

**MASTER AGREEMENT FOR PROFESSIONAL SERVICES
BY AND BETWEEN
BRAUN INTERTEC CORPORATION
AND
CITY OF DULUTH**

THIS MASTER SERVICES AGREEMENT, effective as of the date of attestation by the City Clerk (the "Effective Date"), is made by and between the CITY OF DULUTH, a municipal corporation under laws of the State of Minnesota, hereinafter referred to as "City," and BRAUN INTERTEC CORPORATION, located at 4511 West First Street, Suite 4, Duluth, MN 55807, hereinafter referred to as "Consultant," for the purpose of rendering services to the City.

WHEREAS, the City desires to utilize Consultant's geotechnical and material testing services on a non-exclusive, project by project basis to support the construction, operation, and maintenance of city systems; and

WHEREAS, Consultant has represented that it is qualified and willing to perform these services;

NOW, THEREFORE, in consideration of the mutual covenants and conditions hereinafter contained, the parties hereto agree as follows:

I. Services

Consultant will provide, upon written request of the city engineer in the form of a Statement of Work or similar documentation (each a "SOW"), geotechnical and/or material testing services including, but not limited to, laboratory tests of soils, grain size analysis, strength and compressibility testing, and construction testing and observations.

II. Fees

It is agreed between the parties that Consultant's estimated annual fee is One Hundred Fifty Thousand and 00/100 Dollars (\$150,000.00), payable from various appropriate funds, departments, agencies, and objects, Project 2140. The maximum amount payable for the term of this Agreement is Seven Hundred Fifty Thousand and 00/100 Dollars (\$750,000.00). Fees for each service will be determined by the Consultant's current testing fee schedule, attached hereto as "Exhibit A," less a fifteen percent (15%) discount. All invoices for services rendered shall be submitted monthly to the project manager, or his/her designee, and shall be accompanied by such documentation as the City shall reasonably expect. Upon receipt of said request and appropriate documentation, the City shall reimburse Consultant up to the amount set forth above.

III. General Terms and Conditions

1. Amendments.

Any alterations, variations, modifications or waivers of terms of this Agreement shall be binding upon the City and Consultant only upon being reduced to writing and signed by a duly authorized representative of each party.

2. Assignment.

Consultant represents that it will utilize only its own personnel in the performance of the services set forth herein; and further agrees that it will neither assign, transfer or subcontract any rights or obligations under this Agreement without prior written consent of the City.

3. Data and Confidentiality.

- a. The City agrees that it will make available all pertinent information, data and records under its control for Consultant to use in the performance of this Agreement, or to assist Consultant wherever possible to obtain such records, data and information.
- b. All reports, data, information, documentation and material given to or prepared by Consultant pursuant to this Agreement will be confidential and will not be released by Consultant without prior authorization from the City.
- c. Consultant agrees that all work created by Consultant for the City is a "work made for hire" and that the City shall own all right, title, and interest in and to the work, including the entire copyright in the work ("City Property"). Consultant further agrees that to the extent the work is not a "work made for hire" Consultant will assign to City ownership of all right, title and interest in and to the work, including ownership of the entire copyright in the work. Consultant agrees to execute, at no cost to City, all documents necessary for City to perfect its ownership of the entire copyright in the work. Consultant represents and warrants that the work created or prepared by Consultant will be original and will not infringe upon the rights of any third party, and Consultant further represents that the work will not have been previously assigned, licensed or otherwise encumbered.
- d. Records shall be maintained by Consultant in accordance with requirements prescribed by the City and with respect to all matters covered by this Agreement. Such records shall be maintained for a period of six (6) years after receipt of final payment under this Agreement.
- e. Consultant will ensure that all costs shall be supported by properly executed payrolls, time records, invoices, contracts, vouchers, or other official documentation evidencing in proper detail the nature and propriety of the charges. All checks, payrolls, invoices, contracts, vouchers, orders, or other accounting documents pertaining in whole or in part to this Agreement shall be clearly identified and readily accessible.
- f. Consultant shall be responsible for furnishing to the City records, data and information as the City may require pertaining to matters covered by this Agreement.
- g. Consultant shall ensure that at any time during normal business hours and as often as the City may deem necessary, there shall be made available to the City for examination, all of its records with respect to all matters covered by this Agreement. Consultant will also permit the City to audit, examine, and make excerpts or transcripts from such records, and to make audits of all contracts, invoices, materials, payrolls, records of personnel, conditions of employment, and other data relating to all matters covered by this Agreement.

