NAPA LOGISTICS PARK

NAPA, CALIFORNIA

Land Use Compatibility and Airspace Analysis Report

Prepared for
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By
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June 2015

Napa Logistics Park Review

The following Land Use Compatibility and Airspace Analysis report provides an airspace and airport land use compatibility review for the proposed Napa Logistics Park, Phase II Project (the Project), as provided on April 2, 2015 and supplementary information received on May 13, 2015.

The proposed Project will be constructed south of the Napa County Airport (the Airport), south of the approach end of Runway 24. The Project site is located south of Airport Road and west of the railroad tracks. This report reviews compliance of the Project with the: 1) Napa County Airport Land Use Compatibility Plan (Napa ALUCP) adopted by the Napa County Airport Land Use Commission (ALUC) in 1995 and revised in 1999, and 2) Federal Aviation Administration (FAA) regulations (FARs).

Review Summary

No impacts are expected with regard to FAA airspace or the Napa ALUCP density requirements; however, two specific components of the Project, landscaping and on-site storm drainage facilities, have the potential to attract wildlife and increase hazards to aircraft operations.

The following recommendations are provided to reduce potential hazards:

- Refine or adapt water management designs to comply with FAA guidance.
- Refine or adapt landscape design to include materials that will not be attractive to wildlife.
- Develop Project design standards to address aviation and wildlife hazard management concerns.
- Establish a cooperative agreement and ongoing dialogue with Airport staff regarding wildlife management, facility management procedures, and Airport operations.

Airport Land Use Compatibility Review

The Project site falls within the Napa County ALUC planning area. The specific limits of the planning area for the Airport are defined in the Compatibility Map included in the Napa ALUCP. Compatibility Zones affecting the proposed Project site are shown in **Exhibit 1**.

The Napa ALUCP establishes policies and compatibility zones to address four focus areas: noise, safety, airspace protection, and overflight. The Napa ALUCP defines five compatibility zones that address the focus areas in a composite manner:

- Zone A encompasses the Runway Protection Zones and areas lateral to the runway.
- Zone B includes the approach/departure zone where aircraft will be less than 100 feet above ground.
- Zone C is defined by the extended approach/departure zone where aircraft will be less than 300 feet above ground level.
- Zone D encompasses the common traffic pattern. These areas are routinely overflown by aircraft.
- Zone E includes the remaining Airport environs and defines the Airport's influence area and ALUC's planning area.

The Project site falls entirely within Zone D. Zone D is characterized by moderate risk, frequent noise intrusion and routine overflights at less than 1,000 feet above ground level. The Napa ALUCP indicates that warehousing, low-intensity light industrial uses, and office uses are normally acceptable uses. Napa ALUCP Table 3-2, *Airport Vicinity Land Use Compatibility Criteria,* establishes maximum densities for indoor and outdoor uses. Within Zone D, indoor uses are limited to no more than 100 people per net acre. Uses with an outdoor component can have up to 150 per net acre. The Napa ALUCP does not limit the number of people that can be clustered in any one acre of the parcel within Zone D. Net acreage is defined as the total site area inclusive of parking areas and landscaping, less the area dedicated for streets.

Additionally, the Napa ALUCP prohibits residential uses and uses posing hazards to flight. Hazards to flight include objects that penetrate FAR Part 77 airspace surfaces, uses that would attract large numbers of birds, and uses that would create smoke, glare, distracting lights, or electronic interference.

The analysis that follows assesses Napa ALUCP density and airspace criteria that relate to the Project.

Maximum Density

The Project site includes several buildings that would facilitate the development of industrial uses including warehousing, manufacturing, and general office uses. These land uses are generally consistent with Napa ALUCP criteria, provided that the uses do not attract large concentrations of people.

For the purposes of this analysis, the total number of parking spaces provided for each building (buildings 2 through 5) is used to estimate the total number of people who could be on site at any given time during peak use. The density calculations also assume that the typical vehicle occupancy rate for a business professional office use is 1.2 persons per vehicle. The actual vehicle occupancy rate may be lower than what is used for this analysis, as several of the buildings will be used for low-intensity industrial/warehousing uses. This approach assumes that most users are arriving by private vehicle rather than public transportation, walking, carpooling or other method.

The Project provides 2,083 parking spaces. Applying the vehicle occupancy load factor of 1.2 persons per vehicle results in approximately 2,500 people present on the site during peak use. The site, which includes

buildings 2 through 5, wetland preserve and detention areas, is 159.6 net acres in size. Dividing the total number of people on site by the net acreage results in 16 people per net acre, which is below the Napa ALUCP maximum density criterion of 100 people per net acre.

The Project includes four building lots. To ensure that each component use would not exceed the ALUCP density criteria, the average density (people per acre) for each proposed building lot is also calculated. The results of the analysis are summarized in **Table 1**.

Table 1: Density Calculations

Building No.	Proposed Parking Spaces	Maximum People On Site[1]	Proposed Lot Size in Acres	Average Density (people/acre) In and Out of Structures[2]
2	465	558	9.10	**61**
3	685	822	49.62	**17**
4	624	749	38.27	**20**
5	309	371	24.40	**15**
Total	**2,083**	**2,500**	**121.39**	**21**

Notes:
[1] Multiplies number of parking spaces by the estimated average vehicle occupancy load factor of 1.2.
[2] Divides maximum number of people on site by lot size.

Both the Project as a whole and its individual buildings comply with Napa ALUCP density criteria.

