



**CITY OF BROOKINGS, SOUTH DAKOTA  
AUTHORIZATION #31  
For  
PROFESSIONAL SERVICES  
To  
BURNS & McDONNELL ENGINEERING COMPANY, INC.**

In accordance with the AGREEMENT for PROFESSIONAL ENGINEERING SERVICES dated February 6, 1995, as amended January 20, 2022 (hereinafter called AGREEMENT) between the City of Brookings (hereinafter called City or CLIENT) and Burns & McDonnell Engineering Company, Inc. (hereinafter called Burns & McDonnell or CONSULTANT), CLIENT hereby authorizes CONSULTANT to proceed with the following services:

**1. Project Summary**

This Authorization includes professional services for the City of Brookings and the Brookings Regional Landfill (Landfill) for the Major Permit Modification Application (Permit Application) for a northern expansion of the existing Landfill. The expansion is anticipated to extend the landfill disposal footprint by approximately 100 acres.

**2. Scope of Services:**

The Scope of Services to be provided by CONSULTANT in connection with this Authorization, is as follows:

**Task 1 – Hydrogeologic Investigation Support and Reporting**

Burns & McDonnell will provide a geologist or other qualified professional to observe and document the field activities for the hydrogeologic investigation including marking soil boring locations, logging soil borings, confirming locations and frequency of soil sampling, and documenting the soil and groundwater conditions encountered during drilling. It is assumed that the City will directly retain a geotechnical firm to complete the hydrogeologic investigation including drilling, soil sampling and testing, and providing a summary report. For purposes of establishing the level of effort and associated budget for this task, Burns & McDonnell has assumed two weeks of field time for observation and documentation. Actual effort will be dependent on the geotechnical firm's drilling schedule, productivity, and the Site and subsurface conditions encountered.

Burns & McDonnell will develop a Hydrogeologic Investigation Report to summarize the data gathered as part of the hydrogeologic investigation field work completed by the City's geotechnical firm regarding the groundwater, soils, and subsurface conditions of the proposed Expansion area. The Hydrogeologic Investigation Report will be included as an appendix with the permit application and applicable information will be utilized in geotechnical calculations for the proposed Expansion. The Report will summarize findings from the hydrogeologic investigation, previous investigations, and publicly available information.

**Task 2 – Desktop Locational Restrictions Review**

Burns & McDonnell will perform a desktop review of the proposed Expansion area's applicability to locational requirements described in Section 74:27:11 of the Administrative Rules of South Dakota (ARSD). The following items will be reviewed:

- Wildlife, recreation, aesthetic value, threatened or endangered species
- Floodplains
- Distance to airports
- Distance to residences, other buildings, roads, and parks
- Distance to surface water
- Wetlands
- Gravel pits and quarries
- Unstable areas
- Seismic impact zones
- Fault areas

Conformance to these locational criteria will be included in the permit application submittal to the DANR. If any variances are required based on the findings, Burns & McDonnell will notify the Client to discuss potential options to obtain the variance request.

### **Task 3 – Environmental Desktop Review**

In addition to the desktop review of locational restrictions described above, Burns & McDonnell will perform a wetland delineation and threatened and endangered species evaluation of the Expansion area. The environmental desktop review will include the following items:

**Wetlands and waterbodies:** Burns & McDonnell will download and review available GIS data for the Expansion area including applicable 7.5-minute topographic maps, National Wetland Inventory (NWI) maps, National Hydrography Dataset (NHD), county soils survey, Soil Survey Geographic (SSURGO) digital data, and available aerial photography to determine the presence of wetlands or other waters of the United States (U.S.) within the Expansion area and identify the need for an on-site habitat assessment.

**Threatened and Endangered Species:** Burns & McDonnell will complete an online review of the federal and state protected species as well as a GIS/desktop analysis. The initial online review will be completed to evaluate the Site for habitat that may be capable of supporting protected species and identify the need for an on-site habitat assessment.

Findings of the initial environmental desktop review will be summarized in the Permit Application report and will assist with defining the on-site ecological survey scope and further assessment outlined in Task 4.

