



## Consultant's Guide to Working with Small Businesses

MDT encourages and supports small business participation in transportation contracts through the Small Business Enterprise (SBE) Program and the Disadvantaged Business Enterprise (DBE) Program. While both programs have similar certification and eligibility requirements, the DBE Program focuses on participation of women and minority owned companies. For more information on the Programs, visit our website: <http://www.mdt.mt.gov/business/contracting/civil/business.shtml>

MDT has created several avenues to assist prime contractors in finding and working with small businesses, including DBE Goals, the Directory and Quote Request System.

### MDT DBE Goals

Through September 30, 2022, MDT's agency-wide FHWA approved DBE race-neutral goal is 6.5%. While MDT does not set required DBE goals on individual contracts, we do set aspirational goals to let bidders/proposers know the availability of DBEs based on the anticipated costs, types of work and location of the project.

Note: other entities receiving federal funding, including transit providers, airports, and state agencies may have DBE, minority, or women goals.

### MDT DBE Directory

<https://app.mdt.mt.gov/dbe/dbe/search>

To find all certified DBEs in Montana, click the Search button, which can be downloaded to Excel. The results can also be narrowed with the following filter options:

- DBE Name,
- Owner Name
- State
- NAICS Code, or
- Work Type

We recently asked each DBE to update their work types. For more detailed descriptions of Consultant work types, see Appendix A.

### DBE Quote Request

<https://app.mdt.mt.gov/dbeqt/>

Firms can also submit a Quote Request to DBE firms, which allows a contractor/consultant to directly solicit bids for a specific project from certified MDT DBE firms. There are two links: Quotes for MDT and Non-MDT Projects. The MDT Project Quote is tied to specific construction lettings at MDT, so for Consultant projects, it is best to use the Non-MDT Project Quote. Enter the following:

- Company Contact
- Information about the Project (or where to find more information)
- Due Dates (RFP due date and due date for subcontract proposals)
- What type of work you are looking to subcontract

The information is emailed to DBE firms and if interested, the DBE firms will respond directly to your company.

## Recruitment

Most firms in Montana meet the federal definition for small business and a lot of primes are already working with these firms. However, they aren't certified as a small business and participation reported to the federal government only counts if the firm is certified. We encourage firms that are small businesses (related to the transportation fields) to visit our website and/or talk with our Certification Specialists about the benefits of being certified.

<http://www.mdt.mt.gov/business/contracting/civil/business.shtml>

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## Appendix A – Consultant Work Types and Descriptions

Work Category	Description of Work
Airport - Engineering Services	Engineering design and construction inspection of airside and landside facilities to include: runways, taxiways, aprons, airfield signing and lighting, navigational aids, access roads, parking, fueling facilities, ARFF facilities and equipment, hangar development, terminal facilities, contract administration, construction supervision, and project documentation.
Airport - Planning	Comprehensive airport planning of airside and landside facilities giving due consideration to environmental impacts, financial constraints, and community vision. Services include: pavement management, airport master plans, airport layout plans, site selection studies, obstruction analysis, A-GIS surveys, navigational aid planning, terminal area planning, wildlife plans, environmental documents, and various studies.
Bridge - Deck Delamination Mapping	Delamination surveys on bridge decks statewide. The delamination information will be used for project screening and preservation treatment determination. Provide and operate any specialized equipment needed.
Bridge - Design	Comprehensive design of new structures or the rehabilitation of existing structures, including steel and concrete superstructures, pile bents, drilled shafts, solid piers, and abutments. Services to include all detailing (except shop drawings) and the determination of all quantities, plans & specifications.
Bridge - Inspection (Climbing)	Inspection of all visible deck, superstructure and substructure elements only accessible utilizing climbing techniques. Provide and operate any specialized equipment needed to fully inspect all requested parts of bridges.
Bridge - Inspection (Standard)	Inspection of all visible and accessible deck, superstructure and substructure elements. Provide and operate any specialized equipment needed to fully inspect all requested parts of bridges.
Bridge - Inspection (Underwater)	Category 2 diving inspections from the mud line to the water surface for various substructure types. Also provide information on the existing and potential for scour at the bridge site as well as cross sections and contour maps of the stream or river bed.
Bridge - Load Rating	Load rating of bridges using the latest version of the AASHTOWARE Bridge Rating (BrR) program for all bridges that BrR has the capability to rate. All bridges will be rated in accordance with the most current versions of MDT and AASHTO manuals, specifications, and guides.
Bridge - Non-Destructive Testing	Inspection of pin and/or pin and hanger connections. NDT personnel must be qualified and certified in accordance with the American Society of Nondestructive Testing (ASNT) commended practice.
CADD Services	Design and drafting of transportation facilities utilizing Computer Aided Drafting and Design software platforms. MDT's current software platform is Bentley Microstation and Geopak.

