



**DATE:** March 8, 2021

## INTRODUCTION TO THE FAA OBSTRUCTION EVALUATION PROCESS

- This presentation provides guidance for complying with Federal Aviation Regulations, Part 77 (Safe, Efficient Use, and Preservation of the Navigable Airspace), commonly referred to as "FAR Part 77", for development within the general vicinity of San Jose International Airport (SJC)
- Compliance begins with the filing of Federal Aviation Administration (FAA)
   Form 7460-1, Notice of Proposed Construction or Alternation, through the
   FAA's Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) system for
   the following proposed actions:
  - Any proposed construction or alteration of a structure which exceeds a 100:1 slope (100 feet horizontal/one foot vertical) from any point of the SJC runways out to a distance of 20,000 feet
  - Any proposed construction or alteration of a structure which exceeds 200 feet in height above ground level (irrespective of distance from SJC)
  - Any proposed temporary structure (e.g., construction equipment) which exceeds the above two criteria



# INTRODUCTION TO THE FAA OBSTRUCTION EVALUATION PROCESS (CONT.)

- FAA Form 7460-1 can be accessed at the following link:
  - https://www.faa.gov/documentLibrary/media/Form/FAA\_Form\_7 460-1\_042023.pdf
- The internet address to the FAA OE/AAA online system is:
  - https://oeaaa.faa.gov/oeaaa/external/portal.jsp
  - 7460-1 forms should be prepared by a licensed civil engineer or surveyor using NAD83 latitude/longitude coordinates out to hundredths of seconds and NAVD88 elevations rounded off to the next highest foot
  - To ensure spatial accuracy (horizontal and vertical), a 1A survey accuracy level is required by the City of San Jose for any proposed development and construction cranes (refer to slide 23 for more information)

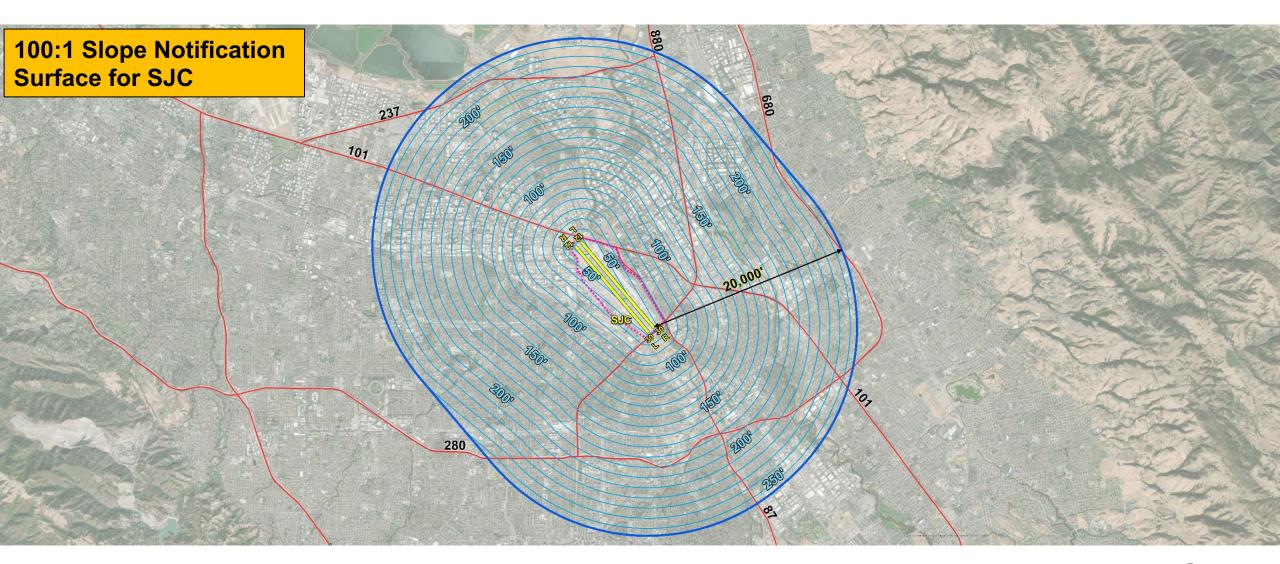


# INTRODUCTION TO THE FAA OBSTRUCTION EVALUATION PROCESS (CONT.)

- Form 7460-1 filings can also be submitted to the FAA in hard copy form through conventional mail
- The FAA does not charge a fee for Form 7460-1 filings or review
- Additional resource:
  - FAA Order JO 7400.2J Procedures for Handling Airspace Matters Chapter 6: Aeronautical Studies
    - https://www.faa.gov/documentLibrary/media/Order/AIR.pdf



## 100:1 SLOPE NOTIFICATION SURFACE FOR SJC





## OE/AAA NOTICE CRITERIA TOOL

- The OE/AAA website provides a "Notice Criteria Tool" that will allow anyone to input coordinates and elevations to determine whether or not they are required to file a 7460-1
  - https://oeaaa.faa.gov/oeaaa/external/gisT ools/gisAction.jsp?action=showNoNotice RequiredToolForm
- Populate the required information as required in the graphic to the right and click the "Submit" button

The requirements for filing with the Federal Aviation Administration for proposed structures vary based on a number of factors: height, proximity to an airport, location, and frequencies emitted from the structure, etc. For more details, please reference CFR Title 14 Part 77.9.

You must file with the FAA at least 45 days prior to construction if:

- your structure will exceed 200ft above ground level
- your structure will be in proximity to an airport and will exceed the slope ratio
- your structure involves construction of a traverseway (i.e. highway, railroad, waterway etc...) and once adjusted upward with the appropriate vertical distance would exceed a standard of 77.9(a) or (b)
- your structure will emit frequencies, and does not meet the conditions of the FAA Co-location Policy
- your structure will be in an instrument approach area and might exceed part 77 Subpart C
- your proposed structure will be in proximity to a navigation facility and may impact the assurance of navigation signal reception
- · your structure will be on an airport or heliport
- filing has been requested by the FAA

If you require additional information regarding the filing requirements for your structure, please identify and contact the appropriate FAA representative using the Air Traffic Areas of Responsibility map for Off Airport construction, or contact the FAA Airports Region / District Office for On Airport construction.

The tool below will assist in applying Part 77 Notice Criteria.

Deg M S N ✓
Deg M S W V
NAD83 V
(nearest foot)
(nearest foot)
No Traverseway  (Additional height is added to certain structures under 77.9(c))  User can increase the default height adjustment for  Traverseway, Private Roadway and Waterway
No Yes Submit



## OE/AAA NOTICE CRITERIA TOOL

- Once processed, the location that the sponsor submitted will be plotted and a result of the analysis will be summarized as indicated in the graphic to the right
- The results will provide an initial summary of the basic impacts of the proposed structure and whether the proposed structure will require a 7460-1 submission to the FAA for further evaluation

#### Results

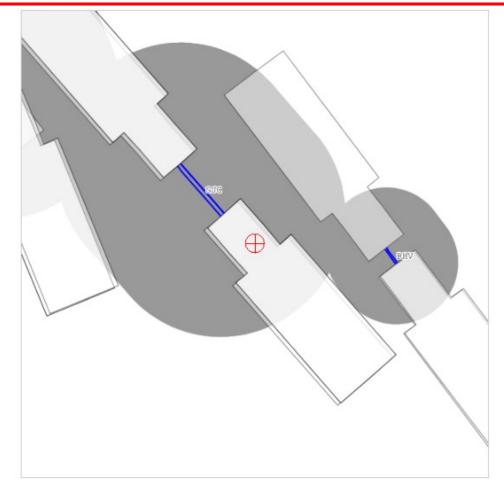
You exceed the following Notice Criteria

Your proposed structure exceeds an instrument approach area by 102 feet and aeronautical study is needed to determine if it will exceed a standard of subpart C of 14CFR Part 77. The FAA, in accordance with 77.9, requests that you file.

Your proposed structure is in proximity to a navigation facility and may impact the assurance of navigation signal reception. The FAA, in accordance with 77.9, requests that you file.

