U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: Filing Notice of Construction or Alteration Located on a Public Use Airport	**Date:** Draft **Initiated By:** AAS-100	**AC No:** 150/xxxx-xx **Change:**

1 Purpose.

This Advisory Circular (AC) provides guidance for quality submissions of proposed construction or alteration in accordance with 14 Code of Federal Regulation Part 77.

2 Applicability.

The Federal Aviation Administration (FAA) recommends the standards and guidelines in this AC to improve the speed and quality of Notice of Filing applications. This AC does not constitute a regulation, is not mandatory and is not legally binding. It will not be relied upon as a separate basis by the FAA for affirmative enforcement action or other administrative penalty. Conformity with this AC is voluntary, and nonconformity will not affect rights and obligations under existing statutes and regulations, except for the projects described in subparagraphs (3) and (4) below:

1. The standards and guidelines contained in this AC are practices the FAA recommends establishing an acceptable level of safety, performance and operation for airfield ground navigation.
2. This AC provides one, but not the only, acceptable means of meeting the requirements of 14 CFR part 139, *Certification of Airports*.
3. Use of these standards and guidelines is mandatory for projects funded under Federal grant assistance programs, including the Airport Improvement Program (AIP). See Grant Assurance #34.
4. This AC is mandatory, as required by regulation, for projects funded by the Passenger Facility Charge program. See PFC Assurance #9.

3 Related Documents.

ACs and Orders referenced in the text of this AC do not include a revision letter, as they refer to the latest version.

4 Use of Metrics.

Throughout this AC, U.S. customary units are used followed with “soft” (rounded) conversion to metric units. The U.S. customary units govern.

5 Where to Find this AC.

You can view a list of all ACs at https://www.faa.gov/regulations_policies/advisory_circulars/. You can view the Federal Aviation Regulations at https://www.faa.gov/regulations_policies/faa_regulations/.

6 Feedback on this AC.

If you have suggestions for improving this AC, you may use the Advisory Circular Feedback form at the end of this AC.

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CHAPTER 1. BACKGROUND AND RESPONSIBILITIES

1.1 Purpose.

This Advisory Circular (AC) describes the type of information, data and supporting documents the FAA needs, as a minimum, to conduct an aeronautical study. This AC is mandatory for airports obligated to the Federal Government. All public use airports are required to file notice under 14 Code of Federal Regulations (CFR) Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace,* if subparagraphs three and four of the Applicability paragraph of this document are valid.

All proposed development on public-use airport property, with the exception of wind turbines and navigational aids (NAVAIDS), is subject to an airport airspace analysis (AAA) and is processed as a non-rulemaking airport (NRA) case. Wind turbines, either on or off an airport, are processed as an obstruction evaluation (OE) study. NAVAIDS are processed by the FAA as a non-rulemaking (NR) case. Refer to the OE/AAA website for additional information. Upon receipt of a filing notice proposal from the sponsor, the FAA Airports Division is responsible for initiating the coordination of NRA aeronautical studies that consist of:

1. Evaluating the effect of the construction or alteration on existing and planned aeronautical operating procedures.
2. Determining the potential effect of the proposed construction on air navigation.
3. Ensuring compatible land use.
4. Confirming compliance with FAA airport design standards.
5. Identifying mitigating measures to enhance safe air navigation.

This AC does not apply to private-use airports. The sponsor of proposed development on a private-use airport with an Instrument Approach Procedure (IAP) will file notice online with the FAA at the Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) website as an obstruction evaluation (OE) case.

1.2 Regulations.

All public-use airports must file a notice of proposed construction or alteration on the airport with the FAA. The requirements to notify the FAA fall under the regulations listed below:

1. The airport is certificated under CFR Part 139.
2. The airport received a federal grant under the Airport Improvement Program (AIP).
3. The airport is collecting a Passenger Facility Charge (PFC).
4. Federal property has been conveyed to the airport under a federal surplus property program.

This AC does not provide guidance for landing area proposals. 14 CFR Part 157 establishes standards and notification requirements for anyone proposing to construct,

or deactivate a civil or joint-use (civil/military) airport including proposals that alter the status or use of such an airport.

Notice required by 14 CFR Part 77 is pursuant to 49 United States Code (U.S.C.), Section 44718. Persons who knowingly and willingly violate the notice requirements of 14 CFR Part 77 are subject to a civil penalty of $1,000 per day until the notice is received, pursuant to 49 U.S.C., Section 46301(a).

1.2.1 The regulatory requirements for an airport sponsor to notify the FAA are:

Title 49 U.S.C. 47107 requires airports certificated under 14 CFR Part 139, in receipt a federal grant, collecting a PFC, to maintain and keep an approved, up-to-date Airport Layout Plan (ALP) on file with the FAA. As a part of this ALP requirement, the airport sponsor, or operator, agrees to allow any alteration to the airport or any of its facilities only after FAA approval. Filing notice in accordance with this AC will initiate an FAA review.

1.2.2 Title 14 CFR Part 77 requires notice for construction or alteration on any of the following airports and heliports:

- A public use airport listed in the Chart Supplement.
- A military airport under construction, or an airport under construction that will be available for public use.

The proposal is filed as an Off-Airport study in OE/AAA for a military-only airport.

- An airport operated by a Federal agency or the DOD.
- An airport or heliport with at least one FAA-approved instrument approach procedure.

1.3 Purpose of the FAA Analysis.

The FAA has jurisdiction of the National Airspace System (NAS). Proposed changes that may affect the NAS are submitted to the FAA to ensure the safety and efficiency of the NAS. Filing notice with the FAA initiates a formal aeronautical study of the proposal.

Each proposal is unique. The aeronautical study determines whether the aeronautical effects of the proposal and any cumulative effects of the proposal would constitute a hazard to air navigation. In addition, the aeronautical study will determine the effect on the:

- Safe and efficient use of navigable airspace.
- Air navigation facilities or equipment.
- Airport design standards.
- Compatible land use.

The time necessary for the FAA to conduct a complete analysis is dependent on many factors such as:

- The proposal itself.
- The proposed location.
- The type and/or size of the airport.
- Facilities on or planned for the airport (navigational, radar, communication, weather reporting, firefighting, etc.).
- Existing or planned instrument approach procedures.

1.4 Responsibilities and Overview

FAA Order 7400.2 establishes internal FAA responsibilities. There are specific and detailed responsibilities to conduct an analysis for any given proposal.

1. The FAA's Airports Division is responsible for processing, coordinating with other FAA Lines of Business (LOB) and reviewing all on-airport proposals.
2. The LOBs (and their respective Divisions, Branches, Sections and Units) have varying responsibilities that is specific to their area of expertise.

1.5 Filing Notice.

1.5.1 The recommended filing notice submittal method is e-filing via the FAA's Obstruction Evaluation Airport Airspace Analysis website at: https://oeaaa.faa.gov. If unable to file electronically, a paper copy of FAA Form 7460-1 may be sent to the appropriate FAA Airports District or Regional Office. E-filing is preferred because:

1. It is the fastest and most accurate method to submit to the FAA,
2. It immediately assigns an aeronautical study case number,
3. It establishes an electronic communications link between the FAA and the sponsor,
4. It allows the proponent/sponsor to obtain project status notifications directly from this website.

1.5.2 The sponsor, when using the OE/AAA e-filing system, needs to provide the proper personnel contact information in the event there is a need for the filing of any notices to airman (NOTAMs) during the course of the project.

1.5.3 When e-filing, the sponsor is encouraged to properly identify the project by selecting the component and development type that best described the purpose of the proposal. For example, if the project involves building a new hangar, the component is "hangar" and the development is "construction." The proposal would be listed as "HANGAR-

Construction" in the OE/AAA website. Correctly identifying the project will greatly ease future searches for this development.

1.5.4 In accordance with 14 CFR Part 77, the sponsor must provide notice at least 45 days before the start date of the proposed construction or alteration or the date of the application for a construction permit is filed, whichever is earliest. Filing the notice 60-90 days before planned construction is highly recommended. The sponsor is encouraged to file notice more than 90 days before planned construction along with early coordination with the local Airports District or Regional Office for complex projects involving runways, taxiways, or navigational aid impacts. The aeronautical study process includes evaluations by various FAA lines of business. There is no guarantee that a final agency determination will be issued at the end of 45 days. 14 CFR Part 77 does not carry provisions for waivers or exemptions. There is no method to shorten or bypass this process.

1.6 **Methodology.**

1.6.1 FAA regulations require that each object is studied as a separate aeronautical case. This requirement can cause issues evaluating the aeronautical effect of a large area object or structure. To reduce workload for all parties involved, the sponsor uses professional judgment in determining the points of interest (POIs) that identify the area limits of the object or structure and any critical location(s) within that area. Each of these POIs will be individually studied and then grouped together into a single project.

1.6.2 The sponsor considers how the project's ultimate presence on the airfield, and its construction activity, will impact aircraft and airport operations. Follow the guidance in the appendices for similar type projects when submitting a proposal to the FAA. Whether the project aligns perfectly with an appendix example or not, ask the following questions:

1. Will the project impact the line of sight (LOS) from the tower to any aircraft movement area under control of the tower? Will the project affect electronic equipment?
2. Will the project need construction equipment on the airfield or in an aircraft movement area?
3. How will workers get to the project location (haul routes)?
4. Will a staging area or stockpiles be necessary?
5. Is the proposal in close proximity to a navigational aid (NAVAID)?
6. Will the project emit a frequency?

1.6.3 Determining the number and location of POIs for each structure and/or object is vital in submitting a filing notice for an aeronautical study with the FAA. Each POI has a specific sight elevation (SE), above ground level height (AGL), and latitude and longitude coordinate. The sponsor identifies the minimum number of POIs that will

ensure the proposal features, both area and elevation, are properly assessed. More POIs do not necessarily make a better filing notice submittal.

1.6.4 The FAA may request additional information to complete their analysis based on the unique nature of each project, and the individual airport.

1.6.5 A filing notice proposal may be the first time the FAA becomes aware of the project. It is critical that the project sketches and exhibits are clear and show all information correctly. It does not matter if the project diagrams and/or graphics are hand drawn (examples are Figure A-7 and Figure B-1), marked-up satellite images (examples are Figure A-12 and Figure D-8), illustrations (examples are Figure A-3 and Figure A-4), photographs (examples are Figure B-3 and Figure D-4), or some other form of drawing, such as an engineering drawing, given the project information is understandable to the FAA reviewers. The figures in this AC show various types of acceptable graphics.

1.7 **Determinations.**

1.7.1 Upon completion of the aeronautical study, the FAA will issue an agency determination. Determinations do not constitute FAA approval or disapproval of the physical development involved in the proposal. The FAA determination is with respect to the safe and efficient use of navigable airspace by aircraft and with respect to the safety of persons and property on the ground. Local project coordination is encouraged prior to filing notice with the FAA.

1.7.2 The FAA determination does not relieve the airport sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body. This may include an environmental determination in accordance with the National Environmental Protection Act (NEPA) or ensuring the proposed project is shown on the approved ALP.

1.7.3 Determinations may contain an expiration date. The sponsor must request an extension at least 15 days prior if the proposed development will not be completed prior to the expiration date. The FAA may issue an extension up to an additional 12 months. A new notice is required if the work cannot be completed before the extension date.

1.7.4 The FAA's database (and FAA publications) may need to be updated depending on the proposal, concurrent with the completion of the permanent changes to the airport. If this be the case, the airport sponsor needs to stay in contact with the FAA office that issued the determination. The following proposals typically necessitate post determination coordination with the FAA:

- Changes in runway location and/or dimensions
- Changes in the airport diagram
- Changes in runway data
- Changes in airport data.

1.8 Definitions.

The definitions in this paragraph are relevant to this AC.

1. *Above Ground Level (AGL).* The total height of the structure or object above the ground.
2. *Above Mean Sea Level* (AMSL). The sum of the Site Elevation and the Above Ground Level.
3. *Aeronautical Study Number (ASN).* A unique identifier assigned to an individual point of interest. (e.g., 2018-AXX-0152-NRA).
4. *Air Operations Area* (AOA). Area of the airport primarily used or intended to be used for landing, takeoff, or surface maneuvering or aircraft, and related activities.
5. *Airport.* An area of land that is used or intended to be used for the landing and takeoff of aircraft, and includes any buildings or facilities. This includes any airport, heliport, helistop, vertiport, gliderport, seaplane base, ultralight flightpark, manned balloon launching facility, or other aircraft landing or takeoff area.
6. *Airport/Facility Directory (A/FD).* Section within the Chart Supplement regional booklets published by Aeronautical Information Services that provides information about all airports in the region. The A/FD section includes runway length and width, runway surface, load bearing capacity, runway slope, airport services, and hazards, such as birds and reduced visibility. The A/FD has been replaced by the Chart Supplement.
7. *Airport Layout Plan (ALP).* A scaled drawing (or set of drawings), in either traditional or electronic form, of current and future airport facilities that provides a graphic representation of the existing and long-term development plan for the airport and demonstrates the preservation and continuity of safety, utility, and efficiency of the airport to the satisfaction of the FAA.
8. *Airport Reference Point (ARP).* The approximate geometric center of all usable runways at the airport. The ARP is identified on the Airport Layout Plan.
9. *Airport Sponsor.* The entity that is legally responsible for the management and operation of an airport, including the fulfillment of the requirements of laws and regulations related thereto including any federal obligations. [Not to be confused with the term “Sponsor” defined below.]
10. *Airport Traffic Control Tower (ATCT).* The primary method of controlling the immediate airport environment is visual observation from the airport control tower. The tower is a tall, windowed structure located on the airport grounds. Air traffic controllers are responsible for the separation and efficient movement of aircraft and vehicles operating on the taxiways and runways of the airport itself, and aircraft in the air near the airport.
11. *Apron.* An area typically located in the non-movement area of an airport near or adjacent to the terminal area. Its function accommodates aircraft during loading and unloading of passengers and or cargo. Activities such as fueling, maintenance and short/long-term parking take place on an apron.

12. *Chart Supplement:* A Civil Flight Information Publication, updated every eight weeks by the US Department of Transportation, Federal Aviation Administration, Aeronautical Information Service. The Chart Supplement contains an Airport/Facility Directory.

13. *FAA Form 7460-1*. The FAA form that is filed to submit notice under Part 77.

14. *Feasibility Studies.* Future airport development, constructions or alterations being planned beyond the near-term planning period of 5 years (> 6-years). All proposed airport development within the near-term period of 1-5 years will not be considered a feasibility study. Per FAA Order 7400.2, "A feasibility study is a limited aeronautical review based on very broad, estimated, or general information supplied for the structure". A feasibility study will allow the FAA to provide feedback to the proponent that may affect local planning decisions.

15. *Instrument Approach Procedure (IAP).* A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing or to a point from which a landing may be made visually. It is prescribed and approved for a specific airport by competent authority.

16. *Movement Area.* The runways, taxiways, and other areas of an airport that are used for taxiing or hover taxiing, air taxiing, takeoff, and landing of aircraft including helicopters and tilt-rotors, exclusive of loading aprons and aircraft parking areas (reference Part 139).

17. *National Airspace System (NAS).* The common network of U.S. airspace; air navigation facilities, equipment and services, airports or landing areas; aeronautical charts, information and services; rules, regulations and procedures, technical information, and manpower and material. Included are system components shared jointly with the military.

18. *Navigational Aid (NAVAID).* Electronic and visual air navigation aids, lights, signs and associated supporting equipment.

19. *Non-Movement Area*. The areas of an airport that are used for taxiing or hover taxiing, or air taxiing aircraft including helicopters and tilt-rotors, but are not part of the movement area (i.e., the loading aprons and aircraft parking area).

20. *Object*. Includes, but is not limited to, above ground structures, NAVAIDs, equipment, vehicles, natural growth, terrain, and parked or taxiing aircraft.

21. *Obligated Airport*. Any public use airport having agreements with the Federal Aviation Administration. These obligations are in the sponsor's assurances in grant agreements under the Airport Improvement Program (AIP) and in real property transfers under the Surplus Property Act and other legislation. Among the obligations is the requirement to maintain a current Airport Layout Plan on file with the FAA. Failure to comply with the obligations may jeopardize federal financial assistance.

22. *Obstacle*. An existing object at a fixed geographical location or which may be expected at a fixed location within a prescribed area with reference to which vertical clearance is or must be provided during flight operation.

23. *Obstruction Evaluation / Airport Airspace Analysis (OE/AAA).* Title of the FAA website for e-filing proposals to the FAA. (https://oeaaa.faa.gov)
24. *OE/AAA Project*. Allows E-filers to group related points of interest into a single project. For example; a proposed hangar building consists of four points. These points can be grouped into a single OE/AAA Project.
25. *Part 77.* Federal Regulation Title 14 Part 77 establishes standards and notification requirements for objects affecting navigable airspace.
26. *Points of Interest (POI).* Points which approximate the footprint of an area as well as identify critical locations within the area.
27. *Public-Use.* Available for use by the general public without a requirement for prior approval of the owner or operator.
28. *Runway (RW).* A defined rectangular surface on an airport prepared or suitable for the landing or takeoff of aircraft.
29. *Site Elevation (SE).* The elevation above mean sea level expressed in whole feet.
30. *Sponsor.* For the purposes of this document, a "Sponsor" is a person or company proposing action and submitting FAA Form 7460-1.
31. *Subject Matter Expert (SME).* An individual with in-depth knowledge and experience in a specific area.
32. *Taxilane (TL).* A taxiway designed for low speed and precise taxiing. Taxilanes are usually, but not always, located outside the movement area, providing access from taxiways (usually an apron taxiway) to aircraft parking positions and other terminal areas.
33. *Taxiway (TW).* A defined path established for the taxiing of aircraft from one part of an airport to another.

CHAPTER 2. TYPES OF STUDIES

2.1 General.

On-airport studies fall in one of the following categories, permanent, temporary, or planning.

2.2 Permanent Construction or Alteration.

1. This type of study applies to any structure, object, or earthwork that will be constructed, modified, installed, or placed on or above the ground that will permanently change existing topography. Typical structures or objects include buildings, hangars, aprons, taxiways, taxilanes, runways, equipment (antenna, windsock, airport beacon etc.), fuel farms, light poles, parking lots, access roads.
2. Notification under 14 CFR Part 77 is not required for any object that would be shielded by existing structures of a permanent and substantial character or by natural terrain or topographic features of equal or greater height only if located in the congested area of a city, town, or settlement. Shielding is not applicable for on-airport filing notice proposals.
3. Filing notice for the rehabilitation or restoration of an existing structure or object is typically not necessary. Filing notice for the temporary construction activity and/or equipment to complete the work is necessary. (See Appendix B).

2.3 Temporary Construction or Alteration.

This type of study applies to construction activity within a defined project area, such as staging areas, construction employee parking, material stockpiles, concrete batch plant, cranes, or drill rigs. The FAA will conduct an aeronautical study similar to the study required for permanent structures listed above. The study will advise the airport sponsor of any operational impacts and mitigations to consider before allowing construction activity to proceed.

2.4 Planning.

This type of study applies to planning documents developed by the airport sponsor. Typical planning documents include ALP, Construction Safety Phasing Plans (CSPP), taxiway geometry configurations, terminal/hangar area plans or feasibility studies beyond the near-term development period (1-5 years). The FAA will review planning proposals and respond with potential impacts they were able to identify and may provide guidance, recommendation(s) and/or instruction(s) as applicable in order to assist the airport sponsor in their planning efforts.

2.5 Survey Accuracy.

FAA applies an accuracy standard to obstacles when evaluating effects on instrument procedures. These adjustments are applied to structures that may become the

controlling obstructions and are applicable until their elevation and location are verified by survey. E-filers are unable to select a specific accuracy code, as it defaults to 4D. If a survey is provided with the signature of the engineer/surveyor, a sponsor may modify the accuracy code. Operational impact may be mitigated simply by providing a certified survey with a higher than 4D accuracy. It is recommended that the survey accuracy be identified in the filing proposal.

Table 2-1. Survey Accuracy Codes

Horizontal Code Tolerance	Vertical 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)	HA +1,000 ft (300 m)
9 Unknown	I Unknown

APPENDIX A. PERMANENT CONSTRUCTION OR ALTERATION

This appendix serves as a guide to identify the information needed by the FAA based on the type of project proposed. This appendix is not intended to be a step-by-step instruction on how to navigate the OE/AAA web portal. Directions on how to file electronically and navigate the OE/AAA website, can be found at https://oeaaa.faa.gov by selecting the "Instructions" link.

A.1 General.

Permanent objects include a wide variety of project types including new or expanded buildings, fences, power lines, new or expanded airfield facilities (aprons, taxiways, etc.), and solar arrays. The examples that follow discuss:

- Determining the location and the number of Points of Interest (POIs)
- Submitting appropriate documentation.
- Clarifying remarks for commonly studied proposals.

Latitude and longitude coordinates are entered as degrees, minutes and seconds (NAD 83, NAD 27). Accuracy is provided to the nearest hundreth of a second if possible. The elevation for a POI for temporary construction objects is the ground/site elevation.

