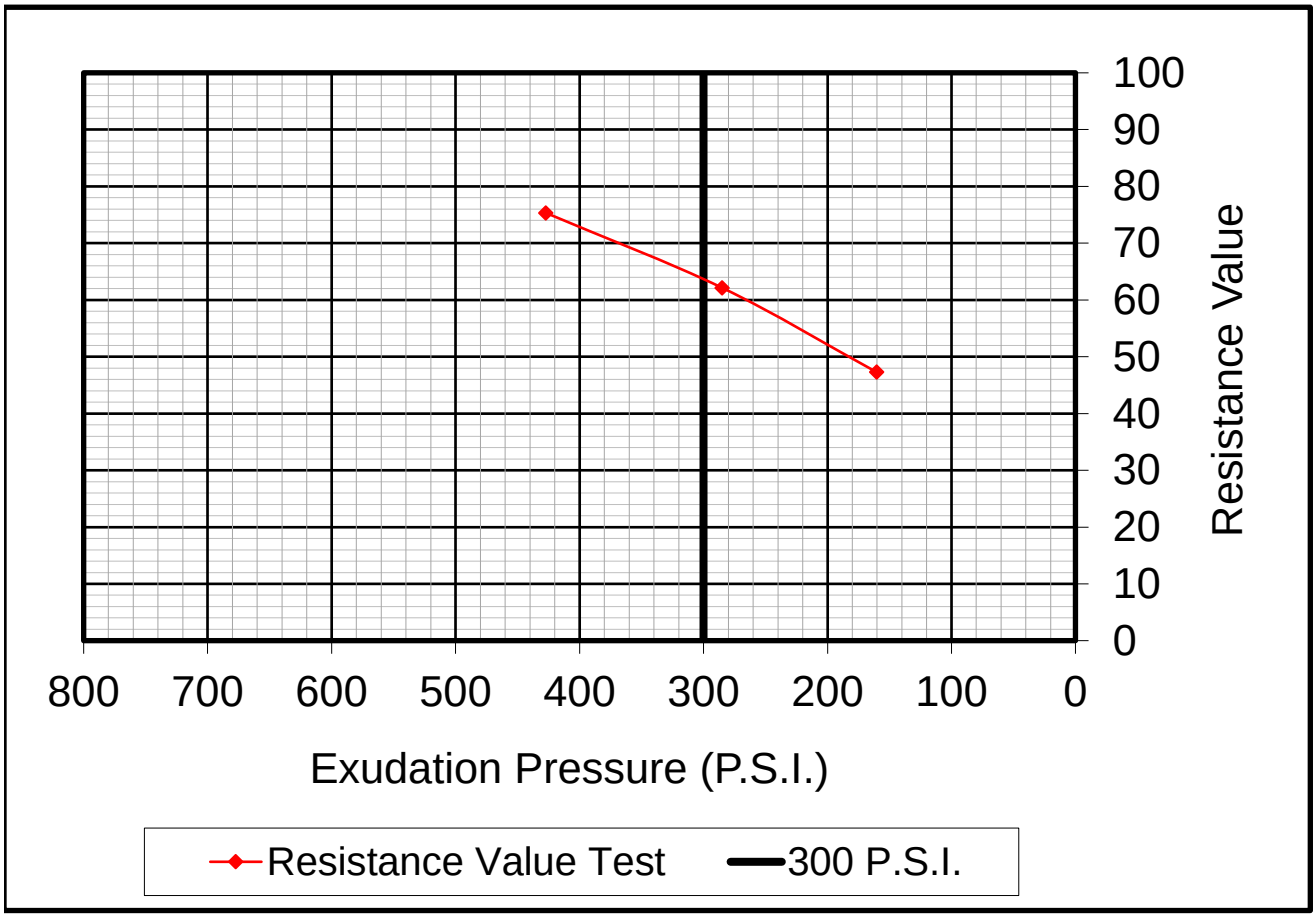
Brandon Rodebaugh
Materials Engineer

Pavement Engineering Inc.
Redding • Sacramento • San Luis Obispo
Concord • Santa Clarita

RESISTANCE (R) VALUE TEST

California Test 301

Laboratory No.: L220271
Project No.: 210169 (LACO Project No.: 9016.05)
Sample Date: February 11, 2022
Report Date: February 28, 2022
Client: LACO Associates
Project Name: 2022 Laboratory Testing (1280 N. Main St. Planning)
Sample Description: Brown Silty Gravel
Sample Location: TP-5 @ 1'-2'



Specimen No.	1	2	3
Moisture Content (%)	7.1	8.0	8.4
Dry Density (PCF)	133.0	133.3	132.3
Resistance Value (R)	75	62	47
Exudation Pressure (PSI)	427	285	160
Expansion Pressure	17	0	0
As Received Moisture Content (%)	7.1		

RESISTANCE VALUE AT 300 P.S.I. 64

AAP® AASHTO R18

Reviewed By: _____

Brandon Rodebaugh
Materials Engineer

LACO

September 21, 2021

9016.05

1280 N. Main, LLC
PO Box 630
Ukiah, California 95482

Attention: Ms. Kristyn Byrne

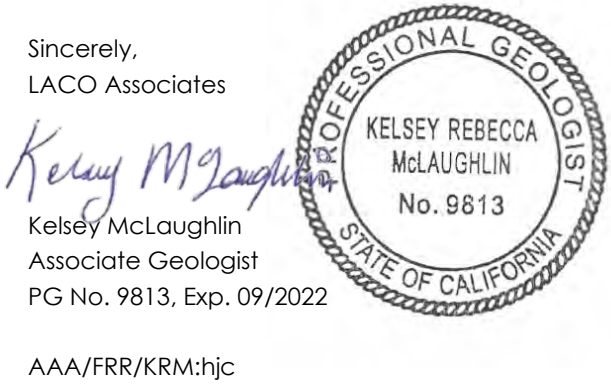
Subject: Phase I Environmental Site Assessment
1280 N. Main Street, Fort Bragg, California
Assessor's Parcel Number 069-231-21

Dear Ms. Byrne:

LACO Associates (LACO) presents the results of a Phase I Environmental Site Assessment (Phase I ESA) prepared for 1280 North Main Street, Fort Bragg, California, that is identified by Assessor's Parcel Number 069-231-21. This Phase I ESA was performed in accordance with the Master Services Agreement for Environmental Geology Services, between 1280 N. Main, LLC (User) and LACO, dated June 18, 2021.

If you have any questions, please contact us at (707) 462-0222.

Sincerely,
LACO Associates



Kelsey McLaughlin
Associate Geologist
PG No. 9813, Exp. 09/2022

AAA/FRR/KRM:hjc

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530 801-6170 – Fax 707 462-0223

Toll Free 800 515-5054 lacoassociates.com

LACO

Phase I Environmental Site Assessment

1280 North Main Street, Fort Bragg, California
Assessor's Parcel Number 069-231-21

September 21, 2021

Prepared for:
1280 N. Main, LLC

Prepared By:
LACO Associates, Inc

1072 North State Street
Ukiah, California 95482
707 462-0222
Project No. 9016.05

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Kelsey McLaughlin
Associate Geologist
PG 9813, Exp. 09/2022

EXECUTIVE SUMMARY

LACO performed a Phase I Environmental Site Assessment (Phase I ESA) of real property identified by Assessor's Parcel Number (APN) 069-231-21, at 1280 North Main Street, Fort Bragg, California (the "Subject Property"). This Phase I ESA was completed in general accordance with the scope and limitations of ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E 1527-13), United States Environmental Protection Agency (US EPA) Standards and Practices for All Appropriate Inquiries (AAI) (40 CFR 312), and the Service Agreement between 1280 N. Main, LLC (Client/User) and LACO, dated June 18, 2021. Our provided recommendations are based on continued commercial/industrial use of the Subject Property.

The results of this Phase I ESA represent an opinion of the environmental condition of the property based on review of aerial photographs and other historical sources; review of information contained in federal, state, and local records; commonly known and specialized knowledge of the Subject Property; interviews of persons knowledgeable about current and past activities on the property and in the vicinity; records from regulatory authorities; observations made during the site visit on August 31, 2021; and our professional experience. Our recommendations are based on continued commercial/ industrial use for the Subject Property.

The purpose of the Phase I ESA is to evaluate whether the Subject Property is impacted by "recognized environmental conditions" (RECs), "historical recognized environmental conditions" (HRECs), "controlled recognized environmental conditions" (CRECs), or a "business environmental risk" (BER). A definition for a REC, HREC, CREC, or BER is provided below. These terms are not intended to include de minimis conditions that generally do not present a threat to human health and/or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government agencies.

This ESA is intended to satisfy one of the requirements of innocent landowner, contiguous property owner, or bona fide prospective purchaser defense limitations on CERCLA liability (hereinafter, the "landowner liability protections," or "LLPs") by constituting "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined at 42 U.S.C. §9601(35) (B).

REC Definition

According to ASTM E 1527-13 section 3.2.78, RECs are the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to release to the environment; 2) under conditions indicative of a release to the environment; or 3) under conditions that pose a material threat of a future release to the environment.

HREC Definition

According to ASTM E 1527-13 section 3.2.42, an HREC is a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.

CREC Definition

According to ASTM E 1527-13 section 3.2.18, a CREC is a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

BER Definition
According to ASTM E 1527-13 section 3.2.11, a BER is a risk that can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice.

Property Description

The Subject Property is located at 1280 North Main Street, inside the city limits of Fort Bragg, California (Figure 1 – Location Map). The legal description of the Subject Property is the grant deed provided in Appendix A. According to information provided by Parcelquest.com, the Subject Property occupies one parcel identified as APN 069-231-21 and is comprised of approximately 6.96 acres (Figure 2). The parcel is roughly trapezoidal in shape with relatively flat topography.

No structures are located on the Subject Property. Properties in the vicinity of the Subject Property comprise commercial and residential properties. There are no known private leach field

The Subject Property is located on the United States Geological Survey (USGS) Topographic Maps, Fort Bragg Quadrangle (7.5-minute series) at Township 19N, Range 17W, Section 31, Humboldt Meridian (Figure 1). Based on Google Earth elevation data, the Subject Property has an elevation of 45 to 65 feet relative to NAVD88. As identified on the APN map included as Figure 2, boundary measurements are as follows:

Address, APN:

Northern Boundary: Approximately 756 feet;
Southern Boundary: Approximately 928 feet;
Eastern Boundary: Approximately 255 feet; and,
Western Boundary: Approximately 483 feet.

Findings

The earliest record for the Subject Property is an aerial photograph from 1942; however, historical topographic records are present as early as 1943. The aerial photography and topographic map show structures are present at the southwest corner of the Subject Property. The structures are present in aerial imagery and maps until circa 1978. In the early 1990s, the Subject Property was developed as a concrete batch plant. In the early 2000s, the batch plant was used to support construction of the Noyo Bridge. Following construction of the Noyo Bridge, the batch plant was disassembled, and the Site has lain vacant. A water well was installed in the 1990s to support the batch plant. Records from the MCDEH indicate that the water well is unpermitted and therefore may present a BER for the User.

Opinion

The decision to classify a condition as a REC, HREC, CREC, or BER was based upon the conclusion that known or suspected hazardous substance or petroleum product releases had occurred at a location, and a reasonable inference could be made that the hazardous substance or petroleum product had impacted soil and/or groundwater quality at greater than de minimis quantities on the Subject Property and is relative to the planned use of the property. REC, HREC, CREC, and BER classifications attributable to hydraulically upgradient off-site sources are based upon hydrologic, geologic, and chemical/material specific factors that when combined lead to the opinion that off-site RECs may negatively impact on-site soil and groundwater conditions. Hydrologic and geologic factors include groundwater depth, flow rate, flow orientation, hydraulic gradient slope, soil hydraulic conductivity, permeability, and organic content. Chemical factors include retardation factors, decay rates, solubility, and diffusion/dispersion.

LACO did not identify a REC, HREC, or CREC for the Subject Property. One BER was identified for the Subject Property associated with a potentially unpermitted water well. Reasoning for classification for the BER is provided with the description of the condition in 4.2.2.

Conclusions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 of the property located at 1280 North Main Street, Fort Bragg, California (APN 069-231-21). Any exceptions to, or deletions from, this practice are described in Section 8.0 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the property, with the exception of the following BER:

Subject Property

The potentially unpermitted well located on the Subject Property may present a BER for the User (section 4.2.2 of this Phase I ESA report).

Recommendations

During the environmental site assessment of the Subject Property, 1 BER was identified. LACO recommends the User contact MCDEH if the proposed well is planned to be used as a water source for the Subject Property.

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1.0 INTRODUCTION

LACO performed a Phase I Environmental Site Assessment (Phase I ESA) of real property identified by Assessor's Parcel Number (APN) 069-231-21 and located at 1280 N. Main Street in Fort Bragg, California (the "Subject Property"). This Phase I ESA was completed in general accordance with the scope and limitations of ASTM *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E 1527-13), United States Environmental Protection Agency (US EPA) *Standards and Practices for All Appropriate Inquiries* (AAI) (40 CFR 312), and the Service Agreement between 120 N. Main, LLC (Client/User) and LACO, dated June 18, 2021. Our provided recommendations are based on continued commercial/industrial use of the Subject Property.

1.1 Purpose

The purpose of the Phase I ESA is to evaluate whether the Subject Property is impacted by "recognized environmental conditions" (RECs), "historical recognized environmental conditions" (HRECs), "controlled recognized environmental conditions" (CRECs), or a "business environmental risk" (BER). A definition for a REC, HREC, CREC, or BER is provided below. These terms are not intended to include *de minimis* conditions that generally do not present a threat to human health and/or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government agencies.

This ESA is intended to satisfy one of the requirements of innocent landowner, contiguous property owner, or bona fide prospective purchaser defense limitations on CERCLA liability (hereinafter, the "landowner liability protections," or "LLPs") by constituting "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined at 42 U.S.C. §9601(35) (B).

1.1.1 REC Definition

According to ASTM E 1527-13 section 3.2.78, RECs are the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: 1) due to release to the environment; 2) under conditions indicative of a release to the environment; or 3) under conditions that pose a material threat of a future release to the environment.

1.1.2 HREC Definition

According to ASTM E 1527-13 section 3.2.42, an HREC is a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.

1.1.3 CREC Definition

According to ASTM E 1527-13 section 3.2.18, a CREC is a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

1.1.4 BER Definition

According to ASTM E 1527-13 section 3.2.11, a BER is a risk that can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice.

1.2 Scope of Services

The scope of services performed was in general accordance with the scope and limitations of ASTM's *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E 1527–13) and included records review, research of historical records, interviews with past and present owners and occupants, interviews with state and/or local government officials, a site reconnaissance, and an analysis of the Subject Property's physical setting.

1.3 Significant Assumptions

The following significant assumptions were made:

- All known and relevant information, knowledge, and experience have been provided by the User.
- The records used in our research are reliable

1.4 User Reliance

This Phase I ESA report documents the results and conclusions regarding the potential for site impairment by hazardous substances generated, used, or stored on the Subject Property and within the immediate vicinity of the Subject Property. This report has been prepared on behalf of the User, 1280 N. Main, LLC (Client). LACO assumes no responsibility with respect to Client's use or use by Client's employees, Client's customers, or other third parties. LACO shall not be liable for any special, consequential, or exemplary damages resulting in whole or in part from the Client's use of the data. This report is valid solely for the purpose, Subject Property, and project described in this document. Any alteration or deviation from this description will invalidate this report.

1.5 Limitations and Exceptions

This Phase I ESA was completed in general accordance with the scope and limitations of ASTM *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E 1527-13) and United States Environmental Protection Agency (US EPA) *Standards and Practices for All Appropriate Inquiries* (AAI) (40 CFR 312), and represents the standard of care equal to the customary practice of other professional consulting firms in the area performing Phase I ESAs.

According to ASTM E 1527-13, no ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of a Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with a property while recognizing reasonable limits of time and cost. All appropriate inquiry does not mean an exhaustive assessment. One of the purposes of ASTM standard practice is "to identify a balance between the competing goals of limiting the costs and time demands inherent in performing an environmental site assessment and the reduction of uncertainty about unknown conditions resulting from additional information."

