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November 9, 2022



Letter Proposal

Mike Gitter
Racine Water and Wastewater Utilities
City Hall Annex Room 227
800 Center Street
Racine, WI 53403

SID 97944

Subject: Proposed Scope of Work and Fee Estimate for North Main and Goold Relief Sewer Design

Dear Mr. Gitter:

In accordance with your request, Brown and Caldwell is pleased to present this proposal for providing design services for the North Main and Goold Relief Sewer Project (which is Alternative C2 from the North Main and Goold Preliminary Engineering Study dated March 16, 2022). This project will provide critical redundancy to the 90-year-old Zoo Interceptor sewer for times when the Zoo Interceptor is taken out of service for inspection, repair, or damage. It will also provide wet weather flow relief to the Zoo Interceptor sewer, thereby eliminating Safety Site 01 and 02 bypassing up to the 5-year design storm – a requirement of the WDNR-approved Facilities Plan.

Our team of experts have been selected to meet the challenges of this project and minimize risk during construction. In addition to BC's tunneling and design experts, we have teamed with Brierley Associates who specialize in tunneling applications, particularly where complex geotechnical considerations are paramount to a successful project. Ruekert Mielke were also selected for the topographic survey based on their extensive experience in Racine with linear projects such as this.

Scope of Services

The scope of services to be performed by Brown and Caldwell is detailed on Exhibit A. Due to the depth of the sewer and the desire to minimize community impacts during construction, this project will be designed and constructed using tunneling methods.

Compensation

Compensation for services outlined in the scope of work is provided on Exhibit B, broken out by task. We appreciate the Utility's efforts to keep costs down while maintain a high level of service to its customers. As such, we have made efforts to minimize cost in all phases of the project and feel this estimate is cost-competitive (6.1% of the estimated construction cost) for a project of this size and complexity.

Schedule

To meet Clean Water Fund Loan (CWFL) schedule requirements, the work defined herein shall begin upon the notice-to-proceed and will be expedited to meet WDNR submittal deadline of September 30, 2023. It is anticipated that the project will go out to bid in

February 2024. A detailed project schedule is provided in Table 2 of the Scope of Work (Exhibit A).

We appreciate this opportunity and look forward to providing continuing services to the Racine Wastewater Utility.

Very truly yours,

Brown and Caldwell,

A handwritten signature in black ink, appearing to read 'B. Rogne', with a long horizontal flourish extending to the right.

Bryan Rogne, Project Manager

Attachment: Exhibit A – Scope of Work
Exhibit B - Compensation

Exhibit A

**Scope of Work
Racine Wastewater Utility**

NORTH MAIN AND GOULD RELIEF SEWER ENGINEERING DESIGN SERVICES



November 2022

PROJECT DESCRIPTION

Project Background

This project is the design of a new 36-inch diameter relief interceptor sewer to provide redundancy and additional capacity to relieve sanitary sewer overflows at Racine Wastewater Utility "Safety Sites" (overflow locations). BC conducted the North Main and Goold Preliminary Engineering Report that analyzed various alternatives to reduce overflows and provide improved sanitary sewer level of service. The original recommendation was an in-line storage tunnel (Alternative T1) but has since been scaled back to a 36-inch conveyance option (Alternative C2).

Alternative C2 is a conveyance option that provides both relief and redundancy to the Zoo Interceptor sewer. This project consists of approximately 600 feet of open cut and 7,100 feet of tunneled sewer. Major structures include a diversion structure, isolation structure on the Zoo interceptor, and intermediate access shafts. The project will divert excess wet weather flow to the relief sewer using a diversion structure located on Augusta Street near Safety Site 01 (SS01). The flow diversion will relieve the currently overloaded Zoo Interceptor sewer, reduce surcharging, and eliminate Safety Site bypassing at SS01 and SS02 up to the 5-year, 6-hour and 12-hour storm events. Preliminary construction estimate is approximately \$26,000,000.

The deep relief sewer (greater than 30 feet) will be constructed using tunneling methods to minimize community disruption during construction (as opposed to an open cut installation of the sewer on Augusta Street and North Wisconsin Street).