It is important to note that this may be the first time the FAA becomes aware of the project. It is critical that exhibits are clear and show the project's location relative to the airfield. The FAA encourages the submittal of an exhibit showing out and over distances from the closest point of the structure to the nearest runway centerline and extended to the nearest runway end. Refer to Figure A-1 and Figure A-2.

Figure A-1. Out and Over Distance Example

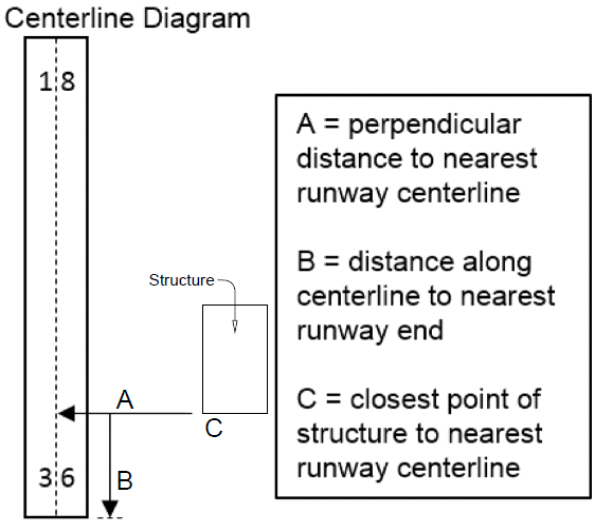
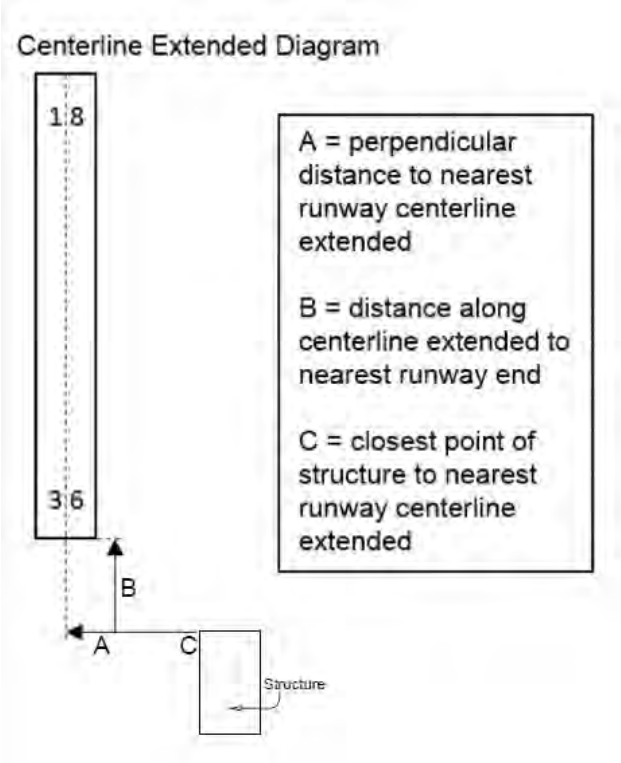


Figure A-2. Out and Over Distance Example – Extended



A.2 **Buildings (Hangars, Structures, Signs, Fuel Farms).**

A.2.1 Background.

Above ground structures that have walls and a roof are considered “Buildings” for the purposed FAA aeronautical studies. In addition to conventional buildings such as hangars, terminals, hotels, and maintenance facilities, this classification also includes above ground fuel tanks. A building may be permanent or temporary and may be new construction or an expansion/addition.

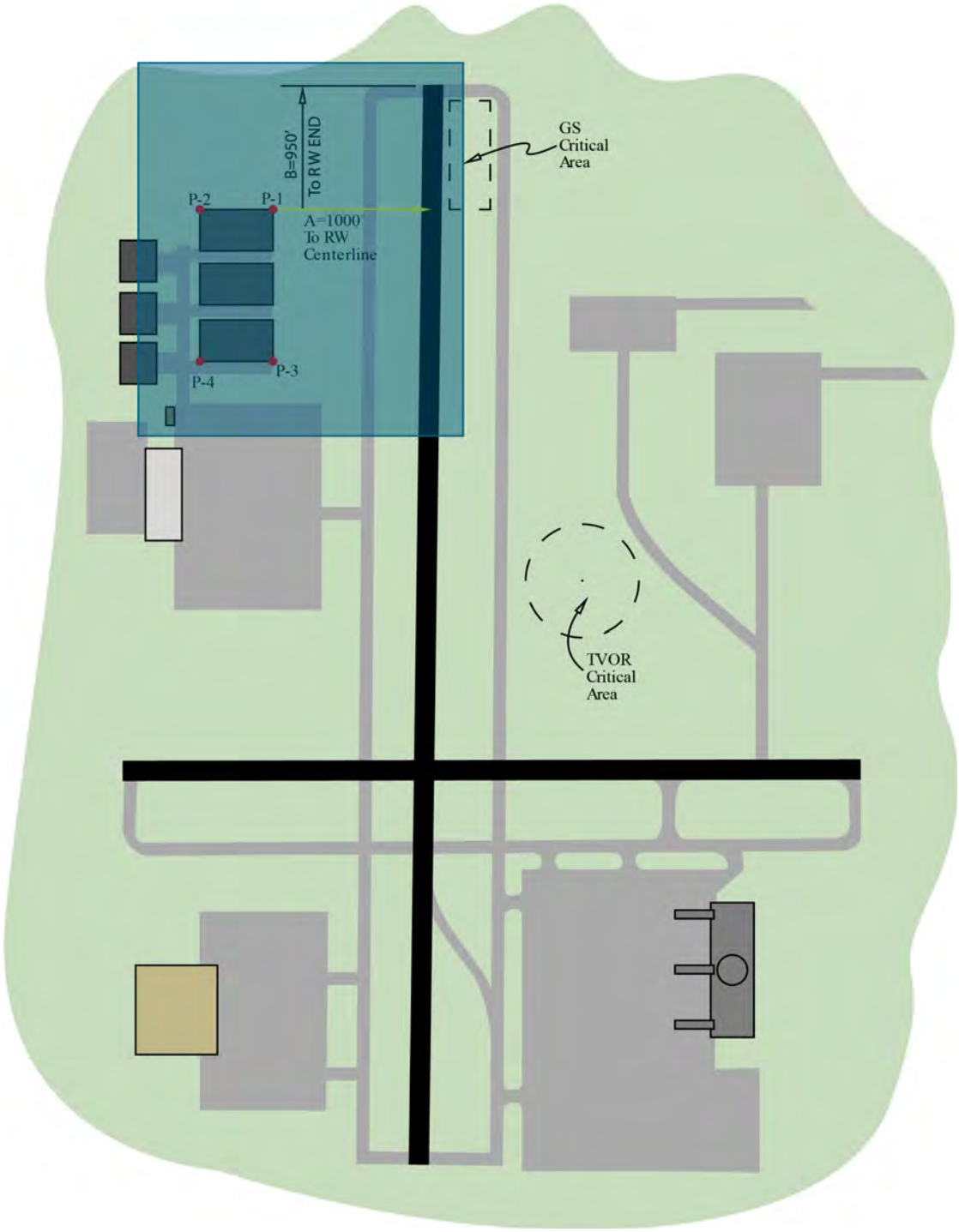
A.2.2 Selection of POIs.

The FAA will need at least four POIs for most buildings. Consider providing the farthest outside corners of the structure to capture the basic footprint. If the corners are not the tallest points, ensure the AGL includes the highest elevation of the structure; i.e., roof peak or appurtenances (AC units, antennas, flag poles, light poles etc.) After reviewing the proposal and the POIs provided, the FAA may request additional POIs.

It may be prudent (and efficient) to file notice for all the structures in the area under a single airspace project proposal. This can be done when the current approved ALP has a defined development area showing the airport’s plan to construct the multiple buildings/hangars. When multiple structures are combined in a single notice (airspace project), the proposal description makes this clear. Figure A-3 and Figure A-4 depict a multiple building example. Figure A-5, Figure A-6, and Figure A-7 depict a single building example.

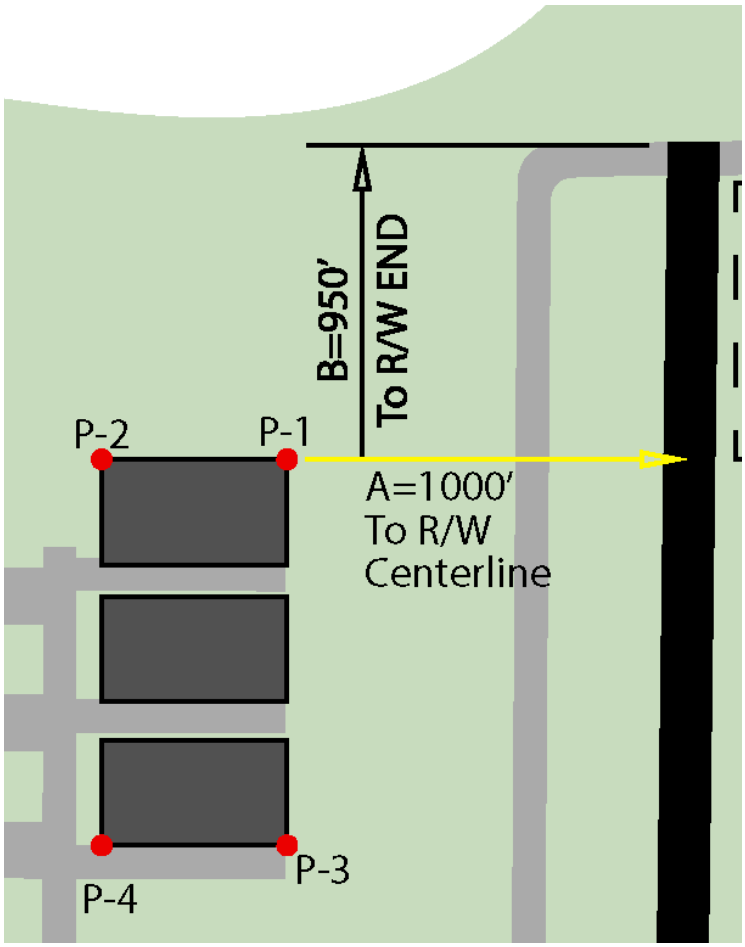
After reviewing the proposal and the POIs provided, the FAA may request additional POIs.

Figure A-3. Airport Building Example



Note 1: In this example, three proposed hangar buildings are grouped together into one project proposal.
Note 2: TVOR = Terminal Very High Frequency Omni Range NAVAID
Note 3: GS = Glide Slope NAVAID
Note 4: For the enlarged area of interest, the blue shaded area, refer to Figure A-4.

Figure A-4. Airport Building Example – Enlarged Area of Interest



Note 1: See Figure A-1 for explanation of "A" and "B" dimensions.

Note 2: The 4 POIs outline the area of the three proposed buildings on the airport.

Figure A-5 and Figure A-6 show an example of a single building proposal with a POI data table and a building side elevation view.

Figure A-5. Building Site Diagram

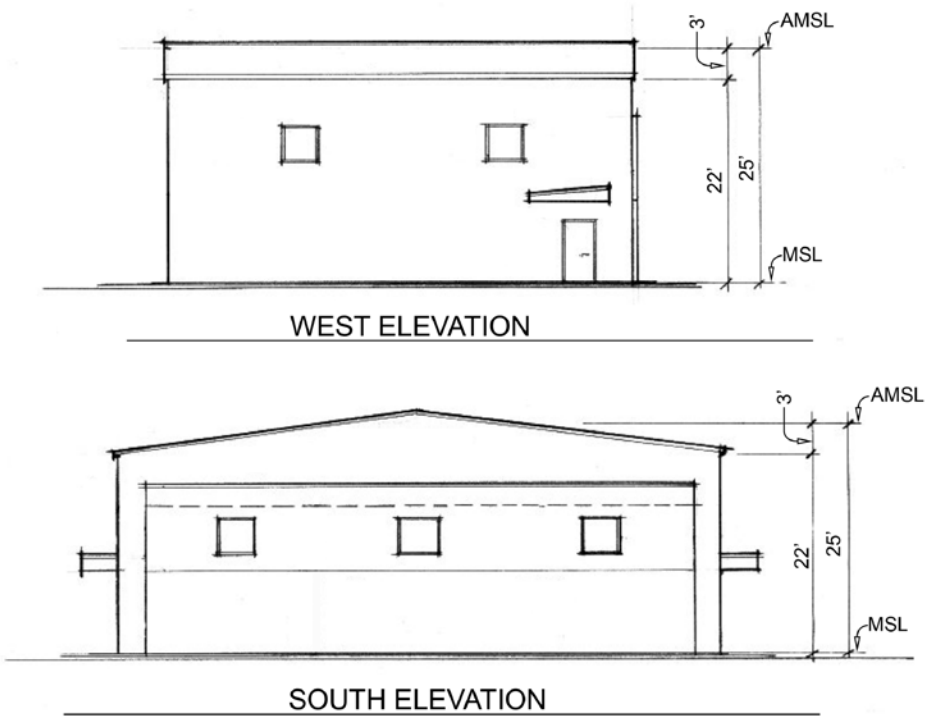
Note: The enlargement of the area of interest, the blue shaded area, is shown on Figure A-6.

Figure A-6. Building Site Diagram – Enlarged Area of Interest

Table A-1. Point of Interest (POI) Table for the Building

POI	SE	AGL	Latitude	Longitude	AMSL
101	426	30	32-57-54.29	82-50-17.38	456
102	426	37	32-57-54.01	82-50-14.42	463
103	426	30	32-57-53.44	82-50-15.84	456
104	426	30	32-57-53.54	82-50-17.91	456
105	426	30	32-57-52.79	82-50-14.44	456

Figure A-7. Building Elevation Drawing



Note: A sketch showing the building elevation to be included with the proposal.

A.2.3 Attachments.

Attach a dimensioned plan and elevation drawing (Similar to Figures A-6 and A-7) of your proposed building(s) as well as a site plan or aerial photo showing the location and orientation of the proposed building similar to the above Figure A-4.

Include a diagram showing your building site in relation to the rest of the airport is helpful in facilitating the FAA's evaluation of your proposal. See Figure A-5.

A.2.4 Describe/Remarks.

The information provided will become part of FAA's determination.

Describe the structure and its purpose. Provide a physical description (building materials), general footprint dimensions, the type of roof i.e., flat, sloped, gable, hip etc. and if there are any appurtenances (antennas, flag pole, lights, air conditioning, etc.).

A.2.5 Example 1.

Proposal for a new corporate hangar. The hangar's construction is steel frame, brick exterior and general footprint is 140′ × 80′. The roof is a gable with a 4:12 pitch. There are no appurtenances on the roof.

A.2.6 Example 2.

Proposal for a new corporate hangar development eventually containing three corporate hangars. The hangars will all be steel frame construction with metal skin. The overall footprint is 150′ × 450′. The hangar roofs will be gables with a maximum 8:12 pitch. Any future roof appurtenances exceeding the limits of the coordinates provided or any broadcast antennas will be proposed and filed under separate study. The POIs provided delineate the footprint of the hangars at the maximum roof height (gables).

A.3 **Apron.**

A.3.1 Background.

An apron is typically located in the non-movement area of an airport near or adjacent to the terminal area. The apron accommodates aircraft during loading and unloading of passengers and or cargo. Activities such as fueling, maintenance and short/long-term parking take place on an apron. Apron layout depends on aircraft gate positions; aircraft and ground vehicle circulation needs; and aircraft clearance standards. A well laid-out apron minimizes runway incursions and effectively expedites aircraft services. Refer to AC 150/5300-13 , *Airport Design*, for a more detailed discussion regarding aprons. A stationary aircraft may have the same impact to tower line of sight, electromagnetic interference, etc., as a permanent structure. In addition to new aprons, submit a similar proposal for the expansion of an existing apron.

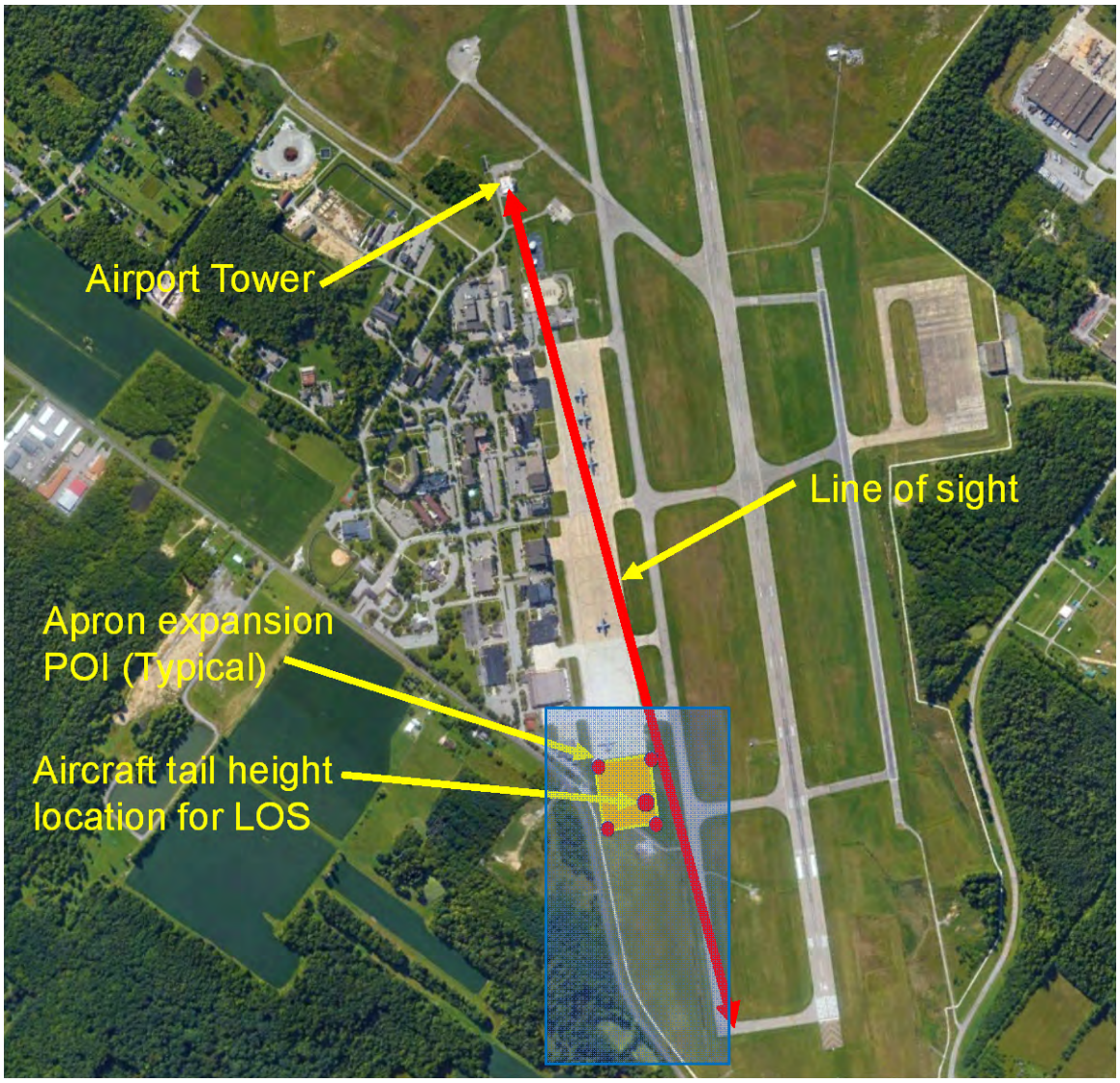
A.3.2 Selection of POIs.

The FAA evaluates aprons as Area Studies just as it would a building. Submitting the appropriate points along the apron perimeter will aid the FAA in conducting their analysis. Include POIs for the major corners of the apron and additional centerline points where the apron meets any taxiway/taxilane. The appropriate elevation (AGL) is "0" for the apron corners and centerline points. At towered airports additional POIs provide the tallest aircraft tail height and location of aircraft using this area.

After reviewing the proposal and the POIs provided, the FAA may request additional POIs.

