Department of Public Works
Mike Azevedo, Secretary to the
Airport Advisory Committee
1215 Market Street
Colusa, CA 95932
Phone: (530)458-0580
Fax: (530)458-5000
colusacountyca.iqm2.com
www.countyofcolusa.com

COLUSA COUNTY
Airport Advisory Committee

SPECIAL MEETING AGENDA

August 12, 2021

Board Chambers
546 Jay Street, Suite 108
Colusa, CA 95932

Welcome to a meeting of the Colusa County Airport Advisory Committee. If you are scheduled to address the Committee, please state your full name for the record. Regularly numbered items may be considered at any time during the meeting. All items are listed in accordance with the Ralph M. Brown act. We invite all members of the public to attend.

NOTE: You can listen to the meeting by dialing one of the numbers below:

Phone: **1-916-246-0723**
Toll-Free: **1-800-356-8278**
Code: **401978** **DO NOT PUT YOUR PHONE ON HOLD**

1:30 p.m. CALL TO ORDER

I. PUBLIC COMMENT

II. REPORTS
1. Director
2. Members

III. SITTING AS THE AIRPORT LAND USE COMMISSION
1. Adopt a Resolution finding that the Golden Roots Nursery Greenhouse (Hoop House) project is conditionally consistent with Airport Land Use Compatibility Plan.

2. Adopt a Resolution determining that the Tan Oak Innovations project in the Colusa Industrial Park is consistent with the County's Airport Land Use Compatibility Plan based on the findings and conditions in said resolution.

ADJOURN

THE NEXT REGULAR MEETING OF THE COLUSA COUNTY AIRPORT ADVISORY COMMITTEE IS SCHEDULED FOR September 13, 2021.

PERIOD OF PUBLIC COMMENT: Any person may speak about any subject of concern, provided it is within the jurisdiction of the Colusa County Airport Advisory Committee and is not already on today's agenda. The total amount of time allotted for receiving such public communication shall be limited to a total of 15 minutes per issue and each individual or group will be limited to no more than 5 minutes each within the 15 minutes allocated per issue. **Note:** No action shall be taken on comments made under this comment period.

ADA COMPLIANCE: Upon request, Agendas will be made available in alternative formats to accommodate persons with disabilities. In addition, any person with a disability who requires a modification or accommodation to participate or attend this meeting may request necessary accommodation. Please make your request to the County Board Clerk, specifying your disability, the format in which you would like to receive this Agenda, and any other accommodation required no later than 24 hours prior to the start of the meeting.

All supporting documentation is available for public inspection and review in the office of the Board Clerk, 547 Market Street, Suite 102, Colusa, CA 95932 during regular business hours 8:30 a.m. to 5:00 p.m., Monday through Friday.

COUNTY OF COLUSA, CA

Request For Airport Advisory Committee

MEETING DATE: **August 12, 2021**

DEPARTMENT: **Community Development Department**

FROM: **Tana Loudon**

SUBJECT: **Golden Roots Nursery (Ranveer Tumber) Greenhouse (Hoop Houses) Project**

SITTING AS AIRPORT LAND USE COMMITTEE

Adopt a Resolution finding that the Golden Roots Nursery Greenhouse (Hoop House) project is conditionally consistent with Airport Land Use Compatibility Plan.

PROJECT OVERVIEW

Referral Agency:
Bryan Stice
Senior Planner
City of Colusa
425 Webster Street
Colusa, CA 95932
(530) 458-4941, Ext 103

Property Owner:
Ranveer Tumber
Golden Roots Nursery
2151 Redding Avenue
Yuba City, CA 95993
(530) 354-6464

Applicant:
Ranveer Tumber
Golden Roots Nursery
2151 Redding Avenue
Yuba City, CA 95993
(530) 354-6464

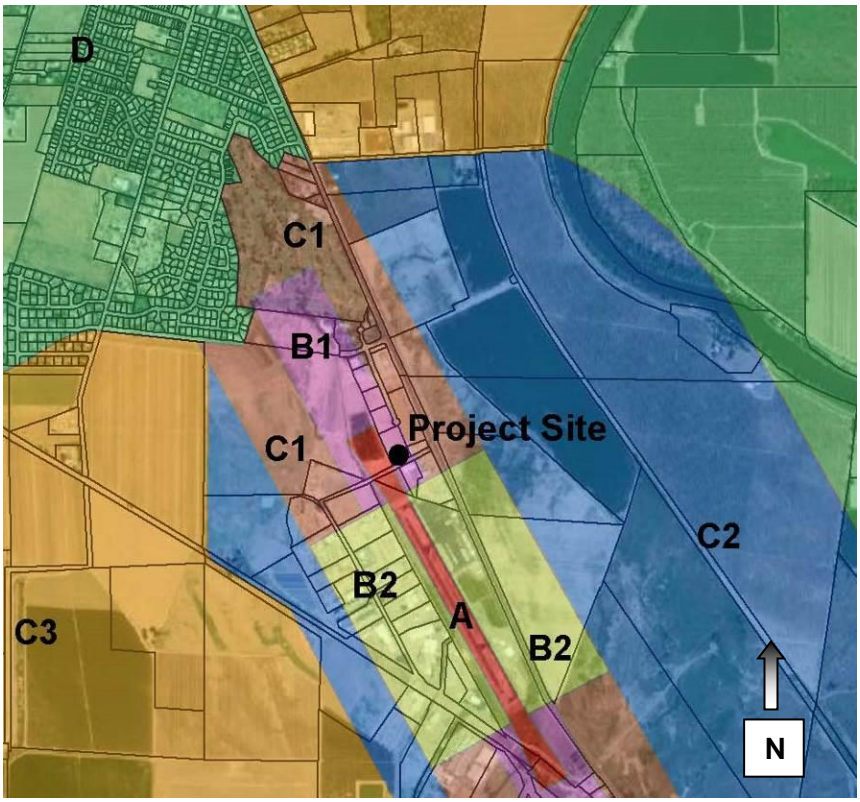
Project Summary:

The applicant proposes to illuminate previously approved greenhouses. These greenhouses did not trigger Commission review due to the construction being under 10,000 square feet and the fact that no Federal Aviation Administration (FAA) hazard

determination was triggered. The applicant proposed to light the greenhouses which triggers ALUC review. The four greenhouses (hoop houses) measure 20 feet by120 feet (2,400 square feet each) for a total of 9,600 square feet (see Exhibit A). The greenhouses will be 8.5 to 9 feet in height. The greenhouses will be lighted with low wattage string lights. There will be two additional employees to the eight already working on the site. Normal operating hours are from 6 am to 4 pm. There are no on site sales or public access. The area will be used to grow plants to a larger size for resale.

Location:

The project site is located on Farinon Road approximately 475 feet southwest of the intersection of State Route 20 and Farinon Road within the City of Colusa. The site is located in Compatibility Zone B1 of the Airport Land Use Compatibility Plan (ALUCP) as shown below:



Background:

Golden Roots Nursery has been operating a greenhouse operation just to the east of the project site on Farinon Road, which is approximately 22,000 square feet in size for the past several years. This project was reviewed by ALUC in 2018 and found to be consistent with ACLUP. The applicant also operates a cloning operation inside the existing 9,430 square foot building on the project site located at 2483 Niagara Road. The ALUC reviewed an expansion of this facility in March 2021 (ALUC 21-01) and found it to be consistent with ACLUP.

In regards to this project, the applicant submitted conceptual plans to construct four greenhouses (hoop houses) for clone production in February of 2021 so staff could determine as to whether the proposed greenhouse complex encroached into the 50:1 imaginary surface and whether a Federal Aviation Administration (FAA) Determination was required. Additionally, the project was analyzed in relation to the 10,000 square foot building ALUC review requirement found in Airport Compatibility Land Use Plan (ACLUP). In March of 2021, staff determined that ALUC review was not required because no FAA determination was required and the project did not exceed 10,000 square feet in size (see attached letter). In April 2021 the applicant submitted a request to light the greenhouse complex. The ALUC Referral Form was received in July from the City of Colusa.

ANALYSIS:

Proposed Greenhouses

In the B1Compatibility Zone, the Maximum Sitewide Average Intensity (25 people/acre) would allow 27 persons on the site with no more than 50 persons in a single-acre based on the Maximum Single Acre Intensity (50 persons/acre).

B1 Compatibility Zone			
Density Intensity			
	People/Acre	Site Size (Acres)	Allowed Persons
Maximum Site Wide Average	25	1.1	27
Maximum Single Acre	50	1	50

The proposal states that there will be approximately two employees in addition to the eight employees already on site in the existing green houses. Staff analyzed the proposal taking into considering the existing greenhouses and the current proposal. At 10 employees, the total number of employees on site is well below the Intensity Criteria of Table 3A, Compatibility Zone B1 of the ALUCP and, thus, would be consistent with the ACLUP.

The applicant has provided a lighting plan (Exhibit B) which details that the greenhouses will be illuminated with low intensity LED lighting. The string lights will be oriented downward with a 60 degree beam as to not create glare outside of the proposed hoop houses. The lights will be used to supplement daylight so they receive 24-hours of illumination. There will be 160 lights (40 per greenhouse) which will use 85 watts of electricity each for a total of 13,600 watts, with the greenhouse complex covering 9,600 square feet this results in 1.4 watts per square foot. For comparison High Intensity Discharge Lighting (HID) used for flowering of plants average 41.66 watts per square foot. There will be no additional exterior security lighting and the greenhouse plastic will coated in light diffusing materials. The proposed lighting system is essentially the same as was found to be consistent with ACLUP under the ALUC 21-01 application which was reviewed in March of this year.

The project is subject to review under ACLUP Policy 2.2.2 (I), because the greenhouses

will be illuminated and may have the potential to create visual hazards to aircraft in flight.

Based upon the information above staff is recommending that the Golden Roots Nursery project be found to be consistent with the ACLUP as conditioned in the draft resolution.

PUBLIC COMMENTS:

No public comments have been received at this time. If comments are received following distribution of this staff report, those comments will be provided to the Airport Land Use Commission at the meeting.

ALUC STAFF RECOMMENDATION:

Staff recommends that the Commission adopt the proposed Resolution finding that this project is consistent with Airport Land Use Compatibility Plan subject to the conditions contained in the Resolution.

PRIOR COMMITTEE ACTION

None

FISCAL IMPACT/FUNDING SOURCE

None

PREPARATION:

Prepared By:

Kent Johanns, Associate Planner (530) 458-0484

ACTION FOR THE CLERK

Assign the applicable Resolution Number, Obtain the Chair's signature on the resolution and forward an electronic copy to the Community Development Director and a hard copy to:

Ranveer Tumber
Golden Roots Nursery
2151 Redding Avenue
Yuba City, CA 95993

ATTACHMENTS:

- Proposed ALUC Resolution (DOCX)
- Exhibit "A" Project Description and Conceptual Plans (PDF)

- Exhibit "B" Lighting Plan (PDF)
- ALUC Referral Form 7-22-21 Ranveer (PDF)
- 2021 03 26 Golden Roots Hoops Houses (Farinon Road) (PDF)

RESOLUTION NO. 21-_____

A RESOLUTION OF THE COLUSA COUNTY AIRPORT LAND USE COMMISSION MAKING AIRPORT LAND USE COMPATIBILITY PLAN CONSISTENCY FINDINGS REGARDING THE LIGHTING OF GREENHOUSES

WHEREAS, Ranveer Tumber (Golden Roots Nursery) has submitted conceptual plans for the construction of a greenhouse complex 9,600 square feet size with a maximum height of 9 feet and low wattage lighting to be used for 24 hours a day.

WHEREAS, the Property is located north of Farinon Road and the north end of the Colusa County airport within Zone B1 of the Colusa County's Airport Influence Area as defined by Map 3A contained within the Colusa County Airport Land Use Compatibility Plan;

WHEREAS, the proposed lighting of the greenhouses are required to be submitted to the Colusa County Airport Land Use Compatibility Plan pursuant to Section 2.2.2 (l) lighting which may create visual hazards to aircraft in flight of the Colusa County Airport Land Use Compatibility Plan;

WHEREAS, the City of Colusa has referred the proposed project to the Airport Land Use Commission for a determination of consistency with the Colusa County Airport Land Use Compatibility Plan;

WHEREAS, on August 12, 2021 the Airport Land Use Commission reviewed the proposed project for consistency with the Colusa County Airport Land Use Compatibility Plan;

WHEREAS, during the Airport Land Use Commission review it considered the staff report, the requirements of the Airport Land Use Compatibility Plan, and all orally and written testimony presented concerning the application.

NOW, THEREFORE, BE IT RESOLVED that the Colusa County Airport Land Use Commission finds the following:

I. The Commission can only make a finding of consistency or inconsistency for the proposed greenhouse complex and is unable to make any finding of consistency with respect to any future use or development on the project site and, as such, all future uses and development must be submitted to the County to determine if the Commission is required to make a review of consistency consistent with the ALUCP.

A. Density of the Number of Persons on the Site

1. Pursuant to Table 3A of the Airport Land Use Compatibility Plan the maximum number of persons that can be on the site at any one time is 27 persons. Whereas the maximum number of persons proposed to be on the site at any one time is 10 persons within the existing greenhouse complex and the new greenhouses which would be lighted and therefore the project is consistent with the ACLUP density requirements.

B. **Golden Roots Greenhouse Complex Consistency with the ACLUP**

1. The proposed 9,600 square foot greenhouse complex lighting plan was required to be reviewed for consistency with the Airport Land Use Compatibility Plan pursuant to Section 2.2.2(l) of the Airport Land Use Compatibility Plan and this consistency review occurred at the Commission's August 12, 2021 meeting.

2. At the August 12, 2021 meeting, the Commission found that the proposed greenhouse complex was consistent with the Airport Land Use Compatibility Plan contingent on the condition that the proposed greenhouse complex shall be constructed in accordance with the proposed building plans detailed in Exhibits "A" and "B" attached to the August 12, 2021 staff report which calls for the use of opaque light diffusing materials on the greenhouse roofs and siding, that the proposed lighting utilize the low-intensity lighting, and that any exterior lighting be shielded and directed downward to reduce light and glare to the satisfaction of the Community Development Director.

PASSED AND ADOPTED this 12th day of August, 2021 by the following vote:

AYES:

NOES:

ABSENT:

_____
Michael P. West, Chair
Airport Land Use Commission

ATTEST: Wendy G. Tyler, Secretary to the Airport Land Use Commission

_____
Melissa Kitts, Deputy Clerk

ATTEST TO FORM

_____
Jennifer Sutton, Sr. Deputy Counsel

Exhibit A

I wish to build four hoop houses on the west side of the existing structures. These are simple structures that offer frost protection. Each hoop house will be approx. 2,400 sq ft. (20'x120').

This area is outside the runway protection zone.

The Building heights are 8'6" per manufacture, but I am assuming 9' to stay safe.

Highest elevation in proposed area is 48.20'. Highest Point on runway has an elevation of 49.60' per NAVD 88 as shown on exhibit 4B of the Colusa County Airport Layout Plan. Therefor we are 1'+ below grade at this location.

We are approx. 573' from the edge of the runway to the corner of the property closest to the runway. At a 50:1 slope this gives us 11.46". Being below grade, it gives us an additional 1 foot, totaling 12.46" of allowed height.

Our Structures at 9' will be 3+ plus feet (closer to 4') below the maximum allowed height.

This area will consist of approx. 2 employees.

Normal operating Hours are from 6 am to 4 pm.

There will be no onsite sales or public access.

This area will be used to grow plants to a larger size for resale.

Exhibit A

Elevation at proposed area

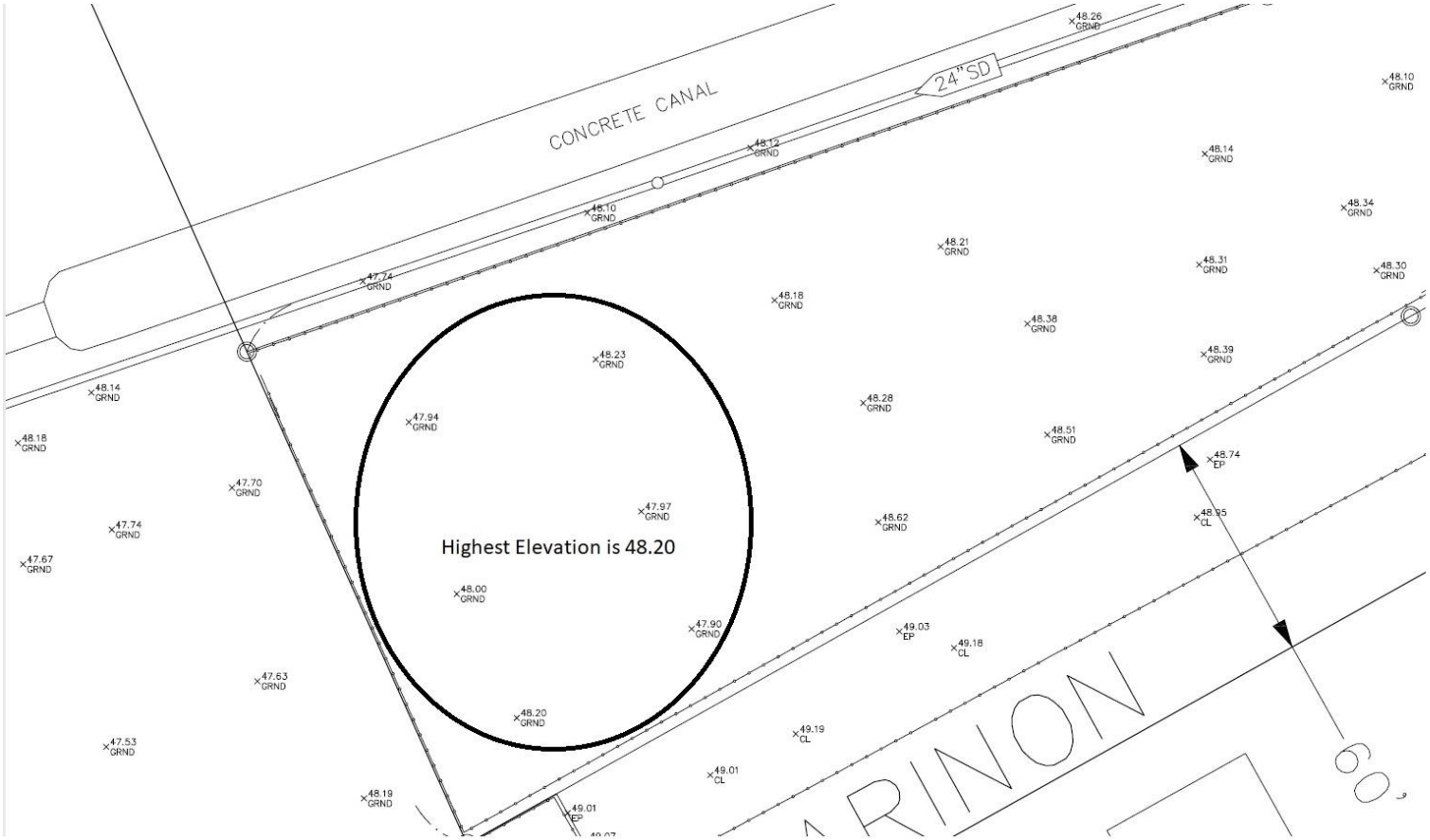


Exhibit A

Distance to Corner from Edge of Runway

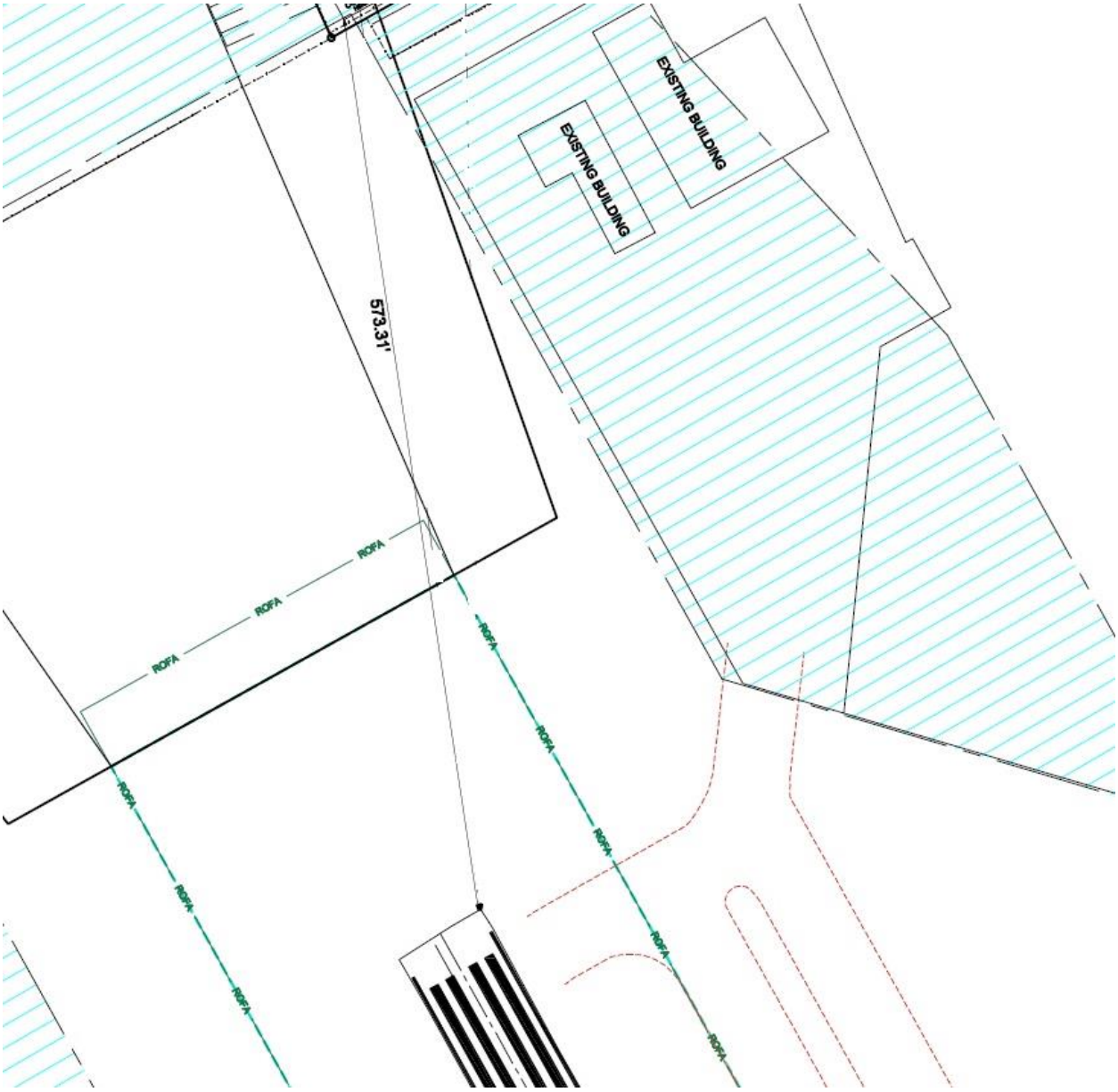
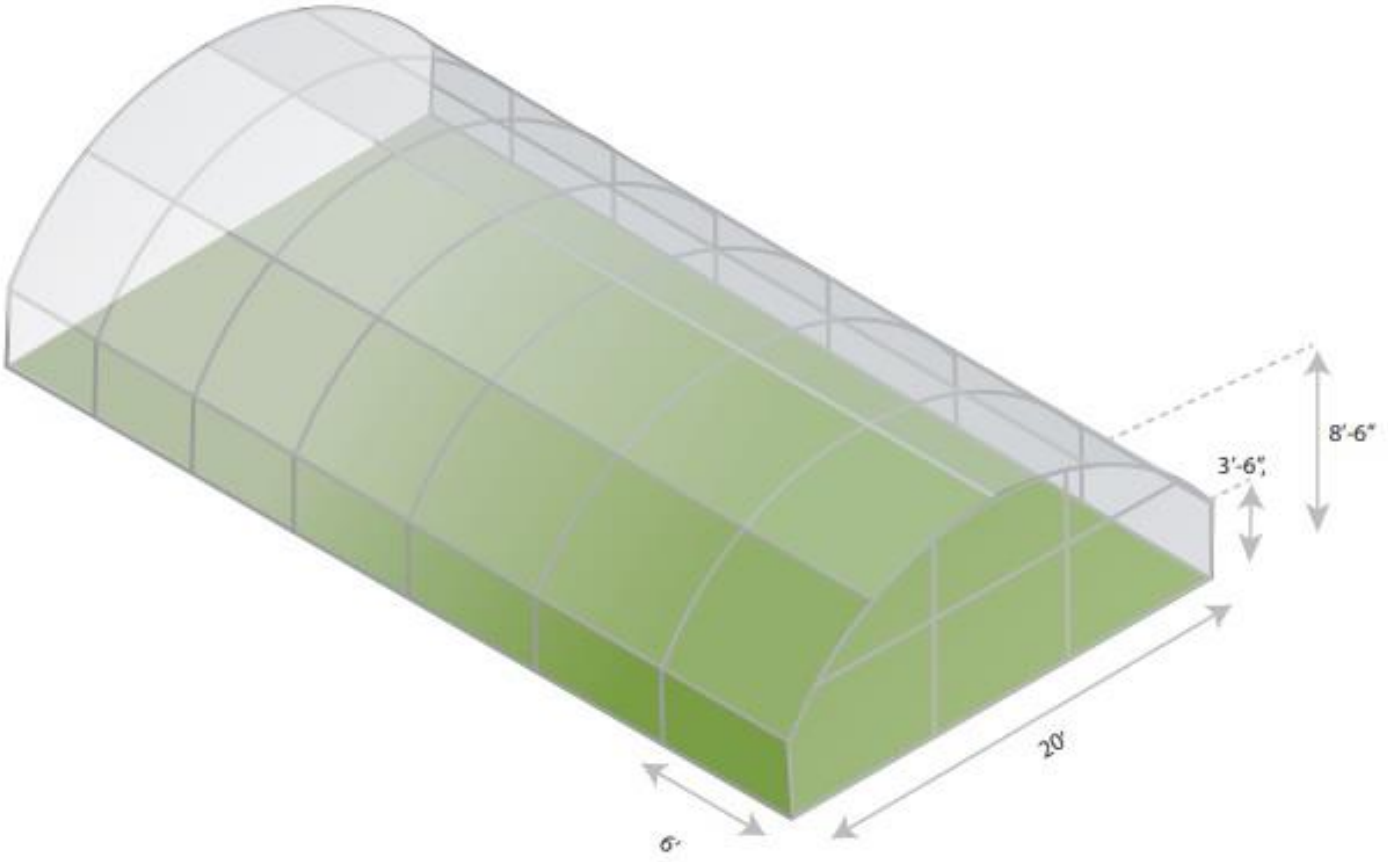


Exhibit A

Manufacture Drawing



Conley's CF 1100 With Side Walls

Main Features:

- Two-piece arch
- Easy installation
- Economically priced
- ROLL-FORMED arch design for maximum strength
- Wood for sidewall framing supplied by customer
- Three runs of purlins

EXHIBIT "B"

Greenhouse Lighting

Greenhouse lighting will be low intensity LED Lighting. String lights with Flood light bulbs will be used. These lights will have a downward beam of 60 degree. Downward lighting will not allow light to hit the ceiling of the building, therefor avoiding any upward lighting glare. Lighting will be used to supplement daylight hours giving 24 hours of illumination. Lights will be 1.41 watts per sq ft.