4. Standard of Performance.

Consultant represents and warrants that:

- a. Consultant and all personnel to be provided by it hereunder has sufficient training and experience to perform the duties set forth herein and are in good standing with all applicable licensing requirements.
- b. Consultant and all personnel provided by it hereunder shall perform their respective duties in a professional and diligent manner in the best interests of the City and in accordance with the then current generally accepted standards of the profession for the provisions of services of this type.
- c. Consultant has complied or will comply with all legal requirements applicable to it with respect to this Agreement. Consultant will observe all applicable laws, regulations, ordinances and orders of the United States, State of Minnesota and agencies and political subdivisions thereof.
- d. The execution and delivery of this Agreement and the consummation of the transactions herein contemplated do not and will not conflict with, or constitute a breach of or a default under, any agreement to which the Consultant is a party or by which it is bound, or result in the creation or imposition of any lien, charge or encumbrance of any nature upon any of the property or assets of the Consultant contrary to the terms of any instrument or agreement.
- e. There is no litigation pending or to the best of the Consultant's knowledge threatened against the Consultant affecting its ability to carry out the terms of this Agreement or to carry out the terms and conditions of any other matter materially affecting the ability of the Consultant to perform its obligations hereunder.
- f. The Consultant will not, without the prior written consent of the City, enter into any agreement or other commitment the performance of which would constitute a breach of any of the terms, conditions, provisions, representations, warranties and/or covenants contained in this Agreement.

5. Agreement Period.

The term of this Agreement shall commence on the Effective Date and shall continue until December 31, 2027, unless terminated earlier as provided for herein.

Either party may, by giving written notice, specifying the effective date thereof, terminate this Agreement in whole or in part without cause. In the event of termination, all property and finished or unfinished documents and other writings prepared by Consultant under this Agreement shall become the property of the City and Consultant shall promptly deliver the same to the City. Consultant shall be entitled to compensation for services properly performed by it to the date of termination of this Agreement. In the event of termination due to breach by Consultant, the City shall retain all other remedies available to it, and the City shall be relieved from payment of any fees in respect of the services of Consultant which gave rise to such breach.

6. Independent Contractor.

- a. It is agreed that nothing herein contained is intended or should be construed in any manner as creating or establishing the relationship of copartners between the parties hereto or as constituting Consultant as an agent, representative or employee of the City for any purpose or in any manner whatsoever. The parties do not intend to create any third party beneficiary of this Agreement. Consultant and its employees shall not be considered employees of the City, and any and all claims that may or might arise under the Worker's Compensation Act of the State of Minnesota on behalf of Consultant's employees while so engaged, and any and all claims whatsoever on behalf of Consultant's employees arising out of employment shall in no way be the responsibility of City. Except for compensation provided in Section II of this Agreement, Consultant's employees shall not be entitled to any compensation or rights or benefits of any kind whatsoever from City, including without limitation, tenure rights, medical and hospital care, sick and vacation leave, Worker's Compensation, Unemployment Insurance, disability or severance pay and P.E.R.A. (Public Employee Retirement Association). Further, City shall in no way be responsible to defend, indemnify or save harmless Consultant from liability or judgments arising out of Consultant's intentional or negligent acts or omissions of Consultant or its employees while performing the work specified by this Agreement.
- b. The parties do not intend by this Agreement to create a joint venture or joint enterprise, and expressly waive any right to claim such status in any dispute arising out of this Agreement.
- c. Consultant expressly waives any right to claim any immunity provided for in Minnesota Statutes Chapter 466 or pursuant to the official immunity doctrine.

7. Indemnity.

To the extent allowed by law, Consultant shall defend, indemnify and hold City and its employees, officers, and agents harmless from and against any and all cost or expenses, claims or liabilities, including but not limited to, reasonable attorneys' fees and expenses in connection with any claims resulting from the Consultant's a) breach of this agreement or b) its negligence or misconduct or that of its agents or contractors in performing the Services hereunder or c) any claims arising in connection with Consultant's employees or contractors, or d) the use of any materials supplied by the Consultant to the City unless such material was modified by City and such modification is the cause of such claim. This Section shall survive the termination of this Agreement for any reason.

8. Insurance.

Consultant shall obtain and maintain for the Term of this Agreement the following minimum amounts of insurance from insurance companies authorized to do business in the State of Minnesota.

- a. Commercial General Liability and Automobile Liability Insurance with limits not less than \$1,500,000 Single Limit, shall be in a company approved by the city of Duluth; and shall provide for the following: Liability for Premises, Operations, Completed Operations, and Contractual Liability. City of Duluth shall be named as Additional Insured by endorsement under the Commercial General Liability and Automobile Liability. Upon execution of this

Agreement, Consultant shall provide Certificate of Insurance evidencing such coverage with 30-days' notice of cancellation, non-renewal or material change provisions included.

