

Invitation to Tender

CITY OF KENORA

INVITATION TO TENDER / ADVERTISEMENT

Sealed Tenders
for:

Keewatin Channel Bridge Recoating and Steel Repair
Tender Number: KCB-312-001-24

Will be received
by:

City of Kenora
(the "City")

at:

1 Main Street South
Kenora, ON P9N 3X2
Attention: Heather Pihulak, City Clerk

Time and date for Tender Closing is:

11:00:00 a.m. CST/CDT on Thursday, May 29, 2025
(the "Tender Closing")

1. The work to be undertaken generally involves, but is not necessarily limited to:
Recoating and Steel Repair at the Keewatin Channel Bridge (the "Work") as set out on the list of drawings and specifications described as follows: **Refer to Part 1.1, Part 3, and Appendix D – Contract, Specifications and Drawings of the Tender documents.**
2. The CITY's consultant for the Project is: **Stantec Consulting Ltd.**
3. The Successful Bidder shall achieve substantial performance of the Work for the Project by: **Refer to Article 1.16.1 of the Instructions to Tenderers.**
4. The drawings and specifications for the Project can be obtained from **MERX under the name 'City of Kenora Keewatin Channel Bridge Recoating and Steel Repair'**. Deposits paid to obtain the drawings and specifications will be refunded to unsuccessful bidder(s) at the discretion of the CITY.
5. All written inquiries regarding the technical aspects of the drawings and specifications for the Work shall be emailed to **Eric Tranquada, B.Env. D., P.Eng, Eric.tranquada@stantec.com**, however the bidder(s) acknowledge and agree that the CITY does not have an obligation to provide a response to any written inquiry and that it is in the sole and unfettered discretion of the CITY to provide any written response to a written inquiry. Telephone inquiries will not be replied to.
6. Submission of a tender by a Bidder gives the CITY the right to require the Bidder to execute the contract to perform the Work as set out within the tender documents. Tenders may not be withdrawn after the Tender Closing and will be irrevocable and open for acceptance by the CITY for a period of sixty (60) days following the end of the day of the Tender Closing. The Successful Bidder will be notified in writing of the award of the Tender when the CITY delivers a letter of intent to the Successful Bidder.

Contract & Specifications

Keewatin Channel Bridge
Recoating and Steel Repair



Prepared for:
City of Kenora

Project/File:
113733903

Prepared by:
Stantec Consulting Ltd.

Tender Number:
KCB-312-001-24

May 5, 2025

TABLE OF CONTENTS

PART 1 – Instructions to Tenderers	PAGES
1.1 Description	01-01
1.2 Submission of Tender	01-01
1.3 Tendering Details	01-01
1.4 Scope of Work	02-02
1.5 Tender Document review	02-02
1.6 Tender Form and Unit Price Schedule	02-03
1.7 Freedom of Information Act	03-03
1.8 Tender Documents	03-03
1.9 Variation in Tender Documents and No Implied Obligations	03-04
1.10 Addenda	04-04
1.11 Tender	04-05
1.12 Tender Deposit	05-05
1.13 Performance and Labour Material Bonds	05-06
1.14 Insurance	06-06
1.15 Work Schedule	06-06
1.16 Commencement and Completion of Work	06-06
1.17 Site Conditions	06-07
1.18 Prime Cost and Contingency Sums	07-07
1.19 Permits and Inspection	07-07
1.20 Successful Tenderer	07-08
1.21 Tender Evaluation	08-08
1.22 Worker Compensation	08-09
1.23 Registration	09-09
1.24 Tenders Exceeding Budget	09-10
1.25 Certificate of Recognition ("C.O.R.") Safety Program Requirement	10-10
1.26 Canadian Free Trade Agreement	10-10
1.27 Acceptance or Rejection of Tenders	10-11
1.28 Law of Forum of Tender	11-11
1.29 Acceptance Period	11-11
1.30 Drawing list	11-11
PART 1.1 CCDC 4 - 2023	12-42



PART 2 – TENDER FORMS	PAGES
Tender Form & Schedule of Prices	43-44
Declaration Statement	45-45
Form A: Tenderer's Experience in Similar Work	46-46
Form B: Subcontractors, Suppliers & Equipment	47-47
Form C: Alternatives	48-48
Form D: Undertaking to Comply	49-50
Form E: Indemnification Agreement	51-51

PART 3 – TECHNICAL SPECIFICATIONS	PAGES
01 General	52-61
02 Mobilization, Demobilization, and Site Work	62-62
03 Traffic Control and Pedestrian Accommodation	63-65
04 Steel Repair and Protective Coating	66-103
05 Measurement and Payment	104-109

APPENDIX

Appendix A – Kenora Health & Safety Policy
Appendix B – DFO Interim Code of Practice
Appendix C – Acuren Paint Testing Results
Appendix D – Drawings
Appendix E – Tender Checklist



Part 1 – Instructions to Tenderers

Keewatin Channel Bridge
Recoating and Steel Repair



SECTION 1 INSTRUCTIONS TO TENDERERS

1.1 DESCRIPTION

- .1 The City of Kenora (the "CITY") is seeking tenders for **Keewatin Channel Bridge Recoating and Steel Repair** (the "Work") as more particularly set out in Part 3 – Technical Specs and Appendix "A" & "D" attached to these Instructions to Tenderers.

1.2 SUBMISSION OF TENDERS

- .1 The CITY will receive sealed tenders until: **11:00:00 A.M. CDT Thursday May 29, 2025** ("Tender Closing").
- .2 Each Tender shall be addressed to the CITY in a sealed envelope clearly marked with the Tenderer's name, address and tender number. The sealed envelope containing the Tender shall be delivered before the Tender Closing to the CITY in accordance with the Invitation to Tender and the Instructions to Tenderers at:

**City of Kenora
1 Main Street South
Kenora, ON P9N 3X2
Attention: Heather Pihulak, City Clerk**

- .3 Emailed and faxed tenders will NOT be accepted and will be returned to the Tenderer unopened.
- .4 Inquiries are permitted until **Tuesday May 27, 2025 at 16:00:00 CDT** and are to be directed to the below via email.
 - a. Eric Tranquada B.Env. D., P.Eng.
(204) 228-2574
Eric.tranquada@stantec.com
- .5 The deadline for issuance of addenda by the City or the Consultant shall be **Tuesday May 27, 2025 at 16:00:00 CDT**. Any addenda posted after this date shall result in an extension to the tender closing date by an equal number of days.
- .6 In the event of a dispute or issue about whether or not a tender complies with the Instructions to Tenderers, the Consultant reserves the right to retain and open a copy of the tender in question in order to seek and obtain a legal opinion in relation thereto. The opening of a tender does not in any way constitute an admission by the Consultant as to the compliance, or not, of the subject tender.

1.3 TENDERING DETAILS

- .1 Digital copies of the tender and addenda documents will be posted on the City of Kenora Website and on MERX.
 - a. The owner is City of Kenora
 - b. The Consultant is Stantec Consulting Ltd.

1.4 SCOPE OF WORK

- .1 The work to be done under the contract shall include the labour, equipment, and materials required to complete the maintenance works specified in the contract documents. This work generally consists of, but is not limited to, the following:
 - a. Mobilization, demobilization, and site work.
 - b. Provision for design and implementation of temporary traffic control and pedestrian accommodation as needed.
 - c. Provision for design and implementation of temporary access scaffolding and/or platforms.
 - d. Provision for design and implementation of navigational signage or clearance for watercraft.
 - e. Provision for design and implementation of containment system to facilitate coating removal and re-application.
 - f. Abrasive blasting of all structural steel in Span 5 in three phases as noted on the Drawings.
 - g. Clean up and testing of waste prior to disposal.
 - h. Inspection and subsequent repairs to deteriorated structural steel.
 - i. Application of polysiloxane two-coat system to all structural steel.
 - j. Final clean up and coating touch-ups.
 - k. Removal of all containment tarps, platforms and scaffolding.
 - l. Final site clean up.

1.5 TENDER DOCUMENT REVIEW

- .1 Investigate the drawings and local conditions prior to providing a tender.
- .2 Compare tender documents to existing work in-place conditions and report any discrepancies to the Consultant.
- .3 Tender documents examination can be obtained at the following locations as noted below:
 - a. MERX
 - b. City of Kenora Website
 - c. Construction Association of Thunder Bay.
 - d. Winnipeg Construction Association.

1.6 TENDER FORM AND UNIT PRICE SCHEDULE

- .1 Each Tenderer shall submit a complete tender on the Tender Form and Unit Price Schedule which forms part of the Tender Documents with the blank spaces filled in. The tender sum must be written in words as well as figures, and must be for a sum in Canadian Dollars including all tariffs, freight, duties and taxes other than the Harmonized Sales Tax which must be shown as a separate amount unless otherwise specifically stipulated (hereinafter referred to as the "Tender Sum"). In the event of a discrepancy between an amount written in words and an amount written in figures, the amount written in words shall be deemed the intended amount. Tenders shall be written in English.
- .2 The Tender Form and Unit Price Schedule must be completed in their entirety. All blank spaces shall be filled with a numerical value or text, as applicable. The entry of "zero" or "\$0.00" in any field within the Tender Form or Unit Price Schedule shall be deemed an acceptable response and shall not, in and of itself, render the Tender incomplete.