This report is not an in-depth study of site contamination and should not be interpreted as such. No subsurface explorations of soil or groundwater conditions were performed, and no sampling or chemical analyses of any materials or waters on the Subject Property (for example soil, water, air, building materials) were conducted. Sampling and testing for contamination, subsurface explorations, and cleanup of hazardous materials are not within the scope of this Phase I ESA. This report does not offer any legal opinion, interpretation, or representation of any federal, state, or local environmental law, rule, regulation, or policy.

Information regarding certain contaminants and issues are outside the scope of this assessment, including the following:

- Naturally occurring asbestiform minerals
- Asbestiform minerals in construction materials
- Radon
- Lead-based paint
- Lead in drinking water
- Wetlands delineation
- Regulatory compliance
- Cultural and historical resources
- Industrial hygiene
- Health and Safety
- Ecological resources
- Endangered species
- Indoor air quality
- Biological agents
- Mold
- Geologic hazards
- Geotechnical site conditions
- Environmental Permits

Some information contained in this report has been obtained by LACO from publicly available sources and other secondary sources of information produced by outside entities other than LACO. Although care has been taken to ensure that the information contained in this report is current and accurate, LACO disclaims any and all liability for any errors, omissions, or inaccuracies in information and data produced by such outside entities, whether attributable to inadvertence or otherwise, and for any consequences arising therefrom. LACO makes no representation or warranty of any kind, express or implied, including, but not limited to, the warranties of fitness for a particular purpose or merchantability, with respect to the data furnished.

The required search of public agency records and environmental liens was performed by Environmental Data Resources (EDR), a private firm specializing in research of publicly available environmental records.

The findings presented in this report are based upon research and review of available data, interviews, discussions with local regulatory and advisory agencies, and observations made during site visits at the Subject Property. Observations describe only the conditions present at the time of reconnaissance of the Subject Property and are limited to accessible areas. Additionally, in evaluating the property, LACO has relied in good faith upon the representations and information provided by the individuals or firms noted in the report with respect to present operations and existing property conditions, as well as the historic uses of

the Subject Property. It must also be understood that changing circumstances in the property usage, proposed property usage, and changes in the environmental status of other nearby properties, can alter the validity and conclusions contained in this report. Therefore, the data obtained are clear and accurate only to the degree implied by the sources and methods used.

This report is valid solely for the purpose, Subject Property, and project described in this document. Any alteration or deviation from this description will invalidate this report.

2.0 SITE DESCRIPTION

2.1 Location and Legal Description

The Subject Property is located at 1280 North Main Street, Fort Bragg, California (Figure 1 – Location Map). The legal description of the Subject Property and preliminary title report are included in Appendix A.

According to information provided by Parcelquest.com, the Subject Property occupies approximately 6.96 acres and is identifies as APN 069-231-21. The Subject Property is located on the United States Geological Survey (USGS) Topographic Maps, Fort Bragg Quadrangle (7.5-minute series) at Township 19 North, Range 17 West, Section 31, Mount Diablo Base, and Meridian (Appendix B). The Subject Property is located within the city limits of Fort Bragg and the western extent is located within the California Coastal Zone.

2.2 Current Use of Property

The Subject Property is presently vacant.

2.3 Current Uses of Adjoining Properties

Current uses of adjoining parcels were gathered from visual observations performed during the site reconnaissance on August 31, 2021, and Parcelquest.com. Information from Parcelquest.com is deemed reliable but is not always accurate. Current uses of adjacent properties are as follows:

North: Three parcels are located along the northern boundary of the Subject Property:

- A parcel that is 0.84-acres (APN 069-231-30-01), is identified by address 1290 North Main Street, and is owned by Michael and Maribelle Anderson. The parcel is developed with a truck repair shop.
- A parcel that is 0.95-acres (APN 069-231-35-01), is identified by address 1292 North Main Street, and is owned by Kemppe Liquid Gas Corporation. The parcel developed and a business is present that stores and sales propane.
- A parcel that is 2.3-acres (APN 069-231-34-01), is identified by address 1296 North Main Street, and is owned by Michael and Maribelle Anderson. The parcel is developed with a truck shop and appears to be associated with the logging operation on the eastern adjoining parcel.

East: One parcel is located along the eastern boundary of the Subject Property: a 14-acre parcel (APN 069-231-39-00) that is identified by address 22601 North Highway 1, and is owned by

Michael and Maribelle Anderson. The parcel is developed and is used as a logging operation known as Anderson Logging, Inc. that provides tree falling and trucking services.

South: Two parcels are located along the southern boundary of the Subject Property:

- A parcel that is 4.7-acres (APN 069-231-28-00), is identified by address 1258 North Main Street, and is owned by Ronald Ray. The parcel is developed with self-storage buildings known as the Fort Bragg Mini Storage.
- The second parcel is 1.2-acres (APN 069-231-26-00), is identified by address 1270 North Main Street, and is owned by Ronald Ray. Recreation vehicles are stored on the property that appears to be associated with the Fort Bragg Mini Storage.

West: Highway 1, also identified as North Main Street or Shoreline Highway, adjoins the western property boundary. On the west side of Highway 1/North Main Street are six parcels:

- A parcel that is 0.88-acres (APN 069-232-09-00), is identified by address 1271 North Main Street, and is owned by Russell Perdock. The parcel appears to be developed with a single-family residence.
- A parcel that is 2.4-acres (APN 069-232-08-00), is identified by address 1281 North Main Street, and is owned by Jeanette Colombi. The parcel appears to be undeveloped.
- A parcel that is 0.37-acres (APN 069-232-04-00), is identified by address 22500 North Highway 1 and is owned by Tom and Julee Estes. The parcel appears to be undeveloped.
- A parcel that is 2.6-acres (APN 069-232-07-00), is identified by address 1291 North Main Street, and is owned by RJ Developers. The parcel appears to be undeveloped.
- A parcel that is 2.3-acres (APN 069-232-06-00), is identified by address 1301 North Main Street, and is owned by RJ Developers. The parcel appears to be developed with a single-family residence.
- A parcel that is 1.2-acres (APN 069-231-27-00), is identified by address 1260 North Main Street, and is owned by Ronald Ray. The parcel appears to be developed with a single-family residence.

2.4 Site and Vicinity General Characteristics

The Subject Property is defined by the boundaries of APN 069-231-21 and is trapezoidal in shape (Figure 2). The northern, southern, eastern, and western boundaries are approximately 756, 928, 255, and 483 feet long, respectively. The Subject Property is bound by highway one (also known as North Main Street and the Shoreline Highway) and residential properties to the west, and industrial and commercial properties to the north, south, and east.

The Subject Property is presently vacant and has no structures with the exception of a small shed used to house an electrical panel. The public presently uses the western portion of the property as parking to gain access to coastal trails to the Pacific Ocean. The majority of the property is undeveloped with the exception of an existing cistern well, asphalt paved areas, a gravel driveway along the northern boundary, and remnants of former concrete foundation. Two 2,500-gallon poly water storage tanks are present adjacent to the well. Access to the Subject Property is via Highway 1.

2.5 Physical Setting

The following physical setting sources were utilized:

- Fort Bragg 7.5 Minute Series Quadrangle (USGS, 2018)
- Geologic Map of California – Ukiah Sheet (Jennings and Strand, 1960)
- Flood Insurance Rate Map (FEMA, 2017)
- GeoTracker.waterboards.ca.gov
- Tsunami Inundation Zone (State of California, 2021)

2.5.1 Local Geology and Soils

The Subject Property is in the Coast Ranges geomorphic province of California which comprises primarily of marine deposits and volcanic rock seen in northwest-trending ridges and valleys subparallel to the San Andreas Fault Zone. As mapped by USGS (USGS, 2018), the Subject Property is situated at an elevation between approximately 45 to 65 feet relative to NAVD88. Based on a review of the Subject Property and published geologic maps (Jennings and Strand, 1960), the Subject Property is underlain by Pleistocene marine and marine terrace deposits, and is in proximity to undivided Cretaceous marine deposits. No faults are mapped in the immediate vicinity of the Subject Property.

2.5.2 Local Hydrology and Hydrogeology

The Subject Property is located approximately 0.3 miles east of the Pacific Ocean, and 0.2 miles south of Virgin Creek, a tributary to the Pacific Ocean. Based on local topography and drainage patterns, the inferred direction of local groundwater is northwesterly toward the Pacific Ocean. This is consistent with groundwater monitoring records on GeoTracker for an environmental site known as Eastman Transport, Inc. (California Regional Water Quality Control Board case number 1TMC358) located approximately 180 feet to the southwest of the Subject Property (Hanover Environmental Services, 2009). Based on historical depth to water measurements collected at Eastman Transport, Inc., groundwater may be encountered at depths ranging from 1.3 to 10.3 feet below ground surface at the Subject Property.

2.5.3 Flood Zone

The Subject Property is not mapped within the 100-year FEMA flood zone (FEMA, 2017).

2.5.4 Coastal Zone

The western portion of the Subject Property is located within the California coastal zone (California Coastal Commission, 1977).

2.5.5 Tsunami Inundation Zone

The Subject Property is not mapped within the tsunami inundation zone (State of California, 2021).

3.0 HISTORICAL INFORMATION

3.1 USGS Topographic Maps

Historical topographic maps of the Subject Property and surrounding area were reviewed. EDR's Topographic Map Report is included as Appendix B. The following table summarizes findings of the review:

Table A. Historical Topographic Maps

Map Year	USGS Quadrangle	Minute	Description
1943	Fort Bragg	15	Highway 1 is present in its current alignment. The map indicates that structures are present on the adjoining parcels to the north and west. Agricultural land is depicted on the eastern adjoining parcel. Train tracks are depicted approximately 550 feet west.
1947	Fort Bragg	15	No discernible changes since the previous map.
1960	Fort Bragg	7.5	A structure is depicted on the southwestern corner of the Subject Property. Further development is observed in the surrounding area including a new development labeled "Gas" located approximately 250 feet to the north. This appears to be associated with environmental records for Kemgas located at 1300 North Main Street and will be discussed further in section 4 A road has been constructed along the alignment of the railroad tracks approximately 550 feet to the west. The Fort Bragg airport is mapped approximately 1,600 feet to the northeast.
1978	Fort Bragg	7.5	No discernible changes to the Subject Property or adjoining properties. Further development is depicted in the vicinity.
2012	Fort Bragg	7.5	The topographic map does not contain symbols or information on building structures, only roads, water features, and topography.

3.2 Aerial Photographs

Historical aerial photographs provided by EDR (Appendix C) were reviewed. The following table summarizes findings of the photograph review:

Table B. Historical Aerial Photographs

Date Photo Taken	Photo Scale	Photo Condition	Description
1942	1" = 500'	Fair (black and white)	Subject Property features are not easily discernible. Subject Property appears vacant with the exception of what appears to be a structure near the southwest corner of the Subject Property. The rest of the Subject Property is partially covered in vegetation and sand dunes. A structure that appears residential is located on a western adjoining parcel, and on a southern parcel. A structure of unknown use on the northern adjoining parcel is visible.
1952	1" = 500'	Fair (black and white)	The southwestern corner of the Subject Property appears to have four structures of unknown use.
1964	1" = 500'	Good (black and white)	New residential and commercial developments appear in parcels surrounding the Subject Property.
1974	1" = 500'	Good (color)	Structures and trees appear to have been removed near the western Subject Property boundary.

Date Photo Taken	Photo Scale	Photo Condition	Description
1976	1" = 500'	Fair (black and white)	No discernable changes to the Subject Property.
1983	1" = 500'	Fair (infrared)	A driveway is discernible along the northern Subject Property boundary. New commercial/industrial developments appear adjacent to the Subject Property in their present locations.
1998	1" = 500'	Good (black and white)	Structures likely associated with the concrete bulk plant appear in the eastern area of the Subject Property.
2006	1" = 500'	Fair (color)	No discernable changes to the Subject Property.
2009	1" = 500'	Good (color)	No discernable changes to the Subject Property.
2012	1" = 500'	Good (color)	No discernable changes to the Subject Property.
2016	1" = 500'	Excellent (color)	No discernable changes to the Subject Property.

3.3 Fire Insurance Maps

An EDR search of the Sanborn Library for fire insurance maps covering the Subject Property identified that the Subject Property is unmapped. The Sanborn search certification is included as Appendix D.

3.4 Property Tax Files

EDR's Property Tax Map Report is included as Appendix E.

3.5 Recorded Land Title Records

No environmental liens or activity and use limitations were found for the Subject Property. A copy of the Deed is included in the EDR Environmental Lien and AUL Search report (Appendix A). The report identifies Aleandro Sarti Trustee as the property owner as of 2017. A copy of the preliminary title report is included in Appendix A.

3.6 City Directories

EDR conducted a review of city, cross-reference, and telephone directories at five-year intervals for the Subject Property and nearby properties. A copy of EDR's City Directory Image Report is provided in Appendix F. For the purpose of this Phase I ESA, only listings for the Subject Property, adjoining properties, and properties that have the potential to impact soil and groundwater quality to the Subject Property are listed below:

Subject Property – *1280 North Main Street, Fort Bragg, California*

- Fort Bragg Redi Mix (2000)

Northern Adjoining Parcels – *1290-1296 North Main Street, Fort Bragg, California*

- Fort Bragg Cycle Supplies (2010 to 2017)
- Anderson Logging Inc (2014 to 2017)
- Roach Brothers Incorporated (2000)
- Arts in Redwood (1992 to 1995)

Eastern Adjoining Parcel – *22601 North Highway 1, Fort Bragg, California*

- Frito Lay Inc (2005 to 2017)
- Matson Building Materials (2005 to 2017)
- North Coast Refrigeration & Electric (2010 to 2017)

Southern Adjoining Property – *1258, 1260, 1270 North Main Street, Fort Bragg, California*

- Burkhardt Turbines (1995 to 2000)
- Watercolors by Erin (1992 to 1995)
- Suntools (1992)
- Fort Bragg Mini Warehouse (1992 to present)

3.7 Historical Use Information on Adjoining Properties

Historical use information for adjoining properties was collected from EDR's City Directory Image Report, EDR's Historical Topographic Map Report, EDR Historical Aerial Photo Report, Sanborn Maps, and observations during the Site Reconnaissance. Adjoining properties have a history of agricultural and residential use from the 1940s to the 1950s. Since the 1950s, adjoining properties showed residential and commercial use.

4.0 REGULATORY RECORDS REVIEW

4.1 Standard Environmental Record Sources

A search of federal, state, and tribal environmental records for the Subject Property, and on properties within minimum search distances specified by US EPA AAI regulations and ASTM standards, was compiled by EDR, on July 30, 2021. A copy of the EDR Radius Map Report with GeoCheck is included as Appendix G. The following standard environmental record sources were reviewed using the approximate minimum search distance from the Subject Property as listed in Table C, below.