- b. Professional Liability Insurance in an amount not less than \$1,500,000 Single Limit; provided further that in the event the professional malpractice insurance is in the form of "claims made," insurance, 60 days' notice prior to any cancellation or modification shall be required; and in such event, Consultant agrees to provide the City with either evidence of new insurance coverage conforming to the provisions of this paragraph which will provide unbroken protection to the City, or, in the alternative, to purchase at its cost, extended coverage under the old policy for the period the state of repose runs; the protection to be provided by said "claims made" insurance shall remain in place until the running of the statute of repose for claims related to this Agreement.
- c. Consultant shall also provide evidence of Statutory Minnesota Workers' Compensation Insurance.
- d. A certificate showing continued maintenance of such insurance shall be on file with the City during the term of this Agreement.
- e. The City of Duluth does not represent or guarantee that these types or limits of coverage are adequate to protect the Consultant's interests and liabilities.

9. Notices.

Unless otherwise expressly provided herein, any notice or other communication required or given shall be in writing and shall be effective for any purpose if served, with delivery or postage costs prepaid, by nationally recognized commercial overnight delivery service or by registered or certified mail, return receipt requested, to the following addresses:

City: City of Duluth
411 W First Street
City Hall Room # 211
Duluth MN 55802
Attn: City Engineer

Consultant: Braun Intertec Corporation
4511 West First Street, Suite 4
Duluth, MN 55807
Attn: Joseph C. Butler

10. Civil Rights Assurances

Consultant, as part of the consideration under this Agreement, does hereby covenant and agree that:

- a. No person on the grounds of race, color, creed, religion, national origin, ancestry, age, sex, marital status, status with respect to public assistance, sexual orientation, and/or disability shall be excluded from any participation in, denied any benefits of, or otherwise subjected to discrimination with regard to the work to be done pursuant to this Agreement.
- b. That all activities to be conducted pursuant to this Agreement shall be conducted in accordance with the Minnesota Human Rights Act of 1974, as amended (Chapter 363),

Title 7 of the U.S. Code, and any regulations and executive orders which may be affected with regard thereto.

11. Laws, Rules and Regulations

Consultant agrees to observe and comply with all laws, ordinances, rules and regulations of the United States of America, the State of Minnesota and the City with respect to their respective agencies which are applicable to its activities under this Agreement.

12. Applicable Law

This Agreement, together with all of its paragraphs, terms and provisions is made in the State of Minnesota and shall be construed and interpreted in accordance with the laws of the State of Minnesota.

13. Force Majeure

Neither party shall be liable for any failure of or delay in performance of its obligations under this Agreement to the extent such failure or delay is due to circumstances beyond its reasonable control, including, without limitation, acts of God, acts of a public enemy, fires, floods, wars, civil disturbances, sabotage, accidents, insurrections, blockades, embargoes, storms, explosions, labor disputes, acts of any governmental body (whether civil or military, foreign or domestic), failure or delay of third parties or governmental bodies from whom a party is obtaining or must obtain approvals, franchises or permits, or inability to obtain labor, materials, equipment, or transportation. Any such delays shall not be a breach of or failure to perform this Agreement or any part thereof and the date on which the party's obligations hereunder are due to be fulfilled shall be extended for a period equal to the time lost as a result of such delays.

14. Severability

In the event any provision herein shall be deemed invalid or unenforceable, the remaining provision shall continue in full force and effect and shall be binding upon the parties to this Agreement.

15. Entire Agreement

It is understood and agreed that the entire agreement of the parties including all exhibits is contained herein and that this Agreement supersedes all oral agreements and negotiations between the parties relating to the subject matter hereof. Any amendment to this Agreement shall be in writing and shall be executed by the same parties who executed the original agreement or their successors in office.

16. Counterparts

This Agreement may be executed in two or more counterparts, each of which shall be deemed to be an original as against any party whose signature appears thereon, but all of which together shall constitute but one and the same instrument. Signatures to this Agreement transmitted by facsimile, by electronic mail in "portable document format" (".pdf"), or by any other electronic means which preserves the original graphic and pictorial appearance of the Agreement, shall have the same effect as physical delivery of the paper document bearing the original signature.

IN WITNESS WHEREOF, the parties have hereunto set their hands as of the date of attestation shown below.

CITY OF DULUTH

BRAUN INTERTEC CORPORATION

By:

By:

Mayor

Company Representative

Attest:

Its:

City Clerk

Title of Representative

Date Attested: _____

Date: _____

Countersigned:

City Auditor

Approved as to form:

City Attorney

Exhibit A



The Science You Build On.

