

**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 maximum annual fee for the term of this Agreement shall not exceed the sum of Fifty Thousand and no/100 Dollars (\$50,000.00), payable from various appropriate funds, departments, agencies, and objects, Project 1722. 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, 2022, 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. Public 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 Public Liability and Automobile Liability, or as an alternate, Consultant may provide Owners-Contractors Protective policy, naming himself and City of Duluth. 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 his 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:

Assistant City Attorney

EXHIBIT A



Schedule of Charges
(Effective January 1, 2018)
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	328
9100 – Flotation Tire Drill Rig and Crew, per hour	389
9200 – Track Mounted Drill Rig and Crew, per hour	452
9300 – Skid Mounted Drilling Services, per hour	328

GeoProbe Services

9400 – GeoProbe services, per hour	278
9430 – Water sampling tubing and consumables, per sample	8
9435 – Soil gas sampling tubing and consumables, per sample	24
9450 – GeoProbe grouting/sealing, per foot	2
9455 – Additional crew person for SPT borings, per hour	58
9460 – Overtime addition, per person, for work in excess of 8 hours per day, per hour	28

CPT Services

9500 – CPT Services, per hour	480
9515 – Standby time, CPT & Crew, per hour	400
9525 – CPT grouting/sealing, per foot	2
9520 – Seismic wave analysis	317
9540 – Dissipation testing, per ¼ hour	120
9510 – Overtime addition to two-person crews, per hour	66

Drilling Related Services

205 – Site layout and utility clearance	118
292 – Drilling supervisor	129
306 – Flaggers (per flagger 2 or 3 man crew)	118
1052 – Warning signs	Quote
1030 – Vane shear test (ASTM D 2573), per day	368
1032 – Electrical resistivity equipment (ASTM G 57), per day	275
1022 – Thin-walled sample tubes (ASTM D 15 87), each	32
1040 – Pressure meter equipment, per day	758
1044 – Surcharge for continuous tube sample systems (2-1/4" x 5"). Per hour	46

E-Logging Services

1086 – E-Log unit, per mile	Quote
1089 – E-Log unit and technician, per day	1,250
1084 – E-Log setup and mobilization, per day	Quote

Consumables: Wells/Piezometers/Borehole Abandonment

9702 – Piezometer or well casing – 3/4" PVC, per foot	6
9712 – Well screen – 3/4" PVC, per foot	6
9720 – Well screen – 2" stainless, per foot	65
9710 – Piezometer or well casing - 2" black iron, per foot	33
9723 – Borehole closure device	10
9732 – Grout with neat cement, materials per foot	8
9746 – 8" Well Vault for at grade well - each	85
9748 – 6" Protective casing with locking cover - each	312
9752 – 4" Bumper post steel - each	132
9754 – 4" Bumper post wood - each	67

Permits & Sealing Records

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

Additional Drilling Related

9950 – Drum, steel 55 gallon, with lid, each	54
9964 – Air compressor rental	Quote
9952 – In-field steam cleaning, per hour	147

9954 – Steam cleaning of drill rig and tool, per steam	148
1087 – Mobilization	Quote
1059 – NQ Diamond coring bit wear, per foot	23
6204 – Rock coring setup, each	274
1055 – Rock core boxes, each	60
1045 – Rock coring, per foot	54
1050 – Site restoration	Quote
1029 – Standby time (2 man crew), per hour	213
1033 – Jars with box, 24 jars	27

Laboratory Tests of Soils

1152	Moisture content (ASTM D 2216), per sample	22
1154	Moisture content and density (ASTM D 2937), per sample	39
1156	Atterberg Limits: LL and PL (ASTM D 4318), per sample	123
1157	Atterberg Limits: LL and PL (AASHTO T89 and T90 and Wet Preparation (AASHTO T146), per sample	167
1223	Soil/Concrete Stabilization	2,950

Grain Size Analysis

1162	Sieve analysis with 200 wash (ASTM C 136 and C 117), per sample	151
1680	Rush surcharge, per sample	38
1679	Rush surcharge	22
1172	Mechanical (sieve) -hydrometer analysis (ASTM D 422), per sample	199
1174	Organic content (ASTM D 2974), per sample	84
1176	Specific gravity of fine -grained soils (ASTM D 854), per sample	146