Other Flight Hazards

Chapter 2 of the Napa ALUCP states, "Any land use which can attract large flocks of birds should be avoided, but those which are artificial attractors are particularly inappropriate because they generally need not be located near airports." Concerns about potential wildlife hazards are further articulated in Policy 3.3.5, paragraph 4, of the Napa ALUCP:

> ***3.3.5*** *Land uses which may produce hazards to aircraft in flight shall not be permitted within any airport's planning area. Specific characteristics to be avoided include: (1) glare or distracting lights which could be mistaken for airport lights; (2) sources of dust, steam, or smoke which may impair pilot visibility; (3) sources of electrical interference with aircraft communications or navigation; and (4) any use which may attract large flocks of birds, especially landfills and certain agricultural uses.*

The Project's industrial land use is considered normally acceptable by ALUCP as long as they do not create the hazards identified in Policy 3.3.5. Two components of the Project, landscaping and on-site drainage, should be designed and managed to discourage wildlife use of the Project site.

The FAA maintains records of wildlife strikes, and FAA's Wildlife Strike Database identifies 69 bird strike records for the Airport since 1990. Birds associated with the strikes included waterfowl, shorebirds, gulls, pigeons, and raptors. Two mammal strikes have also been recorded (mule deer and a coyote). The strike with a mule deer resulted in substantial damage to a Learjet.

Proposed Water Management Facilities. The Project description states that several detention ponds totaling 6.76 acres will be constructed. Additional details pertaining to stormwater management are

provided in the report entitled *Preliminary Stormwater Control Plan for Napa Logistics Park, American Canyon, CA (Stormwater Control Plan)* dated February 4, 2015. As described in the Stormwater Control Plan, five stormwater ponds will be created:

- Pond 1 will discharge through an underground storm drain system to an existing outfall and then into No Name Creek.
- Ponds 2 and 3 will provide treatment for quality and quantity and discharge via an underground storm drain system to Pond 4B.
- Pond 4 will be divided into an upper section (Pond 4A) and lower section (Pond 4B). Pond 4A will provide water quality treatment through bio-retention, after which water will be conveyed to Pond 4B, where it will be metered out to the existing outfall at No Name Creek.
- Pond 5 will provide water quality treatment. Following water quality treatment through bio-retention, the flows from Pond 5 will pass over a level flow spreader to before leaving the property.

The *Stormwater Control Plan* notes that the Project area is characterized by silty clays with low permeability and specifies that the bio-retention facilities will incorporate "engineered soils that will allow runoff to either permeate the soils and enter the groundwater, or drain away slowly." In describing water quality treatment, the report clarifies that "The facilities will act as swales and will include a top layer of plants and grasses, a secondary layer of permeable engineered soil to allow for percolation, and a gravel base with a 4" perforated pipe underdrain that drains treated stormwater to the tidally influenced Napa River but does not influence hydraulics on site."

The *Stormwater Control Plan* also summarizes maintenance requirements. The report notes that typical pond maintenance procedures will include the routine inspection of soils, plantings, pond slopes, and bottoms. The plan states that "If portions of the area do not drain within 48 hours after the end of a storm, the soil should be tilled and replanted."

FAA guidance set forth in Advisory Circular (AC) 150/5200-33, *Wildlife Hazard Attractants On and Near Airports*, discourages the creation of open water sources within 10,000 feet of aircraft movement areas for airports that support turbine-powered aircraft. However, the guidance also acknowledges the need to address stormwater management in accordance with local regulations. AC 5200-33B states, "To prevent wildlife hazards, land-use developers and airport operators may need to develop management plans in compliance with local and state regulations to support the operation of stormwater management facilities on or near all public-use airports to ensure a safe airport environment." AC 5200-33B Section 2-3b provides guidance that can be applied to proposed storm water management facilities to make them less attractive to hazardous wildlife, including the following:

> 2-3b. The FAA strongly recommends that off-airport stormwater management systems located within the separations identified in Sections 1-2 through 1-4 be designed and operated so as not to create above-ground standing water. Stormwater detention ponds should be designed, engineered, constructed, and maintained for a maximum 48–hour detention period after the design storm and remain completely dry between storms. To facilitate the control of hazardous wildlife, the FAA recommends the use of steep-sided, rip-rap lined, narrow, linearly shaped water detention basins.

> When it is not possible to place these ponds away from an airport's AOA, airport operators should use physical barriers, such as bird balls, wires grids, pillows, or netting, to prevent access of hazardous wildlife to open water and minimize aircraft-wildlife interactions. ...All vegetation in or around detention basins that provide food or cover for hazardous wildlife should be eliminated. If soil conditions and other requirements allow, the FAA encourages the use of underground stormwater infiltration systems, such as French drains or buried rock fields, because they are less attractive to wildlife.

The *Stormwater Control Plan* indicates that the proposed stormwater management ponds will comply with FAA guidance insofar as the ponds will be designed and maintained to drain within 48 hours following a storm. In addition, the incorporation of plantings for bio-retention can make open water less visible to wildlife. However, the presence of vegetated slopes and use of some planting materials can also be attractive to potentially hazardous wildlife, such as waterfowl, by providing a source of food, cover, and sloped areas for nesting and loafing.

Landscaping. The Project description indicates that approximately 16.8 acres of the Project site will be landscaped with trees, shrubs, and groundcover. The description states that drought-tolerant plants will be used wherever feasible, and Table 2-1 states that 7.33 acres of roads and off-site landscaping will be provided.

Landscaping has the potential to attract potentially hazardous wildlife, such as birds. Planting materials, such as trees or shrubs, can provide new food sources (fruit, nuts, and berries) and opportunities to nest and roost. Shrubs and groundcover can also provide opportunities for nesting and loafing and provide protection from predators. Groundcover can also harbor small mammals that provide a food source for hazardous species such as raptors. All landscape plans should be developed to include vertical structures to discourage roosting and nesting, include species or cultivars that do not provide new food sources, and prevent opportunities for nesting and loafing. Sharp edges between different ground cover types are also recommended to prevent the formation of edge habitats. All proposed landscaping and planting plans should be reviewed by an FAA–qualified Airport Wildlife Biologist to prevent the inadvertent creation of habitat for potentially hazardous wildlife.