77.9(b) by 101 ft. The nearest airport is SJC, and the nearest runway is 12L/30R

The FAA requests that you file





## AIRPORT RUNWAY END COORDINATES FOR REFERENCE

TW_Name	Latitude	Longitude	Northing	Easting
Runway 12L	37° 22' 29.972" N	121° 56′ 24.633″ W	1962229.54	6143200.161
Runway 12R	37° 22' 25.416" N	121° 56′ 31.160″ W	1961776.913	6142666.29
Runway 30L	37° 21' 3.570" N	121° 55′ 1.435″ W	1953389.333	6149782.474
Runway 30R	37° 21' 8.128" N	121° 54′ 54.911″ W	1953842.306	6150316.146
Runway 12L - 20,000'	37° 24' 58.741" N	121° 59' 7.914" W	1977480.216	6130261.193
Runway 12R - 20,000'	37° 24' 54.183" N	121° 59' 14.442" W	1977027.589	6129727.322
Runway 30L - 20,000'	37° 18′ 34.705″ N	121° 52' 18.433" W	1938138.658	6162721.442
Runway 30R - 20,000'	37° 18′ 39.260″ N	121° 52' 11.910" W	1938591.63	6163255.114
	Runway 12L Runway 12R Runway 30L Runway 30R Runway 12L - 20,000' Runway 12R - 20,000' Runway 30L - 20,000'	Runway 12L 37° 22' 29.972" N Runway 12R 37° 22' 25.416" N Runway 30L 37° 21' 3.570" N Runway 30R 37° 21' 8.128" N Runway 12L - 20,000' 37° 24' 58.741" N Runway 12R - 20,000' 37° 24' 54.183" N Runway 30L - 20,000' 37° 18' 34.705" N	Runway 12L 37° 22' 29.972" N 121° 56' 24.633" W Runway 12R 37° 22' 25.416" N 121° 56' 31.160" W Runway 30L 37° 21' 3.570" N 121° 55' 1.435" W Runway 30R 37° 21' 8.128" N 121° 54' 54.911" W Runway 12L - 20,000' 37° 24' 58.741" N 121° 59' 7.914" W Runway 12R - 20,000' 37° 24' 54.183" N 121° 59' 14.442" W Runway 30L - 20,000' 37° 18' 34.705" N 121° 52' 18.433" W	Runway 12L 37° 22' 29.972" N 121° 56' 24.633" W 1962229.54 Runway 12R 37° 22' 25.416" N 121° 56' 31.160" W 1961776.913 Runway 30L 37° 21' 3.570" N 121° 55' 1.435" W 1953389.333 Runway 30R 37° 21' 8.128" N 121° 54' 54.911" W 1953842.306 Runway 12L - 20,000' 37° 24' 58.741" N 121° 59' 7.914" W 1977480.216 Runway 12R - 20,000' 37° 24' 54.183" N 121° 59' 14.442" W 1977027.589 Runway 30L - 20,000' 37° 18' 34.705" N 121° 52' 18.433" W 1938138.658

- The graphic to the right depicts the extent of the 20,000 feet radius of the 100:1 notification surface for SJC
- The coordinates above can be plotted and used to help developers understand the location of their respective developments in relation to the extended runway centerlines at SJC
- Northing/easting coordinates are based upon NAD 1983 State Plane California III FIPS 0403 Feet projected coordinate system





## OE/AAA FEASIBILITY STUDY OVERVIEW

- It is highly recommended that project sponsor submit a feasibility study during the initial planning and design phase of the project
  - Submit estimate building and crane heights to the FAA for a preliminary evaluation
- A feasibility study is a recommended precursor to the filing an official 7460-1 through the FAA OE/AAA system
  - Essentially a "sanity check" for the sponsor to identify any potential impacts to airspace as a result of proposed building or crane heights
  - Provides guidance so the sponsor can adjust their development plan and mitigate airspace impacts before filing an official 7460-1 submission
- A feasibility study is a limited aeronautical review based on very broad, estimated, or general information supplied for the structure. The study usually addresses only certain issues; e.g., feasibility of height at a general location, feasibility of frequency and power at a general location.



## OE/AAA FEASIBILITY STUDY OVERVIEW

- Requests for feasibility studies should be accommodated to the extent existing resources and workloads allow. The need for coordination with other divisions will be based on the type of information supplied for the structure.
- A feasibility study are summarized in a report and are not an official FAA OE/AAA official determination.
- Please refer to Slide 30 and follow the steps listed to file a feasibility study with the FAA through the OE/AAA system.



## OE/AAA FEASIBILITY STUDY - SAMPLE REPORT FINDINGS



Mail Processing Center Federal Aviation Administration Southwest Regional Office Obstruction Evaluation Group 10101 Hillwood Parkway Fort Worth, TX 76177 Aeronautical Study No. 2018-AWP-OE

Issued Date: 07/27/2018



\*\* FEASIBILITY REPORT \*\*

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

Structure: Location: Feasibility Study San Jose, CA

Latitude: Longitude: Heights:

90 feet site elevation (SE)

643 feet above ground level (AGL) 733 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 (310) 725-6557, or karen.mcdonald@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2018-AWP

OE.

Signature Control No: 363321213-371359059

(FSB)

Karen McDonald Specialist

Attachment(s)

Additional Information

Map(s)

### IDENTIFIED AS AN OBS

Additional information for ASN 2018-AWP-OE

STRUCTURE HEIGHT IS IDENTIFIED AS AN OBSTACLE UNDER CFR PART 77 SUBPART C OSTRUCTION STANDARDS.

STRUCTURE HEIGHT WOULD IMPACT INSTRUMENT FLIGHT ALTITUDES: At 733 AMSL, Norman Y Mineta San Jose Intl (SJC) San Jose, CA. Obstacle penetrates RWY 12L Diverse A departure area 323 feet requiring TAKE-OFF MINIMUM AND (OBSTACLE) DEPARTURE PROCEDURES, ALMDN FOUR, BMRNG FOUR, SUNOL NINE, TECKY THREE, RWY 12L, 400-2 1/2 with a minimum climb gradient of 493 ft per NM to 1000. Obstacle penetrates RWY 12R Diverse A departure area 326 feet requiring TAKE-OFF MINIMUM AND (OBSTACLE) DEPARTURE PROCEDURES, ALMDN FOUR, BMRNG FOUR, SUNOL NINE, TECKY THREE, RWY 12L, 400-2 1/2 or departure NA (CG exceeds 500 ft per NM). /// ILS or LOC RWY 12R, increase S-ILS 12R DA from 251 to 334. Increase S-LOC 12R MDA from 420 to 480. (RNP) Z RWY 12L, increase 0.18 DA from 385 to 406. /// RNAV (RNP) Z RWY 12R, increase RNP 0.15 DA from 380 to 397, /// RNAV (RNP) Z RWY 30L, increase RNP 0.30 DA from 544 to 1063, /// RNAV (RNP) Z RWY 30R, increase RNP 0.30 DA from 541 to 1063. /// RNAV (GPS) Y RWY 12L, increase LNAV/VNAV DA from 341 to 405. /// RNAV (GPS) Y RWY 12R, increase LPV DA from 246 to 329. /// RNAV (GPS) Y RWY 30L, increase LNAV/VNAV DA from 540 to 1141. LNAV NA, obstacle increases MDA at FORUL. /// RNAV (GPS) Y RWY 30R, increase LNAV/VNAV DA from 541 to 1141. LNAV NA, obstacle increases MDA at HILUD. NCT (Northern California TRACON), NCT MVA FUS3 2017, Minimum Vectoring Altitude (MVA), increase NCT Sector OAK L MVA from 1600 to 1700.