We are not using High Intensity Discharge lights or any gas discharge lights such as High Pressure Sodium. These lights are used for cannabis flowering and are associated with high glare. HID lights are used at a rate of 41.66 watts per sq ft.

EXHIBIT "B"

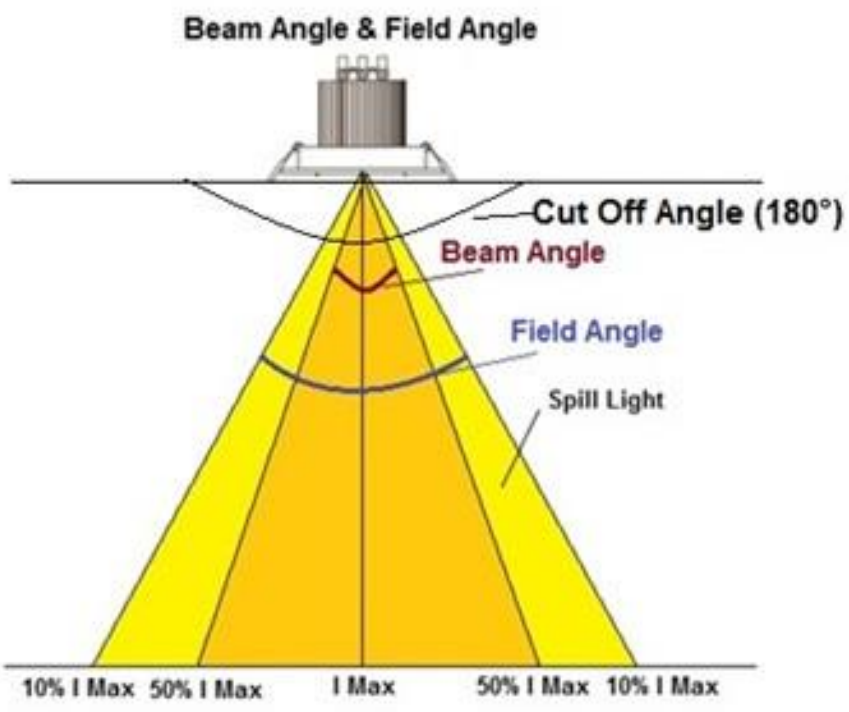
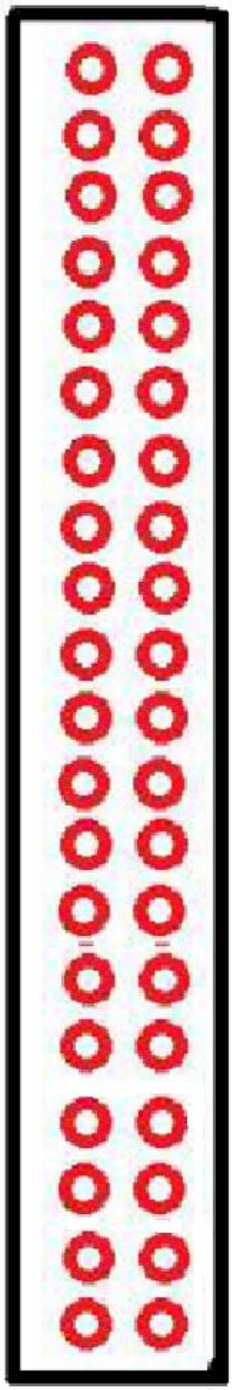


EXHIBIT "B"

Aggregate Wattage Calculation Per Greenhouse

40 lights @ 85 watts = 3,400 watts Per Greenhouse

3,400 watts / 2,400 sq ft = **1.41 watts per sq ft**



APPENDIX F

ALUC Referral Form

COLUSA COUNTY AIRPORT LAND USE COMMISSION (ALUC) REFERRAL FORM FOR PROJECT REVIEW

ALUC Identification No. 21-05

PROJECT PROPONENT (TO BE COMPLETED BY APPLICANT)

Date of Application	7-22-21		
Applicant	Ranveer Tumber	Phone Number	530.354.6464
Mailing Address	1289 LINCOLN ROAD		
	YUBA CITY, CA 95991		
Agent (if any)		Phone Number	
Mailing Address			

PROJECT LOCATION (TO BE COMPLETED BY APPLICANT)

Attach an accurately scaled map showing the relationship of the project site to the airport boundary and runways

Street Address	7100 Farinon Rd		
	Colusa, CA 95932		
Assessor's Parcel No.	017-130-092	Parcel Size	1.11
Subdivision Name	Mogk	Zoning Classification	M-1
Lot Number			

PROJECT DESCRIPTION (TO BE COMPLETED BY APPLICANT)

If applicable, attach a detailed site plan showing ground elevations, the location of structures, open spaces and water bodies, and the heights of structures and trees; include additional project description data as needed

Existing Land Use (describe)	Remainder undeveloped pad (adjacent to existing cannabis cultivation)		
Proposed Land Use (describe)	Cannabis cultivation		
For Residential Uses	Number of Parcels or Units on Site (exclude secondary units)		
For Other Land Uses	Hours of Use	6am to 4pm	
	Number of People On Site…	Maximum Number: 2	
		Method of Calculation: Business Plan	
Height Data	Height above Ground of Tallest Object (including antennas and trees)	9	ft.
	Highest Elevation (above sea level) of Any Object or Terrain on Site	48.20	ft.

Flight Hazards

Does the Project Involve Characteristics that:

- Could Create Electrical Interference, Confusing Lights, Glare, Smoke, or Other Electrical or Visual Hazards to Aircraft Flight? ☐ Yes ☑ No
- Could Attract Birds or Other Wildlife to the Airport or Vicinity? ☐ Yes ☑ No

If Yes, Describe

REFERRING AGENCY (TO BE COMPLETED BY SUBMITTING AGENCY STAFF)

Date Received: 7-20-21

Agency Name: City of Colusa
Planning Department

Staff Contact: Bryan Stice

Phone Number: 530-458-4740 x103

Agency's Project No.: pending

Type of Project
- ☐ General Plan Amendment
- ☐ Zoning Amendment or Variance
- ☐ Subdivision Approval
- ☐ Use Permit
- ☐ Public Facility
- ☑ Other: Building Permit

Indicate agencies that have been notified of project.

☑ Colusa County Airport ☐ County of Colusa ☑ City of Colusa ☐ Other: _____

ALUC REVIEW (TO BE COMPLETED BY ALUC STAFF / ATTACH ADDITIONAL PAGES IF NECESSARY)

Application Receipt
- Date Received _____ By _____
- Is Application Complete? ☐ Yes ☐ No
- If no, cite reasons _____

Airport ☐ Colusa County Airport ☐ New Airport/Heliport ☐ Other: _____

Land Use Category/Categories _____

Basic Review Criteria
- Compatibility Zone(s) ☐ A ☐ B1 ☐ B2 ☐ C1 ☐ C2 ☐ C3 ☐ D
- Land Use Acceptability ☐ Normally Compatible ☐ Conditional ☐ Incompatible
- Sitewide Avg. Density/Intensity Criteria Met? ☐ Yes ☐ No _____
- Single-Acre Density/Intensity Criteria Met? ☐ Yes ☐ No _____
- Open Land Requirement Met? ☐ Yes ☐ No _____
- Sound Attenuation Requirement Met? ☐ Yes ☐ No _____
- Easement/ Overflight Notice Provided? ☐ Yes ☐ No _____

Airspace Protection Compatibility
- Height Acceptable? ☐ Yes ☐ No _____
- FAA Notified if Applicable? ☐ Yes ☐ No _____
- Other Hazards to Flight Excluded? ☐ Yes ☐ No _____

Special Site/Project Conditions Describe: _____

ACTIONS TAKEN (TO BE COMPLETED BY ALUC STAFF)

ALUC Action
- ☐ Consistent Date _____
- ☐ Consistent with Conditions (list conditions / attach additional pages if needed)
- ☐ Inconsistent (list reasons / attach additional pages if needed)

COUNTY OF COLUSA

COMMUNITY DEVELOPMENT DEPARTMENT

220 12th Street
Colusa, California 95932
TELEPHONE (530) 458-0480 FAX (530) 458-0482

March 26, 2021

Ranveer Tumber
Golden Roots Nursery
2151 Redding Avenue
Yuba City CA, 95993

Re: Hoop Houses on Farinon Road

Dear Mr. Tumber:

The purpose of this letter is to inform you that the four proposed hoop houses on Farinon Road do not require Airport Land Use Commission (ALUC) review as currently proposed. As we discussed the proposed hoop houses do not encroach into the 50:1 imaginary surface so a Federal Aviation Administration (FAA) Determination is not required (*50:1 ratio at project site is 11.46 feet site is 573 feet form runway with highest elevation of the site being 48.2 feet, runway elevation is 49.6 feet so total allowable height is 12.46 feet*) for hoop houses with an elevation of 8.5 feet.

Additionally, the proposal for four hoop houses of 2,400 square feet (120' x 20') for a total of 9,600 square feet does not exceed the 10,000 square foot ALUC review requirement found in Airport Compatibility Land Use Plan (ACLUP). At such time you do decide to install lighting in the hoop houses, ALUC review of the lighting plan will be required

Should you have any questions regarding this matter, please feel contact me at (530) 458-0480.

Sincerely,

Kent Johanns
Associate Planner

Cc: Bryan Stice, Senior Planner, City of Colusa (e-mail)

COUNTY OF COLUSA, CA

Request For Airport Advisory Committee

MEETING DATE: **August 12, 2021**

DEPARTMENT: **Community Development**

FROM: **Greg Plucker**

SUBJECT: **Tan Oak Innovations Industrial Buildings and Use**

SITTING AS THE AIRPORT LAND USE COMMISSION

Adopt a Resolution determining that the Tan Oak Innovations project in the Colusa Industrial Park is consistent with the County's Airport Land Use Compatibility Plan based on the findings and conditions in said resolution.

PROJECT OVERVIEW

Owner:
Ed Hulbert
Colusa Industrial Properties
50 Sunrise Boulevard
Colusa, California 95932

Referring Agency:
County of Colusa
ATTN: Kent Johanns
220 12 Street
Colusa, CA 95932
kjohanns@countyofcolusa.com
(530) 458-0484

Project Summary:

At the Commission's July 12th meeting, the Commission reviewed the proposed Tan Oak Innovations project for consistency with the Colusa County's Airport Land Use Compatibility Plan (ALUCP). Please refer to Attachment #1 for the staff report packet from this meeting.

At the conclusion of the meeting, the Commission determined that additional information was necessary before a final decision on the project's consistency with the ALUCP could be determined; although based on the information that was available the project was positively received. The Commission directed staff to return to the Commission as soon after the additional information had been submitted to staff.

Subsequent to the Commission's July 12th meeting, staff received the additional information, including the required FAA's hazard identification studies (Attached). Based on the submittal of the additional information, staff has prepared the attached resolution for the Commission's consideration. The proposed resolution finds that the project is consistent, with certain conditions, with the ALUCP. Significant conditions include:

1.) The building height consistency determination is conditioned on the determinations of the FAA studies becoming final on August 23, 2021. The FAA determinations are subject to challenge and the challenge period will expire on August 23, 2021.

2.) Because the project site is located within the Airport's Critical Airspace Protection Zone, no outdoor use that would penetrate an Airspace Protection Surface would be allowed until the FAA determines that the penetration would not be a hazard to air navigation (ALUCP §3.5.2(c)(1)) and the Airport Manager, or the Commission if the matter is referred to it, makes certain findings (ALUCP §3.5.2(c)(2)).

3.) Truck traffic on Farinon Road can penetrate the 20:1 Approach Surface. The ALUCP prohibits any object, including a mobile object such as a vehicle, from penetrating an Airspace Protection Zone unless the FAA and County's Airport Manager/ALUC makes the determinations and findings detailed in Section 3.5.2(c) of the ALUCP. County staff and its consultant are working on obtaining the required FAA determination. Once that happens, and assuming that the FAA determination is one of "not a hazard to air navigation", the matter will be brought to the Commission for your determination of the required findings detailed in Section 3.5.2(c)(2) of the ALUCP. At your regularly scheduled September meeting, County staff will provide a status update of this effort.

At the Commission's meeting, County staff will be available to answer any questions regarding the proposed resolution.

PUBLIC COMMENTS:

No public comments have been received at this time. If comments are received following distribution of this staff report, those comments will be provided to the Airport Land Use Commission at the meeting.

ALUC STAFF RECOMMENDATION:

Staff recommends that the Commission consider and then adopt the attached resolution finding that the Tan Oak Innovations project is conditionally consistent with the ALUCP.

PRIOR COMMISSION ACTION

This matter was considered at the Commission's July 12th meeting and was continued until such time that the necessary information was submitted to allow the Commission to make a consistency determination.

FISCAL IMPACT/FUNDING SOURCE

None

PREPARATION:

Prepared By:

Greg Plucker, Community Development Director (530) 458-0483

ACTION FOR THE CLERK

Obtain the necessary signatures on the resolution, mail a copy to the owner at the previously referenced address, and email an electronic copy to the County's Community Development Director.

ATTACHMENTS:

- Draft ALUC Resolution Finding of Consistency for Tan Oak Innovations (DOCX)
- Exhibit "A" Tan Oak Innovations Process Summary UPDATED 07 13 2021 (PDF)
- Attachment #1 ALUC Staff Report Packet of July 12th (PDF)
- Tan Oak FAA Determination For Bldg #1 (PDF)
- Tan Oak FAA Determination for Bldg #2 (PDF)

RESOLUTION NO. 21-__

A RESOLUTION OF THE COLUSA COUNTY AIRPORT LAND USE COMMISSION MAKING AIRPORT LAND USE COMPATIBILITY PLAN CONSISTENCY FINDINGS REGARDING THE TAN OAK INNOVATIONS DEVELOPMENT

WHEREAS, on May 10, 2021 Colusa Industrial Properties submitted a request to the Airport Land Use Commission (ALUC) that the Commission hold a special meeting in June to make a consistency determination for the Tan Oak Innovations development proposal with the Colusa County's Airport Land Use Compatibility Plan (ALUCP);

WHEREAS, the project site has an address of 2949 Farinon Road, Colusa and is located approximately 250 feet northwest of the end of Airport Runway 13 (APN:017-130-006);

WHEREAS, the project site is located within the ALUCP's B1 and C1 Compatibility Zone and pursuant to the Airport Land Use Compatibility Plan (ALUCP) Section 2.2 (h) (nonresidential buildings greater than 10,000 sq.ft.), Section 2.2 (j) (FAA hazard determination), Section 2.2 (l) (potential visual hazards to aircraft in flight) and Section 2.2 (m) (potential thermal plume) the project is required to be reviewed by the ALUC for consistency with the ALUCP.;

WHEREAS, on July 12, 2021, the proposed project was submitted to the ALUC for review of its consistency with the ALUCP;

WHEREAS, during the ALUC's review, it considered the staff report, the requirements of the ALUCP, and all oral and written testimony presented concerning the application;

WHEREAS, following the consideration of all facts and information at the July 12, 2021 ALUC meeting, the Commission determined that additional information, including the results of the FAA air hazard study, was necessary in order to fully consider the project and determine its consistency with the requirements of the ALUCP; and

WHEREAS, subsequent to the Commission's July 12, 2021 meeting, additional project information, including the results of the FAA air hazard study, was submitted to County staff; and

WHEREAS, on August 12, 2021, the proposed project was re-submitted to the ALUC for further review of its consistency with the ALUCP at which time the Commission considered the proposed consistency resolution with findings, the requirements of the ALUCP, and all oral and written testimony presented concerning the application.

NOW, THEREFORE, BE IT RESOLVED that the Colusa County Airport Land Use Commission makes the following determinations and findings based on its review of the project:

I. The Commission can only make a finding of consistency or inconsistency for the proposed buildings and use considered herein and is unable to make any finding of

consistency with respect to any future use or development on the project site and, as such, all future uses and development must be submitted to the County's ALUC staff to determine if the Commission is required to make a review of consistency consistent with the ALUCP.

II. The proposed development and use as shown in Exhibit "A" attached hereto and incorporated by reference has the potential to be inconsistent with the ALUCP due to use compatibility, the density of the number of persons on the site, noise impacts to sensitive receptors, height issues, potential light impacts, and the creation of a thermal plume. All of which could negatively impact aviation at the Colusa County Airport. However, based on the following facts, conditions on the proposed development and use, and agreement of project proponents to said conditions detailed herein the proposed project would be consistent with the ALUCP:

A. Use Compatibility

1. The project site is located in the B1 and C1 Compatibility Zones of the ALUCP. Pursuant to Table 3A of the ALUCP, industrial uses that involve the storage of hazardous materials are considered Heavy Industrial uses and these uses are not allowed in the in the B1 Compatibility Zone. Industrial uses that involve the on-site storage of hazardous materials are considered Heavy Industrial uses and these uses are conditionally allowed in the C1 Compatibility Zone subject to an evaluation of the possible need for special measures to minimize hazards if struck by an aircraft. In addition, the generation of steam or thermal plumes are not allowed.

2. The proposed use would not involve the storage of hazardous materials and is not considered a heavy industrial use. Based on the intensity of person per square foot, the use is considered a Light Industrial – Low Intensity Use which is a conditionally compatible use in the B1 and C1 Compatibility Zones.

3. In the future should the storage of hazardous materials be proposed in an amount that would trigger a permit from the Colusa Certified Unified Program Agency (CUPA), the proposed storage shall be reviewed and found to be consistent with the ACLUP by the ALUC to determine any special measures which would be required to minimize hazards if struck by an aircraft prior to issuance of any required CUPA permit.

4. Project proponents have stated that there will be no exterior visual steam or thermal plumes created, and based on this representation the project would be consistent with the ALUCP in that the ALUCP does not allow visual steam or thermal plumes that would impact aircraft operations.

B. Density of the Number of Persons on the Site

1. Pursuant to Table 3A of the ALUCP, a maximum of 62 persons, with no more than 50 persons on any one-acre area is allowed on the easterly half of the site where the storage and parking uses would occur (B1 Zone). On the easterly half of the property in the C1 Zone, a maximum of 200 persons are allowed to work in the industrial and office buildings since the sitewide average limit is less than the maximum single acreage limit.

2. Tan Oak representatives have stated that the maximum number of employees on-site at any time would be 14 with 10 employees in the B1 Zone and 4 employees in the C1 Zone. At shift change, a maximum of 28 employees could theoretically be on-site at any one time. The maximum number of employees at shift change is less than the maximum number of persons allowed on the entirety of the site and the maximum number of persons in any single-acre in the B1 and C1 Zones and, therefore, the number of persons on the site would be consistent with the ALUCP.

C. Exposure of Persons to Excess Noise

1. The proposed buildings are subject to a noise exposure level in excess of 70 dB Ldn. Typical construction techniques for future noise sensitive office space uses (2 x 4 stud walls, R-13 insulation, and interior ½" sheetrock) would afford approximately 25 dB of noise reduction and would significantly reduce aircraft noise impact.

2. The City shall require as a condition of any interior office space building permit approval that such office space be constructed to meet the minimum construction requirements to obtain an interior noise level pursuant to the City's General Plan Noise Element (45 dB Ldn).

D. Exterior Lighting Impacts

1. The installation of high-intensity and/or unshielded exterior building or other outside lighting could create a negative impact to night-time aircraft flight operations.

2. Any exterior lighting that is installed in conjunction with the proposed development shall be at the minimum intensity level to provide the necessary illumination, shall be shielded to prevent off-site glare impacts, and shall be directed downward to focus the light on the ground.

E. Potential Steam/Thermal Plume

1. In conjunction with production processes, a certain amount of steam would be produced and vented into the atmosphere by the "Mini-Quick" chunk dryer and the natural charcoal briquettes production equipment.

2. Project proponents have testified that given the limited amount of steam that would actually be produced that there will be no exterior visual steam or thermal plumes created by the production processes and based on this assurance the project would be consistent with the ALUCP.

F. Height Obstructions

1. The proposed buildings have encroachments into the 40:1 Departure Surface and the 50:1 7460-1 notification slopes. Pursuant to the FAA Aeronautical Study No. 2021-AWP-7414-OE, a portion of a building would penetrate the O08 RWY 31 40:1 instrument departure surface by 26 feet. Pursuant to the FAA Aeronautical Study No.2021-AWP-7420-OE, a portion of a building would penetrate the O08 RWY 31 40:1 departure surface by 20 to 23 feet.

2. The referenced FAA aeronautical studies determined that the proposed building construction would not have a substantial adverse effect on the safe and efficient use of navigable airspace by aircraft with conditions.

3. Pursuant to Section 3.5.2(c)(2) of the ALUCP, the Commission makes each of three findings relating to no increase in the ceiling or visibility minimums of the Airport, no reduction of the established operational efficiency and capacity of the Airport, and no conflict with the visual flight rules (VFR) or airspace used for the airport traffic pattern or en route navigation to and from the Airport contingent upon the development complying with all conditions of the referenced FAA aeronautical studies including but not limited to:

   a. The buildings shall be marked/lighted in accordance with FAA Advisory Circular 70/7460-1 M, Obstruction Marking and Lighting, red lights-Chapters 4,5(Red), & 15 at the earliest possible time but not later than any building final and prior to any occupancy.

   b. Once the lighting has been installed, any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, shall be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued and as soon as the normal operation is restored notification of the repair shall also be made to (877) 487-6867.

   c. FAA Form 7460-2, Notice of Actual Construction or Alteration, must be e-filed any time the project is abandoned or at least 10 days prior to start of construction (7460-2, Part 1) and within 5 days after the construction reaches its greatest height (7460-2, Part 2).

d. Prior to building final and prior to any occupancy, the Airport's TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES shall be modified to include the required notations detailed in the FAA Aeronautical Study No. 2021-AWP-7414-OE and Study No. 2021-AWP-7420-OE to the satisfaction of the Airport Manager.

4. The determination of building height consistency with the County's ALUCP is contingent upon the FAA's determinations in Aeronautical Study No 2021-AWP-7420-OE and Study 2021-AWP-7414-OE becoming final on August 23, 2021.

5. In the event that a petition against said determinations is timely filed with the FAA, the determination of building height consistency will not become final until such time as the FAA determines the disposition of the filed petition. In the event that the FAA makes any changes to the determinations and conditions within Aeronautical Study No 2021-AWP-7420-OE and/or Study 2021-AWP-7414-OE, said changes shall be referred back to the ALUC for reconsideration of the building height consistency determination.

6. Project proponents have stated that the easterly portion of the property would be used for storage and truck parking. In addition, there is the potential for the installation of exterior light poles so that night time operations can be conducted. The layout of the parking, storage, light poles and other uses on the easterly portion of the property has not been specifically defined and, therefore, the ALUC cannot make any consistency determination with respect to future development in this area and, as such, all future uses and development must be submitted to the County's ALUC staff to determine if the Commission is required to make a review of consistency consistent with the ALUCP.

7. The property is located within the Airport's Critical Airspace Protection Zone (ALUCP Map 3B, Airspace Protection Surfaces). Project proponents have submitted conceptual plans for two buildings in the easterly half of the property to the FAA for a hazard identification study. The results of the conceptual FAA Aeronautical Study No. 2021-AWP-2877-0E and Aeronautical Study No. 2021-A WP-2883-0E is that objects that exceed a height as little as three feet could penetrate an Airspace Protection Zone.

