

HUMBOLDT COUNTY DEPARTMENT OF PUBLIC WORKS
ROAD EVALUATION REPORT

PART A: *Part A may be completed by the applicant*

Applicant Name: Humboldt Heritage Farm Mangement, LLC APN: 216-281-015

Planning & Building Department Case/File No.: _____

Road Name: Private Access Road (complete a separate form for each road)

From Road (Cross street): Alderpoint Road

To Road (Cross street): Private Access Road to Parcel Entrance

Length of road segment: 0.31 miles Date Inspected: December 17, 2018

Road is maintained by: County Other Private
(State, Forest Service, National Park, State Park, BLM, Private, Tribal, etc)

Check one of the following:

Box 1 The entire road segment is developed to Category 4 road standards (20 feet wide) or better. If checked, then the road is adequate for the proposed use without further review by the applicant.

Box 2 The entire road segment is developed to the equivalent of a road category 4 standard. If checked, then the road is adequate for the proposed use without further review by the applicant.

An equivalent road category 4 standard is defined as a roadway that is generally 20 feet in width, but has pinch points which narrow the road. Pinch points include, but are not limited to, one-lane bridges, trees, large rock outcroppings, culverts, etc. Pinch points must provide visibility where a driver can see oncoming vehicles through the pinch point which allows the oncoming vehicle to stop and wait in a 20 foot wide section of the road for the other vehicle to pass.

Box 3 The entire road segment is not developed to the equivalent of road category 4 or better. The road may or may not be able to accommodate the proposed use and further evaluation is necessary. Part B is to be completed by a Civil Engineer licensed by the State of California.

The statements in PART A are true and correct and have been made by me after personally inspecting and measuring the road. A map showing the location and limits of the road being evaluated in PART A is attached.

Signature

Date

Name Printed

Important: Read the instructions before using this form. If you have questions, please call the Dept. of Public Works Land Use Division at 707.445.7205.

PART B: Only complete Part B if Box 3 is checked in Part A. Part B is to be completed by a Civil Engineer licensed by the State of California. Complete a separate form for each road.

Road Name: Private Access Road Date Inspected: December 17, 2018 APN: 216-281-015
From Road: Alderpoint Road (Post Mile approx. 16.3) Planning & Building
To Road: Private Access Road (Post Mile _____) Department Case/File No.:

1. What is the Average Daily Traffic (ADT) of the road (including other known cannabis projects)?

Number of other known cannabis projects included in ADT calculations:
(Contact the Planning & Building Department for information on other nearby projects.) _____

ADT: 4 Date(s) measured: December 17, 2018 to December 18, 2018

Method used to measure ADT: Counters Estimated using ITE *Trip Generation Book*

Is the ADT of the road less than 400? Yes No

If YES, then the road is considered very low volume and shall comply with the design standards outlined in the American Association of State Highway and Transportation Officials (AASHTO) *Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤400)*. Complete sections 2 and 3 below.

If NO, then the road shall be reviewed per the applicable policies for the design of local roads and streets presented in AASHTO *A Policy on Geometric Design of Highways and Streets*, commonly known as the "Green Book". Complete section 3 below.

2. Identify site specific safety problems with the road that include, but are not limited to: (Refer to Chapter 3 in AASHTO *Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤400)* for guidance.)

A. Pattern of curve related crashes.

Check one: No. Yes, see attached sheet for Post Mile (PM) locations.

B. Physical evidence of curve problems such as skid marks, scarred trees, or scarred utility poles

Check one: No. Yes, see attached sheet for PM locations.

C. Substantial edge rutting or encroachment.

Check one: No. Yes, see attached sheet for PM locations.

D. History of complaints from residents or law enforcement.

Check one: No. Yes (check if written documentation is attached)

E. Measured or known speed substantially higher than the design speed of the road (20+ MPH higher)

Check one: No. Yes.

F. Need for turn-outs.

Check one: No. Yes, see attached sheet for PM locations.


