

Exhibit A



Consulting Engineers P.A.

June 25, 2018

Mr. Erik Birkland
City of Duluth
1532 West Michigan Street
Duluth, MN 55806

Re: Relocation of William A. Irvin - Proposal
AMI Project # 181078

Mr. Birkland:

This proposal is written at the request of the City of Duluth (City) for AMI Consulting Engineers, PA (AMI) to plan, coordinate and develop bid documents for the relocation of the vessel SS William A. Irvin (Irvin) from its current location in MN Slip to Fraser Shipyards in Superior, WI in the fall of 2018. The Irvin will be returned to MN Slip in the spring of 2019. AMI will also provide technical assistance and oversee the Contractor during the movement of the vessel.

Background Information

The sediment located at the base of MN Slip, where the Irvin is currently located, is contaminated. The Minnesota Pollution Control Agency (MPCA) plans to remediate the slip by regrading the bottom of the slip to one elevation and then capping the contaminates with clean granular fill. Prior to the remediation, the City has agreed to relocate the Irvin outside of the slip, so it will not interfere with the MPCA remediation process.

Scope of Work

The process to remove the vessel from the slip is very complicated and will require participation from several different parties including, but not limited to, the City, DECC, United States Army Corp of Engineers (USACE), United States Coast Guard (USCG) & Fraser Shipyards (Fraser). AMI will coordinate with all parties to develop a clearly defined bid package that identifies all of the potential risks and methods to minimize these risks. As part of this project AMI proposes to complete the following items summarized below:

- General Coordination & Meetings with Interested Parties
 - AMI will attend weekly meetings with all interested parties throughout the process of moving the vessel. Included in this item will be a two-day sit down with all parties to assess the risks and measures to be implemented to reduce these risks.
- Survey of Bridge Opening
 - To move the Irvin out of MN Slip, the vessel will need to pass through a narrow opening in a pedestrian bridge which spans the opening of the slip. This opening has already been surveyed by two separate parties. However, the information gathered by these two different parties conflict with each other. Due to the critical nature of this information, AMI proposes to re-survey the opening between the bridge abutments and the location of the steel members of the deck to determine the actual available room for the Irvin.
- Structural Analysis & Inspection of Bridge Abutment
 - The abutments of the pedestrian bridge will be at a high risk of damage during the movement of the vessel. To minimize this risk, AMI proposes to analyze the existing structures to determine the allowable lateral loads. From this information, AMI will determine if and what kind of protection system will be necessary. AMI will also perform an underwater inspection of the abutments to determine if the existing structural drawings are accurate.

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- Temporary Mooring Design & Layout (*partially completed, then cancelled*)
 - Once the Irvin is out of the slip, the vessel will be relocated to the Harbor dock wall near the DECC and the Great Lakes Aquarium. However, currently there are not adequate structures at that location to properly moor the vessel. AMI proposes to analyze the mooring of the vessel to determine how the mooring lines of the vessel should be arranged and what structures will be required to resist the mooring forces.
- Irvin Relocation Planning Bid Documents
 - AMI will develop bid documents, so the City can advertise the project to potential Contractors. AMI will work with the City, DECC, USACE, and USCG to develop a tow plan & specifications that identify all of the risks and means to minimize those risks. Bid documents for the installation of the additional bollards for the mooring will also be provided at the temporary location of the Irvin.
- Cost Estimations (*Removed further cost estimations after 6/18/18*)
 - AMI will provide and present cost estimations to the City and the DECC to relocate the Irvin. Cost estimations will summarize the entire scope of the project and will be broken down to identify each item covered.
- Bidding Services
 - During the bidding of the project, AMI will assist the City with the bidding process and answering any questions from Contractors which may arise. AMI will attend a pre-bid meeting where the scope of the project will be presented to Contractors. After bids have been received, AMI will assist the City with selecting a qualified Contractor.
- Construction Administration
 - Once a Contractor is selected, AMI will coordinate with the Contractor and City to ensure that the Irvin is relocated safely and according to the project specifications. AMI will attend and run coordination meetings prior to the relocation process to ensure all interested parties have a complete understanding of the schedule & scope of work.

Proposed Fees

AMI will provide the services described above on an Hourly Not to Exceed Basis for **Forty-Nine Thousand Seven-Hundred Fifty Dollars (\$49,750.00)** with the following breakdown:

- General Coordination & Meetings with Interested Parties = **\$11,450.00**
- Survey of Bridge Opening = **\$4,050.00**
- Structural Analysis & Inspection of Bridge Abutments = **\$3,550.00**
- Temporary Mooring Design & Layout = **\$3,900.00**
- Irvin Relocation Planning and Bid Documents = **\$13,900.00**
- Cost Estimations = **\$600.00**
- Bidding Services = **\$3,400.00**
- Construction Administration = **\$8,900.00**

AMI will not exceed these fees without your approval. Additional services beyond those outlined above may be provided at your request and will be billed per attached AMI hourly rates of compensation. If you have any questions or comments or would like additional information, please contact AMI at (715) 718-2193 ext. 17.

Respectfully Submitted,



Chase Dewhirst, PE
Marine Engineering Manager

Enclosed: AMI 2018 Hourly Rates of Compensation & AMI General Terms and Conditions



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Consulting Engineers P.A.

FEE SCHEDULE - CONFIDENTIAL

Effective Date: January 19, 2018

The compensation of *AMI Consulting Engineers, PA* for professional services is based upon hourly rates as indicated below.

| STAFF CLASSIFICATION | HOURLY RATE |
|--------------------------------|-------------|
| Principal Engineer | 200 |
| Engineer/Specialist III | 140-180 |
| Engineer/Specialist II | 115-135 |
| Engineer/Specialist I | 95-110 |
| Health & Safety Director | 120 |
| Staff Professional III | 90-100 |
| Staff Professional II | 80-90 |
| Staff Professional I | 70-80 |
| Scientist I/II/III | 65/75/85 |
| Technician III | 95-115 |
| Technician II | 75-90 |
| Technician I | 50-70 |
| Survey Crew | 150-180 |
| Marine Surveyor | 115 |
| 3 Man Dive Team | 380 |
| 4 Man Dive Team | 450 |
| EQUIPMENT | RATE |
| 22' Hewescraft Boat | 325/day |
| 17.5' Waterman Boat, 20' Barge | 150/day |
| Bathymetric Survey Package | 325/day |
| Sidescan Survey Package | 250/day |
| Survey Boat | 250/day |

·Engineer/Specialist classification includes department managers, project managers, licensed engineers, engineers in training, graduate engineers, permitting specialists & registered land surveyor.

·Staff Professional classification includes mid level geologist, scientist, water resource professional, soil scientist and environmental consulting professionals.

·Scientist classification includes junior level geologist, scientist, water resource professional, soil scientist and environmental consulting professionals.