8. Section 3.5.2(a) of the ALUCP prohibits any object, including a mobile object such as a vehicle from penetrating an Airspace Protection Zone unless the FAA determines that the object would not be a hazard to air navigation (ALUCP §3.5.2(c)(1)) and the FAA or other expert analysis conducted under the auspices of the ALUC or the airport operator concludes that, despite being an airspace obstruction the object that would not cause any of the following (ALUCP §3.5.2(c)(2)):

a. An increase in the ceiling or visibility minimums of the Airport for an existing or planned instrument procedure (a planned procedure is one that is formally on file with the FAA);

b. A reduction of the established operational efficiency and capacity of the Airport, such as by causing the usable length of the runway to be reduced; or

c. Conflict with the visual flight rules (VFR), airspace used for the airport traffic pattern or en route navigation to and from the Airport.

9. In order to comply Section 3.5.2(a) of the ALUCP, any use or object on the property that penetrates an Airspace Protection Zone is not permitted unless the findings required by Section 3.5.2(c) of the ALUCP have been made. In order to make said findings, the results of the required FAA aeronautical study shall be submitted to the Airport Manager for review. The Airport Manager shall either make the required findings pursuant ALUCP §3.5.2(c)(2) or refer the determination of said findings to the ALUC.

10. Project proponents have stated their desire to access the project site using Farinon Road. As detailed in Caltrans' Division of Aeronautics letter of December 5, 2021 to Greg Hinton, then Airport Manager, vehicle traffic on Farinon Road penetrates the FAR Part 77, 20:1 Approach Surface along the entire north and southwest fence lines. This penetration had been previously identified and in the County's May 2019 Airport Layout Plan Update, this encroachment was identified with the requirement that access be restricted.

11. County staff and the County's airport consultant have initiated a hazard identification study with the FAA on Farinon Road vehicular traffic to precisely define the issues and potential solutions. The preliminary results indicate that vehicular truck traffic on Farinon Road penetrates the FAR Part 77, 20:1 Approach Surface by 1.3± feet. Section 3.5.2(a) of the ALUCP prohibits any object, including a mobile object such as a vehicle, from penetrating an Airspace Protection Zone unless the FAA and County's Airport Manager or ALUC makes the determinations and findings detailed in Section 3.5.2(c) of the ALUCP.

12. Until such time that the FAA determines that truck traffic on Farinon Road penetrating the 20:1 Approach Surface is not a hazard to air navigation (ALUCP §3.5.2(c)(1)) and the Airport Manager, or the ALUC if the matter is referred to it, makes the findings detailed in Section 3.5.2(c)(2) of the ALUCP, no truck or vehicular traffic penetrating the 20:1 Approach Surface from the proposed development is allowed to use Farinon Road. Once and contingent upon said determinations and findings being made, truck traffic associated with the proposed development penetrating the 20:1 Approach Surface shall only be allowed subject to any and all conditions that have been adopted as part of said determinations and findings.

PASSED AND ADOPTED this 12th day of August, 2021 by the following vote:

AYES:

NOES:

ABSENT:

_____
Michael P. West, Chair
Airport Land Use Commission

ATTEST: Wendy G. Tyler, Secretary
Airport Land Use Commission

_____
Melissa Kitts, Deputy Clerk

ATTEST TO FORM

_____
Jennifer Sutton,
Senior Deputy County Counsel

RECEIVED
July 13, 2021
Colusa County
Community Development
Department

TANOAK INNOVATION, LLC
PROCESS DESCRIPTION

Tanoak is an abundant hardwood tree that grows primarily along the coast from Brookings, Oregon to Santa Cruz, California. There is perhaps no tree in North America which has been so systematically wasted as Tanoak. From 1814 to 1928, Tanoak bark was peeled from the tree for its tannin extract used to tan leather hides. The tree was left standing to decay. Currently, landowners chemically kill tanoak trees to accelerate the growth of existing redwood and Douglas fir trees. The chemical eradication process, commonly referred to as "hack & squirt", increases fire risk and intensity. The optimal solution to reduce the overstock of tanoak trees is to harvest and convert the trees into innovative products. Tanoak Innovation was formed to provide landowners a commercial outlet for tanoak trees.

Tanoak trees will be harvested as a component of a redwood and Douglas fir logging operation. The trees will be bucked in-woods to 20 foot or shorter log segments and loaded into open top boxes for shipment to Colusa. Upon arrival in Colusa, the logs will be unloaded, weighed and placed into log bunks. The logs will be placed on a conveyor, advanced to a bucksaw and cut to 4-foot, 8-foot or 10-foot segments. All sawdust and bark waste (biomass) from the bucksaw will be collected and conveyed to a hammermill for further processing. This operation is referred to as the "merchandising" line. The merchandising operation requires **2 employees per shift**.

Merchandised logs are conveyed to a lathe style debarker capable of debarking log diameters from 4 to 20 inches and lengths from 4 to 10 feet. A single log segment will drop down from an opening at the top of the debarker onto 2 counter rotating drive shafts. A steel knife is hydraulically advanced until it comes into contact with the log. The knife is held into place by hydraulic pressure. As the log spins against the knife, all biomass is removed until the log is clean and cylindrical. As the biomass is removed and discharged, it is reduced in size by a series of small circular saws mounted on a drive shaft. The small pieces of biomass are then conveyed to a hammermill where it will be refined into powder. The clean, cylindrical logs drop down onto a conveyor to be sorted by diameter and quality. Log sort #1 will be bundled and sold to hardwood veneer plants and flooring manufacturers. Log sort #2 will be processed into wood chunks for the barbecue industry and log sort #3 will be converted into charcoal briquettes for the

barbecue industry. The debarking and sorting operation requires **1 employee per shift**.

A log "Chunker" is a modified commercial firewood splitter. It's function is to convert 10 to 12 inch diameter logs into into chunks measuring 3 inches x 3 inches x 3 inches. The logs are conveyed from the debarker onto a log in-feed table then advanced to a U-shaped feed trough where the logs are abutted end to end and chain fed in 3-inch increments to a log stop. The logs are then cut into 3-inch thick "Rounds". Each round drops down into a 5-inch wide splitting chamber then pushed through a splitting wedge by a hydraulic ram. The wedge is designed to convert the rounds into 3-inch x 3-inch squares. All biomass generated by the chunk saw and wedge are conveyed to a hammermill and refined into powder. When the wood chunks exit the wedge, the chunks are conveyed to a trammel screen and tumbled to remove all "Fines". The "fines" are conveyed to a hammermill and refined into powder. The chunks are conveyed and loaded into steel baskets for drying. Each basket holds .75 cords of chunks or 5,000 Lbs. The chunking operation requires **1 employee per shift**.

The "Mini-Quick" chunk dryer is effectively a shipping container measuring 29 feet long, 8.5 feet wide and 12.6 feet tall equipped with a control room, natural gas burner and fan. The container holds 8 baskets of wood chunks containing 6 cords of chunks weighing a maximum of 40,000 Lbs. The dryer is heated to a maximum temperature of 260 degrees Fahrenheit. When the internal temperature of the wood reaches 212 degrees Fahrenheit, the wood moisture turns to steam. A 2 Hp fan removes the steam from the container through a vent to atmosphere. The drying process is engineered to reduce the chunk moisture content from 50% to 10% in 24 hours. The small amount of natural gas burned to heat the kiln is well below State and Federal air emissions standards. The mini-quick kiln will remove 20,000 Lbs. of water per day reducing the chunk weight to 20,000 pounds when dry. The chunks are then bagged, palletized and inventoried. The drying and bagging operation requires **2 employees per shift**.

Small diameter logs measuring 4 inches to 10 inches in diameter are conveyed to a whole-log chipper. A chipper consists of a series of knives mounted on a circular steel rotating drum. The log is hydraulically pushed against the r0tating drum that slices the logs into chips measuring ¼ inch thick x ¾ inch wide x 1-inch long. The chips are then conveyed to a hammermill and refined into powder. A portion of the chips will be dried and bagged for the barbecue industry. The chipping operation does not require a dedicated employee.

Log sort #1 are the highest quality logs. These logs will be bundled and sold to veneer and flooring manufacturing companies. In the future, If the quantity of #1 sort logs is sufficient to operate a veneer plant or flooring plant, these logs will be processed in Colusa, which will require **4 employees per shift**.

All bark, fines and wood chips (biomass) will be converted into charcoal to make briquettes for the barbecue industry. The charcoal operation consumes 13.33 green (wet) tons of wood and bark (biomass) per hour to generate 2 tons of bone-dry charcoal per hour.

The process of making charcoal begins by refining biomass into powder. Biomass is fed into a hammer mill, which is a steel drum containing a vertical or horizontal rotating drum on which hammers are mounted. The spinning hammers refine the biomass into powder. The powder is discharged when the biomass particles are small enough to pass through a mesh screen. The biomass powder is then conveyed to a rotary drum dryer for moisture reduction.

Rotary dryers remove moisture from biomass by tumbling material in a rotating drum in the presence of heat and air flow. As the drum rotates, lifting flights pick up the material and drop it through the air stream to maximize heat transfer efficiency. The dryer will reduce moisture content from 50% to 15% at an infeed rate of 13.33 green tons of wood fiber per hour generating 6.77 dry tons of biomass powder. The rotary dryer is initially heated by a natural gas fired burner. When the carbonizer is fully heated, the natural gas turns off and the high temperature exhaust from the carbonizer provides the heat to the rotary dryer eliminating all rotary dryer emissions. The dry biomass powder from the rotary dryer is conveyed to a continuous carbon reactor for carbonizing.

A continuous carbon reactor utilizes dry distillation carbonization technology to convert biomass into charcoal. The process generates combustible gases, such as carbon monoxide, methane and hydrogen that form synthesis gases (syngas) that are burned as a replacement of natural gas. The combustible syngas heats up the carbonizing reactor through the self-air distribution burners. The excess heat from the carbonizer is exhausted to a rotary dryer to create a closed loop drying and carbonizing system. The only natural gas consumed during the charcoal making process is the initial startup of the rotary dryer and carbon reactor. From the start of ignition until the reactor temperature rises to 160° C (320°F), the residual 15% moisture contained in the biomass powder is evaporated by external heat. The chemical composition of the wood does not change during this stage. The biomass will begin to generate heat when the reactor temperature reaches 232°C or 450°F. The biomass undergoes a thermal decomposition reaction, and its composition

begins to change, including the decomposition of hemicellulose, evaporation of CO2, CO and a small amount of acetic acid and other volatile organic gasses. Full carbonization occurs at temperature peak of 650°C or 1,202°F. In this stage, the wood undergoes rapid thermal decomposition while generating a significant amount of syngas. The syngas is captured and burned in the carbonizer to produce the energy required by the process. The thermal decomposition and gas combustion produce a large amount of heat so that the temperature of the reactor rises, and the biomass is carbonized at a high temperature. Because the inside of the furnace is sealed and without oxygen, the biomass does not burn, but instead, carbonizes into charcoal. When combustible gas is fully expended from the wood the carbonization process is complete. The moisture free charcoal is continuously dispensed from the bottom of the reactor where it is cooled and conveyed into a bin.

Tanoak Innovation will make all natural charcoal briquettes using only charcoal, starch and water. The 3 ingredients are dosed into an agitating mixer to create a consistent blend. The moist charcoal mixture is then metered into a roll briquette machine that applies pressure to the charcoal particles by squeezing them between two counter rotating rolls. Cavities are cut into the surfaces of the rolls to form the "pillow" shaped briquettes. The briquettes are discharged from the cavity by gravity as the cavity wheel rotates. The wet briquettes are then dispensed from the briquetter onto a wire mesh belt conveyor through a 15-foot wide x 100-foot long enclosed drying chamber. The drying chamber is heated by a natural gas burner to a temperature of 260 degrees Fahrenheit. When the internal temperature of the briquette reaches a temperature of 212 degrees Fahrenheit, the moisture turns to steam, which is exhausted to atmosphere by fans mounted on the side of the dryer. The dry briquettes are conveyed to a packaging line for bagging then stored in inventory. Belt dryer emissions are below Federal EPA and State standards. The charcoal and briquette operation requires 3 **employees per shift**.

Tanoak Innovation intends to phase its manufacturing plant. The first phase includes the products described in the preceding paragraphs. The second production phase will include the making of lump charcoal, BBQ pellets and dry smoke wood chips. These processes will be summarized at the time of project permitting. The labor requirement indicated above is sufficient to operate future processes. All trucks are unloaded by the truck driver as the bins are self unloading.

COUNTY OF COLUSA, CA

Request For Airport Advisory Committee

MEETING DATE: **July 12, 2021**

DEPARTMENT: **Community Development**

FROM: **Greg Plucker**

SUBJECT: **Proposed Tan Oak Innovations Industrial Buildings and Use**

SITTING AS THE AIRPORT LAND USE COMMISSION

Receive a presentation on the proposed Tan Oak Innovations use and buildings. **Further**, provide any desired direction with respect to the project and its consistency with the County's Airport Land Use Compatibility Plan.

PROJECT OVERVIEW

Owner:

Ed Hulbert
Colusa Industrial Properties
50 Sunrise Boulevard
Colusa, California 95932

Referring Agency:

County of Colusa
ATTN: Kent Johanns
220 12 Street
Colusa, CA 95932
kjohanns@countyofcolusa.com
(530) 458-0484

Project Summary:

The County's Planning staff has referred the proposed Tan Oak Innovations project to the Colusa County's Airport Land Use Commission (ALUC) for a consistency review of the project with the Colusa County's Airport Land Use Compatibility Plan (ALUCP).

As detailed in the use summary (Exhibit "A"), Tan Oak logs are transported to the site and converted to barbecue charcoal briquettes and wood chips and veneer and flooring logs. The charcoal briquettes are produced from a continuous carbon reactor which is initially fueled by natural gas. A lathe style debarker removes the excess biomass from the logs and produce clean and cylindrical logs which are then sorted

into three different log types: (1) Log Sort #1 is bundled and sold to hardwood veneer plants and flooring manufacturers; (2) Log Sort #2 is processed into wood chunks for the barbecue industry; and (3) Log Sort #3 is converted into charcoal briquettes for the barbecue industry.

As shown on the attached plans (Exhibit "B"), the proposed use would occur in two 20,000 sq.ft. industrial buildings situated along the Niagara Avenue frontage with a 2,400 sq.ft. office building situated between the industrial buildings. The balance of the site would be used for storage and truck parking.

The attached use summary indicates that within the industrial buildings 14 employees would be working at any one time. The use summary also states that additional operating employees would unload and load the trucks, maintain equipment, and fulfill orders and that sales and administrative staff would also be present on the site. No specific employee counts were given for these employees. Project proponents have indicated that operations at the site would occur in several phases. Ultimately it is planned that operations would be conducted 24 hours a day, 7 days a week. However, initially operations would be conducted up to 16 hours a day, 5 days a week.

Location:

The subject site has an address of 2949 Farinon Road in Colusa. As shown below, the site is located approximately 250 feet northwest of the end of Airport Runway 13 (APN: 017-130-006).

ANALYSIS:

As introduced, the proposed project has been submitted for a consistency evaluation to the Commission. Colusa Industrial Properties representatives (CIP) are working with Tan Oak Innovations to establish the proposed use on the site. The application was submitted on May 10th and CIP requested that this project be reviewed by the Commission at a special meeting scheduled in June. Staff discussed the potential of scheduling a special meeting with the Chair of the ALUC as the by-laws (Section 4.1) empower the Chair with the authority to schedule a special meeting. However, the information packet that was submitted lacked information that was necessary for staff to be able to fully evaluate the project against the ALCUP and develop a specific recommendation of whether the proposal was consistent with the ALUCP. A key piece of the missing information was the FAA Part 77 obstruction evaluation. The required FAA Form 7460-1(Notice of Proposed Construction) was submitted to the FAA on May 13th.

Given that the FAA review has been taking 90± days and that other information was missing, staff believed that bringing the project to a special meeting would not be productive as it should. Rather staff believed that bringing the project to the regularly scheduled July meeting was appropriate in that it would allow staff additional time to obtain other necessary information to complete the consistency analysis; although the FAA obstruction evaluation was not anticipated to be available until at least August. CIP representatives would have preferred that the project be considered by the Commission at a special meeting in June and that the Commission make a conditional consistency determination contingent upon the submittal of missing information in the future.

Airport Land Use Compatibility Plan Review (ALUCP):

The proposed project requires that the Commission review the proposed project for consistency with the ALUCP due to the following:

1.) Section 2.2 (h): Nonresidential buildings greater than 10,000 sq.ft.

The proposed project would construct two 20,000 sq.ft. buildings.

2.) Section 2.2 (j): Any proposed object (including buildings, antennas, and other structures) that receives a determination of anything other than "not a hazard to air navigation" by the Federal Aviation Administration in accordance with Federal Aviation Regulations Part 77.

The proposed buildings have not received a determination of "not a hazard to air navigation" as of the writing of this staff report.

3.) Section 2.2 (l): Any project having the potential to create electrical or visual hazards to aircraft in flight.

The proposed project is planned to have 24-hour a day operations which would necessitate the installation of exterior building and parking lot lighting.

4.) Section 2.2 (m): Any project having the potential to create a thermal plume extending to an altitude where aircraft fly.

A by-product of the production process is steam which will be released into the atmosphere.

Based on the aforementioned, Issues that require review are use compatibility, population density, open space, noise impacts to sensitive receptors (office users), height limits, light and glare, and the creation of thermal plumes from steam. Exhibit "B" attached to the staff report shows the buildings elevations, a compatibility zone map, and height analysis of the proposed industrial buildings.

Use Compatibility:

Exhibit "B" shows that the subject site is located in the ALUCP's B1 and C1 Compatibility Zones. As shown in Exhibit "C" (Site and Building Plans), the industrial buildings would be located on the westerly half of the parcel in Zone C1 and the outdoor storage and truck parking would be located on the easterly half of the parcel in Zone B1. The proposed use within the buildings would be considered a "Light Industrial - Low Intensity" use and it is a permitted use in the C1 Zone. Examples of Light Industrial - Low Intensity uses include wood product facilities with a person density of less than 350 sq.ft. per person and does not include the storage of hazardous materials. The proposed use meets these criteria. The proposed use would have outdoor storage in the B1 Zone which is also permitted use, provided an airspace obstruction does not occur (the airspace discussion follows under the height section).

Part of the use determination is the calculation of the site intensity which is determined by the number of persons per acre. The below table shows the Maximum Sitewide Average Intensity (people/acre) and the Maximum Single Acre Intensity (people/acre) for both the B1 Zone and the C1 Zone. Because the compatibility zones split the parcel in half, the density intensity calculation is conducted per compatibility zone.

Compatibility Zone Density Intensity						
	People/Acre		Site Size		Allowed	
	B1	C1	B1	C1	B1	C1
Maximum Sitewide Average	25	80	2.5	2.5	62.5	200
Maximum Single Acre	50	240	1.0	1.0	50.0	240

Per the above table, a maximum of 62 persons, with no more than 50 persons on any one acre, could be working on the easterly half of the site where the storage and parking uses would occur (B1 Zone). On the easterly half of the property, a maximum of 200 persons would be allowed to work in the industrial and office buildings (C1 Zone); since the sitewide average limit is less than the maximum single acreage limit the sitewide average limit restricts the number of employees.

As previously discussed, within the industrial buildings (C1 Zone) 14 employees would be working at any one time; although at shift time the number of employees could be as high as 28. No specific employ counts were given for the additional operating employees which would unload and load the trucks, maintain equipment, fulfill orders, and conduct sales and administrative functions. Although the complete employ count has not been provided, given the density calculations it appears that the proposed use would comply with the intensity requirements. Staff believes that the actual employee numbers should be provided as part of any formal consistency determination to confirm this assumption.

With respect to the open land requirement in the B1and C1 Zones, the below table lists the acreage in both zones, the open space requirements (Table 3A), and the amount of open space calculated per Section 3.4.10. As is shown, both the B1 and C1 Compatibility Zones meet the open space requirements of the ALUCP.

Compatibility Zone Open Space Requirements					
Compatibility Zone	Acreage of Compatibility Zone	ALUCP Open Space Requirements	Acreage of Open Space	Percent Open Space	Open Space Requirement Met
B-1	59	30%	26	44%	MET
C-1	155	20%	83	54%	MET

Noise Impacts To Sensitive Receptors:

Sensitive receptors at the site would be office workers who could be exposed to aircraft noise levels of approximately 70 Ldn dB. The typical standard building construction for an office space (2 x 4 framing, dry wall construction, R13 insulation) would offer approximately a 25 dB reduction in the noise level. Accordingly, as long as any future office space tenant improvements incorporate the standard building specifications mentioned above, this would address this potential noise impact. Any formal consistency finding should include these requirements to ensure that aircraft noise levels do not impact future office workers.

Height Limits:

Given the project site location there are three primary height issues: (1) structure heights; (2) outdoor storage and parking heights; and (3) height of truck traffic along Farinon Road.

Building Heights

With respect to potential building height issues, as shown on Exhibit "B" the maximum height of the industrial buildings are 34.17 feet above the finish floor and would be at a maximum elevation of 85.63 feet. Portions of the industrial buildings encroach some 30.3 feet into the 40:1 departure surface elevation and the buildings encroach some 32.89 feet into the 50:1 7460-1 notification slope. The proposed buildings are outside the

20:1 Approach Surface and Threshold Sighting Surface. No height information is given for the office building. However, since it would be shielded between the much taller industrial buildings, should the industrial building heights be determined to be consistent with the ALCUP, the office building would then be considered consistent.

The proposed buildings have encroachments into the 40:1 Departure Surface and the 50:1 7460-1 notification slope. Project proponents have filed the required FAA Form 7460-1(Notice of Proposed Construction) on May 13th in order for the FAA to evaluate the proposed encroachments. Unfortunately, it has been taking 90± days for the FAA to complete the hazard evaluation. Project proponents have requested that the Commission review the proposed project in advance of receiving the FAA determination. The Commission does have the discretion of reviewing the project in advance of the FAA hazard determination. If the Commission determines that the proposed encroachments would not be a hazard to aviation, the Commission can make a consistency determination. However, once the FAA determination is completed, it must be submitted to the Commission and the Commission has the authority to reconsider its previous consistency determination if the FAA study provides new information.

In order to help determine potential height issues with respect to developing the subject property, CIP representatives previously submitted a Form 7460-1 filing for two conceptual buildings on the subject site. Please see Attachment #1 for the submittal details and the FAA's response. While the height penetrations into the various slopes are less than the Tan Oak buildings (approximately 19 to 20 feet vs. 30 to 33 feet) the conceptual buildings are much closer. In general, the FAA's aeronautical review found the furthest conceptual building (Building #2, 539 feet from Runway 13) would have "*no significant adverse effect on airspace and visual/instrument procedures*" at the airport. The FAA's aeronautical review found the closest conceptual building (Building #1, 341 feet from Runway 13) would have "*probably have no significant adverse effect on airspace and visual/instrument procedures*" at the airport. In both cases red obstruction lights would be required as well as the addition of notations on Runway 31's Take-Off Minimums and (Obstacle) Departure Procedures. In addition, the conceptual Building #1's aeronautical study would be required to be circulated for public comment but as long as there were "*no substantial objections*" it could likely be constructed at its full requested height.

Given the degree of the building encroachments into the various regulated height elevations, staff believes that the information from the FAA's hazard determination should be considered prior to a formal building height consistency determination being made. The Commission could provide an initial consistency determination for issues where the necessary information has been provided that allows for issues to be fully analyzed. However, for issues such as building height where a critical piece of information is not yet available, staff does not believe a formal determination either for or against can be made with any degree of certainty.

Outdoor Heights

As previously mentioned, the easterly half of the property would be used for storage

and truck parking. This area is located within the 40:1 Departure Surface and a small portion of the easterly most portion of the property is located within the 20:1 Approach Surface. Given the close proximity, it appears that the installation of light standards which would be needed for night time activities (and possibly the semi-truck parking) would encroach into various regulated height elevations.

When staff initially reviewed the project, staff recommended that the applicable FAA 7460-1Forms be submitted to the FAA so that these encroachments could be evaluated at that same time as the height of the industrial buildings; especially since the outdoor storage and parking are important aspects of the proposed use. Prior to any formal consistency determination being made for the outdoor uses any encroachments into the various surface elevations caused by outdoor operations and structures would be subject to an FAA Part 77 hazard evaluation and potentially Commission review for any determinations other than "not a hazard to air navigation".

Farinon Road

The final height issue relates to truck traffic on Farinon Road. Traffic on Farinon Road penetrates the 20:1 Approach Surface by 2.9 feet. The business owner has stated that he would prefer to bring truck traffic to the site by using Farinon Road; although the site does have access off Niagara Avenue. As the Commission is aware, the consistency determinations for all recent applications that had the potential to use Farinon Road were all conditioned on traffic not utilizing Farinon Road. County staff and the County's airport consultant have recently initiated discussions with the FAA on Farinon Road vehicular traffic to precisely define any issues and potential solutions. Until this effort is finalized, County staff will continue to recommend that no additional access to or from Farinon Road be allowed. Should the Farinon Road circumstances change in the future, then the Farinon Road traffic restriction can be reconsidered. As part of any formal consistency determination, staff will recommend access to and from Farinon Road be prohibited for any new development.

Light and Glare:

The elevations of the buildings do not show any exterior lighting. In addition, outdoor activity at night would necessitate additional parking lot/storage area lights which have not been shown. Staff believe that this is a minor issue that can be resolved with the requirement that all exterior lighting be shielded and pointed downwards to prevent off-site glare impacts. Any formal consistency finding can include this requirement.