3. Conclusions/Recommendations per AASHTO. Check one:

The roadway can accommodate the cumulative increased traffic from this project and all known cannabis projects identified above.

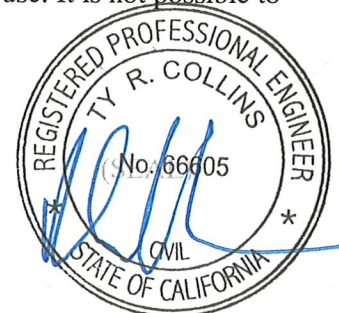
The roadway can accommodate the cumulative increased traffic from this project and all known cannabis projects identified above, if the recommendations on the attached report are done. (check if a *Neighborhood Traffic Management Plan* is also required and is attached.)

The roadway cannot accommodate increased traffic from the proposed use. It is not possible to address increased traffic.

A map showing the location and limits of the road being evaluated in PART B is attached. The statements in PART B are true and correct and have been made by me after personally evaluating the road.


Signature of Civil Engineer

1/5/19
Date



Important: Read the instructions before using this form. If you have questions, please call the Dept. of Public Works Land Use Division at 707.445.7205.



**GREEN
ROAD**
CONSULTING

Road Evaluation Report

Prepared For:

Humboldt Heritage Farm Management, LLC

APN: 216-281-015

Signature of Civil Engineer

Date



Seal

Table of Contents

Abbreviations	2
Introduction	3
Background	3
Methods	3
Results	5
Conclusion	13

List of Tables:

Table 1: Summary of road characteristics throughout private road system off Category 4 Alderpoint Road.....	5
Table 2: Summary of data collected over the 24-hour road study.....	12
Table 3: Summary of remediation measure(s) required to bring the private road system up to standards set forth in Humboldt County Ordinance 2599.	12

List of Figures:

Figure 1: Site overview map showing the roadways used to access APN 216-281-015.....	4
Figure 2: PM 0 on Private access road.	6
Figure 3: PM 0.1 on Private access road.	6
Figure 4: PM 0.2 on Private access road.	7
Figure 5: PM 0.3 on Private access road.	7
Figure 6: PM 0.4 on private access road.	8
Figure 7: PM 0.5 on Private access road.	8
Figure 8: PM 0.6 on Steelhead Road.....	9
Figure 9: PM 0.7 on Steelhead Road.....	9
Figure 10: 6th Street intersecting 6th Street.	10
Figure 11: Snapshot from Google Earth Pro’s line measurement tool used to determine the distance traveled to reach the applicants parcel from Alderpoint Road.	11

Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
ADT	Average Daily Traffic
SMP	Safety Management Plan
PM	Post Mile
SWRCB	State Water Resources Control Board

Introduction:

Green Road Consulting performed a road evaluation study to determine whether commercial cannabis cultivation activities will impact the current road systems on APN 216-281-015. This parcel is accessed using a private paved road (Steelhead Road), which intersects 6th Street approximately 0.31 miles from Alderpoint Road, a Category 4 road (Figure 1).

Background:

On May 6, 2018, the Humboldt County Board of Supervisors passed Ordinance No. 2599 defining the rules and regulations of commercial cultivation, processing, manufacturing, distribution, testing and sale of cannabis for medicinal or adult use outside the coastal zone. Section 55.4.12 of the ordinance describes the performance standards related to all commercial cannabis activities at cultivation sites that must be met for the applicant to be eligible for a commercial cannabis cultivation permit issued by Humboldt County. As defined in Section 55.4.12.1.8, roads must conform to the following three (3) standards:

Standard 1: Dead-End Road Length,

Standard 2: Functional Capacity,

Standard 3: Protection for Water Quality and biological Resources on Private Road Systems.

Humboldt County has also deemed it necessary that a road maintenance association be formed for all road systems providing access to three or more parcels seeking a Commercial Cannabis license. If a special permit regarding the functional capacity is required, Humboldt County mandates that all property owners utilizing the same road system be sent notice of the project, in addition to all parcels within 300 feet of the project parcel boundaries.