STRUCTURE HEIGHT WOULD HAVE A PHYSICAL IMPACT ON THE OPERATION OF AN AIR NAVIGATION AID; The structure would affect the NUQ ASR-9, causing a loss of Radar LOS Coverage in the area of this construction due to its height above 400 ft. AMSL

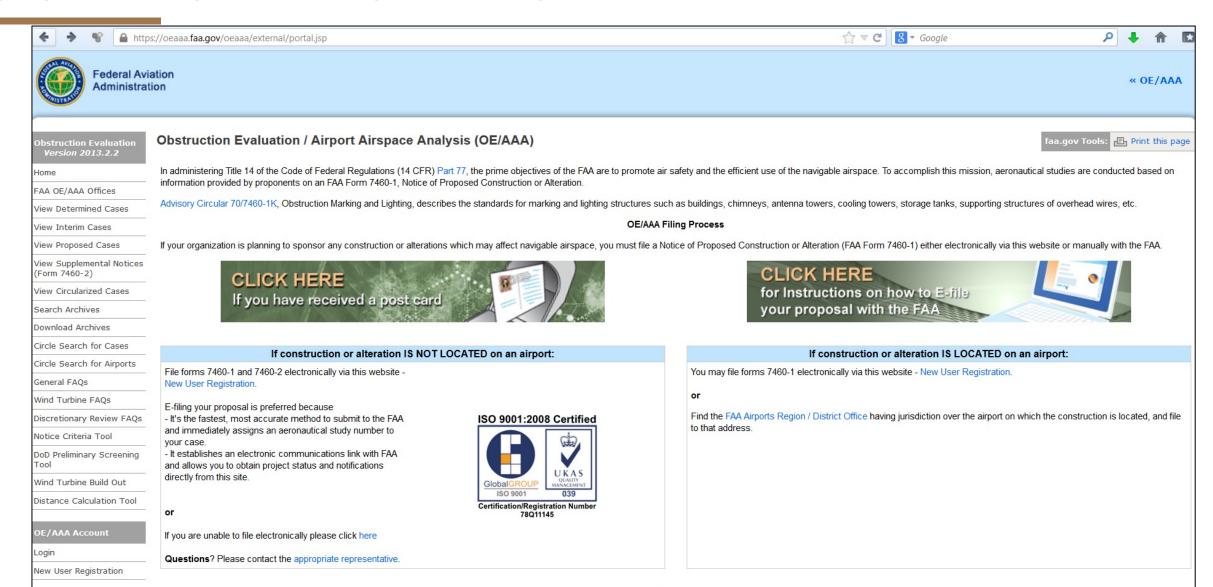
MAXIMUM ACCEPTABLE HEIGHT IS 340 FEET AMSL.



# FAA Form 7460-1 Filing Instructions

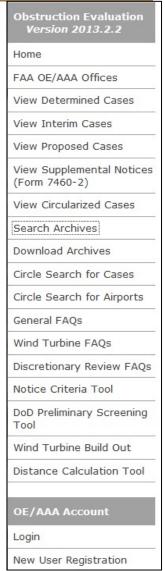


## OE/AAA PORTAL HOME PAGE





# OE/AAA PORTAL HOME PAGE (CONT.)



- On the left side of the OE/AAA home page contains the primary links to various webpages within the site
- To begin the process of submitting a 7460-1 for a proposed obstacle, click the "Login" screen under the OE/AAA Account section. If you do not have an active account, you will need to create by clicking New User Registration
- Once the account login page appears, input the sponsor's login credentials to the OE/AAA system and press the submit button



## OE/AAA NEW USER REGISTRATION

- The graphic to the right depicts the new user registration dialog window. The project sponsor will be required to populate the required information and submit it to the FAA in order to create an account on the OE/AAA online system
  - https://oeaaa.faa.gov/oeaaa/external/userMgmt/per missionAction.jsp?action=showRegistrationForm
- Please populate the form below and accept the Restriction of Liability Statement in order to register. A valid Username is at least 4 characters long and may contain letters, numbers, or the following special characters ( - \_ @ . ). No spaces are allowed in a Username. A valid Password is at least 8 characters long and contains one letter, one number, and one special character (e.g., Fly2\*High, gliDer\$77, @ntenna#5). Required fields indicated with an asterisk\* \* First Name: \* Last Name: \* Fmail Address: \* Username: \* Password: \* Retype Password: \* Phone Number: Fax Number: Organization/Company: \* Address 1: Address 2: \* City: \* State: -OR-\* Non-US State: \* Country: United States \* Zip / Post Code:

#### Restriction of Liability Statement

The FAA makes no claims, promises, or guarantees about the accuracy, verification of the set-up of user accounts, completeness, or adequacy of the contents of this website and expressly disclaims liability for errors and omissions in the contents of this website. No warranty of any kind, implied, expressed or statutory, including but not limited to warranties of non-infringement of third party rights, title, merchantability, fitness for a particular purpose and freedom from computer virus, is given with respect to the contents of this website or its hyperlinks to other Internet resources. Reference in this website to any specific commercial products, processes, or services, or the use of any trade, firm or corporation name is for the information and convenience of the public, and does not constitute endorsement, recommendation, or favoring by FAA.

I accept the above statement.

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<b>4</b>

## OE/AAA PORTAL PAGE

#### **OE/AAA Portal Page**

#### My Account

Name: User Name: Sponsor Name Project Name

Login Time: IP Address: 08/01/2013 05:15:11 PM

198.228.232.24

#### Actions:

What's New

OE/AAA System User Guide V 2013.2.0

Update Account Information

Change Password

Logout

#### **Email Notifications:**

Circularized Case Notification Subscription Preferences

#### Documents:

FAA Acronyms

Help:

OE/AAA Support Desk Phone: 202-580-7500

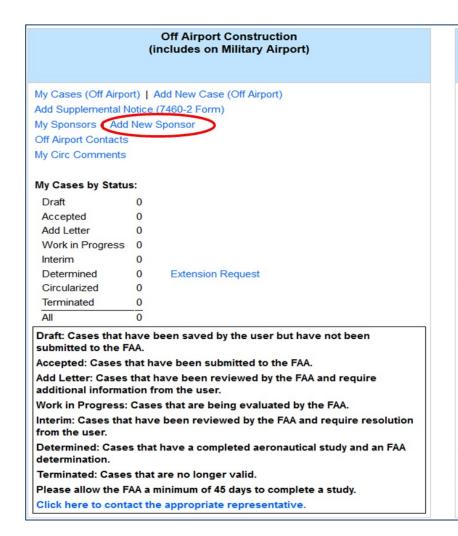
Email: oeaaa\_helpdesk@cghtech.com

- Once logged in, general information about the sponsor account is provided on the left side of the screen
- In addition there are helpful links to FAA resources located under the "Actions" and "Documents" sections
- Specialized email notifications can be setup so the account user can be notified by the FAA regarding changes in status to 7460-1 processing



## OE/AAA PORTAL HOME PAGE (CONT.)

- The OE/AAA system requires sponsors to submit 7460-1 submittals separately for onairport obstacles and offairport obstacles
- The first step is to locate the "Off Airport Construction" section on the OE/AAA Portal Home Page
- Click the "Add New Sponsor" button



#### On Airport Construction (excludes on Military Airport)

#### Please file all Wind Turbine/Met Towers as Off Airport

My Cases (On Airport) | Add New Case (On Airport)
My Sponsors | Add New Sponsor

On Airport Contacts

#### My Cases by Status:

Draft	0
Waiting	0
Accepted	0
Add Letter	0
Work In Progress	0
Determined	9
Terminated	1
All	0

Draft: Cases that have been saved by the user but have not been submitted to the FAA.

Waiting: Cases that have not been submitted to the FAA and are waiting for an action from the user, either to verify the map or attach a document.

Accepted: Cases that have been submitted to the FAA.

Add Letter: Cases that have been reviewed by the FAA and require additional information from the user.

Work in Progress: Cases that are being evaluated by the FAA.

Determined: Cases that have completed a aeronautical study and an FAA determination.