Thermal Plume:

As described in the use summary, in conjunction with the drying process of the mini-quick chunk dryer and the natural charcoal briquettes steam will be produced and released into the atmosphere. Staff has requested additional details on whether the production processes would generate any steam or other types of air plumes. CIP representatives have stated that in discussions with the business owner that he stated that the steam generation is anticipated to be minor and not a factor for airport. In

addition, a closed loop system would be used to recapture the water from the steam. Staff believes that using a closed loop, steam recapture system would mitigate potential steam plumes. However, staff believes that as part of any formal consistency finding that additional details for how this system would be implemented should be provided so that the Commission can rely on this information in making a finding that steam plumes would not be an issue.

PUBLIC COMMENTS:

No public comments have been received at this time. If comments are received following distribution of this staff report, those comments will be provided to the Airport Land Use Commission at the meeting.

ALUC STAFF RECOMMENDATION:

Based on the preliminary information that staff has received, the proposed use should not impact aircraft operations. However, as discussed, staff has identified additional information that staff believes should be provided prior to a formal consistency determinations being made. Specifically, staff believes that the following information should be provided as part of any formal consistency determinations: (1) the maximum number of employees that would perform truck operations, maintain equipment, fulfill orders, and conduct sales and administrative functions and there work locations on the property; (2) the FAA Part 77 Hazard determinations for the industrial buildings and any operational or structures that would exceed surface elevations in the outdoor storage and parking lot; (3) exterior building and parking lot lighting details; and (4) additional information regarding the steam closed-loop recapture system. Staff believes that this information should be relatively easy to provide; although the FAA hazard determinations can cause project delays. Once this information has been provided, staff would return at the very next available Commission meeting with the formal consistency determination resolution for the Commission's consideration.

PRIOR COMMITTEE ACTION

None

FISCAL IMPACT/FUNDING SOURCE

None

PREPARATION:

Prepared By:

Greg Plucker, Community Development Director (530) 458-0483

ACTION FOR THE CLERK

None at the present time.

ATTACHMENTS:

- Exhibit "A" Tan Oak Innovations Proposed Use Summary (PDF)
- Exhibit "B" Tan Oak FAA 7460-1 Maps and Height Analysis (PDF)
- Exhibit "C" Tan Oak Site and Building Plans (PDF)
- Attachment #1 Conceptual Buildings Location and FAA 7460-1 Evaluations (PDF)

TANOAK INNOVATION, LLC
PROCESS DESCRIPTION

Tanoak is an abundant hardwood tree that grows primarily along the coast from Brookings, Oregon to Santa Cruz, California. There is perhaps no tree in North America which has been so systematically wasted as Tanoak. From 1814 to 1928, Tanoak bark was peeled from the tree for its tannin extract used to tan leather hides. The tree was left standing to decay. Currently, landowners chemically kill tanoak trees to accelerate the growth of existing redwood and Douglas fir trees. The chemical eradication process, commonly referred to as "hack & squirt", increases fire risk and intensity. The optimal solution to reduce the overstock of tanoak trees is to harvest and convert the trees into innovative products. Tanoak Innovation was formed to provide landowners a commercial outlet for tanoak trees.

Tanoak trees will be harvested as a component of a redwood and Douglas fir logging operation. The trees will be bucked in-woods to 20 foot or shorter log segments and loaded into open top boxes for shipment to Colusa. Upon arrival in Colusa, the logs will be unloaded, weighed and placed into log bunks. The logs will be placed on a conveyor, advanced to a bucksaw and cut to 4-foot, 8-foot or 10-foot segments. All sawdust and bark waste (biomass) from the bucksaw will be collected and conveyed to a hammermill for further processing. This operation is referred to as the "merchandising" line. The merchandising operation requires **2 employees per shift**.

Merchandised logs are conveyed to a lathe style debarker capable of debarking log diameters from 4 to 20 inches and lengths from 4 to 10 feet. A single log segment will drop down from an opening at the top of the debarker onto 2 counter rotating drive shafts. A steel knife is hydraulically advanced until it comes into contact with the log. The knife is held into place by hydraulic pressure. As the log spins against the knife, all biomass is removed until the log is clean and cylindrical. As the biomass is removed and discharged, it is reduced in size by a series of small circular saws mounted on a drive shaft. The small pieces of biomass are then conveyed to a hammermill where it will be refined into powder. The clean, cylindrical logs drop down onto a conveyor to be sorted by diameter and quality. Log sort #1 will be bundled and sold to hardwood veneer plants and flooring manufacturers. Log sort #2 will be processed into wood chunks for the barbecue industry and log sort #3 will be converted into charcoal briquettes for the barbecue industry. The debarking and sorting operation requires **1 employee per shift**.

A log "Chunker" is a modified commercial firewood splitter. It's function is to convert 10 to 12 inch diameter logs into into chunks measuring 3 inches x 3 inches x 3 inches. The logs are conveyed from the debarker onto a log in-feed table then advanced to a U-shaped feed trough where the logs are abutted end to end and chain fed in 3-inch increments to a log stop. The logs are then cut into 3-inch thick "Rounds". Each round drops down into a 5-inch wide splitting chamber then pushed through a splitting wedge by a hydraulic ram. The wedge is designed to convert the rounds into 3-inch x 3-inch squares. All biomass generated by the chunk saw and wedge are conveyed to a hammermill and refined into powder. When the wood chunks exit the wedge, the chunks are conveyed to a trammel screen and tumbled to remove all "Fines". The "fines" are conveyed to a hammermill and refined into powder. The chunks are conveyed and loaded into steel baskets for drying. Each basket holds .75 cords of chunks or 5,000 Lbs. The chunking operation requires **1 employee per shift**.

The "Mini-Quick" chunk dryer is effectively a shipping container measuring 29 feet long, 8.5 feet wide and 12.6 feet tall equipped with a control room, natural gas burner and fan. The container holds 8 baskets of wood chunks containing 6 cords of chunks weighing a maximum of 40,000 Lbs. The dryer is heated to a maximum temperature of 260 degrees Fahrenheit. When the internal temperature of the wood reaches 212 degrees Fahrenheit, the wood moisture turns to steam. A 2 Hp fan removes the steam from the container through a vent to atmosphere. The drying process is engineered to reduce the chunk moisture content from 50% to 10% in 24 hours. The small amount of natural gas burned to heat the kiln is well below State and Federal air emissions standards. The mini-quick kiln will remove 20,000 Lbs. of water per day reducing the chunk weight to 20,000 pounds when dry. The chunks are then bagged, palletized and inventoried. The drying and bagging operation requires **2 employees per shift**.

Small diameter logs measuring 4 inches to 10 inches in diameter are conveyed to a whole-log chipper. A chipper consists of a series of knives mounted on a circular steel rotating drum. The log is hydraulically pushed against the rotating drum that slices the logs into chips measuring ¼ inch thick x ¾ inch wide x 1-inch long. The chips are then conveyed to a hammermill and refined into powder. A portion of the chips will be dried and bagged for the barbecue industry. The chipping operation does not require a dedicated employee.

Log sort #1 are the highest quality logs. These logs will be bundled and sold to veneer and flooring manufacturing companies. In the future, If the quantity of #1 sort logs is sufficient to operate a veneer plant or flooring plant, these logs will be processed in Colusa, which will require **4 employees per shift**.

All bark, fines and wood chips (biomass) will be converted into charcoal to make briquettes for the barbecue industry. The charcoal operation consumes 13.33 green (wet) tons of wood and bark (biomass) per hour to generate 2 tons of bone-dry charcoal per hour.

The process of making charcoal begins by refining biomass into powder. Biomass is fed into a hammer mill, which is a steel drum containing a vertical or horizontal rotating drum on which hammers are mounted. The spinning hammers refine the biomass into powder. The powder is discharged when the biomass particles are small enough to pass through a mesh screen. The biomass powder is then conveyed to a rotary drum dryer for moisture reduction.

Rotary dryers remove moisture from biomass by tumbling material in a rotating drum in the presence of heat and air flow. As the drum rotates, lifting flights pick up the material and drop it through the air stream to maximize heat transfer efficiency. The dryer will reduce moisture content from 50% to 15% at an infeed rate of 13.33 green tons of wood fiber per hour generating 6.77 dry tons of biomass powder. The rotary dryer is initially heated by a natural gas fired burner. When the carbonizer is fully heated, the natural gas turns off and the high temperature exhaust from the carbonizer provides the heat to the rotary dryer eliminating all rotary dryer emissions. The dry biomass powder from the rotary dryer is conveyed to a continuous carbon reactor for carbonizing.

A continuous carbon reactor utilizes dry distillation carbonization technology to convert biomass into charcoal. The process generates combustible gases, such as carbon monoxide, methane and hydrogen that form synthesis gases (syngas) that are burned as a replacement of natural gas. The combustible syngas heats up the carbonizing reactor through the self-air distribution burners. The excess heat from the carbonizer is exhausted to a rotary dryer to create a closed loop drying and carbonizing system. The only natural gas consumed during the charcoal making process is the initial startup of the rotary dryer and carbon reactor. From the start of ignition until the reactor temperature rises to 160° C (320°F), the residual 15% moisture contained in the biomass powder is evaporated by external heat. The chemical composition of the wood does not change during this stage. The biomass will begin to generate heat when the reactor temperature reaches 232°C or 450°F. The biomass undergoes a thermal decomposition reaction, and its composition begins to change, including the decomposition of hemicellulose to generate CO2, CO and a small amount of acetic acid and other substances. Full carbonization occurs at temperature peak of 650°C or 1,202°F. In this stage, the wood undergoes rapid thermal decomposition while generating a significant amount of syngas. The syngas is captured and burned in the carbonizer to produce the energy required by the process. The thermal decomposition and gas combustion produce a large

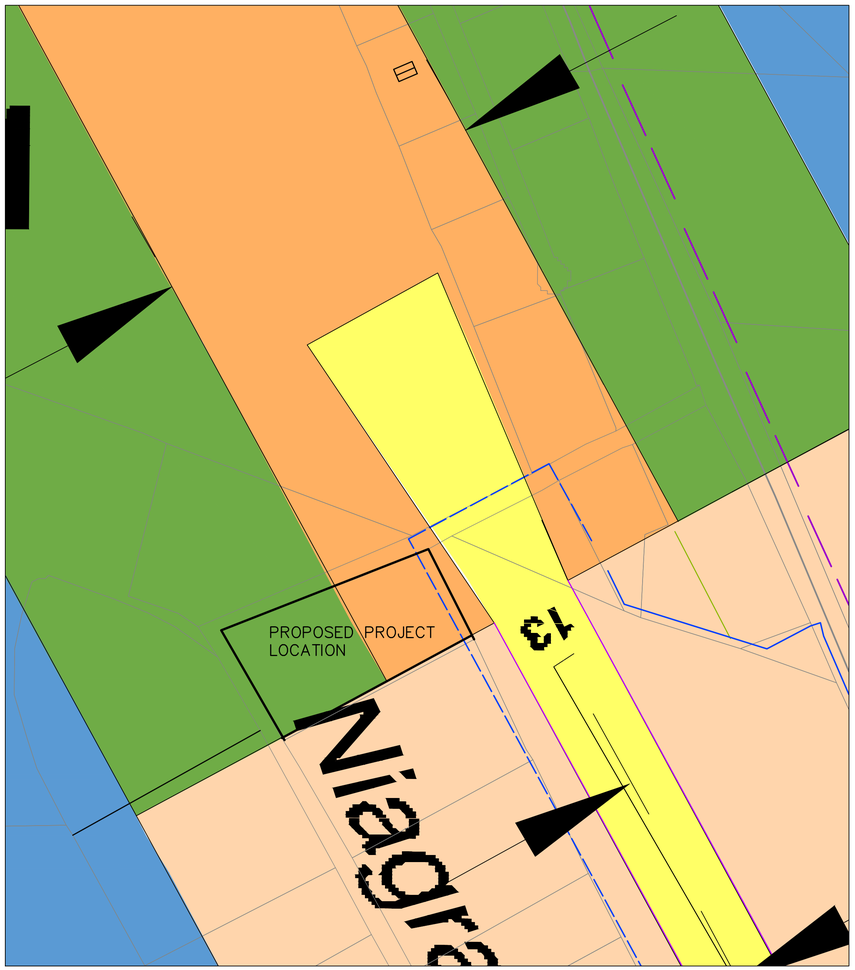
amount of heat so that the temperature of the reactor rises, and the biomass is carbonized at a high temperature. Because the inside of the furnace is sealed and without oxygen, the biomass does not burn, but instead, carbonizes into charcoal. When combustible gas is fully expended from the wood the carbonization process is complete. The moisture free charcoal is continuously dispensed from the bottom of the reactor where it is cooled and conveyed into a bin.

Tanoak Innovation will make all natural charcoal briquettes using only charcoal, starch and water. The 3 ingredients are dosed into an agitating mixer to create a consistent blend. The moist charcoal mixture is then metered into a roll briquette machine that applies pressure to the charcoal particles by squeezing them between two counter rotating rolls. Cavities are cut into the surfaces of the rolls to form the "pillow" shaped briquettes. The briquettes are discharged from the cavity by gravity as the cavity wheel rotates. The wet briquettes are then dispensed from the briquetter onto a wire mesh belt conveyor through a 15-foot wide x 100-foot long enclosed drying chamber. The drying chamber is heated by a natural gas burner to a temperature of 260 degrees Fahrenheit. When the internal temperature of the briquette reaches a temperature of 212 degrees Fahrenheit, the moisture turns to steam, which is exhausted to atmosphere by fans mounted on the side of the dryer. The dry briquettes are conveyed to a packaging line for bagging then stored in inventory. Belt dryer emissions are below Federal EPA and State standards. The charcoal and briquette operation requires **4 employees per shift**.

The company will hire additional operating employees to unload and load trucks. maintain equipment and to fulfill orders. Sales and administrative positions will also be required.

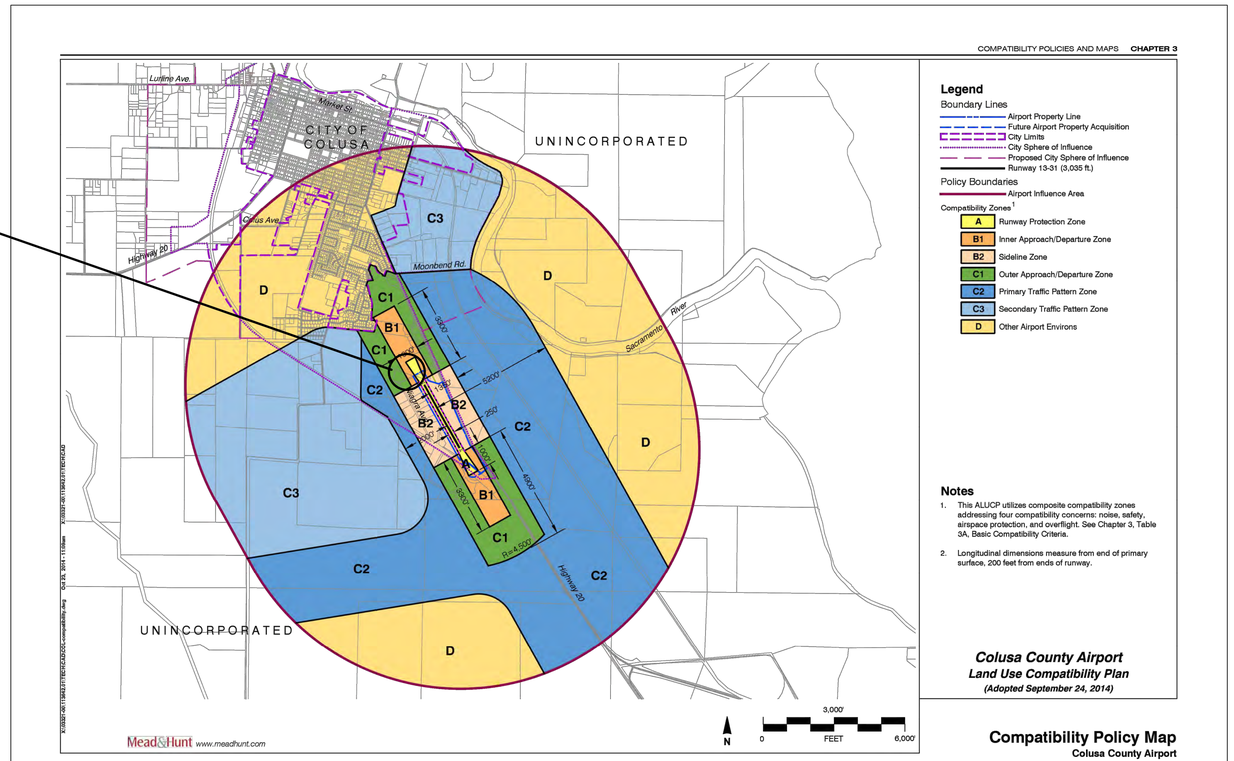
Tanoak Innovation intends to phase its manufacturing plant. The first phase includes the products described in the preceding paragraphs. The second production phase will include the making of lump charcoal, BBQ pellets and dry smoke wood chips. These processes will be summarized at the time of project permitting.

Exhibit "B"



DETAIL
NTS

SEE DETAIL



REGISTERED PROFESSIONAL ENGINEER
GEORGE L. MUSALLAM
No. 49466
EXP. 9-30-2020
CIVIL
STATE OF CALIFORNIA

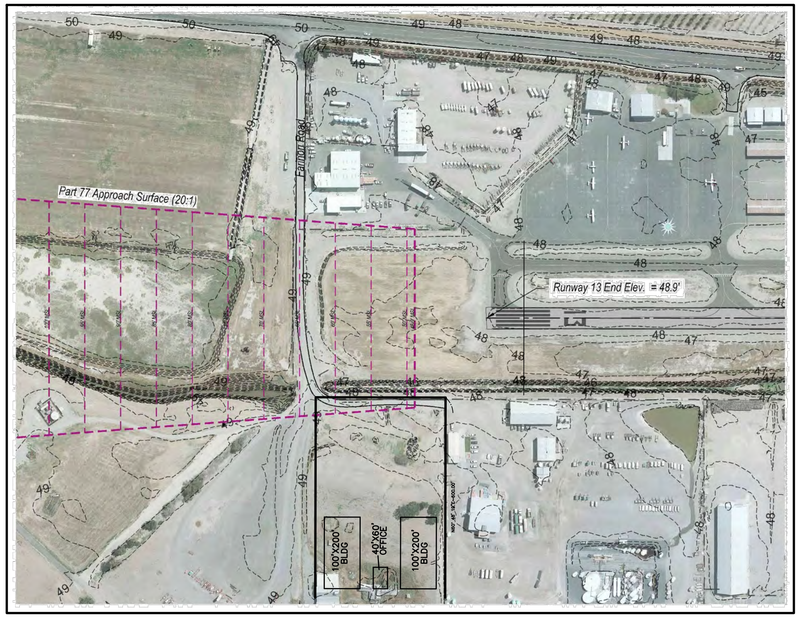
NVES
1547 STARR DRIVE SUITE "J"
YUBA CITY, CA 95993
(530) 713-0417

HULBERT PROPERTY
PLOT PLAN

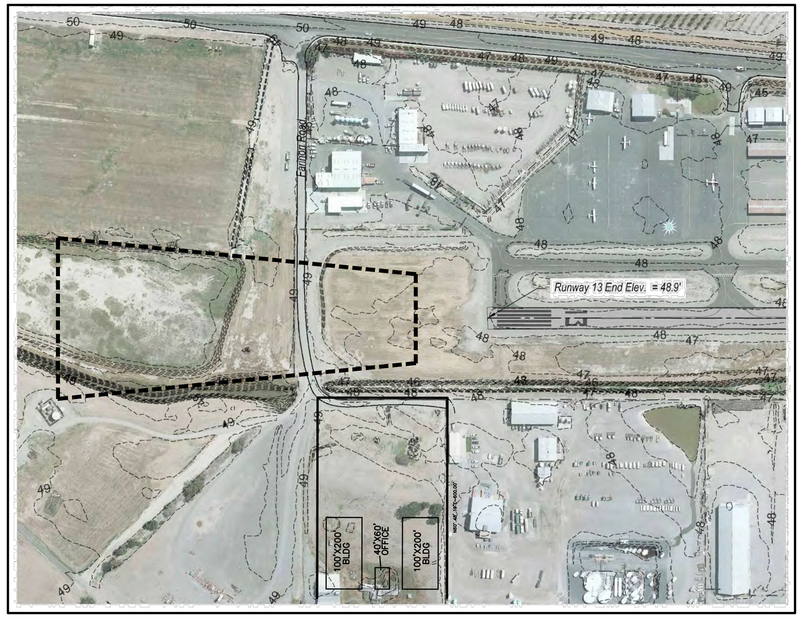
DESIGNED BY: GEORGE MUSALLAM
DRAWN BY: GLM
CHECKED BY: GEORGE MUSALLAM
JOB NO.:
FILE NAME: NA

DWG.NO.: 1
SHT. NO.: P-1

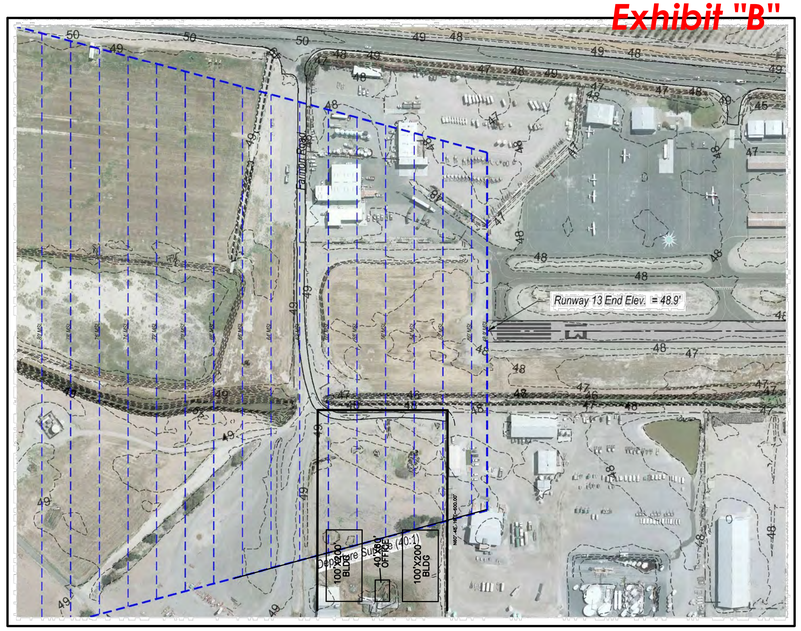
Exhibit "B"



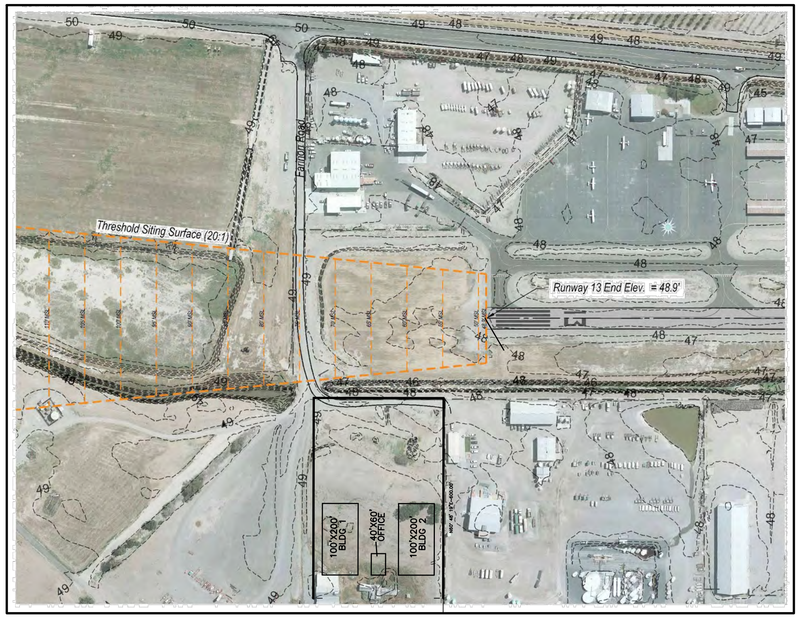
PART 77 APPROACH SURFACE (20:1)
1"=200'



RUNWAY PROTECTION ZONE
1"=200'

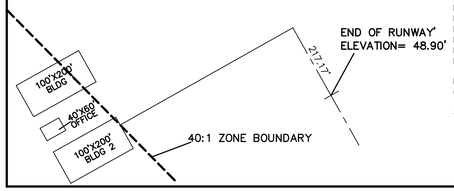


DEPARTURE SURFACE (40:1)
1"=200'



THRESHOLD SIGHTING SURFACE (20:1)
1"=200'

40:1 DEPARTURE SURFACE EVALUATION
1"=200'



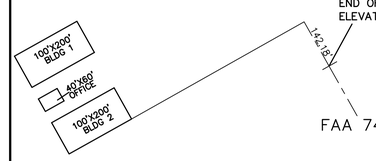
BUILDING NUMBER 2 CLOSEST TO RUNWAY:

HEIGHT OF RIDGE ABOVE FINISH FLOOR= 34.17'
FINISH FLOOR ELEVATION (1' ABOVE EXISTING GRADE)=50.46'
ELEVATION OF RIDGE = 50.46+34.17'=84.63'
DISTANCE OF CLOSEST BUILDING WITHIN THIS ZONE TO RUNWAY= 217.17'
RISE IN 40:1 SLOPE FROM RUNWAY= 217.17'/40= 5.42'
ELEVATION OF 40:1 SLOPE AT BUILDING= 5.42'+48.90' (ELEVATION OF RUNWAY)=54.33'

HIGHEST POINT OF BUILDING ENCROACHES BY 30.30' INTO THE 40:1 SLOPE (84.63'-54.33'=30.30')

ALL ELEVATION ARE ON NAVD 88 DATUM.

