

Categories Defined

ROADWAY DESIGN: intended to include (but not be limited to) design/analysis, specification development, plans preparation, construction support (cco design & plans, etc.) related to roadway design on highway projects.

BRIDGE DESIGN: intended to include (but not be limited to) structure TS&L studies, design/analysis, specification development, plans preparation, construction support (shop plan reviews, field inspection, cco design & plans, etc.) related to structure design on highway projects.

BRIDGE HYDRAULICS / HYDROLOGY: intended to include (but not be limited to) drainage & flood studies, hydraulic design, bridge scour determination, erosion protection recommendations, specification development, plans preparation, construction support (field inspection, reviews, cco design, etc.) related to drainage features on highway projects.

BRIDGE PROTECTIVE COATING DESIGN: intended to include (but not be limited to) design, specification development, plans preparation, construction support (field inspection, reviews, cco design, etc.) related to bridge protective coatings.

BRIDGE EVALUATION/TESTING: intended to include (but not be limited to) non-destructive testing/evaluation (NDT/NDE) of structural connections and materials, physical testing of structural materials, fracture analysis, petrographic analysis, ultrasonic impact treatment, condition inspection, load rating and evaluation related to existing bridges and structural elements.

LAND SURVEYING: intended to include (but not be limited to) research and establishment of property boundaries, and the proper filing of survey information in accordance with SDCL.

LANDSCAPE ARCHITECTURE: intended to include (but not be limited to) design/analysis, plans preparation, construction support (cco design & plans, etc.) related to landscape development on highway projects.

CONSTRUCTION ADMINISTRATION/INSPECTION/TESTING: intended to include (but not be limited to) project administration (pay estimates, cco preparation, project documentation etc.), construction inspection, and testing

PHOTOGRAMMETRY: intended to include (but not be limited to) land surveying and aerial photography related to corridor preservation and design on highway projects.

SUBSURFACE UTILITIES EXPLORATION: intended to include (but not be limited to) determination of exact location of existing underground utilities to be used for planning and design purposes.

BUILDING ARCHITECTURE: intended to include (but not be limited to) design/analysis, plans preparation, construction support (shop plan reviews, building inspection, cco design & plans, etc.) related to buildings (structure, heating/cooling, electric, water, sewage, etc.) for rest area, scale site, etc. projects.

HISTORIC PRESERVATION: intended to include (but not be limited to) preservation of historic buildings and facades, restoration and reuse of historic structures and buildings, and interpretive displays at historic sites. All work must comply with the State Historic Preservation Office requirements.

BRIDGE INSPECTION: intended to include (but not be limited to) perform in-field bridge safety inspections and load rating analysis, fill out PONTIS inventory coding sheets, and submit inspection reports and pictures detailing the condition for each structure.

TRANSPORTATION PLANNING: intended to include (but not be limited to) sidewalk pedestrian movements, airport master plan, highway corridors to accommodate future traffic, land use, environmental impacts and access rights. Past studies can be found at http://www.sddot.com/PE/projdev/planning_ss.asp. May also include preparation of environmental documents including Environmental Impact Statements, Environmental Assessments, Categorical Exclusions, 4(f) assessments, wetland findings and storm water permits. These documents assess the impacts of SD Department of Transportation (DOT) projects on adjacent properties. Impacts include air, water, noise, economics, and historical and archaeological items. Parks, wetlands, game production areas or other public use facilities located along a project may require 4(f) assessments, 6(f) assessments or wetland findings.

AIRPORT PLANNING AND DESIGN: intended to include airport design, ALP development, construction engineering, PCI inspections, and approach obstruction surveys.

GEOTECHNICAL MATERIAL TESTING: intended to include foundation support of structures and slabs, including bearing pressures, bearing elevations, foundation design recommendations and anticipated settlement, anticipation of, and management of, ground water for design of structures and pavements, lateral earth pressures for design of walls below grade, including backfill compaction and sub drainage and their requirements, soil material and compaction requirements for site fill, construction backfill, and for the support of structures and pavements, subgrade modules for design of pavements and slabs, temporary excavation and temporary protection, such as excavation sheeting, underpinning and temporary dewatering of slopes, stability of slopes, frost penetration depth, effect and design mitigation, analysis of the effect of weather or construction equipment or both on soil during construction, analysis of soils to ascertain presence of potentially expansive, deleterious, chemically active or corrosive materials or conditions, or presence of gas, evaluation of depth of material requiring rock excavation and methods of removal and construction materials testing including, but not limited to: concrete compressive and flexural strength, asphalt compaction and laboratory quality testing, soil and aggregate gradations, asphalt and concrete mix designs, proctors, soil compaction testing.