·Technician classification includes CADD and GIS operators, surveyors, marine surveyors, certified bridge inspectors, interns and clerical staff.

·Overtime for personnel will be charged at 125% the above rates and Sundays and Holidays will be charged at 150% the above rates. Expenses connected with the work such as travel, vehicle rental, subsistence, lodging, etc., will be charged at cost. Outside consultants and materials will be charged at cost plus ten percent. Travel to locations outside the Duluth / Superior city limits will be charged at \$0.75 per mile for standard travel and \$1.25 per mile when towing a trailer. A minimum rate of ½ day will be charged for all equipment rentals.

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Consulting Engineers P.A.

General Terms and Conditions

1. AMI Consulting Engineers P.A. (AMI) shall perform the services defined in the attached AGREEMENT and shall invoice the CLIENT. Any estimate of cost to the CLIENT as stated in this AGREEMENT shall not be considered as a fixed price, but only an estimate (unless otherwise specifically stated in the AGREEMENT). AMI will provide additional services under the attached AGREEMENT as requested by the CLIENT and invoice the CLIENT for those additional services at standard rates.
2. Right of Entry. The CLIENT will provide for right of entry of AMI personnel and all necessary equipment, in order to complete the work. While AMI will take all reasonable precautions to minimize any damage to the property, it is understood by the CLIENT that in the normal course of work some damage may occur, the correction of which is not part of this AGREEMENT.
3. Retainer. The CLIENT shall submit a retainer as set out in the AGREEMENT at the time of a fully executed AGREEMENT. Services shall not begin until retainer and fully executed AGREEMENT are received. Retainer amount shall be applied to the last invoice upon completion of services.
4. Invoices. Invoices will be processed on a monthly basis, due within 30 calendar days of the invoice date (NET 30). CLIENT agrees to pay a finance charge of one and one-half percent (1.5%) per month, or the maximum rate allowed by law, which ever is less, on past due accounts. If collection of past due invoices becomes necessary, CLIENT agrees to pay AMI the cost of any court costs and reasonable attorney's fees associated with collecting monies due.
5. Ownership of Documents. All reports, field data, field notes, drawing, specifications, calculations, estimates and other documents prepared by AMI, as instruments of service, shall remain the property of AMI. CLIENT agrees that all reports and other work furnished to the CLIENT or his agents, which are not paid for, will be returned upon demand and will not be used by the CLIENT for any purpose whatsoever. The CLIENT agrees not to use surveying and engineering documents for purposes other than intended unless the use is approved by AMI. AMI will retain all pertinent records relating to the services performed for a period of five years following submission of the final invoice.
6. Standard of Care. Service performed by AMI under this AGREEMENT will be conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions. No other warranty, express or implied, is made.
7. Limitation of Liability. CLIENT agrees to limit AMI's liability to CLIENT and all construction contractors arising from AMI's professional acts, errors or omissions, such that the total aggregate liability of AMI to all these named shall not exceed AMI's total fee for the services rendered on this project.

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8. Insurance. AMI represents and warrants that it and its employees are protected by worker's compensation insurance and that AMI has such coverage under public liability and property damage insurance policies which AMI deems to be adequate. Certificates for all such policies of insurance shall be provided to CLIENT upon request. Within the limits and conditions of such insurance and the provisions of paragraph 7 above pertaining to limitation of liability, AMI agrees to indemnify and save Client harmless from and against any loss damage, or liability arising from any negligent acts by AMI, its agents, staff and consultants employed by it. AMI shall not be responsible for any loss, damage or liability arising from any acts by CLIENT, its agents, staff and other consultants employed by it.
9. Termination. This AGREEMENT may be terminated by either party upon fifteen (15) days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof. Such termination shall not be effective if that substantial failure has been remedied before expiration of the period specified in the written notice. In the event of termination, AMI shall be paid for services performed to the termination notice date plus reasonable termination expenses.
10. Disputes. In the event that a dispute should arise relating to the performance of or payment for the services to be provided under this AGREEMENT, and should that dispute result in litigation, it is agreed that AMI shall be entitled to recover all reasonable costs incurred in the claim, including staff time, court costs, attorney's fees and other claim-related expenses.
11. Assignments. This AGREEMENT and the rights and duties hereunder will not be assigned, subcontracted, or transferred by CLIENT, in whole or in part, without AMI's prior written approval.
12. Waivers. No waiver by either party of any default by the other party in the performance of any provision of this AGREEMENT will operate as, or be construed as, a waiver of any future default, whether like or of different character.
13. Force Majeure. Neither party to this AGREEMENT will be liable to the other party for delays in performing the Scope of Work or for the direct or indirect cost resulting from such delays, that may result from such delays, that may result from labor strikes, riots, war, acts of governmental authorities, ordinary weather conditions, catastrophe, or any other cause beyond the reasonable control or contemplation of either party.
14. Authorization to Proceed. Execution of this AGREEMENT by Client will be authorization for AMI to proceed with the Scope of Services, unless otherwise provided for in this AGREEMENT.
15. No Third Party Beneficiaries. This AGREEMENT gives no rights or benefits to anyone other than AMI and the CLIENT and has no third-party beneficiaries.
16. Jurisdiction. The law of the State of Minnesota shall govern the validity of this AGREEMENT, its interpretation and performance, and any other claims related to it.
17. Severability. If any of the provisions contained in this AGREEMENT are held for any reason to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability will not affect any other provision, and this AGREEMENT will be construed as if such invalid, illegal or unenforceable provision had never been contained herein.
18. Change Orders. Client may adjust the Scope of Services by either adding to or deleting from the services to be performed. If such adjustment increases or decreases the cost or time required for AMI to complete the Scope of Services, adjusted compensation and/or time will be mutually agreed upon. Additional services provided by AMI will be entitled to additional compensation or extension of time in conformity with the attached schedule of Fees.

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PROFESSIONAL ENGINEERING SERVICES AGREEMENT

ENGINEER & CITY OF DULUTH

THIS AGREEMENT, effective as of the date of attestation by the City Clerk, is made by and between the City of Duluth, Minnesota hereinafter referred to as the "City" and:

Name: AMI Consulting Engineers
Address: 91 Main St, Superior, WI 54880

hereinafter referred to as the "Engineer", in consideration of the mutual promises contained herein.

Payments hereunder, in the estimated amount of Forty-Nine Thousand Seven-Hundred Fifty and no/100ths Dollars (\$49,750.00) shall be made from Funding 450-030-5535; Project # CP450-Irvin; and Resolution No. 18-0XXXR passed on July 9, 2018.