50:1 SLOPE EVALUATION
1"=200'

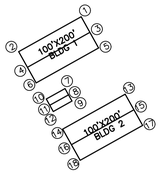


UNIT NUMBER 1 CLOSEST TO RUNWAY:

HEIGHT OF RIDGE ABOVE FINISH FLOOR= 34.17'
FINISH FLOOR ELEVATION (1' ABOVE EXISTING GRADE)=50.46'
ELEVATION OF RIDGE = 50.46+34.17'=84.63'
DISTANCE OF CLOSEST POINT OF BUILDING TO RUNWAY= 142.18'
RISE IN 50:1 SLOPE FROM RUNWAY= 142.18/50= 2.84'
ELEVATION OF 50:1 SLOPE AT BUILDING= 2.84'+48.90' (ELEVATION OF RUNWAY)=51.74'

BUILDING ENCROACHES INTO THE 50:1 SLOPE BY 84.63'-51.74'=32.89' (FILING OF FAA FORM 7460 IS REQUIRED)

ALL ELEVATION ARE ON NAVD 88 DATUM.



BUILDINGS CORNERS LABELING
N.T.S,

BUILDING CORNERS COORDINATES (NAD 83)

CORNER NO.	LATITUDE	LONGTITUDE
1	N39° 10' 58.72"	W121° 59' 54.40"
2	N39° 10' 57.75"	W121° 59' 56.61"
3	N39° 10' 58.28"	W121° 59' 54.09"
4	N39° 10' 57.32"	W121° 59' 56.30"
5	N39° 10' 57.85"	W121° 59' 53.78"
6	N39° 10' 56.89"	W121° 59' 55.99"
7	N39° 10' 56.86"	W121° 59' 55.10"
8	N39° 10' 56.69"	W121° 59' 54.98"
9	N39° 10' 56.51"	W121° 59' 54.85"
10	N39° 10' 56.57"	W121° 59' 55.76"
11	N39° 10' 56.40"	W121° 59' 55.64"
12	N39° 10' 56.22"	W121° 59' 55.52"
13	N39° 10' 56.88"	W121° 59' 53.08"
14	N39° 10' 55.91"	W121° 59' 55.29"
15	N39° 10' 56.45"	W121° 59' 52.77"
16	N39° 10' 55.48"	W121° 59' 54.98"
17	N39° 10' 56.01"	W121° 59' 52.46"
18	N39° 10' 55.05"	W121° 59' 54.67"

NOTES:
1- THE DIAGRAMS AND INFORMATION SHOWN HEREIN ARE BASED ON A FIELD SURVEY COMPLETED IN JANUARY OF 2021. NVES HAS NOT EVALUATED THE PROPOSED NEW CONSTRUCTION TO DETERMINE COMPLIANCE WITH THE COLUSA COUNTY LAND USE COMPATIBILITY PLAN AND THE SUBMITTAL OF THESE CALCULATIONS ARE SUBMITTED FOR INFORMATION ONLY. COMPLIANCE EVALUATION NEEDS TO BE DONE BY OTHERS.

2- BENCH MARK USED IS AN NGS MONUMENT SET AT CONCRETE HEADWALL LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF FARINON ROAD AND STATE HIGHWAY 20 WITH SET ELEVATION OF 48.7' NAVD 88 DATUM.

3- SIZE AND HEIGHT OF BUILDINGS WERE PROVIDED BY LANDX, GENERAL BUILDING CONTRACTOR.

NEW METAL BUILDINGS (TYP)

DIMENSIONS: 100'X200'

HIGHEST POINT OF ROOF ABOVE FINISHED FLOOR=34.17'
ELEVATION OF FINISHED FLOOR=50.67'
ELEVATION OF HIGHEST POINT ON ROOF= 50.67+34.17'=84.84'
PART 77 20:1 APPROACH SURFACE AT BUILDING(BUILDINGS OUTSIDE IMPACT AREA)
THRESHOLD SIGHTING 20:1 SURFACE AT BUILDING=(BUILDINGS OUTSIDE IMPACT AREA)
40:1 DEPARTURE SURFACE EVALUATION (SEE CALCULATIONS THIS PAGE)
50:1 FAA 7460 FILING REQUIREMENTS (SEE CALCULATIONS THIS PAGE)
BUILDINGS ARE OUTSIDE THE LIMITS OF THE RUNWAY PROTECTION ZONE.

REGISTERED PROFESSIONAL ENGINEER
GEORGE L. MUSALLAM
No. 49466
EXP. 9-30-2022
CIVIL
STATE OF CALIFORNIA

NVES
HULBERT PROPERTY
PLOT PLAN

DESIGNED BY: GEORGE MUSALLAM	DWG.NO.: 2
DRAWN BY: RANA MOORE	
CHECKED BY: GEORGE MUSALLAM	SHT. NO.: P-2
JOB NO.:	
FILE NAME: NA	

NVES
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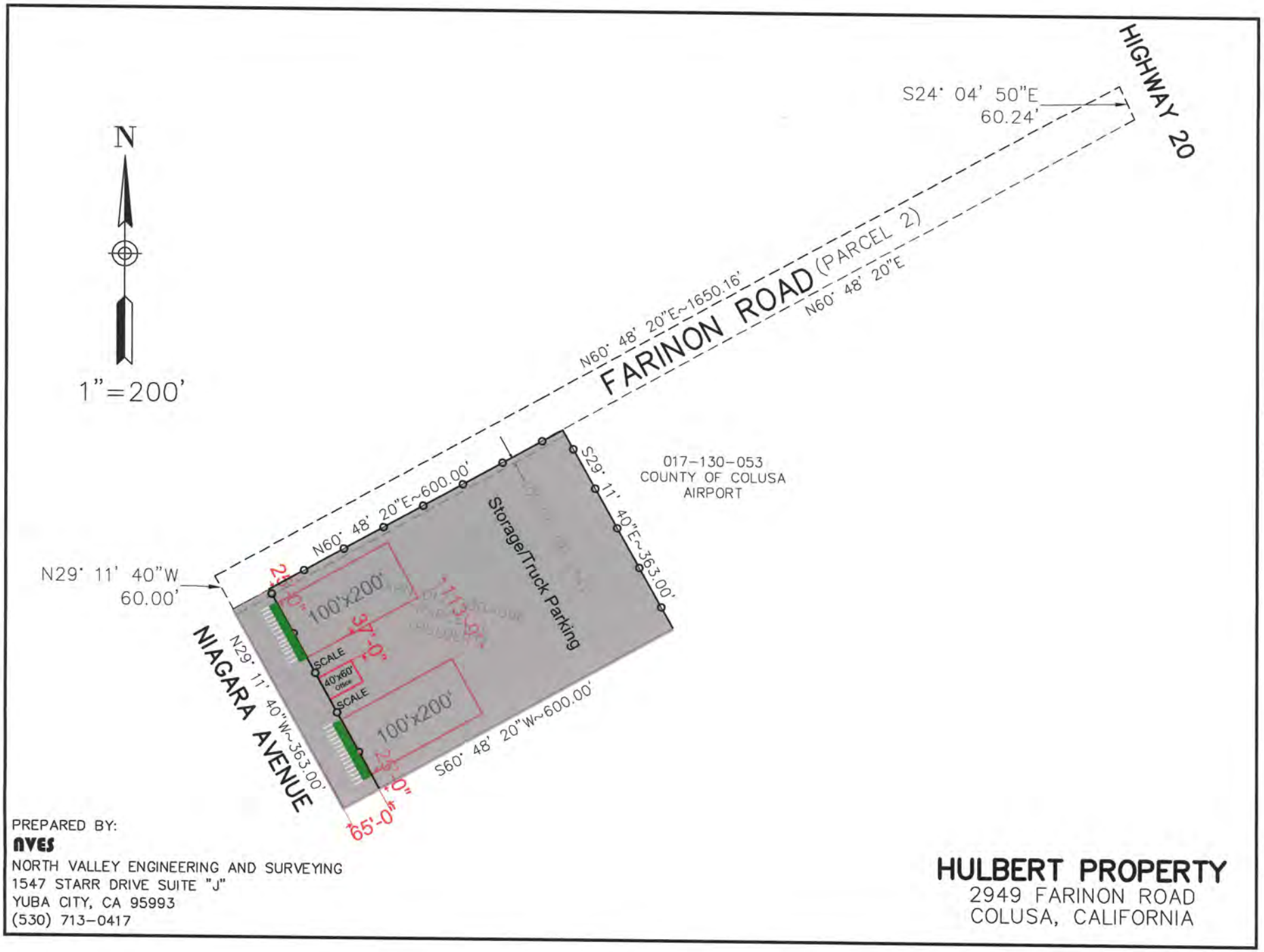
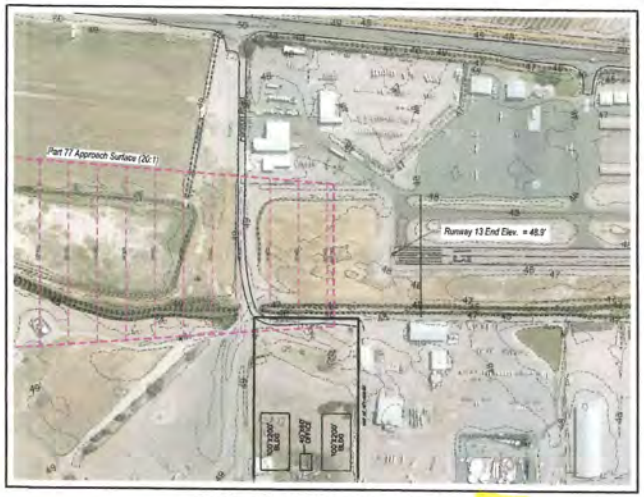
YUBA CITY, CA 95993
(530) 713-0417



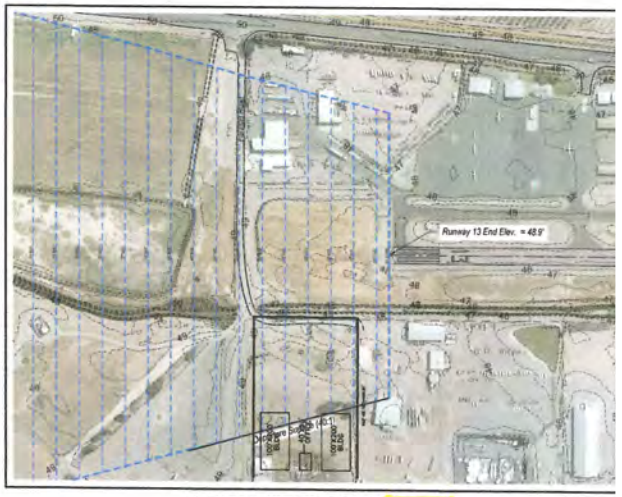
PREPARED BY:
NVES
NORTH VALLEY ENGINEERING AND SURVEYING
1547 STARR DRIVE SUITE "J"
YUBA CITY, CA 95993
(530) 713-0417

HULBERT PROPERTY
2949 FARINON ROAD
COLUSA, CALIFORNIA



PART 77 APPROACH SURFACE (20:1)
1"=200'

RUNWAY PROTECTION ZONE
1"=200'

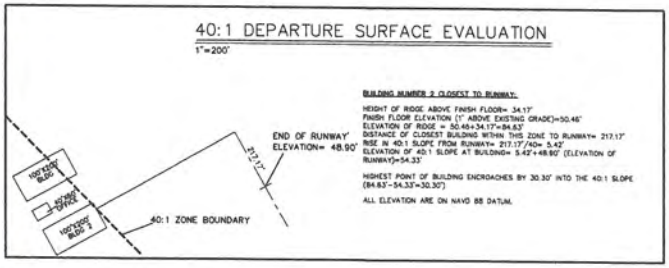


DEPARTURE SURFACE (40:1)
1"=200'

THRESHOLD SIGHTING SURFACE (20:1)
1"=200'

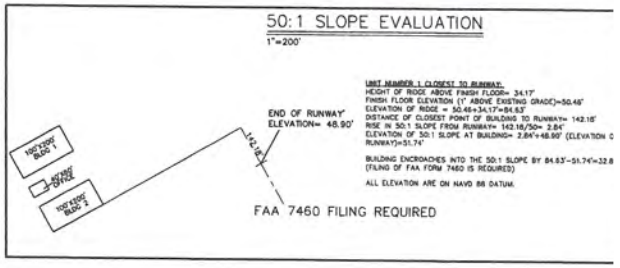
40:1 DEPARTURE SURFACE EVALUATION

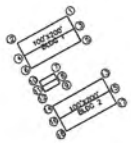
1"=200'



50:1 SLOPE EVALUATION

1"=200'





BUILDINGS CORNERS LABELING
N.T.S.

BUILDING CORNERS COORDINATES (NAD 83)

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3	N39° 10' 58.28"	W121° 59' 54.09"
4	N39° 10' 57.32"	W121° 59' 56.30"
5	N39° 10' 57.85"	W121° 59' 53.78"
6	N39° 10' 56.89"	W121° 59' 55.99"
7	N39° 10' 56.86"	W121° 59' 55.10"
8	N39° 10' 56.69"	W121° 59' 54.98"
9	N39° 10' 56.51"	W121° 59' 54.85"
10	N39° 10' 56.57"	W121° 59' 55.76"
11	N39° 10' 56.40"	W121° 59' 55.64"
12	N39° 10' 56.22"	W121° 59' 55.52"
13	N39° 10' 56.88"	W121° 59' 53.08"
14	N39° 10' 55.91"	W121° 59' 55.29"
15	N39° 10' 56.45"	W121° 59' 52.77"
16	N39° 10' 55.48"	W121° 59' 54.98"
17	N39° 10' 56.01"	W121° 59' 52.46"
18	N39° 10' 55.05"	W121° 59' 54.67"

NOTES:
1- THE DIAGRAMS AND INFORMATION SHOWN HEREIN ARE BASED ON A FIELD SURVEY COMPLETED IN JANUARY OF 2021. NVES HAS NOT EVALUATED THE PROPOSED NEW CONSTRUCTION TO DETERMINE COMPLIANCE WITH THE COLUSA COUNTY LAND USE COMPATIBILITY PLAN AND THE SUBMITTAL OF THESE CALCULATIONS ARE SUBMITTED FOR INFORMATION ONLY. COMPLIANCE EVALUATION NEEDS TO BE DONE BY OTHERS.
2- BENCH MARK USED IS AN NGS MONUMENT SET AT CONCRETE HEADWALL LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF FARMON ROAD AND STATE HIGHWAY 20 WITH SET ELEVATION OF 48.9' NAVD 88 DATUM.
3- SIZE AND HEIGHT OF BUILDINGS WERE PROVIDED BY LANDIX, GENERAL BUILDING CONTRACTOR.

NEW METAL BUILDINGS (TYP)

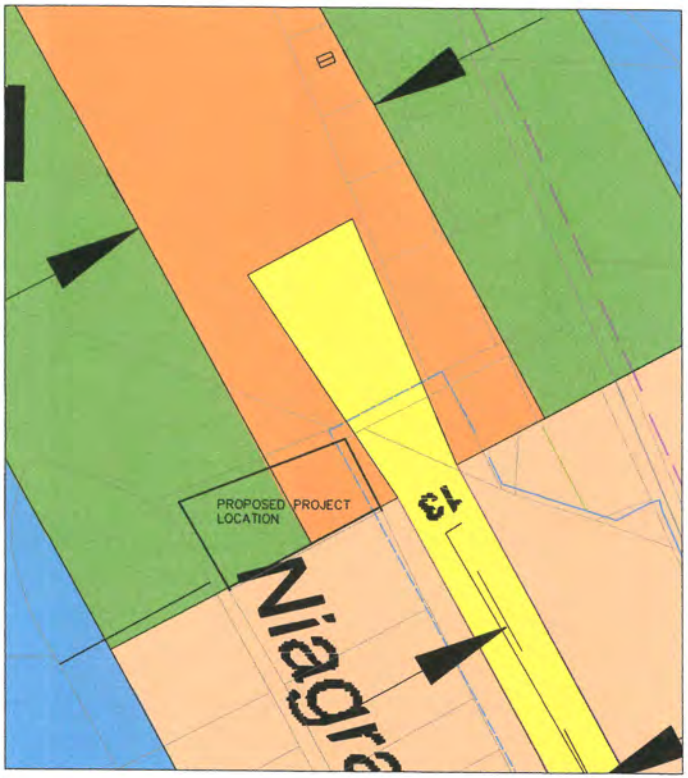
DIMENSIONS: 100'X200'

HIGHEST POINT OF ROOF ABOVE FINISHED FLOOR=34.17'
ELEVATION OF FINISHED FLOOR=50.83'
ELEVATION OF HIGHEST POINT ON ROOF= 50.87+34.17'=84.84'
PART 77 20:1 APPROACH SURFACE AT BUILDING(BUILDINGS OUTSIDE IMPACT AREA)
THRESHOLD SIGHTING 20:1 SURFACE AT BUILDING=(BUILDINGS OUTSIDE IMPACT AREA)
40:1 DEPARTURE SURFACE EVALUATION (SEE CALCULATIONS THIS PAGE)
50:1 FAA 7460 FILING REQUIREMENTS (SEE CALCULATIONS THIS PAGE)
BUILDINGS ARE OUTSIDE THE LIMITS OF THE RUNWAY PROTECTION ZONE.

REGISTERED PROFESSIONAL ENGINEER
GEORGE C. MUSALLAM
No. 49485
Exp. 9-30-2022
CIVIL
STATE OF CALIFORNIA

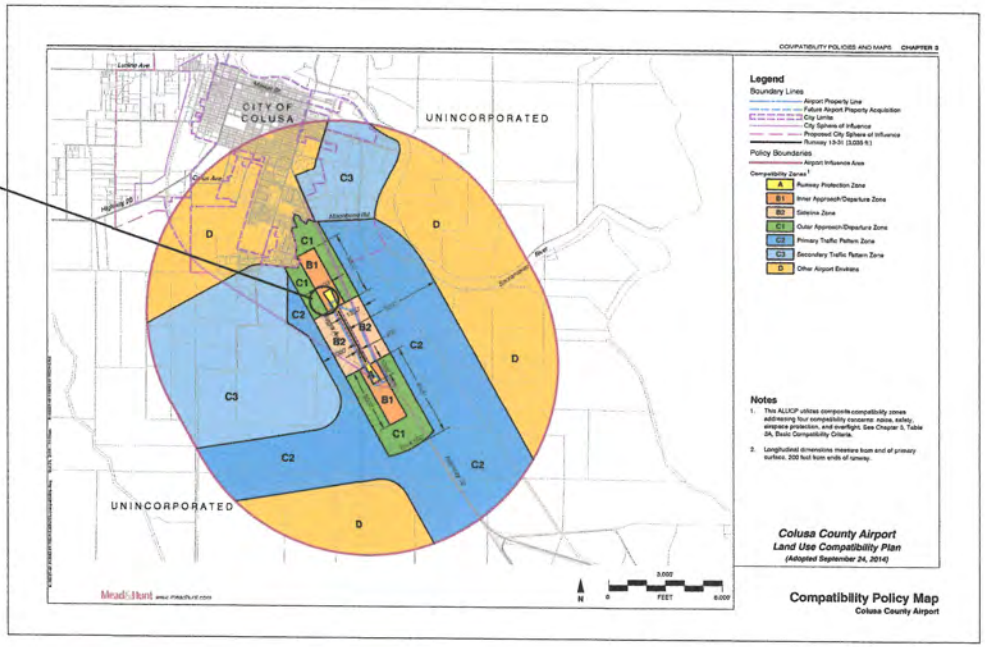
NVES
HULBERT PROPERTY
PLOT PLAN

	DESIGNED BY: GEORGE MUSALLAM
	DRAWN BY: RAHA MOORE
NVES	CHECKED BY: GEORGE MUSALLAM
1547 STARR DRIVE SUITE 'J' YUBA CITY, CA 95993 (530) 713-0417	JOB NO.:
	FILE NAME: NA



DETAIL
NTS

SEE DETAIL

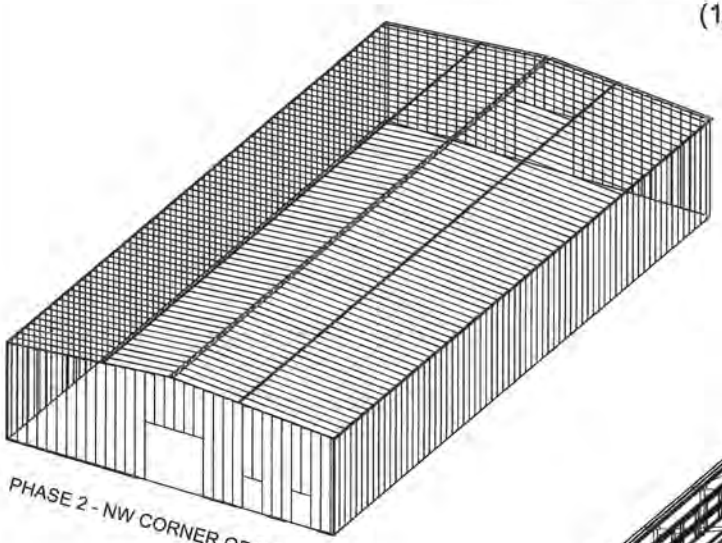


NVES
HULBERT PROPERTY
PLOT PLAN
DESIGNED BY: GEORGE MUSALLAM
DRAWN BY: GLM
CHECKED BY: GEORGE MUSALLAM
JOB NO.:
FILE NAME: NA
NVES
1547 STARR DRIVE SUITE "J"
YUBA CITY, CA 95993
(530) 713-0417

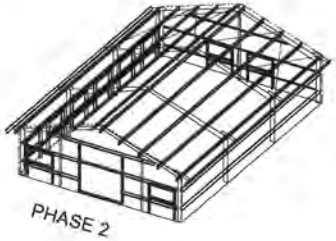
REGISTERED PROFESSIONAL ENGINEER
GEORGE L. MUSALLAM
No. 49458
EXP. 9-30-2020
CIVIL
STATE OF CALIFORNIA

TAN OAK INNOVATION, LLC

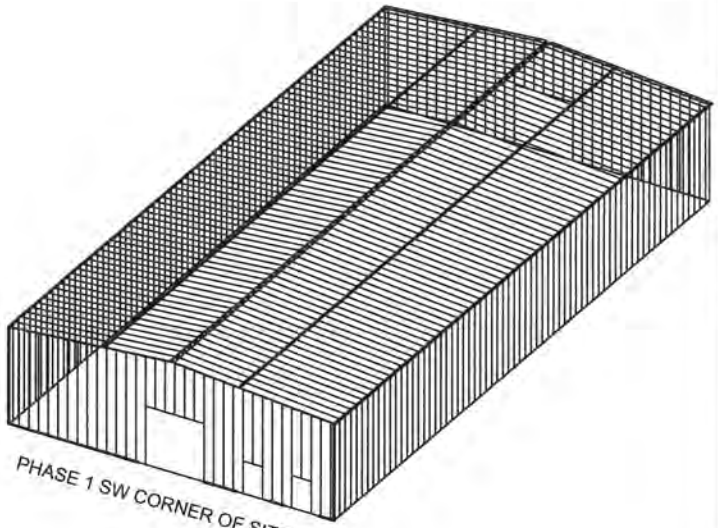
(1) New 100'x200'x30' Warehouse
(1) Future 100'x200'x30' Warehouse
(1) Future 40'x60'x18' Office



PHASE 2 - NW CORNER OF SITE



PHASE 2



PHASE 1 SW CORNER OF SITE

NORTH

SITE PLAN

General Contractor:
LAND X Construction, Inc.
Lic # 973168
7550 Sierra Dr.
Granite Bay CA 95746
530-448-3314
brad@landxinc.com

LAND X
CONSTRUCTION

COMMITTED TO BUILDING GREEN

All standard Butler-Cote™ 25-year fluoropolymer color finishes feature a Solar Reflectance Index (SRI) of 29 or greater.

ENHANCE AND PROTECT THE BEAUTY

The standard exterior paint finish for all Butler panels and trim is the Butler-Cote system, consisting of a full strength 70% Kynar 500® or Hylar 5000® PVDF resin-base fluoropolymer finish.

The Butler-Cote system resists the chalking and fading that often leaves a building looking drab and dated. Our 25-year warranty guarantees that, on roof and wall panel standard colors, chalking will not exceed a rating of #8 and fading will not exceed 5ΔE color difference units. The warranty also covers peeling, cracks, or chipping of the paint finish.

While many manufacturers' warranties are prorated after a certain period of time, we offer our Butler-Cote roof and wall panel warranty for a full 25 years—with no prorating. It's a testament to our high performance standards.

FLUOROPOLYMER FINISH VS. SILICONE POLYESTER AFTER 8 YEARS OF WEATHERING.