- .3 Notwithstanding the foregoing, the Consultant shall be entitled to accept a Tender in such form as the Consultant in its sole and unfettered discretion deems acceptable irrespective of irregularities whether of a trivial or substantial nature, or whether the Tender is noncompliant in a trivial or substantial manner.
- .4 The Consultant shall not be obligated to accept Tenders that are unsigned, incomplete, conditional, illegible, unbalanced, obscure, contain irregularities of any kind, or contain mathematical or calculation errors of any kind. On Unit Price Tenders, if there is a discrepancy found between the unit price and the extended amount, the unit price shall be deemed to represent the intention of the Tenderer. Discrepancies between words and figures will be resolved in favour of the words. Discrepancies between the indicated sum of any figures and the correct sum thereof will be resolved in favour of the correct sum. Any discrepancies between the Tender Form and a post Tender Closing submission required by the Tender Documents will be resolved in favour of the post Tender submission.
- .5 Tenders shall not be withdrawn, modified or clarified after being delivered in accordance with the Tender Documents unless such withdrawal, modification or clarification is made in writing and actually received by Heather Pihulak, City Clerk prior to the Tender Closing. Any withdrawal, modification or clarification of the Tender must be followed by a letter of confirmation signed and sealed in the same manner as the Tender and delivered to the address for the CITY in the Invitation to Tender within 48 hours of the Notice of the Withdrawal, Modification or Clarification.

1.7 FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY ACT

- .1 All documents submitted to the CITY will be subject to the protection and disclosure provisions of Ontario's Freedom of Information and Protection of Privacy Act ("FOIP"). FOIP allows persons a right of access to records in the CITY's custody or control. It also prohibits the CITY from disclosing the Tenderer's personal or business information where disclosure would be harmful to the Tenderer's business interests or would be an unreasonable invasion of personal privacy as defined in sections 1.20 and 1.24 of FOIP. Tenderers are encouraged to identify what portions of their submissions are confidential and what harm could reasonably be expected from its disclosure. However, the CITY cannot assure Tenderers that any portion of the Tenderer's documents can be kept confidential under FOIP.

1.8 TENDER DOCUMENTS

- .1 The documents for the tender are:
 - Cover Sheet
 - Invitation to Tender, and Instructions to Tenderers, Part 1
 - CCDC 4 – 2023
 - Tender Forms and Schedule of Prices, Part 2
 - Technical Specifications, Part 3
 - Appendix A – City of Kenora Health & Safety Policy
 - Appendix B – Fisheries and Oceans Canada: Code of Practice
 - Appendix C – Coating Test Results
 - Appendix D – Drawings
 - Appendix E – Tender Submission Checklist(hereinafter collectively referred to as the "Tender Documents")

By submitting its Tender, the Tenderer acknowledges and agrees that it has received and reviewed the Tender Documents.

1.9 VARIATION IN TENDER DOCUMENTS AND NO IMPLIED OBLIGATIONS

- .1 The Tenderer shall carefully examine the Tender Documents. Any errors, omissions, discrepancies or clauses requiring clarification shall be reported in writing to the CITY at least 5 calendar days prior to the Tender Closing. Where necessary the CITY shall respond to reported errors, omissions, discrepancies or clauses requiring clarification by way of Addenda.
- .2 Should a Tenderer fail to report any such errors, omissions, discrepancies or clauses requiring clarification at least 5 calendar days prior to the Tender Closing, the CITY shall be the sole judge as to the intent of the Tender Documents.
- .3 No implied obligation of any kind by or on behalf of the CITY shall arise from anything in the Tender Documents, and the express covenants and agreements contained in the Tender Documents and made by the CITY, are and shall be the only covenants and agreements that apply.
- .4 Without limiting the generality of Article 1.9.3, the Tender Documents supersede all communications, negotiations, agreements, representations and warranties either written or oral relating to the subject matter of the Tender made prior to the Tender Closing, and no changes shall be made to the Tender Documents except by written Addenda.

1.10 ADDENDA

- .1 Any changes to the Tender shall be in writing in the form of Addenda. Any Addenda issued to the Tender shall form part of the Tender Documents, whether or not the receipt of same has been acknowledged by a Tenderer, and the cost for doing the work therein shall be included in the Tender Sum. Verbal representations shall not be binding on the CITY nor form part of the Tender Documents. Technical inquiries into the meaning or intent of the Tender Documents must be submitted in writing to the person identified in Article 1.2.3 of the Instructions to Tenderers.

1.11 TENDER

- .1 Tenders submitting Tenders shall be actively engaged in the line of work required by the Tender Documents and shall be able to refer to work of a similar nature performed by them. They shall be fully conversant with the general technical phraseology in the English language of the lines of work covered by the Tender Documents.
- .2 Each Tenderer shall review the Tender Documents provided by the CITY and confirm that it is in possession of a full set of Tender Documents when preparing its Tender.
- .3 Tenders shall be properly executed in full compliance with the following requirements:
 - a. The signatures of persons executing the Tender must be in their respective handwriting; and
 - b. If the Tender the Tender is made by a limited company, the full name of the company shall be accurately printed immediately above the signatures of its duly authorized officers and **the corporate seal shall be affixed;**
 - c. If the Tender is made by a partnership, the firm name or business name shall be accurately printed above the signature of the firm and the Tender shall be signed by a partner or partners who have authority to sign for the partnership;

- d. If the Tender is made by an individual carrying on business under the name other than its own, its business name together with its name shall be printed immediately above its signature or
 - e. If the Tender is made by a sole proprietor who carries on business in its own name, the proprietor shall print its name immediately below its signature.
- .4 Tenders received from agents representing principals must be accompanied by a Power of Attorney signed by the said principals showing that the agents are duly authorized to sign and submit the Tender and have full power to execute the Contract on behalf of their principals. The execution of the Contract will bind the principals and have the same effect as if it were duly signed by the principals.

1.12 TENDER DEPOSIT

- .1 The Tenderer is required to submit with its Tender, a Consent of Surety and a Bid Bond in a form acceptable to the CITY, or in lieu of a Bid Bond, a Tenderer may submit, along with a Consent of Surety, a certified cheque or an irrevocable letter of credit in favour of the CITY equal to 10% of the Tender Sum as a guarantee that, if awarded the contract for the Work, the Tenderer will execute a contract and the Labour and Material Payment, and Performance Bonds referred to in Article 1.13 within the specified time frames.
- .2 The Bid Bonds, certified cheques or irrevocable letters of credit of the unsuccessful Tenderers shall be returned as soon as possible after the Contract has been duly executed by the Successful Tenderer.
- .3 The CITY will not pay any interest on money furnished as security.
- .4 The Bid Bond and Consent of Surety shall be issued by a Surety Company licensed in the Province of Ontario and satisfactory to the CITY.

1.13 PERFORMANCE AND LABOUR MATERIAL BONDS

- .1 The Successful Tenderer shall be required to furnish at its own expense a Performance Bond and Labour and Materials Payment Bond. For the purposes of this Article, both of these bonds shall be referred to as the "Bonds".
- .2 The Performance Bond shall guarantee the faithful performance of the Contract, and in default thereof, shall protect the CITY against any losses or damage arising by reason of failure of the Successful Tenderer to faithfully perform the Contract.
- .3 The Bonds are to be issued by a Surety Company licensed in the Province of Ontario and satisfactory to the CITY in the amount of 100% of the Contract Price for the Performance Bond and 50% of the contract price for the Labour and Materials Payment Bond.
- .4 The Performance Bond shall remain in force as a Maintenance Bond for the Warranty Period as defined in the Contract. For Contract values not including Harmonized Sales Tax greater than \$500,000 the Bonds must be provided using Form 31 and Form 32 under Section 85.1 of the Construction Act, Ontario.
- .5 The Bonds shall be in the form set out in the Tender Documents or in such other form as may be acceptable to the CITY.
- .6 The CITY may consider alternate forms of security in lieu of the Bonds. The Tenderer shall make known any alternative form of security it wishes the CITY to consider and obtain the CITY's approval prior to submitting a Tender.

- .7 The Successful Tenderer shall provide all required Bonds to the CITY no later than 5 working days after receipt of the Letter of Intent from the CITY provided in accordance with Article 1.20. The Bonds must be received prior to the execution of the contract.
- .8 The Successful Tenderer shall supply all required Bonds before any Work is undertaken by the Successful Tenderer.
- .9 No payment shall be made by the CITY to the Successful Tenderer for any of the Work performed by the Successful Tenderer until the required Bonds have been provided.

1.14 INSURANCE

- .1 The Tender shall be accompanied by a Certificate of Insurance, certifying that the insurance as required by the Contract, is in place or, if the required insurance is not in place, by a Letter of Insurability or Undertaking of Insurance in standard form from the Tenderer's Insurance Broker certifying that the required insurance will be issued to the Tenderer if the Tenderer is the Successful Tenderer.
- .2 The Successful Tenderer shall be required to secure and maintain at its own expense the insurance provided for in the Contract.
- .3 The Successful Tenderer shall provide all required insurance to the CITY no later than 5 working days after receipt of a Letter of Intent from the CITY provided in accordance with Article 1.20.