The professional engineering services obtained by the City under this agreement concern the following described project hereinafter referred to as the "Project":

Project Number: CP450-Irvin
Project Name: Engineering Services for Temporary Relocation of the William A. Irvin
Project Description: Plan, coordinate and develop bid documents for the relocation of the SS William A. Irvin. Provide technical assistance and oversee the Contractor during the movement of the vessel from the Minnesota Slip to Fraser Shipyards and then during the return from Fraser to the MN Slip in the Spring Of 2019.

The professional engineering services to be provided under this agreement consist of those phases A through H checked below. A more particular description of each phase is contained in Section II, "Basic Services", of the agreement.

| <u>Phase</u> | <u>Description</u> |
|---------------|---|
| <u>X</u> | A. Study and Report Phase |
| <u>X</u> | B. Preliminary Survey Phase |
| <u>X</u> | C. Preliminary Design Phase |
| <u>X</u> | D. Final Design Phase |
| <u>X</u> | E. Bidding Phase |
| <u> </u> | F. Construction Survey and Layout Phase |
| <u>X</u> | G. Construction Administration and Inspection Phase |
| <u> </u> | H. Additional Services |

SECTION I. GENERAL

A. ENGINEER

The Engineer shall provide professional engineering services for the City in all phases of the Project to which this agreement applies, serve as the City's professional engineering representative for the Project as set forth below and shall give professional engineering consultation and advice to the City during the performance of services hereunder. All services provided hereunder shall be performed by the Engineer in accordance with generally accepted Engineering standards to the satisfaction of the City.

B. NOTICE TO PROCEED

The Engineer shall only begin performance of each Phase of work required hereunder upon receipt of a written Notice to Proceed by City representative with that Phase.

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C. TIME

The Engineer shall begin work on each successive phase promptly after receipt of the Notice to Proceed and shall devote such personnel and materials to the Project so as to complete each phase in an expeditious manner within the time limits set forth in Section II. Time is of the essence to this agreement.

D. CITY'S REPRESENTATIVE

The City's representative to the Engineer shall be the City Engineer or his or her designees assigned in writing.

E. ENGINEERING GUIDELINES

All work performed as part of this project shall conform to the most current edition of the Engineering Guidelines for Professional Engineering Services and Developments as approved by the City Engineer and on file in the office of the City Engineer.

F. SUBCONSULTANTS

Engineer may contract for the services of sub-consultants to assist Engineer in the performance of the services to be provided by Engineer hereunder but the selection of any sub-consultant to perform such services shall be subject to the prior written approval of the City Engineer. Engineer shall remain responsible for all aspects of any services provided by such sub-consultants to City under this Agreement. City shall reimburse Engineer for sub-consultant services under the categories of services to be provided by Engineer under Phases A through H as applicable and within the amounts allocated for such services pursuant to Section V.D below.

SECTION II. BASIC SERVICES

A. STUDY AND REPORT PHASE

 X Included in this agreement

 Not included in this agreement

The Engineer shall:

1) City's Requirements

Review available data and consult with the City to clarify and define the City's requirements for the Project.

2) Advise Regarding Additional Data

Advise the City as to the necessity of the City's providing or obtaining from others data or services of the types described in Section III.C, in order to evaluate or complete the Project and, if directed by the City's representative, act on behalf of the City in obtaining other data or services.

3) Technical Analysis

Provide analysis of the City's needs, planning surveys, site evaluations, and comparative studies of prospective sites and solutions.

4) Economic Analysis

Provide a general economic analysis of various alternatives based on economic parameters and assumptions provided by the City.

5) Report Preparation

Prepare a report containing schematic layouts, sketches and conceptual design criteria with appropriate exhibits to indicate clearly the considerations involved and the alternative solutions available to the City and setting forth the Engineer's findings and recommendations with opinions of probable total costs for the Project, including construction cost, contingencies, allowances for charges of all professionals and consultants, allowances for the cost of land and rights-of-way, compensation for or damages to properties and interest and financing charges (all of which are hereinafter called "Project Costs").

6) Report Presentation

Furnish three copies of the report and present and review the report in person with the City as the City

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Representative shall direct.

7) Supplementary Duties

The duties and responsibilities of Engineer during the Study and Report Phase shall also include any additional duties and responsibilities to be provided pursuant to the Engineer's proposal attached as Exhibit B.

8) Completion Time

The Study and Report Phase shall be completed and report submitted by July 31, 2018.

B. PRELIMINARY SURVEY PHASE

Included in this agreement

Not included in this agreement

After written authorization by the City's representative to proceed with the preliminary survey phase, the Engineer shall:

1) General

Perform topographic survey as necessary to prepare the design and provide Construction Survey and Layout as described in Section II.F

2) Boundary Survey

Perform boundary survey if checked.

3) Document Presentation

Furnish a CADD file of the survey base map to the City. Files shall be in the software specified in the Engineering Guidelines for Professional Engineering Services and Developments described in Section I.E.

4) Supplementary Duties

The duties-responsibilities of the Engineer during the preliminary survey phase shall also include any additional duties and responsibilities to be provided pursuant to the Engineer's proposal attached as Exhibit B.

5) Completion Time

The preliminary survey phase shall be completed and submitted by July 31, 2018.

C. PRELIMINARY DESIGN PHASE

Included in this agreement

Not included in this agreement

After written authorization by the City's Representative to proceed with the Preliminary Design Phase, the Engineer shall:

1) Preliminary Design Documents

Prepare preliminary design documents consisting of final design criteria, preliminary drawings and outline specifications.

2) Revised Project Costs

Based on the information contained in the preliminary design documents, submit a revised opinion of probable Project costs.

3) Preparation of Grants; Environmental Statements

Preparation of applications and supporting documents for governmental grants, loans or advances in connection with the Project, preparation or review of environmental assessments and impact statements; review and evaluation of the effect on the design requirements of the Project of any such statements and documentation prepared by others; and assistance in obtaining approvals of authorities having jurisdiction

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over the anticipated environmental impact of the Project.

4) Renderings and Models

Providing renderings or models for the City's use.

5) Economic Analysis

Investigations involving detailed consideration of operations, maintenance and overhead expenses; providing value engineering during the course of design; the preparation of feasibility studies, cash flow and economic evaluations, rate schedules and appraisals; assistance in obtaining financing for the Project; evaluating processes available for licensing and assisting the City in obtaining licensing; detailed quantity surveys of material, equipment and labor; and audits of inventories required in connection with construction performed by the City.

6) Document Presentation

Furnish three copies of the above preliminary design documents and present and review such documents in person with the City as the City Engineer may direct.

7) Supplementary Duties

The duties and responsibilities of the Engineer during the Preliminary Design Phase shall also include any additional duties and responsibilities to be provided pursuant to the Engineer's proposal attached as Exhibit B.

8) Completion Time

The Preliminary Design Phase shall be completed and report or plan submitted by July 31, 2018.