Schedule of Charges
(Effective January 1, 2023)
Braun Intertec Corporation
and Subsidiaries

Service Locations

Minneapolis, MN
St. Paul, MN
Albertville, MN
Duluth, MN
Hibbing, MN
Mankato, MN
Rochester, MN
St. Cloud, MN

Cedar Rapids, IA

Lenexa, KS

St. Louis, MO

Bismarck, ND
Dickinson, ND
Minot, ND
Watford City, ND
West Fargo, ND
Williston, ND

La Crosse, WI

Geotechnical Services

Hourly rates apply for regular-time (8 hours or less on weekdays). Hourly rates do not include support truck or carrier rental or use, mileage, supplies consumed in drilling or abandoned in test holes, or per diem expenses.

Drilling Equipment, Services & Personnel

Drilling Services

9000 – Truck Mounted Drilling Services, per hour	393
9100 – Flotation Tire Drill Rig and Crew, per hour	465
9200 – Track Mounted Drill Rig and Crew, per hour	540
9300 – Skid Mounted Drilling Services, per hour	393

GeoProbe Services

9400 – GeoProbe services, per hour	334
9430 – Water sampling tubing and consumables, per sample	9
9435 – Soil gas sampling tubing and consumables, per sample	29
9450 – GeoProbe grouting/sealing, per foot	2
9455 – Additional crew person for SPT borings, per hour	75

CPT Services

9500 – CPT Services, per hour	572
9510 – Overtime addition to two-person crews, per hour	83
9515 – Standby time, CPT & Crew, per hour	572
9525 – CPT grouting/sealing, per foot	2
9520 – Seismic wave analysis	375
9540 – Dissipation testing, per ¼ hour	143

Drilling Related Services

205 – Site layout and utility clearance	179
292 – Drilling supervisor	152
306 – Flaggers (per flagger)	75
1052 – Warning signs	Quote
1030 – Vane shear test (ASTM D 2573), per day	435
1032 – Electrical resistivity equipment (ASTM G 57), per day	324
1022 – Thin-walled sample tubes (ASTM D 15 87), each	38
1044 – Surcharge for continuous tube sample systems (2-1/4" x 5"). Per hour	53

E-Logging Services

1084 – E-Log setup and mobilization, per day	Quote
1089 – E-Log unit and technician, per day	1,559

Consumables: Wells/Piezometers/Borehole Abandonment

9710 – Piezometer or well casing - 2" black iron, per foot	39
9720 – Well screen – 2" stainless, per foot	85
9723 – Borehole closure device	11
9732 – Grout with neat cement, materials per foot	11
9746 – 8" Well Vault for at grade well - each	102
9748 – 6" Protective casing with locking cover - each	653
9752 – 4" Bumper post steel - each	155
9754 – 4" Bumper post wood - each	79

Permits & Sealing Records

9906 – Well permit MN – Hennepin County, each	Quote
9912 – Trip permit, each	Quote
9920 – Right of way permit, each	Quote

Additional Drilling Related

9950 – Drum, steel 55 gallon, with lid, each	105
9952 – In-field steam cleaning, per hour	325
9954 – Steam cleaning of drill rig and tool, per steam	325
9964 – Air compressor rental	Quote
1087 – Mobilization	Quote
1059 – NQ Diamond coring bit wear, per foot	28

6204 – Rock coring setup, each	323
1055 – Rock core boxes, each	71
1045 – Rock coring, per foot	65
1029 – Standby time (2 man crew), per hour	325
1033 – Jars with box, 24 jars	34

Laboratory Tests of Soils

1152	Moisture content (ASTM D 2216), per sample	27
1154	Density and Moisture of Soil Specimens (ASTM D 2937), per sample	43
1156	Atterberg Limits: LL and PL (ASTM D 4318), per sample	146
1157	Atterberg Limits: LL and PL (AASHTO T89 and T90 and Wet Preparation (AASHTO T146), per sample	194
1223	Soil/Concrete Stabilization	Quote

Grain Size Analysis

1162	Sieve analysis with 200 wash (ASTM C 136 and C 117), per sample	179
1172	Hydrometer – Sieve Analysis (ASTM D 422), per sample	232
1174	Organic content (ASTM D 2974), per sample	103
1176	Specific gravity of fine -grained soils (ASTM D 854), per sample	173
1679	Rush surcharge	33
1680	Rush surcharge, per sample	48

Permeability

1180	Constant head permeability of course-grained soils (ASTM D 2434), per sample	470
1183	Falling head permeability, undisturbed (ASTM D 5084, per sample	692
1185	Falling head permeability, remolded (ASTM D 5084, per sample	800
Double ring-infiltrometer test (ASTM D 3385):		
1193	Granular soils – test and equipment rental	920
1194	Cohesive soils – test and equipment rental	1,136

Strength and Compressibility Testing

1186	Unconfined compression (ASTM D 2166), per sample	124
1190	Direct shear, granular soil (3 point test) (ASTM D 3080), per sample	784
1192	Direct shear, cohesive soil (3 point test) (ASTM D 3080), per sample	1,006
1198	Consolidation testing, time-rate (ASTM D 2435), per sample	779