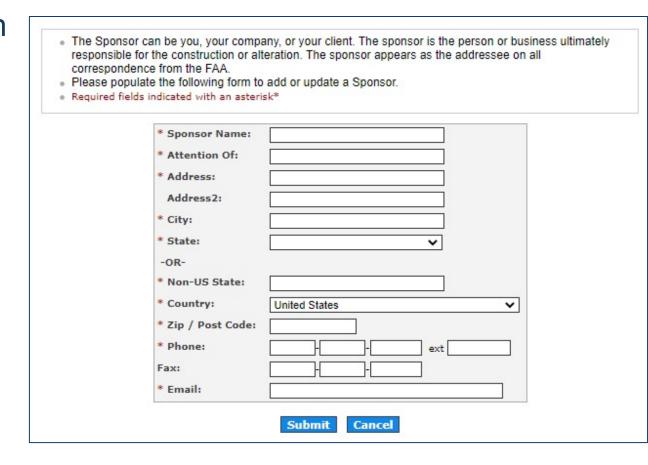
Terminated: Cases that are no longer valid.

NOTE: Please use this section for filing on-airport constructions electronically.



## ADD NEW SPONSOR

- According to the FAA, The sponsor can be you, your company, or your client. The sponsor is the person or business ultimately responsible for the construction or alteration. The sponsor appears as the addressee on all correspondence from the FAA".
- Populate the required information as listed in the graphic to the right, verify and then click "Submit"
- All sponsors defined under the user account can be found under "My Sponsors"





# ADD NEW CASE (OFF AIRPORT)

- Return to the OE/AAA Portal Home Page and return to the "Off Airport Construction" section
- Next, press the "Add New Case (Off Airport)" button depicted below
- A new web page will appear called "Notice of Proposed Construction or Alteration - Off Airport", which is the data input page for the 7460-1 submittal



Draft: Cases that have been saved by the user but have not been submitted to the FAA.

Accepted: Cases that have been submitted to the FAA.

Add Letter: Cases that have been reviewed by the FAA and require additional information from the user.

Work in Progress: Cases that are being evaluated by the FAA.

Interim: Cases that have been reviewed by the FAA and require resolution from the user.

Determined: Cases that have a completed aeronautical study and an FAA determination.

Terminated: Cases that are no longer valid.

Please allow the FAA a minimum of 45 days to complete a study.

Click here to contact the appropriate representative.

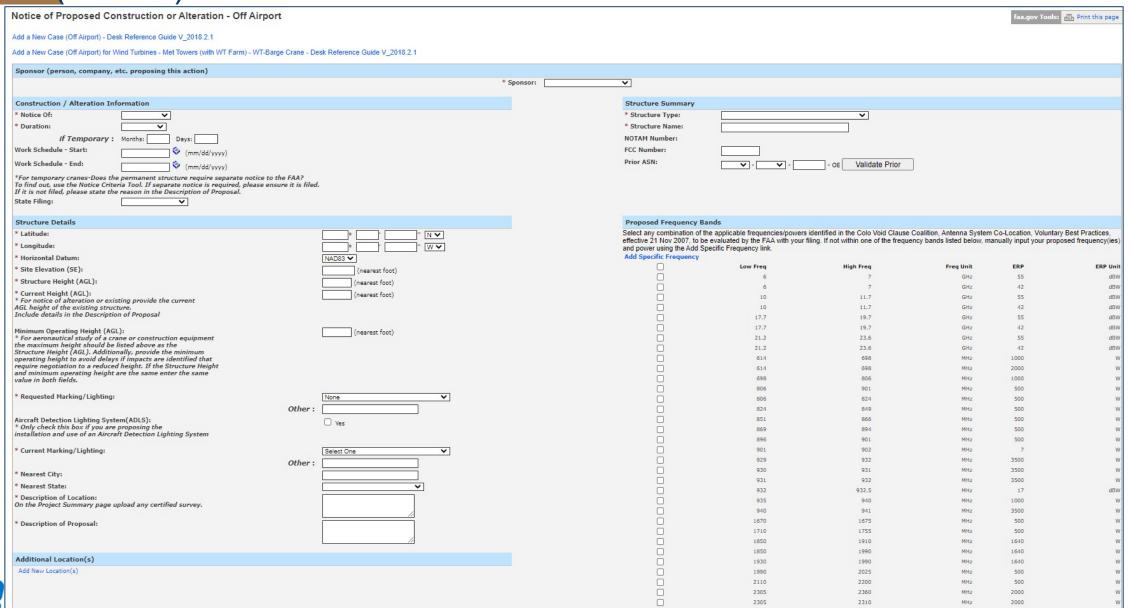


# NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION - OFF AIRPORT

- The "Notice of Proposed Construction or Alteration Off Airport" page contains the following categories:
  - 1. Sponsor (person, company, etc. proposing this action)
  - 2. Construction/Alteration Information
  - 3. Structure Details
  - 4. Additional Locations (for buildings and cranes, multiple points will need to be submitted:
    - a) Buildings: critical building footprint corner points
    - b) Cranes: crane high point, mast and jib (critical points along the operational limits and closest to the airport)
    - c) Temporary crane(s) points associated with a specific proposed building(s) should be submitted together so the impacts of the structures can be evaluated concurrently
  - 5. Structure Summary
  - 6. Proposed Frequency Bands



# NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION - OFF AIRPORT (CONT.)





## PROJECT SPONSOR

- First, select the "Sponsor" drop down box to select the project sponsor associated with the 7460-1 submittal
- For this fictitious 7460-1 submittal, we will use "John Doe" as our project sponsor

Sponsor (person, company, etc. proposing this action)		
	* Sponsor:	
		John Doe



## CONSTRUCTION/ALTERNATION INFORMATION

 After the project sponsor has been selected, the next step is to input required information into the "Construction/Alteration Information" section which provides the FAA with critical information pertaining to the type of proposal, the duration of the construction and the proposed start and end dates associated with the proposed structure

Construction / Alteration Ir	nformation
* Notice Of:	
* Duration:	
if Temporary :	Months: Days:
Work Schedule - Start:	(mm/dd/yyyy)
Work Schedule - End:	(mm/dd/yyyy)
To find out, use the Notice Crit	the permanent structure require separate notice to the FAA? teria Tool. If separate notice is required, please ensure it is filed. the reason in the Description of Proposal.
State Filing:	



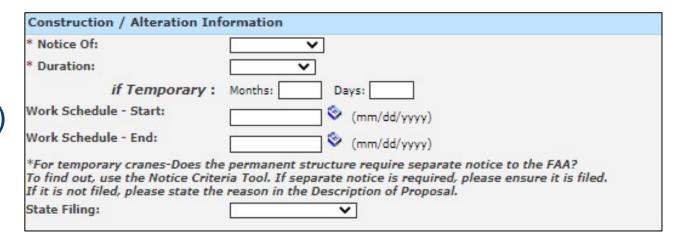
# CONSTRUCTION/ALTERATION INFORMATION (CONT.)

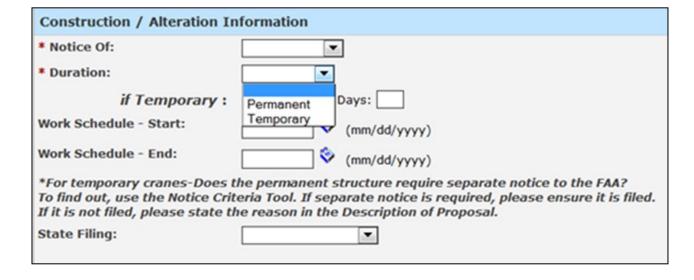
### Notice of:

- Construction (new structure)
- Alteration (of existing structure)
- Existing (existing structure)

### Duration:

- Permanent (defining whether or not the structure will be permanent)
- Temporary (is the structure temporary? If so what are the proposed start and end dates of the structure?)