	Butler-Cote™ Fluoropolymer Finish	Industry Standard Silicone Polyester Coating
Original Color		
Level of Chalking Allowable Within Warranty Terms		
Warranty Period	25 years	10 years

BUTLER–COTE™ FINISH SYSTEM SOLAR REFLECTANCE DATA

Available Standard "Cool" Colors	Initial Solar Reflectance	Initial Emittance	Solar Reflectance Index (SRI)	Color Number
Cool Solar White – MR–24®	71.7	0.85	87	BN5W204B
Cool Solar White (Galvalume® substrate)	74.9	0.84	91	BN5W184B
Cool Igloo White	62.4	0.87	74	BN5W183B
Cool Ivory White	62.3	0.85	74	BN5I137B
Cool Birch White	63.7	0.85	75	BN5I135B
Cool Shell Gray	55.1	0.84	63	BN5A221B
Cool Country Wheat	60.3	0.84	71	BN5I136B
Cool Desert Beige	49.0	0.85	55	BN5N235B
Cool Gray Stone	37.1	0.85	39	BN5A222B
Cool Marsh Green	32.9	0.84	33	BN5G175B
Cool Emerald Green	29.7	0.85	29	BN5G174B
Cool Palm Green	28.7	0.86	29	BN5G176B
Cool Ocean Blue	33.0	0.84	33	BN5L148B
Cool Majestic Blue	30.8	0.85	30	BN5L149B
Cool Brick Red	32.9	0.84	33	BN5R143B
Cool Harvest	31.1	0.84	31	BN5N239B
Cool Onyx Black	29.6	0.84	29	BN5B114B
Galvalume® Plus	68.0	0.30	65	

BUTLER

Butler Manufacturing
Kansas City, MO
816–968–3000

Butler Buildings Canada
Burlington, ON, Canada
905–332–7786

www.butlermfg.com

MBMA ACCREDITED AC472 CRRC RATED PRODUCT

Form No. 4828 06/14

BUTLER-COTE™ FINISH SYSTEM

for Butler® Building Systems

Featuring a full palette of Butler-Cote™ colors each with an SRI of 29 or greater.

BUTLER

BUTLER-COTE™ FINISH SYSTEM

for Butler® Building Systems

All Butler-Cote™ fluoropolymer finishes have a Solar Reflectance Index of 29 or greater.

BUTLER

ROOF SYSTEMS

MR-24® AND CMR-24® ROOF SYSTEMS

- Cool Solar White 22 & 24 ga.
- Cool Ivory White 24 ga.
- Cool Shell Gray 22 & 24 ga.
- Cool Emerald Green 24 ga.
- Cool Ocean Blue 24 ga.
- Cool Brick Red 24 ga.
- Cool Harvest 22 & 24 ga.

VSR II™ ROOF SYSTEM

- Cool Solar White 24 ga.
- Cool Igloo White 24 ga.
- Cool Ivory White 24 ga.
- Cool Shell Gray 24 ga.
- Cool Country Wheat 24 ga.
- Cool Desert Beige 24 ga.
- Cool Gray Stone 24 ga.
- Cool Marsh Green 24 ga.
- Cool Emerald Green 24 ga.
- Cool Palm Green 24 ga.
- Cool Ocean Blue 24 ga.
- Cool Majestic Blue 24 ga.
- Cool Brick Red 24 ga.
- Cool Harvest 24 ga.

BUTLERIB® II ROOF SYSTEM

- Cool Solar White 24 & 26 ga.
- Cool Shell Gray 26 ga.
- Cool Emerald Green 26 ga.

MODULEZE™ II SOFFIT COLORS

- Cool Solar White 24 ga.
- Cool Ivory White 24 ga.
- Cool Birch White 24 ga.
- Cool Shell Gray 24 ga.
- Cool Desert Beige 24 ga.
- Cool Harvest 24 ga.

For color, gauges, or color/panel combinations not shown, additional charges apply and a minimum order is required.

BUTLER

WALL SYSTEMS

SHADOWALL™, BUTLERIB® II, STYLWALL® II FLAT AND FLUTED WALL SYSTEMS, AND MOD-36 (GABLE TRIM, EAVE TRIM, GUTTER AND DOWNSPOUTS)

Walls

- Cool Solar White*
- Cool Igloo White*
- Cool Ivory White*
- Cool Birch White*
- Cool Shell Gray*
- Cool Country Wheat*
- Cool Desert Beige*
- Cool Gray Stone
- Cool Emerald Green
- Cool Ocean Blue
- Cool Majestic Blue
- Cool Brick Red
- Cool Harvest*
- Cool Onyx Black (Trim Only)
- Cool Marsh Green
- Cool Palm Green

Trim

BUTLER THERMAWALL™ WALL SYSTEM

- Cool Solar White
- Cool Birch White
- Cool Shell Gray
- Cool Country Wheat
- Cool Igloo White

INTERIOR FINISH COLORS (NOT FORMULATED FOR EXTERIOR USE)

- Light Gray (Butlerib® II roof & wall, StylWall® II Fluted, Shadowall™, MR-24®, VSR II™ and MOD-36)
- Igloo White (Butler Thermawall™ & TextureWall™) USDA-approved
- Interior White (CMR-24® Liner and MOD-36 in 22 or 28 gauge only)

GAUGE AVAILABILITY

Butlerib® II & Shadowall™ - 26 gauge
StylWall® II Flat - 26 gauge
StylWall® II Fluted - 24 gauge
MOD-36 - 22, 24, 26, and 28 gauge
Trim - 26 gauge
*Also available in 24 gauge for Butlerib® II, Shadowall™ and MOD-36

All color selections are close representations, but are limited by processing and viewing conditions. Lead times may vary by product selection. Contact your Butler Builder® for more information.

BUTLER

NW ELEVATION

Planned Solar on South face of roof TYP

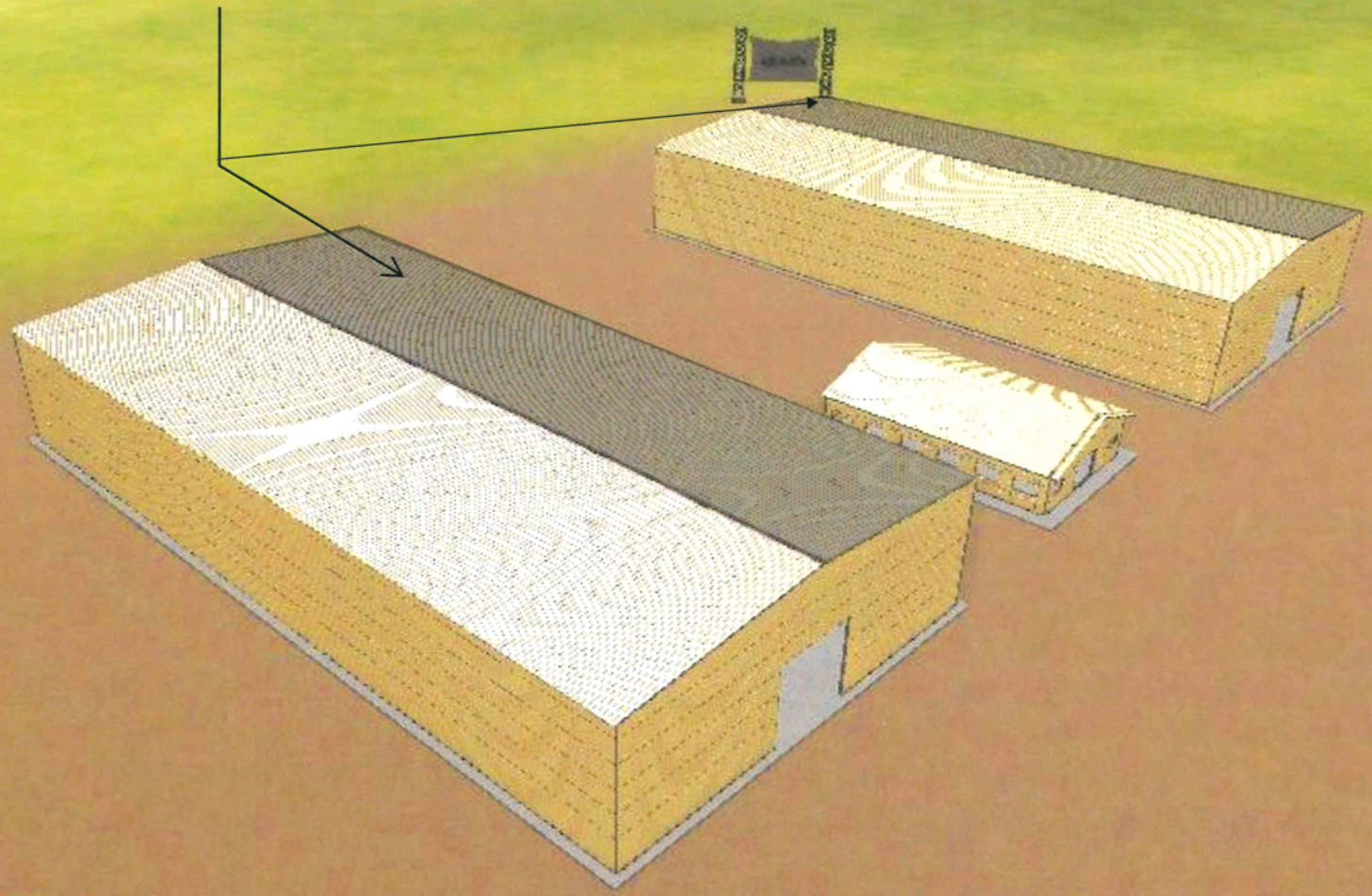


Exhibit "C"

EAST ELEVATION

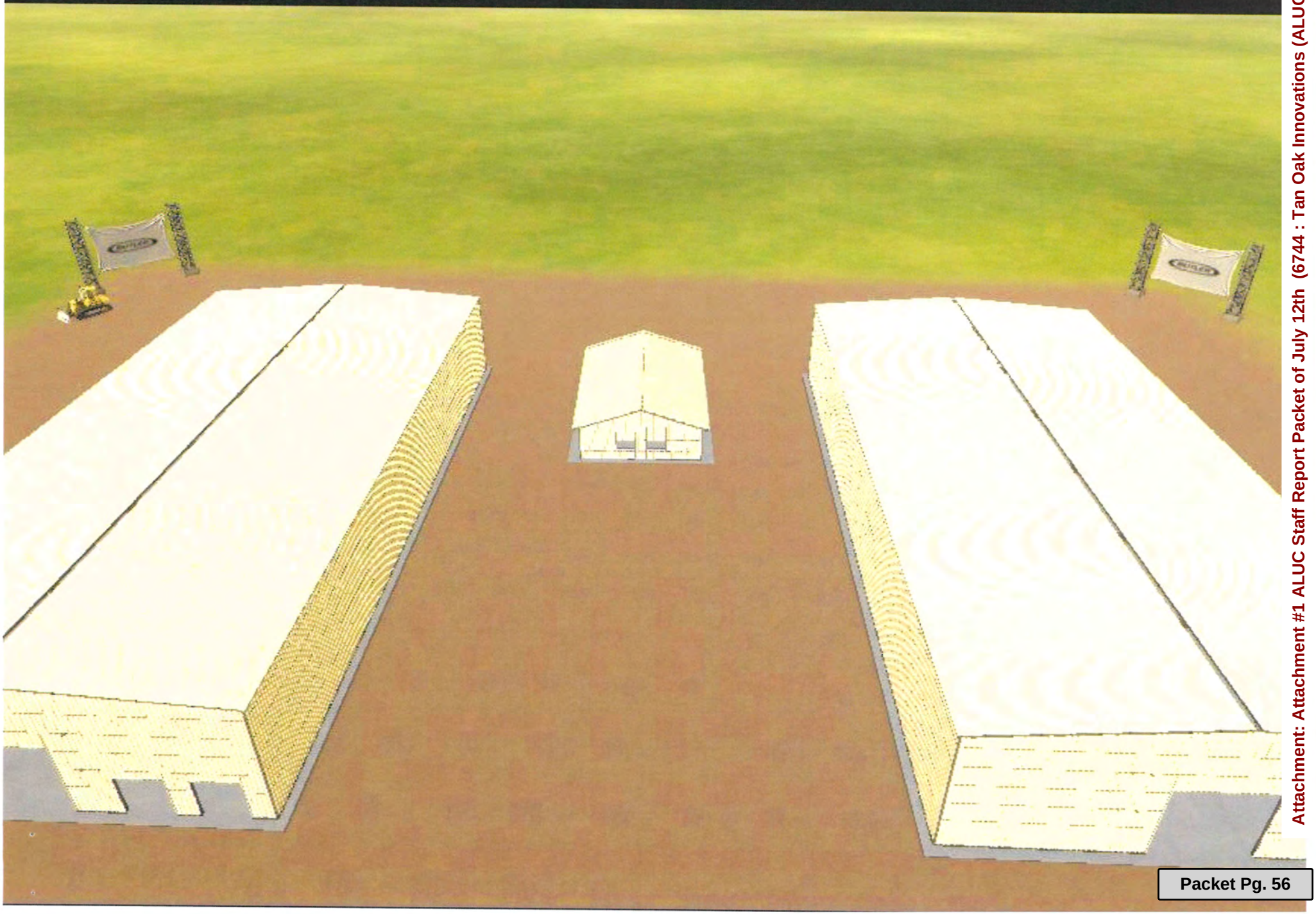


Exhibit "C"

NORTH ELEVATION

Exhibit "C"

WEST ELEVATION

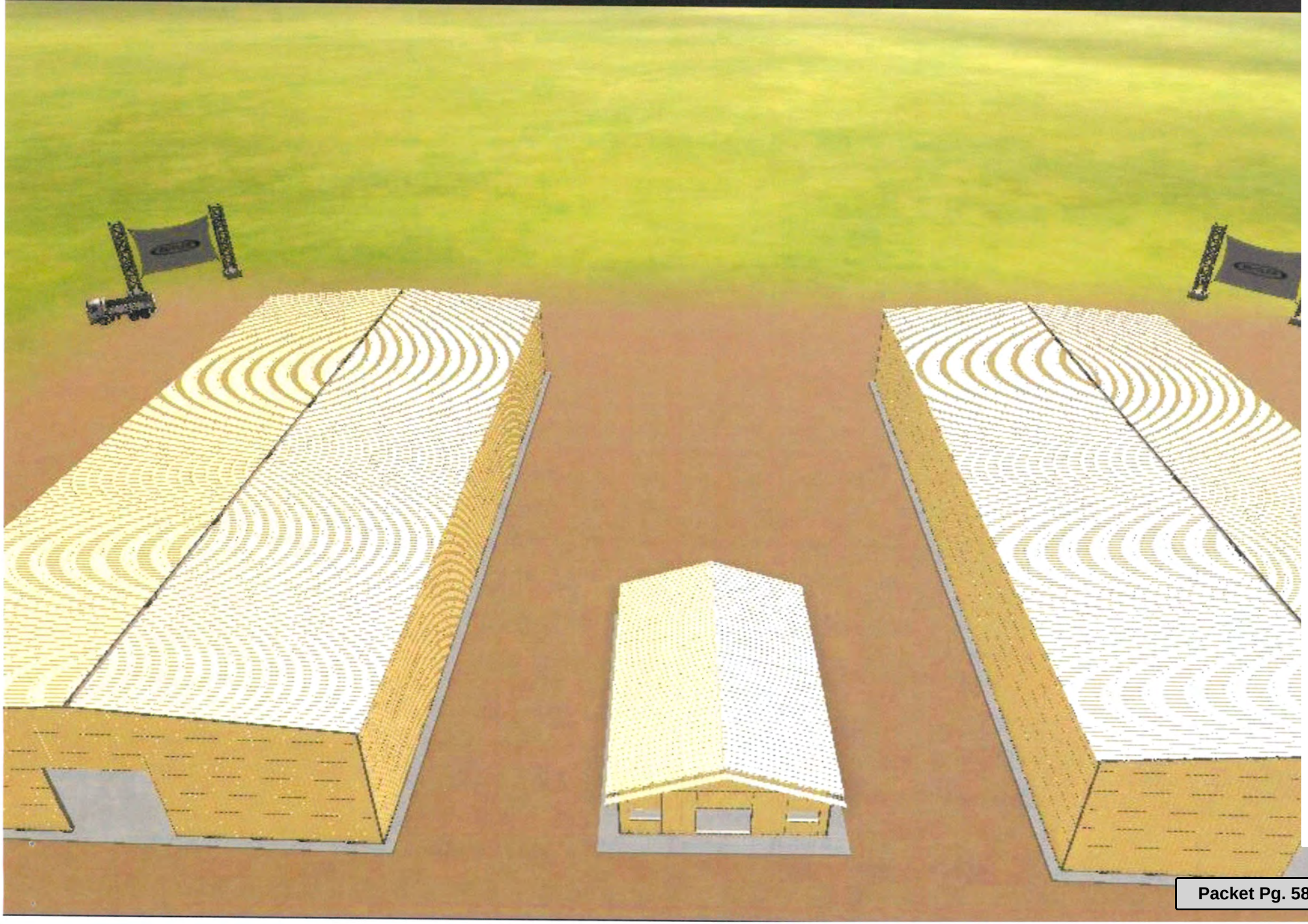


Exhibit "C"

SW ELEVATION

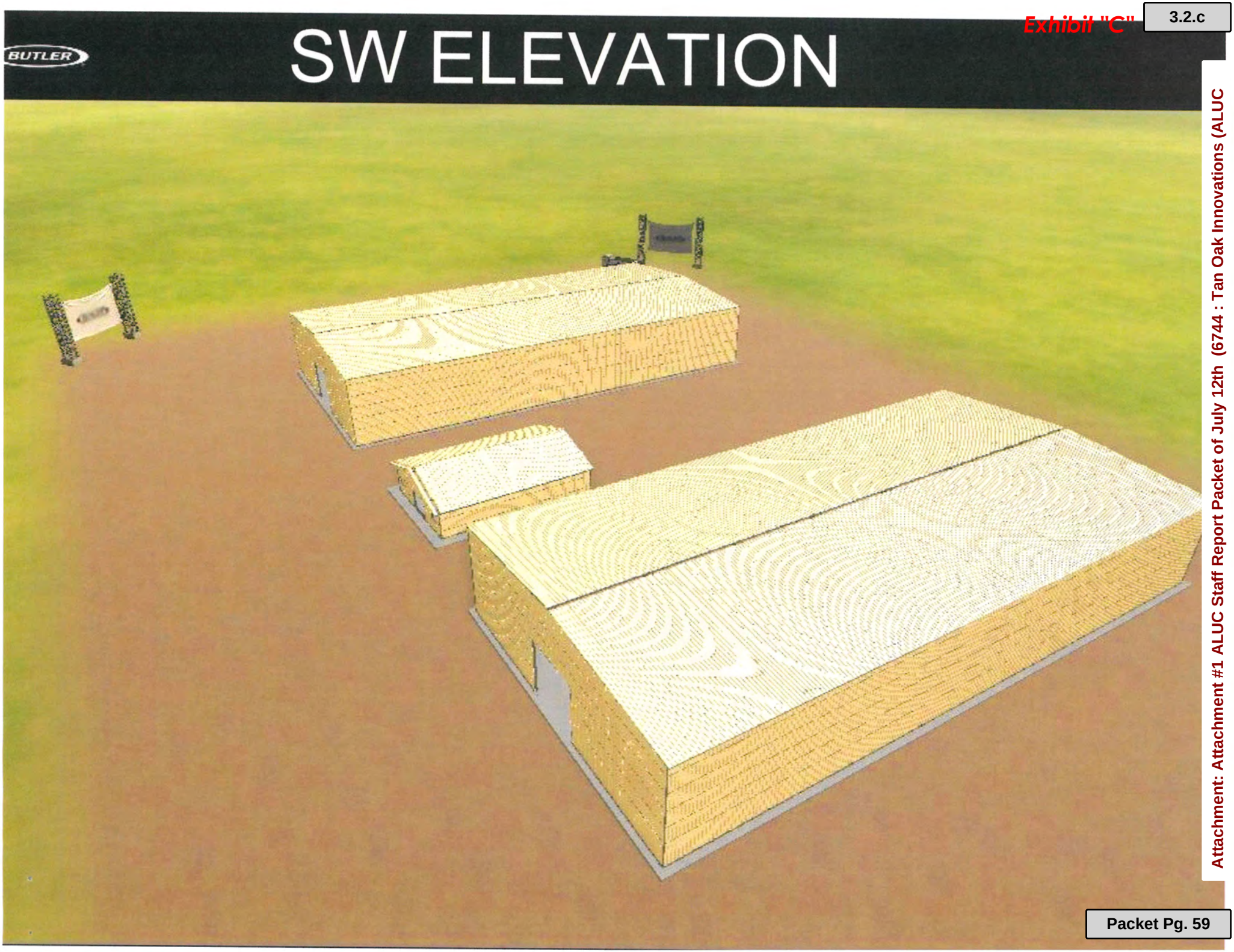


Exhibit "C"

BUTLER

SE ELEVATION

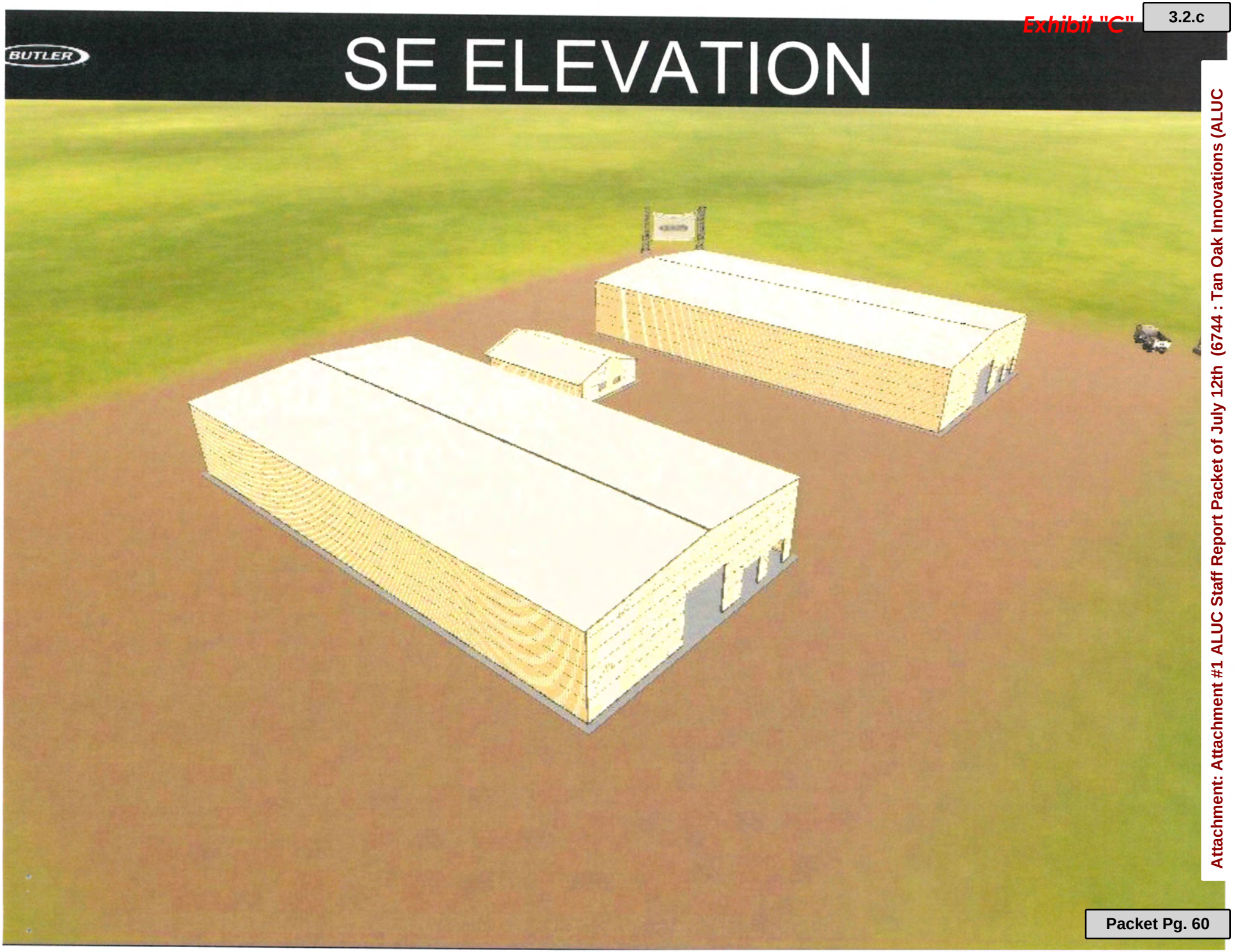
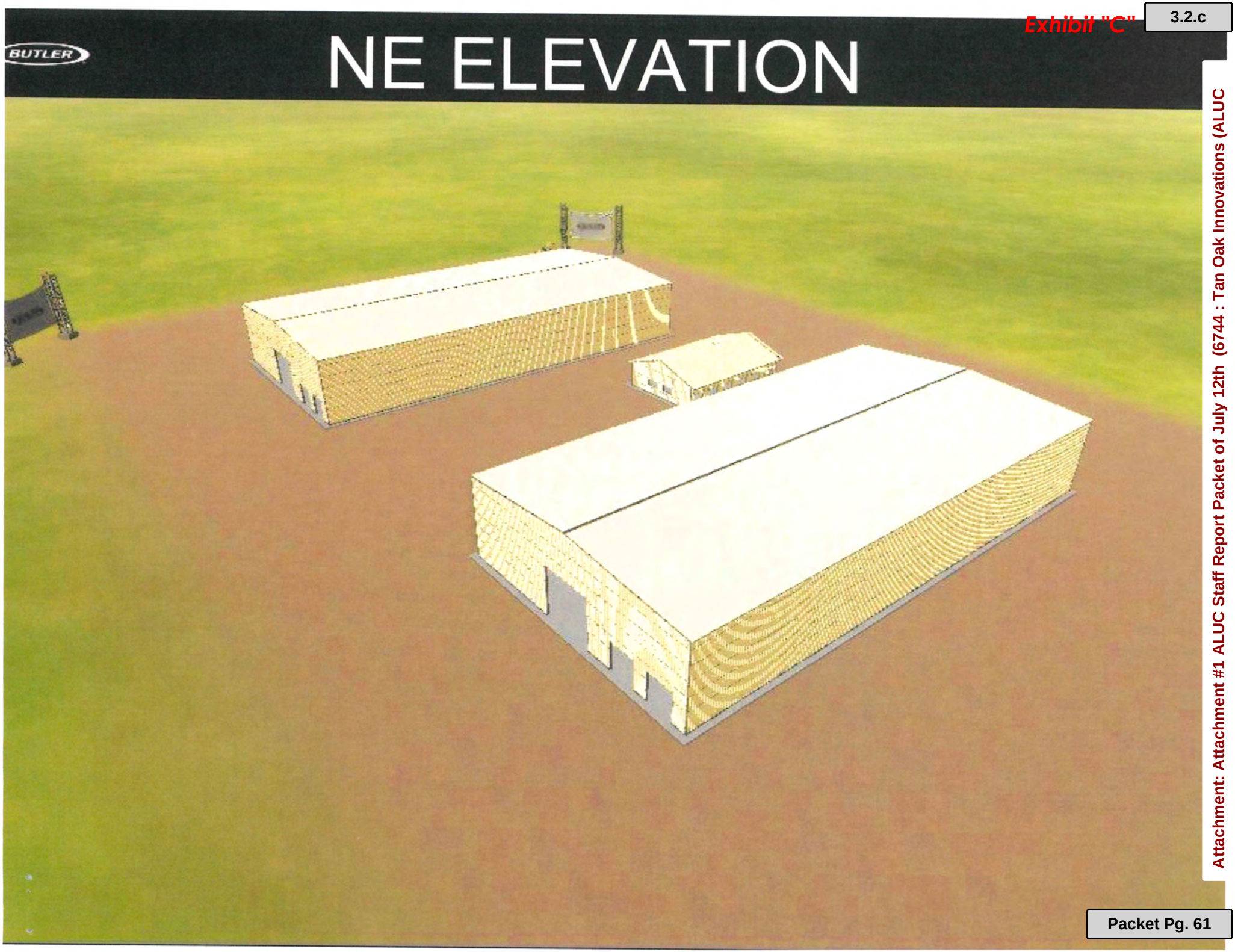