The Project site includes an existing 37-acre wetland preserve. FAA advises Airport operators to remain alert to wildlife use in these areas and recommends immediately correcting hazards arising from wetlands on and near airports, in cooperation with regulatory agencies. The Airport has undertaken a Wildlife Hazard Assessment and initiated measures to discourage wildlife from aircraft movement areas and notify aviators of wildlife hazards. Ongoing coordination with the Airport operator is recommended so that potential changes in wildlife activity and behavior during or following project construction can be identified and addressed in a swift and cooperative manner.

Recommendations for Addressing Bird Hazards. The Project site is located adjacent to a federally obligated public-use Airport. Although the development of light industrial land uses at the site does not represent an incompatible land use as specified by the Napa County ALUCP, specific components of the proposed Project have the potential to attract wildlife and increase hazards to aircraft operations. The following recommendations could help to reduce these potential hazards:

- *If necessary, refine or adapt water management designs to comply with the guidance set forth FAA guidance* (see Section 2.3 of FAA AC 150/5200-33B, *Hazardous Wildlife Attractants On or Near Airports*). Once developed, the Project proponent should provide copies of its stormwater management plans to Airport management for review by an FAA-qualified Airport Wildlife Biologist. The biologist can evaluate proposed the slope design and bio-retention plantings to confirm consistency with the recommendations in FAA AC 150/5200-33B.
- *Refine or adapt Project landscape designs to include materials that will not be attractive to potentially hazardous wildlife.* The Project proponent should provide copies of its proposed landscape plans and plant palettes to Airport management for review by an FAA-qualified Wildlife Hazard Damage Biologist to confirm that the proposed landscaping will not attract potentially hazardous wildlife.
- *Develop design standards for the Napa Logistics Park to address aviation and wildlife hazard management concerns.* The Project component should develop specific design standards or language for incorporation into lease documents that address wildlife hazard management. For example, site users should be directed to store all refuse in covered bins or dumpsters and equip signs and light standards with non-perching devices.
- *Establish a cooperative agreement and ongoing dialogue with the Napa County Airport staff regarding wildlife management, facility management procedures, and Airport operations.* Mitigation Measure H.2 from the 2009 EIR recommends the performance of a Wildlife Hazard Assessment (WHA) by USDA Wildlife Services in accordance with FAR Part 139 followed by an annual re-evaluation and update. Napa County recently undertook a WHA for the Napa County Airport to address wildlife behavior on the Airport and the area within 10,000 feet of movement areas, and this area includes the Project site. The results of the WHA will be summarized in the fall of 2015, and the FAA will determine whether a Wildlife Hazard Management Plan will be needed.

Ongoing coordination with the Airport operator is recommended so that the results of the 2015 WHA and potential changes in wildlife activity during or following Project construction can be identified and addressed in a swift and cooperative manner. In addition, the developer and the County might benefit from a collaborative wildlife hazard assessment and management effort rather than parallel efforts.

Airspace Analysis

This report provides a review of the proposed development site relative to FAA airspace regulations. This analysis identifies if the proposed structures penetrate the surfaces reviewed, and provides a summary of where the high points of the structure are in relation to the surfaces. The surfaces reviewed here are:

- Federal Aviation Regulations Part 77 (Part 77)
- FAA Order 8260.3B (U.S. Standards for Terminal Instrument Procedures (TERPS))
- FAA Advisory Circular 150/5300-13A, Change 1, Surfaces (Departure Surface and Runway Threshold Siting Surfaces (TSS))

FAA airspace surfaces that could potentially affect the Project are illustrated in **Exhibit 2**. These surfaces are explained in more detail below. Airspace analysis looks at the elevations of the proposed structured in

feet above mean sea level (MSL). Preliminary elevations of each building corner are identified in **Exhibit 2**. However, the developer indicated these are not final elevations and final building heights may be 100 feet above ground level. The airspace analysis assumes final building heights at 100 feet above finished grade.

Airspace surfaces on **Exhibit 2** include those associated with the existing runways and instrument approach capabilities at the Airport, and the future runways and instrument approaches illustrated on the Airport Layout Plan that is going through FAA review as of April 2015. The general conclusion is that the Project does not penetrate any of the approach and departure airspace surfaces.

FAR Part 77 Airspace

FAR Part 77 establishes standards and notification requirements for objects affecting navigable airspace. Part 77 serves as the basis for:

- Evaluating the effect of the construction or alteration on operating procedures.
- Determining the potential hazardous effect of the proposed construction on air navigation.
- Identifying mitigating measures to enhance safe air navigation.
- Charting of new objects.

The Part 77 surfaces are considered a notification tool, whereas when an object penetrates any of the Part 77 surfaces, the FAA will identify the object to alert pilots and airports of potential airspace hazards. There are three Part 77 surfaces that are most applicable to structures near, but not on, an airport: the approach surfaces, the transitional surface, and the horizontal surface. Two other surfaces are not considered applicable because they are contained entirely on the airport (primary surface), or are located nearly two miles away from the runway ends (conical surface).

The approach surface is a surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of each runway based upon the type of approach available or planned for that runway end. Existing and planned future approach surfaces are shown on **Exhibit 2**. The Project is not located under any of the approach surfaces, and are therefore clear of each Part 77 approach surface.

The transitional surface extends outward at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces until the surface is 150 feet above airport elevation, where it meets the horizontal surface. The Project is not located under the transitional surface, and is therefore clear of this surface.