The following is a summary of design items and assumptions:

- Survey and Utility mapping
- Field inspections of selected manholes along the alignment
- Geotechnical investigation
- Traffic control design
- Environmental review
- Provide necessary permit applications for construction
- Coordination with stakeholders and agencies
- Preparation of contract documents
- Review meetings with RWWU staff and other stakeholders
- Preparation of opinion of probably construction costs (OPCCs)

SUBCONSULTANT PARTICIPATION

The following Subconsultants will be engaged to perform services as indicated in Table 1. Please refer to the attached cost proposal for a summary of the fees. Gestra Engineering, Inc. will provide geotechnical field investigation services. Brierley Associates will oversee the geotechnical investigations, develop the Geotechnical Data Report (GDR), and provide interpretation of the GDR through the Geotechnical Baseline Report (GBR). Brierley will also provide tunnel and tunnel shaft design support with oversight from BC. Ruekert Mielke (R/M) will provide topographic survey and subsurface utility engineering for the project.

Table 1 – Subconsultant Participation

Firm	Responsibilities
Gestra Engineering, Inc.	Geotechnical Investigation
Brierley Associates	GDR, GBR, and Tunnel and Shaft Design
Ruekert Mielke, Inc.	Survey and SUE

SCHEDULE

Table 2 presents a proposed project schedule and main deliverables. The design schedule has been developed to meet Clean Water Fund Loan (CWFL) requirements.

Table 2 – Project Milestones

Project Milestone	Completion Date
Notice To Proceed	December 1, 2022
Kickoff Meeting	January 6, 2023
Geotech and Survey	December 2022 - January 2023
Basis of Design Report	May 2023
50% Design Documents	September 30, 2023
90% Design Documents	December 1, 2023
Bidding Documents	January 19, 2024
Bid Advertisement	February 7, 2024
Construction NTP	May 1, 2024

Work Breakdown Structure

This scope of work provides the engineering services required for the design and permitting of the North Main and Goold relief sewer project. The design and schedule will meet Clean Water Fund Loan project requirements.

PHASE 001 - PROJECT ADMINISTRATION

TASK 110 PROJECT MANAGEMENT

Description: The Consultant's Project Manager will maintain ongoing communication to keep the Client fully informed of the work progress, major issues, and potential problems and their resolutions. Specific activities will include the following:

- a) Maintain proper staffing, providing the necessary skills, experience, and resources.
- b) Engage and coordinate with Subconsultants throughout the project.
- c) Meet with client staff on an as-needed basis but no more frequently than every month to review project status and discuss specific design issues.
- d) The project manager and appropriate design team members will attend project status meetings to discuss issues on a timely basis and to review project status.
- e) Maintain project financial controls, submitting monthly invoices and progress reports.

Deliverable: Copies of project status meeting minutes and periodic updates, monthly submittals for progress payments, and project correspondence.

TASK 120 QA/QC

Description: Develop a Quality Assurance plan and implement Quality Control procedures engaging appropriate technical staff for project input and review. A review of the Preliminary Design Submittal will be conducted by senior BC staff not involved in the design of the project. A set of plans and specifications will be submitted for review by Client staff at the intermediate (50%) and final (90%) design stages.

- a) BC will conduct its own internal reviews, including review of work by Subconsultants' under contract to BC, prior to submitting deliverables to the client for review.
- b) BC will conduct review meetings with the client for each project deliverable and address client written comments and questions.

Deliverables: Copies of all quality control review submittals; copies of the minutes of all review meetings; written response to Racine Wastewater Utility (RWU) review comments.

PHASE 002 – PRELIMINARY DESIGN

TASK 210 INITIAL WORKSHOP

Description: Initial workshop to review planning work completed to date and discuss the plan for completing the design and construction of the project. Topics to be addressed:

- a) Introduction of client team and consultant team.
- b) Communication protocols

- c) Project overview and planning completed to date.
- d) Establish project goals
- e) Geotechnical based risk/mitigation discussion
- f) Project Schedule

It is anticipated that the initial workshop will be conducted in BC's Milwaukee office.

Interviews with O&M staff will be conducted separately or as part of the Initial Workshop.

Deliverables: Copies of workshop agenda and meeting minutes.