Environmental - Agronomy	Development of project-specific reclamation and long-term erosion control strategy and plans. Development of recommendations, plans, and specifications to re-establish or plant vegetation on various types of highway projects.
Environmental - Air Quality & Noise Analysis & Abatement	Traffic noise analysis and evaluation of noise abatement options for transportation projects. Creation of simple models representing different roadway configurations for use in estimation of noise contours. Evaluating projects for air quality and transportation conformity specific to Montana.
Environmental - Archeology	Conducting archeological resource inventory for specific projects. The purpose of the archeological resource inventory will be identification and evaluation of known or suspected archeological resource sites within the project's area of potential effect.
Environmental - Cultural Resources	Conducting a cultural resource inventory for specific projects. The purpose of the cultural resource inventory is the identification and evaluation of known or suspected cultural resource sites within the project's area of potential effect.
Environmental - Engineering & Documents	Research, coordination, and preparation of environmental documents in compliance with the National Environmental Policy Act (NEPA) and with the Montana Environmental Policy Act (MEPA), and in following the US DOT FHWA Technical Advisory. May also prepare, coordinate and obtain various environmental permits such as Clean Water Act permit approvals, Montana Stream Protection Act 124 authorizations, and State and Tribal water quality permits. May also include preparation of preliminary designs for submittal to regulatory agencies for early comment.
Environmental - Natural Resources - Design	Engineering and design services for the purposes of developing wetland and stream mitigation projects.
Environmental - Natural Resources - Evaluations, Studies, Reports, & Wetland Delineations	Development and analysis of project-specific environmental evaluations, conducting studies and scientific field surveys, and analysis of potential project impacts. Examples of these assessments and reports are: biological resources reports; threatened and endangered species biological assessments; wetland determinations, delineations, and assessments; aquatic findings reports; wetland determinations, delineations, and assessments.
Environmental - Remediation & Assessment	Investigation of known or potential contaminated sites. Contamination may be related to leaking underground storage tanks (USTs), mine tailings, hazardous materials, petroleum spills, or any contaminant that may have impacted highway R/W. Coordination with construction contractors on removal, treatment and disposal of contaminated soils and/or USTs encountered during highway construction projects. Design collection, separation, and remediation systems related to highway projects or maintenance facilities to degrade, remove, or contain contamination.

Environmental - Stream Mitigation Monitoring	Monitoring of stream mitigation projects. Monitoring of streams requires detailed surveying of channel profiles and cross-sections at established transects through the entire stream mitigation corridor. Other monitoring standard protocols include the measurement of pool/riffle complexes, stream slopes, gravel and bed materials, stream bank stability evaluations, and the development of as-built plans of the restored streams.
Environmental - Wetland Mitigation Monitoring	Preparation of annual reports, including baseline and comparative wetland delineations and functional assessments for various mitigation sites, in accordance with MDT and U.S. Army Corps of Engineers wetland mitigation monitoring and reporting requirements.
Facilities Layout and Development	Conceptual site layout of new rest areas or rehabilitation of existing rest areas, as well as the design of public water supply and wastewater treatment systems in order for the Department to obtain necessary permits. Design may include well installation (depth, screened interval, pump size), water distribution, and wastewater treatment.
Geotechnical - Design & Analysis	Engineering, design, and analysis work for geotechnical features of transportation projects. Work includes geology reconnaissance and/or pavement structure analysis, soils, pavement, structure foundation, slope stability, rock slope design, seismic design, subsurface ground improvement techniques, complex slope failure assessment, and geophysical investigation and analysis. Also includes development of plan sheets, special provisions, and construction estimates.
Geotechnical - Exploration, Drilling, and Sampling	On-site investigation and exploration, sampling of earth or rock materials including keeping field records of boring logs, boring locations, etc. Includes all types of drilling; geophysical exploration; SPT, ring sample, thin wall tube, pitcher, diamond core and bulk sampling; in-situ testing such as cone penetrometer, vane shear; and installation of monitoring instrumentation such as inclinometers, piezometers, etc.
Geotechnical - Laboratory Material Testing	Performing various ASTM, AASHTO and Department standard tests on aggregate, concrete, asphalt, soils, metals, etc. Must be AASHTO accredited in area of testing to be performed.
Geotechnical - Non-destructive Testing	Performing non-destructive testing of pavements and structures. Tests to perform may include ground penetrating radar, falling weight deflectometer, locked wheel skid test, impact echo, distress surveys, profiling, ultrasound, etc., providing results, analysis, and recommendations.
Geotechnical - Pavement Design	Design of asphalt and concrete pavement sections, including base course, based on soils and traffic information; determine alternate combinations of materials, which meet structural requirements.