Methods:

All road systems related to commercial cannabis cultivation must comply with the standards set forth in Section 55.4.12.1.8 of Humboldt County Ordinance No. 2599. These standards include roads being located less than 2-miles from the nearest intersection with a Category 4 road (Standard 1), roads providing access to the parcel(s) must meet or exceed the Category 4 road standard (Standard 2), and all private road systems and driveways providing access to parcel(s) shall be designed, maintained, or retrofitted in accordance with “A Water Quality and Stream Habitat Protection Manual for County Road Maintenance in Northwestern California Watersheds” (Standard 3). Where road standards are not met, a special permit is required.

A NanoCount 1000 totalizing vehicle counter was used to determine the Average Daily Traffic (ADT) on the private access road leading to the parcel. The 24-hour study was initiated at 1 PM on 12/17/2018 and concluded at 2PM on 12/18/2018. The NanoCount 1000 uses a single-channel receiver connected to flexible surgical tubing to accurately count the number of vehicles (or axles) by sensing changes in pressure when a vehicle tire runs over the hollow tubing.

A GPS unit (2 to 4-meter accuracy) was used to mark locations where the NanoCount 1000 was installed for the study. The GPS unit also tracks the location of the user by marking a point every 15 seconds used to determine the dead-end road length. The location tracks obtained with the GPS unit were used in conjunction with Humboldt County Web GIS and ESRI ArcMap to determine accurate measurements of road segments (Figure 1).