590 A.3.3 Attachments.

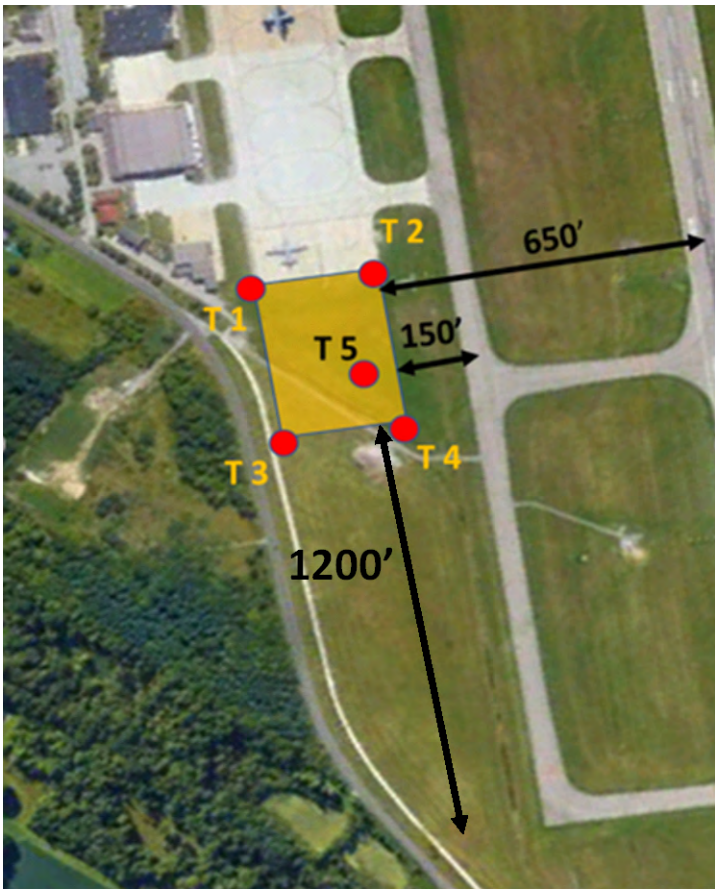
591 **Figure A-8. Apron Expansion – With Line of Sight (LOS) Consideration**



592

593 **Note:** For enlargement of the area of interest, the blue shaded area, see Figure A-9.

Figure A-9. Apron Expansion – Enlarged Area of Interest



Note: See Table A-2 for POI data elements.

Table A-2. POIs for Apron Expansion Project

POI	SE	AGL	AMSL	Latitude	Longitude
T 1	125	0	125	XX-XX-XX.X	YY-YY-YY.YY
T 2	125	0	125	XX-XX-XX.X	YY-YY-YY.YY
T 3	125	0	125	XX-XX-XX.X	YY-YY-YY.YY
T 4	125	0	125	XX-XX-XX.X	YY-YY-YY.YY
T 5	125	40*	165	XX-XX-XX.X	YY-YY-YY.YY

Note: *Tallest tail height and location of the aircraft parked on apron.

The attachments provide distance measurements from the apron edge to a nearby TW and/or RW centerlines. Graphically depicting applicable airport design standards on the attachments, such as safety or object free areas or obstacle free zones, may help expedite the aeronautical study.

603 A.3.4 Describe/Remarks.

604 1. The information provided will become part of FAA's determination.

605 2. Describe the apron and its proposed operational use.

606 A.4 **Taxiways/Taxilanes.**

607 A.4.1 Background.

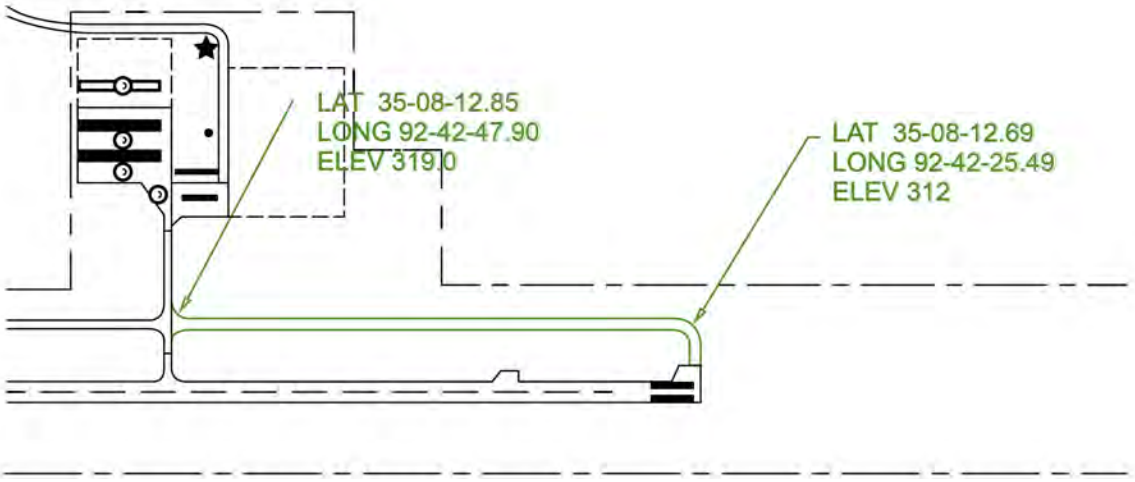
608 Taxiways are defined paths established for the taxiing of aircraft from one part of an
609 airport to another. Taxilanes are taxiways designed for low speed and precise taxiing.
610 Planned taxiways and taxilanes are typically illustrated on the ALP. However, when
611 the planned taxiway or taxilane has transitioned to actual development, the actual
612 location may differ from the planning document.

613 A.4.2 Selection of POIs.

614 Taxiways and taxilanes are typically evaluated as a series of points by the FAA.
615 Selecting the appropriate points along the taxiway or taxilane centerline will aid the
616 FAA in conducting their analysis. Always provide at least two POIs to clearly define
617 the end points and orientation. Include additional points if the taxiway includes turns or
618 is near a FAA or airport facility (i.e., NAVAID critical areas, runway approach
619 surfaces, etc.). The ground/site elevation is the proposed centerline elevation. In
620 addition to the ground POIs, for towered airports, add POIs representing the highest
621 aircraft tail height expected to use the taxiway on a regular basis.

622 After reviewing the proposal and the POIs provided, the FAA may request additional
623 POIs.

624 **Figure A-10. Taxiway/Taxilane Example**



625

626 **Note:** The critical aircraft using this taxiway extension has a tail height of 40 feet.

A.4.3 Attachments.

Include a plan view drawing of the taxiway, showing the taxiway safety and object free areas and intersections.

A.4.4 Describe/Remarks.

The information provided will become part of FAA's determination.

Describe the taxiway/taxilane and provide the Airplane Design Group (ADG) and the Taxiway Design Group (TDG). Refer to AC 150/5300-13.

A.5 **Runways.**

A.5.1 Background.

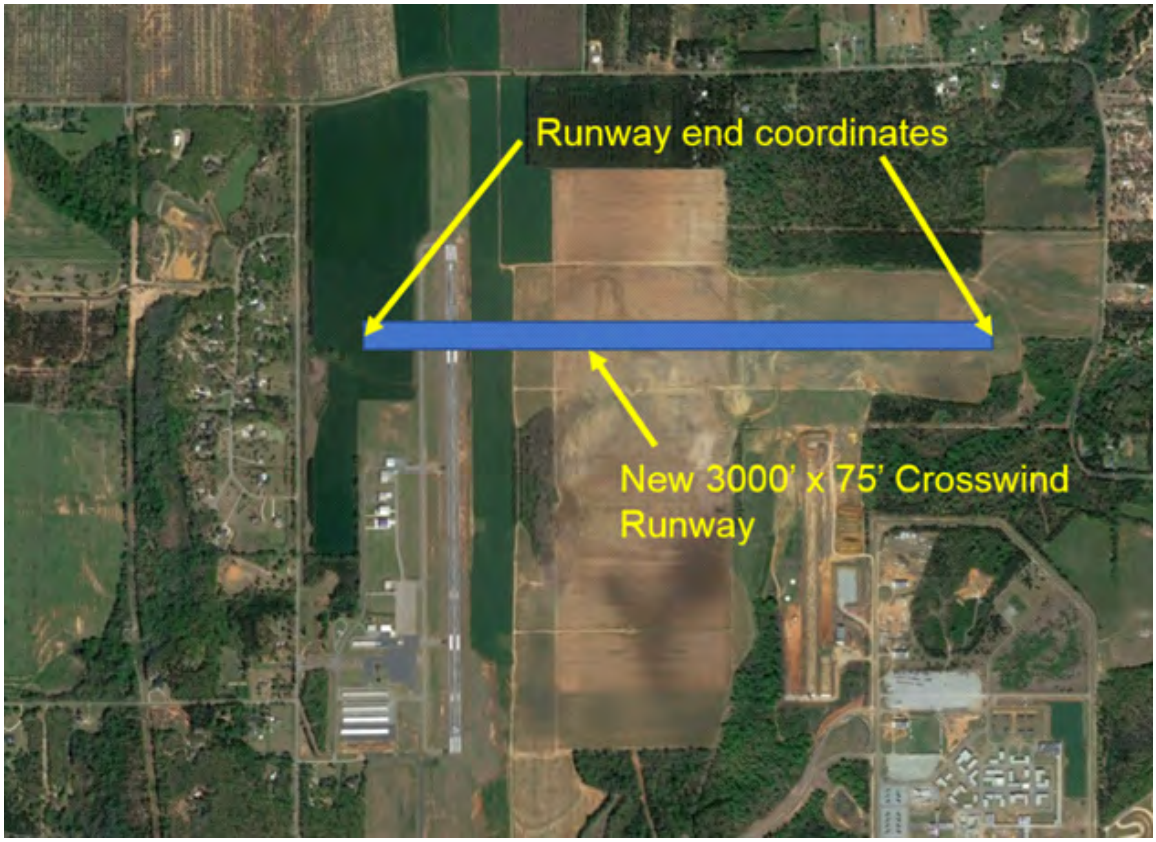
Runways provide a surface for takeoff and landing of aircraft. The physical location of the runway is critical and defined by the location of the runway threshold, runway end and end of pavement. These locations are typically coincident; i.e., the same point. All points are identified by coordinates, latitude, longitude and elevation (above sea level). The FAA, specifically the Airports Division, is the steward of airport data and maintains a database that includes runway data. This data exists as part of the plan on file (for example the ALP) and serves to protect the future airspace needs of the airport.

It is critical to notify the FAA well in advance (at least two years) of any proposed changes to an instrument runway that will shift, extend, shorten, relocate or realign the runway. This advance notice is necessary for the airport sponsor and the FAA to complete the coordination for all applicable changes such as: instrument approach procedures, publications, movement areas, air traffic control procedures etc. The aeronautical study does not initiate the development of a new/amended instrument approach procedure. Separate coordination is required.

A.5.2 Selection of POIs.

1. New runways are evaluated as a pair of points at the runway ends.

652 **Figure A-11. Example of New Runway**



653

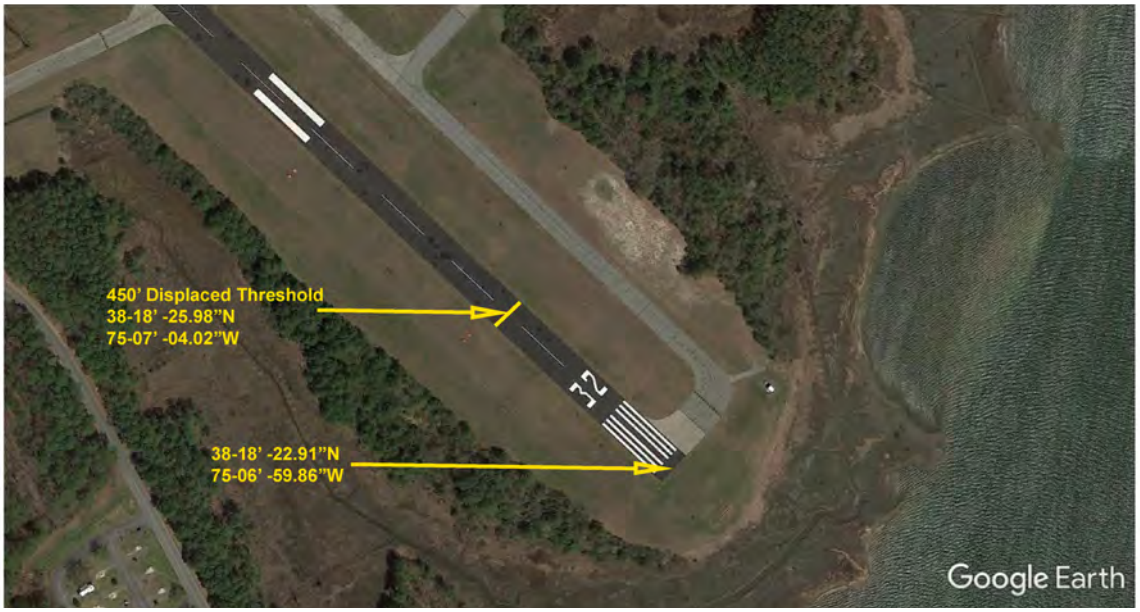
654 **Note:** Two POIs are necessary that identify the runway ends.

655 2. Runway extensions are typically evaluated as a single point. Select the new runway
656 end point along the extended centerline.

Figure A-12. Example of Extended Runway

3. Relocated/displaced thresholds are evaluated as a single point. Provide the new threshold point along the centerline of the runway.

Figure A-13. Example of Relocated/Displaced Threshold



4. The elevation is the proposed centerline elevation.
5. After reviewing the proposal and the POIs provided, the FAA may request additional POIs.

A.5.3 Attachments.

Include a plan view drawing of the runway, showing the applicable design standards and intersections with intersecting pavements.

A.5.4 Describe/Remarks.

1. The information provided will become part of FAA's determination**.**
2. Describe the proposed width, aircraft design group, and aircraft approach category. Refer to AC 150/5300-13.

A.6 **Traverse Way (Roads, Railroads, People Movers etc.).**

A.6.1 Background.

A traverse way is the infrastructure to allow mobile objects to travel through, over or under it. On an airport, a traverse way may be a road (controlled or public), a railroad, a people mover, or even a waterway. It could be at grade, below grade, or elevated. When submitting a traverse way to the FAA for review and coordination, if the use of the traverse way is controlled by the airport, be sure to provide the height of the mobile object using it. Per Part 77 when submitting points for a traverse way:

1. A privately controlled (on-airport) road is typically analyzed as a 10 foot above ground level obstacle.
2. Publicly accessible roadways are analyzed as a 15 foot above ground level obstacle.
3. Railroads and people movers are analyzed as a 23 foot above ground level obstacle.
4. Waterways and other traverse ways not mentioned are analyzed based on the height of the highest mobile object that would normally traverse it.

The movement of vehicles and people on an airfield may affect airport operations. The proposed location of a traverse way on an airfield is vetted for existing and future activity and operations. Planned traverse way(s) are typically shown on the ALP in accordance with design standards. They are not evaluated for line of sight, effects to equipment and facilities etc. but studied independently at the time of proposed development.

A.6.2 Selection of POIs.

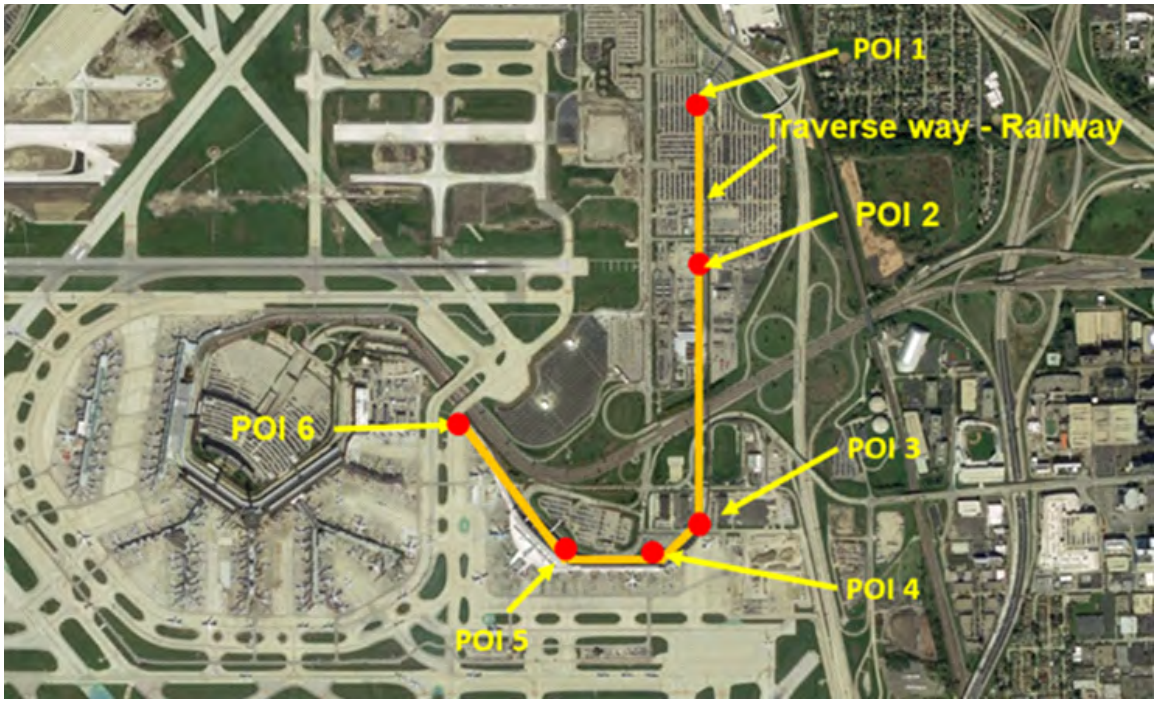
Traverse ways are typically evaluated as a series of points along the path. Submit critical points along the traverse way so the FAA can conduct a proper evaluation. The points define the direction, orientation, and length as a minimum. Use the height of supporting infrastructure and appurtenances (i.e., light poles, supports for elevated structures, overhead signage/wayfinding etc.) if it exceeds the height of the mobile object.

Select POIs that consider for the following:

- change in alignment
- significant change in grade

- airport design surfaces
- navigational aid critical areas.

Figure A-14. Traverse Way Railway Example



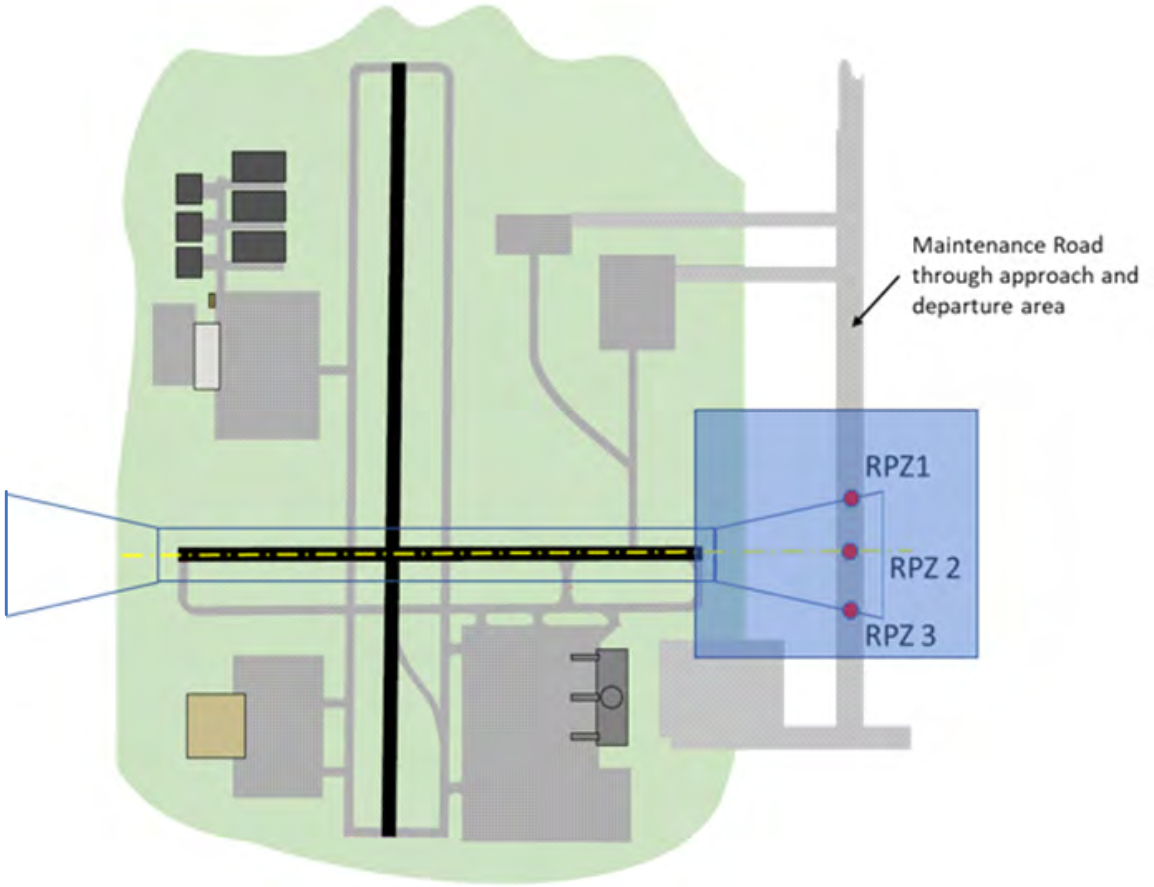
Note: See Table A-3 for POI data elements.