Permeability

1180	Constant head permeability of course-grained soils (ASTM D 2434), per sample	404
1183	Falling head permeability, undisturbed (ASTM D 5084), per sample	585
1185	Falling head permeability, remolded (ASTM D 5084), per sample	699
Double ring-infiltrometer test (ASTM D 3385):		
1193	Granular soils – test and equipment rental	646
1194	Cohesive soils – test and equipment rental	906

Strength and Compressibility Testing

1186	Unconfined compression (ASTM D 2166), per sample	106
1190	Direct shear, granular soil (3 point test) (ASTM D 3080), per sample	675
1192	Direct shear, cohesive soil (3 point test) (ASTM D 3080), per sample	881
1196	Consolidation testing, one-dimensional (strain vs. pressure curve only) (ASTM D 2435), per sample	452
1198	Consolidation testing, time-rate (ASTM D 2435), per sample	677

One Dimensional Swell Test

1202	Maximum swell pressure (ASTM D 4546), per sample	351
1206	Unconsolidated-Undrained triaxial testing (per 3 points) (ASTM D 2850), per sample	970
1208	Consolidated-Undrained triax testing with pore pressure measurements (ASTM D 4767), per sample	1,450
1210	Consolidated-Drained triax testing (includes pore-pressure measurements) (ASTM D 4767), per sample	1,785
1211	Consolidated-Drained triax testing (without pore-pressure measurements) (ASTM D 4767), per sample	1,785

Corrosion Potential and Miscellaneous

1214	pH determination (ASTM G 51), per sample	29
1216	Electrical resistivity of soils (ASTM G 187), per sample	84
3238	Thermal conductivity of soil (ASTM D 5334)	771
1220	Sulfate (concrete), per sample	43
6146	Sulfate (soil) (ASTM C 1580-05)	388
1222	Sulfide (metals), per sample	69
1226	Topsoil testing, MNDOT 3877A (without nutrients), per sample	313
1228	Topsoil testing, MNDOT 3877B (with nutrients), per sample	387
1229	Topsoil testing, MNDOT 3877B (nutrients only), per sample	87
1230	Specialty testing	Quote
1234	Extrusion of thin-walled tube, per sample	36

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	26
1310	Field laboratory rental including utilities, if required	Quote
1318	Proctor test, standard (ASTM D 698), per sample	212
6170	Rush surcharge – Proctor test	49
1322	One-point Proctor check	80
1324	Maximum-minimum density of cohesionless soils (ASTM D 4523, D 4254), per sample	351

Deep Foundation and Vibration

1340	Special inspection of pile or drilled shaft installation. Hourly rates as shown in section "100 Personnel Services," plus vehicle and mileage	Quote
1342	Pile Driving Analyzer™ equipment rental, per day	644
1343	Wave Equation analysis	314
1344	CAPWAP analysis	515

Seismograph monitor:

1346	Monitor only, per day	210
1348	Monitor only, per week	481
1349	Monitor only, per month	976
1570	With modem, per day	216
1571	With modem, per week	504
1572	With modem, per month	1,060
1573	With X100 geophone, per day	221
1574	With X100 geophone, per week	514
1575	With X100 geophone, per month	1,107
1576	With modem and X100 geophone, per day	227
1577	With modem and X100 geophone, per week	538
1578	With modem and X100 geophone, per month	1,192
1347	Static or cyclic load testing equipment (compression, tension with environmental control)	Quote

Concrete

1356	Theoretical concrete mix design based on ACI 211, per mix	348
1357	Concrete strength development curve, each	294
1373	Maturity curve development (ASTM C 1074), each	2,476
1374	Temperature maturity sensor, each	80
1365	Estimating the Cracking Tendency of concrete (AASHTO T334), per sample	2,841
1393	Coring of shotcrete panels, per panel	54

Command Center PDA

5122	Per week	88
5123	Per month	234
1358	Laboratory batching of concrete, per batch	475
1361	Quality control testing of concrete placement activities, per hour	Quote

Laboratory moist-curing of concrete delivered to laboratories

1364	Compression strength of concrete cylinders (ASTM C 39), per specimen	34
1366	Accelerated curing and testing (ASTM C 684), per specimen	96
1367	Flexural strength of beams (ASTM C 78 and ASTM C 293), per specimen	138
1368	Splitting tensile strength of concrete (ASTM C 496), per specimen	104
1371	Dry unit weight (ASTM C 567), per specimen	131
1372	Specific gravity and voids (ASTM C 642), per specimen	249
1380	Sawing of concrete unit (ASTM C 31), per cut	15
5163	Compressive Strength of Controlled Low Strength Material ASTM D4832, each	47
5165	Compressive Strength of Lightweight Insulating Concrete ASTM C495, each	47