The horizontal surface is a horizontal plane 150 feet above the established airport elevation, the perimeter of which begins at the transitional surface and extends outward for 10,000 feet beyond the end of each runway. The entire Project site is located under the horizontal surface. Analysis of building points in relation to the horizontal surface is provided in **Table 2**.

TERPS Surfaces

U.S. Standard for Terminal Instrument Procedures (TERPS) surfaces are used to prescribe the criteria used for the formulation, review, approval, and the publishing of procedures for Instrument Flight Rules (IFR) operations to and from civil and military airports. TERPS surfaces can be complicated to illustrate and describe. For this purpose, the most applicable TERPS surface with regards to the Project site is described for this report—the surfaces to protect for missed instrument approach procedures. When an aircraft is on instrument approach, it reaches a decision point where the pilot must be able to visually identify the runway, or otherwise follow a prescribed climbing course away from the Airport.

The published instrument approach procedures (**Exhibits 3** and **4**) into the Airport show the missed approach procedure for Runways 6 and 36L beginning over one nautical mile (NM) from the Airport. At the missed approach point, the aircraft would increase elevation and fly a set course away from the Airport and the site. For Runway 6, the missed approach begins 1.9 NM from the Airport, and then aircraft would fly level at 1,700 MSL for 1 NM before turning left and climbing to 3,800 MSL. For Runway 36L, the missed approach begins 1.2 NM from the Airport, before turning left and climbing to 3,200 MSL. Due to the distance from the Airport and the altitudes for each of these procedures, it can be ascertained the buildings in the proposed development will be clear of any TERPS missed approach surfaces.

Departure Surface

The departure surface (DS) keeps airspace beyond a runway end clear of obstructions for departing aircraft. The DS is applicable to runways with instrument departure procedures. The Project may be impacted by the DS associated with Runway 18R (to the south) and the DS associated with Runway 6 (to the east).

The DS is a trapezoid shape that begins at the end of the runway length usable for takeoff and extends along the extended runway centerline and with a slope of 1 unit vertically for every 40 units horizontally (40:1). As shown in **Exhibit 2**, the Project is not below or near either DS, therefore the Project will not impact the DS.

Threshold Siting Surface

Threshold siting surfaces (TSS) are used to site landing thresholds so that approach slope standards can be met by keeping critical objects clear of the surfaces. The TSS typically has a trapezoidal shape that extends up and away from the runway along the centerline. The size, slope, and starting point of the trapezoid depends upon the visibility minimums and the type of procedure associated with the runway end.

The TSS is also named the 'approach surface' in FAA Advisory Circular 150/5300-13A, Change 1. To avoid confusion with the Part 77 approach surface, the TSS name is given here and generally used in the industry. Penetrations to the TSS can be rectified by obstruction mitigation and displacing the runway threshold.

The Project site does not lie within the exiting or future threshold siting surfaces.

Airspace Analysis Table

Table 2 shows each building corner of the proposed development with the affected airspace surface and the amount of feet the building is clear of the affected airspace. The proposed development falls exclusively under is the Part 77 horizontal surface; therefore, the horizontal surface is the only surface that is included.

Table 2: Airspace Analysis

Point No.	Affected Airspace Surface	Airspace Surface Elevation (MSL)	Building Elevation (MSL)	Object Clear of Airspace Surface?	Clear Value
1	Part 77 Horizontal	185.4'	120.0'	Yes	65.4'
2	Part 77 Horizontal	185.4'	120.0'	Yes	65.4'
3	Part 77 Horizontal	185.4'	120.0'	Yes	65.4'
4	Part 77 Horizontal	185.4'	120.0'	Yes	65.4'
5	Part 77 Horizontal	185.4'	135.0'	Yes	50.4'
6	Part 77 Horizontal	185.4'	135.0'	Yes	50.4'
7	Part 77 Horizontal	185.4'	135.0'	Yes	50.4'
8	Part 77 Horizontal	185.4'	135.0'	Yes	50.4'
9	Part 77 Horizontal	185.4'	145.0'	Yes	40.4'
10	Part 77 Horizontal	185.4'	145.0'	Yes	40.4'
11	Part 77 Horizontal	185.4'	145.0'	Yes	40.4'
12	Part 77 Horizontal	185.4'	145.0'	Yes	40.4'
13	Part 77 Horizontal	185.4'	145.0'	Yes	40.4'
14	Part 77 Horizontal	185.4'	145.0'	Yes	40.4'

Note: All values are in feet above mean sea level (MSL) except for the clear value, which is the difference between the surface elevation and the building elevation.

Note: Airspace analysis assumes final building heights at 100 feet above finished grade. Top elevation estimated based on existing ground elevations, plus 100 feet.

Airspace Analysis Conclusion

The Project is clear of critical airspace surfaces. The site is located under the Part 77 horizontal surface, but will not penetrate it as shown in **Table 2.**

Review Summary

The total number of parking spaces provided for each building (buildings 2 through 5) is used to estimate the total number of people who could be present on-site at any given time during peak use. The density calculations assume that the typical vehicle occupancy rate for a business professional office use is 1.2 persons per vehicle. The calculations result in an average density of about 16 to 21 people per net acre, which is below the Napa ALUCP maximum density criterion of 100 people per net acre.