D. FINAL DESIGN PHASE

Included in this agreement

Not included in this agreement

1) Drawings and Specifications

On the basis of the accepted preliminary design documents and the revised opinion of probable Project costs, prepare for incorporation in the contract documents Construction Plans to show the character and extent of the Project and specifications.

2) Approvals of Governmental Entities

Furnish to the City such documents and design data as may be required for, and prepare the required documents so that the City may apply for approvals and permits of such governmental authorities as have jurisdiction over design criteria applicable to the Project, and assist in obtaining such approvals by participating in submissions to and negotiations with appropriate authorities.

3) Adjusted Project Costs

Advise the City of any adjustments to the latest opinion of probable Project costs, identify cause of change and furnish a revised opinion of probable Project cost based on the drawings and specifications.

4) Contract Document Preparation

Prepare for review and approval by the City, its Attorney and other advisors, contract agreement forms, general conditions and supplementary conditions and (where requested) bid forms, invitations to bid and instructions to bidder, including for federally funded Projects, all documentation, including wage determinations, in order to comply with Davis-Bacon Act or City code requirements, and assist in the preparation of other related contract documents. To the extent possible, the Engineer will follow the document format supplied by the City and use the standard terms and conditions supplied by the City in preparation of these documents.

5) Real Estate Acquisition: Legal Description

Based on preliminary design documents, furnish a legal description and recordable reproducible 8-1/2" X 11" plat of each parcel of real estate in which the City must acquire an interest in order to proceed with construction of the Project.

6) Document Presentation

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Furnish three copies of the above documents and present and review them in person with the City.

7) Supplementary Duties

The duties and responsibilities of the Engineer during the Final Design Phase shall also include any additional duties and responsibilities to be provided pursuant to the Engineer's proposal attached as Exhibit B.

8) Completion Time

The Final Design Phase shall be completed and contract documents submitted by September 30, 2018.

E. BIDDING PHASE

Included in this agreement

Not included in this agreement

The Engineer shall:

1) Assist in Bidding

Assist the City in obtaining bids for each separate City contract for construction, materials, equipment and services.

2) Advise Regarding Contractors and Subcontractors

Consult with and advise the City as to the acceptability of subcontractors and other persons and organizations proposed by the City's contractor(s) (hereinafter called "Contractor(s)" for those portions of the work as to which such acceptability is required by the bidding documents).

3) Consult Regarding Substitutes

Consult with and advise the City as to the acceptability of substitute materials and equipment proposed by the contractor(s) when substitution prior to the award of contracts is allowed by the bidding documents.

4) Evaluation of Bids

Assist the City in evaluating bids or proposals and in assembling and awarding contracts.

5) Supplementary Duties

The duties and responsibilities of the Engineer during the Bidding Phase shall also include any additional duties and responsibilities to be provided pursuant to the Engineer's proposal attached as Exhibit B.

6) Completion Time

The bidding phase shall be completed by September 30, 2018.

F. CONSTRUCTION SURVEY AND LAYOUT PHASE

Included in this agreement

Not included in this agreement

1) General

This phase of work may or may not be performed in conjunction with Phase G, "Construction Administration and Inspection Phase" of this agreement. Inclusion of this phase in the agreement does not imply that services identified under Phase G are to be provided unless specifically indicated in this agreement.

2) Duties

The Engineer shall provide horizontal and vertical control line and grade to enable construction of the improvement as depicted in the Project plans. The number of control points to be established by the Engineer shall be sufficient to permit the construction contractor to construct the improvement within the construction tolerances established in the Project specifications. In addition, the number of control points shall be consistent with standard engineering practice.

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3) Accuracy

The Engineer shall provide the horizontal and vertical control points within the same measurement tolerances as the construction tolerances established in the Project specifications. The Engineer shall be responsible for the accuracy of the control points which are established. The Engineer shall be responsible for costs which may result from errors in placement of control points. The Engineer shall be required to establish control points at Engineer's costs only one time. Control points which are lost, damaged, removed or otherwise moved by the Contractor or others shall be promptly replaced by the Engineer and costs for such replacement shall be computed on a time and materials basis, and reimbursed by the City. The Engineer shall take all reasonable and customary actions to protect the control points established by the Engineer.

4) Supplementary Duties

The duties and responsibilities of the Engineer during the construction survey and layout phase shall also include any additional duties and responsibilities to be provided pursuant to the Engineer's proposal attached as Exhibit B.

5) Completion Time

The construction survey & layout phase shall be completed by n/a.

G. CONSTRUCTION ADMINISTRATION AND INSPECTION PHASE

Included in this agreement

Not included in this agreement

1) General Duties

Consult with and advise the City and act as its representative as provided herein and in the General Conditions of the construction contract for the Project. This phase of the work may or may not be performed in conjunction with Phase F "Construction Survey and Layout Phase" of this agreement. Inclusion of this phase in the agreement does not imply that services identified under Phase F are to be provided unless specifically indicated in this agreement.

2) Construction Inspection and Reporting

Make visits to the site with sufficient frequency at the various stages of construction to observe as an experienced and qualified design professional the progress and quality of the executed work of the contractor(s) and to insure that such work is proceeding in accordance with the contract documents. During such visits and on the basis of on-site observations, the Engineer shall keep the City informed of the progress of the work, shall endeavor to guard the City against defects and deficiencies in such work and may disapprove or reject work failing to conform to the contract documents.

3) Warranty Inspection

Eleven months following construction completion, conduct an inspection to document any items to be repaired by the contractor under the conditions of the construction contract warranty. Submit work to be corrected to the Contractor and the City.

4) Review of Technical and Procedural Aspects

Review and approve (or take other appropriate action in respect to Shop Drawings), the results of tests and inspections and other data which each contractor is required to submit, determine the acceptability of substitute materials and equipment proposed by the contractor(s), and receive and review (for general content as required by the specifications) maintenance and operating instructions, schedules, guarantees, bonds and certificates of inspection which are to be assembled by the contractor(s).

5) Contract Documents

Receive from each contractor and review for compliance with contract documents all required document submissions including but not limited to performance and payment bonds, certificates of insurance report forms required by any City, State or Federal law or rule or regulation and submit the forms to the City for final approval.

6) Conferences and Meetings

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Attend meetings with the contractor, such as preconstruction conferences, progress meetings, job conferences and other Project-related meetings, and prepare and circulate copies of the minutes thereof including to the City.

7) Records

- a) Maintain orderly files for correspondence, reports of job conferences, shop drawings and samples, reproductions of original contract documents, including all work directive changes, addenda, change orders, field orders, additional drawings issued subsequent to the execution of the contract, the Engineer's clarifications and interpretations of the contract documents, progress reports, and other Project-related documents.
- b) Keep a diary or log book, recording the contractor's hours on the job site, weather conditions, data relative to questions of work directive changes, change orders, or changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in more detail, as in the case of observing test procedures and send copies to the City. Take multiple photographs of the Work and keep a log and file of the photos. Specifically maintain records of acceptance and rejection of materials and workmanship.
- c) Record names, addresses and telephone numbers of all the contractors, subcontractors, and major suppliers of materials and equipment.