TASK 220 TOPOGRAPHIC SURVEY AND SUBSURFACE UTILITY ENGINEERING (SUE)

Description: A limited field topographic survey will be conducted by Ruckert and Mielke to verify critical elements for design of the project.

- a) Provide horizontal and vertical control, benchmarks and control points to be included in contract documents for use during construction.
- b) Topographic survey using Unmanned Aircraft System (UAS) utilizing full frame mapping sensor. Additional topographic survey for mapping found or placed monuments; easements; locations of existing buildings, walls, fences, streets, driveways, sidewalks, parking areas, roadways and ditches, trees and landscaping along project corridor.
- c) Mapping of field-marked utilities using UAS.
- d) Field survey of sewer structures including inverts, pipe sizes and rim elevations. Field survey of lot corners for fitment of cadastral linework from Racine County GIS. This will increase efficiency and reduce cost of the boundary survey.
- e) Laser scanning of sewer structures to develop 3D models of structures for modification during design. Photo documentation of sewer structures will be provided as well.
- f) Finalize the field survey to confirm elevations and coordinates of existing features such as utilities, structures or other features to be shown on the project drawings.
- g) Potholing will be performed at critical utility crossings as determined by activities under the Utility Coordination task and identified by the topographic survey. It is assumed that 10 potholing locations will be required.

Deliverables: Survey and utility information will be incorporated into the Contract Drawings. Subsurface Utility Engineering Summary report.

TASK 230 GEOTECHNICAL INVESTIGATION

Description: It is anticipated that borings will be needed every 500 feet (on average) along the proposed pipeline alignment and at each proposed access shaft locations. A total of 14 borings with a maximum depth of 50-feet, with continuous SPT sampling along the tunnel horizon and standard sampling at all other intervals. A series of 7 wells will be installed during the geotechnical investigation and will be in place throughout the construction process to monitor any groundwater fluctuations due to seasonal or construction impacts. Wells could be left in place or abandoned after construction. Conduct a geotechnical investigation along the proposed pipeline alignment and issue a Geotechnical Data Report that includes recommendations for soil correction, shaft design, and/or pipe support requirements. The GDR will be included in the appendix of the Project Manual for bidding.

Deliverables: Digital copy of the geotechnical report including logs and a map of the location of the soil borings and test pits.

TASK 240 BASIS OF DESIGN REPORT (BODR)

Description: BC shall prepare a Basis of Design Report (BODR) for the Project that will concisely summarize the activities and critical design considerations to support advancement of the Project into detailed design. The primary objective of the BODR is to ensure common understanding between BC and the Utility regarding the design for the Project. The report will include information on all Phase 002 pre-design tasks as well as the following:

- a) Design criteria – Design criteria for all disciplines will be summarized (Civil, Electrical, Mechanical, Structural)
- b) Proposed alignment – Proposed alignment maps will be developed with the new site topographic survey
- c) Easement and land acquisition – Issues relative to easement and land acquisition will be determined and discussed
- d) Geotechnical Design – A geotechnical design memorandum will be developed and provided as an appendix to the BODR. Based on findings from the GDR, this memorandum will be used to inform the design and further evaluate various construction methods for the relief sewer and associated structures. The geotechnical components of the BODR will discuss design parameters, tunnel construction methodologies, shaft construction methodologies and summarize preliminary ground and utility impacts, as well as monitoring requirements during construction. Narratives will also include discussions on dewatering (if needed), ground conditioning (if needed) and existing infrastructure that will need to be monitored during construction.
- e) Construction methods – Based on findings summarized in the geotechnical design memorandum, appropriate construction methods will be identified including micro-tunneling and other trenchless methods, and open cut for the upstream and downstream portions of the Project that will support the Utility’s construction period and budget, as well as the long-term effectiveness, operation and maintenance, and resiliency of each recommended improvement.
- f) Required structures (diversion, control, isolation, etc.) for effective operation of the proposed system. Once the proposed alignment is determined, required structures such as the diversion structure on Augusta Street and the isolation structure on the Zoo Interceptor Sewer will be evaluated to maximize performance and operational flexibility. Conceptual drawings of each structure will be provided.
- g) Hydraulic analysis / modeling – Hydraulic modeling /analysis will support the pre-design work as well as continue to be applied during design, construction, and closeout to evaluate the effects of project refinements on hydraulic performance. BC will build upon the modeling work performed as part of the North Main and Goold Study. MIKE URBAN Model refinements will be made based on updated survey information to establish a pre-project baseline condition for which proposed Project alignments can be compared (to meet project objectives). Additional upstream flow monitoring will also be reviewed and compared to model results, if available. BC assumes that some hydrologic parameter adjustments may be required based on recent flow monitoring data (24 hours

of effort). Additional detail on the hydraulic analysis is provided in Task 250 of this scope of work.