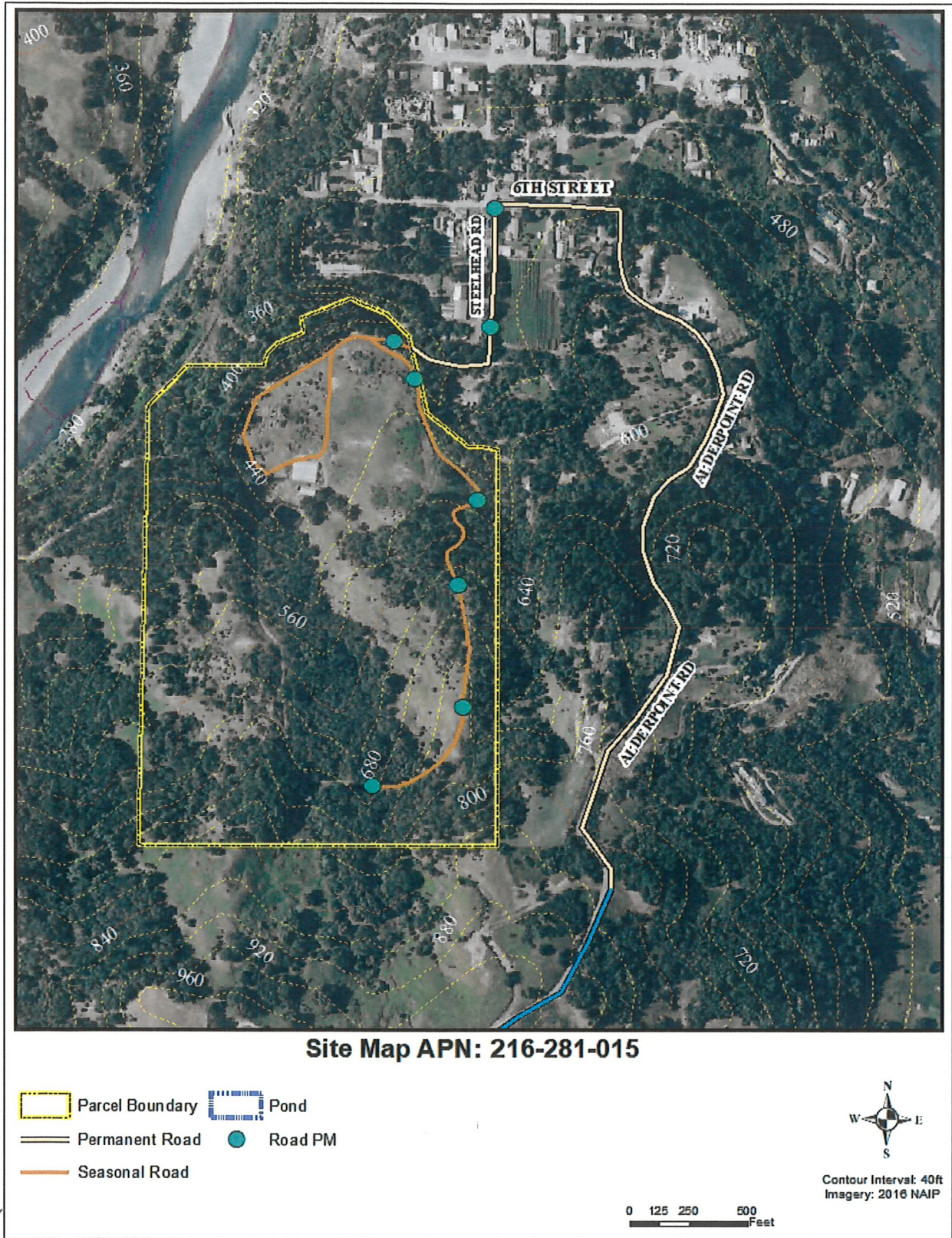


Figure 1: Site overview map showing the roadways used to access APN 216-281-015.

Results:

Summary of Road Characteristics throughout private road system:

Table 1: Summary of road characteristics throughout private road system off Category 4 Alderpoint Road.

Parcel Road PM	Distance (mi)	Slope (%)	Width (ft)	Surface Material	Pinch Points and Narrow Section	Pullouts	Notes
0		1.5	12.5	Rock and dirt	None		
	0.1						
0.1		1	11	Rock and dirt	Narrow section with pullout	1	
	0.1						
0.2		14.7	10	Rock and dirt			
	0.1						
0.3		20.8	11.5	Rock and dirt			
	0.1						
0.4		9.6	9	Rock and dirt	Narrow road with pullout	1	
	0.1						
0.5		15.9	10.5	Rock and dirt			
	0.1						
0.6		9.5	14	Pavement			
	0.1						
0.7		1.3	13	Pavement			At intersection of Steelhead Rd. and 6 th St.
		1.2	25	Pavement			

Table 1 outlines the road conditions that were identified at the time of the site inspection. Road features such as slope and width were measured at 0.1-mile intervals for 0.7 miles, private access road on APN 213-281-015 to 6th Street (a county maintained road). The entire road consisted of rock and dirt as the surface material with two (2) pullouts counted in total.

As outlined in the AASHTO Guidelines for Geometric Design of Very Low-Volume Local Roads (American Association of State Highway and Transportation Officials 2001), “evidence of site-specific safety problems may be: a pattern of curve-related crashes; physical evidence of curve problems such as skid roads, scarring on trees or utility poles, substantial edge rutting or encroachments; a history of complaints from neighbors and/ or local police; or measured or known speeds higher than the current operational speed of the road system.” No significant safety problems were identified at the time of the site inspection.

Pinch Points:

No pinch points were observed at the time of the site inspection.

Road Images:



Figure 2: PM 0 on Private access road.



Figure 3: PM 0.1 on Private access road.



Figure 4: PM 0.2 on Private access road.



Figure 5: PM 0.3 on Private access road.



Figure 6: PM 0.4 on private access road.



Figure 7: PM 0.5 on Private access road.



Figure 8: PM 0.6 on Steelhead Road.



Figure 9: PM 0.7 on Steelhead Road.



Figure 10: 6th Street intersecting 6th Street.