1.15 WORK SCHEDULE

- .1 Then Tender shall be accompanied by a Work Schedule. The Work Schedule shall be in the form of a Gantt Chart and shall show dates of commencement and completion of various parts of the Work, ordering and delivery dates of product, phasing and timing for various subcontracts, and all other detailed information.

1.16 COMMENCEMENT AND COMPLETION OF THE WORK

- .1 The Successful Tenderer shall commence the Work by **June 23, 2025**, and shall achieve substantial completion of the Work as defined in the contract by **December 31, 2025**.

1.17 SITE CONDITIONS

- .1 The Tenderer is responsible for inspecting the site(s) of the Work and for making whatever inquiries or arrangements necessary for it to become fully informed of the nature of the site(s) of the Work, including the soil structure and topography of the site(s), and of the Work to be performed and all matters which may in any way affect the Work. Without limiting the foregoing, by the submission of its Tender, the Tenderer acknowledges that it has investigated and satisfied itself as to:
 - a. the nature of the Work;
 - b. the location and all conditions relating to the location of the Work including, but not limited to, accessibility, general character, surface and sub-surface conditions, soil structure, utilities, road, uncertainties of seasonal weather and all other physical, topographical, geological and geographic conditions;
 - c. the general character, conditions, laws and restrictions applicable to the Work that might affect the performance of the Work;

- d. all environmental risks, conditions, laws and restrictions applicable to the Work that might affect the Work; and
 - e. the magnitude of the work required to execute and complete the Work.
- .2 The Tenderer is fully responsible for obtaining all information required for the preparation of its Tender and for the execution of the Work. The CITY is not responsible for undertaking any investigations to assist the Tenderer. Any information, plans, drawings, shop drawings or existing equipment or facilities, photos of the original construction, reports or other documents which are not included or referred to in the Tender Documents (the "Non-Tender Information"), form no part of this Tender. The CITY and the CITY's Consultants assume no responsibility of any kind whatsoever arising from or relating to its failure to include or refer to such Non-Tender Information. Tenderers who obtain or rely upon such Non-Tender Information or other documents, do so entirely at their own risk.
- .3 The Tenderer's obligation to become familiar with the information described in Article 1.14.1 is not lessened or discharged by reason of any technical reports, including soils reports or data, test hole drilling reports or other soils information, made available or supplied in conjunction with the tendering process. Any technical reports so provided are for information only and neither the CITY nor the CITY's Consultants accept or assume any responsibility for the contents or accuracy of such technical reports and the Tenderer agrees that the CITY, the CITY's Consultants and their representatives shall not be liable in any way to the Tenderer in respect of such technical reports. The Tenderer further agrees that it shall not rely upon any oral information provided to it by the CITY, the CITY's Consultants or their representatives.
- .4 The preferred staging area for the Contractor's equipment, trailers and material has been identified on the design drawings. This area is identified as a suggestion only, and it is the Contractor's responsibility to obtain access to, and use of, a suitable area for the duration of the Work.
- .5 Compensation will not be made for failure to make proper site investigations or to fully understand the nature of the work.

1.18 PRIME COST AND CONTINGENCY SUMS

- .1 The Tenderer shall include in its Tender Sum any prime cost sums or contingency sums. The Harmonized Sales Tax shall be shown as a separate amount.

1.19 PERMITS AND INSPECTIONS

- .1 The Tenderer shall include in its Tender Sum the cost of permits and inspections required by any governmental or other authority having jurisdiction or as required to fully perform the Work in accordance with the Contract.

1.20 SUCCESSFUL TENDERER

- .1 Award of Contract by the CITY occurs once the Tenderer receives a Letter of Intent executed by Stefan Stiller, P.Eng. – Project Engineer of the CITY who has been duly and legally authorized by the CITY to send such Letter of Intent.
- .2 Following the receipt of the Letter of Intent, the Successful Tenderer shall provide the Performance Bond and Labour and Material Payment Bond within the time required in Article 1.13.7. The Successful Tenderer shall also provide a Certificate of Insurance unless previously provided.

- a. Upon the Successful Tenderer complying with the requirements of both Articles 1.20.2 and 1.20.4, the certified cheque or Bid Bond or irrevocable letter of credit, as the case may be, shall be returned to the Successful Tenderer.
 - b. If the Successful Tenderer fails to comply with either or both of the requirements of Articles 1.20.2 and 1.20.4, the certified cheque or Bid Bond or irrevocable letter of credit, as the case may be, shall be forfeited to the CITY as compensation for damages the CITY may suffer.
- .3 The forfeiture of a Successful Tenderer's certified cheque or Bid Bond or irrevocable letter of credit shall not be construed as a waiver of any rights or remedies which the CITY may have against such Tenderer for loss or damages incurred or suffered in excess of the amount of such certified cheque or Bid Bond or irrevocable letter of credit.
- .4 Within 5 working days of receipt of the Contract from the CITY, the Successful Tenderer shall duly execute the Contract and return the Contract to the CITY.

1.21 TENDER EVALUATION CRITERIA

- .1 Each Tender will be evaluated on the basis of the criteria listed below and the CITY will have the sole and unfettered discretion to award up to the maximum number of points for each criteria as listed below. By submitting a Tender, the Tenderer acknowledges and agrees that the CITY has, and it is hereby entitled to exercise, the sole and unfettered discretion to award the points for the evaluation of the noted criteria.
- .2 By submitting its Tender, each Tenderer acknowledges and agrees that it waives any right to contest in any legal proceedings, the decision of the CITY to award points in respect of the criteria noted below. The criteria for evaluation are as follows:
- .3 The Tender will be evaluated on lowest price.
- .4 The City's selection of the successful Bidder be based on which Bidder has provided a Bid on terms which the City determines, in its sole and unfettered discretion, to be most beneficial or most advantageous to the City based on any criteria that may be employed by the City from time to time. The lowest or any Bid will not necessarily be accepted. After the selection of a Bidder, the City has, in its sole and unfettered discretion, the right to negotiate with that Bidder and, as part of that negotiation, to negotiate changes, amendments, or modifications to the Bid as submitted, without offering other Bidders the opportunity to amend their Bids. The City shall incur no liability to any Bidder as a result of these discussions, negotiations, or modifications. By submitting its Bid, each Bidder waives its right to contest in any action, application, case or legal proceeding (in any court) the decision of the City to conduct any negotiation or the decision by the City of which Bidder has submitted the most advantageous Bid. Both the City and the Bidder expressly agree and acknowledge that all statements made by either side in the course of any negotiation are without prejudice and strictly confidential.
- .5 The City reserves the right to accept a Bid other than the lowest Bid without stating reasons.

1.22 WORKERS' COMPENSATION

- .1 Each Tenderer is to submit with its Tender, a letter of account from the Workplace Safety and Insurance Board – Ontario. This letter is to be current and must be dated no earlier than 21 calendar days prior to the Tender Closing.
- .2 The Tenderers who do not have an account with the Workplace Safety and Insurance Board - Ontario shall provide with their Tender evidence of a subcontractor or other company that will carry such coverage on their behalf.

- .3 If the Tenderer is performing work in any exempt industry within the meaning of the Workplace Safety and Insurance Act (the "WSIB Act") and does not carry coverage, the Tenderer acknowledges that:
 - a. The CITY is subject to a deeming order under s. 14(2) of the WSIB Act (the "Deeming Order"); and
 - b. The Deeming Order states that all of the Tenderer's employees, directors, proprietors, partners or employees are deemed to be CITY employees for the purposes of the WSIB Act while performing work for the CITY; and
 - c. The effect of the Deeming Order is that the Tenderer's employees, directors, proprietors and partners who are injured while performing work for the CITY under the Contract, have no right to sue anyone and are limited to a claim under the WSIB Act.
- .4 The Tenderer shall communicate the existence and effect of the Deeming Order to all of its employees, directors, proprietors, partners or employees.
- .5 The CITY will reject any Tender which fails to comply with the provisions set out in Article 1.22.

1.23 REGISTRATION

- .1 Prior to commencing the Work, the Successful Tenderer shall obtain all authorizations required by the laws of the Province of Ontario and of the Country of Canada enabling it to carry on business to complete the Work required under the Contract. Failure to be properly authorized shall entitle the CITY to forthwith terminate the Contract without compensation.

1.24 TENDERS EXCEEDING BUDGET

- .1 In addition to the rights contained within Article 1.24 herein, if the Tender Sum of every Tenderer exceeds the amount the CITY has budgeted for the Work, the CITY may reject all Tenders or attempt to negotiate a lower price with the Tenderer who, in the sole and unfettered discretion of the CITY, has submitted the most advantageous Tender.
- .2 Each Tenderer acknowledges and agrees that the CITY has the sole and unfettered discretion to employ any criteria in order to determine the Tender most advantageous to the CITY, that the CITY has no obligation to neither disclose such criteria nor employ the criteria listed outlined in Article 1.21 Tender Evaluation Criteria.
- .3 By submitting its Tender, each Tenderer waives its right to contest in any action, application, case or legal proceeding in any court, the decision which the CITY may pursue under Article 1.24.1 and Article 1.24.2 herein.
- .4 If the Tender Sum of every Tenderer exceeds the amount budgeted for the Work and the CITY negotiates with the Tenderer who has submitted the Tender considered most advantageous to the CITY:
 - a. All statements made by either side in the course of negotiation are without prejudice and confidential;
 - b. In particular, the CITY's attempt to negotiate with such Tenderer does not constitute a rejection of its Tender; and
 - c. The CITY will not attempt to obtain a lower price for the same work that the Tenderer originally bid on, but may attempt to obtain a lower price for an altered or reduced

scope of work. In no event will the CITY be obliged to disclose the amount budgeted for the Work.