- h) LaSalle / English Street basin evaluation and recommended improvements – present a summary of findings from the basin evaluation, described in more detail in Task 250.
- i) Electrical and Power issues – Electrical and power requirements will be discussed, depending on the preferred option for flow management at the control structures. If the structures are to be passive structures, where gates are operated manually, then no power or electrical will be required.
- j) Instrumentation and control philosophy - instrumentation and control options will be evaluated and discussed. The recommended control philosophy will be summarized after discussions with Utility O&M staff.
- k) Conceptual design drawings – Conceptual design drawings showing the primary features, improvements, structures, equipment, etc. will be developed with base mapping developed from the new topographic survey. A preliminary list of anticipated drawings is provided as Attachment A to this scope of work.
- l) List of Specifications – The BODR will include a list of anticipated specifications.
- m) Sequence of Construction – A figure showing the anticipated sequence of construction will be developed to accompany a narrative of each construction phase. To the extent possible, the critical path for each major construction task will be outlined.
- n) Permits – Identify permits required by public and private entities, including but not limited to the City of Racine, Wisconsin Department of Natural Resources, and Wisconsin Department of Transportation. It is assumed that this project will not impact wetlands that would require federal permitting through the Army Corps of Engineers. It is also assumed that a Cultural and Archaeological Survey will not be required, nor will a WDNR Facilities Plan. A preliminary list of anticipated permits is provided below:
 - a. WisDOT Work on Highway Right-of-Way permit
 - b. WisDOT Utility Accommodation permit
 - c. Racine County Highway permit
 - d. City of Racine Street Closing permit
 - e. WDNR Construction Site Stormwater permit
 - f. WDNR Dewatering Operations permit
- o) Community – Community impacts and concerns during construction will be summarized based on stakeholder meetings described in Task 320.
- p) Traffic Control – A description of anticipated traffic control will be provided for all phases of construction.
- q) Engineer’s Opinion of Probable Construction Cost – In the Basis of Design Report, BC will include a Class 5 estimate in accordance with the Association for the Advancement of Cost Engineering (AACE) International Recommended Practices 18R-97.

Deliverables: Draft and Final Basis of Design Report.

TASK 250 HYDRAULIC ANALYSIS / MODELING

The modeling completed in the North Main / Goold Storage Evaluation Preliminary Engineering Report (March 16, 2022) will be refined and expanded to further optimize the solution and improve resiliency. Specific areas for further hydraulic model evaluation include:

- a) Simulate the performance of the system for larger events to estimate upstream and downstream impacts like system surcharging, basement flooding, and safety site overflows.
- b) LaSalle Street / English Street basin evaluation – On September 11-12, 2022, multiple homes reported basement backups during a large wet weather event. Based on a preliminary evaluation conducted by BC, the backups were likely due to limited downstream sewer capacity along LaSalle Street and English Street. This basin evaluation will include model refinement and calibration of the hydraulic model. Calibration will be performed using recent flow monitoring at two locations on Yout and English Streets. The updated model will be used to evaluate conveyance projects which may or may not affect the North Main and Goold project. If it is found that wet weather relief to the LaSalle / English Street area can be provided by diverting excess wet weather flow to the proposed North Main and Goold relief sewer, then the North Main and Goold relief sewer will be designed (upsized) accordingly. If local conveyance improvements are required and independent of the North Main and Goold project, then the design of those improvements will be under a separate contract. The basin evaluation will be summarized in a technical memorandum and provided as an appendix to the BODR.
- c) Evaluate performance of the conveyance system between the North Main and Goold project and Lift Station 01, to understand potential impacts in terms of peak flows, timing of peak flow to Lift Station 01, system surcharging, and Safety Site bypassing.
- d) Evaluate various sizes of larger diameter relief sewer pipe, with the intent of controlling and storing flow in the relief sewer to mitigate any potential impacts of flow timing and possible flow increases downstream of the project to Lift Station 01.
- e) Evaluate different configurations of the upstream diversions structure, to optimize performance and improve operational flexibility.
- f) Evaluate dry weather velocities for times when the relief sewer is used to divert Zoo Interceptor flow (for times when it is taken out of service for inspection, cleaning, or repair).