Table C. Federal, Tribal and State Record Sources

Database Acronym	Database	Agency	Information on Database	Minimum Search Distance (in miles)
AWP	Annual Workplan Sites	Cal EPA (California Environmental Protection Agency)	California Department of Toxic Substances Control (DTSC) workplan hazardous substances sites targeted for cleanup. State or Tribal equivalent to the National Priorities List (NPL).	1
Delisted NPL	Delisted National Priorities List Site List	United States Environmental Protection Agency (US EPA)	Sites deleted from the National Priorities List (NPL)	1

CA FID UST	California Facility Inventory Database for Underground Storage Tanks	Cal EPA	Contains historical listings of active and inactive underground storage tanks from the State Water Resources Control Board.	0.25
Cal-NFE	DTSC Properties Needing Further Evaluation	Cal EPA	Properties where contamination is suspected, but unconfirmed, and requiring further assessment. State or Tribal equivalent to CERCLIS.	0.25
CA SWF/LF	Solid Waste Information System	California Integrated Waste Management Board	California active, closed, and inactive landfills. State/Tribal landfill and/or solid waste disposal.	0.5
CERCLIS and SEMS	Comprehensive Environmental Responsibility Compensation and Liability Information Systems (CERCLIS) and Superfund Enterprise Management System (SEMS)	US EPA	SEMS tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly known as CERCLIS, renamed to SEMS by the EPA in 2015.	0.5
CERCLIS - NFRAP	Comprehensive Environmental Responsibility Compensation and Liability Information Systems – No Further Remedial Action Planned	US EPA	CERCLIS sites where no further remedial action is planned.	0.5
CERS	California Environmental Reporting System	Cal-EPA	Statewide web-based system that supports the electronic exchange of required Unified Program information among businesses, local governments, and the U.S. EPA.	0.125
CERS HAZ WASTE				0.25
CIWQS	California Integrated Water Quality System	State Water Resources Control Board (SWRCB) and Regional Water Quality Control Board (RWQCB)	A computer system used by the SWRCB and RWQCB that tracks information about places of environmental interest, manages permits and orders, inspections, violations, and enforcement activities.	0.001
CORTESE	CORTESE Hazardous Waste & Substances Sites List	Cal EPA and Office of Emergency Information	CORTESE list is designated by the State Water Resources Control Board (SWRCB) LUST, the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).	0.5
CPS-SLIC	Cleanup Program Sites – Spills, Leaks, Investigations, and Cleanups	California Water Boards	Investigations and cleanups of unauthorized discharges	0.5
CUPA, CUPA Lake	Certified Unified Program Agencies	Cal-EPA	The program protects Californians from hazardous waste and hazardous materials by ensuring local regulatory agencies consistently apply statewide standards when they issue permits, conduct inspections, and engage in enforcement activities.	0.25
ECHO	Enforcement & Compliance History Information	US EPA	Information for integrated compliance and enforcement information for regulated facilities throughout the United States. Data is released quarterly.	0.001
ERNS	Emergency Response Notification Systems	US EPA	Reported releases of oil and hazardous substances.	0.001

FEMA UST, UST, AST	Underground Storage Tank Listing (FEMA UST)	FEMA, EPA, SWRCB	Active UST facilities gathered from local regulatory agencies.	0.25
	Active underground storage tank facilities (UST)			
	Above petroleum storage tank facilities (AST)			
FINDS	Facility Index System	US EPA	An inventory of facilities monitored or regulated by the EPA.	0.001
HAZNET	Hazardous Waste Information System	California Department of Toxic Substances Control (DTSC)	Database the records annual hazardous waste shipments, as required by the Resource Conservation and Recovery Act (RCRA).	0.001
HIST CORTESE	Historical CORTESE	DTSC	CORTESE list is designated by the SWRCB LUST, the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). HIST CORTESE listings are no longer updated by the state agency.	0.5
HIST UST	Historical UST Registered Database	Local Agency, County, SWRCB	Historical listings of UST sites.	0.25
HWTS	Hazardous Waste Tracking System	California DTSC	Data repository for hazardous waste manifest and identification information. System active from 1993 to present.	0.001
Indian LUST	Leaking Underground Storage Tanks (LUST) on Indian Land	US EPA	LUST facilities on Indian land in California.	0.5
Indian UST	Underground Storage Tanks on Indian Land	US EPA	UST facilities on Indian land in California.	0.25
LUST	Leaking Underground Storage Tanks List	SWRCB	LUST sites included in GeoTracker.	0.5
NPDES	National Pollutant Discharge Elimination System	SWRCB	A permit program that addresses water pollution by regulating point sources that discharge pollutants to waters of the United States.	0.001
NPL	National Priorities List	US EPA	Federal Superfund sites	1
RCRA CORRACTS	Resource Conservation and Recovery Act	US EPA	Hazardous waste handlers with corrective action activity under RCRA.	1
RCRIS	Resource Conservation and Recovery Information System	US EPA	Sites which generate, store, treat, and/or dispose hazardous waste as defined under RCRA.	0.25
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank	SWRCB	Historical database for LUST sites.	0.001
SWEEP UST	Statewide Environmental Evaluation and Planning System	Local Agency	Private company that is no longer updated or maintained that was contacted by the SWRCB in the early 1990s.	0.25
US Eng Controls	Engineering Controls Site List	US EPA	List of sites with engineering controls in place.	0.5
US Inst Controls	Institutional Controls Site List	US EPA	List of sites with institutional controls in place.	0.5
US Brownfields	Brownfields Site List	US EPA	Listing of Brownfields properties.	0.5

VCP	Voluntary Cleanup Program Properties	Cal-EPA	Low-level threat properties where project proponents have requested DTSC involvement.	0.5
WDS	Waste Discharge System	SWRCB	Facilities that have been issued requirements for waste discharge. Data is released quarterly.	0.001

These databases identify minimum environmental records searched. LACO has also reviewed the results of over 30 additional databases identified by EDR (Appendix G). Information received from EDR was checked by LACO for accuracy of location and geographic relationship to the Subject Property. See pages 5 through 9 of the EDR report Executive Summary (Appendix G) for a list of all acronyms and associated descriptions.

4.1.1 Record Listings for the Subject Property

In searching the federal, state, and local regulatory agency databases, EDR identified 22 records within the search radius, specified by ASTM and AAI standards, of the Subject Property. Of the 22 records identified by EDR, one is for the Subject Property. Table D, below, presents a listing of the records listed by EDR for the Subject Property. For specific reports on the site listed in Table D, refer to the EDR Radius Map with GeoCheck Report included as Appendix G.

Table D. List of EDR Environmental Records for the Subject Property

Record / Facility Name	Address	Database
Granite Construction: Fort Bragg Facility	1280 North Main Street, Fort Bragg, California	NPDES, CIWQS

The database listings for the Subject Property are associated with industrial stormwater permits for the ready-mix concrete facility in 2006. No violations are indicated in the records for the database listings provided by EDR. Therefore, the database records associated with the Subject Property are not considered RECs.

4.1.2 Relevant Record Listings for Surrounding Properties

In searching the federal, state, and local regulatory agency databases, EDR identified 21 records for facilities within the search radius, specified by ASTM and AAI standards, of the Subject Property. Sites interpreted to present no risk to the soil and groundwater quality of the Subject Property are not addressed in this report. A summary of the listings is provided below in Table E and, if bold, is discussed further below. Table E provides the record listing, record address, the database in which the record is listed, and the current regulatory status of the listed record, if known. For specific reports on the sites listed in Table E, refer to the EDR Radius Map with GeoCheck Report included as Appendix G.

Table E. List of EDR Environmental Records within One-Mile Search Radius

Record Number	Facility Name	Address	Database(s)
1	**ANDERSON LOGGING INC.**	1296 N MAIN ST	CERS HAZ WASTE,HIST UST,CERS TANKS,NPDES,WDS,CIWQS,CERS
2			AST
3			RCRA NONGEN / NLR
4	KEMGAS	1300 N MAIN ST	RCRA NONGEN / NLR
5			AST

6			CERS HAZ WASTE,CERS TANKS,CERS
7	COMCAST - FORT BRAGG FFO	1260 NORTH MAIN STREET	RCRA-SQG
8	SUPERIOR PUMP & DRILLING INC	1251 N MAIN ST	RCRA NONGEN / NLR
9	EASTMAN TRANSPORT INC		HWTS,LUST,SWEEPS UST,HIST UST,CA FID UST
10	ROACH BROTHERS INC		AST
11	EASTMAN TRANSPORT, INC.		HIST UST
12	EASTMAN TRANSPORTING		LUST,CORTESE,HIST CORTESE,CERS
13	FORT BRAGG GUN CLUB	HWY 1	ENVIROSTOR,VCP
14	ORCA TOWING	1230 NORTH MAIN ST.	HWTS,CERS HAZ WASTE,HAZNET,CERS
15	ER CURTI INC	1230 N MAIN ST STE C	RCRA NONGEN / NLR
16	ORCA TOWING	1230 NORTH MAIN ST.	RCRA NONGEN / NLR
17	ROUSSIN, SHARON	22800 HIGHWAY 1, NORTH	LUST
18	ROUSSIN, SHARON		LUST,CORTESE,HIST CORTESE,CERS
19	FORT BRAGG GUN CLUB (FORMER)	22689 HIGHWAY 1, NORTH	CPS-SLIC,CERS
20	BAXMAN GRAVEL COMPANY	1221 MAIN STREET, NORTH	CPS-SLIC,CERS
21	GEO AGGREGATES	no address listed	US MINES

Records 1 through 3: Anderson Logging, Inc., 1296 North Main Street (Northern Adjoining Parcel)

Records indicate a history of fuel use and hazardous and non-hazardous waste generation. Of the database records reviewed, the following are of concern:

- A permit dated 1988 indicates that underground storage tanks containing 3,000 gallons of diesel and 2,800 gallons of regular gasoline are present that may not have been removed.
- Records indicate that the site services buses and stores waste oil indoors; however, the regulatory agency notes excellent housekeeping and no signs of leaks or stressed wildlife or vegetation.
- Record for an above-ground storage tank containing 54,305 gallons. No information is identified for the record with the exception of the volume of the tank.

The above records show a history of fuel use on the property in large quantities; however, because the interpreted groundwater flow direction is to the northwest, this facility is located inferred down-gradient from the Subject Property and therefore is interpreted to not likely impair groundwater quality. Additionally, based on visual observation during the site reconnaissance, the Subject Property is approximately 3 to 5 feet higher in elevation and separated by a berm. Therefore, due to the inferred groundwater flow direction, and the vertical separation between the Subject Property and Anderson Logging, the property located at 1296 North Main Street is not considered a REC for the Subject Property.

4.1.3 Orphan Sites

An orphan site is a listing with an undefined location. Typically, orphan sites result from poor address controls and are often duplicated in record searches. EDR identified three orphan sites during the standard environmental records search; these listings were reviewed by LACO for location and relevance or risk to the Subject Property. Of the orphaned sites, none are located within the distance specified by ASTM standard practice for review. Orphan sites are listed in the EDR Radius Map with GeoCheck Report included as Appendix G.

4.1.4 Vapor Encroachment Conditions

The risk for vapor intrusion caused by releases of hazardous substances into subsurface soil or groundwater was evaluated using EDR's VEC online application. The input criteria for the vapor screen included an assumed regional groundwater flow direction toward the northwest, based on topography and the locations of surface water bodies in the vicinity. Note that this screening does not account for any potential hazardous vapor conditions sourced at the Subject Property. EDR's Vapor Encroachment Screen is included as Appendix H. The vapor screen for the Subject Property did not identify a potential REC for the Subject Property.

4.2 Additional Environmental Information Sources

4.2.1 EDR Environmental Lien Report

LACO obtained an EDR Environmental LienSearch Report for the Subject Property (Appendix A). The report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls. EDR's Environmental Lien and AUL Search Report did not reveal any environmental liens or activity and use limitations (AULs).

4.2.2 Mendocino County Division of Environmental Health

On August 3, 2021, Ms. Fiona Roper of LACO electronically submitted a public records request to the Mendocino County Division of Environmental Health (MCDEH) public records request portal for records regarding the Subject Property and adjoining parcels. On August 20, 2021, the respondent emailed files pertaining to the Subject Property and the adjoining parcels at 1258, 1296, and 1300 North Main Street. No records were found for the adjoining parcels 1290 and 1292 North Main Street. The MCDEH files are included in Appendix I.

Subject Property – 1280 North Main Street

Three files pertaining to the Subject Property were located: an application for building permit; a memorandum for temporary use of a portable toilet during construction of the Noyo Bridge in 2002 that includes a hand-drawn site map from Rosenthal Construction for a portable Redimix batch plant; and, an expired water well permit from 1995.

The expired well permit may permit present a BER for the User as an existing well was observed during the site reconnaissance. Since the well permit is expired, the well may be unpermitted. Since the well may be unpermitted, and the construction methodology unknown since a well completion report is not available, the well may not be constructed to required standards. The well could be required to be properly abandoned by the MCDEH or state.

Southern Adjoining Parcel - 1258 North Main Street

The files obtained for the 1258 North Main Street parcel included correspondence and permit applications for a recirculating sand filter wastewater disposal system. The wastewater disposal system serves the North of Town Industrial Park and had failing conditions due the use of soap from a kitchen named Jams and Jellies in the park. There was no indication of potential impact of this wastewater disposal system on the Subject Property.

Northern Adjoining Parcel - 1296 North Main Street

The files obtained for the 1296 North Main Street parcel included a well completion report, well permit, an individual sewage disposal permit and correspondence regarding soil test data for the system's installation, a site map, and a building permit for a metal storage unit. The records show the following conditions existing on the property:

- Two truck barns located adjacent to the property line with the Subject Property that includes a 1,200-gallon diesel tank approximately 50 to 75 feet northwest of the Subject Property;
- Above ground storage tanks consisting of a 5,000-gallon unleaded gasoline tank and 5,000-gallon diesel tank location approximately 200 feet northwest of the Subject Property;
- A 10,000-gallon diesel above ground storage tank, solvent tank, drain oil tank, welding tank, and hydraulic motor oil at a location approximately 300 feet northwest of the Subject Property; and,
- and a shop building on the property.

Due to the inferred groundwater direction to the northwest, the chain-link fence between the Subject Property and northern adjoining parcel that prevents the use of the Subject Property as an access road, and that the visual observation during the site reconnaissance that the Subject Property is 3 to 5 feet higher in elevation than the northern adjoining parcel due to a berm/terrace, the northern adjoining parcel is not considered a REC for the Subject Property.

200 feet North to Northwest of Subject Property - 1300 North Main Street

The files obtained for the 1300 North Main Street parcel included a map of the Kemgas Kemppe Liquid Gas facility, a building permit application for installation of a 2,000-gallon diesel fuel tank, a request for comments for installation of a 30,000-gallon propane storage tank, building schematics for the facility, and files regarding the facility's individual sewage disposal system. The parcel is located inferred downgradient from the Subject Property and therefore is not considered a REC for the Subject Property.

4.2.3 Fort Bragg Fire Department

On August 3, 2021, Ms. Fiona Roper of LACO contacted Fort Bragg Fire department via email to inquire of any records regarding the Subject Property. To date, no response has been received and is considered a data gap.

4.2.4 Mendocino County Air Quality Management District

On August 3, 2021, Ms. Fiona Roper of LACO filed a request for public records to inquire if any records exist for the Subject Property. On August 8, 2021, Ms. Geneva Beaman responded by email that no records exist for the addresses provided. A certificate of no records is included in Appendix J.

4.2.5 North Coast Regional Water Quality Control Board

On August 3, 2021, Ms. Fiona Roper of LACO contacted the North Coast Regional Water Quality Control Board via email to inquire whether any records exist for the Subject Property and adjoining properties that were not available on the GeoTracker website. On August 3, 2021, Ms. Heidi Bauer responded that there are no records for the Subject Property in their files and on GeoTracker.

4.2.6 State of California Department of Toxic Substances Control

On August 3, 2021, Ms. Fiona Roper of LACO contacted the State of California Department of Toxic Substances Control (DTSC) about any enforcement actions associated with the Subject Property and

adjoining properties. Choua Her, the regional records coordinator, responded on August 4, 2021, that they had no information pertaining to the Subject Property.

4.2.7 Fort Bragg City Building Department

On August 33, 2021, Ms. Kelsey McLaughlin reviewed the files for the Subject Property and the 1280 North Main Street at the Fort Bragg Building Department. Reviewed records did not indicate a potential REC for the Subject Property. Records were in regards to the concrete batch plant that formerly occupied the Subject Property. EDR reported a building permit filed in 2002 for a batch plant on the Subject Property. A copy of the EDR Building Permit Report, which shows the results of a search of building department records for indications of environmental conditions, is attached as Appendix K.

5.0 USER-PROVIDED INFORMATION

5.1 Results of Title Records Search for Environmental Liens or Activity and Use Limitation

No environmental liens or activity use limitations (AULs) have been reported to the environmental professional by the User.

5.2 Specialized Knowledge or Experience of the User

No relevant specialized knowledge regarding the Subject Property was reported to the environmental professional by the User.

5.3 Actual Knowledge of the User

The User of the Phase I ESA reported that a concrete plant and construction storage yard were previously located at the Subject Property. Additional review indicates that the concrete plant and construction storage mentioned by the User was Granite Construction Company that has since been closed. The User also indicated that an adjoining property (north) was used as a truck stop that stored gasoline.

5.4 Commonly Known or Reasonably Ascertainable Information

It is commonly known and therefore reasonably ascertainable that the Subject Properties have been previously used for mixed commercial use. This understanding is based on information gained through the interview process, review of historical site documents and reports, and aerial photograph interpretation.