8) Reports

- a) Furnish the City periodic reports, as required, on progress of the work and of the contractor's compliance with the progress schedule and schedule of shop drawings and sample submittals.
- b) Consult with the City, in advance of scheduled major tests, inspections, or start of important phases of the Work.
- c) Draft proposed change orders and work directive changes, obtaining back-up material from the contractor, and make recommendations to the City regarding change orders, work directive changes and field orders.
- d) Report immediately to the City upon the occurrence of any accident.

9) Contract Interpretation, Review of Quality of Work

Issue all instruction of the City to the contractor(s); issue necessary interpretations and clarifications of the contract Documents and in connection therewith prepare change orders as required, subject to the City's approval; have authority, as the City's representative, to require special inspection or testing of the work; act as initial interpreter of the requirements of the contract documents and judge of the acceptability of the work there under and make decisions on all claims of the contractor(s) relating to the acceptability of the work or the interpretation of the requirements of the contract documents pertaining to the execution and progress of the work.

10) Change Orders and Revisions

Prepare change orders to reflect changes in the Project requested or approved by the City, evaluate substitutions proposed by the contractor(s) and make revisions to drawings and specifications occasioned thereby, and provide any additional services necessary as the result of significant delays, changes or price increases occurring as a direct or indirect result of material, equipment or energy shortages.

11) Review of Applications for Payment

Based on the Engineer's on-site observations as an experienced and qualified design professional and on review of applications for payment and the accompanying data and schedules, determine the amount owing to the contractor(s) and recommend in writing payments to the contractor(s) in such amounts; such recommendations of payment will constitute a representation to the City, based on such observations and review, that the work has progressed to the point indicated, that, to the best of the Engineer's knowledge, information and belief, the quality of such work is in accordance with the contract documents (subject to an evaluation of such work as a functioning Project upon substantial completion, to the results of any subsequent tests called for in the contract documents, and to any qualifications stated in his recommendation), and that payment of the amount recommended is due the contractor(s).

12) Determination of Substantial Completion

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Conduct an inspection to determine if the Project is substantially complete and a final inspection to determine if the work has been completed in accordance with the contract documents and if each contractor has fulfilled all of his obligations there under so that the Engineer may recommend, in writing, final payment to each contractor and may give written notice to the City and the contractor(s) that the work is acceptable (subject to any conditions therein expressed).

13) Authority and Responsibility

The Engineer shall not guarantee the work of any contractor or subcontractor, shall have no supervision or control as to the work or persons doing the work, shall not have charge of the work, shall not be responsible for safety in, on, or about the job-site or have any control of the safety or adequacy of any equipment, building component, scaffolding, supports, forms or other work aids. If the Engineer determines that there are deficiencies in materials or workmanship on the Project, or otherwise deems it to be in the best interest of the City to do so, the Engineer shall be responsible to stop any contractor or subcontractor from performing work on the Project, until conditions giving rise to this need, therefore, are rectified.

14) Engineer Not Responsible for Acts of Contractor

The Engineer shall not be responsible for the supervision or control of the acts or omissions or construction means, methods or techniques of any contractor, or subcontractor, or any of the contractor(s)' or subcontractors' or employees or any other person (except the Engineer's own employees and agents) at the site or otherwise performing any of the contractor(s) work; however, nothing contained in this paragraph shall be construed to release the Engineer from liability for failure to properly perform duties undertaken by him in these contract documents or this agreement.

15) Preparation of Record Drawings

The Engineer shall prepare a set of record drawings in accordance with the Engineering Guidelines for Professional Engineering Services and Development described in Section I.E.

16) Manuals

The Engineer shall furnish operating and maintenance manuals; protracted or extensive assistance in the utilization of any equipment or system (such as initial start-up, testing, and adjusting and balancing); and training personnel for operation and maintenance.

17) Supplementary Duties

The duties and responsibilities of the Engineer during the construction administration and inspection phase shall also include any additional duties and responsibilities to be provided pursuant to the Engineer's proposal attached as Exhibit B.

18) Completion Time

The construction administration and inspection phase shall be completed by June 30, 2019.

H. ADDITIONAL SERVICES

Included in this agreement

Not included in this agreement

If authorized in writing by the City, the Engineer shall furnish or obtain other additional services of the following types which are not considered normal or customary basic services except to the extent specifically provided in Section II; these will be paid for by the City as indicated in Section V.

1) Significant Changes

Services resulting from significant changes in extent of the Project or its design including, but not limited to, changes in size, complexity, City's schedule or character of construction or method of financing; and revising previously accepted studies, reports, design documents or contract documents when such revisions are due to causes beyond the Engineer's control.

2) Alternate Bid Documents

Preparing documents for alternate bids requested by the City for contractor(s)' work which is not executed or documents for out-of-sequence work.

Exhibit A

3) Services Resulting from Acts Beyond Engineer's Control

Additional or extended services during construction made necessary by (1) work damaged by fire or other cause during construction, (2) a significant amount of defective or neglected work of the contractor(s) as determined by the city representative, (3) prolongation of the contract time due to delays by the contractor, (4) acceleration of the progress schedule involving services beyond normal working hours, and (5) default by the contractor.

4) Services After Construction Phase

Services after completion of the construction phase excluding the warranty inspection.

5) Legal Proceedings

Preparing to serve or serving as a consultant or witness for the City in any litigation, public hearing or other legal or administrative proceeding involving the Project (except as agreed to under Basic Services).

6) Services Not Otherwise Provided

Additional services in connection with the Project, including services normally furnished by the City and services not otherwise provided for implicitly or by fair implication of this agreement.

7) Supplementary Duties

The following additional services have been identified and are included in the Additional Services Phase any additional duties and responsibilities to be provided pursuant to the Engineer's proposal attached as Exhibit B.

8) Completion Time

The time limit to complete additional services cannot be fully specified in this agreement because the full nature and full extent of additional services are unknown.

SECTION III. CITY'S RESPONSIBILITIES

A. FURNISH REQUIREMENTS AND LIMITATIONS

Provide all criteria and full information as to the City's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expendability, economic parameters and any budgetary limitations; and furnish copies of all design and construction standards which the City will require to be included in the Drawings and Specifications.

B. FURNISH INFORMATION

Assist the Engineer by placing at the Engineer's disposal all available information reasonably known to and in possession of the City.

C. REVIEW DOCUMENTS

Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by the Engineer.

D. OBTAIN APPROVALS AND PERMITS

Furnish approvals and permits from all governmental authorities having jurisdiction over the Project and such approvals and consents from others as may be necessary for completion of the Project.