Flow monitoring is not included in BC's scope of work.

Deliverables: LaSalle Street / English Street Technical Memorandum. Final working model files will be provided to the Utility upon request.

PHASE 003 – STAKEHOLDER/PERMITTING

TASK 310 UTILITY COORDINATION

Description: Potential utility conflicts will be investigated through contact with public and private utilities.

- a) Electric utility (WE Energies)

- b) Racine Wastewater Utility (Water)
- c) City of Racine (stormwater)
- d) Gas (WE Energies)
- e) Cable TV
- f) Communications utilities

BC will schedule a utility coordination meeting with known stakeholders (listed above) at the Racine Wastewater Utility office.

Deliverables: Meeting minutes from the utility coordination meeting. Findings will be incorporated into the design documents and will be utilized during Subsurface Utility Engineering.

TASK 320 PUBLIC AND STAKEHOLDER MEETINGS

Description: Contact and coordination with impacted stakeholders such as neighborhood organizations, businesses, etc. to gain information that will minimize impacts to the public. Activities will include:

- a) Public Information meetings (2)
- b) Coordination meetings with City utility, traffic, mass transit and other departments that may be impacted by construction.

Deliverables: Preparing maps, informational handouts and slides for inclusion in PowerPoint presentations.

TASK 330 PERMITS AND REGULATORY COMPLIANCE

Description: Provide support for acquisition of construction permits and compliance with regulatory requirements.

- a) Identify permits and regulatory compliance requirements necessary for project implementation.
- b) Provide completed permit application forms and documentation necessary to meet regulatory compliance requirements.
- c) Complete Water Resources Application for Project Permits (WRAPP) form through the WDNR on-line permitting system for a Storm Water Notice of Intent (NOI).
- d) Prepare supporting data including maps, site photos, applicable checklists required for NOI application, soil loss/sediment discharge calculations (if applicable), and a Storm Water Management and Erosion Control Plan Narrative.
- e) Coordinate with the design team to provide an overall project that minimizes impacts to environmental resources and reduces permitting challenges.
- f) Incorporate construction related regulatory requirements into the contract documents as necessary.
- g) Prepare the permit applications for work within WisDOT right-of-way if required.
- h) Permits and supporting documents will be submitted in the final bid documents.

Deliverables: Complete permit application forms and supporting documents. Provide blank permit applications in the contract documents that the Contractor is required to acquire.

PHASE 004 – FINAL DESIGN

TASK 410 50% DESIGN

Description: Carry layout from BODR to 50 Percent. Prepare a 50% complete set of plans and specifications for review and comment.

- a) Meeting with interested tunneling contractors to discuss constructability issues (informational workshop)
- b) Design Workshop with Racine Wastewater Utility (at the Utility's office)
- c) Update of all existing utilities.
- d) Final alignment of the new 36-inch tunneled gravity sewer.
- e) Layout for shaft and near surface structures.
- f) Preliminary design of specialized structures.
- a) Tunnel and shaft construction methodology selection.
- g) Geotechnical recommendations as they relate to soil correction, shaft design, tunneling, groundwater control, and casing/carrier pipe requirements.
- h) Evaluation of construction impacts to surrounding structures and utilities, as well as recommendations for protective measures.
- i) Erosion & sedimentation control plans along the alignment.
- j) Plan & profile plans for the proposed pipe alignment.
- k) Site preparation and restoration plans along the alignment.
- l) Removal, replacement, and modifications of existing structures.
- m) Preliminary staging and traffic control plans will be prepared. Detailed traffic control plans will be submitted to the governing authority by the Contractor.
- n) Table of contents for expected specification sections. Preliminary technical specifications will be completed to a 50% level.
- o) Submit to the WDNR 50 % plans and specifications for review and preliminary approval.