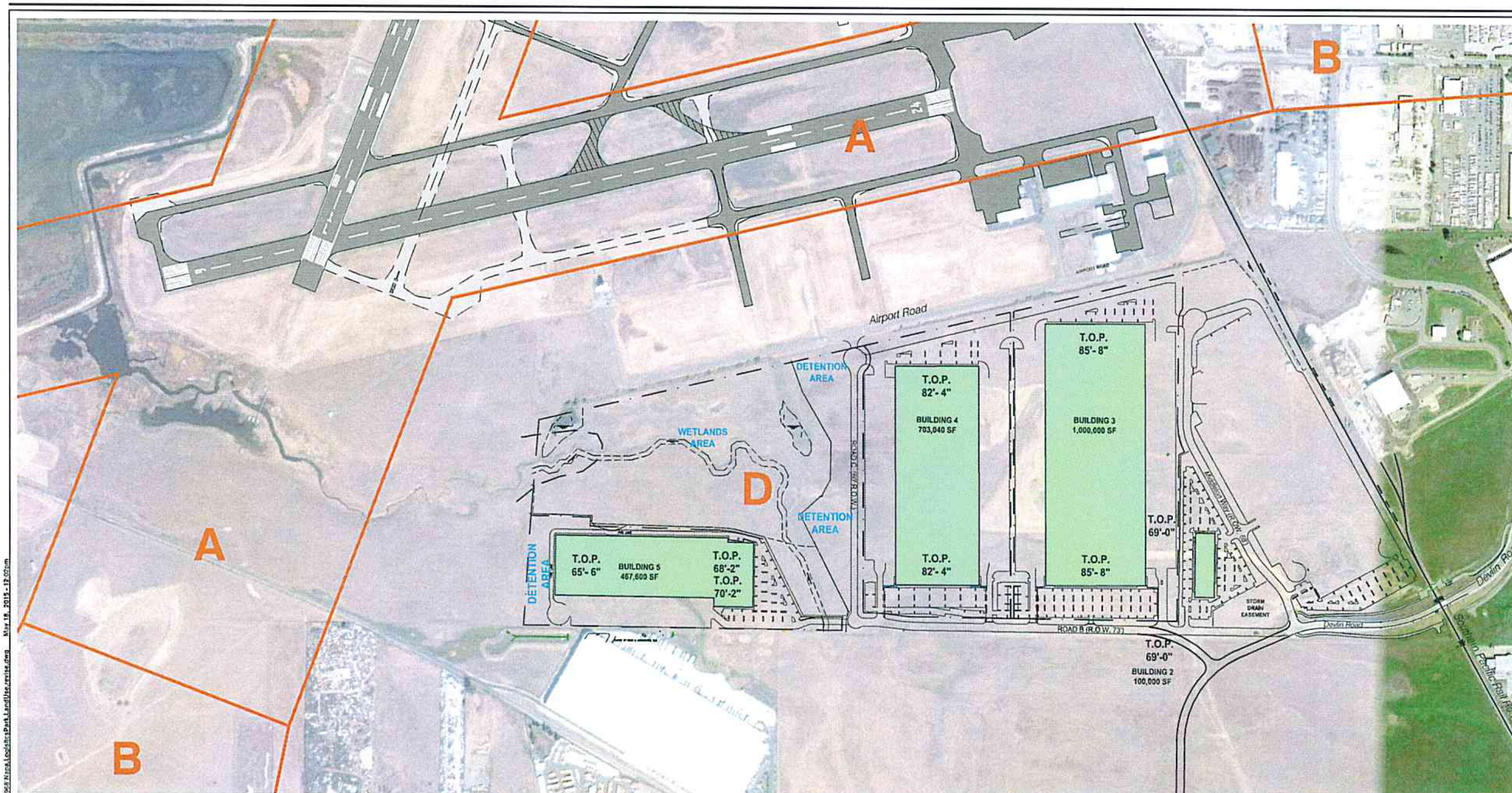
Specific components of the proposed Project have the potential to attract wildlife and increase hazards to aircraft operations, rendering them inconsistent with the Napa County ALUCP. The proposed Project would include the following components that would be inconsistent with Policy 3.3.5 of the Napa ALUCP as they have the potential to attract hazardous birds and other potentially hazardous wildlife to the AOA and the critical zone associated with wildlife hazard management at the Airport:

- Landscaping
- On-site drainage facilities

Recommendations are provided that could help to reduce these potential hazards:

- Refine or adapt water management designs to comply with the guidance set forth FAA guidance.
- Refine or adapt Project landscape designs to include materials that will not be attractive to potentially hazardous wildlife.
- Develop design standards for the Napa Logistics Park to address aviation and wildlife hazard management concerns.
- Establish a cooperative agreement and ongoing dialogue with the Napa County Airport staff regarding wildlife management, facility management procedures, and Airport operations.

There are no issues with regard to FAA airspace.



Notes

1. Source: Napa County Airport Land Use Compatibility Plan (1999)

Legend

- Airfield Pavement (existing)
- Airfield Pavement (future)
- Proposed Building
- ALUC Zones[1]