5.5 Reason for Significantly Lower Purchase Price

This section is not applicable as the reason for conducting this Phase I ESA is not related to a sale of the Subject Property.

5.6 Owner, Property Manager, and Occupant Information

The User indicated that the Subject Property is currently owned by Aleandro Sarti.

5.7 Reason for Performing Phase 1

The Client contracted this Phase 1 ESA to provide an assessment of the environmental condition of the Subject Property as part of a regulatory transaction.

5.8 Previous Report(s)

The Owner indicated that a previous Environmental Assessment had been performed on the Subject Property but did not provide a copy of the report. However, the owner may be referring to a floristic survey performed in December of 2007 (Nelson, 2007).

6.0 INTERVIEWS

Interviews consist of completing an ASTM E 1527-13 User Questionnaire and/or the ASTM E 1528-13 Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process questionnaire (specialized knowledge questionnaire). The owner completed the specialized knowledge questionnaire and a copy is provided in Appendix L. The User of this Phase I ESA has not provided a user questionnaire as of the filing date of this report. The lack of the user questionnaire is a data gap.

6.1 Interview with Owner

Mr. Roger Fenderson, the controller for the current owner, completed the specialized knowledge questionnaire on July 21, 2021. The owner identified that electric services for the Subject Property are provided by Pacific Gas and Electric, but did not identify if drinking water or septic is present. The owner is aware of previous Environmental Assessment performed on the Subject Property but did not provide a copy of the report. The owner may be referring to a floristic survey performed in December of 2007 by Playalina Nelson (Nelson, 2007).

The owner is aware that past uses of the Subject Property consist of a concrete plant and construction storage yard, and that an adjoining property is used as a truck shop.

7.0 SITE RECONNAISSANCE

A site visit was conducted by Ms. Kelsey McLaughlin on August 31, 2021. The property was reconnoitered using a visual survey of the areas accessible by vehicle and foot. Adjacent properties were viewed through fences from the Subject Property. Site photographs are included with this report as Appendix M.

7.1 General Site Setting

The Subject Property is located in the coastal area within the city limits of Fort Bragg. Highway 1, also identified as North Main Street, adjoins the western boundary of the Subject Property. The western portion of the Subject Property is used as parking by the public to access beaches along the Pacific Ocean. The Subject Property is vacant and the central portion is partially vegetated and partially covered in sand dunes. The immediate surrounding area appears to have a low-density development, with residential properties to the west, and commercial and industrial properties to the north, east, and south. Topography is generally flat-lying, with the exception of some berms and sand dunes throughout the Subject Property.

7.2 Description of Structures, Roads, and Other Improvements

7.2.1 Structures

No structures exist on the Subject Property with the exception of a small shed that houses the electrical panel.

7.2.2 Roads

Access to the Subject Property is via a paved driveway accessed off of highway 1 / north main street.

7.2.3 Drainage

No drain inlets were observed; however, stormwater is anticipated to drain via sheet flow to the west towards the Pacific Ocean. Precipitation is anticipated to infiltrate the ground surface in unpaved locations.

7.2.4 Security

A chain-link fence is located along the eastern, southern, and a portion of the northern boundaries. Additionally, a gate consisting of a chain with a lock is present on the driveway of the Subject Property that prevents access to the former concrete bulk plant area by vehicle. No other security services are known to exist or were reported to LACO by the User in the specialized knowledge questionnaire.

7.2.5 Heating/Cooling System

No structures, with the exception of a small shed, are present on Subject Property. Current or evidence of former heating or cooling systems were not seen during the site reconnaissance.

7.2.6 Sewage Disposal

It is unknown if a historical septic system exists on the Subject Property and evidence of one was not observed during the site reconnaissance. Review of public building records identified that porta-potties were historically used to serve the temporary bulk plant during construction of the Noyo Bridge (Appendix I). The owner questionnaire did not identify what septic services supply the Subject Property (Appendix L).

7.2.7 Potable Water Source

A private well provides water for the Subject Property and its location is shown on Figure 3. It is unknown if the well is of potable water quality.

7.3 Site Observations

A summary of features visually observed during the site reconnaissance on August 31, 2021, is provided in Table F below.

Table F. Summary of Site Reconnaissance

Feature	Observed	Not Observed
Existing Structures (shed)	X	
Evidence of Past Uses (Bulk Plant)	X	
Hazardous Substances and/or petroleum products (containers)		X
Aboveground Storage Tanks (AST's)		X
Underground Storage Tanks (UST's) or evidence of UST's		X
Strong, pungent, or noxious orders		X
Pools of liquid likely to be hazardous or petroleum materials		X
Drums		X
Unidentified substance containers		X
Potential polychlorinated biphenyl (PCB) containing equipment		X
Subsurface hydraulic equipment		X
Stains on floor, walls, or ceilings		X
Floor drains and sumps		X
Pits, ponds, or lagoons		X
Stained soil or pavement		X
Stressed Vegetation		X
Waste or wastewater discharges to surface or surface waters		X
Wells	X	
Septic Systems		X

7.3.1 Exterior Observations

The following general and specific exterior observations were made by Ms. Kelsey McLaughlin during the site reconnaissance on August 31, 2021 (Appendix M):

- Two poly water storage tanks are located adjacent to a private cistern well. The well was covered with a concrete lid.
- The eastern portions of the Subject Property had concrete and asphalt paving, and former foundations, that are associated with the former concrete batch plant.
- A small shed that houses the electric panel is located on the northern boundary.
- Trash piles were observed on the eastern portion of the Subject Property; however, the piles were small in size, and hazardous substances that could impair soil or groundwater quality were not noticed in them.
- Berms varying 3 to 10 feet in height are present on the eastern and central portions.

- The eastern portion of the Subject Property is accessed by a gravel driveway along the northern boundary. A gate consisting of a chain with a lock is present on the driveway to deter people from driving to the eastern portion of the Subject Property.
- Chain-link fences are present along the southern, eastern, and portion of the northern boundary.
- The central portion of the Subject Property appears to be undeveloped and is partially vegetated and partially covered in sand dunes.
- The western portion of the Subject Property is used as parking by the public to access coastal trails that extend to the Pacific Ocean.
- Other unpaved access roads were observed throughout the property.

8.0 DEVIATIONS

8.1 Data Gaps

AAI Section 312.20(g) states that

> To the extent there are data gaps ... that affect the ability of persons conducting all appropriate inquiries to identify conditions indicative of releases or threatened releases in each area of inquiry under each standard and practice, such persons should identify such data gaps, identify the sources of information consulted to address such data gaps, and comment upon the significance of such data gaps with regard to the ability to identify conditions indicative of releases or threatened releases of hazardous substances, pollutants, contaminants, petroleum and petroleum products, and controlled substances.

The following information was not readily available:

- Records for the Subject Property were not received from the Fort Bragg Fire Department.
- Records for the Subject Property were not received from the Fort Bragg Building Department.
- City directory information for the Subject Property prior to 1992.
- Site use prior to 1942.
- A user questionnaire was not completed by the User of this Phase I ESA.
- The use of the former building(s) located on the southwest corner of the Subject Property that is visible in aerial imagery from 1942 to 1964.

8.2 Exceptions or Deletions

There were no exceptions to, or deletions from, ASTM Practice E 1527-13.

9.0 ADDITIONAL SERVICES

LACO completed this report for our Client as a component of a broader scope of work related to the entitlement of the Subject Property.

10.0 FINDINGS

The earliest record for the Subject Property is an aerial photograph from 1942; however, historical topographic records are present as early as 1943. The aerial photography and topographic map show

structures are present at the southwest corner of the Subject Property. The structures are present in aerial imagery and maps until circa 1978. In the early 1990s, the Subject Property was developed as a concrete batch plant. In the early 2000s, the batch plant was used to support construction of the Noyo Bridge. Following construction of the Noyo Bridge, the batch plant was disassembled, and the Site has lain vacant. A water well was installed in the 1990s to support the batch plant. Records from the MCDEH indicate that the water well is unpermitted and therefore may present a BER for the User.

11.0 OPINION

The decision to classify a condition as a REC, HREC, CREC, or BER was based upon the conclusion that known or suspected hazardous substance or petroleum product releases had occurred at a location, and a reasonable inference could be made that the hazardous substance or petroleum product had impacted soil and/or groundwater quality at greater than de minimis quantities on the Subject Property and is relative to the planned use of the property. REC, HREC, CREC, and BER classifications attributable to hydraulically upgradient off-site sources are based upon hydrologic, geologic, and chemical/material specific factors that when combined lead to the opinion that off-site RECs may negatively impact on-site soil and groundwater conditions. Hydrologic and geologic factors include groundwater depth, flow rate, flow orientation, hydraulic gradient slope, soil hydraulic conductivity, permeability, and organic content. Chemical factors include retardation factors, decay rates, solubility, and diffusion/dispersion.

LACO did not identify a REC, HREC, or CREC for the Subject Property. One BER was identified for the Subject Property associated with a potentially unpermitted water well. Reasoning for classification for the BER is provided with the description of the condition in 4.2.2.

12.0 CONCLUSIONS

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 of the property located at 1280 N. Main Street, Fort Bragg, California (APN 069-231-21). Any exceptions to, or deletions from, this practice are described in Section 8.0 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the property, with the exception of the following BER:

Subject Property

- The potentially unpermitted well located on the Subject Property may present a BER for the User (section 4.2.2).

13.0 RECOMMENDATIONS

During the environmental site assessment of the Subject Property, 1 BER was identified. LACO recommends the User contact MCDEH if the proposed well is planned to be used as the water source for the Subject Property.

14.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312. I have the specific qualifications based on education,

training, and experience to assess a property of the nature, history, and setting of the Subject Property. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

The work and content of this Phase I ESA were conducted in accordance with ASTM E 1527-13 and generally accepted industry standards for environmental due diligence in place at the time of this report.

Kelsey McLaughlin
Associates Geologist
PG No. 9813; Exp. 09/2022

Qualifications of environmental professional is included as Appendix N.

15.0 REFERENCES

ASTM International, ASTM E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

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Environmental Data Resources, Inc. Building Permit Report, July 30, 2021; Inquiry Number 6600273.8

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Environmental Data Resources, Inc. City Directory Image Report, August 2, 2021; Inquiry Number 6600273.5

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Environmental Data Resources, Inc. Historical Topographic Map Report, July 30, 2021; Inquiry Number 6600273.4

Environmental Data Resources, Inc. Property Tax Map Report, July 30, 2021; Inquiry Number 6600273.6

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Federal Emergency Management Agency (FEMA), 2007. Flood Insurance Rate Map Panel, Mendocino County Unincorporated Areas, Map Number 06045C1010G, effective date June 2, 2011.

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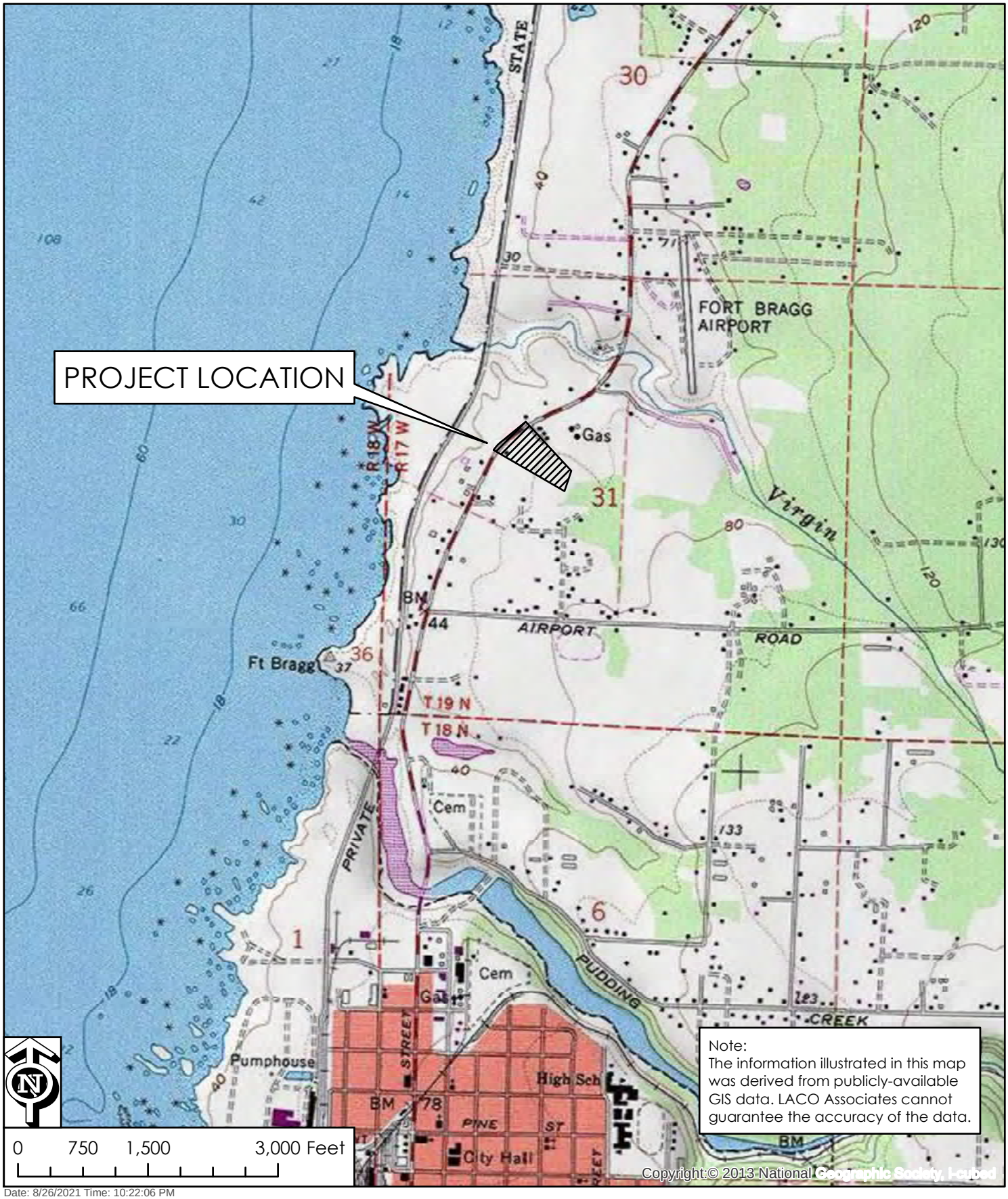
United States Environmental Protection Agency, 40 CFR Part 312 - Standards for Conducting All Appropriate Inquiries, Final Rule, November 2005.