One Dimensional Swell Test

1202	Maximum swell pressure (ASTM D 4546), per sample	400
1206	Unconsolidated-Undrained triaxial testing (per 3 points) (ASTM D 2850), per sample	1,136
1208	Consolidated-Undrained triax testing with pore pressure measurements (ASTM D 4767), per sample	1,650

Corrosion Potential and Miscellaneous

1214	pH determination (ASTM G 51), per sample	38
1216	Electrical resistivity of soils (ASTM G 187), per sample	98
3238	Thermal conductivity of soil (ASTM D 5334)	1,028
1220	Sulfate (concrete), per sample	49
6146	Sulfate (soil) (ASTM C 1580-05)	457

1222	Sulfide (metals), per sample	78
1226	Topsoil testing, MNDOT 3877A (without nutrients), per sample	373
1228	Topsoil testing, MNDOT 3877B (with nutrients), per sample	443
1230	Specialty testing	Quote
1234	Extrusion of thin-walled tube, per sample	43

Construction Testing and Observations

Earthwork (excavation observation, compaction control testing, special foundation installations)

1308	Nuclear moisture-density meter charge in addition to hourly rates in section "100 Personnel Services," per hour	32
1310	Field laboratory rental including utilities, if required	Quote
1318	Moisture Density Relationship (ASTM D 698 Standard)	244
6170	Rush surcharge – Proctor test	62
1322	Moisture Density Field Verification	92
1324	Maximum-minimum density of cohesion less soils (ASTM D 4523, D 4254), per sample	412

Deep Foundation and Vibration

1342	Pile Driving Analyzer equipment rental, per day	760
1343	Wave Equation analysis	630
1344	CAPWAP analysis	683

Seismograph monitor:

1570	With modem, per day	250
1571	With modem, per week	575
1572	With modem, per month	1,200
1576	With modem and X100 geophone, per day	400
1577	With modem and X100 geophone, per week	750
1578	With modem and X100 geophone, per month	1,600
1347	Static or cyclic load testing equipment (compression, tension with environmental control)	Quote

Concrete

1357	Concrete strength development curve, each	357
1374	Temperature maturity sensor, each	60
1365	Estimating the Cracking Tendency of concrete (AASHTO T334), per sample	2,163
1393	Coring of shotcrete panels, per panel	67

Command Center PDA

5122	Per week	106
5123	Per month	277
1358	Laboratory batching of concrete, per batch	557

Laboratory moist-curing of concrete delivered to laboratories

1364	Compression strength of concrete cylinders (ASTM C 39), per specimen	40
1367	Flexural strength of beams (ASTM C 78 and ASTM C 293), per specimen	163
1368	Splitting tensile strength of concrete (ASTM C 496), per specimen	124
1371	Dry unit weight (ASTM C 567), per specimen	155
1372	Specific gravity and voids (ASTM C 642), per specimen	295
1380	Sawing of concrete unit (ASTM C 31), per cut	16
5163	Compressive Strength of Controlled Low Strength Material ASTM D4832, each	57
5165	Compressive Strength of Lightweight Insulating Concrete ASTM C495, each	57

Concrete cylinder molds (includes labels and data slips)

1386	Concrete cylinder molds (ASTM C 470), per mold	3
1392	Cast in place cylinder molds (cippoc), per mold	49
1395	Mold rental (cubes and beams), per use	62
1397	Compressive strength of cast in place cylinders (cippoc) (ASTM C 873), per specimen	106
1401	Compressive strength of concrete cores (ASTM C 42), per specimen	150

Petrographic

No discounting will apply

Petrographic analysis of concrete

2101	(ASTM C 856), per specimen	Quote
5182	Observations only, per sample	769
5283	Thin section only, per sample	769
2102	Hardened air content analysis (ASTM C 457), per specimen	973
2104	Petrographic analysis of coarse aggregate - pit-run material, limited to 7 screens, per sample	2,896
2105	Petrographic analysis of fine aggregate – quarried material (ASTM C 295), limited to 7 screens, per sample	2,228
2108	Petrographic analysis of aggregates, additional screens, per screen	423
2106	Petrographic analysis of mortar (ASTM C 1324), per sample	2,920
3100	X-Ray diffraction analysis (XRD), per sample	323
2109	Fourier transform infrared analysis (FTIR), per sample	418
2110	Other specialty testing	Quote

Masonry

Concrete Masonry Units - Standard:

1403	Compressive strength - RWU (ASTM C 140), per specimen	114
1404	Compressive strength - block (ASTM C 140), per specimen	63
1402	Absorption of RWU (ASTM C 140), per specimen	92
1406	Physical measurements and absorption (ASTM C 140), per specimen	88
1407	Net area determination (ASTM C 140), per specimen	67
1408	Compressive strength of masonry prism assembly (ASTM C 1314), per specimen	145
1409	Compressive strength – Hollow block prisms (ASTM C 1314), per specimen	246
1411	Compressive strength – Grouted block prisms (ASTM C 1314), per specimen	300
1412	Compressive strength of grout (ASTM C 1019), per specimen	88
1421	Linear shrinkage (ASTM C 426), set of 3 specimens	1,013
1424	Freeze/thaw of RWU (ASTM C 1262), per set of 5 specimens	1,153
1414	Unique testing	Quote
1413	Freeze/thaw of brick (ASTM C 67), per set of 5 specimens	1,264
1431	Brick weight per unit area (ASTM C 67/C 216)	207
1434	Brick measurement of length change (ASTM C 67/C 216)	1,008
1438	Brick void area in deep frogged units (ASTM C 67/C 216)	401
1415	Efflorescence of brick or masonry units (ASTM C 67), per set of 10 samples	256
1416	Initial rate of absorption (ASTM C 67), per set of 5 specimens	256
1417	Compressive strength (ASTM C 67), per set of 5 specimens	233

1418	Absorption and saturation coefficient (ASTM C 67), per set of 5 specimens	329	Soil and Aggregate Testing for Concrete, Bituminous, Roofing, etc.	
1419	Dimensional analysis (ASTM C 67), per set of 5 specimens	318	1162 Sieve analysis with 200 wash (ASTM C 136 and C 117), per sample	179
1423	Warpage (ASTM C 67), per set of 10 specimens	379	1166 Loss By Washing #200 Sieve (ASTM C 117), per sample	98
Specialty Concrete			1684 Lightweight particles 2.0 specific gravity (ASTM C 123), per sample	113
1433	Windsor probe, per day	88	1685 Lightweight particles 2.4 specific gravity (ASTM C 123), per sample	201
1437	Length change of hardened concrete (ASTM C 157), per set of 3 samples	663	1686 Lithological count (MNDOT 1209), per sample	179
1439	Absorption of cast stone (ASTM C 1195), per set of 3	251	1688 Percent crushed (ASTM D 5821), per sample	113
1441	Rapid freeze/thaw (ASTM C 666), per specimen	435	1692 Coarse aggregate specific gravity (ASTM C 127), per sample	119
1448	Water-soluble chloride ion (ASTM C 1218), per sample	179	1694 Fine aggregate specific gravity (ASTM C 128), per sample	168
1449	Chloride, acid-soluble, concrete (ASTM C 1152), per sample	184	1696 Modified mill abrasion (Union Pacific), per sample	179
1450	Bulk sample preparation, per sample	155	1698 Los Angeles Abrasion (ASTM C 131, C 535), per sample	179
1456	Electrical indications of concrete's ability to resist chloride ion penetration (RCP ASTM 1202), per test	669	1700 Soundness, Magnesium Or Sodium Sulfate (ASTM C 88), per sample	445
1459	Diffusivity coefficient (ASTM C 1556), per sample	1,782	1702 Flat, elongated, and flat and elongated (ASTM D 4791), per sample	134
1466	Setting time (ASTM C 403), per sample	429	1703 Flakiness index (MNDOT 1223), per sample	217
Cement			1704 Potential reactivity (ASTM C 289), per sample	1,688
1476	Fineness of cement by air permeability – (ASTM C 204), per sample	128	1429 Potential reactivity of aggregates (ASTM C 1260), per sample	1,091
1480	Batching and casting mortar samples (ASTM C 305), per sample	246	1705 Fine aggregate angularity (ASTM C 1252), per sample	106
1486	Mortar-aggregate ratio test (ASTM C 790 Annex A4), per specimen	117	1706 Unit weight (ASTM C 29), per test	111
Grout			1708 Mill abrasion (Union Pacific), per sample	179
3237	Thermal conductivity of Portland Cement, each	239	1712 Moisture content (ASTM C 566), per sample	38
Mortar			1716 Organic impurities (ASTM C 40), per sample	92
1490	Compressive strength of 2x2 mortar cube (ASTM C 109), per specimen	40	1718 Clay lumps (ASTM C 142), per sample, per size tested	173
1493	Compression testing of cylindrical mortar specimen (ASTM C 780), per specimen	40	1720 Freeze-thaw (AASHTO T103)	438
1516	Prism testing (ASTM C 1072), per 5 mortar joints	457	Insoluble residue (MNDOT)	
Bituminous			1724 Insoluble residue (MNDOT 1221), sample prep only	60
1528	Rice specific gravity (ASTM D 2041), per sample	113	1732 Hveem stabilometer R-Value (MNDOT 1307), per sample	616
1529	Gyratory design point, per sample	319	1734 California bearing ratio (ASTM D 1883), per molded specimen	405
1530	Asphalt content (ASTM D 2172/6307), per sample	206	1739 Resilient modulus of fine grain soils (molded), per sample	704
1532	Extracted aggregate gradation (ASTM D 5444), per sample	146	1761 Resilient modulus of coarse grain soils and aggregate, per sample	1,082
1534	Marshall stability and flow (ASTM D 1559), per set of 3 specimens	98	1741 Sand equivalent (ASTM D 2419), per sample	179
1540	Marshall density testing (AASHTO T245), per set of 3 specimens	173	Stone	
5342	Thickness of pavement core (ASTM D 3549)	28	1746 Compressive strength stone, includes end cutting (ASTM C 170), per sample	156
1542	Thickness and density of pavement core (ASTM D 2726), per specimen	70	1747 Unconfined compressive strength of intact rock core specimen (ASTM D 7012), per specimen	155
5821	Disc-shaped Compact Tension Test ASTM 7313 MNDOT Modified	565	1751 Coefficient of linear thermal expansion (ASTM D 5335), per sample	Quote
5822	Semicircular Bend Test	439	Geosynthetic and Pond Liner	
1545	Draindown characteristics of asphalt (ASHTO T305 or ASTM D6390), per sample	151	1753 Shear/peel test on field seams (HDPE, VLDPE), per sample	201
1558	Lottman stripping (AASHTO T283), per sample	479	1754 Material property testing	Quote
1562	Laboratory mix design (Marshall), per mix	Quote		
1563	Laboratory mix design (Gyratory), per mix	Quote		
1567	Resilient modulus of bituminous, per specimen	Quote		
1568	Gyratory gravity (AASHTO T312), per sample	254		
1569	Mobile laboratory rental, per month	Quote		