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	42
1395	Mold rental (cubes and beams), per use	52
1397	Compressive strength of cast in place cylinders (cippoc) (ASTM C 873), per specimen	87
1555	Bit wear and patch material, per core	24
1400	Core truck, per day, plus mileage	144
1401	Compressive strength of concrete cores (ASTM C 42), per specimen	126

Petrographic***No discounting will apply*****Petrographic analysis of concrete**

1460	(ASTM C 856 and C 457), per specimen	1,661
2101	(ASTM C 856), per specimen	1,250
5182	Observations only, per sample	650
5283	Thin section only, per sample	650
2102	Hardened air content analysis (ASTM C 457), per specimen	850
1742	Petrographic analysis of course aggregate quarried material (ASTM C 295), limited to 7 screens, per sample	2,153
2104	Petrographic analysis of coarse aggregate - pit-run material, limited to 7 screens, per sample	2,447
2105	Petrographic analysis of fine aggregate – quarried material (ASTM C 295), limited to 7 screens, per sample	1,845
2108	Petrographic analysis of aggregates, additional screens, per screen	357
2106	Petrographic analysis of mortar (ASTM C 1324), per sample	2,550
3100	X-Ray diffraction analysis (XRD), per sample	275
2109	Fourier transform infrared analysis (FTIR), per sample	350
2110	Other specialty testing	Quote

Masonry**Concrete Masonry Units - Standard:**

1403	Compressive strength - RWU (ASTM C 140), per specimen	52
1404	Compressive strength - block (ASTM C 140), per specimen	52

