

**SURVEYING OPERATIONS TO MEET MINIMUM DATA REQUIREMENTS**

Type of Project	Reconstruction, Reconditioning, or Expansion	Pavement Replacement	Resurfacing	Bridge Replacement or Bridge Rehabilitation
Step				
1	Find existing horizontal and vertical control, and select geodetic references	Find existing horizontal and vertical control, and select geodetic references	Find existing horizontal and vertical control, and select geodetic references	Provide field information for the structure survey report
2	Provide mapping, imagery, and digital spatial data	Provide mapping, imagery, and digital spatial data	Provide mapping, imagery, and digital spatial data	Find existing horizontal and vertical control, and select geodetic references
3	Field locate and document existing pavement centerline, horizontal and vertical control monuments, and right-of-way monuments	Field locate and document existing pavement centerline, and horizontal and vertical control monuments	Field locate and document existing pavement centerline, and horizontal and vertical control monuments	Field locate and document existing pavement centerline, horizontal and vertical control monuments, and right-of-way monuments
4	Field locate and describe topographic features, utilities, and property monuments	Field locate and describe topographic features, utilities, and property monuments	Field locate and describe topographic features, utilities, and property monuments	Field locate and describe topographic features, utilities, and property monuments
5	Field locate environmentally sensitive areas	Field locate critical points of structures and pipes	Field locate critical points of structures and pipes	Field locate environmentally sensitive areas
6	Field locate critical points of structures and pipes	Field locate features shown on the aerial mapping	Field locate features shown on the aerial mapping	Field locate critical points of structures and pipes
7	Field locate features shown on the aerial mapping	Perpetuate monuments of record	Perpetuate monuments of record	Field locate features during final design
8	Locate section corners			Perpetuate monuments of record
9	Field mark proposed right-of-way acquisition for appraisal			
10	Monument right-of-way at time of acquisition			
11	Perpetuate monuments of record	<i>Note: The name of the surveying operation listed above may be similar for more than one type of project; however, the surveying operations may differ slightly. Therefore, the user is advised to refer to the text to learn the level of effort and the options available for collecting the appropriate data for a specific type of project.</i>		