Table A-3. POIs for Railway Traverse Way

POI	SE**	AGL**	AMSL	Latitude	Longitude
1	600	16	616	XX-XX-XX.XX	YY-YY-YY.YY
2*	610	16	626	XX-XX-XX.XX	YY-YY-YY.YY
3	610	16	626	XX-XX-XX.XX	YY-YY-YY.YY
4	610	16	626	XX-XX-XX.XX	YY-YY-YY.YY
5	609	16	625	XX-XX-XX.XX	YY-YY-YY.YY
6	605	16	621	XX-XX-XX.XX	YY-YY-YY.YY

Note: *POI located on extended runway centerline.
Note: ** Height of the railway car using the Traverse Way. No light poles or signage will be higher than the railway car.

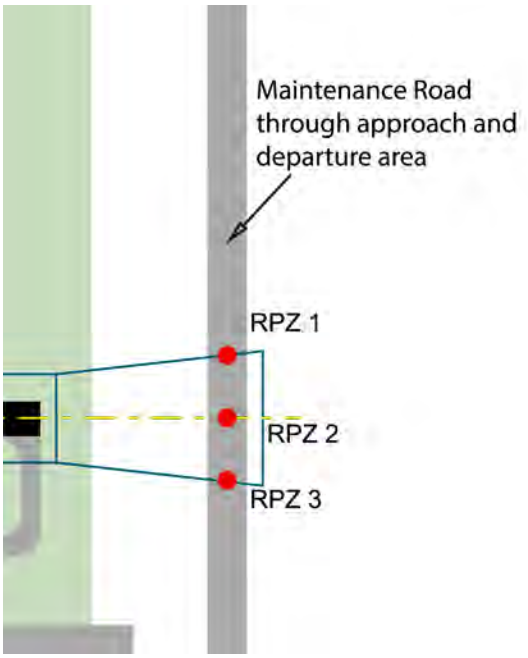
712 **Figure A-15. Traverse Way Perimeter Road Example**



713

714 **Note:** For enlargement area of interest, the blue shaded area, see Figure A-16.

Figure A-16. Traverse Way Perimeter Road Example – Enlarged Area of Interest



Note: See Table A-4 for POI data elements.

Table A-4. POIs for a Traverse Way in an Approach/Departure Area

POI	SE	AGL	AMSL	Latitude	Longitude
RPZ 1	250	15	265	XX-XX-XX.X	YY-YY-YY.YY
RPZ 2	249	15	264	XX-XX-XX.X	YY-YY-YY.YY
RPZ 3	250	15	265	XX-XX-XX.X	YY-YY-YY.YY

A.6.3 Attachments.

A plan view drawing of the traverse way showing the proposed traverse way with relation to the runways and taxiways.

A.6.4 Describe/Remarks.

1. The information provided will become part of FAA's determination.
2. Describe the traverse way and its planned use (airport only or public). Provide a physical description, and if it will be at grade or elevated and if there are any appurtenances (support structures, lighting, etc.).

A.7 **Fencing/Overhead Lines.**

A.7.1 Background.

Fencing on an airport is typically constructed around the perimeter to both define the airport boundary and protect the airfield from unauthorized entry by people or wildlife. Overhead lines (i.e., electrical, communication, etc.) on an airport are analyzed similar to a fence. Multiple POIs are essential for these types of structures.

A.7.2 Selection of POIs.

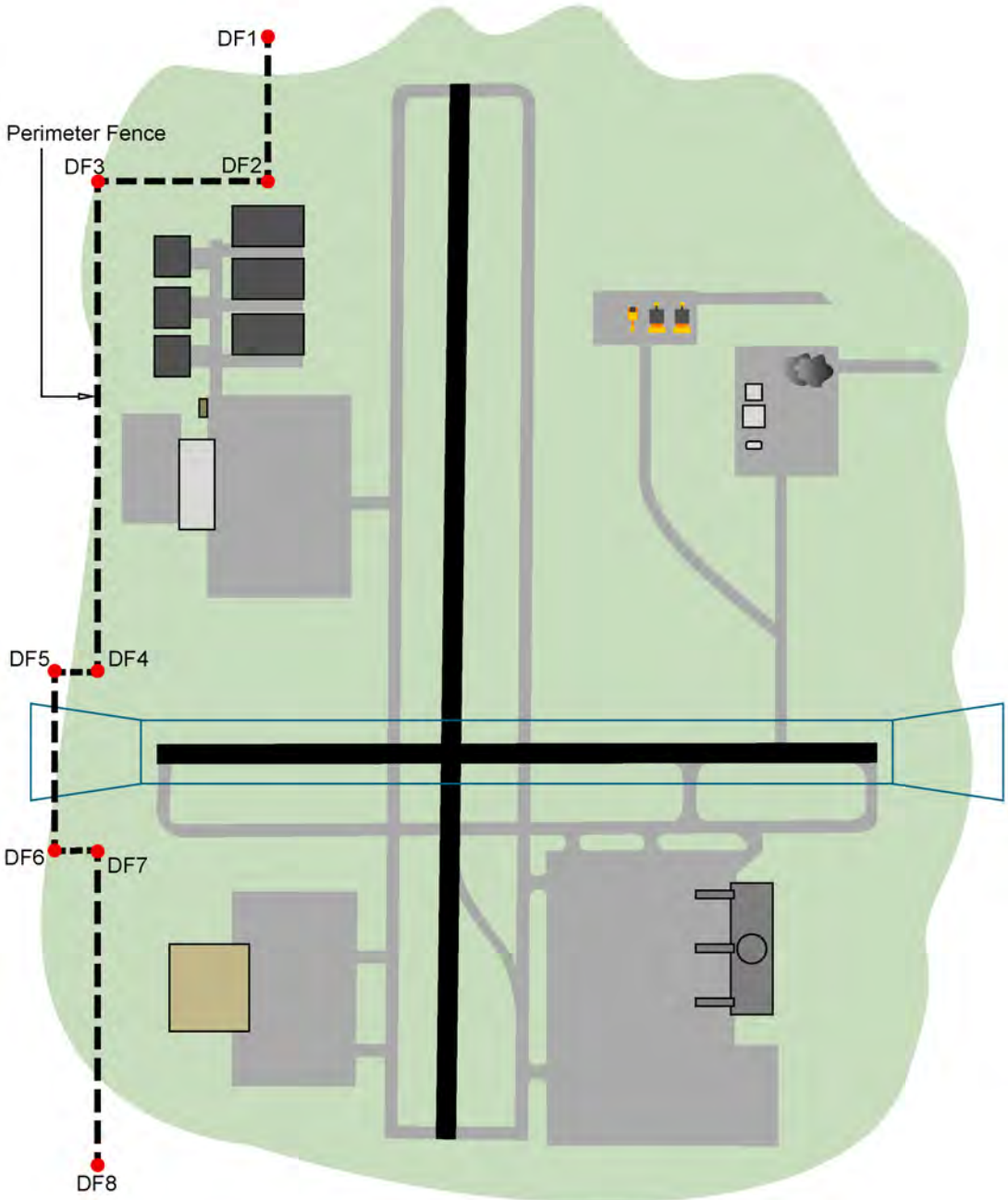
Fences and overhead lines can vary greatly in type, location, and purpose. Therefore, the POIs submitted for evaluation vary between cases.

POIs are necessary for the following:

- Change in alignment
- Significant change in grade
- Airport Design Surfaces
- Navigational Aid Critical Areas

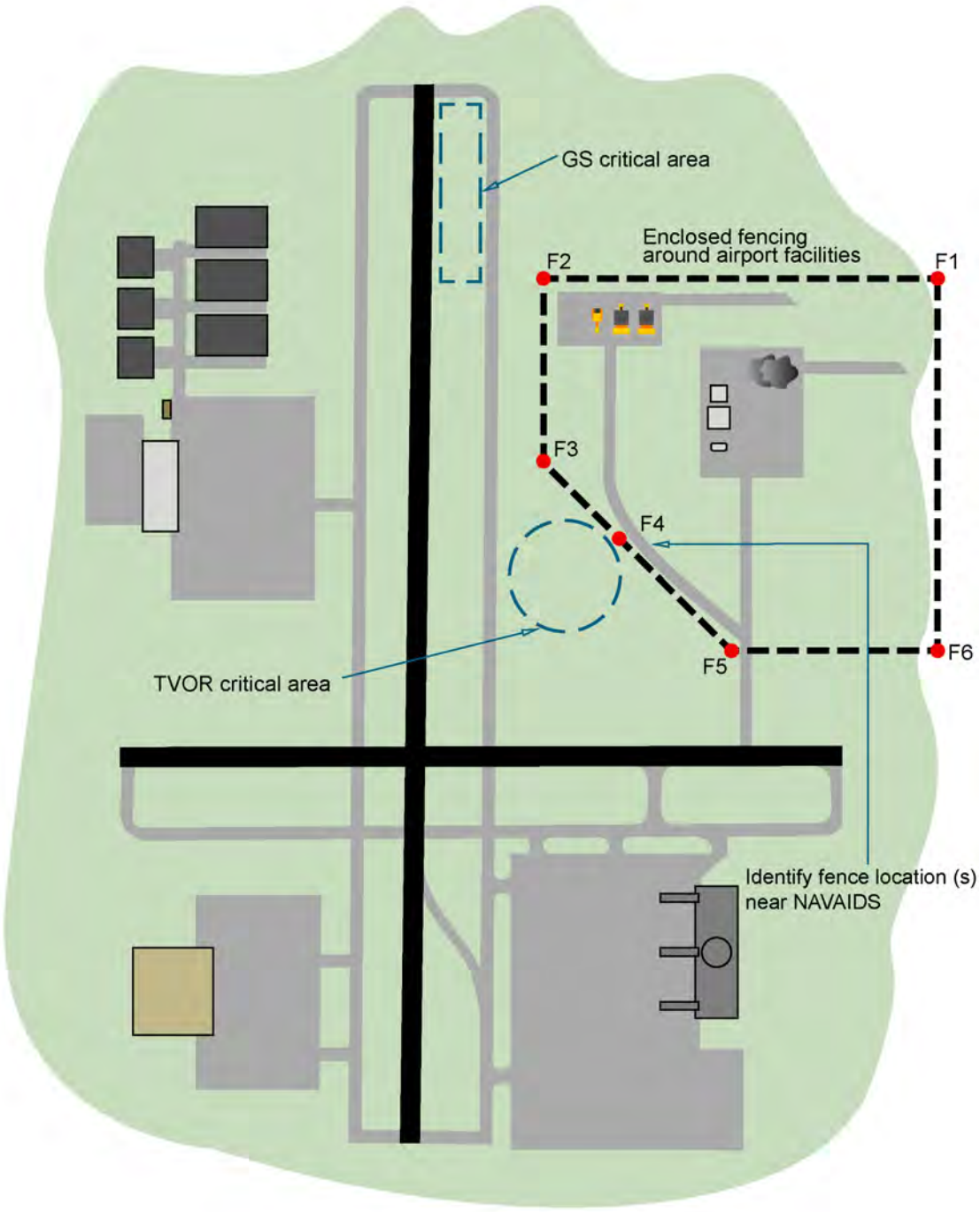
Below are three scenarios to assist in determining the POIs of a fence.

Figure A-17. Straight Line Fence Segments Example



Note: This is an example of a perimeter fence with a POI marking the change in direction of the fence line. There is no need for a POI at each fence post.

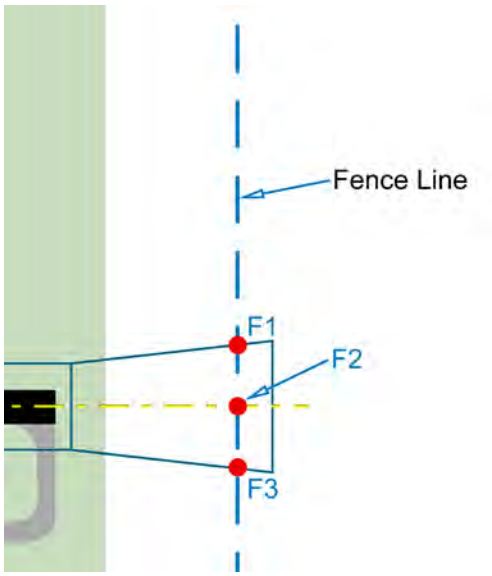
Figure A-18. Enclosed Fence Example



Note 1: TVOR = TVOR NAVAID

Note 2: This example illustrates the importance of a POI at each fence line change in direction and also a POI at the nearest location to a navigational aid critical area.

Figure A-19. Example of Fence Passing through Approach and Departure Areas



Note: See Table A-5 for POI data elements.

Table A-5. POI for a Fence Line in an Approach/Departure Area

POI	SE	AGL	AMSL	Latitude	Longitude
F 1	102	10	112	XX-XX-XX.XX	YY-YY-YY.YY
F 2	103	10	113	XX-XX-XX.XX	YY-YY-YY.YY
F 3	104	10	114	XX-XX-XX.XX	YY-YY-YY.YY

A fence line crossing the approach or departure area of a runway can be significant to airport operations. In this example, POIs are identified at the edges and centerline of the runway approach surfaces

A.7.3 Attachments.

Provide the following information for all types of fencing and overhead lines:

1. Drawing of typical section showing (fence, overhead line) details.
2. Site plan showing location of fence or overhead line in relation to runway(s) taxiway(s). The drawing indicates the POIs being submitted for review. Show airport topography in the background of the drawing if possible.

A.7.4 Describe/Remarks.

The information provided will become part of FAA's determination. The following are three examples of descriptive statements.

A.7.4.1 **Example 1.**

Airport security fencing around facility areas. The fence construction will be 8′ tall chain link with a 2′ three-strand barbed wire topper (10′ total height) with steel posts. The fence will extend 300′ and will tie into an existing fence at each end. See attached drawing.

A.7.4.2 **Example 2.**

The airport would like to construct a wildlife fence along the airport boundary line. The fence construction will be 8′ tall woven wire with wooden posts. Points have been submitted for the corners of the fence along with an additional point where the fence is on top of a hill on the south side of the runway. See attached drawing.

A.7.4.3 **Example 3.**

The airport would like to construct a wildlife fence along the airport boundary line. In the terminal area, the fence will be a security fence constructed of 8′ chain link with a 2′ three-strand barbed wire topper (10’ total height) with steel posts and will extend for 300′ on each side of the terminal building. The remainder of the fence will be a wildlife fence constructed of 8′ tall woven wire with steel posts. See attached drawing.

A.8 Grading/Topography.

A.8.1 Background.

Earthwork or grading such as detention ponds, ditches or drainage channels may affect airport operations. These may affect navigation or communication equipment, create a wildlife attractant or violate airport design standards. Such proposed changes in topography may necessitate a filing notice. Pre-coordinate with the appropriate ADO or Regional office to determine if a filing notice is necessary.

A.8.2 Selection of POIs.

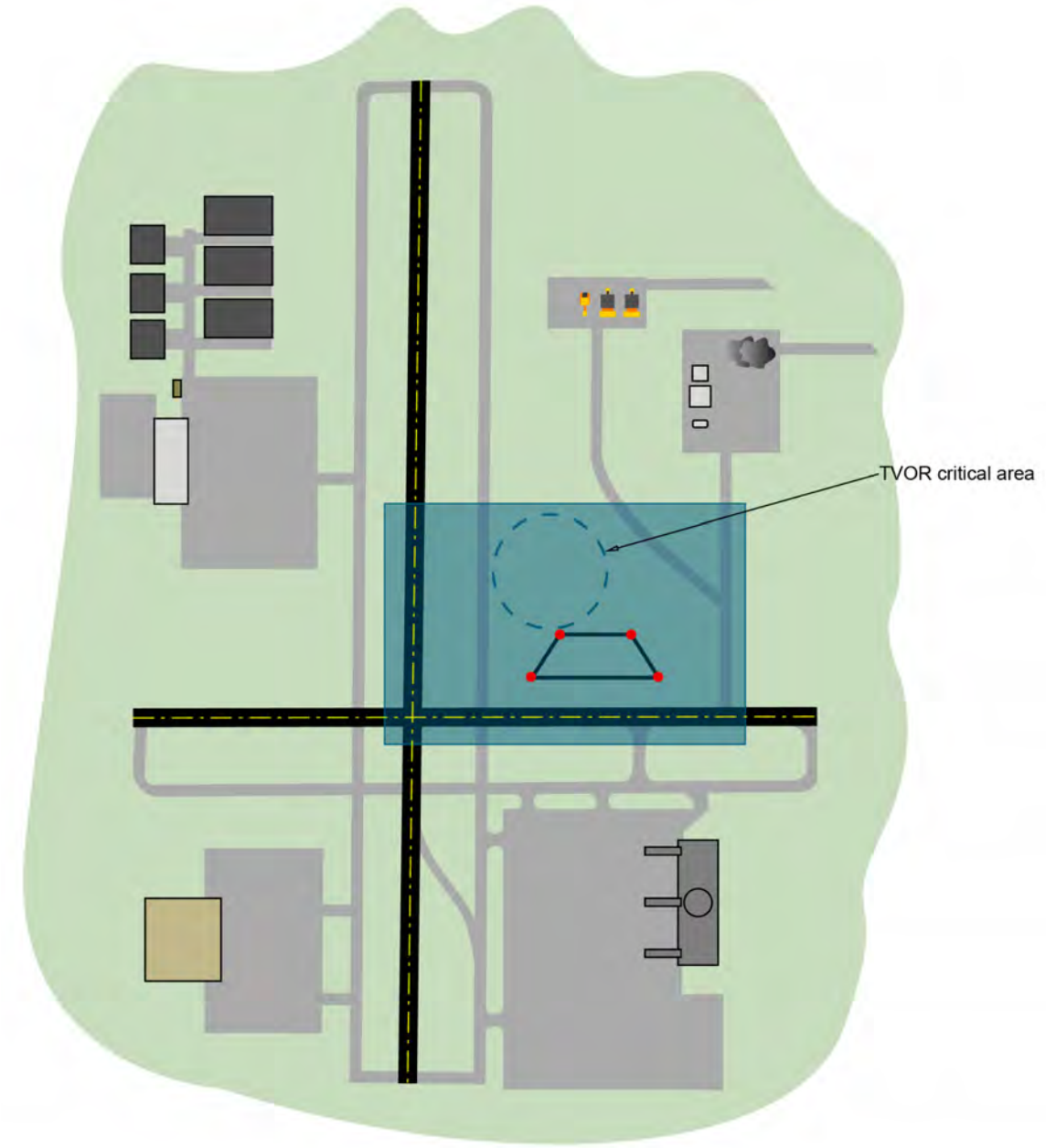
Submitting appropriate points to delineate the extents or perimeter of the changes in topography. POIs include points near navigation facilities. Coordinate with the ADO or Regional Office to determine if the projects can be separated into smaller projects if the proposal covers a large, expansive area.

After reviewing the proposal and the POIs provided, the FAA may request additional POIs.

A.8.3 Attachments.

Site plan showing distance measurements to nearby TW and/or RW Centerlines. Graphically depicting applicable airport design standards on the attachments may help expedite the aeronautical study. Cross section and profile drawings may be appropriate.

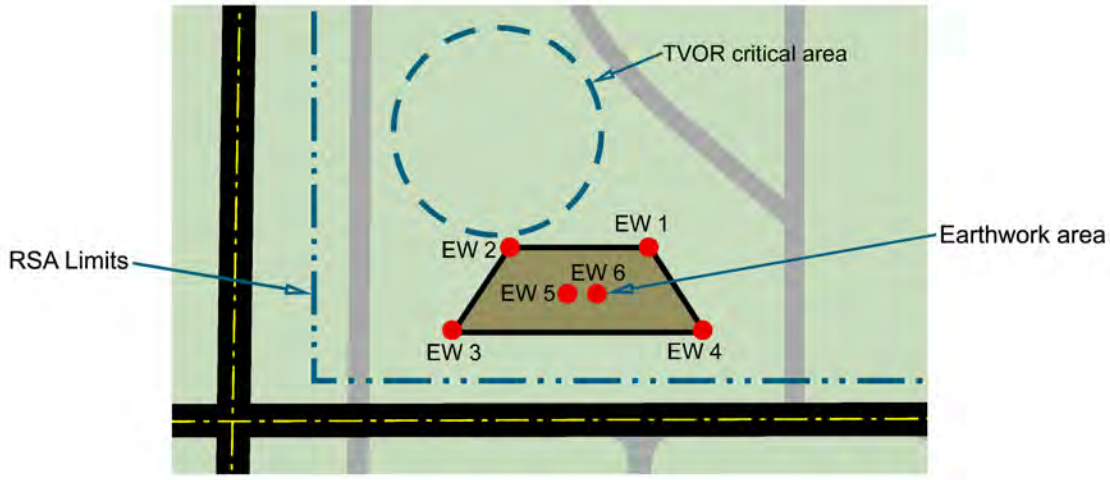
804 **Figure A-20. Grading/Topography Site Plan Example**



805

806 **Note 1:** For the enlarged area of interest, the blue shaded area, see Figure A-21.
807 **Note 2:** TVOR = TVOR NAVAID.

Figure A-21. Grading/Topography Site Plan Example – Enlarged Area of Interest



Note 1: TVOR = TVOR NAVAID
Note 2: POI "EW 2" is closest to the TVOR critical area.
Note 3: See Table A-6 for POI data elements.