1.25 CERTIFICATE OF RECOGNITION (“C.O.R.”) SAFETY PROGRAM REQUIREMENT

- .1 All Contractors must possess a valid Certificate of Recognition (COR) or recognized equivalent for an accredited workplace safety and health program in accordance with The Workplace Safety and Health Act as noted in Article 1.22.
- .2 The Contractor shall be the Prime Contractor and shall serve as and have the duties of the Prime Contractor in accordance with the Occupational Health and Safety Act (Ontario).
- .3 At the preconstruction meeting, provide the Consultant and Owner’s representative with a copy of the Contractor’s site-specific Health and Safety Plan and signed attestation.
- .4 Observe construction safety measures of National Building Code 2020 Part 8 Safety Measures at Construction and Demolition Sites, Ontario Occupational Health and Safety Act, Workplace Safety and Insurance Board Ontario, and the City of Kenora Safety requirements. In case of conflict or discrepancy, the more stringent requirements shall apply.

1.26 CANADIAN FREE TRADE AGREEMENT

- .1 The provisions of the Canadian Free Trade Agreement (“CFTA”) apply to this Tender.

1.27 ACCEPTANCE OR REJECTION OF TENDERS

- .1 As it is the purpose of the CITY to obtain the Tender most suitable and most advantageous to the interests of the CITY, and notwithstanding anything else contained within the Tender Documents, the CITY reserves the right, in its sole and unfettered discretion, to reject or accept any Tender, including the right to reject all Tenders. Without limiting the generality of the foregoing, any Tender which
 - a. is incomplete, obscure, irregular or unrealistic;
 - b. is non-compliant in a trivial/immaterial or substantial/material manner, or conditional;
 - c. has erasures or corrections;
 - d. omits a price on any one or more items in the Tender;
 - e. fails to complete the information required in the Tender;
 - f. is accompanied by an insufficient certified cheque, irrevocable letter of credit or by a Bid Bond in an unsatisfactory form, may at the CITY’s sole and unfettered discretion be rejected or accepted. Further, a Tender may be rejected or accepted on the basis of the CITY’s unfettered assessment of its best interest, which includes the CITY’s unfettered assessment as to a Tenderer’s past work performance for the CITY or for anyone else or as to a Tenderer’s financial capabilities, completion schedule, or ability to perform the Work, or the CITY’s desire to reduce the number of different contractors on the location of the Work at any given time. The CITY reserves the right to negotiate after Tender Closing time with the Tenderer that the CITY deems has provided the most advantageous Tender; in no event will the CITY be required to offer any modified terms to any other Tenderer prior to entering into a Contract with the successful Tenderer and the CITY shall incur no liability to any other Tenderers as a result of such negotiation or modification.

1.28 LAW AND FORUM OF TENDER

- .1 The law to be applied in respect of the Tender Documents and the Contract shall be the law of the Province of Ontario and all civil actions commenced in relation to the Tender Documents or Contract shall be adjudicated by the Courts of the Province of Ontario and by submitting Tenders, Tenderers are taken to have agreed to attorn to the jurisdiction of the Courts of the said Province.

1.29 ACCEPTANCE PERIOD

- .1 The Tender shall be irrevocable and open for acceptance by the Consultant for the period of time contained in the Invitation to Tender, namely, sixty (60) days following the end of the day of the Tender Closing. The time and date of the Tender Closing is as defined in the Invitation to Tender.

1.30 DRAWING LIST

DWG NO.	TITLE
Repair Works for Beggs Arch Culvert and Lajeunesse Bridge	
G-001	Title Page & Drawing Index
G-002	General Notes & Abbreviations
S-101	Staging Area & Planning
S-102	General Arrangement & Locations of repair Details
S-103	Arch Layout & Locations of Repair Types
S-104	Repair types & Methods – Sheet 1 of 3
S-105	Repair types & Methods – Sheet 2 of 3
S-106	Repair types & Methods – Sheet 3 of 3

END OF SECTION

Part 1.1 – CCDC 4 - 2023

Keewatin Channel Bridge
Recoating and Steel Repair



Unit Price Contract

CCDC 4 — 2023

Name of the Work

Keewatin Channel Bridge
Recoating and Steel Repair

Apply a CCDC 4 copyright seal here.

The application of the seal demonstrates the intention of the party proposing the use of this document that it be an accurate and unamended form of CCDC 4 - 2023 except to the extent that any alterations, additions or modifications are set forth in supplementary conditions.

CCDC 4 UNIT PRICE CONTRACT

TABLE OF CONTENTS

AGREEMENT BETWEEN OWNER AND CONTRACTOR

- A-1 The Work
- A-2 Agreements and Amendments
- A-3 Contract Documents
- A-4 Contract Price
- A-5 Payment
- A-6 Receipt of and Addresses for Notices in Writing
- A-7 Language of the Contract
- A-8 Succession

DEFINITIONS

- Change Directive
- Change Order
- Construction Equipment
- Consultant
- Contract
- Contract Documents
- Contract Price
- Contract Time
- Contractor
- Drawings
- Notice in Writing
- Owner
- Other Contractor
- Payment Legislation
- Place of the Work
- Product
- Project
- Ready-for-Takeover
- Schedule of Prices
- Shop Drawings
- Specifications
- Subcontractor
- Substantial Performance of the Work
- Supplemental Instruction
- Supplier
- Temporary Work
- Unit Price
- Value Added Taxes
- Work
- Working Day

GENERAL CONDITIONS

PART 1 GENERAL PROVISIONS

- GC 1.1 Contract Documents
- GC 1.2 Law of the Contract
- GC 1.3 Rights and Remedies
- GC 1.4 Assignment

PART 2 ADMINISTRATION OF THE CONTRACT

- GC 2.1 Authority of the Consultant
- GC 2.2 Role of the Consultant
- GC 2.3 Review and Inspection of the Work
- GC 2.4 Defective Work

PART 3 EXECUTION OF THE WORK

- GC 3.1 Control of the Work
- GC 3.2 Construction by the Owner or Other Contractors
- GC 3.3 Temporary Work
- GC 3.4 Construction Schedule
- GC 3.5 Supervision
- GC 3.6 Subcontractors and Suppliers
- GC 3.7 Labour and Products
- GC 3.8 Shop Drawings

PART 4 ALLOWANCES

- GC 4.1 Cash Allowances
- GC 4.2 Contingency Allowance

PART 5 PAYMENT

- GC 5.1 Financing Information Required of the Owner
- GC 5.2 Applications for Payment
- GC 5.3 Payment
- GC 5.4 Substantial Performance of the Work and Payment of Holdback
- GC 5.5 Final Payment
- GC 5.6 Deferred Work
- GC 5.7 Non-conforming Work

PART 6 CHANGES IN THE WORK

- GC 6.1 Owner's Right to Make Changes
- GC 6.2 Change Order
- GC 6.3 Change Directive
- GC 6.4 Concealed or Unknown Conditions
- GC 6.5 Delays
- GC 6.6 Claims for a Change in Contract Price
- GC 6.7 Quantity Variations

PART 7 DEFAULT NOTICE

- GC 7.1 Owner's Right to Perform the Work, Terminate the Contractor's Right to Continue with the Work or Terminate the Contract
- GC 7.2 Contractor's Right to Suspend the Work or Terminate the Contract

PART 8 DISPUTE RESOLUTION

- GC 8.1 Authority of the Consultant
- GC 8.2 Adjudication
- GC 8.3 Negotiation, Mediation and Arbitration
- GC 8.4 Retention of Rights

PART 9 PROTECTION OF PERSONS AND PROPERTY

- GC 9.1 Protection of Work and Property
- GC 9.2 Toxic and Hazardous Substances
- GC 9.3 Artifacts and Fossils
- GC 9.4 Construction Safety
- GC 9.5 Mould

PART 10 GOVERNING REGULATIONS

- GC 10.1 Taxes and Duties
- GC 10.2 Laws, Notices, Permits, and Fees
- GC 10.3 Patent Fees
- GC 10.4 Workers' Compensation

PART 11 INSURANCE

- GC 11.1 Insurance

PART 12 OWNER TAKEOVER

- GC 12.1 Ready-for-Takeover
- GC 12.2 Early Occupancy by the Owner
- GC 12.3 Warranty

PART 13 INDEMNIFICATION AND WAIVER

- GC 13.1 Indemnification
- GC 13.2 Waiver of Claims

CCDC 4 is the product of a consensus-building process aimed at balancing the interests of all parties on the construction project. It reflects recommended industry practices. The CCDC and its constituent member organizations do not accept any responsibility or liability for loss or damage which may be suffered as a result of the use or interpretation of CCDC 4.

