

Table 2-1. Survey Requirements Matrix

This table is designed for use in two ways. First, it defines in a general fashion the task required to meet a specific objective. Each task listed is generalized and the process to complete it many contain many other pieces. Users should refer to the text of the referenced AC to ensure that all the required subtasks are completed. The second way to use this matrix is as a checklist to ensure all the required data is collected either before leaving the field or submitting the data to the FAA.

Intended End Use of the Data ➤	AC Reference	Category II or III Operations	Navigational Aid Siting			Airport Layout Plan (ALP)	Airport Obstruction Chart	Construction		Instrument Procedure Development	Pavement Design, Construction, Rehabilitation or Roughness	Airport Mapping Database
			Non-Precision	Precision	Visual			Airside	Landside			
Provide a Survey and Quality Control Plan	150/5300-16/17/18	•	•	•	•	•	•	•	•	•	•	•
Establish or validate Airport Geodetic Control	150/5300-16	•	•	•		•	•	•		•	•	•
Perform, document and report the tie to National Spatial Reference System (NSRS)	150/5300-16	•	•	•	•	•	•			•		•
Survey runway end(s)/threshold(s)	150/5300-18	•		•	•	•	•	• <sup>1</sup>		•	•	•
Monument runway end(s)/threshold(s)	150/5300-18	•		•	•	•	•	• <sup>1</sup>		•	•	
Document runway end(s)/threshold location(s)	150/5300-18	•		•	•	•	•	• <sup>1</sup>		• <sup>1</sup>	• <sup>1</sup>	
Identify and survey any displaced threshold(s)	150/5300-18	•		•	•	•	•	• <sup>1</sup>		•	•	•
Monument displaced threshold(s)	150/5300-18	•		•	•	• <sup>1</sup>	• <sup>1</sup>	• <sup>1</sup>		•		
Document displaced threshold(s) location	150/5300-18	•		•	•	•	•	• <sup>1</sup>		•	•	•
Determine or validate runway length	150/5300-18	•				•	•	• <sup>1</sup>		•	•	•
Determine or validate runway width	150/5300-18	•				•	•	• <sup>1</sup>		•	•	•
Determine runway profile using 50 foot stations	150/5300-18			• <sup>2</sup>		• <sup>2</sup>	• <sup>2</sup>	• <sup>1</sup>		•	• <sup>2</sup>	
Determine runway profile using 10 foot stations	150/5300-18	•		• <sup>2</sup>		• <sup>2</sup>	• <sup>2</sup>	• <sup>1</sup>		•	• <sup>2</sup>	• <sup>2</sup>
Determine the touchdown zone elevation (TDZE)	150/5300-18	•		•		•	•			•	•	
Determine and document the intersection point of all specially prepared hard surface (SPHS) runways	150/5300-18	•				•	•					•
Determine and document the horizontal extents of any Stopways	150/5300-18	•				•	•			•		•
Determine any Stopway profiles	150/5300-18	•				•	•			•		•
Determine if the runway has an associated clearway	150/5300-18	•				•	•					
Survey clearway to determine objects penetrating the slope	150/5300-18	•				•	•			•		•
Determine and document the taxiway intersection to threshold distance	150/5300-18					•						
Determine runway true azimuth	150/5300-18	•		•		•	•			•		•
Determine or validate and document the position of navigational aids	150/5300-18	•	•	•	•	•	•			•		
Determine or validate and document the position of runway abeam points of navigational aids	150/5300-18	•		•	•		•			•		
Determine potential navigational aid screening objects	150/5300-18		•	•	•							
Collect and document VOR receiver checkpoint location and associated data	150/5300-18		•								•	
Perform or validate and document an airport airspace analysis	150/5300-18	•	•	•	•	•	•	• <sup>1</sup>		•		
Collect and document helicopter touchdown lift off area (TLOF)	150/5300-18				•	•	•	•		•	•	•
Collect and document helicopter final approach and takeoff area (FATO)	150/5300-18				•	•	•	•		•	•	•
Collect or validate and document airport planimetric data	150/5300-18					•	•	•	•			•
Determine or validate the elevation of the Air Traffic Control Tower Cab Floor (if one is on the airport)	150/5300-18	•				•	•	•	•			•

<sup>1</sup> Only when runway construction is involved.

<sup>2</sup> All 14 CFR Part 139 airports require 10 foot stations. At all other airports the distance between stations is between 10 and 50 feet to meet local requirements

Intended End Use of the Data ➤	AC Reference	Category II or III Operations	Navigational Aid Siting			Airport Layout Plan (ALP)	Airport Obstruction Chart	Construction		Instrument Procedure Development	Pavement Design, Construction, Rehabilitation or Roughness	Airport Mapping Database
Required Tasks ▼			Non-Precision	Precision	Visual			Airside	Landside			
Perform or validate a topographic survey	150/5300-18	• <sup>3</sup>	•	•		•		•	•	• <sup>4</sup>		
Collect and document runway and taxiway lighting	150/5300-18	•				•						•
Collect and document parking stand coordinates	150/5300-18											•
Collect cultural and natural features of landmark value	150/5300-18					•	•					•
Determine elevation of roadways at the intersecting point of the Runway Protection Zone (RPZ) or the runway centerline extended	150/5300-18	•				•						
Determine all Land Use to 65 DNL contour	150/5300-18					•						
Document features requiring digital photographs	150/5300-18	•	•	•	•	•		•		•		
Document features requiring sketches	150/5300-18	•	•	•	•	•		•		•		•
Collect position and type of runway markings	150/5300-18	•				•						•
Collect position and type taxiway markings	150/5300-18											•
Locate, collect, and document photo ID points	150/5300-17						•					
Identify collect, and document wetlands or environmentally sensitive areas	150/5300-18					•						
Collect imagery	150/5300-17	•				•	•			•		•
Provide a final Project Report	150/5300-16/18	•	•	•	•	•	•	•	•	•	•	•

<sup>3</sup> Only required for the identified Category II and III special topographic survey  
<sup>4</sup> For Cat II and III radar altimeter area or if specifically requested