Table A-6. POI for **Grading/Topography Site Plan Example**

POI	SE	AGL	AMSL	Latitude	Longitude
EW 1	94	0	94	XX-XX-XX.XX	YY-YY-YY.YY
EW 2*	98	0	98	XX-XX-XX.XX	YY-YY-YY.YY
EW 3	90	0	90	XX-XX-XX.XX	YY-YY-YY.YY
EW 4	95	0	95	XX-XX-XX.XX	YY-YY-YY.YY
EW 5**	95	8	103	XX-XX-XX.XX	YY-YY-YY.YY
EW 6**	94	9	103	XX-XX-XX.XX	YY-YY-YY.YY

Note: *POI closest to the NAVAID critical area
Note: ** High Point of the earthwork regrading

A.8.4 Remarks.

The information provided will become part of FAA's determination.

Describe the changes being proposed and their purpose; drainage, storm water retention etc. Provide a physical description and the construction materials to be used.

Refer to Appendix D for possibility of reducing the number of POIs for airport topography changing projects.

A.9 **Solar Energy Systems.**

A.9.1 Background.

Installation of solar energy systems on airport property is becoming more popular. Airports often have large open tracts of land suitable for these types of projects, and in return the airport can receive compensation in the form of land lease payments and reduced energy costs.

Like other airport development, solar energy systems are reviewed and coordinated with the FAA to assess the proposal's impact to the airport and to air traffic operations. The FAA conducts the aeronautical study to determine if the impact the proposed system will, or will not, result in an ocular impact that compromises the safety of the air transportation system.

Solar energy systems introduce new visual surfaces to an airport setting where reflectivity could result in glare that can cause flash blindness. Sponsors need to evaluate reflectivity and glare during the project siting and design stages and include the analysis as an attachment to the filing notice submittal. Refer to: *Technical Guidance for Evaluating Selected Solar Technologies on Airports*.

A.9.2 Selection of POIs.

Several points are needed to determine the aeronautical effect of the large areas that a solar energy system may encompass. Individual cases are grouped together into one project. Select POIs that approximate the footprint of the area and identify critical locations within that area.

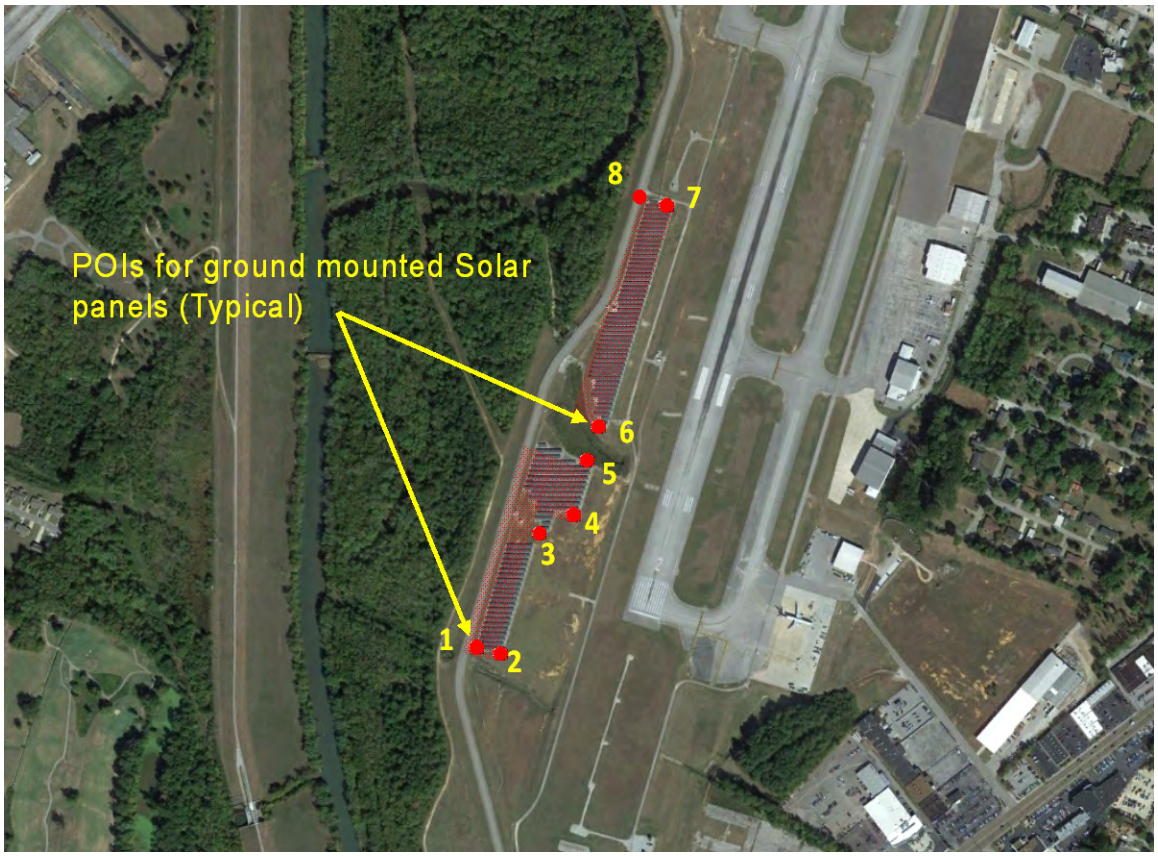
Select POIs that consider for the following:

- Change in alignment
- Significant change in grade
- Airport Design Surfaces
- Navigational Aid Critical Areas

The SE of each POI is the ground elevation at that point. If the solar farm will be installed on top of a building, the SE is the ground elevation at that point, not the elevation of the roof of the building. (see Figure A-23)

The AGL is the highest point on the solar panel measured from the ground. If the solar energy system will be installed on top of a building, the AGL is be measured from the ground, not from the roof elevation of the building. (see Figure A-23)

Figure A-22. Example of Solar Farm on the Ground



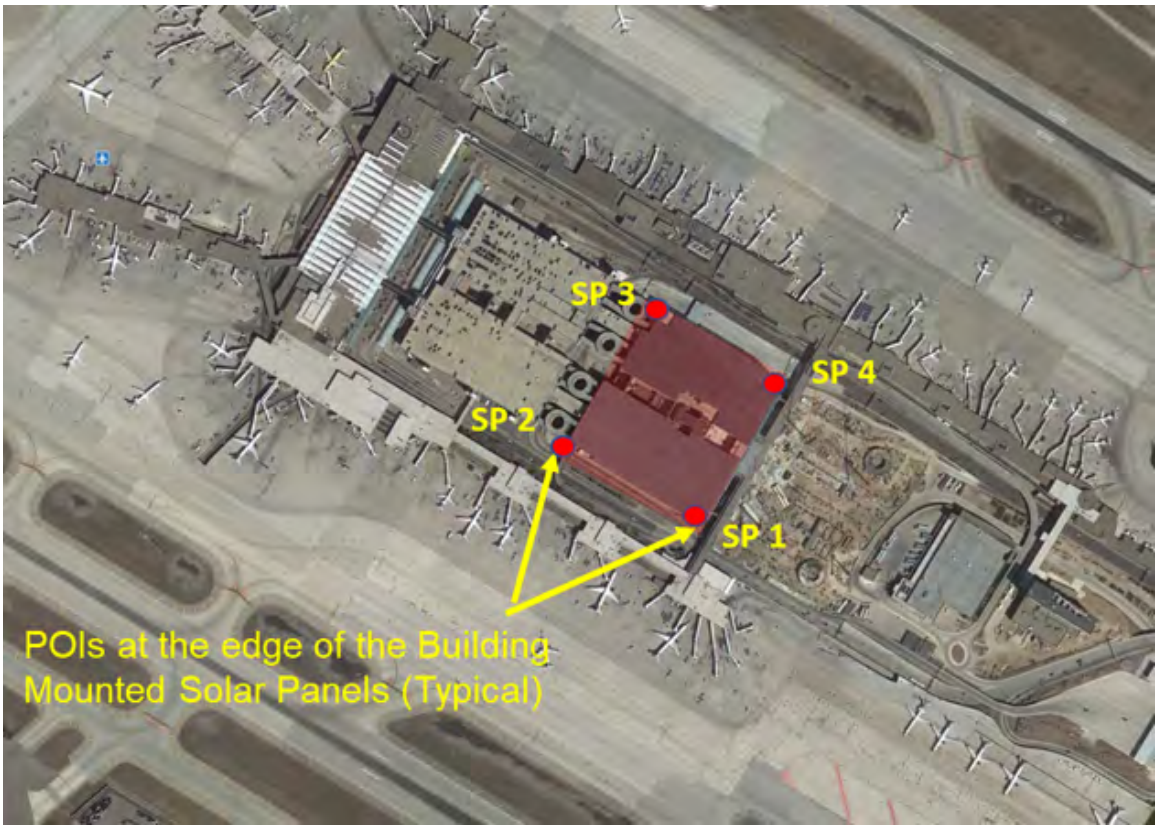
Note: See Table A-7 for POI data elements.

Table A-7. POIs for Ground Mounted Solar Panels

POI	SE*	AGL	AMSL	Latitude	Longitude
1	250	12	262	XX-XX-XX.XX	YY-YY-YY.YY
2	250	12	262	XX-XX-XX.XX	YY-YY-YY.YY
3	252	10	262	XX-XX-XX.XX	YY-YY-YY.YY
4	252	10	262	XX-XX-XX.XX	YY-YY-YY.YY
5	252	10	262	XX-XX-XX.XX	YY-YY-YY.YY
6	253	9	262	XX-XX-XX.XX	YY-YY-YY.YY
7	254	8	262	XX-XX-XX.XX	YY-YY-YY.YY
8	254	8	262	XX-XX-XX.XX	YY-YY-YY.YY

Note: The SE is equal to the ground elevation.

Figure A-23. Example of Solar Farm on a Building



Note: See Table A-8 for POI data elements.

Table A-8. POIs Table for Building Mounted Solar Panels

POI	SE*	AGL**	AMSL	Latitude	Longitude
SP 1	650*	75**	725	XX-XX-XX.XX	YY-YY-YY.YY
SP 2	655*	75**	730	XX-XX-XX.XX	YY-YY-YY.YY
SP 3	655*	75**	730	XX-XX-XX.XX	YY-YY-YY.YY
SP 4	650*	75**	725	XX-XX-XX.XX	YY-YY-YY.YY

Note: *Ground elevation.
Note: ** Height of solar panel is above ground elevation, not above the building root top elevation.

A.9.3 Attachments.

Attach an exhibit illustrating the location of the solar energy system with respect to the airfield, all runway ends (existing and future), radar facilities, navigational aids and their critical areas, and the ATCT. In addition, attach a glare analysis.

A.9.4 Describe/Remarks.

The information provided will become part of FAA's determination.

Reference the temporary construction activity Aeronautical Study Number(s) (ASN).

Provide a concise written description of the project. Refer to these studies if the associated construction equipment has already been submitter in OE/AAA. If not, note that construction equipment will be submitted in the future as separate studies. For example:

Example: These cases are for a XX-acre solar energy system that will be installed along Runway XX-XX.

Example: These cases are for a solar energy system that will be installed on the roof of the long-term parking garage. The associated construction equipment has been submitted as 2018-AXX-#### thru #### - NRA.

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APPENDIX B. TEMPORARY CONSTRUCTION OR ALTERATION

This appendix serves as a guide identifying the information needed by the FAA based on the type of temporary construction or alteration projects. This appendix is not intended to be a step-by-step instruction on how to navigate the OE/AAA web portal. Directions on how to file electronically and navigate the OE/AAA website, can be found at https://oeaaa.faa.gov by selecting the "Instructions" link.

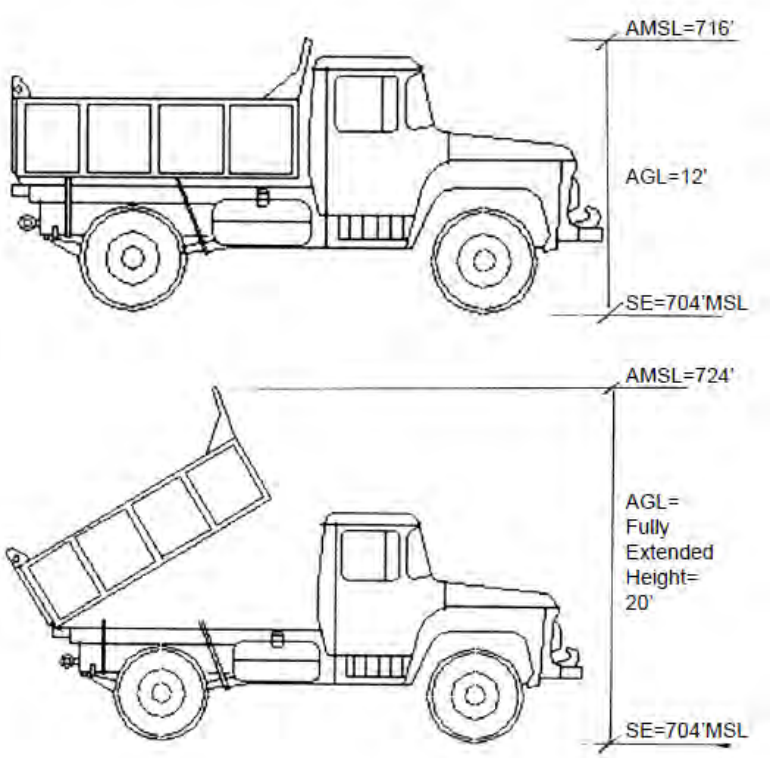
B.1 General.

Temporary construction includes elements such construction vehicles on access routes and in work areas, material stockpiles, and batch plants. The below examples provide guidance for:

1. The most common temporary construction items.
2. How to determine the location and the number of Points of Interest (POIs).
3. Types of documents to provide.
4. Clarifying remarks for commonly studied temporary construction objects. When submitting notice for temporary construction, it is important to include the expected number of days and months the project will be under construction as well as the date construction is expected to start and the date the construction is expected to be completed.

Latitude and longitude coordinates are entered as degrees, minutes and seconds. Accuracy is to the nearest hundreth of a second if possible. The elevation for a POI for temporary construction objects is the ground elevation. Unless identified differently in the following appendices, the Above Ground Elevation (AGL) for temporary construction is the height of the tallest vehicle or piece of equipment (when fully extended). For example, a dump truck's bed is much taller when extended; therefore the height of the extended dump truck bed is used for study purposes. Refer to Figure B-1.

Figure B-1. Example of Temporary Construction Element



It is important to remember that your aeronautical study may be the first time the FAA have been made aware of the project. The FAA may not be familiar with the project details. It is critical that clear exhibits be provided that illustrate the project's location relative to the airfield.

B.2 Construction Work Area.

B.2.1 Background.

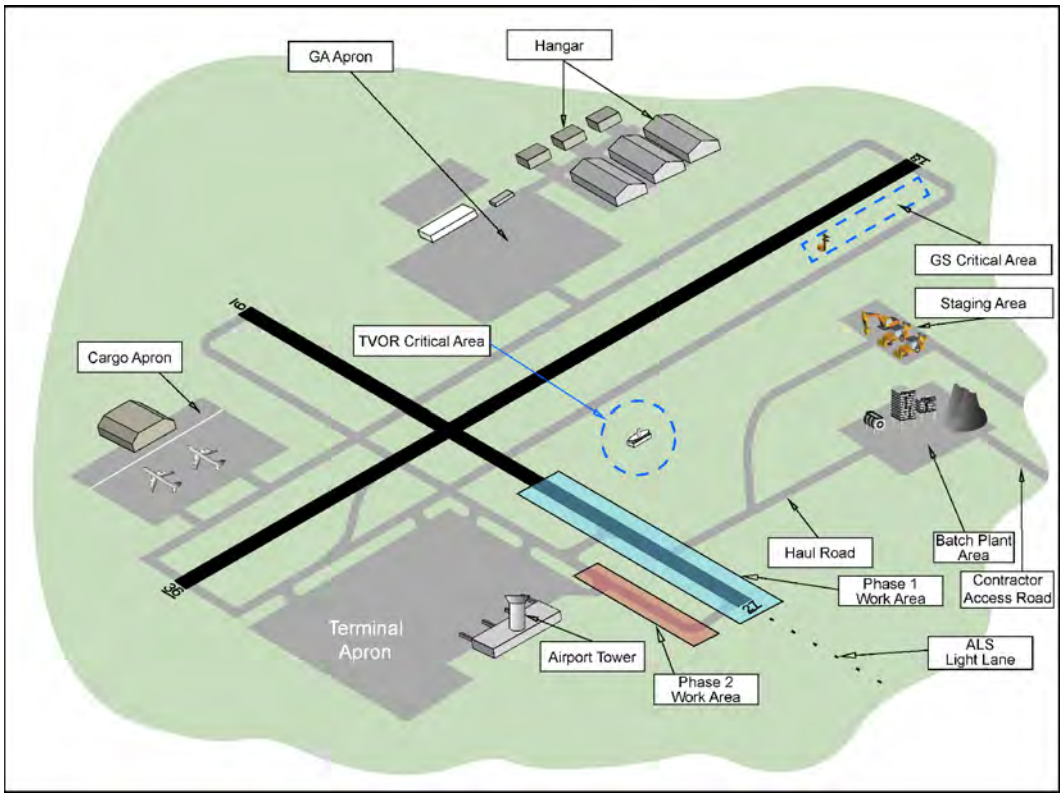
Clearly define the limits of the work area for construction activity on the airport. This will ensure the construction activity's effect on airport operations is minimized or eliminated. The work area encompasses the entire area needed to accomplish a particular 'phase' of construction and may include areas far from the actual daily construction activities (i.e., a taxiway construction project on one end of a runway may lead to a subsequent phase along the entire runway length).

B.2.2 Selection of POIs.

Provide several points to define the limits of the work area. Work areas may be shaped by operational impacts and combined based on similar impacts. This will also simpifly closures for contractors and airport operations and make it easier for airport operations personnel to monitor construction. Consideration includes ensuring the airport remains

open to the greatest extent practicable, while maintaing safety. The AGL for each POI is the tallest equipment (extended) in the work area. POIs are considered for impacts to airport design surfaces and when working in proximity to navigational aids. After reviewing the proposal and the POIs provided, the FAA may request additional POIs.

Figure B-2. Construction Work Area Example



B.2.3 Attachments.

Provide a detailed drawing clearly showing different work areas and specific restrictions or mitgations for each work area. Dimensions of the work area and dimensions to active runways or taxiways is critical. A best practice is to attach an exhibit(s) that illustrates all of the temporary construction objects (staging area, batch plant, stockpile areas, project work areas), clearly illustrating their location relative to the airfield. The exhibits indicate where the airport design and imaginary airspace surfaces are relative to these temporary objects. The location of any NAVAID critical areas, the location of the ATCT is identified. Identify on the exhibit(s) the location of the POIs and include a table listing each POI's latitude, longitude, SE, and AGL.

B.2.4 Describe/Remarks.

The information provided will become part of FAA's determination.

Please reference the permanent construction Aeronautical Study Number(s) (ASN) if applicable.

Describe the project and identify any planned mitigations per phase.

B.2.4.1 **Example 1.**

Construction activity associated with the overlay of RW 18-36. Glide slope and localizer serving RW 18, will be turned off for the duration of Phases 1 and 2. TW H1 will be closed during phase 1.

B.2.4.2 **Example 2.**

Construction activity for a new hangar. TW B3 will be closed while constructing the hangar. Permanent construction studied under 2017-AXX-1234-NRA.

B.3 Staging Areas.

B.3.1 Background.

A staging area is a designated area where the contractor can leave vehicles, supplies, and construction equipment for access and use on the construction site. Depending on the size of the project and the size of the airport, there may be more than one staging area identified for a project. The staging area is be located outside of all airport design surfaces, but in convenient proximity to the project site.

B.3.2 Selection of POIs.

Several points are crucial to determine the aeronautical effect of large staging areas. Select POIs that approximate the footprint of the entire staging area. The AGL for each POI is the tallest equipment (extended) in the work area.

B.3.3 Attachments.

Submit a plan view drawing that illustrates the staging area and it's location relative to the airfield. A best practice is to attach an exhibit(s) that illustrates all of the temporary construction objects (staging area, batch plant, stockpile areas, project work areas), clearly illustrating their location relative to the airfield. The exhibits indicate where the airport design and imaginary airspace surfaces are relative to these temporary objects. The location of any NAVAID critical areas, the location of the ATCT is identified. Identify on the exhibit(s) the location of the POIs and include a table listing each POI's latitude, longitude, SE, and AGL.

B.3.4 Describe/Remarks.

1. The information provided will become part of FAA's determination.
2. Please reference the permanent construction Aeronautical Study Number(s) (ASN) if applicable.
3. Describe the project and identify any planned mitigations.

Example: This case is for construction equipment in the staging area associated with the Construction of TW A project. The associated taxiway project has been submitted as 2017-AXX-1234 thru 1235-NRA.

B.4 **Stockpile.**

B.4.1 Background.