1402	Absorption of RWU (ASTM C 140), per specimen	74	Mortar		
1406	Physical measurements and absorption (ASTM C 140), per specimen	76	1490	Compressive strength of 2x2 mortar cube (ASTM C 109), per specimen	34
1407	Net area determination (ASTM C 140), per specimen	52	1493	Compression testing of cylindrical mortar specimen (ASTM C 780), per specimen	34
1408	Compressive strength of masonry prism assembly (ASTM C 1314), per specimen	123	1516	Prism testing (ASTM C 1072), per 5 mortar joints	387
1409	Compressive strength – Hollow block prisms (ASTM C 1314), per specimen	208	Bituminous		
1411	Compressive strength – Grouted block prisms (ASTM C 1314), per specimen	258	1528	Rice specific gravity (ASTM D 2041), per sample	94
1412	Compressive strength of grout (ASTM C 1019), per specimen	76	1529	Gyratory design point, per sample	266
1421	Linear shrinkage (ASTM C 426), set of 3 specimens	859	1530	Asphalt content (ASTM D 2172/6307), per sample	177
1424	Freeze/thaw of RWU (ASTM C 1262), per set of 5 specimens	974	1532	Extracted aggregate gradation (ASTM D 5444), per sample	121
1414	Unique testing	Quote	1534	Marshall stability and flow (ASTM D 1559), per set of 3 specimens	74
1413	Freeze/thaw of brick (ASTM C 67), per set of 5 specimens	1,069	1540	Marshall density testing (AASHTO T245), per set of 3 specimens	143
1431	Brick weight per unit area (ASTM C 67/C 216)	172	5342	Thickness of pavement core (ASTM D 2726)	20
1434	Brick measurement of length change (ASTM C 67/C 216)	855	1542	Thickness and density of pavement core (ASTM D 2726), per specimen	61
1438	Brick void area in deep frogged units (ASTM C 67/C 216)	341	5821	Disc-shaped Compact Tension Test ASTM 7313 MNDOT Modified	478
1415	Efflorescence of brick or masonry units (ASTM C 67), per set of 10 samples	217	5822	Semicircular Bend Test	372
1416	Initial rate of absorption (ASTM C 67), per set of 5 specimens	217	1545	Draindown characteristics of asphalt (ASHTO T305 or ASTM D6390), per sample	130
1417	Compressive strength (ASTM C 67), per set of 5 specimens	197	1555	Bit wear and patch material, per core	23
1418	Absorption and saturation coefficient (ASTM C 67), per set of 5 specimens	278	1558	Lottman stripping (AASHTO T283), per sample	403
1419	Dimensional analysis (ASTM C 67), per set of 5 specimens	271	1562	Laboratory mix design (Marshall), per mix	Quote
1423	Warpage (ASTM C 67), per set of 10 specimens	321	1563	Laboratory mix design (Gyratory), per mix	Quote
Specialty Concrete			1567	Resilient modulus of bituminous, per specimen	Quote
1427	Pachometer, per day	30	1568	Gyratory gravity (AASHTO T312), per sample	212
1432	Compression of cast stone (ASTM C 11940), per set of 3	160	1569	Mobile laboratory rental, per month	Quote
1433	Windsor probe, per day	75	Soil and Aggregate Testing for Concrete, Bituminous, Roofing, etc.		
1437	Length change of hardened concrete (ASTM C 157), per set of 3 samples	560	1162	Sieve analysis with 200 wash (ASTM C 136 and C 117), per sample	147
1439	Absorption of cast stone (ASTM C 1195), per set of 3	213	1166	200 wash (ASTM C 117), per sample	84
1441	Rapid freeze/thaw (ASTM C 666), per specimen	367	1684	Lightweight particles 2.0 specific gravity (ASTM C 123), per sample	94
1448	Water-soluble chloride ion (ASTM C 1218), per sample	159	1685	Lightweight particles 2.4 specific gravity (ASTM C 123), per sample	172
1449	Chloride, acid-soluble, concrete (ASTM C 1152), per sample	159	1686	Lithological count (MNDOT 1209), per sample	148
1450	Bulk sample preparation, per sample	129	1688	Percent crushed (ASTM D 5821), per sample	94
1456	Electrical indications of concrete's ability to resist chloride ion penetration (RCP ASTM 1202), per test	560	1692	Coarse aggregate specific gravity (ASTM C 127), per sample	96
1459	Diffusivity coefficient (ASTM C 1556), per sample	1,507	1694	Fine aggregate specific gravity (ASTM C 128), per sample	143
1436	Pulse velocity meter, per day	30	1696	Modified mill abrasion (Union Pacific), per sample	151
1466	Setting time (ASTM C 403), per sample	366	1698	Los Angeles Abrasion (ASTM C 131, C 535), per sample	151
Cement			1700	Soundness, magnesium sulfate (ASTM C 88), per sample	374
1476	Fineness of cement by air permeability – (ASTM C 204), per sample	110	1702	Flat, elongated, and flat and elongated (ASTM D 4791), per sample	112
1480	Batching and casting mortar samples (ASTM C 305), per sample	210	1703	Flakiness index (MNDOT 1223), per sample	184
1486	Mortar-aggregate ratio test (ASTM C 790 Annex A4), per specimen	100	1704	Potential reactivity (ASTM C 289), per sample	1,428
Grout			1429	Potential reactivity of aggregates (ASTM C 1260), per sample	923
3239	Thermal conductivity of Grout, each	143	1705	Fine aggregate angularity (ASTM C 1252), per sample	90
3237	Thermal conductivity of Portland Cement, each	202	1706	Unit weight (ASTM C 29), per test	84
			1708	Mill abrasion (Union Pacific), per sample	151
			1712	Moisture content (ASTM C 566), per sample	30
			1716	Organic impurities (ASTM C 40), per sample	74
			1718	Clay lumps (ASTM C 142), per sample, per size tested	149
			1720	Freeze-thaw (AASHTO T103)	372