E. ACCOUNTING, LEGAL AND INSURANCE SERVICE

Provide such accounting, independent cost estimating and insurance counseling services as may be required for the Project, such auditing service as the City may require to ascertain how or for what purpose any contractor has used the monies paid to him under the construction contract, and such inspection services as the City may require to ascertain that the contractor(s) are complying with any law, rule or regulation applicable to their performance of the work except as otherwise provided in Section II.

F. NOTIFY THE ENGINEER OF DEFECTS OR DEVELOPMENT

Give prompt written notice to the Engineer whenever the City observes or otherwise becomes aware of any development that affects the scope or timing of the Engineer's services, or any defect in the work of the contractor(s).

Exhibit A

G. COSTS OF THE CITY'S RESPONSIBILITIES

Bear all costs incident to compliance with the requirements of this Section III.

SECTION IV. GENERAL CONSIDERATIONS

A. SUCCESSORS AND ASSIGNS

The City and the Engineer each binds their respective partners, successors, executors, administrators and assigns to the other party of this agreement and to the partners, successors, executors, administrators, and assigns of such other party, in respect to all covenants of this agreement; the Engineer shall not assign, sublet, or transfer their respective interests in this agreement without the written consent of the City. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of any public body which may be a party hereto, nor shall it be construed as giving any rights or benefits hereunder to anyone other than the City and the Engineer.

B. OWNERSHIP OF DOCUMENTS

All drawings, specifications, reports, records, and other work product developed by the Engineer in connection with this Project shall remain the property of the City whether the Project is completed or not. Reuse of any of the work product of the Engineer by the City on extensions of this Project or any other Project without written permission of the Engineer shall be at the City's risk and the City agrees to defend, indemnify and hold harmless the Engineer from all damages and costs including attorney fees arising out of such reuse by the City or others acting through the City.

C. ESTIMATES OF COST (COST OPINION)

Estimates of construction cost provided are to be made on the basis of the Engineer's experience, qualifications and the best of their professional judgment, but the Engineer does not guarantee the accuracy of such estimates as compared to the contractor's bids or the Project construction cost.

D. INSURANCE

- 1) Engineer shall provide the following minimum amounts of insurance from insurance companies authorized to do business in the state of Minnesota unless Engineer shall have successfully demonstrated to the City Attorney, in the reasonable exercise of his or her discretion that such insurance is not reasonably available in the market. If the Engineer demonstrates to the reasonable satisfaction of the City Attorney that such insurance requires hereunder is not reasonably available in the market, the City Attorney may approve an alternative form of insurance which is reasonably available in the market which he or she deems to provide the highest level of insurance protection to the city which is reasonably available.
 - a) Workers' compensation insurance in accordance with the laws of the State of Minnesota.
 - b) Public Liability Insurance and Automobile Liability Insurance with limits not less than **\$1,500,000** Single Limit, and twice the limits provided when a claim arises out of the release or threatened release of a hazardous substance; shall be in a company approved by the city of Duluth; and shall provide for the following: Liability for Premises, Operations, Completed Operations, Independent Contractors, and Contractual Liability.
 - c) 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, Engineer hereby commits to provide at least 60 days' notice prior to any change to the Professional Liability Insurance policy or coverage ; and in event of any change, Engineer 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.
 - d) **City of Duluth shall be named as Additional Insured** under the Public Liability and Automobile Liability, or as an alternate, Engineer may provide Owners-Contractors Protective policy, naming himself and City of Duluth. Engineer shall also provide evidence of Statutory Minnesota Workers' Compensation Insurance. Engineer to provide Certificate of Insurance evidencing such coverage with notice to City of cancellation in accordance with the

Exhibit A

provisions of the underlying insurance policy included. The City of Duluth does not represent or guarantee that these types or limits of coverage are adequate to protect the Engineer's interests and liabilities.

- e) If a certificate of insurance is provided, the form of the certificate shall contain an unconditional requirement that the insurer notify the City without fail not less than the notice provisions contained in the underlying insurance policy or policies. In addition, Engineer commits to provide to City notice to City at least 30 days prior to any change of the policy or coverages.
- 2) The insurance required herein shall be maintained in full force and effect during the life of this Agreement and shall protect Engineer, its employees, agents and representatives from claims and damages including but not limited to personal injury and death and any act or failure to act by Engineer, its employees, agents and representatives in the performance of work covered by this Agreement.
- 3) Certificates showing that Engineer is carrying the above described insurance in the specified amounts shall be furnished to the City prior to the execution of this Agreement and a certificate showing continued maintenance of such insurance shall be on file with the City during the term of this Agreement.
- 4) The City shall be named as an additional insured on each liability policy other than the professional liability and the workers' compensation policies of the Engineer.
- 5) The certificates shall provide that the policies shall not be cancelled during the life of this Agreement without advanced notice being given to the City at least equal to that provided for in the underlying policy of insurance.
- 6) Except as provided for in Section IV D.1.d) above, Engineer hereby commits to provide notice to City at least 30 days in advance of any change in the insurance provided pursuant to this Section IV or in advance of that provided for in the underlying insurance policy or policies whichever is longer. For the purposes of Section IV. D of this Agreement, the term, "changed", shall include cancellation of a policy of insurance provided hereunder and any modification of such policy which reduces the amount of any coverage provided thereunder below the amounts required to be provided hereunder or otherwise reduces the protections provided under such policy to City.

E. HOLD HARMLESS

The Engineer agrees that it shall defend, indemnify and hold harmless the City of Duluth and its officers, agents, servants and employees from any and all claims including claims for contribution or indemnity, demands, suits, judgments, costs and expenses asserted by any person or persons including agents or employees of the City of Duluth or the Engineer by reason of death or injury to person or persons or the loss or damage to property arising out of, or by reason of, any act, omission, operation or work of the Engineer or its employees while engaged in the execution or performance of services under this Agreement except to the extent that such indemnification is specifically prohibited by Minnesota Statutes Chapter 337 or Section 604.21. Engineer shall not be required to indemnify City for claims of liability arising out of the sole negligent or intentional acts or omission of the City but shall be specifically required to and agrees to defend and indemnify City in all cases where claims of liability against the City arise out of acts or omissions which are passive or derivative of the negligent or intentional acts or omissions of Engineer, including but not limited to, the failure of the City to supervise, the failure to warn, the failure to prevent such acts or omission by Engineer and any other such source of liability. On ten days' written notice from the City of Duluth, the Engineer shall appear and defend all lawsuits against the City of Duluth growing out of such injuries or damages.

F. TERMINATION

- 1) This agreement may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligation under this agreement through no fault of the terminating party; provided that no such termination may be affected unless the other party is given not less than fifteen (15) calendar days' prior written notice (delivered by certified mail, return receipt requested) of intent to terminate.
- 2) This agreement may be terminated in whole or in part in writing by the City for its convenience; provided that the Engineer is given (1) not less than fifteen (15) calendar days' prior written notice (delivered by certified mail, return receipt requested) of intent to terminate and (2) an opportunity for consultation with the City prior to termination.