A stockpile area is a designated area where the contractor can store construction materials for future use or for removal prior to being transported off the airport. While the stockpile area is temporary in nature, it is important to understand its potential impact to airport operations. They are located outside of and under all airport design surfaces, but in convenient proximity to the project site. Potential impacts are considered when selecting a stockpile location such as dust/dust control.

B.4.2 Selection of POIs.

Several points are vital to determine the aeronautical effect of the area as a whole. Select POIs that approximate the footprint of the stockpile area. The AGL for each POI is the tallest equipment (extended) or material in the area.

Figure B-3. Stockpile Example

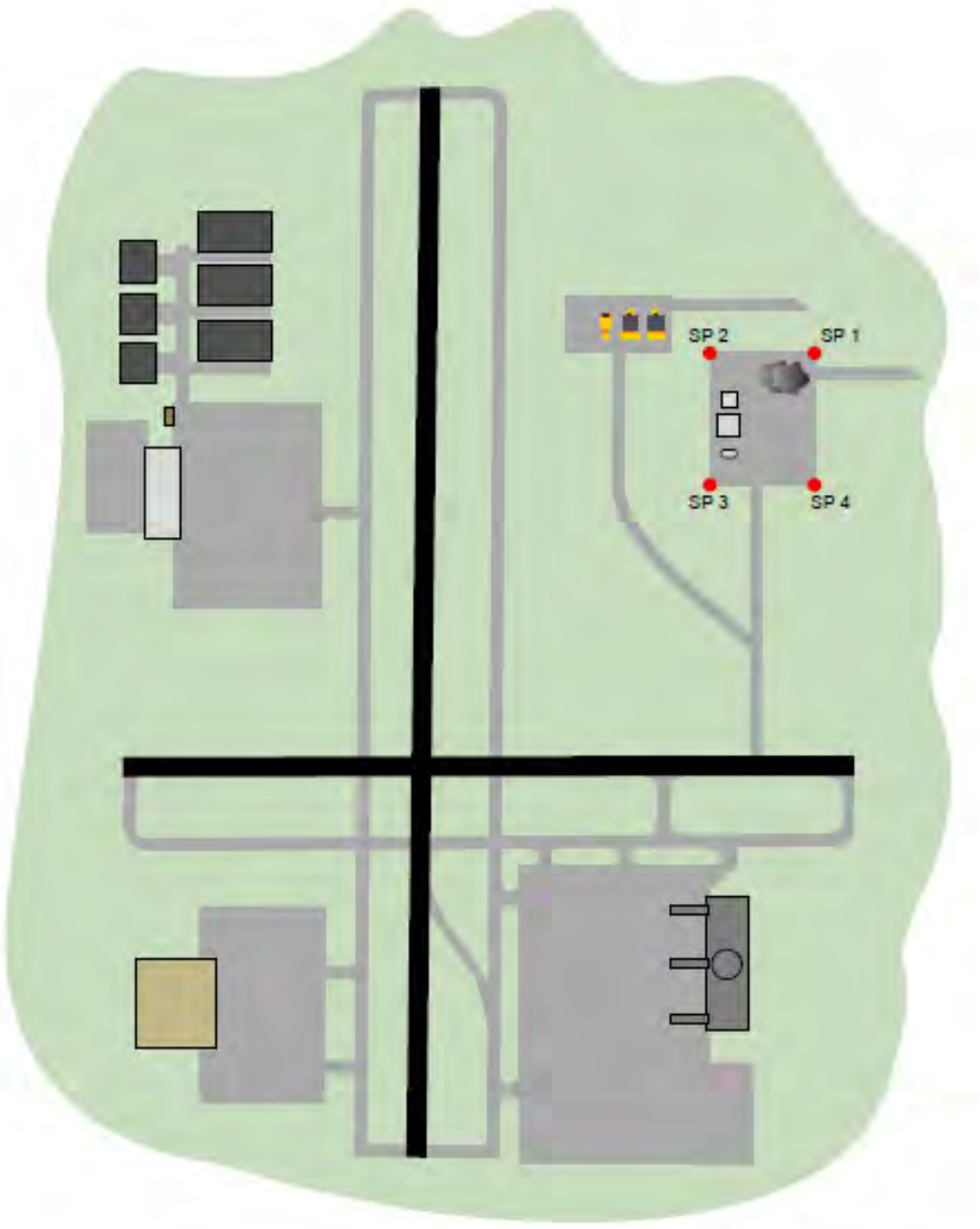
Note: The height of the construction equipment that is on top of the stockpile and the stockpile highest height will be the elevation used in the filing notice study proposal.

B.4.3 Attachments.

Submit a plan view drawing that illustrates the stockpile area and it's location relative to the airfield. A best practice is to attach an exhibit(s) that illustrates all of the temporary construction objects (staging area, batch plant, stockpile areas, project work areas), clearly illustrating their location relative to the airfield. The exhibits indicate where the

airport design and imaginary airspace surfaces are relative to these temporary objects. The location of any NAVAID critical areas, the location of the ATCT is also identified. Identify on the exhibit(s) the location of the POIs and include a table listing each POI's latitude, longitude, SE, and AGL.

Figure B-4. Stockpile Attachment Example



Note: Refer to Appendix D, Figure D-11, regarding the highest point of the stockpile area.

B.4.4 Describe/Remarks.

The information provided will become part of FAA's determination.

Please reference the permanent construction Aeronautical Study Number(s) (ASN) if applicable.

Describe the project and identify any planned mitigations.

Example: This case is for a stockpile area associated with the Construction of TW A project. The associated taxiway project has been submitted as 2017-AXX-1234 thru 1235-NRA.

B.5 **Batch Plant.**

B.5.1 Background.

The contractor may find it advantageous to have a portable batch plant on site rather than transporting the material from an off-site location. While a batch plant is temporary in nature, it is important to evaluate its impact to airport operations. Batch plants are tall structures, and located outside of and under all airport design surfaces, but in convenient proximity to the construction site.

B.5.2 Selection of POIs.

A batch plant may encompass a large area. Several points are needed to determine the aeronautical effect of the area as a whole. Select POIs that approximate the area identified for the batch plant. In addition, select a POI that identifies the highest point (usually the silo) of the batch plant.

B.5.3 Attachments.

Attach an exhibit that illustrates the batch plant area and it's location relative to the airfield. A best practice is to attach an exhibit(s) that illustrates all of the temporary construction objects (staging area, batch plant, stockpile areas, project work areas), clearly illustrating their location relative to the airfield. The exhibits indicate where the airport design and imaginary airspace surfaces are relative to these temporary objects. The location of any NAVAID critical areas, the location of the ATCT is identified. Identify on the exhibit(s) the location of the POIs and include a table listing each POI's latitude, longitude, SE, and AGL.

Figure B-5. Batch Plant Attachment Example

Note: See Table B-1 for POI data elements.

Table B-1. Batch Plant Location POIs

POI	SE	AGL*	AMSL	Latitude	Longitude
BP 1	200	55	255	XX-XX-XX.XX	YY-YY-YY.YY
BP 2	205	55	260	XX-XX-XX.XX	YY-YY-YY.YY
BP 3	207	55	262	XX-XX-XX.XX	YY-YY-YY.YY
BP 4	203	55	258	XX-XX-XX.XX	YY-YY-YY.YY

Note: The above ground height for each POI is the highest point within the batch plant area.

B.5.4 Describe/Remarks.

1. The information provided will become part of FAA's determination.
2. Please reference the permanent construction Aeronautical Study Number(s) (ASN) if applicable.
3. Describe the project and identify any planned mitigations.

Example: *This case is for a batch plant associated with the Construction of TW A project. The associated taxiway project has been submitted as 2017-AXX-1234 thru 1235-NRA.*

B.6 **Haul Routes.**

B.6.1 Background.

A haul route is a temporary path that the construction contractor's vehicles need to traverse the airfield in order to access the work area during a project. A haul route might be an existing public roadway, an existing taxiway, taxilane or apron, or a temporary road. Its location is often a component in the development of a CSPP. Haul routes are planned to provide the least impact to aircraft movements as possible. Notice may not be necessary if the haul route is in an existing traverse way.

B.6.2 Selection of POIs.

Routes are typically evaluated as a series of critical points along the route. Select the minimum number of points that define the routes beginning and end. Additionally, when considering the location and the number of POIs to enter, consider whether or not the haul route may have impacts.

Select POIs that consider for the following:

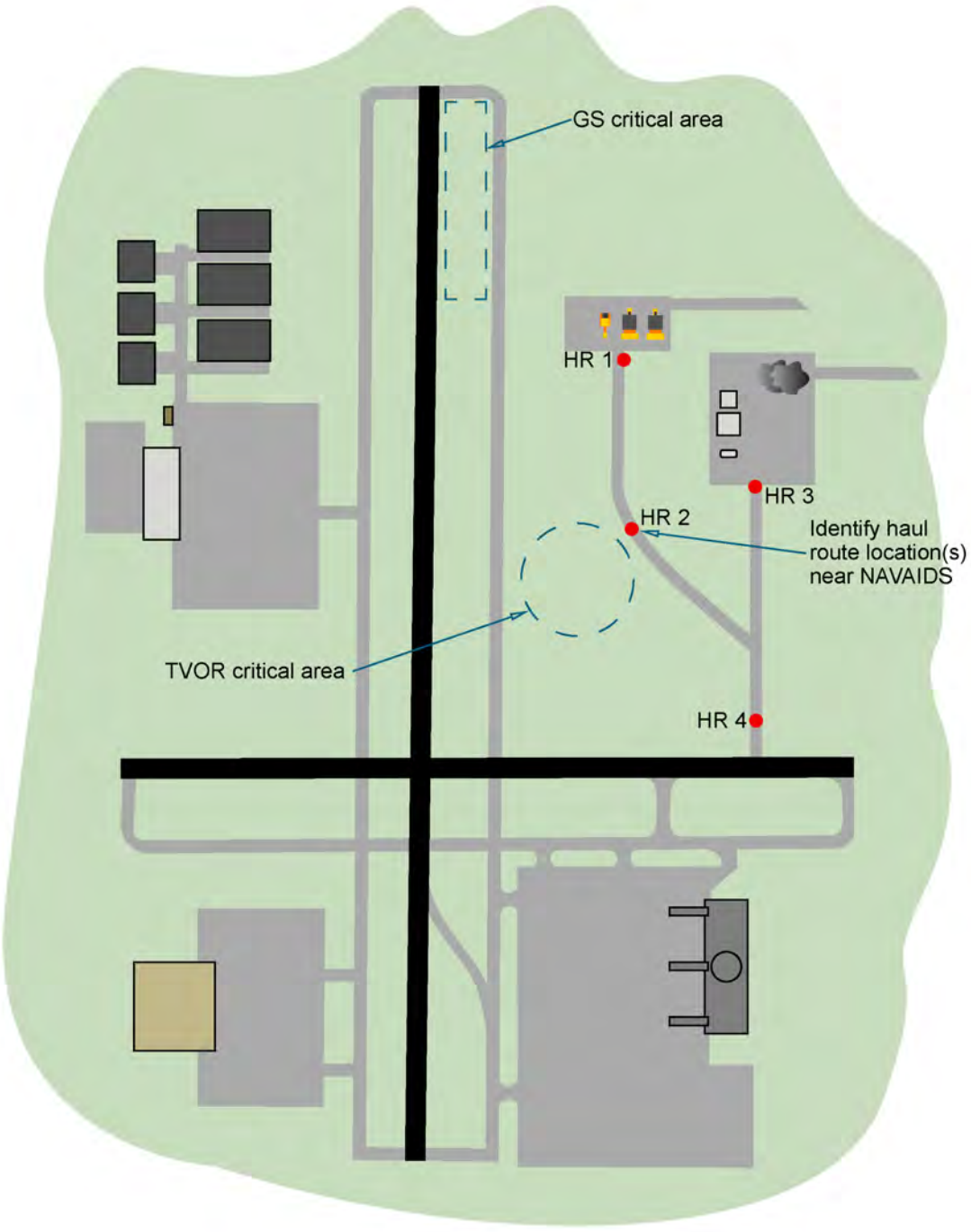
- Significant change in alignment
- Significant change in grade
- Airport Design Surfaces
- Navigational Aid Critical Areas

Use the tallest equipment height (extended) that will be traveling on the haul route as the above ground elevation of a point. (i.e., use the height of a lowered dump truck on a haul route).

B.6.3 Attachments.

Submit a plan view drawing that illustrates the haul route and it's location relative to the airfield. A best practice is to attach an exhibit(s) that illustrates all of the temporary construction objects (staging area, batch plant, stockpile areas, project work areas), clearly illustrating their location relative to the airfield. The exhibits indicate where the airport design and imaginary airspace surfaces are relative to these temporary objects. The location of any NAVAID critical areas, the location of the ATCT is also identified. Identify on the exhibit(s) the location of the POIs and include a table listing each POI's latitude, longitude, SE, and AGL.

Figure B-6. Haul Route Example



Note 1: TVOR = TVOR NAVAID
Note 2: Identify POI "H 2" as closest to the TVOR.
Note 3: See Table B-2 for POI data elements.

Table B-2. POIs Identifying Haul Routes

POI	SE	AGL*	AMSL	Latitude	Longitude	Comment
HR 1	102	15	117	XX-XX-XX.X	YY-YY-YY.YY	
HR 2	101	15	116	XX-XX-XX.X	YY-YY-YY.YY	Near TVOR
HR 3	104	15	119	XX-XX-XX.X	YY-YY-YY.YY	
HR 4	100	15	115	XX-XX-XX.X	YY-YY-YY.YY	650 from R/W edge**

Note: *Maximum height of truck using the haul route.
Note: ** Radio contact with the tower needed for permission to get closer to the runway.

B.6.4 Describe/Remarks.

1. The information provided will become part of FAA's determination.
2. Please reference the permanent construction Aeronautical Study Number(s) (ASN) if applicable.
3. Describe the project and identify any planned mitigations.

Example: This case is for construction equipment on the haul route associated with the Construction of TW A project. The associated taxiway project has been submitted as 2017-AXX-1234 thru 1235-NRA.

B.7 **Cranes.**

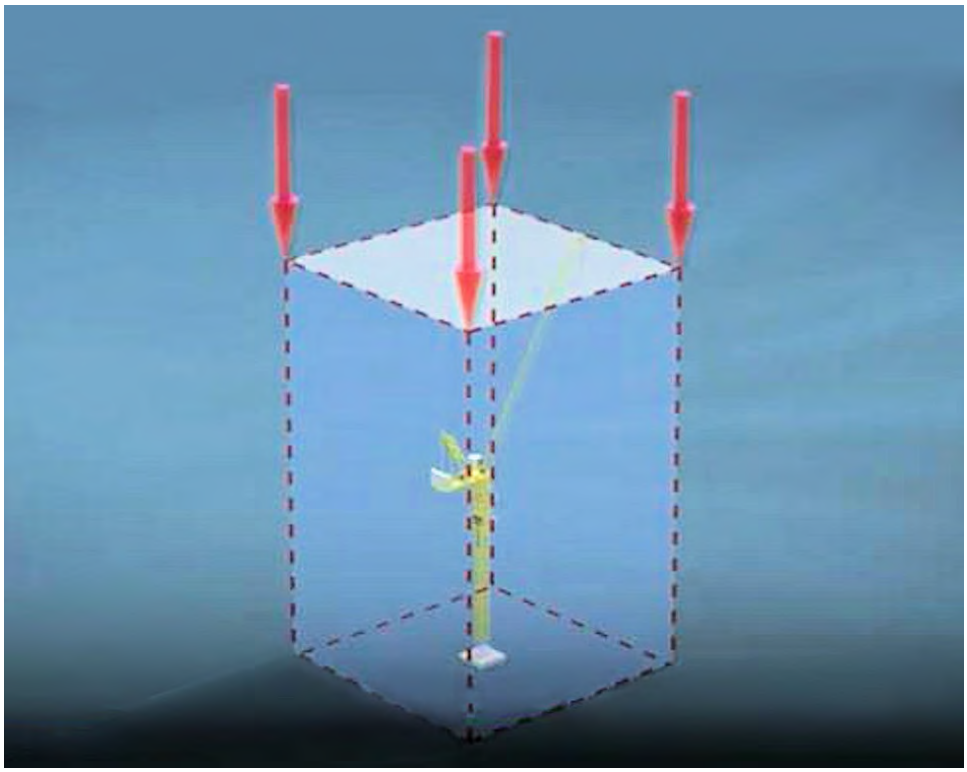
B.7.1 Background.

Cranes are often needed for work on the airfield to lift and move materials or equipment. Types of cranes include fixed or mobile cranes. While cranes are temporary, they could impact the operation of the airport therefore need to be evaluated.

B.7.2 Selection of POIs.

Several points are necessary to determine the aeronautical effect of the area as a crane can have a large movement area. Select POIs that approximate the crane operation area (boom). The highest site elevation or finished grade elevation within the box area is recorded as the site elevation. The AGL for each POI is the maximum height of the crane or boom at that point.

Figure B-7. Crane Example



B.7.3 Attachments.

Submit a plan view drawing that illustrates the crane's operating area, it's location relative to the airfield, and provide the following:

1. A plan view drawing outlining the crane operation area as it relates to the closest runway. Identify the location of any NAVAID critical areas and the location of the ATCT.
2. Crane specifications including maximum height, horizontal and veritical profile, and make and model, if available.

Figure B-8. Crane Attachment Examples

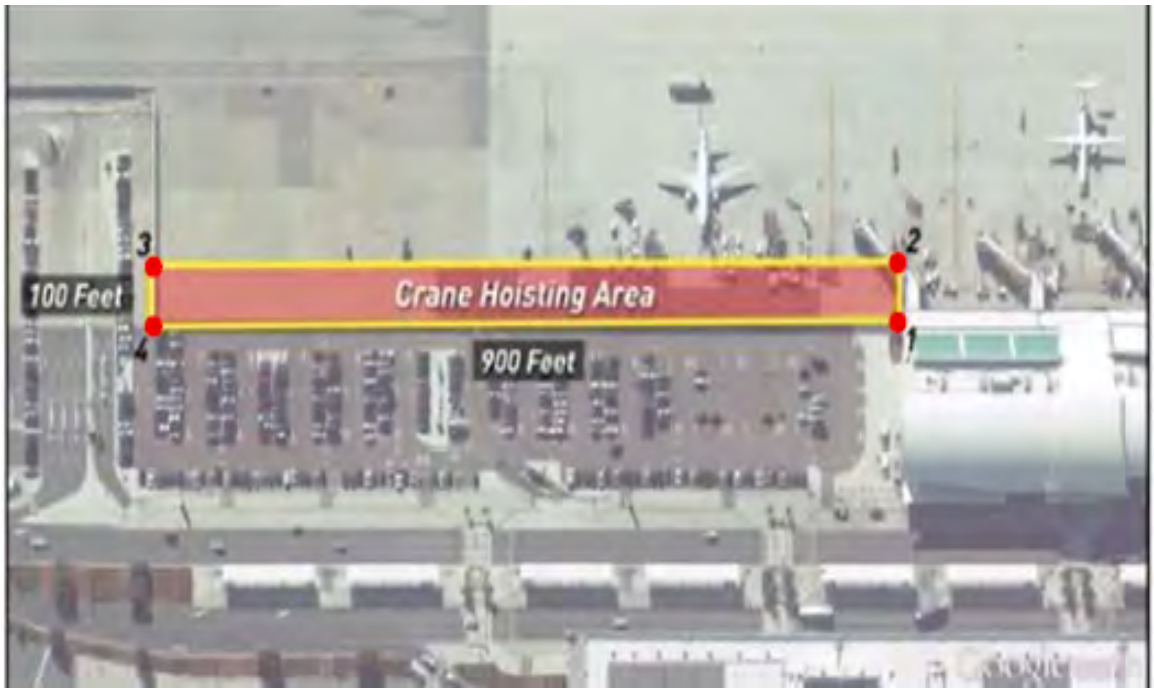


Table B-3. POIs for a Crane Work Area

POI	SE/MSL	AGL	AMSL	Latitude	Longitude	Description
1	46.17	125	171.17	37-36-40.93	121-56-38.56	Corner
2	46.17	125	171.17	37-36-40.03	121-56-40.26	Corner
3	46.17	125	171.17	37-36-21.42	121-56-19.64	Corner
4	46.17	125	171.17	37-36-22.50	121-56-18.02	Corner

B.7.4 Describe/Remarks.

The information provided will become part of FAA's determination.

Please reference the permanent construction Aeronautical Study Number(s) (ASN) if applicable.

Provide a detailed description of the proposed work, including type of materials being hoisted for all crane submittals. Include details of the crane operating plan (i.e., work hours, if crane is lowered at night, marking and /or lighting, etc.).

Example: Tower crane to construct an addition to the terminal building. The associated terminal expansion project has been submitted as 2017-AXX-1234 thru 1235-NRA. The crane is a [Make and Model] and cannot be

lowered. The tower crane will be marked and lighted in accordance with AC 70/7460-1.

B.8 **Drill Rigs.**

B.8.1 Background.