Insoluble residue (MNDOT)			Computed radiography		
1724	Insoluble residue (MNDOT 1221), sample prep only	50	5431	Equipment only, per day	579
1732	Hveem stabilometer R-Value (MNDOT 1307), per sample	522	5432	Equipment and labor, per day	Quote
1734	California bearing ratio (ASTM D 1883), per molded specimen	345	Welding Operator Examination		
1738	Sample crushing, per hour	104	1604	Bend tests	Quote
1739	Resilient modulus of fine grain soils (molded), per sample	492	1611	Radiography, AWS D1.1	146
1761	Resilient modulus of coarse grain soils and aggregate, per sample	525	1612	Bend tests, AWS D1.1	250
1741	Sand equivalent (ASTM D 2419), per sample	151	1613	Radiography, ASME/ANSI	150
Stone			1623	AWS D1.5 qualification	180
1746	Compressive strength stone, includes end cutting (ASTM C 170), per sample	129	Weld Procedure Qualifications		
1747	Unconfined compressive strength of intact rock core specimen (ASTM D 7012), per specimen	129	1619	AWS D1.1	Quote
1751	Coefficient of linear thermal expansion (ASTM D 5335), per sample	Quote	5569	Charpy test	Quote
Geosynthetic and Pond Liner			5572	Write WPS, per hour	290
1753	Shear/peel test on field seams (HDPE, VLDPE), per sample	170	NDE Equipment, per day		
1754	Material property testing	Quote	1626	MT yoke	31
Fire-Resistive Materials			6756	Black light	36
1784	Thickness/Density, laboratory determination	59	5567	Brinell hardness bars	31
1785	Adhesion/Cohesion testing, per test	48	2210	Ultrasonic thickness gauge	68
Other Specialty Testing			5269	Ultrasonic shearwave	118
1470	Moisture vapor emission rate testing kit (ASTM F 1869), per kit	41	NDE Consumables		
1471	Relative humidity probe (ASTM F 2170), per probe	78	1630	Consumable dry powder, per pound	36
1793	Tensile test	125	1633	Portable visible spray, per can	36
1794	Floor flatness	Quote	1634	Portable fluorescent spray, per can	36
1795	Dipstick rental (one week minimum), per week	752	1636	Portable developer, per can	36
1796	Dipstick rental (one week minimum), per additional day	222	1637	Portable cleaner, per can	36
1797	Anchor testing, per test	Quote	1638	Portable visible penetrant, per can	36
3701	Infrared camera, hourly	88	1639	Portable fluorescent penetrant, per can	36
Air meter			1642	Cellulose gum (with certifications), per quart	68
1828	Rebuild, full	115	1643	High temperature couplant, per 4 oz. tube	167
1820	Parts, each	Quote	1646	4-1/2" x 10" film	7
Nondestructive Examination Services			1647	4-1/2" x 17" film	11
1602	Computed radiography, per section "100 Personnel Services"	Quote	1648	14" x 17" film	39
1629	Magnetic particle examination, per section "100 Personnel Services"	Quote	1649	8" x 10" film	11
1635	Liquid penetrant examination, per section "100 Personnel Services"	Quote	1650	5" x 7" film	7
1640	Ultrasonic examination, per section "100 Personnel Services"	Quote	1651	7" x 17" film	20
Infrared			70mm film, per weld		
1658	Report	Quote	5440	Up to 6"	21
1699	Thermographic imaging (minimum charge)	Quote	5441	8" - 12"	27
Positive materials identification (PMI)			5442	14" - 18"	34
1654	Equipment only, per hour	60	5443	20" - 24"	41
1659	Equipment only, per day	250	5444	26" - 30"	49
1668	Radiography, iridium, per shot	Quote	5446	32" - 36"	61
			Geophysical Testing		
			259	Ground penetrating radar, per hour	210
			1443	Ground penetrating radar, per hour on site (includes equipment)	210
			1447	Ground penetrating radar, per project	Quote
			8640	Mobilization for ground penetrating radar, per trip	256
			Coatings		
			617	Inspections, per hour	130
			627	Inspections, NACE certified, per hour	170
			637	Specification review, per hour	219
			1606	PosiTect AT Adhesion Tester, per Day	58
			1607	Elcometer 270 Holiday detector, per day	58
			1608	Adhesion tests, 20 MM, each	49
			2210	Ultrasonic thickness gauge, per day	68

NDE Miscellaneous Expense

1660	Vehicle, per day	48
1661	Vehicle mileage, per mile	Quote
1662	Mobile darkroom, per day	84
1663	Mobile darkroom, per mile	Quote
1653	Radiography transponder, per day	71
1664	Trip charge	Quote
1666	Report	515

Environmental Site Evaluation Services

5000	Generator, per day	113
5003	Grundfos Pump, per day	239
3001	Peristaltic Pump per day	62

Submersible pump (40')

5005	Per day	31
5006	Per week	82

3103	Colorimeter (Hach DR\890), per day	Quote
3093	Field test kit, per reagent parameter	20
5018	Ordinary consumables, per well	22