### **Task 4 – Environmental Field Surveys**

**Onsite Wetland Delineation:** The onsite wetland delineation will be conducted by a wetland scientist with a global positioning system (GPS) to identify and record the boundaries of wetlands and other water bodies that may be present. These areas will be delineated in accordance with the guidelines of the 1987 Corps of Engineers Wetlands Delineation Manual (1987 Manual), the 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Regional Supplement), and other United States Army Corps of Engineers (USACE) guidance regarding the jurisdictionality of wetlands and watercourses. The wetland delineation will occur within the normal growing season (approximately April 15 - November 15). As part of the



delineation process, Burns & McDonnell will gather information on hydric soils, wetland hydrology, and upland and wetland vegetation. Information collected during the desktop study will be confirmed during the onsite wetland delineation. Hydrologic connections between delineated wetland features and surface waters will be determined and documented. The boundaries of the observed wetlands and other waters of the U.S. will be surveyed using a sub-meter-accurate GPS unit. Location information and boundaries of delineated wetlands and waters of the U.S. will be provided electronically in a shapefile or AutoCAD format to allow the project team to identify potential design and construction changes to avoid and minimize impacts.

Burns & McDonnell will prepare a wetland delineation letter report to document the results of the desktop wetland survey and onsite wetland delineation efforts. The wetland delineation letter report will include a project description, purpose and need, discussions of background data, survey methodology, and survey results. Figures will be prepared to incorporate the background data and to illustrate the location and extent of any identified jurisdictional areas. Additionally, routine wetland determination data forms (from the Regional Supplement) and natural color photographs of the Project delineation will be included. A quality review will be completed by one of our certified Professional Wetland Scientists. A draft electronic copy of the wetland delineation letter will be submitted to the Client for review. All applicable review comments will be incorporated into a final letter for transmittal to the DANR and/or USACE for permitting purposes, if applicable, and/or inclusion in the Permit Application.

Onsite Habitat Assessment: The onsite habitat assessment will be conducted by a threatened and endangered species specialist and occur concurrently with the wetland delineation. Any potential protected species habitat will be delineated using a sub-meter-accurate GPS unit and documented with natural color photographs. The onsite habitat assessment will be consistent with federal guidelines for evaluating the presence of suitable habitat for the northern long-eared bat; however, it is assumed that species-specific surveys requiring a state or federal scientific collecting permit will not be required, and thus are not included in this scope of work.

Data collected from the environmental reviews and surveys will be used to prepare agency correspondence letters to the applicable federal and state agencies which are anticipated to include, South Dakota Game, Fish, and Parks (GFP), South Dakota Department of Agriculture and Natural Resources (DANR) Surface Water Quality, U.S. Fish and Wildlife Service, USACE, and U.S. Department of Agriculture Natural Resources Conservation Service. The letters will serve to provide documentation of agency review and concurrence regarding the environmental review of the Site and for inclusion in the Permit Application.

### **Task 5 – Solid Waste Permit Modification Application Preparation**

Burns & McDonnell will facilitate and attend a virtual permit modification pre-application meeting with the City and DANR to discuss the contents of the Landfill Expansion concept and gain understanding and consensus from all parties on the major design components of the Expansion prior to submitting the Permit Application.

Burns & McDonnell will prepare the Permit Application package for the MSW Landfill Expansion. The primary components of the Permit Application include:

- Permit Application forms
- Permit Application Report
- Permit Drawings



- Permit Appendices and Calculations

The Permit Application Report will consist of updating text narratives describing the locational criteria, site design, operations plan, leachate and landfill gas (LFG) management, environmental monitoring, closure/post-closure care, emergency plan, and contingency action plan of the proposed Expansion.

Burns & McDonnell will update the complete set of Permit Drawings for the Expansion. It is anticipated the drawing set will include the following sheet groups:

- General Sheets: Cover, Index, Legend and Abbreviations
- Site Plan Sheets: Existing Conditions, Landfill Base Grades, Landfill Piping Plan, Landfill Final Cover, Landfill Phasing Plans
- Cross Section Sheets: Landfill Cross Sections
- Landfill Detail Sheets: Liner, Leachate Collection, Final Cover, Stormwater

Burns & McDonnell will review and update the applicable Permit Appendices and calculations as required for the Permit Application submittal. It is anticipated that the following Appendices will be included:

- Comprehensive Solid Waste Source Reduction and Recycling Plan
- Waste Received by Month for 2025 (provided by City)
- Landfill Property Owners and Occupied Dwelling within one-mile Vicinity of the Landfill
- One-Mile Water Well Logs
- Landfill Volume Analysis
- Geology and Hydrogeology Information
- Landfill Settlement and Slope Stability Calculations
- Pipe Strength Calculations
- Hydrologic Evaluation of Landfill Performance (HELP) Modeling
- Construction Quality Assurance Plan
- Storm Water Design Calculations
- Closure, Post Closure, and Financial Assurance Cost Table
- Wastewater Treatment Industrial Discharge Permit (provided by City)

As part of this task, Burns & McDonnell has included two (2) site visits to field verify existing conditions and review key design components with the Client.