P:\9000\9016 Yulupa Investments, LLC\9016.05 1280 N Main St Fort Bragg Planning Services\08 Geology\Phase I ESA\9016.05 1280 N Main Street Phase I ESA.docx

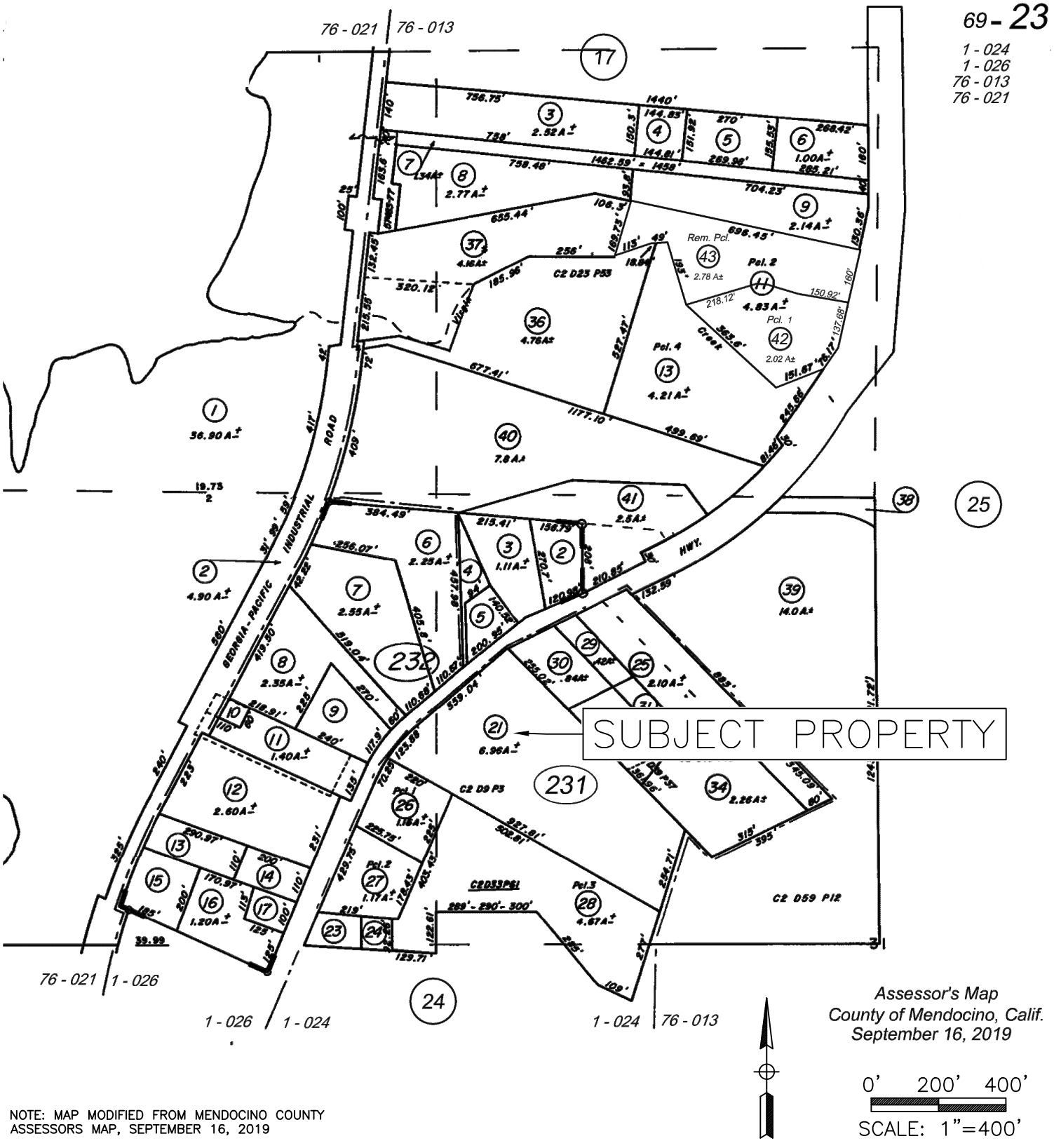
FIGURES

LACO ASSOCIATES			
EUREKA • UKIAH • SANTA ROSA 1-800-515-5054 www.lacoassociates.com	PROJECT: 1280 N. MAIN, LLC: PHASE I ESA	BY: CRP	FIGURE: 1
	CLIENT: 1280 N. MAIN, LLC	CHECK: RD/KD	
	LOCATION: 1280 N. MAIN ST. FORT BRAGG, CA	DATE: 6/23/2021	JOB NO.: 9016.05
	LOCATION MAP		



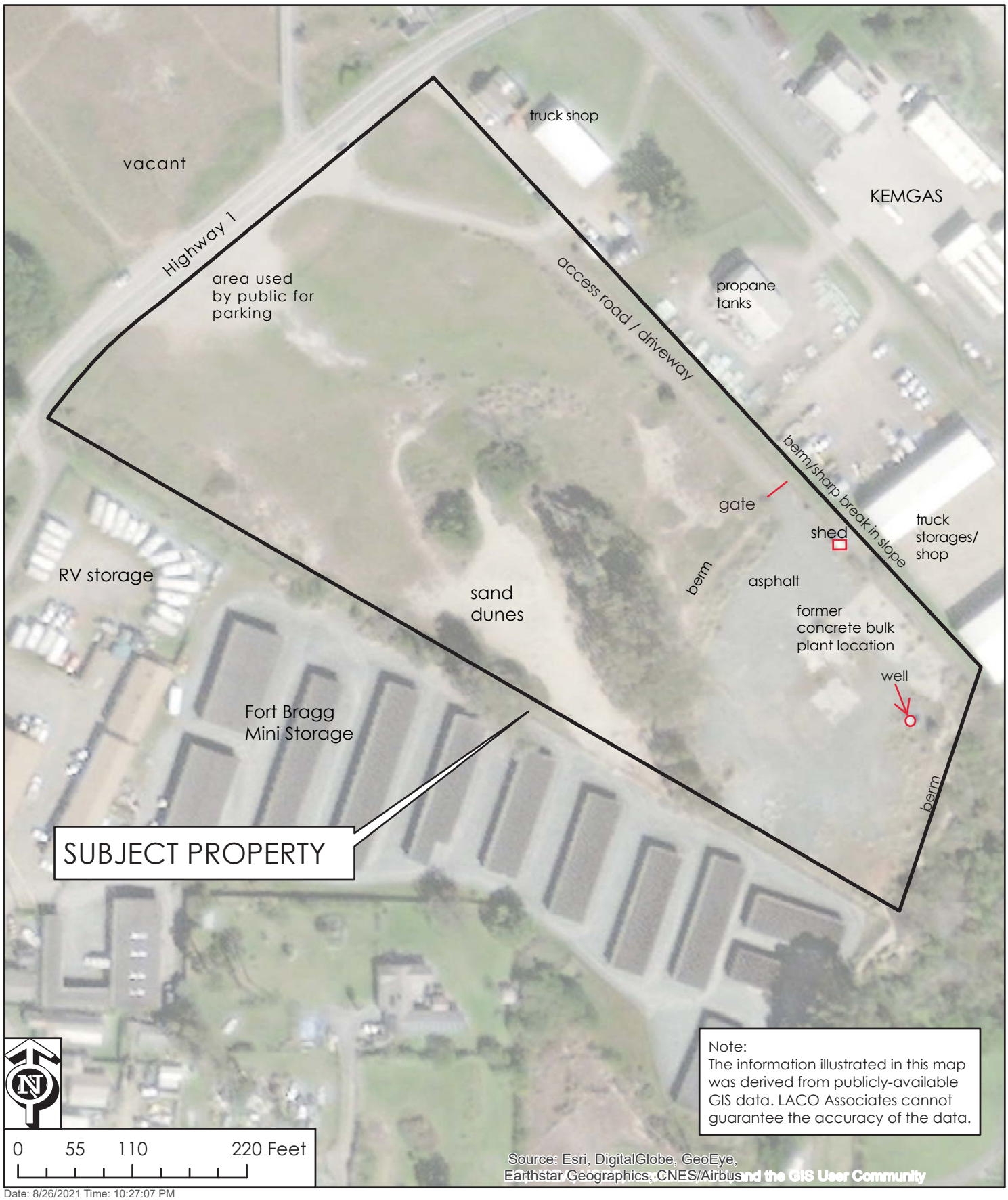
Date: 8/26/2021 Time: 10:22:06 PM
Path: P:\9000\9016 Yulupa Investments, LLC\9016.05 1280 N Main St Fort Bragg Planning Services\12 Figures_Maps\GIS\Figure 1 - Location (modified AAA).mxd

LACO EUREKA • UKIAH • SANTA ROSA 1-800-515-5054 www.lacoassociates.com	PROJECT	1280 N. MAIN: PHASE I ESA	BY	AAA	FIGURE
	CLIENT	1280 N. MAIN, LLC	DATE	8/25/2021	2
	LOCATION	1280 N. MAIN STREET, FORT BRAGG, CA	CHECK	KRM	JOB NO.
		PARCEL MAP	SCALE	AS SHOWN	9016.05



NOTE: MAP MODIFIED FROM MENDOCINO COUNTY ASSESSORS MAP, SEPTEMBER 16, 2019

LACO	PROJECT	1280 N. MAIN, LLC: PHASE I ESA	BY	CRP	FIGURE
EUREKA • UKIAH • SANTA ROSA	CLIENT	1280 N. MAIN, LLC	CHECK	RD/KD	3
1-800-515-5054 www.lacoassociates.com	LOCATION	1280 N. MAIN ST. FORT BRAGG, CA	DATE	6/24/2021	JOB NO. 9016.05
		EXISTING CONDITIONS SITE MAP			



Note:
The information illustrated in this map was derived from publicly-available GIS data. LACO Associates cannot guarantee the accuracy of the data.

Date: 8/26/2021 Time: 10:27:07 PM
Path: P:\9000\9016 Yulupa Investments, LLC\9016.05 1280 N Main St Fort Bragg Planning Services\12 Figures_Maps\GIS\Figure 2 - Existing Cond. (modified AAA).mxd

LAWRENCE
& ASSOCIATES
ENGINEERS & GEOLOGISTS

022047.00

STORMWATER CONTROL PLAN AND

NO DISCHARGE TECHNICAL REPORT

FOR

DIRECT TRANSFER FACILITY

1280 NORTH MAIN STREET

FORT BRAGG, CALIFORNIA

August 24, 2022, revised September 1, 2022

Prepared For:

C&S Waste Solutions
3515 Taylor Drive
Ukiah, CA 95482

Table of Contents

INTRODUCTION

At the request of C&S Waste Solutions (Client or Owner), Lawrence & Associates (L&A) has prepared this Stormwater Control Plan and No Discharge Technical Report (SCP or Report), which describes the adequacy of stormwater containment to meet the criteria for the Notice of Non-Applicability (NONA) under the State of California General Industrial Stormwater Permit (GISWP) and also to incorporate Low Impact Development (LID) requirements in accordance with the City of Fort Bragg, and by reference, the County of Mendocino LID Manual, for the proposed Direct Transfer Facility located at 1280 North Main Street within the City of Fort Bragg, Mendocino County, California. This report includes background, calculations, and ultimately a design to provide for on-site collection, best management practices (BMPs, through bio-retention) and onsite infiltration with no off-site discharge related to the industrial activities.

The Facility plans to operate a solid waste direct transfer station which will utilize the existing driveway, access roads, and formerly developed areas on the parcel, in addition to constructing a loading/unloading ramp for the direct transfer operations. The direct transfer operation will entail collection haul/route trucks directly emptying contents into transfer trailers (through use of the ramp). No materials will be placed on the ground and no structures are proposed as part of the ramp project. Current designs show the ramp construction of compacted gravel, although, the ramp may be paved in the future; the calculations in this report assume future paving of the ramp for stormwater purposes.

Approximately 70% of the site is undeveloped with existing trees and vegetation that will remain the same, with minor exceptions for new bioretention areas. The majority of the vegetated areas are proposed to be fenced and protected in their native condition.

The facility was formerly used for industrial purposes, generally in the southeastern (back) one-third of the parcel. The surface at the former industrial area is a mix of concrete and gravel surfaces. A gravel access road connects the back area of the site to an existing driveway along Highway 1. The driveway is currently gravel and will require at least the first 20 feet paved as part of an encroachment permit with Caltrans. This report includes assessment of drainage in the event the entirety of the access road is paved in the future.

EXISTING SOILS

Existing soil classification is derived from the SoilWeb mapping interface (UC Davis, Agricultural and Natural Resources); Approximate soil location and identification is shown on both **Figure 1** (DA-1) and **Figure 2** (DA-2). There are two types of soils at the site - Sidrak loamy sand (204) at the western quarter of the site (including most of the graveled access road) and Dune land (138) for the mounded vegetated area, ramp area, and remainder of the site. These soils are classed as “somewhat excessively drains”, or where water is removed from the soil rapidly.

CURRENT (PRE-PROJECT) SITE TOPOGRAPHY AND DRAINAGE CONDITIONS

The overall property generally slopes from southeast to northwest with a mounded area centrally located on the site. The eastern third of the site (referred to as 'ramp area' for purposes of this report), consists of the former industrial land use, with two drainage management areas (DMA's) as shown on attached **Figure DA-1**. The northern DMA (DMA-A) includes roughly half of the ramp area and slopes to the northwest across concrete and paved surfaces to the existing gate at the graveled access road. Runoff from this area continues from this point to the northwest within the access road and ultimately sheet flows as shown on the figure.

The south half of the ramp area, shown as DMA-B, slopes similarly from east to west, however do not discharge offsite and infiltrates at a localized depression as shown on Figure 1.

PLANNED IMPROVEMENTS AND DEVELOPED DRAINAGE CONDITIONS

The planned facility operational areas are limited to the ramp area (eastern portion) of the site and the ingress/egress road. The facility plans to retain nearly all existing surfaces including the gravel access road, gravel and concrete areas in the eastern portion of the facility, and nearly all of the vegetation within the western and central portions of the facility.

Proposed improvements in the eastern portion of the facility will be as follows:

1. New Ramp. The ramp will be an approximate 60-foot wide by 90-foot length combination ramp and landing that will serve for loading and unloading for the direct transfer operation. The ramp will consist of a perimeter gravity block wall system and compacted gravel fill. It is anticipated that the ramp may be paved in the future. Drainage calculations assume a paved surface condition for this feature.

2. Concrete V-ditch. Existing sheet flow as shown on the figures, conveys surface runoff from the northern portion of the 'ramp' area along the existing gravel road. For stormwater management purposes, a concrete v-ditch is proposed near the existing gate location to intercept surface water from DMA-A into a bio-retention area and thereon into an infiltration area.

3. Bio-retention and Infiltration areas. Bio-retention areas have been sized based on the Mendocino Low Impact Design Standards Manual v 2.2. The sequence of received runoff (flow) will include surface sheet flow runoff to bioretention areas, with overflow to infiltration areas.

A potential future improvement for the facility is paving the existing gravel access road to provide continuous pavement from the planned driveway at the frontage to the eastern ramp area. At such time this segment of access roadway is paved, the surface should be graded to in-

slope towards the interior of the property with an adjacent earthen v-ditch at least 12" in depth to provide onsite infiltration for runoff from the adjacent paving. Given the relatively small width of paving and diversion of runoff from the ramp area (discussed later in this report), no additional bioretention or separate infiltration (beyond the v-ditch) is necessary for this segment.

STORMWATER CONTROL PLAN – LID COMPONENT

The Mendocino Low Impact Design Standards Manual version 2.2 ("LID Manual") was used as a reference for this project. Drainage management areas (DMA's) were delineated for both existing and developed conditions and further summarized by surface type as shown in the figures. Table 1 of the LID Manual indicated Applicable Post-Construction Standards based on project type. As indicated above, while the current ramp design is gravel (pervious), there is the likelihood this will be paved in the near future based on facility needs for wet weather operation. For this reason, this document assumes the ramp is paved. The overall ramp surface area is roughly 5,400 SF, which meets the definition for a Regulated Project, including requirement for this Stormwater Control Plan (SCP).

The following information is presented in the same format for an SCP as shown in the LID Manual. The initial project information documentation and questions use the same forms as the LID manual. Tables from the LID manual, have been copied and included in **Attachment A**.

It is noted that the facility is preserving and protecting a large number of trees as part of the developed conditions for the project, of which the canopy coverage is roughly 39,180 SF (or 19,597 at 50% canopy coverage). Typically, 50% of the preserved canopy can be used as a credit towards LID compliance for this facility. However, tree preservation alone does not improve water quality or address infiltration capacity. As such, the data shown in **Attachment A** ignores the tree preservation being done by the facility and sizes bio-retention areas based on the stand-alone contributing areas from DMA's A and B.

NOTICE OF NON-APPLICABILITY (NONA) AND NO DISCHARGE

The GISWP in Section XX.C establishes the following requirements for Dischargers claiming "No Discharge" through the NONA:

1. For the purpose of the NONA, the Entity (Entities) is referring to the person(s) defined in section 13399.30 of the Water Code.
2. Entities who are claiming "No Discharge" through the NONA shall meet the following eligibility requirements:
    a. The facility is engineered and constructed to have contained the maximum historic precipitation event (or series of events) using the precipitation data collected from the National Oceanic and Atmospheric Agency's website (or other nearby precipitation data available from other government agencies) so that there will be no discharge of industrial storm water to waters of the United States; or,

   b. The facility is located in basins or other physical locations that are not hydrologically connected to waters of the United States.
3. When claiming the "No Discharge" option, Entities shall submit and certify via SMARTS both the NONA and a No Discharge Technical Report. The No Discharge Technical Report shall demonstrate the facility meets the eligibility requirements described above.
4. The No Discharge Technical Report shall be signed (wet signature and license number) by a California licensed professional engineer.