Exhibit A

3) Upon receipt of a notice of intent to terminate from the City pursuant to this agreement, the Engineer shall (1) promptly discontinue all services affected (unless the notice directs otherwise), and (2) make available to the City at any reasonable time at a location specified by the City all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have accumulated by the Engineer in performing this agreement, whether completed or in process.

4) Upon termination pursuant to this agreement, the City may take over the work and prosecute the same to completion by agreement with another party or otherwise.

G. LAWS, RULES AND REGULATIONS

The Engineer agrees to observe and comply with all laws, ordinances, rules and regulations of the United States of America, State of Minnesota, the City of Duluth and their respective agencies and instrumentalities which are applicable to the work and services to be performed hereunder.

H. INDEPENDENT CONTRACTOR STATUS

Nothing contained in this agreement shall be construed to make the Engineer an employee or partner of the City. The Engineer shall at all times hereunder be construed to be an independent contractor.

I. FEDERAL FUNDING

If Federal Funds (i.e. HUD, FEMA, Revenue Sharing) are utilized as a source of Project funding, the Engineer shall abide by the terms of all Federal requirements in the performance of duties hereunder.

J. AMENDMENT OF AGREEMENT

This agreement shall be amended or supplemented only in writing and executed by both parties hereto.

SECTION V. PAYMENT

A. BASIS OF BILLING

City shall pay the Engineer an amount based on hourly rates not to exceed \$[Click or tap here to enter text.](#) for all services rendered under Section II Phases A through H, including any and all Project-related expenses such as travel, reproduction of reports and drawings, tolls, mileage, etc. For the purposes of this agreement, the principals and employees of the Engineer and their hourly rates are set forth in Exhibit A.

B. PAYMENT FOR WORK COMPLETED

1) Monthly progress payments may be requested by the Engineer for work satisfactorily completed and shall be made by the City to the Engineer as soon as practicable upon submission of statements requesting payment by the Engineer to the City. When such progress payments are made, the City may withhold up to five percent (5%) of the vouchered amount until satisfactory completion by the Engineer of all work and services within a phase called for under this agreement. When the City determines that the work under this agreement for any specified phase hereunder is substantially complete, it shall release to the Engineer any retainage held for that phase.

2) No payment request made pursuant to subparagraph 1 of this Section V shall exceed the estimated maximum total amount and value of the total work and services to be performed by the Engineer under this agreement without the prior authorization of the City. These estimates have been prepared by the Engineer and supplemented or accompanied by such supporting data as may be required by the City.

3) Upon satisfactory completion of the work performed hereunder, and prior to final payment under this agreement, and as a condition precedent thereto, the Engineer shall execute and deliver to the City a release of all claims against the City arising under or by virtue of this agreement.

4) In the event of termination by City under Section IV.F., upon the completion of any phase of the Basic Services, progress payments due Engineer for services rendered through such phase shall constitute total payment for such services. In the event of such termination by City during any phase of the Basic Services, Engineer also will be reimbursed for the charges of independent professional associates and consultants employed by Engineer to render Basic Services, and paid for services rendered during that phase on the basis of hourly rates defined in Exhibit A of this agreement for services rendered during that phase to date of termination by Engineer's principals and employees engaged directly on the Project. In the event of any

Exhibit A

such termination, Engineer will be paid for all unpaid additional services plus all termination expenses. Termination expenses mean additional expenses directly attributable to termination, which, if termination is at City's convenience, shall include an amount computed as a percentage of total compensation for basic services earned by Engineer to the date of termination as follows: 10% of the difference between the amount which the Engineer has earned computed as described in paragraphs A and B of this section and the maximum payment amount described in paragraph D of this section. The above applies only if termination is for reasons other than the fault of the Engineer.

C. STANDARD PAYMENT

The Engineer shall complete all services described in Section II.A through G including all attachments to Section II for an amount including all Project-related expenses for the estimated amounts shown hereunder:

| <u>Section II</u> | <u>Description</u> | <u>Estimated Compensation</u> |
|-------------------|--|-------------------------------|
| A. | Study and Report Phase | \$ 11,450.00 |
| B. | Preliminary Survey Phase | \$ 7,600.00 |
| C. | Preliminary Design Phase | \$ 3,900.00 |
| D. | Final Design Phase | \$ 14,500.00 |
| E. | Bidding Phase | \$ 3,400.00 |
| F. | Construction Survey and Layout Phase | \$ 0 |
| G. | Construction Administration and Inspection Phase | \$ 8,900.00 |
| | TOTAL | \$ 49,750.00 |

The maximum compensation for all phases A through G shall not exceed Forty-Nine Thousand Seven Hundred and Fifty and no/100ths Dollars

D. PAYMENT FOR ADDITIONAL SERVICES

City shall pay the Engineer for all additional services rendered under Section II.H an amount based on hourly rates shown in Exhibit A for services rendered by principals and employees assigned to the Project. The maximum payment described in Section V.C shall not apply to additional services.

The Engineer and City agree that the full extent of additional services may be unknown. Those additional services which have been identified are described in Section II.H, and that payment for those additional services is estimated to be \$49,750.00.

This agreement is made between the City and the Engineer entered into on the last date below written. In witness, the parties have executed this agreement.

E. TOTAL NOT TO EXCEED:

All payments under this Contract are not to exceed \$49,750.00 payable under fund 450-030-5535; CP450-Irvin.

SECTION VI. SPECIAL PROVISIONS

The following exhibits are attached to and made part of this agreement:

- 1) Exhibit A, Engineer's Hourly Rates
- 2) Exhibit B, Engineer's Proposal

In the event of a conflict between the agreement and any Exhibit, the terms of the Agreement will be controlling.

SECTION VII. 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.

Exhibit A

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

CITY OF DULUTH-Client

AMI CONSULTING ENGINEERS

By: _____
Mayor

By: _____

Attest:

Its: _____
Title of Representative

By: _____
City Clerk

Date: _____

Date: _____

Countersigned:

City Auditor

Approved as to Form:

City Attorney



Consulting Engineers P.A.