Fire-Resistive Materials			1634	Portable fluorescent spray, per can	41
1784	Thickness/Density, laboratory determination	52	1636	Portable developer, per can	41
1785	Adhesion/Cohesion testing, per test	42	1637	Portable cleaner, per can	41
Other Specialty Testing			1638	Portable visible penetrant, per can	41
1790	Tensile Testing of Rebar	135	1639	Portable fluorescent penetrant, per can	41
1793	Tensile Test	Quote	1642	Cellulose gum (with certifications), per quart	78
1794	Floor Flatness Equipment, per pour	288	1643	High temperature couplant, per 4 oz. tube	193
1795	Dipstick rental (one week minimum), per week	890	1646	4-1/2" x 10" film	7
1796	Dipstick rental (one week minimum), per additional day	264	1647	4-1/2" x 17" film	11
1845	Hydraulic Ram Calibration	297	1648	14" x 17" film	44
5385	Iron Enriched Aggregate Testing	309	1649	8" x 10" film	11
5570	Charpy Impact Testing	216	1650	5" x 7" film	10
Air meter			1651	7" x 17" film	25
1828	Rebuild, full	150	70mm film, per weld		
1820	Parts, each	Quote	5440	Up to 6"	26
Nondestructive Examination Services			5441	8" – 12"	32
1602	Computed radiography, per section "100 Personnel Services"	Quote	5442	14" – 18"	39
1629	Magnetic particle examination, per section "100 Personnel Services"	Quote	5443	20" – 24"	46
1635	Liquid penetrant examination, per section "100 Personnel Services"	Quote	5444	26" – 30"	58
1640	Ultrasonic examination, per section "100 Personnel Services"	Quote	5446	32" – 36"	71
Infrared			Geophysical Testing		
1658	Report	Quote	259	Ground penetrating radar, per hour	243
1699	Thermographic imaging (minimum charge)	Quote	1443	Ground penetrating radar, per hour on site (includes equipment)	243
Positive materials identification (PMI)			1447	Ground penetrating radar, per project	Quote
1654	Equipment only, per hour	70	1600	FWD/GPR Mobilization, per mile	4
1659	Equipment only, per day	290	Coatings		
1667	Radiography, colbalt, per shot	Quote	617	Inspections, per hour	150
1668	Radiography, iridium, per shot	Quote	627	Inspections, NACE certified, per hour	197
Computed radiography			1606	PosiTest AT Adhesion Tester, per Day	103
5431	Equipment only, per day	670	1607	Elcometer 270 Holiday detector, per day	103
5432	Equipment and labor, per day	Quote	1608	Adhesion tests, 20 MM, each	62
Welding Operator Examination			2210	Ultrasonic thickness gauge, per day	78
1604	Bend tests	Quote	NDE Miscellaneous Expense		
1611	Radiography, AWS D1.1	170	1660	Vehicle, per day	56
1612	Bend tests, AWS D1.1	258	1661	Vehicle mileage, per mile	Quote
1613	Radiography, ASME/ANSI	170	1662	Mobile darkroom, per day	99
1623	AWS D1.5 qualification	258	1663	Mobile darkroom, per mile	Quote
Weld Procedure Qualifications			1653	Radiography transponder, per day	81
1619	AWS D1.1	Quote	1664	Trip charge	Quote
5569	Charpy test	Quote	1666	Report	Quote
5572	Write WPS, per hour	Quote	Safety Plans/Equipment		
NDE Equipment, per day			540	Develop/Review Health Safety Plans	215
1626	MT yoke	33	Miscellaneous Equipment Rental/Supplies		
6756	Black light	41	iPad/R1 Field Data GPS (sub-meter horizontal only)		
5567	Brinell hardness bars	36	5902	Per day	139
2210	Ultrasonic thickness gauge	78	5903	Per week	574
5269	Ultrasonic shearwave	134	Trimble R8 Rover GPS (horizontal and vertical)		
NDE Consumables			5099	Per hour	74
1630	Consumable dry powder, per pound	41	5100	Per day	411
1633	Portable visible spray, per can	41	5101	Per week	1,480
			3758	UAV Quadcopter	376
			Reliance Letter, per addressee		
			Greater of \$1,000 or 10% of original project fee		