Solinst Levellogger 3001

5137	Per day	79
5138	Per week	234
5139	Per month	700

YSI 556 water quality meter

5019	Per hour	70
5020	Per day	258
5021	Per week	654

5025	Disposable bailer, each	22
5027	Field filtering water, per sample	36

Interface probe

5080	Per hour	22
5081	Per day	85

Water level tape

5083	Per hour	19
5084	Per day	57
5085	Per week	227

3106	Boat, per day	221
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Field Analysis/Air Quality

PID w/10.6 eV lamp		
5035	Per hour	41
5036	Per day	175
5037	Per week	525

PID w/11.8 eV lamp

5038	Per hour	47
5039	Per day	216
5040	Per week	649

MSA Orion 4-gas meter

5043	Per hour	31
5044	Per day	134
5045	Per week	402

Landtec methane monitor

5050	Per day	170
5051	Per week	510

PDR-1000 aerosol dust monitor

5053	Per day	155
5054	Per week	479

Lumex mercury vapor analyzer

5063	Per day	567
5064	Per week	1,947

Apex air sampling pump

5135	Per day	72
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3105	Rotary hammer drill, bit rental and wear, per day	80
5056	Video camera rental, per day	66
5057	Radon canister, each	26
5092	Master locks #2106 (brass), each	31

Industrial Hygiene Equipment/Supplies

5065	Q-Trak IAQ monitor	Quote
5066	Dustrak monitor	Quote
5068	Filter cassettes, each	Quote
5070	Draeger tubes, each	Quote

Air sampling pump

5072	Per day	62
5073	Per week	185

5074	Draeger pump, per day	35
5076	Noise dosimeter/sound level meter, per day	Quote

XRF spectrum analyzer

5086	Per hour	134
5087	Per day	639

5105	Ventilation smoke tube	Quote
5106	Andersen sampler	Quote
5107	High volume pump	Quote
5111	Zefon filter, each	11
5118	Moisture meter	Quote

Safety Plans/Equipment

5067	Develop and review Health & Safety Plan for Braun Intertec use only	Quote
540	Develop/Review Health Safety Plans	191

Miscellaneous Equipment Rental/Supplies**Trimble GeoXH GPS (sub-meter horizontal only)**

5096	Per hour	31
5097	Per day	120
5098	Per week	522

Trimble R8 Rover GPS (horizontal and vertical)

5099	Per hour	67
5100	Per day	358
5101	Per week	1,289

Unmanned Aerial Systems (UAS)

3759	Per day	2,712
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Reliance Letter, per addressee

Greater of \$1,000 or 10% of original project fee

Pavement Evaluation Services

Nondestructive testing and analysis flexible pavements

8560	Parking lot testing and evaluation services	Quote
8510	Surface condition survey, per hour	Quote
8620	Falling Weight Deflectometer (FWD) testing, per hour	468
8640	Mobilization	264

Expenses

1854	Vehicle, per day	50
1856	Vehicle, per mile	Quote
1861	CMT Trip charge, per trip	Quote

Personnel Services, Per Hour

121	Engineer-in-training	146
118	Staff Engineer	157
320	Staff Scientist	152
157	Staff Architect	170
327	Industrial Hygienist	191
156	Project Architect	180
126	Project Engineer	191
330	Project Scientist	185
158	Senior Architect	206
128	Senior Engineer	214
340	Senior Scientist	208
338	Senior Industrial Hygienist	235
155	Principal Architect	232
130	Principal Engineer	259
350	Principal Scientist	251
257	Forensic Engineer/Architect Expert	272
226	Project Manager	191
228	Senior Project Manager	214

Rates for litigation support services will include a surcharge

Building Sciences (BldgSci)

160	Building Sciences Technologist I	130
161	Building Sciences Technologist II	138
162	Building Sciences Technologist III	160
163	Building Sciences Technologist IV	174

Field and office services, regular hourly rates*

102	Technician I	90
106	Technician II	107
110	Technician III	123
111	Technician IV	136
138	Project Assistant	104
371	CADD/Graphics Operator	130
375	GIS Technician	130

Nondestructive Examination (NDE) Technicians, regular hourly rates**

108	Level II NDE Technician	123
629	Magnetic Particle	
635	Liquid Penetrant	
640	Ultrasonic Examination	
645	Solo Technician-Radiography	
112	AWS-Certified Weld Inspector	130
613	Radiography, two-man crew (IR-192)	197
619	Radiography, three-man crew (IR-192)	276
254	PMI (positive material identifier) services	236
615	Radiography, two-man crew (Co-60)***	259
107	API 510/570/653 Technician	146
117	Level III NDE services	170
602	Computed Radiography (CR)	332
643	Phased array two man crew, per hour	200

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