Airports often have a need for drill rigs to work on the airfield for various reasons, i.e., geotechnical testing. The drill rig may need to set up in various location across the airfield to perform its work. Each location where the drill rig will be working is a POI. All of the individual points are combined under one project. The various points are shown on an airfield drawing or plan. Operating the drill rig in particular areas or surfaces may have an impact on airport operations to include FAA underground utilities; a detailed drawing that shows site location, coordinates, SE, AGL, and duration is helpful in expediting the review.

B.8.2 Selection of POIs.

Numerous points are necessary to determine the aeronautical effect of each area as drill rigs are used in numerous locatrions. Group individual drilling site locations into one project. When choosing points for the drill rig, consider the contractor's route to the work area. Will workers have to drive the equipment thru a NAVAID critical area or across a runway approach? The engineer will have to rely on experience and professional judgment when selecting the POIs for the drill rig.

The SE chosen for the POI in the drill rig area is the ground elevation at that point.

The AGL for each POI is the maximum height of the drill rig per the project's plans.

B.8.3 Attachments.

Airspace cases for temporary construction objects like drill rigs are accompanied by an exhibit. This exhibit clearly illustrates each location where the drill rig will be located and it's location relative to the airfield.

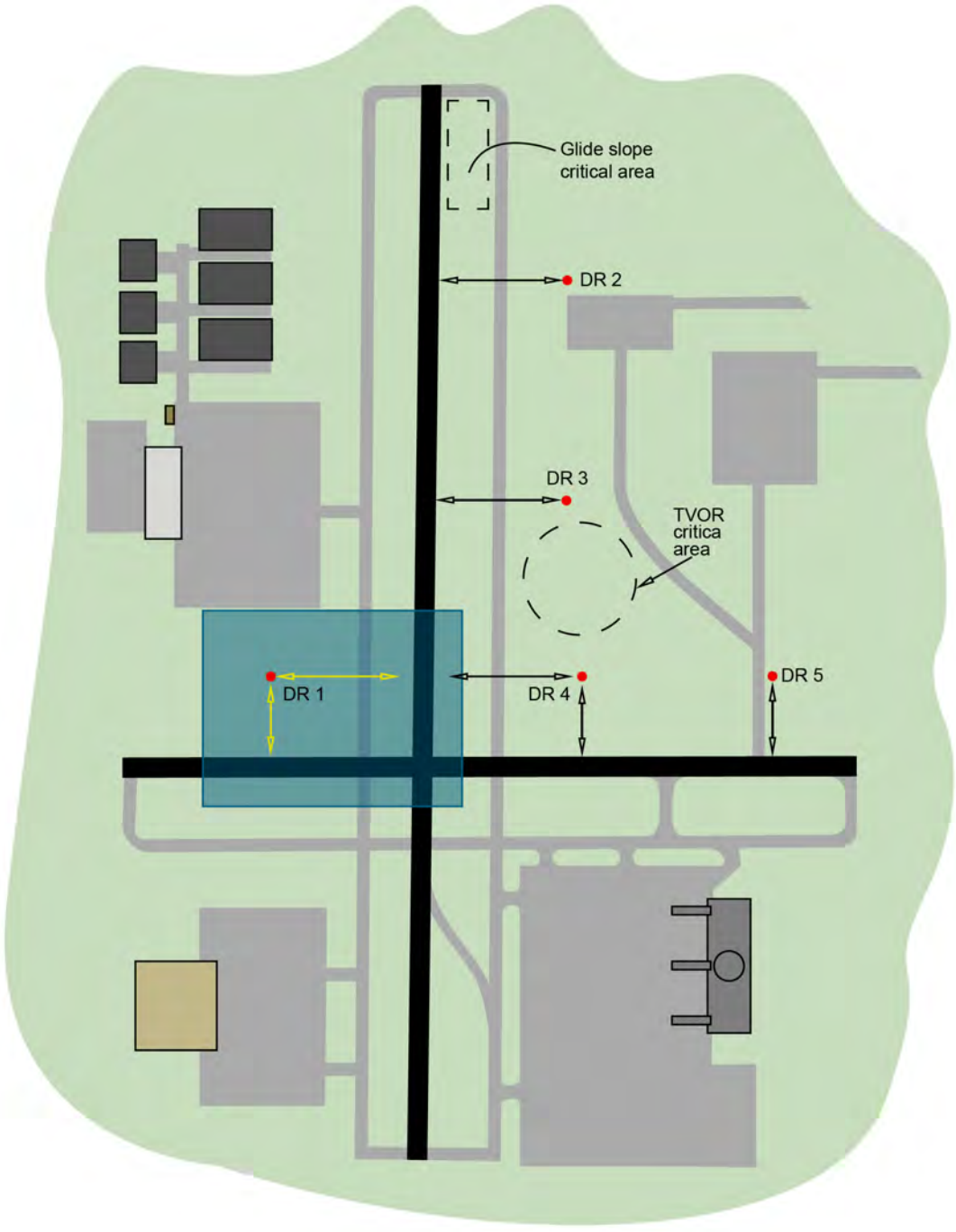
The exhibit indicates where the airport design and imaginary airspace surfaces are relative to these temporary objects. The location of any NAVAID critical areas, the location of the ATCT is identified. Identify on the exhibit(s) the location of the POIs and include a table listing each POI's latitude, longitude, SE, and AGL. The distance from the drill rig location to the runway(s) will also be identified.

B.8.4 Remarks.

Provide a concise description of the project. Refer to those studies if the project was submitted in OE/AAA. Note that the CSPP has been (or will be) submitted for review it is funded under AIP.

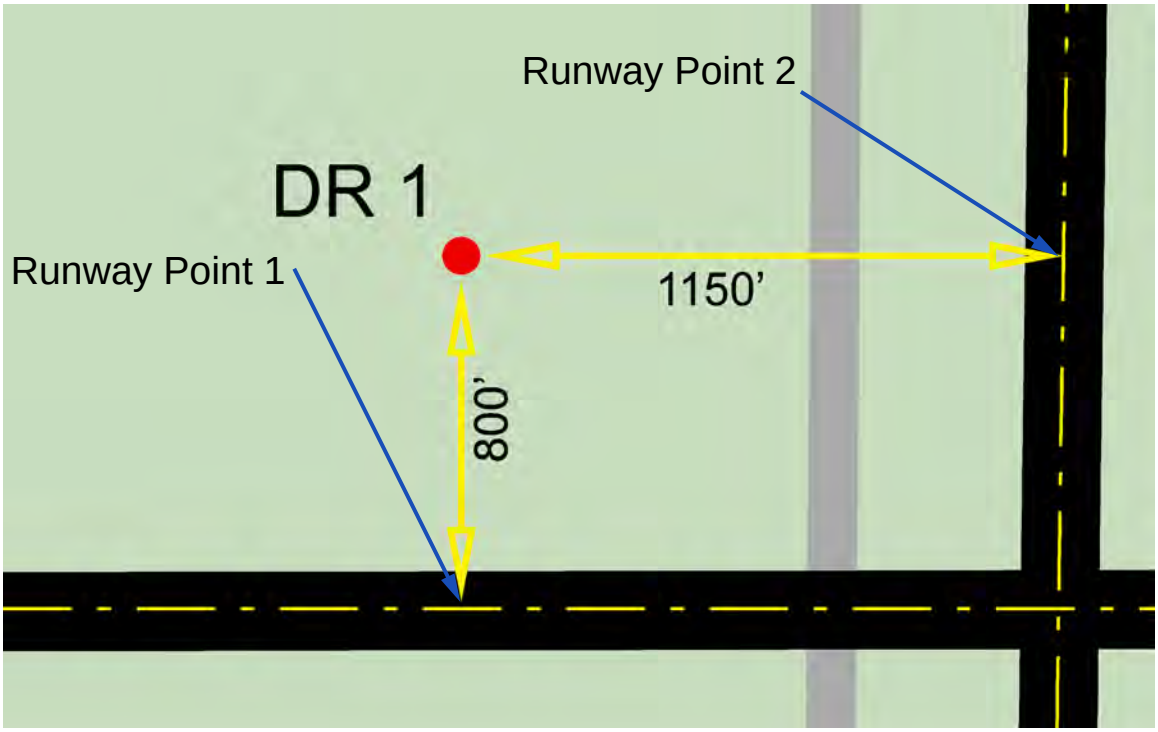
Example: This case is for a drill rig taking core samples for use in the design of TW A.

Figure B-9. Drill Rig Locations



Note 1: For enlargement of the area of interest, the blue shaded area, refer to Figure B-10.
Note 2: TVOR = TVOR NAVAID

Figure B-10. Drill Rig Location Area of Interest



Note: Refer to Table B-4 and Table B-5 for information on runway centerline points closest to the drill rig for all the Drill Rig POI locations.

Table B-4. POIs Identifying Drill Rig Locations on the Airport

POI	SE	AGL	AMSL	Latitude	Longitude
DR 1	100	41	141	XX-XX-XX.XX	YY-YY-YY.YY
DR 2	103	41	144	XX-XX-XX.XX	YY-YY-YY.YY
DR 3	105	41	146	XX-XX-XX.XX	YY-YY-YY.YY
DR 4	106	41	147	XX-XX-XX.XX	YY-YY-YY.YY
DR 5	106	41	147	XX-XX-XX.XX	YY-YY-YY.YY

Table B-5. Data Table Identifying the Closest Ruway Centerline Point to the Drill Rig Location

POI	R/W PT	Distance	Runway	Latitude	Longitude	C/L Elev.
DR 1	1	800	9-27	XX-XX-XX.X	YY-YY-YY.YY	102
DR 1	2	1150	18-36	XX-XX-XX.X	YY-YY-YY.YY	104
DR 2	3	800	18-36	XX-XX-XX.X	YY-YY-YY.YY	105
DR 3	4	900	18-36	XX-XX-XX.X	YY-YY-YY.YY	104
DR 4	5	900	18-36	XX-XX-XX.X	YY-YY-YY.YY	105
DR 4	6	900	18-36	XX-XX-XX.X	YY-YY-YY.YY	105
DR 5	7	900	9-27	XX-XX-XX.X	YY-YY-YY.YY	105

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APPENDIX C. PLANNING

This appendix serves as a guide identifying the information needed by the FAA based on the planning projects. This appendix is not intended to be a step-by-step instruction on how to navigate the OE/AAA web portal. Directions on how to file electronically and navigate the OE/AAA website, can be found at https://oeaaa.faa.gov and selecting the "Instructions" link.

C.1 General.

Planning submittals in OE/AAA include a wide variety of studies including Construction Safety Phasing Plans, Airport Layout Plans, Non-Aeronautical Events, and Feasibility Studies. The following information discusses how to determine the Points of Interest (POIs) for studies located on an airport as well as appropriate documents to submit including clarifying remarks for some of the most common study types.

Latitude and longitude coordinates is be entered as degrees, minutes and seconds. Accuracy is provided to the nearest hundreth of a second if possible. The AGL for a POI for planning studies is entered as "0" feet.

It is important to remember that your aeronautical study may be the first-time parts of the FAA have been made aware of the study. It is critical to provide clear exhibits that illustrate the study location (if applicable) relative to the airfield.

C.2 Construction Safety and Phasing Plan (CSPP).

C.2.1 Background.

The requirement to prepare and/or submit a Construction Safety and Phasing Plan (CSPP) is determined by the project's funding source and its location on the airport. Per AC 150/5370-2, *Operational Safety on Airports During Construction*, a CSPP is developed for each on-airfield construction project funded by the Airport Improvement Program (AIP), the Passenger Facility Charge (PFC) Program, or located on an airport certificated under Part 139. Exceptions to this requirement are projects that take place entirely outside the air operations area.

The review of a CSPP does not evaluate whether temporary construction objects will have an adverse effect on navigable airspace. Submission of the CSPP does not relieve the airport sponsor of their obligation to provide notification to the FAA for both temporary and permanent objects under Part 77. This notification is required regardless of project funding source. Temporary construction objects including construction equipment operating within the construction area, on haul routes and in the staging area, material stockpiles, and batch plants are studied.

C.2.2 Selection of POIs.

A CSPP will be submitted with one POI. Select the Airport Reference Point (ARP) or a point in the construction area, with and AGL of "0" feet. This study if for the review of the plan.

C.2.3 Attachments.

Attach the CSPP to the case.

C.2.4 Describe/Remarks.

The information provided will become part of FAA's determination.

Please reference the permanent and/or temporary construction Aeronautical Study Number(s) (ASN), if applicable.

Example: This case is a Construction Safety and Phasing Plan for the rehabilitation of Taxiway A, AIP No. 3-XX-XXXX-XXX-2017. The associated construction equipment has been submitted as 2017-AXX-1234-NRA.

C.3 **Airport Layout Plan (ALP).**

C.3.1 Background.

An Airport Layout Plan (ALP) creates a plan for airport development by depicting existing facilities and proposed improvements. The ALP provides a guideline by which the airport sponsor can ensure that development maintains airport design standards and safety levels, and is consistent with airport and community land use plans. It also allows the FAA to protect the airspace necessary for facility or approach procedure improvements. Refer to AC 150/5070-6, *Airport Master Plans*, for additional information related to preparing an ALP.

An aeronautical determination and subsequent approval of an ALP does not relieve the airport sponsor from submitting OE/AAA studies for future construction or plans. Nor does it relieve the sponsor of any compliance responsibilities relating to any other law, ordinance, or regulation of any federal, state, or local governmental body, which may include an environmental determination in accordance with the National Environmental Protection Policy.

C.3.2 Selection of POIs.

An ALP will be submitted with one POI. Select the Airport Reference Point (ARP), with an AGL of "0" feet for the review of this plan.

C.3.3 Attachments.

Submit the ALP (all sheets) with a coordination memo. The memo cites significant ALP changes such as a new, extended or relocated runway, new taxiways, a change in critical aircraft, a proposed change in runway approach minimums, a proposed change to declared distances, any changes in the Runway Protection Zone (RPZ) dimensions, and explain why (change in critical aircraft, change in minima, etc.). The memo highlights non-standard conditions such as non-standard runway - taxiway separation, non-standard taxiway – taxiway separation, non-standard design criteria (safety area, object free area, obstacle free zone, etc.)

C.3.4 Describe/Remarks.

The information provided will become part of FAA's determination.

Provide a brief description of the ALP and overall intent of changes from the airport's previous ALP. In addition, refer the reviewer to the attached coordination memo.

Example: This airspace case is for FAA review of a proposed Airport Layout Plan. Significant changes from the previous ALP include an extension to Runway 3/21 and change in future use from B-II to C-II. Please see the attached coordination memo for a list of all changes.

C.4 **Non-Aeronautical Event.**

C.4.1 Background.

An airport developed or improved with federal funds may not be closed for a non-aeronautical event without FAA approval. 49 U.S.C. 47107(a)(8), implemented by Grant Assurance 19a, *Operation and Maintenance*, requires that any proposal to close all or part of an airport for a temporary non-aeronautical event like a running race, county fair, or model car event must submit documentation for FAA consideration. The FAA does not approve the proposed airport closure. The FAA will consider proposals that adequately address safety and compliance factors, and have a benefit to civil aviation.

Each non-aeronautical event on an airport has its unique set of circumstances, Prior to developing a safety plan, it is highly recommended to contact the ADO or RO for additional guidance.

C.4.2 Selection of POIs.

A non-aeronautical event will be submitted with one POI. Select the Airport Reference Point (ARP) or a point where the event will occur, with an AGL of the height of the tallest object for the event.

C.4.3 Attachments.

Contact the ADO or RO in developing the non-aeronautical event safety plan. The plan includes sections on the impacts to aeronautical use, liability and risk, safety, security, and benefits to the airport and to aviation. Attach this safety plan to your OE/AAA submittal.

C.4.4 Describe/Remarks.

The information provided will become part of FAA's determination.

Provide a description of the non-aeronautical event and the airport facilities impacted.

Example: This airspace case is for FAA review of a 5k running race to benefit the local charity. During the event, Runway 18-36 and Taxiway W will be closed.

C.5 **Feasibility Study.**

C.5.1 Background.

A feasibility study is proposed when an aeronautical review would assist the airport sponsor in their planning efforts. This study is based on broad, general information provided for the development being considered. A feasibility study will usually address specific issues; e.g., structure height at a general location. Feasibility studies also include siting for relocating or constructing, a new or replacement airport.

C.5.2 Selection of POIs.

Select a point in the center for conceptual proposals (e.g., terminal area plans, feasibility reports, etc.) or airport site selections. Select the most critical location(s) of the structure to be studied for a feasibility analysis.

C.5.3 Attachments.

Attach relevant study information (site plans, diagrams and/or reports).

C.5.4 Describe/Remarks.

The information provided will become part of FAA's determination.

Provide a description of the proposal to be studied. Ensure items are noted in the remarks to assist reviews.

APPENDIX D. SELECTING POINTS OF INTEREST (POIs)

D.1 Objects to Study.

FAA regulations require that each object is studied as a separate aeronautical case. This can cause concern when evaluating the aeronautical effect of an object or structure that has a large area. To address this issue, use POIs to identify the object area limits and any critical location(s) within that area. Each POI will be studied separately and the overall study results grouped under a single project and a single determination. The sponsor uses professional judgment in deciding the number and location of POIs to be submitted to the FAA for an aeronautical study.

D.2 Number and Location of POIs.

Determining the number and location of POIs for each structure or object is vital in submitting a filing notice for an aeronautical study with the FAA. Each POI has a specific sight elevation (SE), above ground level height (AGL), and latitude and longitude coordinate. In an attempt to reduce workload for all parties involved, the sponsor identifies the minimum number of POIs that will ensure the proposal features, including both area and elevation, are properly assessed. More POIs do not necessarily make a better filing notice submittal.

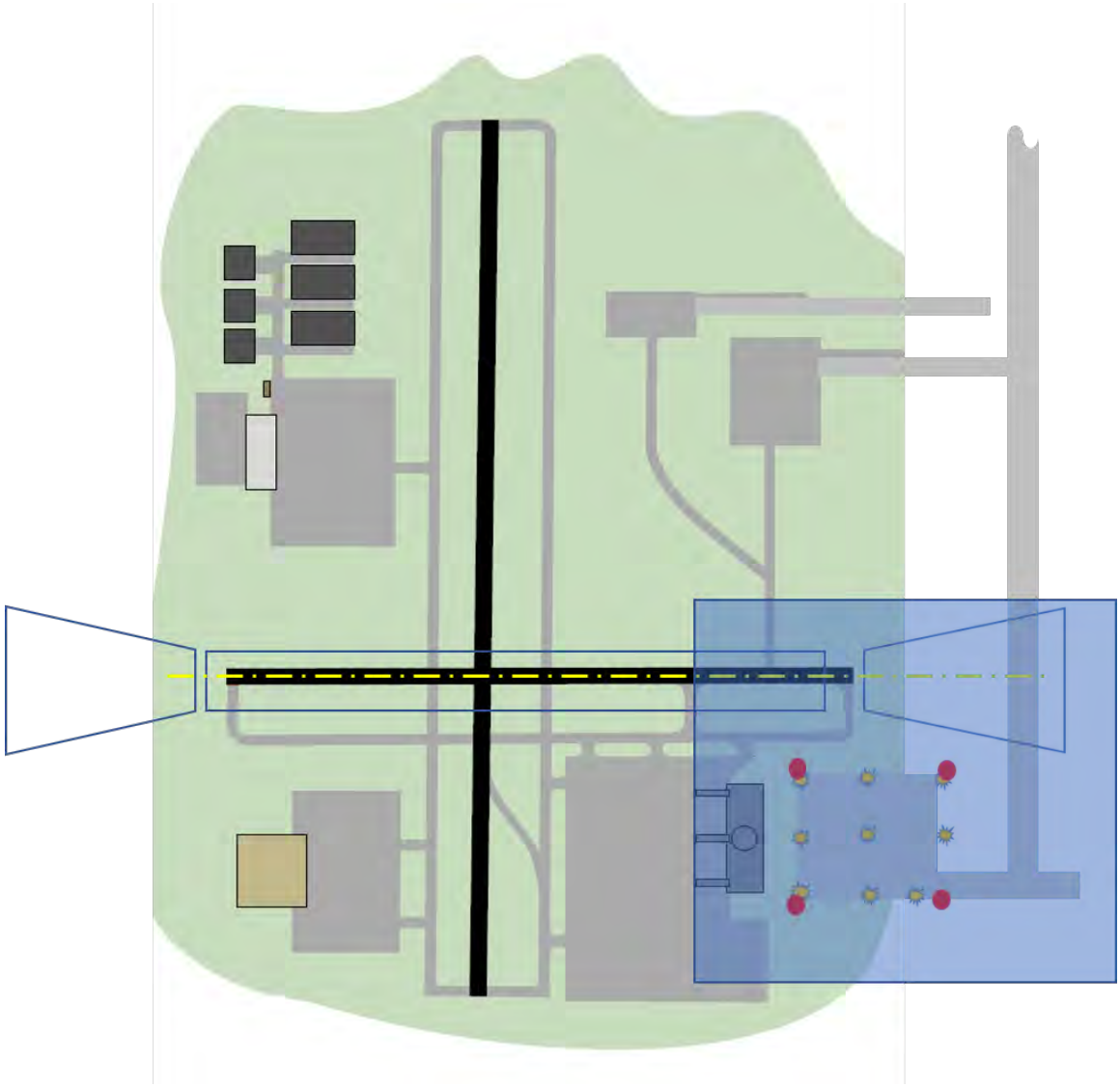
D.3 Construction Cranes.