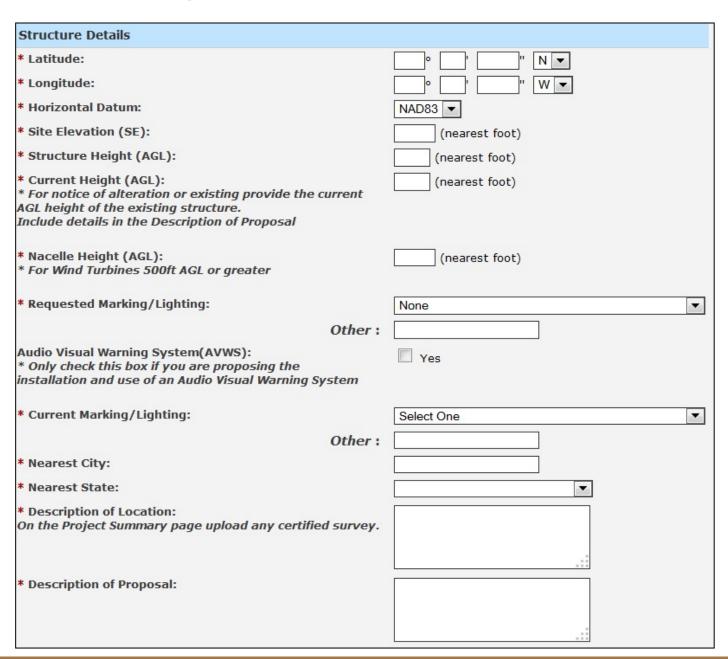




## STRUCTURE DETAILS

- Once the "Construction/Alteration Information" section has been populated, the next section to populate is the "Structure Details" section
- The "Structure Details" section is where critical information about the physical structure is input including the following data elements:
  - 1. Coordinates (latitude and longitude in degrees, minutes and seconds format)
  - Horizontal Datum
  - 3. Site Elevation (feet above mean sea level)
  - 4. Structure Elevation (feet above ground level)
  - 5. Current Height (feet above ground level)
  - 6. Minimum Operating Height (AGL) (for construction cranes)
  - 7. Requested Marking & Lighting
  - 8. Current Marking/Lighting
  - 9. Location (nearest city, state, description of location)
  - 10. Description of Proposal

## STRUCTURE DETAILS





## FAA SURVEY ACCURACY

- For proposed developments/structures, the FAA will take into account the vertical and horizontal accuracy of each case submitted in a 7460-1
- To ensure spatial accuracy (horizontal and vertical), a 1A survey accuracy level is required by the City of San Jose for any proposed development and construction cranes
- The project sponsor may also submit official survey documentation exhibits/summary briefs as part of the 7460-1 submission to the FAA

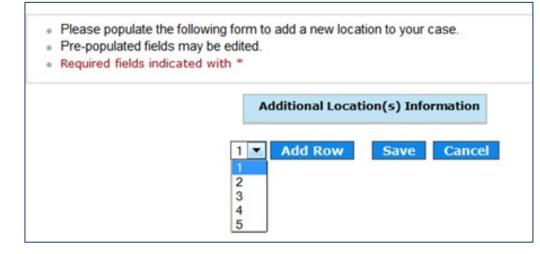
```
The following Obstacle Accuracy Codes are applied in accordance with FAA Order 8260.19H, Appendix C.
HORIZONTAL
                   VERTICAL
Code Tolerance Code Tolerance
1 +20 ft (6 m)
                   A + 3 ft (1 m)
2 +50 ft (15 m)
                   B +10 ft (3 m)
3 +100 ft (30 m)
                  C +20 ft (6 m)
4 +250 ft (75 m)
                  D +50 ft (15 m)
5 +500 ft (150 m) E +125 ft (38 m)
6 +1.000 ft (300 m) F +250 ft (75 m)
7 +1/2 NM (900 m) G +500 ft (150 m)
8 +1 NM (1800 m) H +1.000 ft (300 m)
9 Unknown
                   LUnknown
During the aeronautical study process, the FAA may request a certified survey with an accuracy of either 1A (+20 ft horizontally +3 ft vertically) or 2C (+50 ft horizontally +20 ft vertically).
```



## ADDITIONAL LOCATIONS

- The "Additional Locations" data input allows the sponsor to input up to an additional five (5) more obstacle points into the current 7460-1 submittal for evaluation by the FAA
  - This is typically useful when evaluating a building footprint/corner or a construction crane movement area
  - This is also beneficial because all of the original data input elements will be associated with the additional 5 obstacle points and the sponsor will not have to create a new 7460-1 submittal for each of the additional points
  - The FAA will generate unique Aeronautical Study Numbers (ASN) for each of the additional points evaluated in this 7460-1

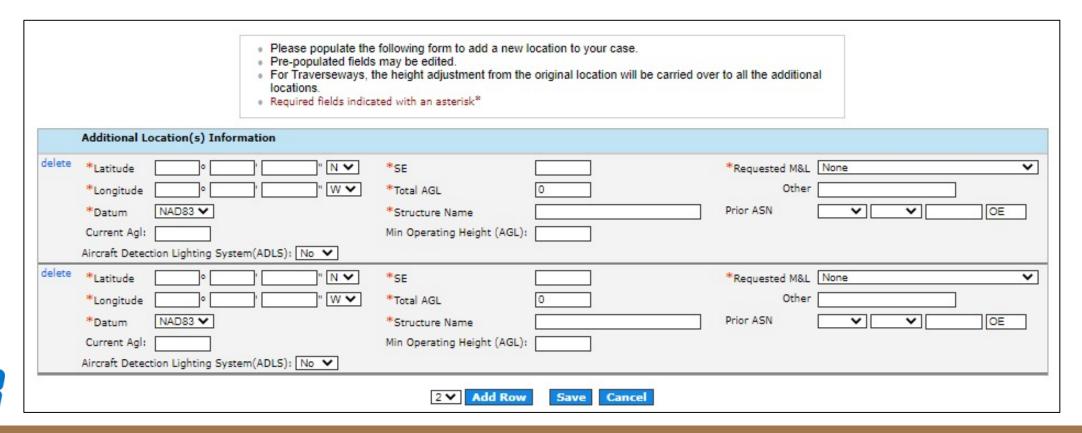






# ADDITIONAL LOCATIONS (CONT.)

- In this example, the sponsor added two new obstacle points for evaluation into the current 7460 submittal
- Ensure that the sponsor selects the "save" button to save the additional obstacle points as part of the 7460-1 submittal





## STRUCTURE SUMMARY

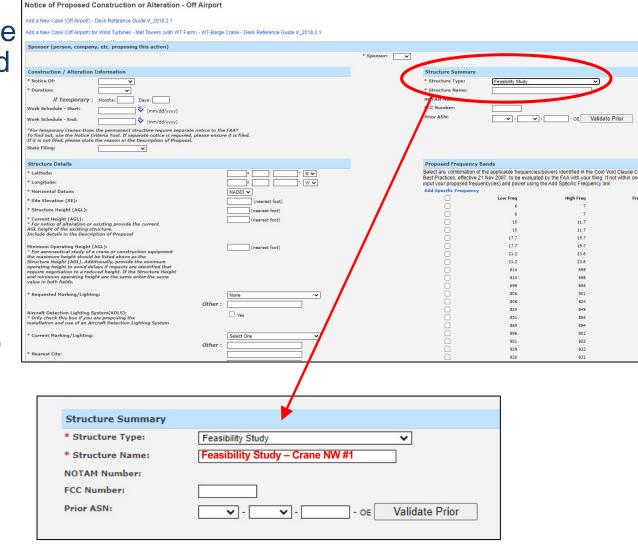
- Once the "Structure Details" section has been populated, the next section to populate is the "Structure Summary" section
- This section will provide the FAA with basic information about the type of structure that is being proposed
- The two required data elements are the "Structure Type and Structure Name"

Structure Summary	
* Structure Type:  * Structure Name:  NOTAM Number:	Crane V
FCC Number: Prior ASN:	Validate Prior Validate Prior



## HOW TO FILE FOR AN OE/AAA FEASIBILITY STUDY

- Filing a for a feasibility study through the FAA OE/AAA website consists of the same general steps that a project sponsor would complete to file a 7460-1 with the exception of two steps:
- In the Notice of Proposed Construction of Alteration – Off Airport form, under Structure Summary select the Structure Type dropdown and click "Feasibility Study".
  - Do not select a specific structure type, only Feasibility Study
- Finally, under Structure Name type a description the object you are requesting the feasibility study for, (e.g., Feasibility Study - Crane NW #1)