CCDC Copyright 2023

Must not be copied in whole or in part without the written permission of the CCDC.

AGREEMENT BETWEEN OWNER AND CONTRACTOR

For use when unit prices are the primary basis of payment.

This Agreement made on _____ day of _____ in the year 2025 .
by and between the parties

City of Kenora

hereinafter called the “Owner”

and

hereinafter called the “Contractor”

The Owner and the Contractor agree as follows:

ARTICLE A-1 THE WORK

The Contractor shall:

- 1.1 perform the *Work* required by the *Contract Documents* for *(insert below the description or title of the Work)*
Keewatin Channel Bridge Recoating and Steel Repair

located at *(insert below the Place of the Work)*

Kenora, Ontario

for which the Agreement has been signed by the parties, and for which *(insert below the name of the Consultant)*

Stantec Consulting Ltd.

is acting as and is hereinafter called the “Consultant” and

- 1.2 do and fulfill everything indicated by the *Contract Documents*, and
- 1.3 commence the *Work* by the 23 day of June in the year 2025 and, subject to adjustment in *Contract Time* as provided for in the *Contract Documents*, attain *Ready-for-Takeover*, by the 31 day of December in the year 2025 .

ARTICLE A-2 AGREEMENTS AND AMENDMENTS

- 2.1 The *Contract* supersedes all prior negotiations, representations or agreements, either written or oral, relating in any manner to the *Work*, including the bid documents that are not expressly listed in Article A-3 of the Agreement – CONTRACT DOCUMENTS.
- 2.2 The *Contract* may be amended only as provided in the *Contract Documents*.

ARTICLE A-3 CONTRACT DOCUMENTS

3.1 The following are the *Contract Documents* referred to in Article A-1 of the Agreement – THE WORK:

- Agreement between *Owner* and *Contractor*
- Definitions
- General Conditions

*

The WORK shall include all references and specifications included in the entire Tender, Contract & Specifications Document. This includes but is not limited to the following:

Part 1 - Tender, Bidding, and Conditions

Part 2 - Technical Specifications

Drawings - As listed in Part 1 - Drawing List

Appendices

Addendum (as issued)

* (Insert here, attaching additional pages if required, a list identifying all other Contract Documents e.g. supplementary conditions; Schedule of Prices; Division 01 of the Specifications – GENERAL REQUIREMENTS; Project information that the Contractor may rely upon; technical Specifications, giving a list of contents with section numbers and titles, number of pages and date; material finishing schedules; Drawings, giving drawing number, title, date, revision date or mark; addenda, giving title, number, date; time schedule)

ARTICLE A-4 CONTRACT PRICE

4.1 *Unit Prices* form the basis for payment of the *Contract Price*. Quantities in the *Schedule of Prices* are estimated. The estimated *Contract Price*, which is the total extended amount indicated in the *Schedule of Prices*, is:

/100 dollars \$

4.2 These amounts shall be subject to adjustments as provided in the *Contract Documents*.

4.3 All amounts are in Canadian funds and exclude *Value Added Taxes*.

ARTICLE A-5 PAYMENT

5.1 Subject to the provisions of the *Contract Documents* and *Payment Legislation*, and in accordance with legislation and statutory regulations respecting holdback percentages, the *Owner* shall:

- .1 make progress payments to the *Contractor* on account of the *Contract Price* when due in the amount certified by the *Consultant* unless otherwise prescribed by *Payment Legislation* together with such *Value Added Taxes* as may be applicable to such payments,
- .2 upon *Substantial Performance of the Work*, pay to the *Contractor* the unpaid balance of the holdback amount when due together with such *Value Added Taxes* as may be applicable to such payment, and
- .3 upon the issuance of the final certificate for payment, pay to the *Contractor* the unpaid balance of the *Contract Price* when due together with such *Value Added Taxes* as may be applicable to such payment.

5.2 Interest

- .1 Should either party fail to make payments as they become due under the terms of the *Contract* or in an award by adjudication, arbitration or court, interest at the following rates on such unpaid amounts shall also become due and payable until payment:

(1) 2% per annum above the prime rate for the first 60 days.

(2) 4% per annum above the prime rate after the first 60 days.

Such interest shall be compounded on a monthly basis. The prime rate shall be the rate of interest quoted by

(Insert name of chartered lending institution whose prime rate is to be used)

Royal Bank of Canada

for prime business loans as it may change from time to time.

- .2 Interest shall apply at the rate and in the manner prescribed by paragraph 5.2.1 of this Article on the settlement amount of any claim in dispute that is resolved either pursuant to Part 8 of the General Conditions – DISPUTE RESOLUTION or otherwise, from the date the amount would have been due and payable under the *Contract*, had it not been in dispute, until the date it is paid.

ARTICLE A-6 RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING

6.1 *Notices in Writing* will be addressed to the recipient at the address set out below.

6.2 The delivery of a *Notice in Writing* will be by hand, by courier, by prepaid first class mail, or by other form of electronic communication during the transmission of which no indication of failure of receipt is communicated to the sender.

6.3 A *Notice in Writing* delivered by one party in accordance with this *Contract* will be deemed to have been received by the other party on the date of delivery if delivered by hand or courier, or if sent by mail it will be deemed to have been received five calendar days after the date on which it was mailed, provided that if either such day is not a *Working Day*, then the *Notice in Writing* will be deemed to have been received on the *Working Day* next following such day.

6.4 A *Notice in Writing* sent by any form of electronic communication will be deemed to have been received on the date of its transmission provided that if such day is not a *Working Day* or if it is received after the end of normal business hours on the date of its transmission at the place of receipt, then it will be deemed to have been received at the opening of business at the place of receipt on the first *Working Day* next following the transmission thereof.

6.5 An address for a party may be changed by *Notice in Writing* to the other party setting out the new address in accordance with this Article.

Owner

City of Kenora

*name of Owner**

One Main Street South, Kenora, ON P9N 3X2

address

gbreen@kenora.ca

email address

Contractor

*name of Contractor**

address

email address

Consultant

Stantec Consulting Ltd

*name of Consultant**

500-311 Portage Avenue, Winnipeg MB R3B 2B9

address

eric.tranquada@stantec.com

email address

** If it is intended that a specific individual must receive the notice, that individual's name shall be indicated.*

ARTICLE A-7 LANGUAGE OF THE CONTRACT

- 7.1 When the *Contract Documents* are prepared in both the English and French languages, it is agreed that in the event of any apparent discrepancy between the English and French versions, the English / ~~French~~ # language shall prevail.
Complete this statement by striking out inapplicable term.
- 7.2 This Agreement is drawn in English at the request of the parties hereto. La présente convention est rédigée en anglais à la demande des parties.

ARTICLE A-8 SUCCESSION

- 8.1 The *Contract* shall enure to the benefit of and be binding upon the parties hereto, their respective heirs, legal representatives, successors, and assigns.

In witness whereof the parties hereto have executed this Agreement by the hands of their duly authorized representatives.

SIGNED AND DELIVERED
in the presence of:

WITNESS

OWNER

City of Kenora

name of Owner

signature

signature

name of person signing

name and title of person signing

WITNESS

CONTRACTOR

name of Contractor

signature

signature

name of person signing

name and title of person signing

- N.B. Where legal jurisdiction, local practice or Owner or Contractor requirement calls for:
- (a) proof of authority to execute this document, attach such proof of authority in the form of a certified copy of a resolution naming the representative(s) authorized to sign the Agreement for and on behalf of the corporation or partnership; or
 - (b) the affixing of a corporate seal, this Agreement should be properly sealed.

DEFINITIONS

The following Definitions shall apply to all *Contract Documents*.

Change Directive

A *Change Directive* is a written instruction prepared by the *Consultant* and signed by the *Owner* directing the *Contractor* to proceed with a change in the *Work* within the general scope of the *Contract Documents* prior to the *Owner* and the *Contractor* agreeing upon adjustments in the *Contract Price* and the *Contract Time*.

Change Order

A *Change Order* is a written amendment to the *Contract* prepared by the *Consultant* and signed by the *Owner* and the *Contractor* stating their agreement upon:

- a change in the *Work*;
- the method of adjustment or the amount of the adjustment in the *Contract Price*, if any; and
- the extent of the adjustment in the *Contract Time*, if any.

Construction Equipment

Construction Equipment means all machinery and equipment, either operated or not operated, that is required for preparing, fabricating, conveying, erecting, or otherwise performing the *Work* but is not incorporated into the *Work*.

Consultant

The *Consultant* is the person or entity engaged by the *Owner* and identified as such in the Agreement. The *Consultant* is the Architect, the Engineer or entity licensed to practise in the province or territory of the *Place of the Work*.

Contract

The *Contract* is the undertaking by the parties to perform their respective duties, responsibilities and obligations as prescribed in the *Contract Documents* and represents the entire agreement between the parties.

Contract Documents

The *Contract Documents* consist of those documents listed in Article A-3 of the Agreement – CONTRACT DOCUMENTS and amendments agreed upon between the parties.