Hydraulics & Hydrology - Bank Stability and Stream Restoration	Eroded stream bank restoration designs near roadways and bridge abutments, restoration designs for stream mitigation sites, hydrologic analysis for low and high flow regimes, development of alternatives for traditional armoring methods versus biotechnical restoration methods to promote vegetation and aquatic habitat, stream stability analysis, one or two dimensional hydraulic modeling, and risk analysis.
Hydraulics & Hydrology - Bridge Opening Design	Hydrologic evaluation, hydraulic bridge analysis and calibration using HEC-RAS and/or 2-Dimensional hydraulic models, scour analysis and mitigation designs, and flood risk assessment.
Hydraulics & Hydrology - Emergency Flood Remediation	Evaluation and analysis of sites damaged by flooding, completion of an on-site survey and field reconnaissance, plan and/or detail development, obtaining floodplain permits, providing construction oversight, and design completion with a very quick turnaround.
Hydraulics & Hydrology - FEMA Map Revisions	Submittals to FEMA when LOMR's, CLOMR's, or PMR's are required. This includes completing MT-2 Form, developing hydraulic models per FEMA protocols, developing work maps, and coordinating with FEMA and navigating the appropriate FEMA process.
Hydraulics & Hydrology - Irrigation Design	Water surface profile modeling and calibration, the design of pipe and siphon crossings, canals, ditches, inlet, outlet, and diversion structures, weirs, and channel linings; coordination with ditch companies, regulatory agencies, landowners, and water rights investigations.
Hydraulics & Hydrology - Roadway Drainage Design	Hydrologic evaluation, culvert hydraulics, roadside drainage and permanent erosion control design, culvert service life analysis, alternative pipe installation techniques/trenchless technology, channel change design, culvert rehabilitation or repair, Aquatic Organism Passage (AOP) design, and flood risk assessment.
Hydraulics & Hydrology - Urban Drainage Design	Urban hydrologic evaluation, spread width evaluation, inlet layout and design, storm drain and outfall design, detention and water quality facility design, development or review of local drainage master plans and storm drain agreements, and pump station design.
Landscape Architecture	Development and design of landscaping plans, including determination of plant species and/or seed mixes dependent upon on-site conditions, preparation of plant lists and planting specifications for the installation of shrubs, trees, and grasses, identifying the location and/or zonation of planting schemes, incorporating hardscape elements, and analysis and design of irrigation systems; analysis of impact of all landscape elements to the safety of the adjacent transportation system.
Manual Development	Authoring, editing, and updating various operational manuals, including engineering and surveying manuals (requiring engineering and surveying expertise).
Non-motorized Facility Design	Engineering, design, surveys, investigations, studies, tests, and calculations necessary for development of non-motorized facilities, such as multi-use paths, sidewalks, curb ramps, pre-fabricated pedestrian bridges, rehabilitation of historic transportation facilities,