0 600' 1,200' FEET N

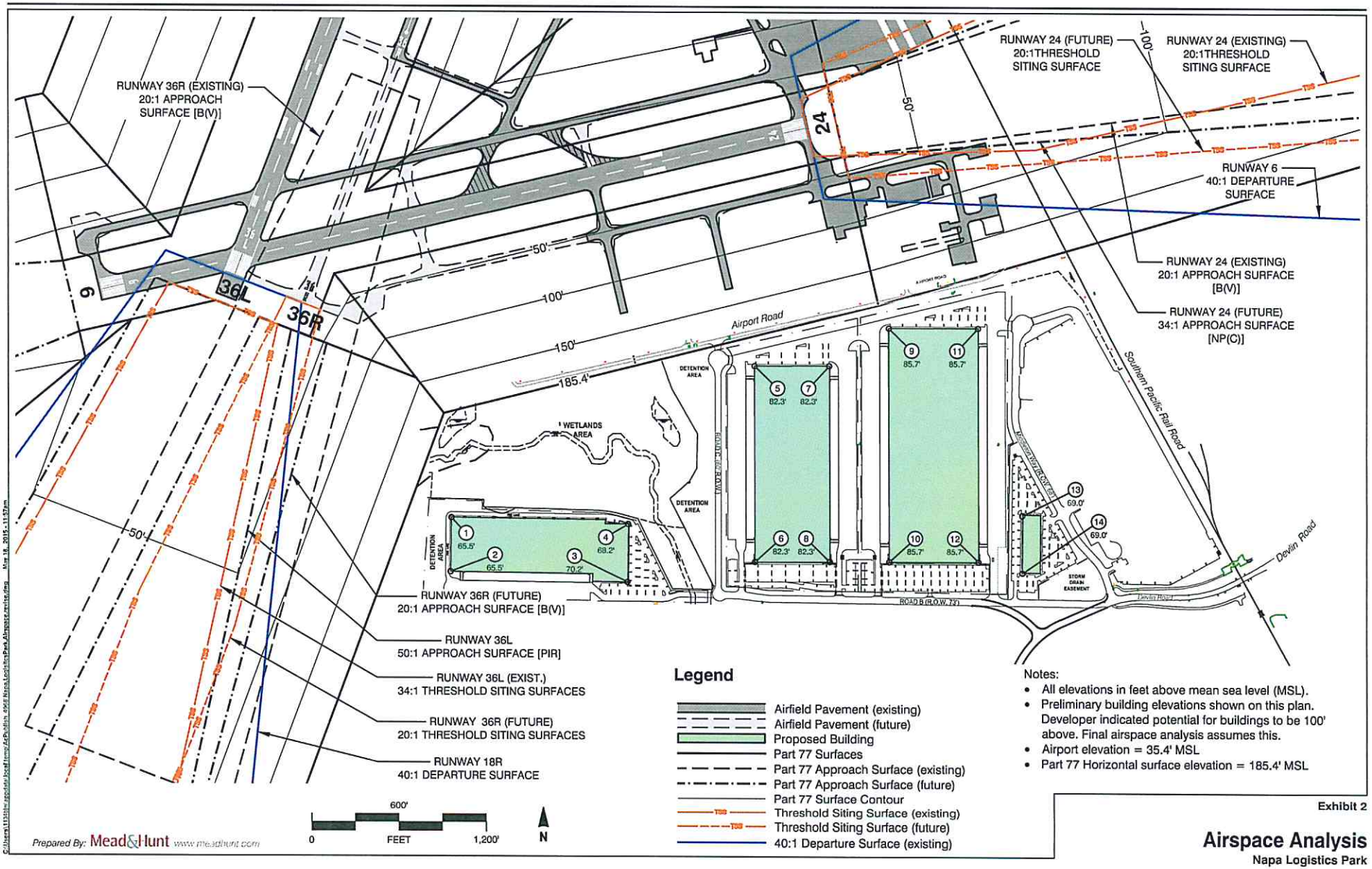
Prepared By: Mead&Hunt www.meadhunt.com

Exhibit 1

Airport Land Use Compatibility Zones

Napa Logistics Park

C:\Users\1135\appdata\local\temp\AcPublish_4968\NapaLogisticsPark.LandUse.revise.dwg May 18, 2015 - 12:02pm



Notes:

- All elevations in feet above mean sea level (MSL).
- Preliminary building elevations shown on this plan. Developer indicated potential for buildings to be 100' above. Final airspace analysis assumes this.
- Airport elevation = 35.4' MSL
- Part 77 Horizontal surface elevation = 185.4' MSL

Exhibit 2

Airspace Analysis

Napa Logistics Park

RNAV (GPS) RWY 6

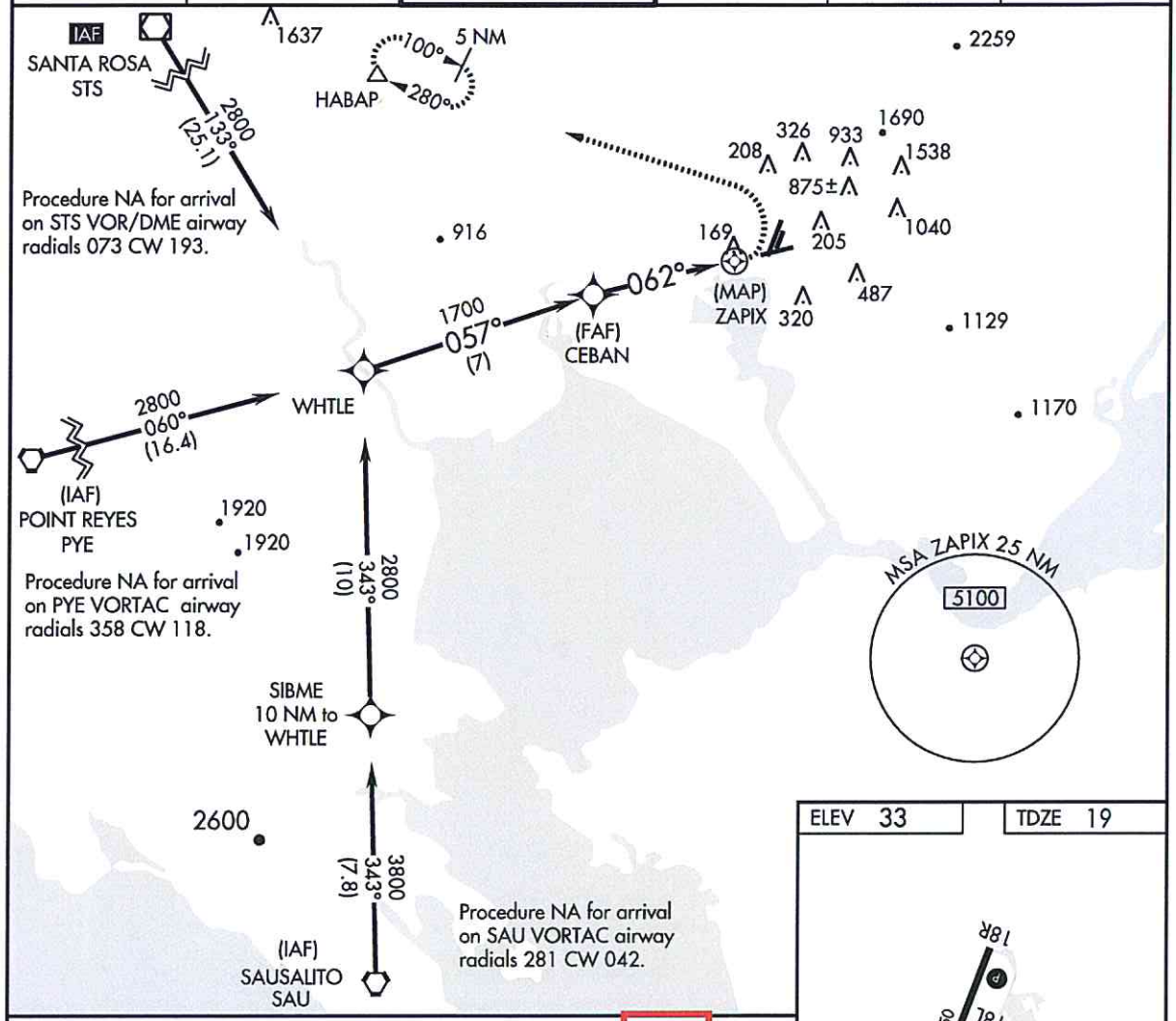
NAPA COUNTY (APC)