Contract Price

The *Contract Price* is the sum of the products of the actual final quantities that are incorporated in or made necessary by the *Work*, multiplied by the appropriate *Unit Prices* stated in the *Schedule of Prices*, plus lump sums and allowances, if any.

Contract Time

The *Contract Time* is the time from commencement of the *Work* to the date of *Ready-for-Takeover* as stipulated in paragraph 1.3 of Article A-1 of the Agreement – THE WORK.

Contractor

The *Contractor* is the person or entity identified as such in the Agreement.

Drawings

The *Drawings* are the graphic and pictorial portions of the *Contract Documents*, wherever located and whenever issued, showing the design, location and dimensions of the *Work*, generally including plans, elevations, sections, details, and diagrams.

Notice in Writing

A *Notice in Writing*, where identified in the *Contract Documents*, is a written communication between the parties or between them and the *Consultant* that is transmitted in accordance with the provisions of Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

Owner

The *Owner* is the person or entity identified as such in the Agreement.

Other Contractor

Other Contractor means a contractor, other than the *Contractor* or a *Subcontractor*, engaged by the *Owner* for the *Project*.

Payment Legislation

Payment Legislation means such legislation, if any, in effect at the *Place of the Work* which governs payment under construction contracts.

Place of the Work

The *Place of the Work* is the designated site or location of the *Work* identified in the *Contract Documents*.

Product

Product or *Products* means material, machinery, equipment, and fixtures forming part of the *Work*, but does not include *Construction Equipment*.

Project

The *Project* means the total construction contemplated of which the *Work* may be the whole or a part.

Ready-for-Takeover

Ready-for-Takeover shall have been attained when the conditions set out in paragraph 12.1.1 of GC 12.1 – READY-FOR-TAKEOVER have been met, as verified by the *Consultant* pursuant to paragraph 12.1.4.2 of GC 12.1 – READY-FOR-TAKEOVER.

Schedule of Prices

The *Schedule of Prices* is the schedule listed in Article A-3 – CONTRACT DOCUMENTS identifying items of work, units of measure, estimated quantities, and *Unit Prices*.

Shop Drawings

Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures, *Product* data, and other data which the *Contractor* provides to illustrate details of portions of the *Work*.

Specifications

The *Specifications* are that portion of the *Contract Documents*, wherever located and whenever issued, consisting of the written requirements and standards for *Products*, systems, workmanship, quality, and the services necessary for the performance of the *Work*.

Subcontractor

A *Subcontractor* is a person or entity having a direct contract with the *Contractor* to perform a part or parts of the *Work* at the *Place of the Work*.

Substantial Performance of the Work

Substantial Performance of the Work is as defined in the lien legislation applicable to the *Place of the Work*.

Supplemental Instruction

A *Supplemental Instruction* is an instruction, not involving adjustment in the *Contract Price* or *Contract Time*, in the form of *Specifications*, *Drawings*, schedules, samples, models, or written instructions, consistent with the intent of the *Contract Documents*. It is to be issued by the *Consultant* to supplement the *Contract Documents* as required for the performance of the *Work*.

Supplier

A *Supplier* is a person or entity having a direct contract with the *Contractor* to supply *Products*.

Temporary Work

Temporary Work means temporary supports, structures, facilities, services, and other temporary items, excluding *Construction Equipment*, required for the execution of the *Work* but not incorporated into the *Work*.

Unit Price

A *Unit Price* is the amount payable for a single unit of *Work* as stated in the *Schedule of Prices*.

Value Added Taxes

Value Added Taxes means such sum as shall be levied upon the *Contract Price* by the Federal or any Provincial or Territorial Government and is computed as a percentage of the *Contract Price* and includes the Goods and Services Tax, the Quebec Sales Tax, the Harmonized Sales Tax, and any similar tax, the collection and payment of which have been imposed on the *Contractor* by tax legislation.

Work

The *Work* means the total construction and related services required by the *Contract Documents*.

Working Day

Working Day means a day other than a Saturday, Sunday, statutory holiday, or statutory vacation day that is observed by the construction industry in the area of the *Place of the Work*.

GENERAL CONDITIONS

PART 1 GENERAL PROVISIONS

GC 1.1 CONTRACT DOCUMENTS

- 1.1.1 The intent of the *Contract Documents* is to include the labour, *Products* and services necessary for the performance of the *Work* by the *Contractor* in accordance with these documents. It is not intended, however, that the *Contractor* shall supply products or perform work not consistent with, not covered by, or not properly inferable from the *Contract Documents*.
- 1.1.2 The *Contract Documents* are complementary, and what is required by one shall be as binding as if required by all. Performance by the *Contractor* shall be required only to the extent consistent with the *Contract Documents*.
- 1.1.3 The *Contractor* shall review the *Contract Documents* for the purpose of facilitating co-ordination and execution of the *Work* by the *Contractor*.
- 1.1.4 The *Contractor* is not responsible for errors, omissions or inconsistencies in the *Contract Documents*. If there are perceived errors, omissions or inconsistencies discovered by or made known to the *Contractor*, the *Contractor* shall promptly report to the *Consultant* and shall not proceed with the work affected until the *Contractor* has received corrected or additional information from the *Consultant*.
- 1.1.5 If there is a conflict within the *Contract Documents*:
- .1 the order of priority of documents, from highest to lowest, shall be
 - the Agreement between *Owner* and *Contractor*,
 - the Definitions,
 - Supplementary Conditions,
 - the General Conditions,
 - Division 01 of the *Specifications*,
 - technical *Specifications*,
 - material and finishing schedules,
 - the *Drawings*.
 - .2 *Drawings* of larger scale shall govern over those of smaller scale of the same date.
 - .3 dimensions shown on *Drawings* shall govern over dimensions scaled from *Drawings*.
 - .4 amended or later dated documents shall govern over earlier documents of the same type.
 - .5 noted materials and annotations shall govern over graphic indications.
- 1.1.6 Nothing contained in the *Contract Documents* shall create any contractual relationship between:
- .1 the *Owner* and a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
 - .2 the *Consultant* and the *Contractor*, a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
- 1.1.7 Words and abbreviations which have well known technical or trade meanings are used in the *Contract Documents* in accordance with such recognized meanings.
- 1.1.8 References in the *Contract Documents* to the singular shall be considered to include the plural as the context requires.
- 1.1.9 Neither the organization of the *Specifications* nor the arrangement of *Drawings* shall control the *Contractor* in dividing the work among *Subcontractors* and *Suppliers*.
- 1.1.10 *Specifications*, *Drawings*, models, and copies thereof furnished by the *Consultant* are and shall remain the *Consultant's* property, with the exception of the signed *Contract* sets, which shall belong to each party to the *Contract*. All *Specifications*, *Drawings* and models furnished by the *Consultant* are to be used only with respect to the *Work* and are not to be used on other work. These *Specifications*, *Drawings* and models are not to be copied or altered in any manner without the written authorization of the *Consultant*.
- 1.1.11 Physical models furnished by the *Contractor* at the *Owner's* expense are the property of the *Owner*.

GC 1.2 LAW OF THE CONTRACT

- 1.2.1 The law of the *Place of the Work* shall govern the interpretation of the *Contract*.

GC 1.3 RIGHTS AND REMEDIES

- 1.3.1 Except as expressly provided in the *Contract Documents*, the duties and obligations imposed by the *Contract Documents* and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by law.
- 1.3.2 No action or failure to act by the *Owner*, the *Consultant* or the *Contractor* shall constitute a waiver of any right or duty afforded any of them under the *Contract*, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

GC 1.4 ASSIGNMENT

- 1.4.1 Neither party to the *Contract* shall assign the *Contract* or a portion thereof without the written consent of the other, which consent shall not be unreasonably withheld.

PART 2 ADMINISTRATION OF THE CONTRACT

GC 2.1 AUTHORITY OF THE CONSULTANT

- 2.1.1 The *Consultant* will have authority to act on behalf of the *Owner* only to the extent provided in the *Contract Documents*, unless otherwise modified by written agreement as provided in paragraph 2.1.2.
- 2.1.2 The duties, responsibilities and limitations of authority of the *Consultant* as set forth in the *Contract Documents* shall be modified or extended only with the written consent of the *Owner*, the *Consultant* and the *Contractor*.