Burns & McDonnell will prepare and submit a draft Permit Application package to the Client for review. Burns & McDonnell will facilitate and attend an in-person review meeting to discuss the Permit Application and address Client comments. Burns & McDonnell will incorporate all applicable review comments into a final Permit Application package for submittal to the DANR for review.

### **3. Assumptions:**

- Client will provide full access to the Landfill property as needed.
- Burns & McDonnell has not included any wetland mitigation permitting effort in this scope of services. If wetland mitigation is required, Burns & McDonnell will submit an amendment to the Client for additional wetland mitigation support services for approval.
- Client will directly pay for any permit application fees associated with the scope of services.
- Client will provide all available information required for the preparation of the Permit Application in a timely manner.
- Existing topographic survey information will be utilized provided by the Client's retained landfill surveyor.
- Burns & McDonnell will submit up to three (3) hard copies of the draft Permit Application package to the Client.
- Burns & McDonnell will prepare up to a total of three (3) hard copies of the final Permit Application package for distribution to the DANR and the Client.
- Response effort to DANR review comments is not included in this scope of services. Once comments are received from the DANR, the level of effort and cost to address comments will be established and provided to the City for approval prior to performing additional services.

### **4. Schedule:**

Burns & McDonnell assumes the scope of services will be completed February 2026 through February 2027 for Tasks 1 through 5. Interim task completion dates will be established as mutually agreed upon by the Client and Burns & McDonnell through the completion of services.

### **5. Compensation:**

CLIENT shall compensate CONSULTANT for providing the services set forth herein in accordance with the terms of the existing Agreement. The estimated cost for the services is \$398,000.00. This cost is an estimate and not a guaranteed maximum; however, the CONSULTANT shall not exceed such amount without prior written approval of CLIENT. The estimated cost for each task is summarized in the attached Cost Estimate Table.

The basis of compensation for the above Services shall be Hourly Rate and reimbursable expenses per CONSULTANT's Current Rate Sheet in affect at the time of services.



IN WITNESS WHEREOF, the parties have made and executed this Authorization as of the date written below.

**CLIENT: City of Brookings, SD**

**CONSULTANT: Burns & McDonnell  
Engineering Company, Inc.**

By: \_\_\_\_\_

By: Luke Rodig

Name: \_\_\_\_\_

Name: Luke Rodig, PE

Title: \_\_\_\_\_

Title: Department Manager, Environmental

Date: \_\_\_\_\_

Cost Estimate Table

City of Brookings  
2026 Major Permit Modification Application for Landfill Expansion