This report is structured to describe current conditions, soil conditions, hydrologic parameters, and stormwater modeling for the facility, and a conclusion section that presents the results of the stormwater modeling relative to pond capacity. When this report is uploaded to SMARTs, it will have complied with the above stated requirements from the GISWP Section XX.C for a No Discharge Technical Report.

INFILTRATION BASIN MODELING

Site drainage features and areas are shown on **Figure 2**. A single infiltration area is shown as the overflow from both bioretention areas (BMP-1 and BMP-2, respectively). For infiltration and modeling purposes, the infiltration model ignores the bioretention areas and does not include their contribution towards site infiltration. This is intended to reflect a conservative scenario for the project.

To size the infiltration basin, Lawrence & Associates (L&A) used a spreadsheet pond-sizing model developed in-house. The model calculates the stage and/or volume of a pond on a daily basis, accounting for inflow (from precipitation and the associated runoff, in this case) and outflow (from percolation through the bottom of the ponds and evaporation).

Table 1 describes the input parameters used in the model:

Table 1. Model Input Parameters

Input Parameter	Units	Description
Daily precipitation	feet	From historical record, NOAA Station Fort Bragg 5N; water years 1992-2006 because the period was of above-average rainfall.
Daily evapo-transpiration	feet	Estimated from "A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California", UC Cooperative Extension & DWR, August 2000.
Stormwater runoff	acre-feet/day	Runoff was calculated by multiplying the daily precipitation by the drainage areas.
Soil permeability	feet/day	Various permeability values were evaluated to assess the effect of differing percolation.

For the model calibration and period, we used precipitation data from October 1, 1991 through September 30, 2006. This period was chosen because it is considered a period of above-

average rainfall for the area. The above-average rainfall period was chosen by interpreting the cumulative deviation from mean precipitation (**Figure 3**). The cumulative deviation is calculated by first averaging the annual rainfall for the period of record, then calculating the difference from the average for each year, then accumulating the differences. The graph shows the accumulated difference for each water year. On a cumulative deviation graph, a rising curve indicates higher than normal annual rainfall, a falling curve indicates lower than normal annual rainfall, and a flat curve indicates average annual rainfall.

The evaporation estimates are in the form of Reference Evapotranspiration (ETo). ETo is converted to Pan Evaporation (a commonly measured parameter) by dividing by 0.76. Pan evaporation is usually converted to actual evaporation (*e.g.*, in a large water body) by multiplying by 0.75. Because these two factors cancel each other out, we used the ETo values directly from the estimated daily ETo from "A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California", UC Cooperative Extension & DWR, Appendix A, Table 1.

Data for precipitation and ETo are included in the attached electronic file.

Runoff was calculated by multiplying the area of each surface type (pervious vs. impervious) in each drainage area by the daily precipitation and the associated runoff factor. For impervious areas (paving) a runoff factor of 1 was used. For pervious areas, two runoff factors were considered - per the LID Manual a factor of 0.1 and per typical design standards (e.g. Rational Method) a factor of 0.7 was evaluated to be more conservative. As an additional conservative assumption, no evaporation of precipitation during transit was assumed because of the short travel lengths (*e.g.*, short travel times).

Permeability in the infiltration areas was set between 1×10^{-3} to rcm/sec (0.28 to 0.028 feet/day) to evaluate the effect of differing permeabilities on the ability of the infiltration area to contain runoff. The soils at the site are generally sandy and likely have permeabilities towards the faster end of this range (Fetter, C.W., *Applied Hydrogeology*, Table 4.6, p. 98). Using a slower permeability would be more conservative (*e.g.*, would not overestimate the ability of the infiltration area to percolate stormwater).

The infiltration area is designed as a linear feature at the west edge of the ramp area. It will have an overall footprint of 3,000 square feet and be 2 feet in depth.

Using the variables described above, the model calculates the infiltration area's volume on a daily basis. The generic term 'pond' is shown in the model to reflect the infiltration area.

Table 2. Infiltration Area Modeling Logic

Category	Units	Description
Day		Historical record date.
Beginning Volume of Water in Pond	acre feet	Starts with the previous day's ending volume.
Direct Precipitation on Pond	acre feet/day	Daily precipitation from historical record × maximum (total) pond area.
Stormwater Runoff	acre feet /day	Calculated as described above.
Total Inflow	acre feet /day	Sum of direct precipitation on pond and stormwater runoff.
Intermediate Theoretical Volume	acre feet	Intermediate calculation of volume are made to check whether pond has theoretically "overflowed". Volume = Beginning Volume + Inflow.
Leakage	acre feet /day	Leakage based on assigned hydraulic conductivity; leakage occurs throughout pond. Leakage is calculated using the Darcy equation (flow = hydraulic conductivity x gradient x area).
Evaporation (pond only)	acre feet /day	Evaporation from the water surface of the pond. Uses maximum pond area if water is present.
Total Outflow	acre feet /day	Sum of leakage and evaporation.
Final Volume of Water	acre feet	Intermediate volume - total outflow: If <0, then pond is empty. If >maximum possible volume, then = maximum volume. Otherwise, intermediate volume - outflow.
Spill	acre feet	If intermediate volume - outflow < 0, then no spill. If intermediate volume - outflow < max. pond volume, then no spill, else intermed. vol. - outflow - max. pond volume.

RESULTS

The predictive modeling shows that the 3,000 square foot infiltration area is adequate for the above-average precipitation event period. **Figure 4** shows a graph of infiltration area volume during the modeling period, for the model run using the most conservative assumptions - lower permeability (1×10^{-5} cm/sec) and higher runoff coefficient (0.7) for pervious areas. This illustrates that the infiltration area would have sufficient capacity to contain runoff from a period of higher historical precipitation without overtopping.

APPENDIX A
Electronic Modeling Files

DRAINAGE MANAGEMENT AREAS (DMA)	
DMA NAME	DMA AREA (sf)
A – GRAVEL	8,140
A – OPEN/LANDSCAPE	29,312
A – IMPERVIOUS	16,903
TOTAL	54,355
B – GRAVEL	32,050
B – OPEN/LANDSCAPE	13,102
B – IMPERVIOUS	9,380
TOTAL	54,532

APN: 069-231-30

APN: 069-231-35

APN: 069-231-34

APN: 069-231-21

APN: 069-231-39

APN: 069-231-26

APN: 069-231-28

(E) OVERHEAD POWER (TYP)

STATE HWY 1

APPROXIMATE PARCEL BOUNDARY

(E) FENCING (TYP)

(E) GRAVEL

(E) GRAVELED ENTRANCE

SOIL MAPPING BOUNDARY, UC DAVIS SOILWEB MAPPING

204
SIDRACK LOAMY SAND (DUNES)
(HYD. GROUP A)

138
DUNE LAND
(HYD. GROUP A)

(E) CHAIN GATE

(E) BERM

(E) AC PAVING

(E) CONCRETE

(E) WELL ASSEMBLY

(E) BASIN

DMA A

DMA B

NO FENCING THIS SIDE

(E) INFILTRATION LOWPOINT

"BRUSH"

(E) CONCRETE

(E) 30' EASEMENT

(E) FENCING (TYP)

APPROXIMATE PARCEL BOUNDARY

N E S W

0 60 120 Feet

1' CONTOUR INTERVAL

NO.	DATE	REVISIONS	BY	CHK

PROJECT NO: 022047.00	PROJECT ID:
DRAWN BY: J. BEERS	SCALE: 1" = 30'
ENGINEER: D. BROWN	DATE:
CHECKED BY:	DATE:

ORIGINAL SCALE IN INCHES
0 1 2

LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

FORT BRAGG FREIGHT TERMINAL

1280 NORTH MAIN, LLC
1280 NORTH MAIN STREET
FORT BRAGG, CA

DRAINAGE SITE MAP EXISTING CONDITIONS

DRAWING: DA-1
SHEET: OF
DATE: 8/9/2022

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DRAINAGE MANAGEMENT AREAS (DMA)	
DMA NAME	DMA AREA (sf)
A – GRAVEL	3,930
A – OPEN/LANDSCAPE	3,132
A – IMPERVIOUS	16,730
TOTAL	23,783
B – GRAVEL	21,770
B – OPEN/LANDSCAPE	18,852
B – IMPERVIOUS	13,910
TOTAL	54,532

(E) OVERHEAD POWER (TYP)

APPROXIMATE PARCEL BOUNDARY

(N) GATE

CONNECT TO (E) FENCE

(N) V–DITCH REQ'D IF ACCESS ROAD IS PAVED (INFILTRATES, NO OUTLET)

(E) GRAVEL

(E) FENCING (TYP)

(N) AUTOMATED SWING ENTRY GATE (NO PUBLIC ACCESS)

PAVE (E) DRIVEWAY, ENCROACHMENT PERMIT THROUGH CALTRANS

(N) FENCING TO PROTECT/ SCREEN (E) VEGETATION

(N) ADDRESS/MONUMENT SIGN

A DA–3 REMOVE (E) GATE, INSTALL CONCRETE V–DITCH ACROSS ROAD

A DA–3 BMP–1 BIORETENTION (700 SF)

(N) TRUCK PARKING (3 SPACES)

DMA A

(E) AC PAVING

(E) CONCRETE

60'

LOADING/UNLOADING AREA

(E) WELL ASSEMBLY

TRAILER STAGING

PERIMETER BLOCK WALL

61'

90'

(N) FENCE

B DA–3 BMP–2 BIORETENTION (720 SF)

(N) INFILTRATION TRENCH / BASIN (3,000 SF TOTAL)

RAMP

SLOPE

(N) EMPLOYEE PARKING (2 SPACES, 1 ADA)

STATE HWY 1

204 SIDRACK LOAMY SAND (DUNES) (HYD. GROUP A)

(E) PARKING (UNCHANGED)

(N) FENCING

SOIL MAPPING BOUNDARY, UC DAVIS SOILWEB MAPPING

138 DUNE LAND (HYD. GROUP A)

FENCE LAYOUT TO COORDINATE WITH ADJACENT OWNER THIS LOCATION

(E) 30' EASEMENT

(E) FENCING (TYP)

APPROXIMATE PARCEL BOUNDARY

REMOVE BRUSH AND PLACE GRAVEL

(E) GRAVEL

DMA B

(E) CONCRETE

N E S W

0 60 120 Feet

1' CONTOUR INTERVAL

NO.	DATE	REVISIONS	BY	CHK

PROJECT NO: 022047.00	PROJECT ID:
DRAWN BY: J. BEERS	SCALE: 1" = 30'
ENGINEER: D. BROWN	DATE:
CHECKED BY:	DATE:

ORIGINAL SCALE IN INCHES

0 1 2

LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

FORT BRAGG FREIGHT TERMINAL

1280 NORTH MAIN, LLC
1280 NORTH MAIN STREET
FORT BRAGG, CA

DRAINAGE SITE MAP PROPOSED IMPROVEMENTS

DRAWING: DA–2

SHEET: OF

DATE: 9/1/2022

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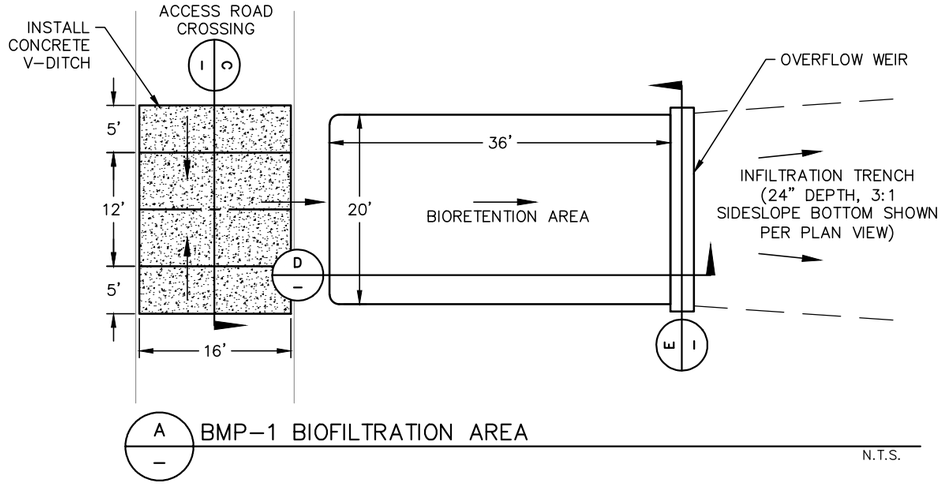
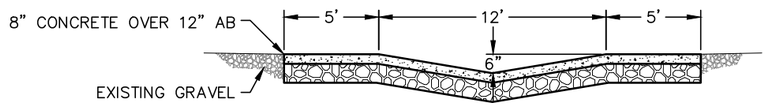


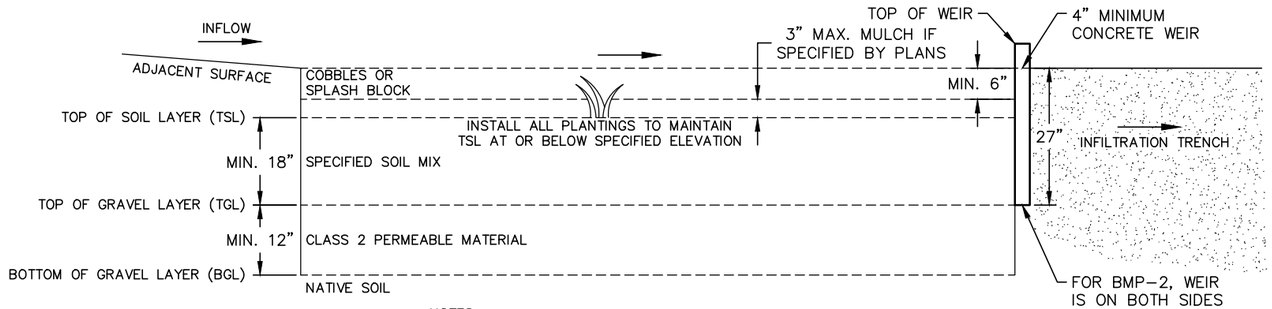
A — BMP-1 BIOFILTRATION AREA

N.T.S.



C — ACCESS ROAD CROSSING

N.T.S.



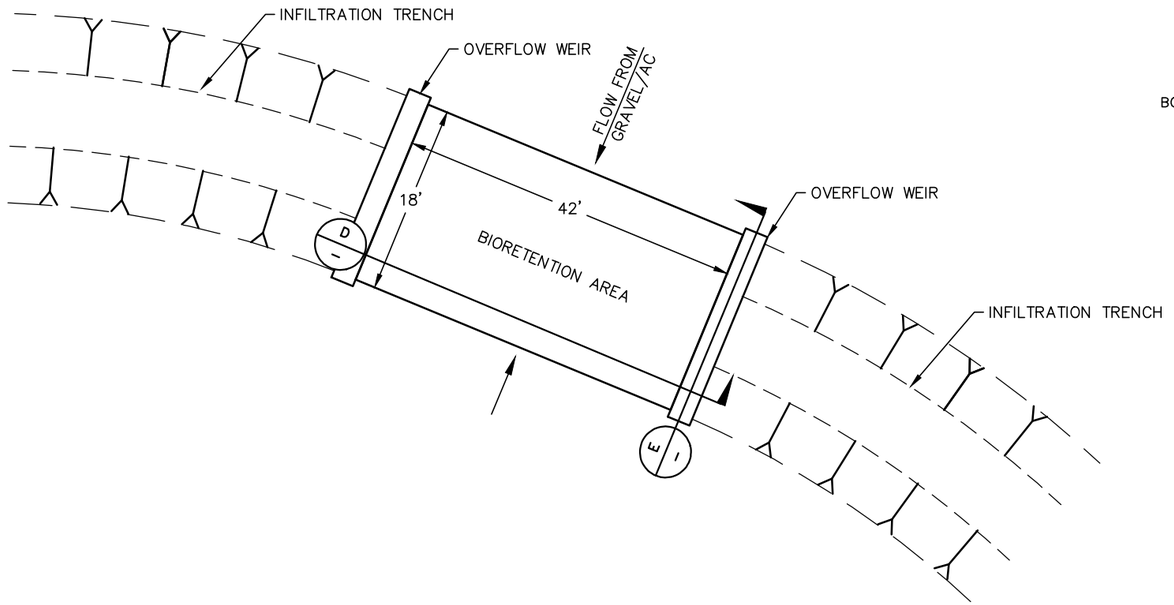
NOTES:

-NO LINER, NO FILTER FABRIC, NO LANDSCAPE CLOTH.