## PROPOSED FREQUENCY BANDS

Proposed Frequency Bands

- The "Proposed Frequency Bands" data input pertains to objects with antennas which transmit a radio frequency such as a radio or cell phone tower
- If you add an antenna (or other objects) to the top of a buildings after its built, you are required to file an additional 7460 filing with the FAA as the overall height of the structure has changed

d Specific Frequency	Law France	Web Free	From Unit	EDD	EDD III
	Low Freq	High Freq	Freq Unit	ERP	ERP U
	6	7	GHz	55	dB
	6	7	GHz	42	dE
	10	11.7	GHz	55	dE
	10	11.7	GHz	42	dE
	17.7	19.7	GHz	55	dE
	17.7	19.7	GHz	42	dB
	21.2	23.6	GHz	55	dE
	21.2	23.6	GHz	42	dE
	614	698	MHz	1000	
	614	698	MHz	2000	
Ä	698	806	MHz	1000	
	806	901	MHz	500	
	806	824	MHz	500	
	824	849	MHz	500	
	851	866	MHz	500	
	869	894	MHz	500	
	896	901	MHz	500	
	901	902	MHz	7	
	929	932	MHz	3500	
	930	931	MHz	3500	
	931	932	MHz	3500	
	932	932.5	MHz	17	d
	935	940	MHz	1000	
	940	941	MHz	3500	
	1670	1675	MHz	500	
	1710	1755	MHz	500	
	1850	1910	MHz	1640	
	1850	1990	MHz	1640	
	1930	1990	MHz	1640	
	1990	2025	MHz	500	
	2110	2200	MHz	500	
	2305	2360	MHz	2000	
	2305	2310	MHz	2000	
	2345	2360	MHz	2000	
	2496	2690	MHz	500	



considered with your new filing.

## **CONFIRMATION AND SUBMISSION OF THE 7460-1**

 Once the sponsor has input all of the required data elements for a 7460-1 submittal, the sponsor must comply with the following information, select the checkbox and press the save button to officially save the required input data for the 7460-1 submittal

✓ I hereby certify that all of the above statements made by me are true, complete, and correct to the best of my knowledge. In addition, I agree to mark and/or light the structure in accordance with established marking and lighting standards as necessary.

Save

Cancel



# CONFIRMATION AND SUBMISSION OF THE 7460-1 (CONT.)

- Once this step is completed, you will return to the main OE/AAA page and you will notice that the 7460-1 submittal will be identified as being in "Draft" status
- These item will remain in draft status until the sponsor confirms the approximate location of the obstacle point
- The OE/AAA system provides mapping with the location of the sponsor submitted point overlaid on the map
- The sponsor must confirm the location before the submittal to the FAA is final

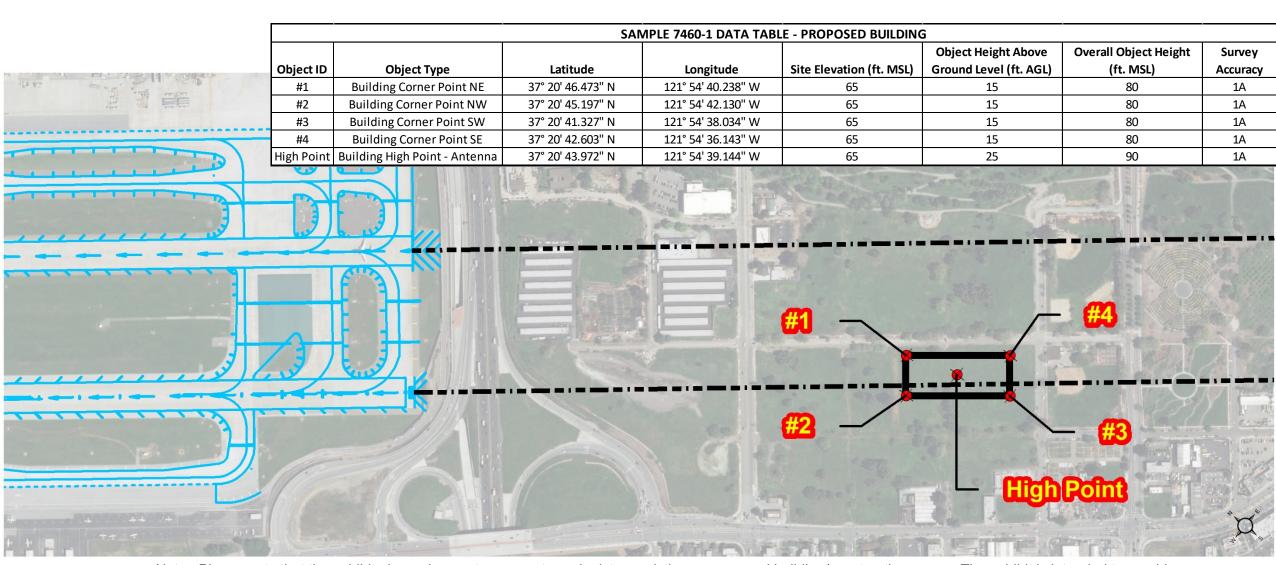


## SAMPLE 7460-1 EXHIBIT AND BASIC DATA TABLE

- In addition, it is good practice for the sponsor to submit a PDF exhibit of the proposed structure with a data table which contains unique obstacle ID's, latitude/longitude (or state plane), structure heights (ground, proposed structure and overall elevation) and an aerial photography background (not required, but useful for visual reference purposes)
- The sponsor can upload and submit a PDF exhibit (which can contain multiple pages) to the FAA for use in their official evaluation
- The exhibit on the next slide depicts an example of a proposed building and building corner points in relation to the airport
- For a building, it is recommended that the entire building footprint be submitted for evaluation in a 7460-1, not just the building high point



## SAMPLE 7460-1 SUBMITTAL EXHIBIT & TABLE - STRUCTURE





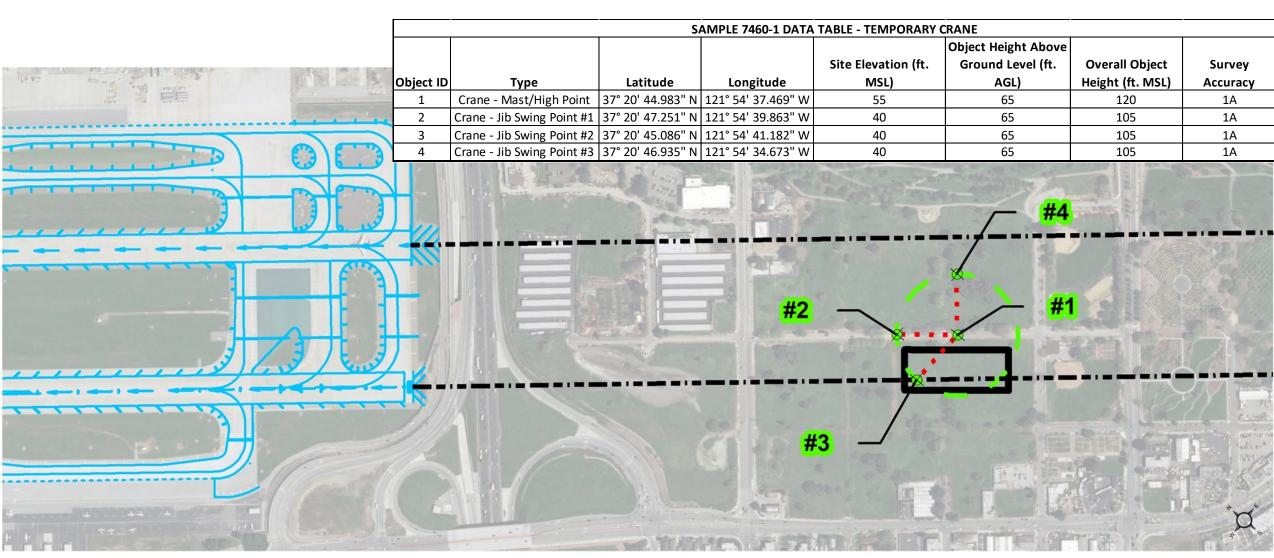
Note: Please note that the exhibit above does not represent nor depict an existing or proposed building/construction crane. The exhibit is intended to provide an example and guidance as it pertains to the basic geometric design data that is required as part of the FAA 7460-1 submission process. It is best practice to provide the FAA with a PDF exhibit of the proposed development and construction cranes along with relevant attribute information as depicted above. Please note that the "Hight Point" of a building includes objects including but not limited to antennas, elevators mechanical rooms, signage, etc.)