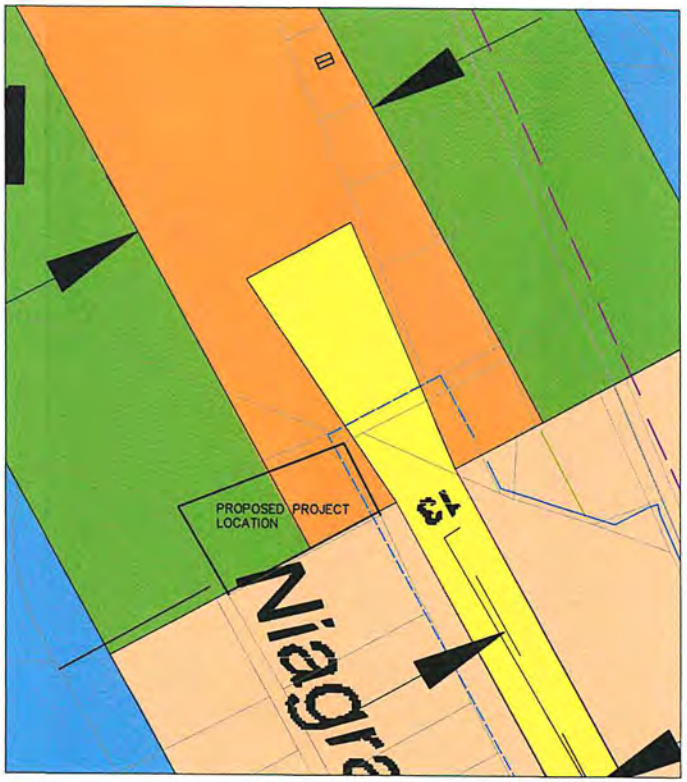
Exhibit "C"

BUTLER

NE ELEVATION

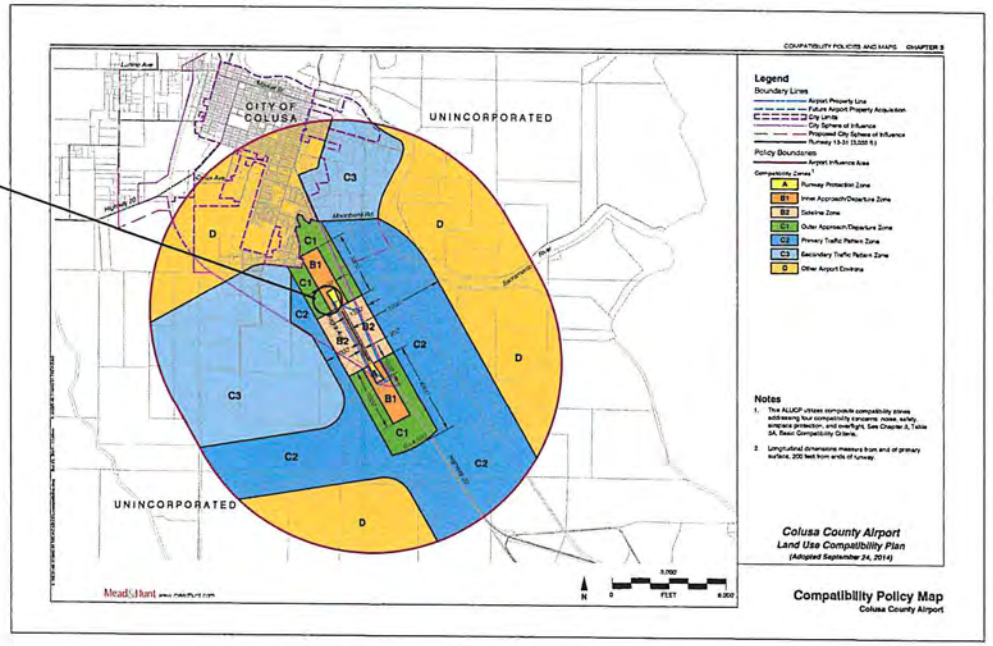


Attachment #1



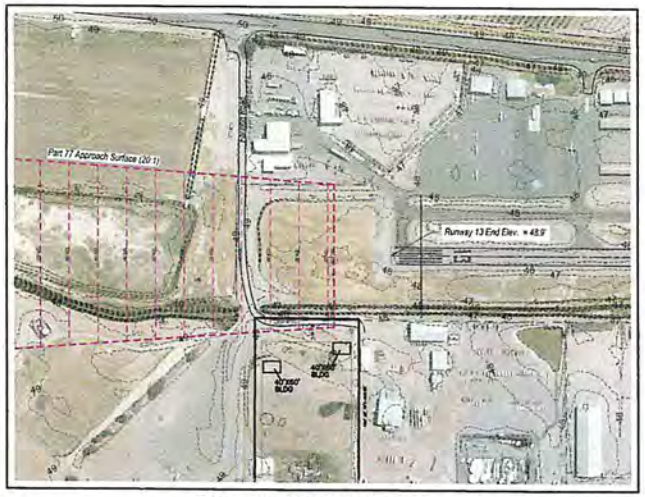
DETAIL
NTS

SEE DETAIL



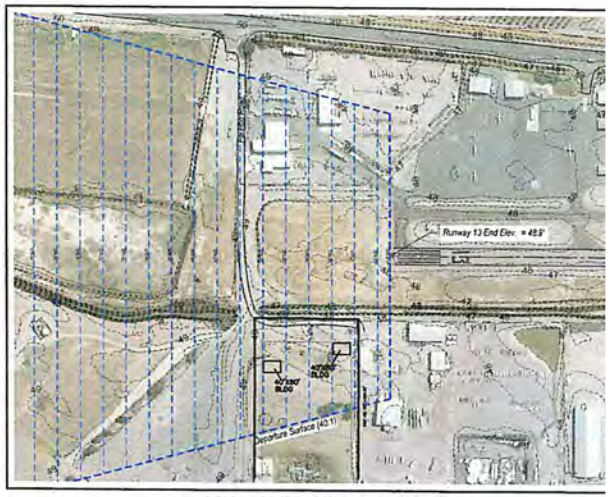
NVES
HULBERT PROPERTY
PLOT PLAN
NVES
1543 STARR DRIVE SUITE 'J'
YUBA CITY, CA 95993
(530) 713-0417

Attachment #1

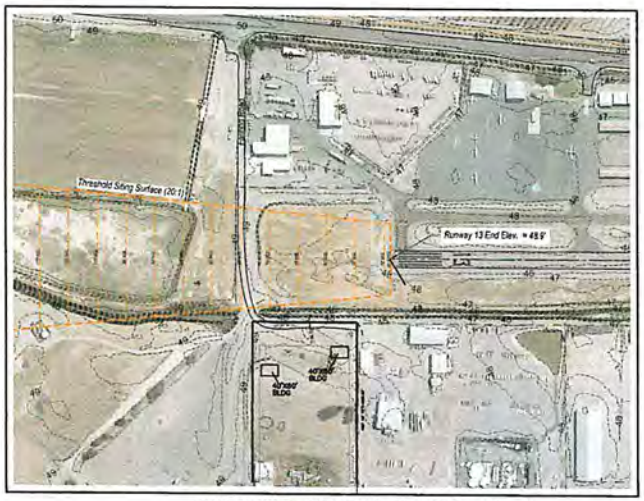


PART 77 APPROACH SURFACE (20:1)
1"=200'

RUNWAY PROTECTION ZONE
1"=200'

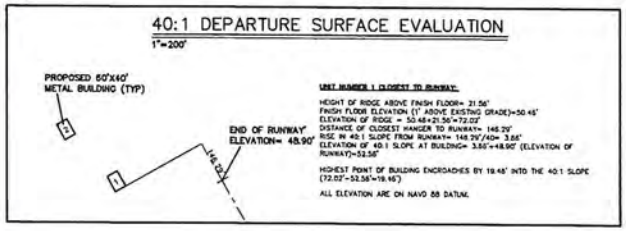


DEPARTURE SURFACE (40:1)
1"=200'

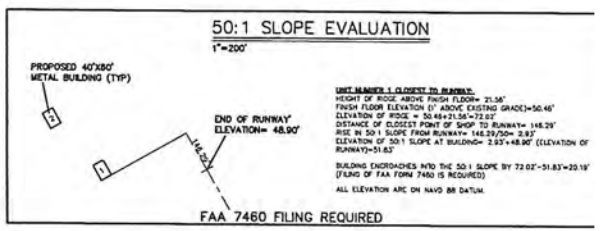


THRESHOLD SIGHTING SURFACE (20:1)
1"=200'

40:1 DEPARTURE SURFACE EVALUATION
1"=200'

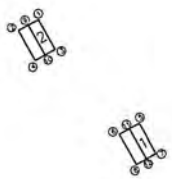


50:1 SLOPE EVALUATION
1"=200'



BUILDING CORNERS COORDINATES (NAD 83)

CORNER NO.	LATITUDE	LONGTITUDE
1	N39° 10' 59.56"	W121° 59' 52.32"
2	N39° 10' 59.37"	W121° 59' 52.77"
3	N39° 10' 59.04"	W121° 59' 51.95"
4	N39° 10' 58.85"	W121° 59' 52.39"
5	N39° 10' 57.78"	W121° 59' 50.08"
6	N39° 10' 57.59"	W121° 59' 50.53"
7	N39° 10' 57.26"	W121° 59' 49.71"
8	N39° 10' 57.07"	W121° 59' 50.15"
9	N39° 10' 56.46"	W121° 59' 52.54"
10	N39° 10' 58.65"	W121° 59' 52.17"
11	N39° 10' 57.68"	W121° 59' 50.31"
12	N39° 10' 57.17"	W121° 59' 49.93"



40'X60' BUILDING CORNERS LABELING
N.T.S.

NOTES:
1- THE DIAGRAMS AND INFORMATION SHOWN HEREIN ARE BASED ON A FIELD SURVEY COMPLETED IN JANUARY OF 2021. NVES HAS NOT EVALUATED THE PROPOSED NEW CONSTRUCTION TO DETERMINE COMPLIANCE WITH THE COLUSA COUNTY LAND USE COMPATIBILITY PLAN AND THE SUBMITTAL OF THESE CALCULATIONS ARE SUBMITTED FOR INFORMATION ONLY. COMPLIANCE EVALUATION NEEDS TO BE DONE BY OTHERS.
2- BENCH MARK USED IS AN NGS MONUMENT SET AT CONCRETE HEADWALL LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF FARNHAM ROAD AND STATE HIGHWAY 20 WITH SET ELEVATION OF 48.7' NAVD 88 DATUM.
3- SIZE AND HEIGHT OF BUILDINGS WERE PROVIDED BY LANDIX, GENERAL BUILDING CONTRACTOR.

NEW METAL BUILDINGS (TYP)

DIMENSIONS: 40'X80'

HIGHEST POINT OF ROOF ABOVE FINISHED FLOOR=17.90'
ELEVATION OF FINISHED FLOOR=50.83'
ELEVATION OF HIGHEST POINT ON ROOF= 50.67+17.90'=68.38'
PART 77 20:1 APPROACH SURFACE AT BUILDING (BUILDINGS OUTSIDE IMPACT AREA)
THRESHOLD SIGHTING 20:1 SURFACE AT BUILDING=(BUILDINGS OUTSIDE IMPACT AREA)
40:1 DEPARTURE SURFACE EVALUATION (SEE CALCULATIONS THIS PAGE)
50:1 FAA 7460 FILING REQUIREMENTS (SEE CALCULATIONS THIS PAGE)
BUILDINGS ARE OUTSIDE THE LIMITS OF THE RUNWAY PROTECTION ZONE.

REGISTERED PROFESSIONAL ENGINEER GEORGE L. MUSALLAM No. 49485 EXP. 9-30-2022 CIVIL STATE OF CALIFORNIA

NVES
HULBERT PROPERTY
PLOT PLAN

	DESIGNED BY: GEORGE MUSALLAM
	DRAWN BY: RIANA MOORE
NVES	CHECKED BY: GEORGE MUSALLAM
1347 STARR DRIVE SUITE "A" YUBA CITY, CA 95993 (530) 713-0417	JOB NO.:
	FILE NAME: NA

2

Attachment: Attachment #1 ALUC Staff Report Packet of July 12th (6744 : Tan Oak Innovations (ALUC

Attachment #1

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2021-AWP-2883-OE

Issued Date: 05/06/2021

Jacob Kley
Colusa Industrial Properties
50 Sunrise Blvd.
Colusa, CA 95932

**** FEASIBILITY REPORT ****

The Federal Aviation Administration has conducted a limited aeronautical review concerning the feasibility of a structure described as follows:

Structure:	Building Warehouse #1 Corner #5
Location:	Colusa, CA
Latitude:	39-10-57.78N NAD 83
Longitude:	121-59-50.08W
Heights:	50 feet site elevation (SE)
	22 feet above ground level (AGL)
	72 feet above mean sea level (AMSL)

The results of this review can be found on the attached page(s).

NOTE: THE RESULTS OF OUR LIMITED REVIEW IS NOT AN OFFICIAL DETERMINATION OF FINDINGS BUT ONLY A REPORT BASED ON THE GENERAL OR ESTIMATED INFORMATION SUPPLIED FOR THE STRUCTURE. ANY FUTURE, OFFICIAL AERONAUTICAL STUDY MAY REVEAL DIFFERENT RESULTS.

If we can be of further assistance, please contact our office at (206) 231-2989, or dan.shoemaker@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2021-AWP-2883-OE.

Signature Control No: 471034113-480014721 (FSB)
Daniel Shoemaker
Specialist

Attachment(s)
Additional Information
Map(s)

Additional information for ASN 2021-AWP-2883-OE *Attachment #1*

ASN 2021-AWP-2883-OE through 2021-AWP-2888-OE

NOTE: This feasibility study letter does not constitute a determination of no hazard to air navigation. THIS LETTER CORRECTS AND SUPERSEDES THE PREVIOUSLY ISSUED LETTER, SAME SUBJECT, DATED 5 MAY 2021.

Abbreviations

AGL - above ground level	AMSL - mean sea level	RWY - runway
VFR - visual flight rules	IFR - instrument flight rules	nm - nautical mile

Part 77 - Title 14 Code of Federal Regulations (CFR) Part 77, Objects Affecting Navigable Airspace

1. LOCATION OF PROPOSED CONSTRUCTION

This feasibility study is for a 22-foot AGL (72 feet AMSL) warehouse building. At its closest point (ASN 2021-AWP-2885-OE), the building will be approximately 341 feet west of the RWY 13 threshold at Colusa County Airport (O08) in Colusa, CA. The O08 airport elevation is 49 feet AMSL.

The Aeronautical Study Numbers, coordinates, and heights for the six points of the proposed building are:

2021-AWP-2883-OE	39-10-57.78N	121-59-50.08W	22 ft. AGL/72 ft. AMSL
2021-AWP-2884-OE	39-10-57.59N	121-59-50.53W	22 ft. AGL/72 ft. AMSL
2021-AWP-2885-OE	39-10-57.26N	121-59-49.71W	22 ft. AGL/72 ft. AMSL
2021-AWP-2886-OE	39-10-57.07N	121-59-50.15W	22 ft. AGL/72 ft. AMSL
2021-AWP-2887-OE	39-10-57.68N	121-59-50.31W	22 ft. AGL/72 ft. AMSL
2021-AWP-2888-OE	39-10-57.17N	121-59-49.93W	22 ft. AGL/72 ft. AMSL

2. OBSTRUCTION STANDARDS EXCEEDED: The structure is identified as an obstruction under the following Part 77 standards:

a. Section 77.17.(a)(3): A height within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area, which would result in the vertical distance between any point on the object and an established minimum instrument flight altitude within that area or segment to be less than the required obstacle clearance. This proposed building would have the following effect on IFR operations at O08:

1) RWY 31: Penetrates the 40:1 instrument departure slope in the initial climb area (ICA) by 19 feet, requiring a TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURE, NOTE: RWY 31, building 143 feet from departure end of runway, 310 feet left of centerline, 22 feet AGL, 72 feet AMSL.

2) b. RWY 13: Obstacle penetrates the 20:1 visual area surface. If not lighted, circling to RWY 13 is not authorized at night for all procedures, and no night IFR operations will be authorized for the airport as a whole (RWY 31 is already not authorized for night IFR operations.

b. Section 77.19(e): The transitional surface area designated under Part 77.19 to protect aircraft during the final approach phase of flight and prevent tall structures from being constructed in close proximity to the runway. The six points of the proposed building would penetrate the O08 RWY 13/31 transitional surface by the following amounts:

Attachment #1

2021-AWP-2883-OE	Exceeds by 15 feet.
2021-AWP-2884-OE	Exceeds by nine feet.
2021-AWP-2885-OE	Exceeds by 15 feet.
2021-AWP-2886-OE	Exceeds by 10 feet.
2021-AWP-2887-OE	Exceeds by 12 feet.
2021-AWP-2888-OE	Exceeds by 12 feet.

3. EFFECT ON AERONAUTICAL OPERATIONS

a. The impact on arrival, departure, and en route procedures for aircraft operating under VFR: This proposed building would exceed the O08 RWY 13/31 Part 77 transitional surface by nine to 15 feet. The building would not penetrate the O08 visual traffic pattern protected airspace (it would be three feet below the transitional surface, not abeam the runway, measured as though the runway was visual-only).

b. The impact on arrival, departure, and en route procedures for aircraft operating under IFR: The proposed building would penetrate the O08 RWY 31 40:1 instrument departure slopes in the ICA by 19 feet, requiring a note in the RWY 31 TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES alerting pilots to the building's presence. However, the building would not require an increase to the departure procedure's minimum weather requirements or minimum climb gradient, and would have no effect on instrument approach procedures at O08. The proposed building would also penetrate the 20:1 visual area surface, requiring that the building be lit with red obstruction lights to permit night IFR operations at O08.

c. The impact on all planned public-use airports and aeronautical facilities: None.

d. The cumulative impact resulting from the proposed construction or alteration of a structure when combined with the impact of other existing or proposed structures: None.

4. CONCLUSIONS

The feasibility study revealed that the building would probably have no significant adverse effect on airspace and visual/instrument procedures at Colusa County Airport. The building's penetration of the O08 RWY 13/31 Part 77 transitional surface and the RWY 13 20:1 visual area surface would require it be lit with red obstruction lights and that its aeronautical studies be circularized for public comment, but it could likely be constructed to the full requested 22-foot AGL (72-foot AMSL) height should no substantive objections emerge as a result of the public comment process. It would not penetrate visual traffic pattern protected airspace at Colusa County Airport, nor would it have any effect on airport facilities or radio/visual navigational and landing aids.

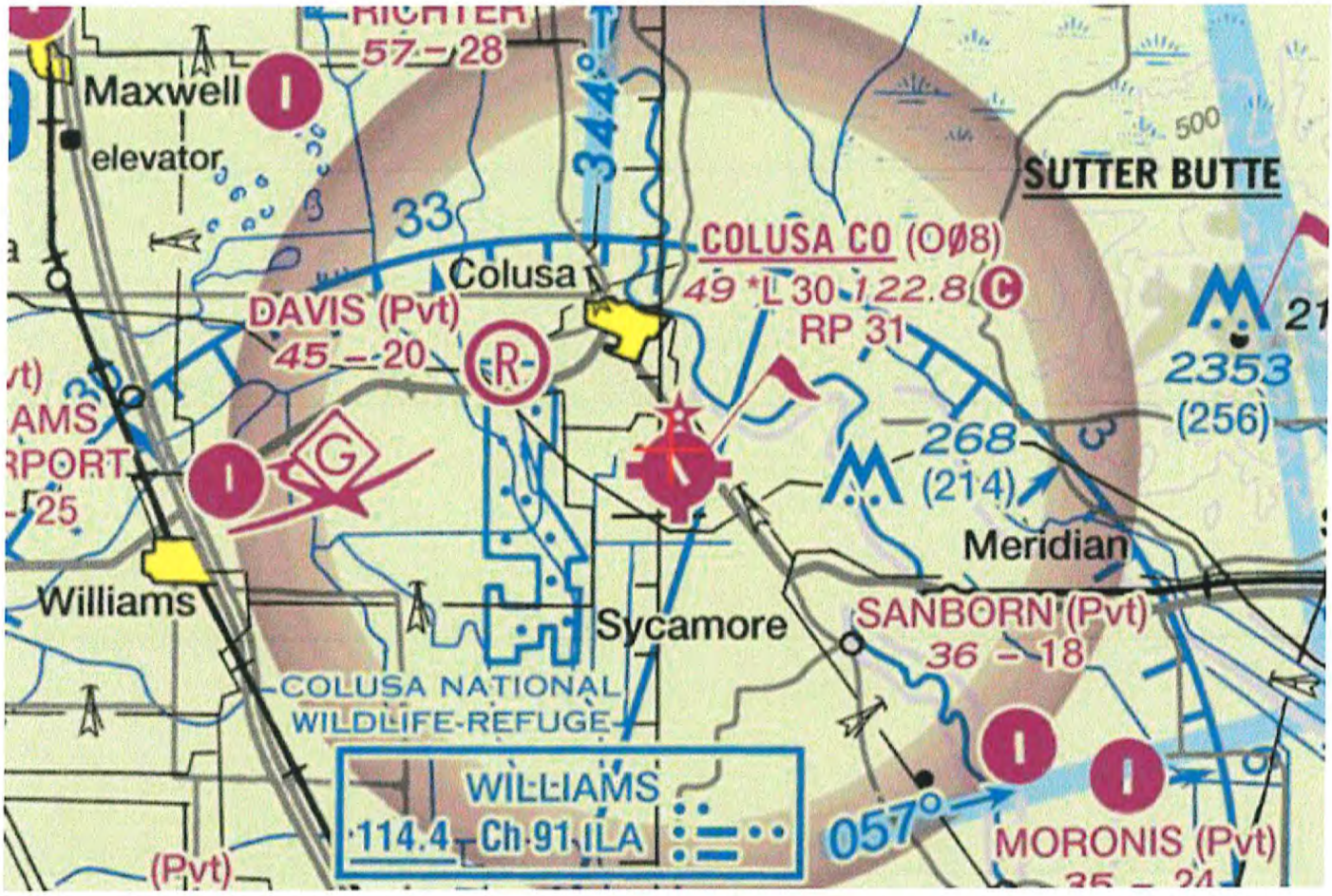
This feasibility study does not constitute a determination of no hazard to air navigation from the FAA. Its purpose is to give the proponent information on effects the proposed structure would have on airspace and aeronautical procedures, and prescribe ways to eliminate or mitigate those effects, in order to allow the proponent to plan for and design the actual structure that will be built on the site. A full aeronautical study will be required for the actual design of the building prior to its construction.

TOPO Map for ASN 2021-AWP-2883-OE

Attachment #1

Sectional Map for ASN 2021-AWP-2883-OE

Attachment #1



Attachment #1

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2021-AWP-2877-OE

Issued Date: 05/06/2021

Jacob Kley
Colusa Industrial Properties
50 Sunrise Blvd.
Colusa, CA 95932

**** FEASIBILITY REPORT ****

The Federal Aviation Administration has conducted a limited aeronautical review concerning the feasibility of a structure described as follows:

Structure:	Building Warehouse #2 Corner #1
Location:	Colusa, CA
Latitude:	39-10-59.56N NAD 83
Longitude:	121-59-52.32W
Heights:	50 feet site elevation (SE)
	22 feet above ground level (AGL)
	72 feet above mean sea level (AMSL)

The results of this review can be found on the attached page(s).