Construction cranes are either fixed or mobile. The preferred method for evaluating temporary cranes is determined by the proposed use of the crane. If the crane boom is fixed at one location, then one POI is sufficient. However, most crane proposals involve moving the crane to various worksite locations during construction; therefore, an area type analysis is preferred for evaluating the aeronautical effect of the crane that encompasses a large area. This method is also referred to as a “Box” analysis. The footprint of the area is defined with work point boundaries. Refer to Appendix B, paragraph B.7, for additional information.

D.4 Airport Fencing and Light Poles.

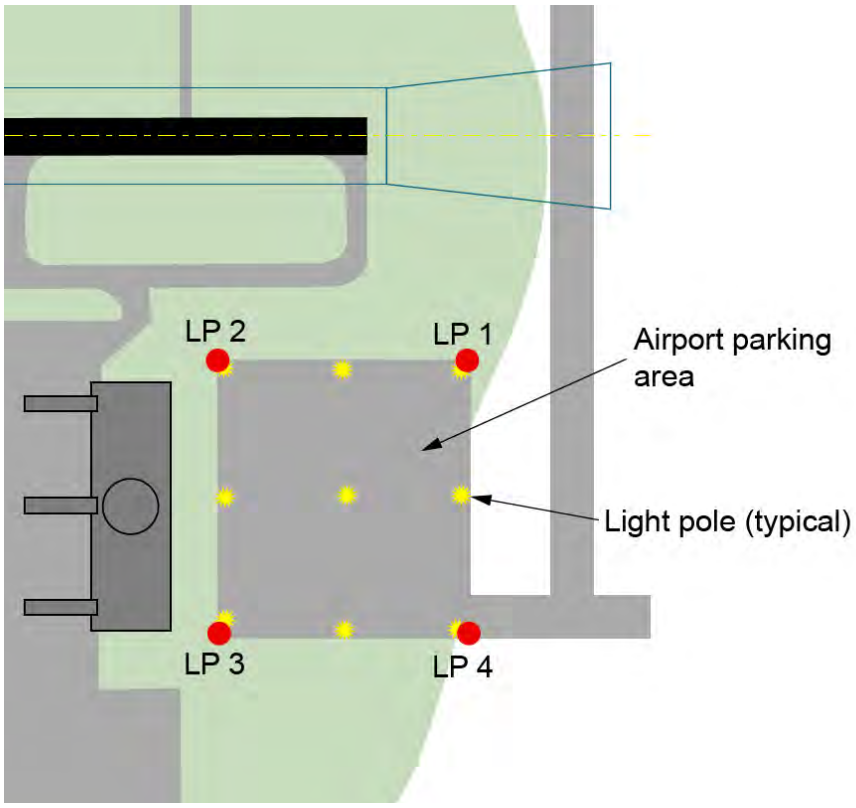
A filing notice involving airport fencing need only POIs showing the fence alignment (think of it as connecting the dots). A POI for each fence post is not necessary. The same is true for a parking lot with 100 light poles. Instead of a POI for each of the poles, the number of POIs can be reduced to only those identifying the perimeter of the light pole area.

Figure D-1. Light Poles



Note: For the enlarged area of interest, the blue shaded area, see Figure D-2.

Figure D-2. Light Poles – Enlarged Area of Interest

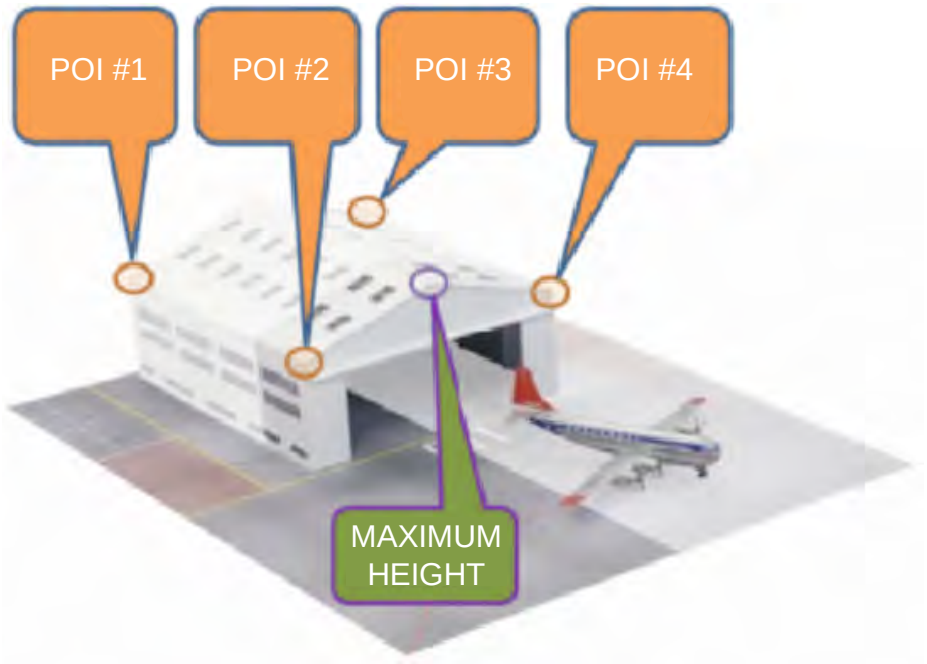


Note: This is an example only four POIs are needed to identify the light pole area of the airport parking lot.

D.5 Proposed Hangar Building.

A proposed hangar building can be evaluated by as few as 4 points, which outline the area of the structure. The height of each of the points is the maximum height of the structure, which takes a conservative approach. Hangar construction is usually studied with 4 POIs at the maximum height, which is the roof peak.

Figure D-3. Building POIs



Note: This figure was adapted from the Airports Division Obstruction Evaluation and Airport Airspace Analysis, *OJT Participant Guide*, page 8-23.

The maximum height of the structure is not always the structure itself. It can be some other ancillary object such as an antenna or a roof top air conditioning unit.

Figure D-4. Highest Building Point

Note: This figure was adapted from the Airports Division Obstruction Evaluation and Airport Airspace Analysis, *OJT Participant Guide*, page 8-23.

D.6 Example.

This building submittal provides 10 points that identify the outline of the proposal area. As a result, a total of 10 POIs will be associated with this project.

Figure D-5. Building with multiple outline POIs

Note: This figure was adapted from the Airports Division Obstruction Evaluation and Airport Airspace Analysis, *OJT Participant Guide*, page 8-24.

The selection of POIs is qualitative in nature as each construction project and airport is unique. Selecting appropriate POIs relies on knowledge, experience, and input from appropriate subject matter experts (SMEs). Considering the FAA's resource limitations, more points do not necessarily make for a better review. Based on the complexity of the project and the unique airport environment, it may not be prudent to reduce the number of POIs. While many points may be essential to identify for close-in on-airport structures, some projects can be reviewed by submitting only POIs to locate the proposal or to capture the structure's basic footprint.

D.7 Permanent Proposals.

The following building example can easily be adapted to a scenarios for earthwork projects, retention basins, landfills, and similar multi-shaped development on an airport.

D.7.1 Example 1 – Building.

The sponsor initially listed twelve POIs (see Figure D-6) that identified each corner of the proposed facility. After further discussion with the airport parties involved, the

sponsor reduced the POIs (see Figure D-7) to four that were sufficient to identify the structure's footprint.

Figure D-6. Building with Twelve POIs

Figure D-7. Building reduced to Four POIs

The project was reduced from twelve POIs to four which minimizes workload while ensuring the safety of the NAS.

An example of a Solid Waste Land Fill Area on an airport is shown in Figure D-8. The POIs are at the corners of the land fill area with an additional POI located at the high point of the land fill.

Figure D-8. Solid Waste Land Fill Area

Table D-1. Data Table for Airport Solid Waste Land Fill

POI	SE	AGL*	AMSL	Latitude	Longitude
LF #1	100	0	100	XX-XX-XX.XX	YY-YY-YY.YY
LF #2	100	0	100	XX-XX-XX.XX	YY-YY-YY.YY
LF #3	100	0	100	XX-XX-XX.XX	YY-YY-YY.YY
LF #4	100	0	100	XX-XX-XX.XX	YY-YY-YY.YY
LF #5	100	0	100	XX-XX-XX.XX	YY-YY-YY.YY
LF #6	100	40*	140	XX-XX-XX.XX	YY-YY-YY.YY

Note: *In this example where the land fill slopes upward from the existing ground point to a highpoint of 40' at POI "LF #6". Consult with the FAA and the aviation community first before considering only one POI that identifies the highest point of this area.

D.7.2 Long Term Temporary Proposals.

For a large paving project, the contractor might find it advantageous to have structures on the airport for an extended period of time, such as portable batch. While a batch plant is temporary in nature, it is important to understand its potential impact to airport operations. Batch plants can be tall structures. The engineer ensures it is located outside of and/or below all airport design surfaces. The same can be said for large earthwork projects on an airport.

D.7.3 Selection of POIs.

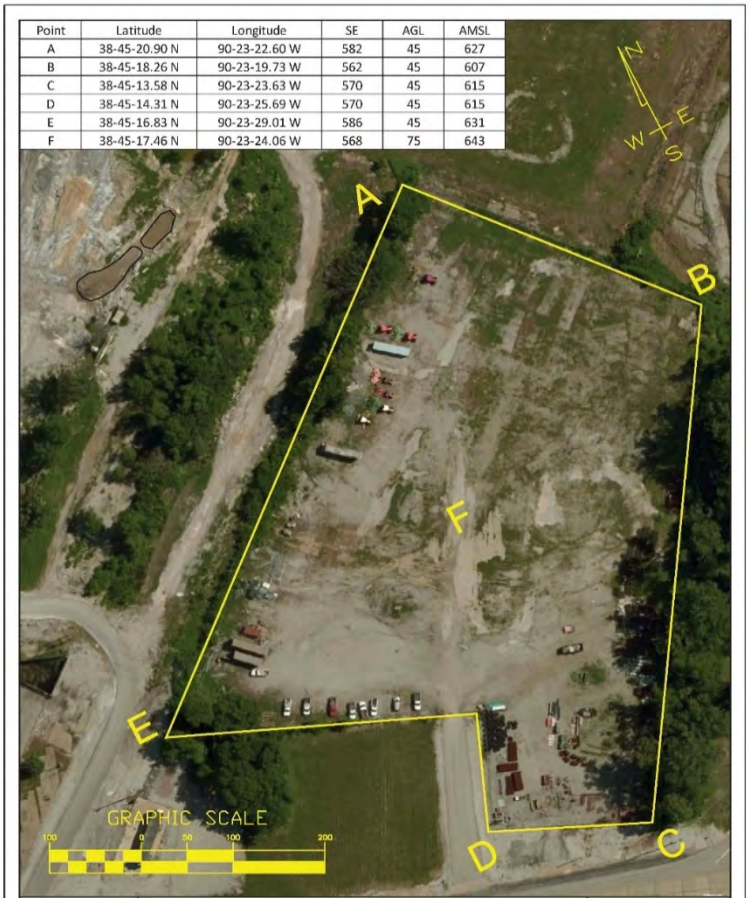
Several points are necessary to determine the aeronautical effect of the construction area as a whole. These individual cases are be grouped into one project. Select POIs that approximate the footprint of the area identified for the construction areas, earthwork area, or a batch plant.

The site elevation for each POI is the ground elevation. The AGL for each POI is the maximum height of the new earthwork or temporary structure (i.e., batch plant).

D.7.4 Attachments.

Attach an exhibit that illustrates an on airport batch plant area in relation to the airport facilities.

Figure D-9. Exhibit Illustrating the Batch Plant Area



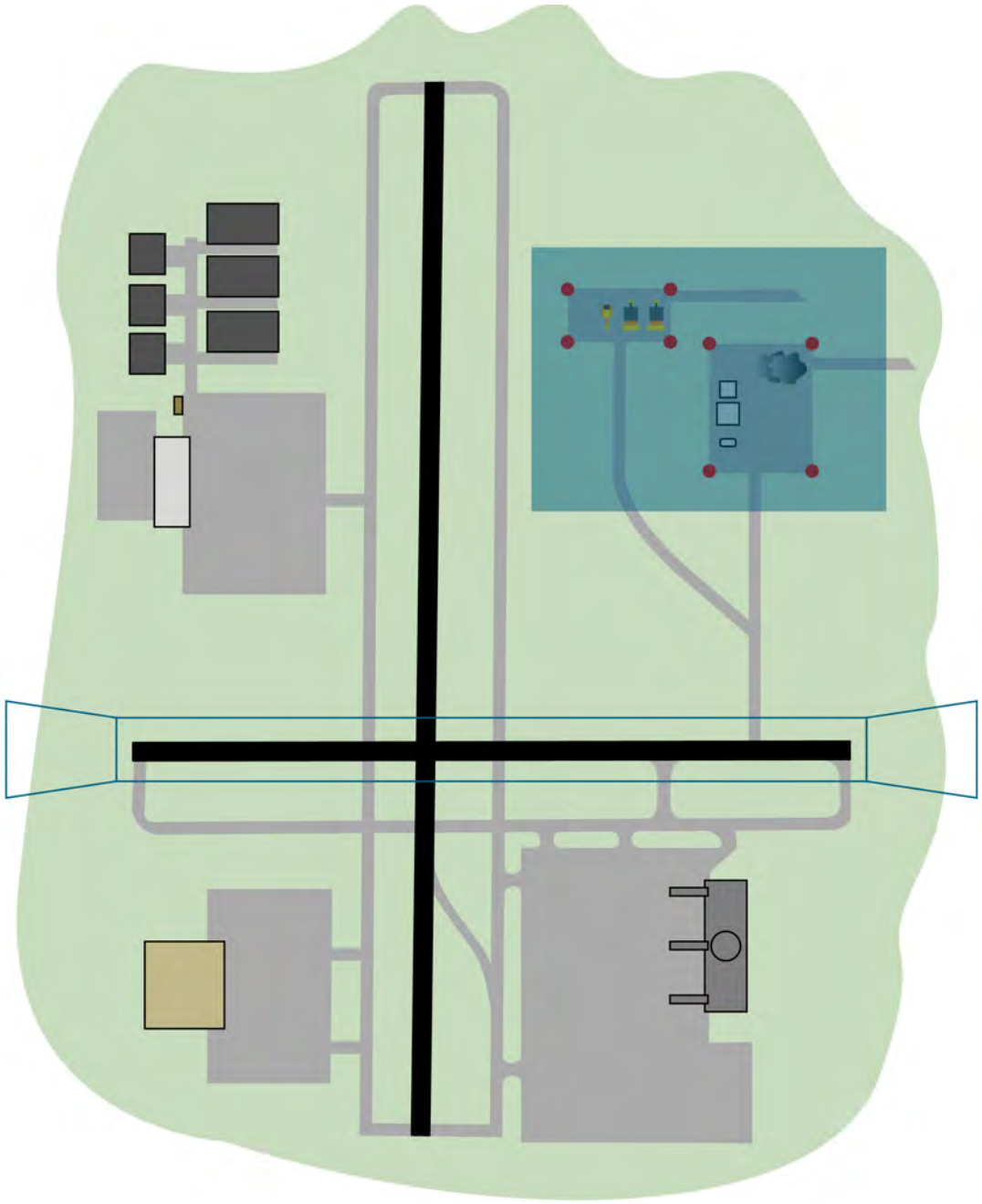
A best practice is to attach an exhibit(s) that illustrates all of the temporary construction objects (staging area, batch plant, stockpile areas, project work areas), clearly illustrating their location relative to the airfield. Refer to Figure D-10 and Figure D-11. The exhibits indicate where the airport design and imaginary airspace surfaces are relative to these temporary objects. The location of any NAVAID critical areas and the location of the ATCT is identified. Identify on the exhibit(s) the location of the POIs and include a table listing each POI's latitude, longitude, SE, and AGL.

D.7.5 Describe/Remarks.

Provide a concise description of the project. Include a statement referencing all the cases associated with a construction project if there are multiple OE/AAA Projects. Refer to those studies if the project itself has been submitted in OE/AAA. Note that the CSPP has been (or will be) submitted for review as well if the project is funded under AIP.

Example: This case is for the batch plant associated with the Construction of TW A project. The associated taxiway project has been submitted as 2017-ASO-123 thru 133-NRA. A construction safety plan was submitted as 2017-ASO-134-NRA.

Figure D-10. Stockpile Areas and Staging Areas

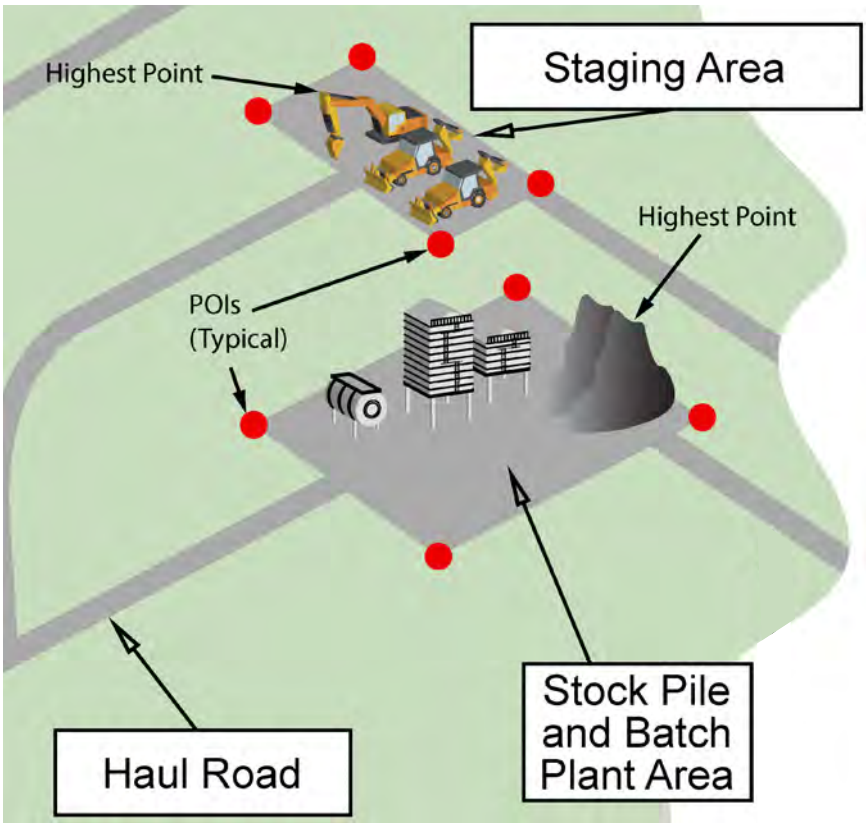


Note 1: For the enlarged area of interest, the blue shaded area, see Figure D-11. POIs shown are for both the staging area and a stockpile area.

Note 2: The POIs outline the limits (corners) of both the staging area and the stockpile area. The AMSL height for each of the POIs that outline the limits of the staging area and stockpile area is the elevation of the highest point in the area.

Note 3: Refer to Figures B-6 and D-8 concerning the AMSL elevation for the POIs that outline these areas. It is possible that the POIs can be reduced to a single POI that identifies the highest point in these areas. Prior to considering a single point POI, consultation with the FAA and aviation community is highly recommended.

Figure D-11. Stockpile Areas and Staging Areas – Enlarged Area of Interest



Note 1: *The highest point of the stockpile area is its maximum plus the height of any extended equipment that may be on the stockpile.

Note 2: The highest point for the staging area is the maximum height of the extended equipment that maybe located in the staging area.

Note 3: Also refer to Figure D-8 and the note under Table D-1. Consult with the FAA and the aviation community regarding complex projects prior to submitting a proposal.

Advisory Circular Feedback

If you find an error in this AC, have recommendations for improving it, or have suggestions for new items/subjects to be added, you may let us know by (1) mailing this form to Manager, Airport Engineering Division, Federal Aviation Administration ATTN: AAS-100, 800 Independence Avenue SW, Washington DC 20591 or (2) faxing it to the attention of the Office of Airport Safety and Standards at (202) 267-5383.

Subject: AC 150/xxxx-xx Date: _____

Please check all appropriate line items:

☐ An error (procedural or typographical) has been noted in paragraph _____ on page _____.

☐ Recommend paragraph _____ on page _____ be changed as follows:

_____
_____
_____

☐ In a future change to this AC, please cover the following subject:
(Briefly describe what you want added.)

_____
_____
_____

☐ Other comments:

_____
_____
_____

☐ I would like to discuss the above. Please contact me at (phone number, email address).

_____
_____
_____

Submitted by: _____ Date: _____