-MAINTAIN BGL, TGL, TSL, THROUGHOUT FACILITY AREA AT ELEVATIONS TO BE SPECIFIED IN PLAN.

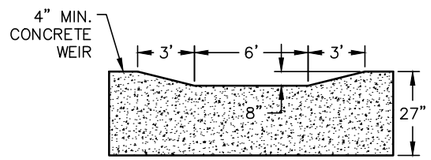
D — BIORETENTION DETAIL

N.T.S.



B — BMP-2 BIOFILTRATION AREA

N.T.S.



E — OVERFLOW WEIR SECTION

N.T.S.

NO.	DATE	REVISIONS	BY	CHK

PROJECT NO: 022047.00	PROJECT ID:
DRAWN BY: J. BEERS	SCALE:
ENGINEER: D. BROWN	DATE:
CHECKED BY:	DATE:

ORIGINAL SCALE IN INCHES

0 1 2

LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

FORT BRAGG FREIGHT TERMINAL

1280 NORTH MAIN, LLC
1280 NORTH MAIN STREET
FORT BRAGG, CA

DETAILS

DRAWING: DA-3

SHEET: OF

DATE: 8/24/2022

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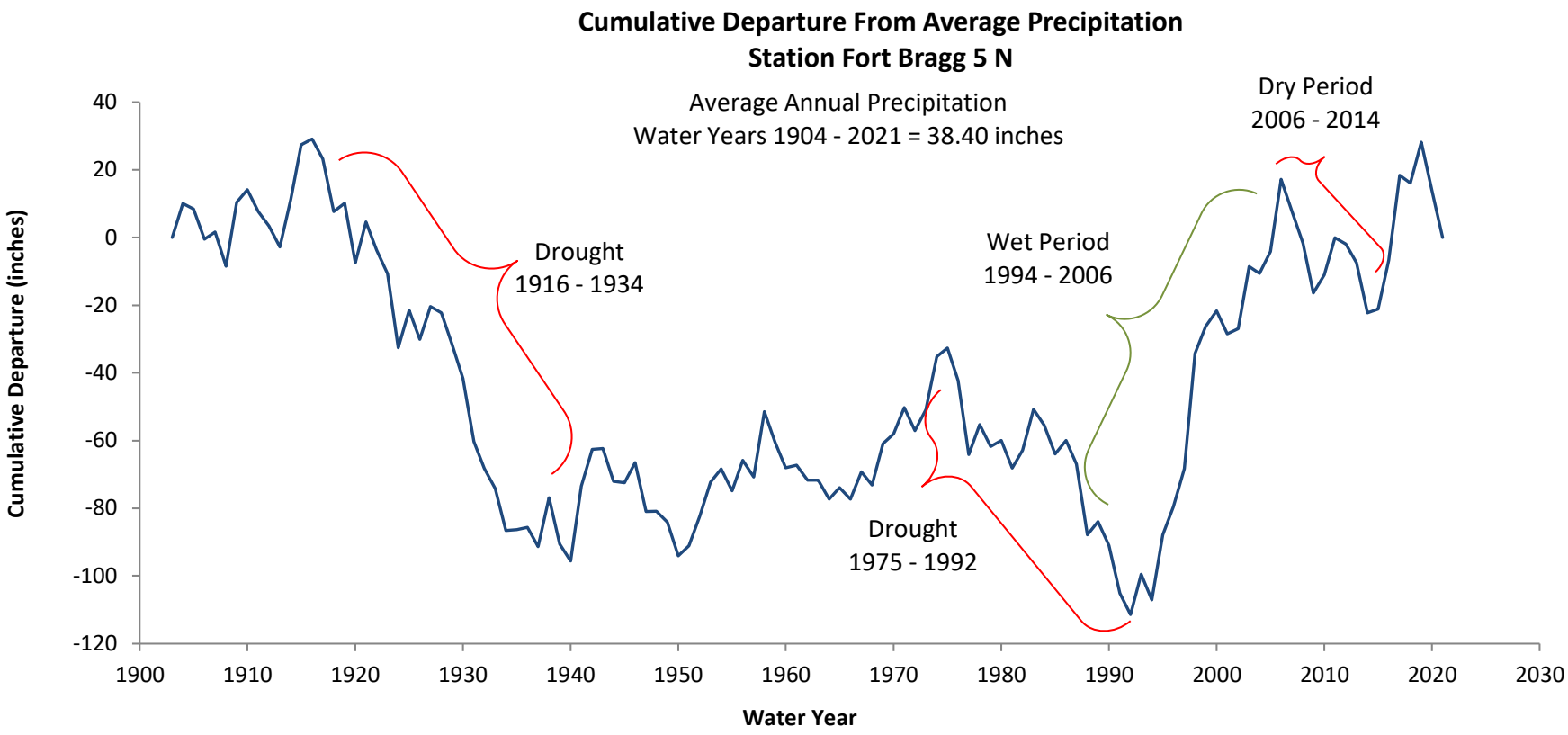
Cumulative Departure From Average Precipitation
Station Fort Bragg 5 N
Average Annual Precipitation
Water Years 1904 - 2021 = 38.40 inches
Dry Period
2006 - 2014
Drought
1916 - 1934
Wet Period
1994 - 2006
Drought
1975 - 1992
Cumulative Departure (inches)
40
20
0
-20
-40
-60
-80
-100
-120
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
2030
Water Year

FIGURE 3

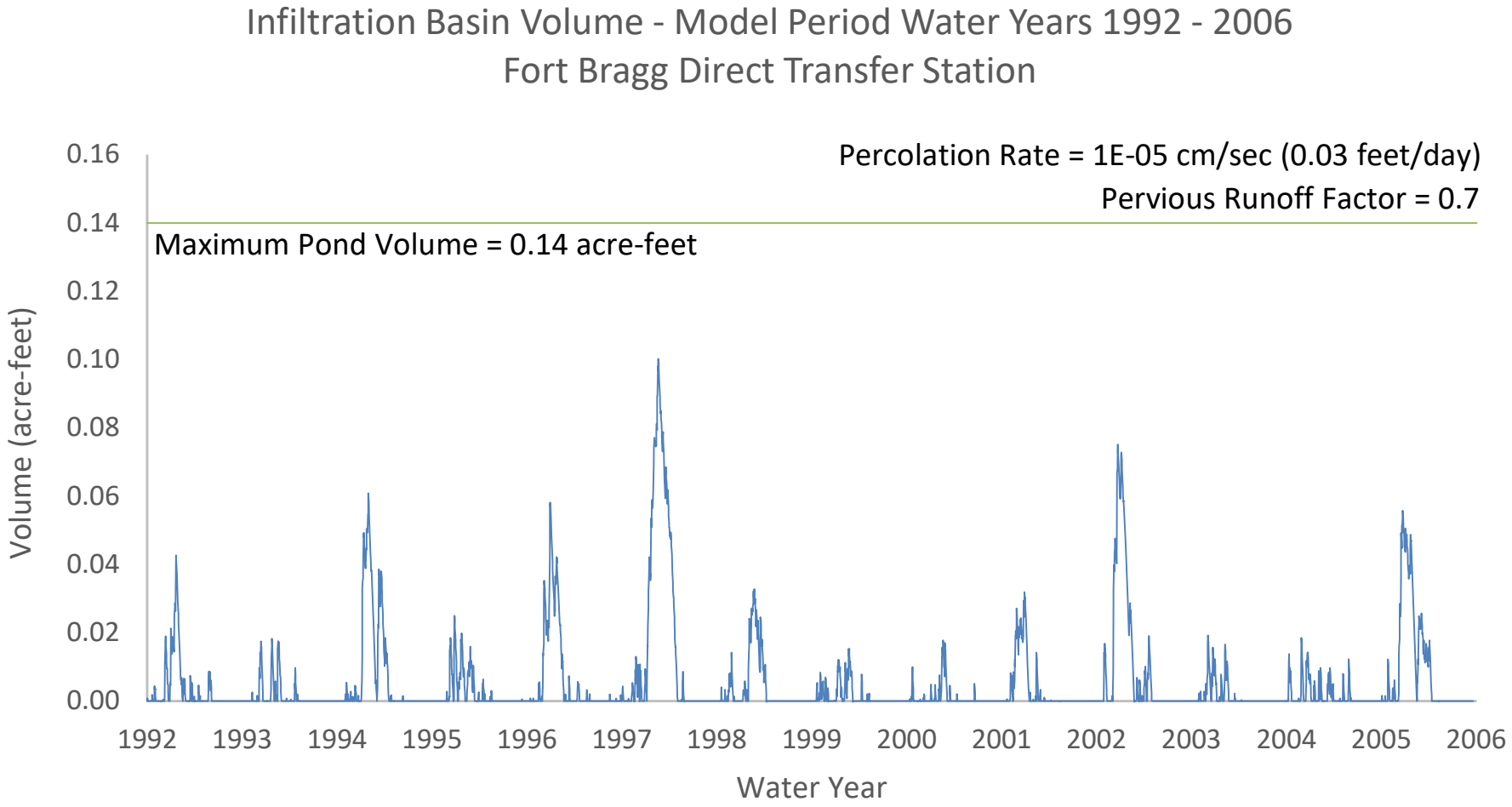
Infiltration Basin Volume - Model Period Water Years 1992 - 2006
Fort Bragg Direct Transfer Station
Percolation Rate = 1E-05 cm/sec (0.03 feet/day)
Pervious Runoff Factor = 0.7
Maximum Pond Volume = 0.14 acre-feet
Volume (acre-feet)
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
Water Year

FIGURE 4

Attachment A
Preliminary Stormwater Control Plan Forms
Operation and Maintenance Template

Preliminary Stormwater Control Plan (CDP, CUP, and SP ≥ 5000 sf)

For Office Use Only
Application No._____
Received By: _____

Instructions

The following worksheet is used to demonstrate that for each and every lot, the intended use can be achieved with a design which disperses runoff from the roofs, driveways, sidewalks, streets and other impervious areas to self-retaining pervious areas. It is also used to demonstrate that drainage to treatment and/or flow control facilities is feasible and that the project is in overall compliance with the MS4 permit. Use this form to assist you in designing your project to comply with the design standards for Multi-Parcel Regulated projects. The completed, signed Preliminary SCP for Subdivision Projects, a site map, plus any additional applicable information, must be submitted with your application to the Planning Department.

Project Name: Pacific Recycling Solutions - Direct Transfer Facility

Physical Site Address: 1280 North Main St., Fort Bragg, CA 95437

Project Applicant: Pacific Recycling Solutions

Mailing Address: 3515 Taylor Drive, Ukiah, CA 95482

Phone: (925) 768-6103 (Curt Fujii) email: curt.fujii@wasteconnections.com

Consultant's Information

Name: David Brown

Firm: Lawrence & Associates

Address: 3590 Iron Court, Shasta Lake, CA 96019

Email: dbrown@lwrnc.com

Phone: (530) 275-4800, cell (530) 391-7650

A. Project Information

1a. Does Project create or replace 1-acre or more of impervious surface?	☐ **Yes** (see question below)	☒ **No** (skip question 1b.)
b. If 'Yes' to the above question: Does project increase impervious surface from pre-project conditions?	☐ **Yes** (hydromodification requirements must be met)	☐ **No** (regulated project requirements must be met)
Total pre-project Impervious Surface (sf):		
Total new or replaced Impervious Surface Area (square feet) [Sum of impervious area that will be constructed as part of the project]		

Preliminary Stormwater Control Plan (CDP, CUP, and SP ≥ 5000 sf)

B. *Summary Table of Pervious to Impervious Surface*

The following table will be used by staff to ensure that adequate measures have been utilized within the project design to capture retain and/or infiltrate the design storm.

Each DMA shown in the table shall be designated with the same name on the site plan. All site design measures used to meet the runoff reduction goals and all treatment facilities utilized to capture remaining runoff volumes must be shown on the site plan at an appropriate scale. Please use the Flow Chart as a reference of the process.

1. **Utilize Worksheet 1 to Summarize Impervious to Pervious Ratio for each DMA (Parcel) to determine if further runoff reduction is needed using site design measures and/or bioretention**
2. **Utilize Site Design Measures to effectively Reduce Pervious Area**
3. **Utilize Bioretention or equivalent if reduction cannot be achieved using Site Design Measures**

Worksheet 1.

DMA Name	**Does impervious to pervious ratio achieve 2:1 or better?** (Yes or No)	**Can ratio be achieved using site design measures?** Utilize Table (2-7) found in the Regulated Projects SCP to aid in calculations	**If "No" in column C: Bioretention facility is required for DMA (parcel). List name and the estimated size (sf) of the facility** Utilize Table 8 found in the Regulated Projects SCP worksheet to aid in calculations
(A)	**(B)**	**(C)**	
Example A	*Yes*	*Yes*	----------
Example B	*No*	*Yes*	----------
Example C	*No*	*No*	*C : (1250 X .04)=50 sf*
Overall Facility	Yes	Yes	
(East) A	Yes	Yes	bioretention provided - see SCP
(East) B	Yes	Yes	bioretention provided - see SCP

C. *Preliminary Site Plan Checklist –items that must be include on the site plan*

- [X] Topographic lines (2 ft. contours)
- [X] On-site waterways/drainages, vegetation, and areas to be left undisturbed all shown with appropriate buffers
- [X] DMAs clearly delineated and labeled with name and area (square feet)

Preliminary Stormwater Control Plan (CDP, CUP, and SP ≥ 5000 sf)

- [X] Location of site design measures
- [X] Location, size, and name of Bioretention/Treatment Facility
- [X] Flow direction that clearly demonstrates the ability of self-retaining areas, infiltration site design measures, and treatment facilities to capture runoff from impervious surfaces
- [X] Hydrologic soil class

D. Operation and Maintenance Plan Requirements

Each Bioretention facility or equivalent will be required to have an operation and maintenance plan attached to the final SCP and shall include all details found in Appendix 5, 6, 7, and 8 of the LID Manual.

E. Additional Requirements

A detailed final Stormwater Control Plan with narrative sections will need to be submitted prior to issuance of a grading/building permit (see Appendix 3). However, completing the Preliminary SCP enables a more efficient and timely review of the final SCP.

F. Signature and Certification

I, the below signed, confirm that I have accurately described my project to the best of my ability, and that I have not purposely omitted any detail affecting my project's classification for stormwater regulation. I hereby certify that the site design measures and stormwater flow treatment measures identified herein as being incorporated into my project have been designed in accordance with the approved BMP Fact Sheet or equivalent, and are included in the final site plans submitted to Mendocino County Planning and Building Services. I also hereby certify that my project meets the stormwater runoff reduction criteria identified in Worksheet 2, or as determined through other approved means.

Signature

8/23/22
Date

David Brown
Print Name

I am the:

☐ Property Owner ☒ Applicant ☐ Contractor

Stormwater Control Plan for Regulated Projects

For Office Use Only
Application No._____
Received By: _____

Project Name: Pacific Recycling Solution - Direct Transfer Facility

Physical Site Address/APN: 1280 N. Main St., Fort Bragg, CA 95437

Project Applicant: Pacific Recycling Solutions (attn: Curt Fujii)

Mailing Address: 3515 Taylor Drive, Ukiah, CA 95482

Phone: (925) 768-6103, email: curt.fujii@wasteconnections.com

Consultant's Information

Name: David Brown

Firm: Lawrence & Associates QSD certification#: C69135

Address: 3590 Iron Court, Shasta Lake, CA 96019

Email: dbrown@lwrnc.com

Phone: 530-275-4800

Instructions

Based on the answers that you provided in the Construction and Post Construction Stormwater Runoff Control Checklist, you have determined that your project is classified as "regulated" for the purposes of the County of Mendocino MS4 Permit. Use this form to assist you in designing your project to comply with the County of Mendocino MS4 Permit design standards for regulated projects. The completed, signed SCP for Regulated Projects, plus any applicable, approved BMP Fact Sheets, must be submitted with your application to Mendocino County Planning and Building Services.