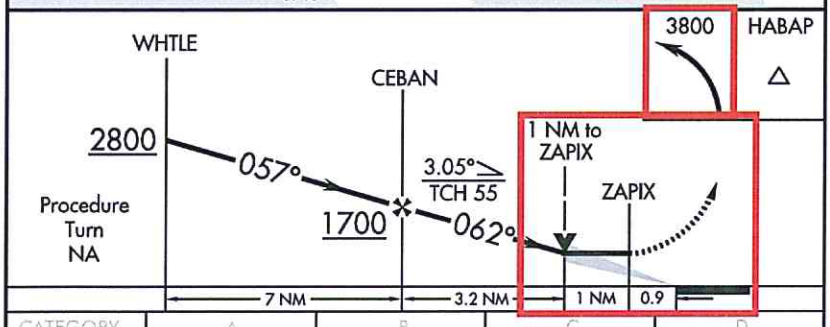
APP CRS	Rwy Idg	5007
062°	TDZE	19
	Apt Elev	33

Circling NA northeast of Rwys 18R and 24.
NA IAF ARM APPROACH MODE PRIOR TO IAF.
GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climbing left turn to 3800 direct HABAP and hold.

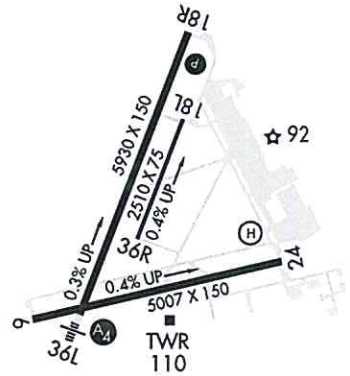
ATIS	OAKLAND CENTER	NAPA TOWER *	GND CON	CLNC DEL	UNICOM
124.05	127.8 353.5	118.7 (CTAF) L 257.8	121.7	127.85	122.95





CATEGORY	A	B	C	D
LNAV MDA	660-1 641 (700-1)		660-1¾ 641 (700-1¾)	660-2 641 (700-2)
CIRCLING	660-1 627 (700-1)		720-2 687 (700-2)	1240-3 1207 (1300-3)

ELEV 33 TDZE 19



REIL Rwy 6 L
MIRL Rwys 6-24 and 18R-36L L

SW-2, 02 APR 2015 to 30 APR 2015

NAPA, CALIFORNIA

14205

ILS or LOC RWY 36L

NAPA COUNTY (APC)