## SAMPLE 7460-1 SUBMITTAL EXHIBIT & TABLE - CRANE

- Providing more than one "point" for crane evaluation submittals is required in order to provide the FAA with sufficient information to thoroughly assess the potential impacts to aviation operations at SJC
- It should never be assumed that the crane mast/high point is the most critical point on the crane that should be solely evaluated by the FAA in a 7460-1 submittal
- Providing points representing the operating range of the crane is required to better understand the critical limits/swing of the jib and to identify its proximity to the nearest runways at SJC
- The exhibit on the next slide depicts an example of a proposed construction crane and multiple points representing critical points in relation to the airport



## SAMPLE 7460-1 SUBMITTAL EXHIBIT & TABLE - CRANE





Note: Please note that the exhibit above does not represent nor depict an existing or proposed building/construction crane. The exhibit is intended to provide an example and guidance as it pertains to the basic geometric design data that is required as part of the FAA 7460-1 submission process. It is best practice to provide the FAA with a PDF exhibit of the proposed development and construction cranes along with relevant attribute information as depicted above.

### FAA DETERMINATIONS

- After the project sponsor submits the 7460-1 through the OE/AAA online system, the FAA will issue an Aeronautical Study Number (ASN) for each 7460-1 points submitted
- Components of an ASN: 2020-AWP-0000-OE
  - 2020 Year the case was submitted
  - AWP Refers to the FAA region where the case was submitted. In this case, it refers to the FAA's Western-Pacific Region (which handles California along with other states)
  - 0000 Unique numeric ID assigned for each case.
     When submitting multiple points, the FAA will assign this unique ID to each case in sequential order.
  - OE Obstacle Evaluation denotes that this case is evaluating an object outside of the airport property boundaries (off-airport). If the case was on-airport, the suffix would be NRA (or Airport Analysis)

Records 1 to 160 of 160			
Case Number	City	State	Latitude
2020-AWP-7739-OE	San Jose	CA	37° 22' 34.25" N
2020-AWP-3-OE	San Jose	CA	37° 17′ 58.84" N
2020-AWP-7751-OE	San Jose	CA	37° 22′ 31.79" N
2020-AWP-1562-OE	SAN JOSE	CA	37° 22′ 19.71" N
2020-AWP-6693-OE	San Jose	CA	37° 24' 24.04" N
2020-AWP-7318-OE	San Jose	CA	37° 19' 24.09" N
2020-AWP-6695-OE	San Jose	CA	37° 24' 29,10" N
2020-AWP-7600-OE	San Jose	CA	37° 19' 08.75" N
2020-AWP-422-OE	San Jose	CA	37° 19' 53.25" N
2020-AWP-7732-OE	San Jose	CA	37° 22′ 31.91" N
2020-AWP-3695-OE	San Jose	CA	37° 19' 51.90" N
2020-AWP-3577-OE	San Jose	CA	37° 19' 42.56" N
2020-AWP-2210-OE	San Jose	CA	37° 19' 59.99" N
2020-AWP-7759-OE	San Jose	CA	37° 22′ 34.09" N
2020-AWP-1576-OE	San Jose	CA	37° 19' 10,66" N
2020-AWP-6184-OE	San Jose	CA	37° 17' 07.15" N
2020-AWP-2003-OE	San Jose	CA	37° 19' 51,10" N
2020-AWP-7754-OE	San Jose	CA	37° 22' 32.41" N
2020-AWP-1639-OE	San Jose	CA	37° 24' 09.00" N
2020-AWP-3580-OE	San Jose	CA	37° 19′ 34.26″ N
2020-AWP-7392-OE	San Jose	CA	37° 17′ 04.38" N
2020-AWP-7733-OE	San Jose	CA	37° 22′ 32.81" N
2020-AWP-3581-OE	San Jose	CA	37° 19′ 41.72″ N
2020-AMP-7760-0E	San lose	CA	379 22' 24 43" N



### FAA DETERMINATIONS

- Once the FAA has completed an aeronautical study, a determination is issued regarding the impact to air navigation. One of four responses is typically issued:
  - Determination of No Hazard The subject construction did not exceed obstruction standards and marking/lighting is not required.
  - Determination of No Hazard with Conditions
     - The proposed construction/alteration would be acceptable contingent upon implementing mitigating measures such as the marking and lighting of the structure.
  - **Notice of Presumed Hazard** is a determination stating that the proposed construction is presumed to be an object that will affect navigable airspace. FAA provides guidance/mitigation options as it pertains to the height(s) of proposed construction/alteration to the project sponsor.
  - Determination of Hazard The proposed construction/alteration is determined to be a hazard to air navigation.



# FAA DETERMINATIONS (CONT.)

- While the FAA recommends 45 days process time to complete and airspace study, there is no standard timeline for completion and the process can take several months. It is encouraged to submit the 7460-1 well in advance of a projects proposed construction date.
- The City of San Jose may require issuance of an FAA Determination of No Hazard prior to development permit approval, or as a condition of development permit approval to be fulfilled prior to building permit issuance.
  - City notification of crane operation is required a minimum of 10-days prior to selected crane operation and each time the crane operation changes (crane erection, change in height, change in location and lowered for removal)
- An FAA Determination of No Hazard to Air Navigation is valid for 18 months from the date of issuance by the FAA



Source: <a href="https://oeaaa.faa.gov/oeaaa/external/content/faaDeterminations.jsp">https://oeaaa.faa.gov/oeaaa/external/content/faaDeterminations.jsp</a>

# FAA DETERMINATIONS (CONT.)

- The determination will expire on the expiration date unless construction has begun or you have requested an extension of the determination at least 15 days prior to the expiration date.
- Construction is considered to have started if actual structural work has begun, such as the laying of a foundation but not including excavation.
- The City of San Jose Airport Department, Planning and Development Division, is available to review or provide further guidance during the initial planning phases of a construction project prior to submitting the 7460-1 with the FAA



# **OBSTRUCTION LIGHTING REQUIREMENTS (1 OF 3)**

- Will my structure require obstruction lights?
  - FAA standards, procedures, and types of equipment specified for marking and lighting structures are presented in Advisory Circular (AC) 70/7460-1, Obstruction Marking and Lighting. These standards provide a uniform means to indicate the presence of structures and are the basis for recommending marking and lighting to the public.
  - These standards are the minimum acceptable level of conspicuity to warn pilots of the presence of structures. All aeronautical studies include an evaluation to determine whether obstruction marking and/or lighting are necessary and to what extent. The sponsor shall utilize the type of obstruction marking/lighting that is specified in the determination. If the sponsor wishes to use a different type of marking/lighting, a notice must be submitted for a lighting study.



## **OBSTRUCTION LIGHTING REQUIREMENTS (2 OF 3)**

- May I mark and/or light my structure voluntarily if I'm not required to file a notice with FAA?
  - Yes, provided the marking and/or lighting is installed in accordance with the current FAA Advisory Circular (AC) 70/7460-1, Obstruction Marking and Lighting.
- Obstruction light outage: Who do I notify if the lights on my structure aren't operating?
  - Select the Light Outage Reporting link in the Information Resources section for guidance. https://oeaaa.faa.gov/oeaaa/external/content/LightOutageReporting.jsp



## **OBSTRUCTION LIGHTING REQUIREMENTS (3 OF 3)**

#### What is ADLS?

 Aircraft Detection Lighting Systems (ADLS) are sensor-based systems designed to detect aircraft as they approach an obstruction or group of obstructions; these automatically activate the appropriate obstruction lights until they are no longer needed by the aircraft. This technology reduces the impact of nighttime lighting on nearby communities and migratory birds and extends the life expectancy of the obstruction lights. Specific guidance about using ADLS with obstruction lighting systems is described in the current FAA Advisory Circular 70/7460-1, Obstruction Marking and Lighting.