Pavement Evaluation Services**Nondestructive testing and analysis flexible pavements**

8620	Falling Weight Deflectometer (FWD) testing, per hour	306
8640	Mobilization	Quote

Expenses

1854	Vehicle, per day	121
1856	Vehicle Mileage, per mile	Quote
1861	CMT Trip charge, per trip	Quote

Personnel Services, Per Hour

118	Staff Engineer	179
126	Project Engineer	222
128	Senior Engineer	249
130	Principal Engineer	297
226	Project Manager	216
228	Senior Project Manager	244

Rates for litigation support services will include a surcharge

Building and Structure Sciences (BaSS)

160	Consultant I	173
161	Consultant II	180
162	Consultant III	194
163	Consultant IV	229
191	Field Technician I	112
192	Field Technician II	131
193	Field Technician III	148
194	Field Technician IV	163
195	Engineer-in-Training	179
196	Staff Engineer/Architect	194
197	Project Engineer/Architect	229
198	Senior Engineer/Architect	258
199	Principal Engineer/Architect	308
253	Forensic Consultant Expert	295
255	Forensic Consultant Witness	318
257	Forensic Engineer/Architect Expert	331
258	Forensic Engineer/Architect Witness	353
652	Firestopping Observations	156
653	Firestopping Manager	229
654	Firestopping Consultant	194

Field and office services, regular hourly rates*

102	Technician I	107
106	Technician II	125
110	Technician III	146
111	Technician IV	160
138	Project Assistant	125
371	GIS/CAD Specialist II	124
373	UAV Pilot	163

Environmental Consulting

302	Field Scientist I	96
308	Field Scientist II	104
310	Field Scientist III	113
311	Field Scientist IV	124
388	Staff Consultant I	104
389	Staff Consultant II	115
390	Staff Consultant III	134
391	Project Consultant I	149
393	Project Consultant II	162
394	Project Consultant III	176
395	Senior Consultant I	194
396	Senior Consultant II	212
397	Principal Consultant I	237
398	Principal Consultant II	263
399	Senior Consultant III	220

Environmental Equipment/Supplies**Quote****Nondestructive Examination (NDE) Technicians, regular hourly rates****

108	Level II NDE Technician	143
629	Magnetic Particle	
635	Liquid Penetrant	
640	Ultrasonic Examination	
645	Radiography Examination	
112	AWS-Certified Weld Inspector	150
613	Radiography, two-man crew (IR-192)	228
619	Radiography, three-man crew (IR-192)	320
254	PMI (positive material identifier) services	274
615	Radiography, two-man crew (Co-60)***	300
107	API 510/570/653 Technician	170
117	Level III NDE services	197
602	Computed Radiography (CR)	385
643	Phased array two man crew, per hour	232

Reduced weekly and monthly rates available for continuous service. Regular hourly rates apply during normal work hours of 7 AM to 4 PM, Monday through Friday. Services provided to meet project requirements or the contractor's construction schedule outside the normal work hours or exceeding 8 hours per day will be invoiced using an overtime rate factor.

* The factor for services provided outside the normal work hours or on Saturday will 1.25 times the regular hourly rate for the service provided. The factor for services provided on Sunday or legal holidays will be 1.5 times the regular hourly rate for the service provided

** The factor for NDE services provided outside the normal work hours or on Saturday will 1.35 times the regular hourly rate for the service provided. The factor for services provided on Sunday or legal holidays will be 1.85 times the regular hourly rate for the service provided

*** Co-60 work may require a three-man crew. Code 615 plus Assistant code 614