		Burns & McDonnell Labor																
		Project Manager	Assistant PM/Project Engineer	Assistant Engineer	CAD Technician	Senior Geologist	Assistant Geologist	Senior Wetland/Env Scientist	Assistant Environmental Scientist	Senior Geotech Engineer	Staff Geotech Engineer	QA/QC Engineer	Project Admin.	Total Hours	Total Labor	Expenses <sup>1,2</sup>	Total	
Task No	Task Description	Associate (14) Hours	Senior (12) Hours	Assistant (9) Hours	Technician (6) Hours	Senior (12) Hours	Assistant (8) Hours	Senior (12) Hours	Assistant (9) Hours	Senior (13) Hours	Staff (10) Hours	Associate (14) Hours	Assistant (8) Hours					
1	Hydrogeologic Investigation Reporting																	
1.1	Field Activities	2.0	2.0			4.0	100.0							108.0	\$18,250	\$5,415	\$23,665	
1.2	Hydrogeologic Investigation Report and Figures	4.0	12.0	30.0	30.0	32.0	70.0					2.0		180.0	\$32,996	\$1,791	\$34,787	
2	Desktop Locational Restrictions Review																	
2.1	Desktop Locational Restrictions Review	2.0	8.0	20.0										30.0	\$6,352	\$299	\$6,651	
2.2	Desktop Locational Restrictions GIS Figures		2.0	20.0										22.0	\$4,202	\$219	\$4,421	
3	Environmental Desktop Review																	
3.1	Wetland and Waterbodies							2.0	18.0					20.0	\$3,834	\$199	\$4,033	
3.2	Threatened and Endangered Species							2.0	18.0					20.0	\$3,834	\$199	\$4,033	
4	Environmental Field Surveys																	
4.1	Onsite Wetland Delineation	1.0	1.0					4.0	20.0					26.0	\$5,277	\$897	\$6,174	
4.2	Onsite Habitat Assessment	1.0	1.0					4.0	20.0					26.0	\$5,277	\$897	\$6,174	
4.3	Wetland Delineation Letter Report	1.0	1.0					8.0	12.0					22.0	\$4,849	\$219	\$5,068	
4.4	Agency Correspondence Letters							4.0	8.0					12.0	\$2,516	\$119	\$2,635	
5	Solid Waste Permit Modification Application																	
5.1	Regulatory Pre-Permit Coordination Meeting	2.0	8.0											10.0	\$2,672	\$100	\$2,772	
5.2	Permit Application Forms	2.0	8.0											10.0	\$2,672	\$100	\$2,772	
5.3	Permit Application Report	12.0	32.0	80.0								8.0		132.0	\$28,912	\$1,313	\$30,225	
5.4	Landfill Expansion Area Grading and Design	20.0	100.0	160.0	40.0							8.0		328.0	\$67,676	\$3,264	\$70,940	
5.5	Permit Application Drawings	12.0	40.0	120.0	210.0							8.0		390.0	\$59,150	\$3,881	\$63,031	
5.6	Comprehensive Solid Waste Source Reduction and Recycling Plan		2.0	8.0										10.0	\$1,994	\$100	\$2,094	
5.7	Landfill Volume Analysis (Cell Phasing)		8.0	40.0										48.0	\$9,448	\$478	\$9,926	
5.8	Geology and Hydrogeology Information		2.0			16.0	24.0							42.0	\$8,562	\$418	\$8,980	
5.9	Landfill Settlement Analysis & Slope Stability Calculations		8.0							32.0	72.0	1.0		113.0	\$25,852	\$1,124	\$26,976	
5.10	Pipe Strength & Capacity Calculations		8.0	8.0								1.0		17.0	\$3,852	\$169	\$4,021	
5.11	Hydrologic Evaluation of Landfill Performance (HELP) Modeling	2.0	20.0	80.0								4.0		106.0	\$21,692	\$1,055	\$22,747	
5.12	Construction Quality Assurance Plan		4.0	8.0										12.0	\$2,516	\$119	\$2,635	
5.13	Stormwater Modeling, Basin Design, Report & Calculations	4.0	50.0	100.0								4.0		158.0	\$33,786	\$1,572	\$35,358	
5.14	Closure, Post Closure, and Financial Assurance Cost Table		2.0	12.0										14.0	\$2,730	\$139	\$2,869	
5.15	Permit Package Preparation	4.0	16.0	40.0									8.0	68.0	\$13,912	\$1,104	\$15,016	
														<b>Total:</b>				<b>\$398,000</b>

1. Expenses include a \$9.95 per labor hour charge for technology usage, software, hardware, etc.  
 2. Costs for other expenses such as travel, vehicle mileage, printing, etc. are included for applicable tasks.

## Schedule of Hourly Professional Service Billing Rates

Position Classification	Classification Level	Hourly Billing Rate
General Office *	5	\$78.00
Technician *	6	\$99.00
Assistant *	7	\$117.00
	8	\$161.00
	9	\$184.00
Staff *	10	\$210.00
	11	\$227.00
Senior	12	\$261.00
	13	\$285.00
Associate	14	\$292.00
	15	\$294.00
	16	\$296.00
	17	\$298.00

**NOTES:**

1. Position classifications listed above refer to the firm's internal classification system for employee compensation. For example, "Associate", "Senior", etc., refer to such positions as "Associate Engineer", "Senior Architect", etc.
2. For any nonexempt personnel in positions marked with an asterisk (\*), overtime will be billed at 1.5 times the hourly labor billing rates shown.
3. For outside expenses incurred by Burns & McDonnell, such as authorized travel and subsistence, and for services rendered by others such as subcontractors, the client shall pay the cost to Burns & McDonnell plus 10%.
4. A charge will be applied at a rate of \$9.95 per labor hour for technology usage, software, hardware, printing & reprographics, shipping and telecommunications. Specialty items are not included in the technology charge.
5. Monthly invoices will be submitted for payment covering services and expenses during the preceding month. Invoices are due upon receipt. A late payment charge of 1.5% per month will be added to all amounts not paid within 30 days of the invoice date.
6. The services of contract/agency and/or any personnel of a Burns & McDonnell parent, subsidiary, affiliate, related, or associated entity shall be billed to Owner according to the rate sheet as if such personnel is a direct employee of Burns & McDonnell.
7. The rates shown above are effective for services through December 31, 2026, and are subject to revision thereafter. The composition or build-up of the rates shown above are not subject to audit, inspection, or review.