FEE SCHEDULE - CONFIDENTIAL

Effective Date: January 19, 2018

The compensation of *AMI Consulting Engineers, PA* for professional services is based upon hourly rates as indicated below.

| STAFF CLASSIFICATION | HOURLY RATE |
|--------------------------------|-------------|
| Principal Engineer | 200 |
| Engineer/Specialist III | 140-180 |
| Engineer/Specialist II | 115-135 |
| Engineer/Specialist I | 95-110 |
| Health & Safety Director | 120 |
| Staff Professional III | 90-100 |
| Staff Professional II | 80-90 |
| Staff Professional I | 70-80 |
| Scientist I/II/III | 65/75/85 |
| Technician III | 95-115 |
| Technician II | 75-90 |
| Technician I | 50-70 |
| Survey Crew | 150-180 |
| Marine Surveyor | 115 |
| 3 Man Dive Team | 380 |
| 4 Man Dive Team | 450 |
| EQUIPMENT | RATE |
| 22' Hewescraft Boat | 325/day |
| 17.5' Waterman Boat, 20' Barge | 150/day |
| Bathymetric Survey Package | 325/day |
| Sidescan Survey Package | 250/day |
| Survey Boat | 250/day |

·Engineer/Specialist classification includes department managers, project managers, licensed engineers, engineers in training, graduate engineers, permitting specialists & registered land surveyor.

·Staff Professional classification includes mid level geologist, scientist, water resource professional, soil scientist and environmental consulting professionals.

·Scientist classification includes junior level geologist, scientist, water resource professional, soil scientist and environmental consulting professionals.

·Technician classification includes CADD and GIS operators, surveyors, marine surveyors, certified bridge inspectors, interns and clerical staff.

·Overtime for personnel will be charged at 125% the above rates and Sundays and Holidays will be charged at 150% the above rates. Expenses connected with the work such as travel, vehicle rental, subsistence, lodging, etc., will be charged at cost. Outside consultants and materials will be charged at cost plus ten percent. Travel to locations outside the Duluth / Superior city limits will be charged at \$0.75 per mile for standard travel and \$1.25 per mile when towing a trailer. A minimum rate of ½ day will be charged for all equipment rentals.



June 25, 2018

Mr. Erik Birkland
City of Duluth
1532 West Michigan Street
Duluth, MN 55806

Re: Relocation of William A. Irvin - Proposal
AMI Project # 181078

Mr. Birkland:

This proposal is written at the request of the City of Duluth (City) for AMI Consulting Engineers, PA (AMI) to plan, coordinate and develop bid documents for the relocation of the vessel SS William A. Irvin (Irvin) from its current location in MN Slip to Fraser Shipyards in Superior, WI in the fall of 2018. The Irvin will be returned to MN Slip in the spring of 2019. AMI will also provide technical assistance and oversee the Contractor during the movement of the vessel.

Background Information

The sediment located at the base of MN Slip, where the Irvin is currently located, is contaminated. The Minnesota Pollution Control Agency (MPCA) plans to remediate the slip by regrading the bottom of the slip to one elevation and then capping the contaminates with clean granular fill. Prior to the remediation, the City has agreed to relocate the Irvin outside of the slip, so it will not interfere with the MPCA remediation process.

Scope of Work

The process to remove the vessel from the slip is very complicated and will require participation from several different parties including, but not limited to, the City, DECC, United States Army Corp of Engineers (USACE), United States Coast Guard (USCG) & Fraser Shipyards (Fraser). AMI will coordinate with all parties to develop a clearly defined bid package that identifies all of the potential risks and methods to minimize these risks. As part of this project AMI proposes to complete the following items summarized below:

- General Coordination & Meetings with Interested Parties
 - AMI will attend weekly meetings with all interested parties throughout the process of moving the vessel. Included in this item will be a two-day sit down with all parties to assess the risks and measures to be implemented to reduce these risks.
- Survey of Bridge Opening
 - To move the Irvin out of MN Slip, the vessel will need to pass through a narrow opening in a pedestrian bridge which spans the opening of the slip. This opening has already been surveyed by two separate parties. However, the information gathered by these two different parties conflict with each other. Due to the critical nature of this information, AMI proposes to re-survey the opening between the bridge abutments and the location of the steel members of the deck to determine the actual available room for the Irvin.
- Structural Analysis & Inspection of Bridge Abutment
 - The abutments of the pedestrian bridge will be at a high risk of damage during the movement of the vessel. To minimize this risk, AMI proposes to analyze the existing structures to determine the allowable lateral loads. From this information, AMI will determine if and what kind of protection system will be necessary. AMI will also perform an underwater inspection of the abutments to determine if the existing structural drawings are accurate.

Exhibit A

- Temporary Mooring Design & Layout (*partially completed, then cancelled*)
 - Once the Irvin is out of the slip, the vessel will be relocated to the Harbor dock wall near the DECC and the Great Lakes Aquarium. However, currently there are not adequate structures at that location to properly moor the vessel. AMI proposes to analyze the mooring of the vessel to determine how the mooring lines of the vessel should be arranged and what structures will be required to resist the mooring forces.
- Irvin Relocation Planning Bid Documents
 - AMI will develop bid documents, so the City can advertise the project to potential Contractors. AMI will work with the City, DECC, USACE, and USCG to develop a tow plan & specifications that identify all of the risks and means to minimize those risks. Bid documents for the installation of the additional bollards for the mooring will also be provided at the temporary location of the Irvin.
- Cost Estimations (*Removed further cost estimations after 6/18/18*)
 - AMI will provide and present cost estimations to the City and the DECC to relocate the Irvin. Cost estimations will summarize the entire scope of the project and will be broken down to identify each item covered.
- Bidding Services
 - During the bidding of the project, AMI will assist the City with the bidding process and answering any questions from Contractors which may arise. AMI will attend a pre-bid meeting where the scope of the project will be presented to Contractors. After bids have been received, AMI will assist the City with selecting a qualified Contractor.
- Construction Administration
 - Once a Contractor is selected, AMI will coordinate with the Contractor and City to ensure that the Irvin is relocated safely and according to the project specifications. AMI will attend and run coordination meetings prior to the relocation process to ensure all interested parties have a complete understanding of the schedule & scope of work.

Proposed Fees

AMI will provide the services described above on an Hourly Not to Exceed Basis for **Forty-Nine Thousand Seven-Hundred Fifty Dollars (\$49,750.00)** with the following breakdown:

- General Coordination & Meetings with Interested Parties = **\$11,450.00**
- Survey of Bridge Opening = **\$4,050.00**
- Structural Analysis & Inspection of Bridge Abutments = **\$3,550.00**
- Temporary Mooring Design & Layout = **\$3,900.00**
- Irvin Relocation Planning and Bid Documents = **\$13,900.00**
- Cost Estimations = **\$600.00**
- Bidding Services = **\$3,400.00**
- Construction Administration = **\$8,900.00**

AMI will not exceed these fees without your approval. Additional services beyond those outlined above may be provided at your request and will be billed per attached AMI hourly rates of compensation. If you have any questions or comments or would like additional information, please contact AMI at (715) 718-2193 ext. 17.

Respectfully Submitted,



Chase Dewhirst, PE
Marine Engineering Manager

Enclosed: AMI 2018 Hourly Rates of Compensation & AMI General Terms and Conditions