NOTE: THE RESULTS OF OUR LIMITED REVIEW IS NOT AN OFFICIAL DETERMINATION OF FINDINGS BUT ONLY A REPORT BASED ON THE GENERAL OR ESTIMATED INFORMATION SUPPLIED FOR THE STRUCTURE. ANY FUTURE, OFFICIAL AERONAUTICAL STUDY MAY REVEAL DIFFERENT RESULTS.

If we can be of further assistance, please contact our office at (206) 231-2989, or dan.shoemaker@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2021-AWP-2877-OE.

Signature Control No: 471034104-480015266 (FSB)
Daniel Shoemaker
Specialist

Attachment(s)
Additional Information
Map(s)

ASN 2021-AWP-2877-OE through 2021-AWP-2882-OE

NOTE: This feasibility study letter does not constitute a determination of no hazard to air navigation.

Abbreviations

AGL - above ground level	AMSL - mean sea level	RWY - runway
VFR - visual flight rules	IFR - instrument flight rules	nm - nautical mile

Part 77 - Title 14 Code of Federal Regulations (CFR) Part 77, Objects Affecting Navigable Airspace

1. LOCATION OF PROPOSED CONSTRUCTION

This feasibility study is for a 22-foot AGL (72 feet AMSL) warehouse building. At its closest point (ASN 2021-AWP-2879-OE), the building will be approximately 539 feet west-northwest of the RWY 13 threshold at Colusa County Airport (O08) in Colusa, CA. The O08 airport elevation is 49 feet AMSL.

The Aeronautical Study Numbers, coordinates, and heights for the six points of the proposed building are:

2021-AWP-2877-OE	39-10-59.56N	121-59-52.32W	22 ft. AGL/72 ft. AMSL
2021-AWP-2878-OE	39-10-59.37N	121-59-52.77W	22 ft. AGL/72 ft. AMSL
2021-AWP-2879-OE	39-10-59.04N	121-59-51.95W	22 ft. AGL/72 ft. AMSL
2021-AWP-2880-OE	39-10-58.85N	121-59-52.39W	22 ft. AGL/72 ft. AMSL
2021-AWP-2881-OE	39-10-59.46N	121-59-52.54W	22 ft. AGL/72 ft. AMSL
2021-AWP-2882-OE	39-10-58.95N	121-59-52.17W	22 ft. AGL/72 ft. AMSL

2. OBSTRUCTION STANDARDS EXCEEDED: The structure is identified as an obstruction under the following Part 77 standards:

Section 77.17.(a)(3): A height within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area, which would result in the vertical distance between any point on the object and an established minimum instrument flight altitude within that area or segment to be less than the required obstacle clearance. This proposed building would have the following effect on IFR operations at O08:

a. RWY 31: Penetrates the 40:1 instrument departure slope in the initial climb area (ICA) by 13 feet, requiring a TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURE, NOTE: RWY 31, building 388 feet from departure end of runway, 376 feet left of centerline, 22 feet AGL, 72 feet AMSL.

b. RWY 13: Obstacle penetrates the 20:1 visual area surface. If not lighted, circling to RWY 13 is not authorized at night for all procedures, and no night IFR operations will be authorized for the airport as a whole (RWY 31 is already not authorized for night IFR operations.

3. EFFECT ON AERONAUTICAL OPERATIONS

a. The impact on arrival, departure, and en route procedures for aircraft operating under VFR: None.

b. The impact on arrival, departure, and en route procedures for aircraft operating under IFR: The proposed building would penetrate the O08 RWY 31 40:1 instrument departure slopes in the ICA by 19 feet, requiring a note in the RWY 31 TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES alerting pilots to the building's presence. However, the building would not require an increase to the departure

procedure's minimum weather requirements or minimum climb gradient, and would have no effect on instrument approach procedures at O08. The proposed building would also penetrate the 20:1 visual area surface, requiring that the building be lit with red obstruction lights to permit night IFR operations at O08.

c. The impact on all planned public-use airports and aeronautical facilities: None.

d. The cumulative impact resulting from the proposed construction or alteration of a structure when combined with the impact of other existing or proposed structures: None.

4. CONCLUSIONS

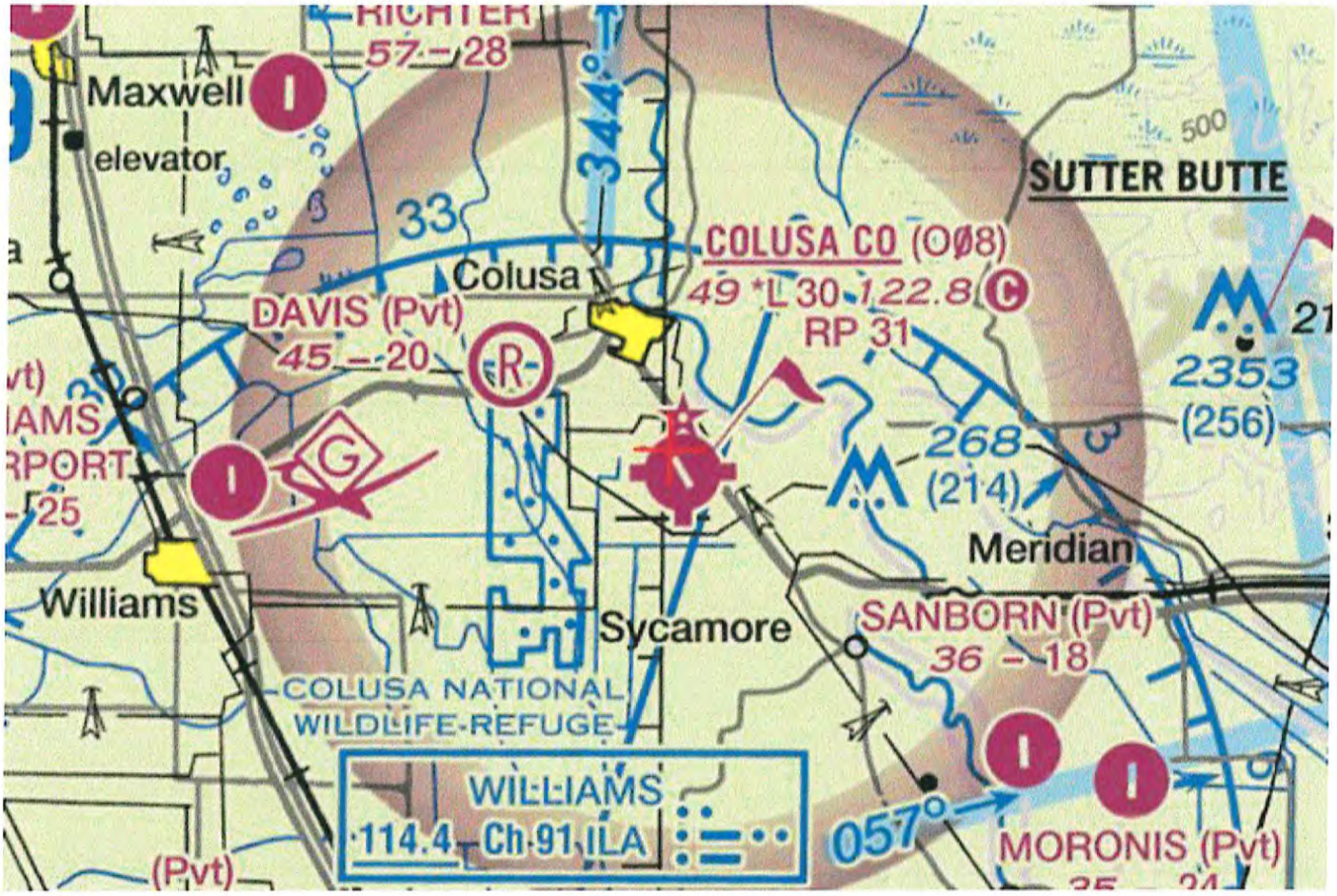
The feasibility study revealed that the building would have no significant adverse effect on airspace and visual/instrument procedures at Colusa County Airport. The building's penetration of the O08 RWY 31 40:1 instrument departure slope would require only a note in the TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES, and would not require any increase to the minimum weather requirements or minimum climb gradient. The penetration of the RWY 13 20:1 visual area surface would require it be lit with red obstruction lights in order to allow continued use of RWY 13 for IFR operations at night. It would not penetrate visual traffic pattern protected airspace at Colusa County Airport, nor would it have any effect on airport facilities or radio/visual navigational and landing aids.

This feasibility study does not constitute a determination of no hazard to air navigation from the FAA. Its purpose is to give the proponent information on effects the proposed structure would have on airspace and aeronautical procedures, and prescribe ways to eliminate or mitigate those effects, in order to allow the proponent to plan for and design the actual structure that will be built on the site. A full aeronautical study will be required for the actual design of the building prior to its construction.

TOPO Map for ASN 2021-AWP-2877-OE

Attachment #1

Sectional Map for ASN 2021-AWP-2877-OE **Attachment #1**



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No
2021-AWP-7420-OE

Issued Date: 07/14/2021

Jacob Kley
Colusa Industrial Properties
50 Sunrise Blvd.
Colusa, CA 95932

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Building Tan Oak B2 C1
Location:	Colusa, CA
Latitude:	39-10-58.72N NAD 83
Longitude:	121-59-54.40W
Heights:	50 feet site elevation (SE)
	30 feet above ground level (AGL)
	80 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities. Therefore, pursuant to the authority delegated to me, it is hereby determined that the structure would not be a hazard to air navigation provided the following condition(s) is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, red lights-Chapters 4,5(Red),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

__X__ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

See attachment for additional condition(s) or information.

The structure considered under this study lies in proximity to an airport and occupants may be subjected to noise from aircraft operating to and from the airport.

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is subject to review if an interested party files a petition that is received by the FAA on or before August 13, 2021. In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted to the Manager of the Rules and Regulations Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on August 23, 2021 unless a petition is timely filed. In which case, this determination will not become final pending disposition of the petition. Interested parties will be notified of the grant of any review. For any questions regarding your petition, please contact Rules and Regulations Group via telephone – 202-267-8783.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

This aeronautical study considered and analyzed the impact on existing and proposed arrival, departure, and en route procedures for aircraft operating under both visual flight rules and instrument flight rules; the impact on all existing and planned public-use airports, military airports and aeronautical facilities; and the cumulative

impact resulting from the studied structure when combined with the impact of other existing or proposed structures. The study disclosed that the described structure would have no substantial adverse effect on air navigation.

An account of the study findings, aeronautical objections received by the FAA during the study (if any), and the basis for the FAA's decision in this matter can be found on the following page(s).

If we can be of further assistance, please contact Daniel Shoemaker, at (206) 231-2989, or dan.shoemaker@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2021-AWP-7420-OE.

Signature Control No: 480731408-488025387 (DNH)
Steve Phillips
Manager, Obstruction Evaluation Group

Attachment(s)
Additional Information
Map(s)

ASN 2021-AWP-7420-OE through 2021-AWP-7425-OE

Abbreviations

AGL - above ground level	AMSL - mean sea level	RWY - runway
VFR - visual flight rules	IFR - instrument flight rules	nm - nautical mile

Part 77 - Title 14 Code of Federal Regulations (CFR) Part 77, Objects Affecting Navigable Airspace

1. LOCATION OF PROPOSED CONSTRUCTION

This proposal is for a 30-foot AGL (80-foot AMSL) building, which, at its closest point (2021-AWP-7418-OE), will be located approximately 576 feet (0.69 nm) west-southwest of the RWY 13 threshold at Colusa County Airport (O08), NV. The O08 airport elevation is 49 feet AMSL.

The Aeronautical Study Numbers and coordinates for the six studied points of the building are:

2021-AWP-7420-OE	39-10-58.72N	121-59-54.40W	30 ft. AGL/80 ft. AMSL NE corner
2021-AWP-7421-OE	39-10-57.75N	121-59-56.61W	30 ft. AGL/80 ft. AMSL NW corner
2021-AWP-7422-OE	39-10-58.28N	115-59-54.09W	30 ft. AGL/80 ft. AMSL E ridge
2021-AWP-7423-OE	39-10-57.32N	121-59-56.30W	30 ft. AGL/80 ft. AMSL W ridge
2021-AWP-7424-OE	39-10-57.85N	121-59-53.78W	30 ft. AGL/80 ft. AMSL SE corner
2021-AWP-7425-OE	39-10-56.89N	121-59-55.99W	30 ft. AGL/80 ft. AMSL SW corner

2. OBSTRUCTION STANDARDS EXCEEDED

The structure is identified as an obstruction under the following Part 77 standards:

Section 77.17(a)(3): A structure that causes less than the required obstacle clearance within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area resulting in increases to an IFR terminal minimum altitude. The proposed structure would have the following effect on O08 instrument procedures:

RWY 31: Three points of the building penetrate the 40:1 departure slope in the initial climb area (ICA), requiring a TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES, NOTE: RWY 31, building 352 feet from departure end of runway, 560 feet left of centerline, 30 feet AGL, 80 feet AMSL.

The following points of the building penetrate the RWY 31 40:1 instrument departure surface in the ICA by the indicated amounts:

2021-AWP-7420-OE	Penetrates by 20 feet.
2021-AWP-7422-OE	Penetrates by 22 feet.
2021-AWP-7424-OE	Penetrates by 23 feet.

3. EFFECT ON AERONAUTICAL OPERATIONS

a. The impact on arrival, departure, and en route procedures for aircraft operating under VFR: None.

b. The impact on arrival, departure, and en route procedures for aircraft operating under IFR: The proposed structure would penetrate the O08 RWY 31 40:1 departure surface in the ICA by 20 to 23 feet. This is a low close-in obstacle and requires a note in the O08 RWY 31 TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES to alert pilots to the building's presence.

c. The impact on all planned public-use airports and aeronautical facilities: None.

d. The cumulative impact resulting from the proposed construction or alteration of a structure when combined with the impact of other existing or proposed structures: None.

4. CIRCULATION AND COMMENTS RECEIVED

The proposal was not circularized for public comment. While the building would penetrate the O08 RWY 31 40:1 instrument departure surface by 20 to 23 feet, the building will qualify as a low close-in penetration, with a climb gradient termination altitude 200 feet or less above the departure end of the runway. Per Obstruction Evaluation Group policy, structures that exceed the ICA 40:1 slope by 35 feet or less, and which do not affect the minimum instrument departure climb gradient, do not require circularization if they have no other effects on aeronautical operations. This proposed building meets those criteria, and therefore was not circularized. However, the fact that the study was not circularized for public comment does not abrogate the public's right to petition this determination.

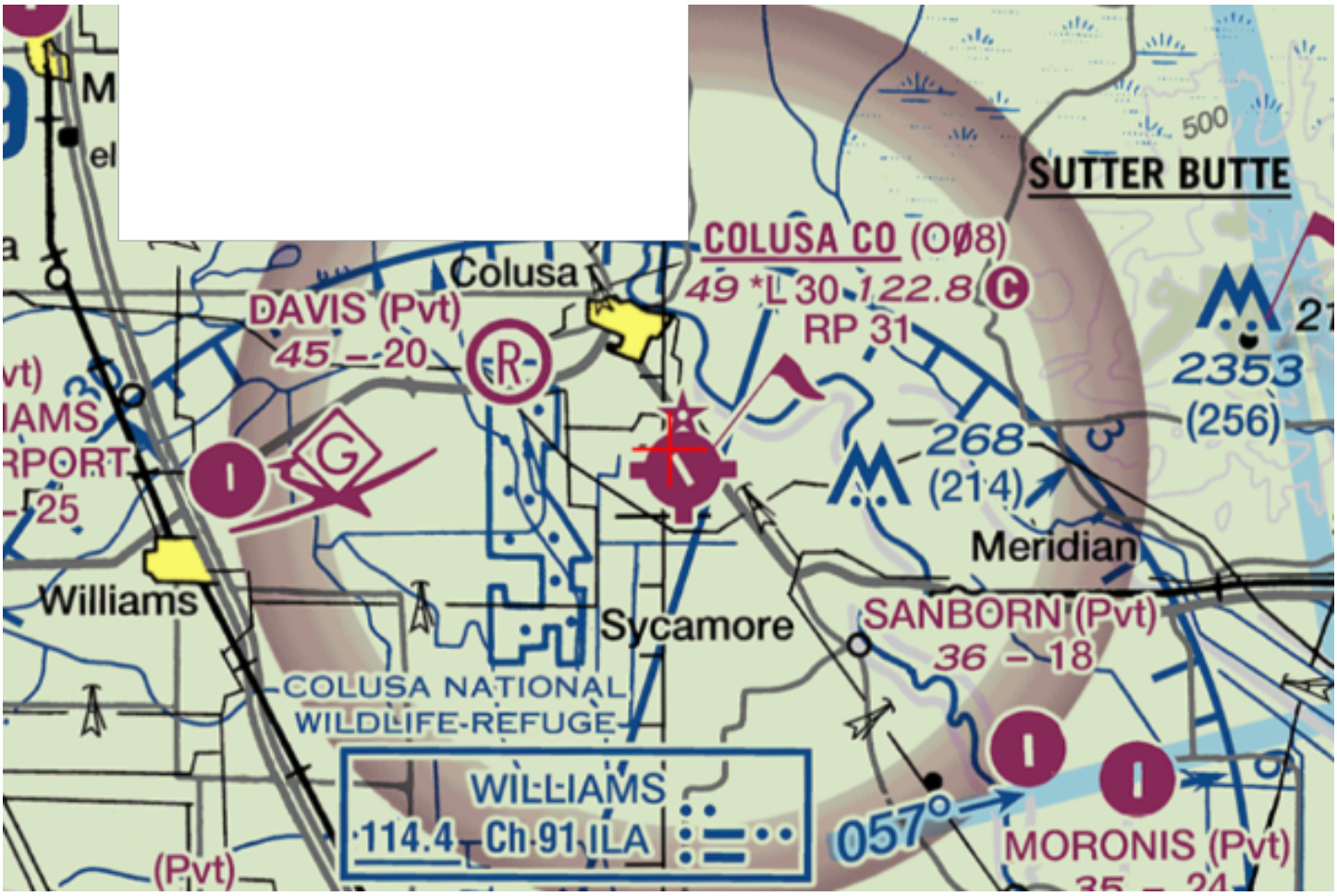
5. DETERMINATION - NO HAZARD TO AIR NAVIGATION

It is determined that the proposed construction would not have a substantial adverse effect on the safe and efficient use of navigable airspace by aircraft.

6. BASIS FOR DECISION

While the proposed building would penetrate the O08 RWY 31 40:1 instrument departure surface by up to 23 feet, it would not increase the instrument departure climb gradient or weather minimums, nor would it have any other adverse effects on visual or instrument approach or departure procedures. The required note in the TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES will alert pilots to the presence of the building off the departure end of the runway.

This building will be located in extremely close proximity to the O08 RWY 13 threshold and the 13/31 extended centerline. Occupants and people outside the building will be exposed to frequent loud aircraft noise and the sight of aircraft flying at very low altitudes in very close proximity to the building.



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No
2021-AWP-7414-OE

Issued Date: 07/14/2021

Jacob Kley
Colusa Industrial Properties
50 Sunrise Blvd.
Colusa, CA 95932

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Building Tan Oak B1 C13
Location:	Colusa, CA
Latitude:	39-10-56.88N NAD 83
Longitude:	121-59-53.08W
Heights:	50 feet site elevation (SE)
	30 feet above ground level (AGL)
	80 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities. Therefore, pursuant to the authority delegated to me, it is hereby determined that the structure would not be a hazard to air navigation provided the following condition(s) is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 M, Obstruction Marking and Lighting, red lights-Chapters 4,5(Red),&15.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

See attachment for additional condition(s) or information.

The structure considered under this study lies in proximity to an airport and occupants may be subjected to noise from aircraft operating to and from the airport.

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is subject to review if an interested party files a petition that is received by the FAA on or before August 13, 2021. In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted to the Manager of the Rules and Regulations Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Washington, DC 20591, via email at OEPetitions@faa.gov, or via facsimile (202) 267-9328.

This determination becomes final on August 23, 2021 unless a petition is timely filed. In which case, this determination will not become final pending disposition of the petition. Interested parties will be notified of the grant of any review. For any questions regarding your petition, please contact Rules and Regulations Group via telephone – 202-267-8783.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

This aeronautical study considered and analyzed the impact on existing and proposed arrival, departure, and en route procedures for aircraft operating under both visual flight rules and instrument flight rules; the impact on all existing and planned public-use airports, military airports and aeronautical facilities; and the cumulative

impact resulting from the studied structure when combined with the impact of other existing or proposed structures. The study disclosed that the described structure would have no substantial adverse effect on air navigation.

An account of the study findings, aeronautical objections received by the FAA during the study (if any), and the basis for the FAA's decision in this matter can be found on the following page(s).

If we can be of further assistance, please contact Daniel Shoemaker, at (206) 231-2989, or dan.shoemaker@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2021-AWP-7414-OE.

Signature Control No: 480731402-488001693 (DNH)
Steve Phillips
Manager, Obstruction Evaluation Group

Attachment(s)
Additional Information
Map(s)

ASN 2021-AWP-7414-OE through 2021-AWP-7419-OE

Abbreviations

AGL - above ground level	AMSL - mean sea level	RWY - runway
VFR - visual flight rules	IFR - instrument flight rules	nm - nautical mile

Part 77 - Title 14 Code of Federal Regulations (CFR) Part 77, Objects Affecting Navigable Airspace

1. LOCATION OF PROPOSED CONSTRUCTION

This proposal is for a 30-foot AGL (80-foot AMSL) building, which, at its closest point (2021-AWP-7418-OE), will be located approximately 576 feet (0.69 nm) west-southwest of the RWY 13 threshold at Colusa County Airport (O08), NV. The O08 airport elevation is 49 feet AMSL.

The Aeronautical Study Numbers and coordinates for the six studied points of the building are:

2021-AWP-7414-OE	39-10-56.88N	121-59-53.08W	30 ft. AGL/80 ft. AMSL NE corner
2021-AWP-7415-OE	39-10-55.91N	121-59-55.29W	30 ft. AGL/80 ft. AMSL NW corner
2021-AWP-7416-OE	39-10-56.45N	115-59-55.77W	30 ft. AGL/80 ft. AMSL E ridge
2021-AWP-7417-OE	39-10-55.48N	121-59-54.98W	30 ft. AGL/80 ft. AMSL W ridge
2021-AWP-7418-OE	39-10-56.01N	121-59-52.46W	30 ft. AGL/80 ft. AMSL SE corner
2021-AWP-7419-OE	39-10-55.05N	121-59-54.67W	30 ft. AGL/80 ft. AMSL SW corner

2. OBSTRUCTION STANDARDS EXCEEDED

The structure is identified as an obstruction under the following Part 77 standards:

Section 77.17(a)(3): A structure that causes less than the required obstacle clearance within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area resulting in increases to an IFR terminal minimum altitude. The proposed structure would have the following effect on O08 instrument procedures:

RWY 31: The southeast corner of the building (2021-AWP-7418-OE) penetrates the 40:1 departure slope in the initial climb area (ICA) by 26 feet, requiring a TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES, NOTE: RWY 31, building 239 feet from departure end of runway, 559 feet left of centerline, 30 feet AGL, 80 feet AMSL.

3. EFFECT ON AERONAUTICAL OPERATIONS

a. The impact on arrival, departure, and en route procedures for aircraft operating under VFR: None.

b. The impact on arrival, departure, and en route procedures for aircraft operating under IFR: The proposed structure would penetrate the O08 RWY 31 40:1 departure surface in the ICA by 26 feet. This is a low close-in obstacle and requires a note in the O08 RWY 31 TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES to alert pilots to the building's presence.

c. The impact on all planned public-use airports and aeronautical facilities: None.

d. The cumulative impact resulting from the proposed construction or alteration of a structure when combined with the impact of other existing or proposed structures: None.

4. CIRCULATION AND COMMENTS RECEIVED

The proposal was not circularized for public comment. While the building would penetrate the O08 RWY 31 40:1 instrument departure surface by 26 feet, the building will qualify as a low close-in penetration, with a climb gradient termination altitude 200 feet or less above the departure end of the runway. Per Obstruction Evaluation Group policy, structures that exceed the ICA 40:1 slope by 35 feet or less, and which do not affect the minimum instrument departure climb gradient, do not require circularization if they have no other effects on aeronautical operations. This proposed building meets those criteria, and therefore was not circularized. However, the fact that the study was not circularized for public comment does not abrogate the public's right to petition this determination.

5. DETERMINATION - NO HAZARD TO AIR NAVIGATION

It is determined that the proposed construction would not have a substantial adverse effect on the safe and efficient use of navigable airspace by aircraft.

6. BASIS FOR DECISION

While the proposed building would penetrate the O08 RWY 31 40:1 instrument departure surface by 26 feet, it would not increase the instrument departure climb gradient or weather minimums, nor would it have any other adverse effects on visual or instrument approach or departure procedures. The required note in the TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES will alert pilots to the presence of the building off the departure end of the runway.

This building will be located in extremely close proximity to the O08 RWY 13 threshold and the 13/31 extended centerline. Occupants and people outside the building will be exposed to frequent loud aircraft noise and the sight of aircraft flying at very low altitudes in very close proximity to the building.