### FORM 7460-2 NOTICE OF ACTUAL CONSTRUCTION OR ALTERATION

- Once construction of a building and/or the removal of temporary construction equipment (e.g., cranes) has been completed, the project sponsor is required to file a 7460-2 form with the FAA
- This form notifies that FAA that the construction is complete or the temporary equipment has been removed so that the FAA can update their obstacle database and pilot notifications for SJC



### FORM 7460-2 NOTICE OF ACTUAL CONSTRUCTION OR ALTERATION

- The 7460-2 form is a supplemental notification form which informs the FAA of the following:
  - Construction of building/structure is complete
  - Alteration of existing building/structure is complete
- This form notifies that FAA that the construction is complete or the temporary equipment has been removed so that the FAA can update their obstacle database and pilot notifications for SJC
- Once construction of a building and/or the removal of temporary construction equipment (e.g., cranes) has been completed, the project sponsor is required to file a 7460-2 form with the FAA
  - https://www.faa.gov/forms/index.cfm/go/document.information/documentID/186274
  - http://www.faa.gov/documentLibrary/media/Form/FAA\_Form\_7460-2\_042023.pdf



### CITY OF SAN JOSE AVIATION DEPARTMENT CONTACTS

• Should you have additional questions about 7460-1 submission requirements for future developments and temporary construction cranes in the vicinity of SJC, please contact City of San Jose Airport Department – Planning and Development Division:

- Mr. Ryan Sheelen, C.M.
  - Planning and Development Division
  - Office: 408-392-1193 | Email: rsheelen@sjc.org



# **EXTRA SLIDES**



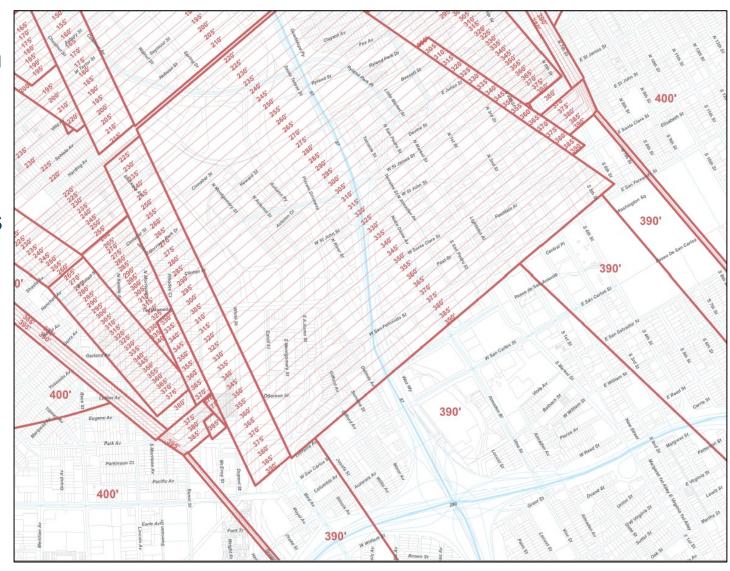
### BUILDING DEVELOPMENT HEIGHT LIMITATIONS

- On March 12, 2019 the City of San José City Council approved a new policy on airspace surface protection heights in the Downtown Core and Diridon Station areas.
- The new airspace protection surfaces, based upon critical FAA TERPS surfaces, provide additional development height opportunities within the Downtown Core and Diridon Station which are described in detail in the Downtown Airspace Development Capacity Study (DADCS).
  - https://www.flysanjose.com/sites/default/files/SJC\_DADCS\_Final\_Report\_August\_2019.pdf
- The building development height limitation policy is intended to be used as additional policy guidance from the City of San Jose based upon the most critical FAA TERPS surface elevations and to limit the heights of structures to avoid adverse impacts on aviation activities at SJC



## BUILDING DEVELOPMENT HEIGHT LIMITATIONS (CONT.)

- For developments in the Downtown San Jose, the City of San Jose Aviation Department has posted Downtown building height limit mapping that is available for download at: <a href="https://www.flysanjose.com/downtownheightlimits">https://www.flysanjose.com/downtownheightlimits</a>
- Proposed building development heights must remain 1 foot below the maximum height limitations depicted on the airspace height limitation exhibits
- 7460-1 submissions for any proposed building/structure development are required





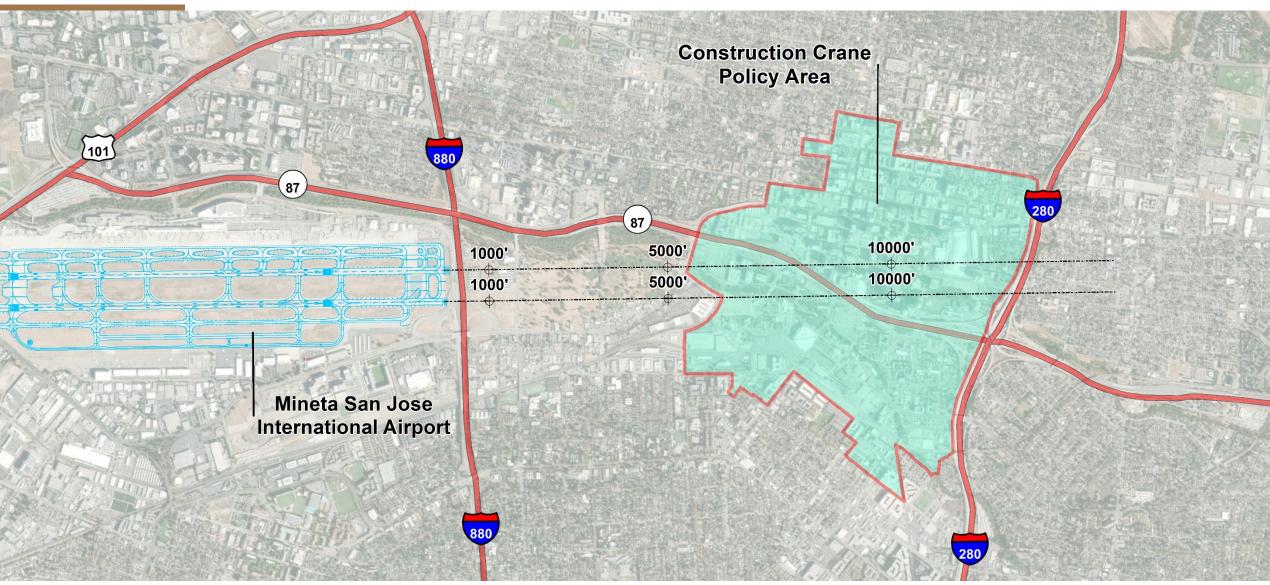
Source: Landrum & Brown

### CONSTRUCTION CRANE POLICY AREA

- Construction cranes are typically required to be taller than the structure which it is being used to develop, however these heights may exceed the protected airspace height limitations adopted for the City of San Jose over the Downtown Core and Diridon Station Areas
- Construction cranes are considered "temporary" in nature, however the duration of the temporary cranes and their required heights for cranes may pose significant impacts to aviation activities at SJC
- In order to better understand the impacts of construction cranes on operations at SJC, the City of San Jose Aviation Department provides guidance to developers to help derive a course of action that will reduce impacts to aviation and to meet the needs of the development community.
- Construction cranes as well as proposed structures are required to be submitted to the FAA for further evaluation to understand the true impact to aviation operations at SJC



# CONSTRUCTION CRANE POLICY AREA (CONT.)





Cranes within the "Construction Crane Policy Area" are required to file Form 7460-1 with the Federal Aviation Administration (FAA). This form is available at www. <a href="https://oeaaa.faa.gov/">https://oeaaa.faa.gov/</a>. Please contact. the City of San Jose Aviation Department for assistance in determining if your crane needs to be submitted to the FAA for review