GC 2.2 ROLE OF THE CONSULTANT

- 2.2.1 The *Consultant* will provide administration of the *Contract* as described in the *Contract Documents*.
- 2.2.2 The *Consultant* will visit the *Place of the Work* at intervals appropriate to the progress of construction to:
- .1 become familiar with the progress and quality of the *Work*,
 - .2 determine if the *Work* is proceeding in general conformity with the *Contract Documents*, and
 - .3 verify quantities of *Work* performed under a *Schedule of Prices* where *Unit Prices* form the basis for payment.
- 2.2.3 If the *Owner* and the *Consultant* agree, the *Consultant* will provide at the *Place of the Work*, one or more project representatives to assist in carrying out the *Consultant's* responsibilities. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in writing to the *Contractor*.
- 2.2.4 Based on the *Consultant's* observations and evaluation of the *Contractor's* applications for payment, the *Consultant* will determine the amounts owing to the *Contractor* under the *Contract* and will issue certificates for payment as provided in Article A-5 of the Agreement – PAYMENT, GC 5.3 – PAYMENT and GC 5.5 – FINAL PAYMENT.
- 2.2.5 The *Consultant* will not be responsible for and will not have control, charge or supervision of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs required in connection with the *Work* in accordance with the applicable construction safety legislation, other regulations or general construction practice. The *Consultant* will not be responsible for the *Contractor's* failure to perform the *Work* in accordance with the *Contract Documents*.
- 2.2.6 Except with respect to GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER, the *Consultant* will be, in the first instance, the interpreter of the requirements of the *Contract Documents*.
- 2.2.7 Matters in question relating to the performance of the *Work* or the interpretation of the *Contract Documents* shall be initially referred in writing to the *Consultant* by the party raising the question for interpretations and findings and copied to the other party.
- 2.2.8 Interpretations and findings of the *Consultant* shall be consistent with the intent of the *Contract Documents*. In making such interpretations and findings the *Consultant* will not show partiality to either the *Owner* or the *Contractor*.
- 2.2.9 The *Consultant's* interpretations and findings will be given in writing to the parties within a reasonable time.
- 2.2.10 With respect to claims for a change in *Contract Price*, the *Consultant* will make findings as set out in GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.
- 2.2.11 The *Consultant* will have authority to reject work which in the *Consultant's* opinion does not conform to the requirements of the *Contract Documents*. Whenever the *Consultant* considers it necessary or advisable, the *Consultant* will have authority to require inspection or testing of work, whether or not such work is fabricated, installed or completed. However, neither the authority of the *Consultant* to act nor any decision either to exercise or not to exercise such authority shall give rise to any duty or responsibility of the *Consultant* to the *Contractor*, *Subcontractors*, *Suppliers*, or their agents, employees, or other persons performing any of the *Work*.

- 2.2.12 During the progress of the *Work* the *Consultant* will furnish *Supplemental Instructions* to the *Contractor* with reasonable promptness or in accordance with a schedule for such instructions agreed to by the *Consultant* and the *Contractor*.
- 2.2.13 The *Consultant* will review and take appropriate action upon *Shop Drawings*, samples and other submittals by the *Contractor*, in accordance with the *Contract Documents*.
- 2.2.14 The *Consultant* will prepare *Change Orders* and *Change Directives* as provided in GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.
- 2.2.15 The *Consultant* will conduct reviews of the *Work* to determine the date of *Substantial Performance of the Work* and verify that *Ready-for-Takeover* has been attained.
- 2.2.16 All certificates issued by the *Consultant* will be to the best of the *Consultant*'s knowledge, information and belief. By issuing any certificate, the *Consultant* does not guarantee the *Work* is correct or complete.
- 2.2.17 The *Consultant* will receive and review written warranties and related documents required by the *Contract* and provided by the *Contractor* and will forward such warranties and documents to the *Owner* for the *Owner*'s acceptance.
- 2.2.18 If the *Consultant*'s engagement is terminated, the *Owner* shall immediately engage a *Consultant* against whom the *Contractor* makes no reasonable objection and whose duties and responsibilities under the *Contract Documents* will be that of the former *Consultant*.

GC 2.3 REVIEW AND INSPECTION OF THE WORK

- 2.3.1 The *Owner* and the *Consultant* shall have access to the *Work* at all times. The *Contractor* shall provide sufficient, safe and proper facilities at all times for the review of the *Work* by the *Consultant* and the inspection of the *Work* by authorized agencies. If parts of the *Work* are in preparation at locations other than the *Place of the Work*, the *Owner* and the *Consultant* shall be given access to such work whenever it is in progress.
- 2.3.2 If work is designated for measurement for payment, tests, inspections, or approvals in the *Contract Documents*, by the *Consultant*'s instructions, or by the laws or ordinances of the *Place of the Work*, the *Contractor* shall give the *Consultant* reasonable notification of when the work will be ready for measurements, tests, inspections, and approvals. The *Contractor* shall arrange for and shall give the *Consultant* reasonable notification of the date and time of inspections by other authorities.
- 2.3.3 The *Contractor* shall furnish promptly to the *Consultant* two copies of certificates and inspection reports relating to the *Work*.
- 2.3.4 If the *Contractor* covers, or permits to be covered, work that has been designated for measurement for payment, special tests, inspections, or approvals before such measurements, special tests, inspections, or approvals are made, given or completed, the *Contractor* shall, if so directed, uncover such work, have the measurements, special tests, inspections, and approvals satisfactorily completed, and make good covering work at the *Contractor*'s expense.
- 2.3.5 The *Consultant* may order any portion or portions of the *Work* to be examined to confirm that such work is in accordance with the requirements of the *Contract Documents*. If the work is not in accordance with the requirements of the *Contract Documents*, the *Contractor* shall correct the work and pay the cost of examination and correction. If the work is in accordance with the requirements of the *Contract Documents*, the *Owner* shall pay the cost of examination and restoration.
- 2.3.6 The *Contractor* shall pay the cost of making any test or inspection, including the cost of samples required for such test or inspection, if such test or inspection is designated in the *Contract Documents* to be performed by the *Contractor* or is required by the laws or ordinances applicable to the *Place of the Work*.
- 2.3.7 The *Contractor* shall pay the cost of samples required for any test or inspection to be performed by others if such test or inspection is designated in the *Contract Documents*.

GC 2.4 DEFECTIVE WORK

- 2.4.1 The *Contractor* shall promptly correct defective work that has been rejected by the *Consultant* as failing to conform to the *Contract Documents* whether or not the defective work was incorporated in the *Work* or the defect is the result of poor workmanship, use of defective products or damage through carelessness or other act or omission of the *Contractor*.
- 2.4.2 The *Contractor* shall make good promptly *Other Contractors*' work destroyed or damaged by such corrections at the *Contractor*'s expense.
- 2.4.3 If in the opinion of the *Consultant* it is not expedient to correct defective work or work not performed as provided in the *Contract Documents*, the *Owner* may deduct from the amount otherwise due to the *Contractor* the difference in value between the work as performed and that called for by the *Contract Documents*. If the *Owner* and the *Contractor* do not agree on the difference in value, they shall refer the matter to the *Consultant* for a finding.

PART 3 EXECUTION OF THE WORK

GC 3.1 CONTROL OF THE WORK

- 3.1.1 The *Contractor* shall have total control of the *Work* and shall effectively direct and supervise the *Work* so as to ensure conformity with the *Contract Documents*.
- 3.1.2 The *Contractor* shall be solely responsible for construction means, methods, techniques, sequences, and procedures and for co-ordinating the various parts of the *Work* under the *Contract*.

GC 3.2 CONSTRUCTION BY THE OWNER OR OTHER CONTRACTORS

- 3.2.1 The *Owner* reserves the right to award separate contracts in connection with other parts of the *Project* to *Other Contractors* and to perform work with own forces.
- 3.2.2 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner's* own forces, the *Owner* shall:
- .1 provide for the co-ordination of the activities and work of *Other Contractors* and the *Owner's* own forces with the *Work* of the *Contract*;
 - .2 enter into separate contracts with *Other Contractors* under conditions of contract which are compatible with the conditions of the *Contract*;
 - .3 ensure that insurance coverage is provided to the same requirements as are called for in GC 11.1 – INSURANCE and co-ordinate such insurance with the insurance coverage of the *Contractor* as it affects the *Work*; and
 - .4 take all reasonable precautions to avoid labour disputes or other disputes on the *Project* arising from the work of *Other Contractors* or the *Owner's* own forces.
- 3.2.3 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner's* own forces, the *Contractor* shall:
- .1 afford the *Owner* and *Other Contractors* reasonable opportunity to store their products and execute their work;
 - .2 co-ordinate and schedule the *Work* with the work of *Other Contractors* or the *Owner's* own forces that are identified in the *Contract Documents*;
 - .3 participate with *Other Contractors* and the *Owner* in reviewing their construction schedules when directed to do so; and
 - .4 report promptly to the *Consultant* in writing any apparent deficiencies in the work of *Other Contractors* or of the *Owner's* own forces, where such work affects the proper execution of any portion of the *Work*, prior to proceeding with that portion of the *Work*.
- 3.2.4 Where a change in the *Work* is required as a result of the co-ordination and integration of the work of *Other Contractors* or *Owner's* own forces with the *Work*, the changes shall be authorized and valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.
- 3.2.5 Disputes and other matters in question between the *Contractor* and *Other Contractors* shall be dealt with as provided in Part 8 of the General Conditions – DISPUTE RESOLUTION provided the *Other Contractors* have reciprocal obligations. The *Contractor* shall be deemed to have consented to arbitration of any dispute with any *Other Contractor* whose contract with the *Owner* contains a similar agreement to arbitrate. In the absence of *Other Contractors* having reciprocal obligations, disputes and other matters in question initiated by the *Contractor* against *Other Contractors* will be considered disputes and other matters in question between the *Contractor* and the *Owner*.
- 3.2.6 Should the *Owner*, the *Consultant*, *Other Contractors*, or anyone employed by them directly or indirectly be responsible for ill-timed work necessitating cutting or remedial work to be performed, the cost of such cutting or remedial work shall be valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

GC 3.3 TEMPORARY WORK

- 3.3.1 The *Contractor* shall have the sole responsibility for the design, erection, operation, maintenance, and removal of *Temporary Work* unless otherwise specified in the *Contract Documents*.
- 3.3.2 The *Contractor* shall engage and pay for registered professional engineering personnel skilled in the appropriate disciplines to perform those functions referred to in paragraph 3.3.1 where required by law or by the *Contract Documents* and in all cases where such *Temporary Work* is of such a nature that professional engineering skill is required to produce safe and satisfactory results.