Standard 1 – Dead End Road Length

Using Humboldt County’s Web GIS tool, the length of road from the nearest Category 4 road (Alderpoint Rd.) was determined to be approximately 0.31 miles. This is less than the 2.0 miles required by Humboldt County (Figure 2). The road intersecting Alderpoint Rd. is 6th Street that has a centerline stripe and is maintained by Humboldt County according to Officer Fowler of the California Highway Patrol Garberville location. This road evaluation began at the private access road within the property and concluded at the intersection of 6th Street and Steelhead Road.

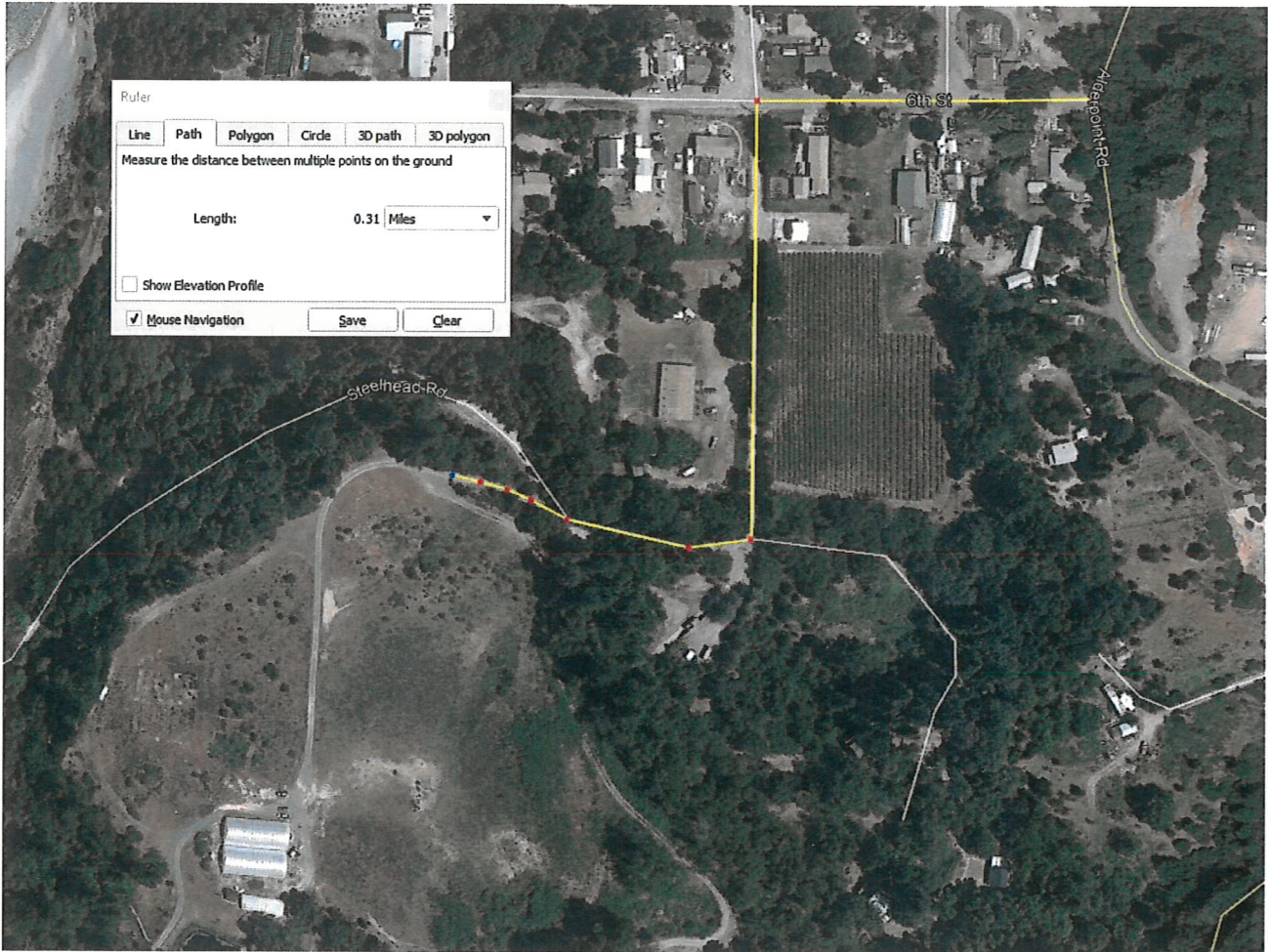


Figure 11: Snapshot from Google Earth Pro's line measurement tool used to determine the distance traveled to reach the applicants parcel from Alderpoint Road.