Type of Application/Project:

What type of application is this checklist accompanying?

☐ Subdivision
☒ Grading Permit
☐ Building Permit
☐ Design Review
☐ Use Permit
☒ Other (please specify) Zoning Concurrence Determination

Stormwater Control Plan for Regulated Projects

A. **Project Description**

Project Type and Description:	Ramp Construction
Total Pre-Project Impervious Surface Area (square feet)	8,446 SF
Total New or Replaced Impervious Surface Area (square feet) [Sum of impervious area that will be constructed as part of the project]	8,217 SF
Total Post-Project Impervious Surface Area (square feet)	16,663 SF

If your project includes more than 5,000 square feet in new or replaced impervious area, is your project one of the following project types?

- Detached single family homes that create and/or replace 2,500 square feet or more and are not part of a larger plan of development
- Interior remodels
- Routine maintenance or repair, such as exterior wall surface replacement or pavement resurfacing within an existing footprint
- Linear Underground/Overhead Projects (LUPs) without a discrete location that has 5,000 square feet or more of newly constructed contiguous impervious surface.
- Sidewalks built as part of new streets or roads and built to direct stormwater runoff to adjacent vegetated areas
- Bicycle lanes that are built as part of new streets or roads that direct stormwater runoff to adjacent vegetated areas
- Impervious trails built to direct stormwater runoff to adjacent vegetated areas, or other non-erodible permeable areas
- Sidewalks, bicycle lanes, or trails constructed with permeable surfaces
- Trenching excavation and resurfacing associated with LUPs
- Grinding and resurfacing of existing roadways and parking lots
- Construction of new sidewalks, pedestrian ramps, or bike lanes on existing roadways
- Routine replacement of damaged pavement such as pothole repair, or replacement of short, non-contiguous sections of roadway

☐ Yes ☒ No

If you answered "Yes" above, your project is a non-regulated project under the definitions in the County of Mendocino MS4 Permit. Please use the Checklist for Non-Regulated Projects *to assist you in your project design and application submittal.*

Stormwater Control Plan for Regulated Projects

B. Site Assessment (Opportunities and Constraints)

1. Soil Characteristics

I. Soil characterization method UC Davis SoilWeb mapping interface, Hydrologic Group A

II. Were infiltration rates assessed for the site? ☐ Yes ☒ No

If Yes, please attach soils testing report

2. Depth to Groundwater

I. What is the depth (below ground surface) to groundwater (in feet)? 8-12 feet

II. How was this determined? well pump test 8/12/22 at east end of property.

3. Existing Vegetation and Natural Areas

I. Are there any key natural vegetation areas, sensitive habitats, or mature trees on the site?

☒ Yes ☐ No

If yes, please draw and label these features on the existing conditions site plan map and attach a description of them to this document.

4. Drainage and Hydrograph

I. Are there any natural drainage features or modified natural drainage features on the site or directly adjacent to the site?

☐ Yes ☒ No

5. Potential Contamination

I. Is the project site within or near a registered contaminated site, according to the State Water Resources Control Board Geotracker Website (http://geotracker.waterboards.ca.gov/)?

☐ Yes ☒ No

If yes, please attach the applicable contaminated site report from the Geotracker website and note the location of the contaminated site on the existing conditions site plan map. Please attach a description how this contamination will affect your project design.

C. Project Layout Optimization

Optimizing the site layout can be done through the following methods:

1. Define the development envelope and protected areas, identifying areas that are most suitable for development and areas to be left undisturbed. Trees and vegetation to be fenced
2. Concentrate development on portions of the site with less permeable soils and preserve areas that can promote infiltration.
3. Limit overall impervious coverage of the site from paving and roofs.
4. Set back development from creek, wetlands, and riparian habitats to maximize vegetative buffer widths. n/a
5. Preserve significant trees. No trees to be removed. Existing trees to be fenced and protected.
6. Conform the site layout along natural landforms.
7. Avoid excessive grading and disturbance of vegetation and soils.
8. Replicate the site's natural drainage patterns.
9. Detain and retain runoff throughout the site.

Based on the features included in the existing conditions site plan, please ensure your project site plan applies project layout optimization measures to the greatest extent practicable, while still meeting the objectives of your project.

Have you attached a short description of how site optimization techniques have been integrated into the project design?

☒ Yes ☐ No Included as part of project description and introduction.

D. Source Controls

Does your project contain potential pollutant-generating activities or sources?

☐ Yes ☒ No Facility operations include direct transfer (truck to truck) of materials. No materials to be placed on the ground.

If Yes, please complete the Source Control Worksheet, available at the County of Mendocino Stormwater website (https://www.mendocinocounty.org/government/planning-building-services/stormwater), and available as Appendix 4 of the County of Mendocino Low Impact Development Technical Design Manual; list and identify, using a simple table format, the source or treatment control measure and locations as an attachment to the SCP document.

E. Drainage Management Areas

On the project site plan, please delineate and label all drainage management areas (refer to Sec. 6 of the manual). Record the DMA names and Areas in the table below.

Table 1. DMAs

DMA name	Area (square feet)
See attached report	

F. Site Design Measures

Please identify the site design measures incorporated into the project design and attach the applicable, approved BMP Fact Sheet or equivalent to this checklist. These measures must be discussed in the SCP and shown on the site design map.

☐ Rooftop and Impervious Area Disconnection

☐ Tree Planting and Preservation *Note: Trees preservation occurring, however stormwater BMP's focus on bioretention and infiltration for the planned facility.

☐ Rain Barrels and Cisterns

☐ Porous Pavement

☐ Flow-Through Planter

☒ Bioretention

Table 2. Area Calculations of *Self-retaining Areas* Used to Treat Impervious Areas

1 DMA Name	2 Area (sq. ft.)
Bioretention preferred BMP at this site - See Table 8	

Table 3. Runoff Factor (surface type)

Roofs and Paving	1.0
Landscaped Area	0.1
Bricks or solid pavers- grouted	1.0
Bricks or solid Pavers-on sand base	0.5
Pervious Concrete Asphalt	0.1
Turfblock or gravel	0.1
Open or Porous pavers	0.1

Tables 4-6 below should be used to quantify the amount of runoff that is reduced by using site design measures. Using the tables in chronological order will calculate the minimum size for your bioretention facility in order to meet the MS4 permit requirements. Several iterations may be need to size facilities according to the site design.

Table 4. Area draining to self-retaining areas

1 DMA Name (must correspond to area on the site map and on Table **1**)	**2** DMA Area (sq. ft.) (Table **1**)	**3** Type of Surface (Runoff Factor Table 3)	**4** Surface with Runoff Factor Column **2** X Column **3**	**5** Area of Self-retaining Area Receiving the Runoff (sq. ft.) (Table 2, Col. 2)	**6** Ratio Col. **4** : Col. **5** Not to exceed 2:1 ratio (if number exceeds 2:1 use table 5 - 6 to reduce tributary area and recalculate or go directly to Table 7)
Example	700	Roof (1.0)	700	100	7:1 (must use site design measures, bioretention or both)
Refer to Table 8 - Bioretention for this site					

Table 5. Tree Planting and Preservation (if not planting trees, go to Table 6)

1 DMA Name (must correspond to area on the site map)	2 DMA sq. ft. (from Table 4. Col. 6)	3 Deciduous (Input 100 for each deciduous tree)	4 Evergreen (Input 200 for each evergreen tree)	5 Total Tree Credit (Col. **3** + Col. **4**) (DMA runoff reduction)	6 New DMA Area Col. **2** – Col. **5** (for use in Table 6 - 8)
Example	700	--------	200	200	500 (new DMA size that must be treated with methods below Table 6-7)

Table 6. Rain Barrels and Cisterns (if not using site design measures, go to Table 8)

1 DMA Name (must correspond to area on the site map)	2 New DMA sq. ft. (Table 5, Col. 7 or, if no trees used, value from Table 4, Col. 2)	3 Number of Rain Barrels	4 Runoff Reduction from using a standard 55 gallon Rain Barrel = 88 sq. ft. Use the following if size is other than the standard (for every gallon of storage, approx. 1.6 sq. ft. of reduction is achieved)	5 Col. **3 X** Col. **4** (DMA runoff reduction)	6 New DMA Area Col. **2** - Col. **5**
Example	500	1	88	88	412 (go to Table 7 to recalculate Ratio)

Table 7. <u>New</u> Tabulation of areas draining to self-retaining area after use of site design measures (must achieve a 2:1 ratio; if not achievable, use table 8 to calculate the size of bioretention required)

1 DMA Name (must correspond to area on the site map)	**2** New Square footage of DMA (Col 6, Table 4,5,6)	**3** Area of Self-retaining Area Receiving the Runoff (Table 2, Col. 2)	**4** Ratio Column **2 :** Column **3** Not to exceed 2:1
Example	412 (Table 6)	100	4.12:1(still exceeds 2:1 go back, add more trees, rain barrels, or use bioretention – example uses bioretention, Table 8)
n/a			

Table 8. Tabulation of areas draining to Bioretention Facility See attached spreadsheet

1 DMA Name (must correspond to area on the site map)	**2** DMA sq. ft. (Table 1, Col 2 or new DMA sq. ft. Table 7, Col. 2)	**3** Runoff Factor Table 6 (skip if coming from Table 1)	**5** DMA Area Col. **2** x Col. **3**	**6** Standard Sizing Factor	**Minimum facility size** Col. **5** X Col. **6**	If site does not allow for the minimum size, recalculate DMA using additional Site Design Measures to further reduce the tributary size
Example	300	***1*** (already calculated in steps above,	300	0.04	12 sq. ft.	(proposed facility size on site plans)

		for this example)				
A-Pervious	7,062	0.1	706	0.04	28 SF (698 SF total)	Total for DMA-A = 697 SF (700 SF)
A-Impervious	16,730	1.0	16,730	0.04	669 SF (698 SF total)	
B-Pervious	13,910	1.0	13,910	0.04	556 SF (720 SF total)	*Bioretention required is sum of pervious and impervious min. facility sizes.
B-Impervious	40,662	0.1	4,062	0.04	163 SF (720 SF total)	Total for DMA-B = 719 SF (720 SF)

Table 9. Runoff Factors

Roofs and Paving	1.0
Landscaped Area	0.1
Bricks or solid pavers- grouted	1.0
Bricks or solid Pavers-on sand base	0.5
Pervious Concrete Asphalt	0.1
Turfblock or gravel	0.1
Open or Porous pavers	0.1

G. Operation and Maintenance in Perpetuity

Indicate whether an *Operation and Maintenance Plan* is accompanying this document (Appendix 9).

☐ Yes ☒ No

H. Stormwater Control Plan

A Stormwater Control Plan is required for all Regulated Projects. This worksheet is designed to be the SCP if all requested descriptions and site plans have been attached. This document will be used by the plan checker to confirm that adequate stormwater control measures are being implemented on the project.

Indicate whether all supporting descriptions and worksheets are accompanying this document, Stormwater Control Plan

☒ Yes ☐ No

Stormwater Control Plan for Regulated Projects

I. Signature and Certification:

I, the below signed, confirm that I have accurately described my project to the best of my ability, and that I have not purposely omitted any detail affecting my project's classification for stormwater regulation. I hereby certify that the site design measures and stormwater flow treatment measures identified herein as being incorporated into my project have been designed in accordance with the approved BMP Fact Sheet or equivalent, which is attached to this checklist, and are included in the final site plans submitted to Mendocino County Planning and Building Services. I also hereby certify that my project meets the stormwater runoff reduction criteria identified in the County of Mendocino MS4 Post-Construction Stormwater Calculator, or as determined through other approved means.

Signature

8/23/22
Date

David Brown, Lawrence & Associates
Print Name

I am the:

☐ Property Owner ☐ Contractor ☒ Applicant

Applicant Checklist for Regulated Projects; items that must be included in the Permit Packet

Items that must be on the Project Site Map	
☒	Exiting natural hydrological features (depressions watercourses, wetlands, riparian areas, undisturbed natural areas, significant natural resource areas)
☒	Existing and proposed site drainage network and connections to MS4 conveyances off-site
☒	Proposed design features and surface treatments used to minimize imperviousness and reduce runoff
☒	DMAs are delineated for the entire site and each is labeled with a unique identifier and is characterized as draining to self-retaining, self-treating, or draining to a bioretention facility
☒	Proposed locations and footprints of bioretention facilities
☒	Pollutant-generating source areas, including loading docks, food service areas, refuse areas, outdoor processes and storage, vehicle cleaning, repair or maintenance, fuel dispensing, equipment washing, etc. (Appendix 5)
Contents of Stormwater Control Plan (SCP)	
☒	Narrative or description of site features and conditions that constrain or provide opportunities for stormwater control
☒	Narrative of Site Design characteristics, building features, and pavement selections that reduce imperviousness of the site including the quantified runoff reduction.
☒	Completed tables showing square footage of proposed pervious and impervious areas, self-treating areas, self-retaining areas, and areas draining to bioretention facilities
☒	Preliminary designs, including calculations, for each bioretention facility. Elevations should show sufficient hydraulic head for each bioretention facility.
☐	General Maintenance requirements for bioretention facilities
☐	Statement accepting responsibility for interim operation and maintenance of facilities
☒	Stormwater Construction Checklist
☒	Certification by professional civil engineer, architect, landscape architect, or other approved professional

APPENDIX 7

Operation and Maintenance Template and Maintenance Declaration

For Office Use Only
Application No._____
Received By: _____

A. Responsible Individual (RI).

The RI is the person that will have direct responsibility for the maintenance of stormwater controls, maintain self-inspection records, and sign any correspondence with the County of Mendocino.

Name of RI: PACIFIC RECYCLING SOLUTIONS - BRUCE McCRACKEN

Phone: 707-234-6400

Project Name: FORT BRAGG DIRECT TRANSFER - 1280 NORTH MAIN.

Physical Site Address and/or APN: 1280 NORTH MAIN ST, FORT BRAGG

☒ Include from the Stormwater Control Plan Worksheet the *Drainage Management Area*s tabulations (tables #1-4)

☒ Include the site plan delineating the DMAs and the locations of the bioretention or equivalent facilities.

☒ Include the final construction drawings of the stormwater facilities:

- Plans, elevations, and details of bioretention facilities.
- Construction details and specifications, including: depths of sand and soil, compaction, pipe materials, and bedding.
- Location and layouts of inflow piping and piping to off-site discharge
- Native soils (lenses beneath the facilities)

B. Scheduled Maintenance Activities

The following activities will need to occur on an annual basis. Frequency may need to be adjusted depending on facility.

- **Refuse removal:** remove trash that collects near the inlets or that is trapped by vegetation. Clean out soil and debris blocking inlets or overflows.
- **Control weeds:** manual methods and soil amendments; non-natural (synthetic) pesticides should not be used.
- **Add mulch:** add mulch to maintain a mulch layer thickness of ~ 3 inches.
- **Pruning and replanting vegetation:** it may be necessary to replace or remove vegetation to ensure the proper functioning of the facility.
- **Check irrigation**: if irrigation exists, check to make sure the system is working as intended.

An annual self-certification letter will be mailed to the RI. This letter will serve as verification that all the stormwater facilities on the property are being maintained and remain operational. The letter should be signed and returned within 30 days.

C. Updates to the O & M Plan

Contact information for the Responsible Individual should be current. If the RI changes, the County of Mendocino's Planning and Building Department should be notified with the appropriate revisions.

D. O & M plans for other Facility Types

If your project included a non-standard stormwater treatment facility that was approved by the Planning and Building Services Department, such as a tree-box type system, than the O & M should reflect the manufacturer's recommended maintenance scheduling.

E. Signature and Certification:

"I, the RI/applicant accept responsibility for operation and maintenance of stormwater treatment and flow-control facilities until such time as this responsibility is transferred to a subsequent owner. Furthermore, a condition on the property deed will be recorded with the County Recorder's office indicating that a stormwater facility is present on the property and that the maintenance responsibility will transfer with property ownership in perpetuity."

_____ _____

Signature of the RI Date

_____

Print Name

* THIS SHEET SHOWN FOR REFERENCE ONLY - ORIGINAL TO BE SIGNED ONCE REPORT IS APPROVED.

I am the:

☐ Property Owner

☐ Applicant

☐ Contractor