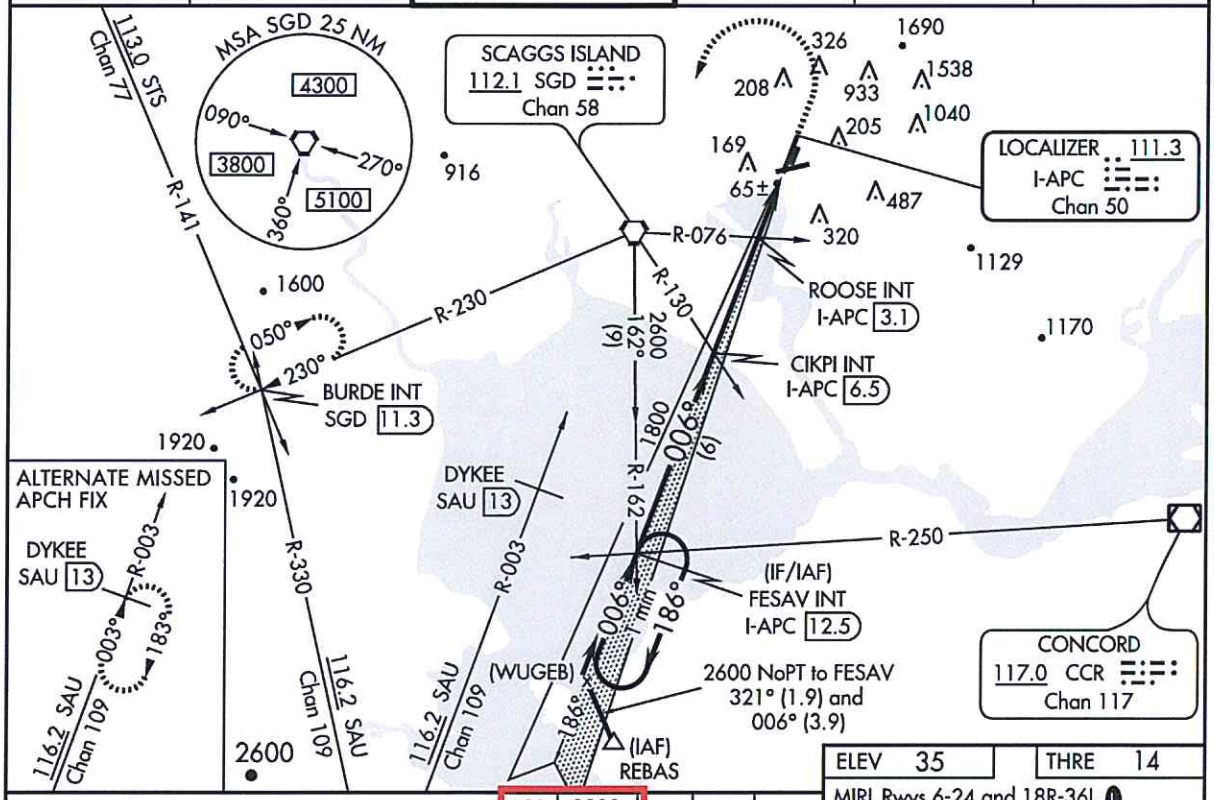
LOC/DME I-APC	APP CRS	Rwy Idg	5930
111.3 Chan 50	006°	THRE	14
		Apt Elev	35

When local altimeter setting not received, use Concord altimeter setting and increase all DA 41 feet; increase all MDA 60 feet and visibility Circling Cat B ¼ mile and; increase ROOSE fix minimums S-L 36L visibility Cats C and D ¼ mile, Circling Cat B ¼ mile. VDP NA when using Concord altimeter setting. For inoperative MALS, increase S-LOC Cats C and D visibility ⅛ mile; increase ROOSE fix S-LOC Cats C and D visibility ⅜ mile. When using Concord altimeter setting; for inoperative MALS, increase ROOSE fix S-LOC Cats C and D visibility ⅛ mile. Autopilot coupled approach NA below 530.

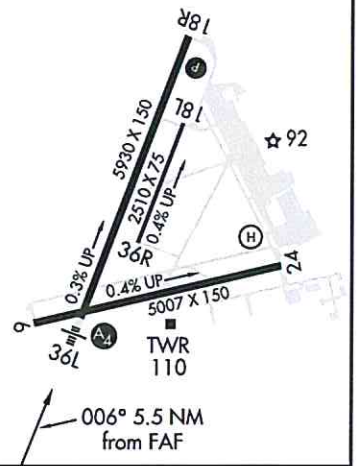
MALS

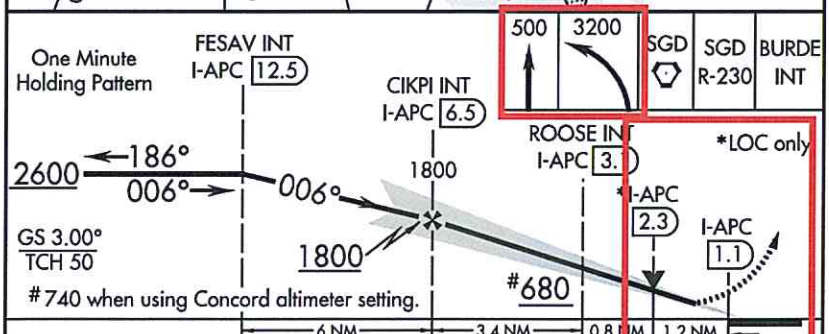
MISSED APPROACH: Climb to 500 then climbing left turn to 3200 direct SGD VORTAC then on SGD R-230 to BURDE INT SGD 11.3 DME and hold.

ATIS	OAKLAND CENTER	NAPA TOWER *	GND CON	CLNC DEL	UNICOM
124.05	127.8 353.5	118.7 (CTAF) L 257.8	121.7	127.85	122.95



ELEV 35	THRE 14
MIRL Rwys 6-24 and 18R-36L L	
REIL Rwy 6 L	





CATEGORY	A	B	C	D
S-ILS 36L	214-¾ 200 (200-¾)			
S-LOC 36L	680-¾ 666 (700-¾)		680-1¾ 666 (700-1¾)	
CIRCLING	700-1 665 (700-1)	820-1 785 (800-1)	920-2¾ 885 (900-2¾)	1180-3 1145 (1200-3)
ROOSE FIX MINIMUMS (DUAL VOR RECEIVERS OR DME REQUIRED)				
S-LOC 36L	460-¾ 446 (500-¾)		460-1 446 (500-1)	
CIRCLING	700-1 665 (700-1)	820-1 785 (800-1)	920-2¾ 885 (900-2¾)	1180-3 1145 (1200-3)

FAF to MAP 5.5 NM

Knots	60	90	120	150	180
Min:Sec	5:30	3:40	2:45	2:12	1:50

NAPA, CALIFORNIA

Orig-A 22AUG13

38°13'N-122°17'W

NAPA COUNTY (APC)

ILS or LOC RWY 36L

SW-2, 02 APR 2015 to 30 APR 2015

SW-2, 02 APR 2015 to 30 APR 2015

EXHIBIT 4