Deliverables: Provide design updates and associated design review documents to communicate design status and decisions. Electronic files will be provided for the 50% design submittal.

TASK 420 90% DESIGN

Description: Prepare a 90% complete set of plans and specifications for review and comment.

- a) Incorporate all comments from the 50% plans and specifications.
- b) BC will prepare the technical specifications following Division 50 specification format.
- c) Appendices to the project manual will include Geotechnical Data Report, Geotechnical Baseline Report^a, and permit applications.
 - o ^a Projects involving subsurface construction present many risks, which must be assumed by both Racine Wastewater Utility (RWWU) and the Contractor. The greatest of these risks are associated with encountered ground conditions and ground behavior during excavation and installation of support systems. The Geotechnical Baseline Report (GBR) provides interpretation of ground conditions and ground behavior during construction and provides contractual baseline statements for the basis of bidding and evaluation of differing site conditions. It establishes a contractual understanding (interpretation) of the subsurface site

conditions presented factually in the GDR. Thus, the GBR is a mechanism to allocate risk between RWWU and the successful bidder. A good GBR is positive and helpful. It presents how ground and groundwater conditions will impact construction and what construction methods can be employed to mitigate risk based on engineering judgement and previous construction experience.

- d) Submit to the WDNR 90 % plans and specifications for review and final approval.

Deliverables: Electronic files of the specifications will be provided for the 90% design submittal, and final bidding documents.

TASK 430 ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS

Description: An opinion of probable construction costs (OPCC) will be prepared, consistent with the Project bid schedule.

Deliverable: Copies of the Engineer's OPCC will be provided with the 50% and 90% submittals and the final bid documents.

TASK 440 BID DOCUMENTS

Description: Prepare a set of drawings and specifications to be provided for bidding purposes.

- a) Incorporate all comments received on the 90% plans and specifications for final bidding documents.
- b) Drawings will be prepared in compliance with BC CADD standards.
- c) The documents will be sent to the appropriate agencies for review as necessary.

Deliverables: Review copies of the drawings for the 100% design submittal. Bidding documents will be provided to the Racine Wastewater Utility for inclusion in other Consultant's final bidding documents. Other Consultant will provide electronic and hard copies of the bidding documents along with the electronic copy on CD or DVD.

Attachment A

Preliminary List of Drawings

No.	Drawing Title
1	TITLE SHEET
2	SHEET INDEX
3	ABBREVIATIONS, SYMBOLS AND GENERAL NOTES
4	SURVEY CONTROL
5	PLAN INDEX – 1
6	PLAN INDEX – 2
7	GENERAL NOTES
8	SOIL EROSION AND SEDIMENT CONTROL NOTES
9	SESC DETAILS – 1
10	SESC DETAILS – 2
11	SESC & DEMOLITION - 1
12	SESC & DEMOLITION - 2
13	SESC & DEMOLITION - 3
14	SESC & DEMOLITION - 4
15	GEOTECHNICAL PLAN & PROFILE – 1
16	GEOTECHNICAL PLAN & PROFILE – 2
17	GEOTECHNICAL PLAN & PROFILE – 3
18	GEOTECHNICAL PLAN & PROFILE – 4
19	GEOTECHNICAL PLAN & PROFILE – 5
20	GEOTECHNICAL PLAN & PROFILE – 6
21	GEOTECHNICAL PLAN & PROFILE – 7
22	GEOTECHNICAL PLAN & PROFILE – 8
23	GEOTECHNICAL PLAN & PROFILE – 9
24	GEOTECHNICAL PLAN & PROFILE – 10
25	GEOTECHNICAL PLAN & PROFILE – 11
26	GEOTECHNICAL PLAN & PROFILE – 12
27	OPEN-CUT PLAN & PROFILE – 1
28	OPEN-CUT PLAN & PROFILE – 2
29	OPEN-CUT PLAN & PROFILE – 3
30	TUNNEL PLAN & PROFILE – 1
31	TUNNEL PLAN & PROFILE – 2
32	TUNNEL PLAN & PROFILE – 3
33	TUNNEL PLAN & PROFILE – 4
34	TUNNEL PLAN & PROFILE – 5
35	TUNNEL PLAN & PROFILE – 6
36	TUNNEL PLAN & PROFILE – 7
37	TUNNEL PLAN & PROFILE – 8
38	TUNNEL PLAN & PROFILE – 9
39	TUNNEL PLAN & PROFILE – 10