Standard 2 – Functional Capacity

The Average Daily Traffic (ADT) was used to determine the functional capacity of the private access road, from County maintained Panther Gap to the parcel entrance. The Average Daily Traffic (ADT) for the 0.3-mile section of private access road, from Alderpoint Road to the parcel entrance was 4, summarized in Table 1. This value defines the Unnamed Private Road, from the intersection of Steelhead Road to the parcel entrance as a very low-volume local road according to the AASHTO design manuals. A Road Evaluation Report completed by a Civil Engineer licensed in the State of California for the Humboldt County Department of Public Works can be found in Appendix A.

Table 2: Summary of data collected over the 24-hour road study.

Segment	Length (miles)	Count (vehicles)
Alderpoint Road to Private Access Road	0.3	4

Standard 3 – Protection for Water Quality and Biological Resources on Private Road Systems

Evaluation of the design, functionality, and performance conditions of all segments of private roadways will be conducted by a licensed engineer. This shall include design measures to minimize impacts from point source and non-point source pollution, sediment delivery, runoff velocity. Drainage features shall be evaluated to ensure adequate design, functionality, and performance of culverts and other discrete drainage systems and develop conclusions regarding compliance and conformance with best management practices for the defined road system.

Remediation measures required to bring the private road system up to standards set forth in the Humboldt County Ordinance 2599 are outlined in the Water Resources Protection Plan (WRPP) completed by Green Road Consulting (Table 2). The WRPP was prepared to monitor and report on the conditions of said parcel, in order to enroll and comply with the Waiver of Water Discharge Requirements and the General Water Quality Certification for Discharges of Waste Resulting from Cannabis Cultivation and Associated Activities or Operation with Similar Environmental Effects in the North Coast Region (Order No. 2015-0023).

Table 3: Summary of remediation measure(s) required to bring the private road system up to standards set forth in Humboldt County Ordinance 2599.

Topic	Issue	Remediation Measure	Expected Completion Date
Erosion, Drainage, and Sediment Control	Poor road drainage with potential to deliver sediment to watercourse.	Install rolling dips at locations indicated on map	September 2019

Conclusion:

Three road standards must be met for the applicant to be in compliance with Humboldt County Ordinance No. 2599: Dead End Road Length, Functional Capacity, and Protection for Water Quality and Biological Resources on Private Road Systems. Green Road Consulting performed a road evaluation study to determine whether commercial cannabis cultivation activities will impact the current road systems on APN 216-281-015. A summary of the results can be found below:

- The Dead-End Road Length from the nearest Category 4 road (Alderpoint Road) to the parcel entrance is approximately 0.3 miles.
- Over a 24-hour car counting study, a total of 4 vehicles utilized the road system accessing the applicants parcel (Table 1), defining the segment of road as very low-volume according to the AASHTO design manuals.
- The condition of these roads is adequate to support commercial cultivation operations in addition to the current regular non-commercial use.
- The project shall meet all three road system standards once the road segment (stream crossing) is upgraded as described in Humboldt County Ordinance No. 2599 Performance Standards for Road Systems described in section 55.4.12.1.8.
- No significant safety problems were identified at the time of the site inspection, such as pinch points or tree scarring.

It is recommended that SMP methods be implemented on the private road leading to the parcel entrance for the environmental remediation conditions to be addressed.

A Road Evaluation Report provided by the Humboldt County Department of Public Works has been completed by a licensed civil engineer.