	bike lane design, etc.
Planning	Development of urban transportation plans, development of pre-NEPA corridor plans and studies, providing general transportation and rail planning assistance, and data collection related to infrastructure and geometrics and for traffic volumes, weights and classification.
Public Involvement	Engaging the public, other agencies, and interest groups early and throughout the transportation decision-making process; ensuring these groups are notified of the project and are provided with periodic updates on the status of the project. Examples of engagement include, but are not limited to informational meetings, websites, newspaper, television, and radio formats, and other types of media, such as social media. Also may include working with MDT to develop outreach efforts to inform the public of all of MDT's projects, plans, and studies.
Right-of-Way - Acquisition	Providing right-of-way acquisition services. The acquisition process involves preparing necessary acquisition documents and acquisition packages, providing necessary documents to show ownership of property to be acquired, obtaining adequate interest in property, clearing all encumbrances, preparation of deeds, easements, and exhibits; preparation of timely and adequate written records, providing recommendations for settlements, direct negotiations with property owners and/or their attorneys, and preparation of condemnation documents, including providing the Department with the necessary witnesses for expert testimony at the request of the Department's Legal Services.
Right-of-Way - Appraisals	Development of property appraisals, further defined as the development and reporting of a supported opinion of Market Value. Appraisal of the Market Value of project and non-project real property to be acquired by MDT, as well as the Market Value of MDT-owned property for disposition as excess land.
Right-of-Way - Plans & Design	Design and preparation of right-of-way plans to identify property needed for a variety of MDT projects. Work includes securing property title information from a land title company to ensure clear title; research and identification of existing public rights-of-way; design and drafting of new right-of-way, easements, and temporary construction permits needed for project design elements; preparation of deeds and exhibits.
Right-of-Way - Utility Plans & Design	Preparation of utility plans to identify utility conflicts, right-of-way requirements and construction items.
Roadway Design	Engineering of comprehensive roadway alignment and grade and cross-section features; development of element-specific detailed drawings; earthwork calculations; roadside safety analysis; determination of quantities; development of construction traffic control plans; estimating; cost benefit analysis on alternatives.

Subsurface Utility Engineering (SUE)	Locating and surveying of above ground and underground facilities. Locate utilities, produce documentation of utility depth along with horizontal and vertical locations.
Survey - cadastral, control, and topographic	Performing surveys necessary for the design of highways, bridges, buildings, drainage/irrigation facilities, etc. including geodetic control, project control, photo control, cadastral/land/property, retracement, engineering, hydraulic/hydrographic, topographic, quality control (e.g. verification of aerial and/or DTM mapping, etc.), and construction.
Survey - remote sensing (photogrammetry, LiDAR)	Performing surveys necessary for design of highways, bridges, buildings, drainage/irrigation facilities, etc. Methods of remote sensing and incidental services include airborne LiDAR; mobile terrestrial LiDAR; static LiDAR; aerial photography; photogrammetric mapping and orthophoto production. Example uses of the information include: planning, engineering design, construction, site monitoring, inventory and maintenance.
Survey - unmanned aerial systems (UAS)	Using an Unmanned Aerial System (UAS) to perform photogrammetric mapping and orthophoto production using a digital camera. The consultant will be expected to deliver a digital terrain model for use in calculating earthwork quantities, along with orthophotos. The scope of work will encompass all phases of data acquisition, data processing and final product development and delivery.
Traffic - Comprehensive Engineering & Design	Engineering of signals, roundabouts, intelligent transportation systems, roadway lighting, and roadway signing. This area of service also consists of the comprehensive review of traffic crashes, identification of crash trends, development of countermeasures to reduce the number and/or the severity of crashes, benefit/cost evaluations and the design of safety improvements.
Traffic - Electrical	Preparation of traffic signal, flasher, and/or lighting plans. Includes electrical plans, special provisions, and cost estimates; electrical engineering of systems, wiring diagrams, etc.
Traffic - Operations Analyses and Studies	Traffic engineering studies and traffic signal operations. General traffic engineering studies includes analysis that determines the best use of the highway right-of-way. These studies may include highway capacity analysis for signalized intersections, unsignalized intersections, two-lane highways, and freeway operations, as well as traffic signal warrant studies, auxiliary turn lane analysis, speed zone investigations, pedestrian studies, etc. Traffic signal operations consist of the review, design, optimization, implementation, and the fine tuning of traffic signal timing plans. It also consists of an assessment of the existing operational characteristics of a traffic control system and identifying improvements to that existing system (e.g. protected left turn arrows, dual left turn lanes, etc.).
Traffic - Signing Design	Engineering of roadway signing; preparation of signing plans, special provisions, and cost estimates in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) and MDT practices,



	policies, and procedures.
Value Engineering/Analysis Team Leader	Lead multi-disciplined Value Analysis (VA) team through the Value Engineering (VE) job plan to develop recommendations and produce a final report.
Visualization & Rendering	Development of visualizations and renderings for the purposes of viewing a project as it will appear in its completed state, typically developed through the use of before and after photographs, composite renderings, animations, 360-degree interactive panoramic photos, and 3D conceptual models.
Water Rights Investigation	Investigation of water rights for use/securing hydrology in perpetuity for a variety of MDT projects; review of point of diversion, historic use, adverse effect, etc. for application for change of use water right; review of basin closure applicability; development of application to the DNRC for securing water right.