40	TUNNEL PLAN & PROFILE – 11
41	TUNNEL PLAN & PROFILE – 12
42	TUNNEL PLAN & PROFILE – 13
43	TUNNEL PLAN & PROFILE – 14
44	OPEN-CUT PLAN & PROFILE – 4
45	CONSTRUCTION DETAILS – 1
46	CONSTRUCTION DETAILS – 2
47	CONSTRUCTION DETAILS – 3
48	CONSTRUCTION DETAILS – 4
49	SITE RESTORATION – 1
50	SITE RESTORATION – 2
51	SITE RESTORATION – 3
52	SITE RESTORATION – 4
53	TRAFFIC CONTROL – 1
54	TRAFFIC CONTROL – 2
55	TRAFFIC CONTROL – 3
56	TRAFFIC CONTROL – 4
57	TRAFFIC CONTROL – 5
58	TRAFFIC CONTROL – 6
59	STRUCTURAL DETAILS – 1
60	STRUCTURAL DETAILS – 2
61	STRUCTURAL DETAILS – 3
62	STRUCTURAL DETAILS – 4
63	STRUCTURAL DETAILS – 5
64	STRUCTURAL DETAILS – 6
65	STRUCTURAL DETAILS – 7
66	STRUCTURAL DETAILS – 8
67	STRUCTURAL DETAILS – 9
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69	STRUCTURAL DETAILS – 11
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71	STRUCTURAL DETAILS – 13
72	STRUCTURAL DETAILS – 14
73	STRUCTURAL DETAILS – 15
74	STRUCTURAL DETAILS – 16
75	STRUCTURAL DETAILS – 17
76	STRUCTURAL DETAILS – 18
77	STRUCTURAL NOTES – 1
78	STRUCTURAL NOTES – 1
79	STRUCTURAL NOTES – 1
80	STRUCTURAL NOTES – 1
81	TUNNEL DETAILS – 1
82	TUNNEL DETAILS – 2
83	INSTRUMENTATION – 1
84	INSTRUMENTATION – 2

85	INSTRUMENTATION – 3
86	INSTRUMENTATION – 4
87	INSTRUMENTATION – 5

Exhibit B

Compensation

Racine Water and Wastewater Utilities (RWWU)

North Main and Goold Relief Sewer Design

Consultant shall be compensated on a time and materials basis. Hourly rates shall be billed at 3.1 times raw salary.

Racine Water and Wastewater Utility - North Main and Goold Relief Sewer Design				
Task	Task Description	BC Labor	Subconsultants and Expenses	Total Effort
001	Project Administration	\$134,189	\$0	\$134,189
110	Project Management	\$68,333	\$0	\$68,333
120	QA/QC	\$65,856	\$0	\$65,856
002	Preliminary Design	\$140,578	\$417,607	\$558,186
210	Initial Workshop	\$5,591	\$6,664	\$12,255
220	Topographic Survey and SUE	\$4,762	\$107,541	\$112,303
230	Geotechnical Investigation	\$4,255	\$250,614	\$254,870
240	Basis of Design Report (BODR)	\$61,086	\$52,788	\$113,873
250	Hydraulic Analysis/Modeling	\$64,884	\$0	\$64,884
003	Stakeholder/Permitting	\$21,320	\$9,641	\$30,960
310	Utility Coordination	\$6,604	\$0	\$6,604
320	Public and Stakeholder Meetings	\$5,450	\$1,236	\$6,686
330	Permits and Regulatory Compliance	\$9,265	\$8,405	\$17,670
004	Final Design	\$489,867	\$378,958	\$868,824
410	50% Design	\$193,184	\$278,018	\$471,202
420	90% Design	\$190,607	\$88,992	\$279,599
430	Engineer's Opinion of Cost	\$22,017	\$1,854	\$23,871
440	Bid Documents	\$84,059	\$10,094	\$94,153
GRAND TOTAL		\$785,953	\$806,206	\$1,592,159