- 3.3.3 Notwithstanding the provisions of GC 3.1 – CONTROL OF THE WORK, paragraphs 3.3.1 and 3.3.2 or provisions to the contrary elsewhere in the *Contract Documents* where such *Contract Documents* include designs for *Temporary Work* or specify a method of construction in whole or in part, such designs or methods of construction shall be considered to be part of the design of the *Work* and the *Contractor* shall not be held responsible for that part of the design or the specified method of construction. The *Contractor* shall, however, be responsible for the execution of such design or specified method of construction in the same manner as for the execution of the *Work*.

GC 3.4 CONSTRUCTION SCHEDULE

- 3.4.1 The *Contractor* shall:
- .1 prepare and submit to the *Owner* and the *Consultant* prior to the first application for payment, a construction schedule that indicates the timing of the major activities of the *Work* and provides sufficient detail of the critical events and their inter-relationship to demonstrate the *Work* will be performed in conformity with the *Contract Time*;
 - .2 monitor the progress of the *Work* relative to the construction schedule and update the schedule on a monthly basis or as stipulated by the *Contract Documents*; and
 - .3 advise the *Consultant* of any revisions required to the schedule as the result of extensions of the *Contract Time* as provided in Part 6 of the General Conditions – CHANGES IN THE WORK.

GC 3.5 SUPERVISION

- 3.5.1 The *Contractor* shall provide all necessary supervision and appoint a competent representative who shall be in attendance at the *Place of the Work* while the *Work* is being performed. The appointed representative shall not be changed except for valid reason.
- 3.5.2 The appointed representative shall represent the *Contractor* at the *Place of the Work*. Information and instructions provided by the *Consultant* to the *Contractor's* appointed representative shall be deemed to have been received by the *Contractor*, except with respect to Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

GC 3.6 SUBCONTRACTORS AND SUPPLIERS

- 3.6.1 The *Contractor* shall preserve and protect the rights of the parties under the *Contract* with respect to work to be performed under subcontract, and shall:
- .1 enter into contracts or written agreements with *Subcontractors* and *Suppliers* to require them to perform their work as provided in the *Contract Documents*;
 - .2 incorporate the applicable terms and conditions of the *Contract Documents* into all contracts or written agreements with *Subcontractors* and *Suppliers*; and
 - .3 be as fully responsible to the *Owner* for acts and omissions of *Subcontractors*, *Suppliers* and any persons directly or indirectly employed by them as for acts and omissions of persons directly employed by the *Contractor*.
- 3.6.2 The *Contractor* shall indicate in writing, if requested by the *Owner*, those *Subcontractors* or *Suppliers* whose bids have been received by the *Contractor* which the *Contractor* would be prepared to accept for the performance of a portion of the *Work*. Should the *Owner* not object before signing the *Contract*, the *Contractor* shall employ those *Subcontractors* or *Suppliers* so identified by the *Contractor* in writing for the performance of that portion of the *Work* to which their bid applies.
- 3.6.3 The *Owner* may, for reasonable cause, at any time before the *Owner* has signed the *Contract*, object to the use of a proposed *Subcontractor* or *Supplier* and require the *Contractor* to employ one of the other subcontract bidders.
- 3.6.4 If the *Owner* requires the *Contractor* to change a proposed *Subcontractor* or *Supplier*, the *Contract Price* and *Contract Time* shall be adjusted by the difference occasioned by such required change.
- 3.6.5 The *Contractor* shall not be required to employ as a *Subcontractor* or *Supplier*, a person or firm to which the *Contractor* may reasonably object.
- 3.6.6 The *Owner*, through the *Consultant*, may provide to a *Subcontractor* or *Supplier* information as to the percentage of the *Subcontractor's* or *Supplier's* work which has been certified for payment.

GC 3.7 LABOUR AND PRODUCTS

- 3.7.1 The *Contractor* shall maintain good order and discipline among the *Contractor's* employees engaged on the *Work* and employ only workers that are skilled in the tasks assigned.
- 3.7.2 The *Contractor* shall provide and pay for labour, *Products*, tools, *Construction Equipment*, water, heat, light, power, transportation, and other facilities and services necessary for the performance of the *Work* in accordance with the *Contract*.

- 3.7.3 Unless otherwise specified in the *Contract Documents*, *Products* provided shall be new. *Products* which are not specified shall be of a quality consistent with those specified and their use acceptable to the *Consultant*.

GC 3.8 SHOP DRAWINGS

- 3.8.1 The *Contractor* shall provide *Shop Drawings* as required in the *Contract Documents*.
- 3.8.2 The *Contractor* shall provide *Shop Drawings* to the *Consultant* to review in accordance with an agreed schedule, or in the absence of an agreed schedule, in orderly sequence and sufficiently in advance so as to cause no delay in the *Work* or in the work of *Other Contractors* or the *Owner's* own forces.
- 3.8.3 The *Contractor* shall review all *Shop Drawings* before providing them to the *Consultant*. The *Contractor* represents by this review that:
- .1 the *Contractor* has determined and verified all applicable field measurements, field construction conditions, *Product* requirements, catalogue numbers and similar data, or will do so, and
 - .2 the *Contractor* has checked and co-ordinated each *Shop Drawing* with the requirements of the *Work* and of the *Contract Documents*.
- 3.8.4 The *Consultant's* review is for conformity to the design concept and for general arrangement only.
- 3.8.5 At the time of providing *Shop Drawings*, the *Contractor* shall expressly advise the *Consultant* in writing of any deviations in a *Shop Drawing* from the requirements of the *Contract Documents*. The *Consultant* shall indicate the acceptance or rejection of such deviation expressly in writing.
- 3.8.6 The *Consultant's* review shall not relieve the *Contractor* of responsibility for errors or omissions in the *Shop Drawings* or for meeting all requirements of the *Contract Documents*.
- 3.8.7 The *Consultant* will review and return *Shop Drawings* in accordance with the schedule agreed upon, or, in the absence of such schedule, with reasonable promptness so as to cause no delay in the performance of the *Work*.

PART 4 ALLOWANCES

GC 4.1 CASH ALLOWANCES

- 4.1.1 The *Contract Price* includes the cash allowances, if any, stated in the *Contract Documents*. The scope of the *Work* or costs included in such cash allowances shall be as described in the *Contract Documents*.
- 4.1.2 The *Contract Price*, and not the cash allowances, includes the *Contractor's* overhead and profit in connection with such cash allowances.
- 4.1.3 Expenditures under cash allowances shall be authorized by the *Owner* through the *Consultant*.
- 4.1.4 Where the actual cost of the *Work* under any cash allowance exceeds the amount of the allowance, any unexpended amounts from other cash allowances shall be reallocated, at the *Consultant's* direction, to cover the shortfall, and, in that case, there shall be no additional amount added to the *Contract Price* for overhead and profit. Only where the actual cost of the *Work* under all cash allowances exceeds the total amount of all cash allowances shall the *Contractor* be compensated for the excess incurred and substantiated, plus an amount for overhead and profit on the excess only, as set out in the *Contract Documents*.
- 4.1.5 The net amount of any unexpended cash allowances, after providing for any reallocations as contemplated in paragraph 4.1.4, shall be deducted from the *Contract Price* by *Change Order* without any adjustment for the *Contractor's* overhead and profit on such amount.
- 4.1.6 The value of the *Work* performed under a cash allowance is eligible to be included in progress payments.
- 4.1.7 The *Contractor* and the *Consultant* shall jointly prepare a schedule that shows when the items called for under cash allowances must be ordered to avoid delaying the progress of the *Work*.

GC 4.2 CONTINGENCY ALLOWANCE

- 4.2.1 The *Contract Price* includes the contingency allowance, if any, stated in the *Contract Documents*.
- 4.2.2 The contingency allowance includes the *Contractor's* overhead and profit in connection with such contingency allowance.
- 4.2.3 Expenditures under the contingency allowance shall be authorized and valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.
- 4.2.4 The *Contract Price* shall be adjusted by *Change Order* to provide for any difference between the expenditures authorized under paragraph 4.2.3 and the contingency allowance.

PART 5 PAYMENT

GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

- 5.1.1 The *Owner* shall, at the request of the *Contractor*, before signing the *Contract*, and promptly from time to time thereafter, furnish to the *Contractor* reasonable evidence that financial arrangements have been made to fulfill the *Owner's* obligations under the *Contract*.
- 5.1.2 The *Owner* shall give the *Contractor Notice in Writing* of any material change in the *Owner's* financial arrangements to fulfill the *Owner's* obligations under the *Contract* during the performance of the *Contract*.

GC 5.2 APPLICATIONS FOR PAYMENT

- 5.2.1 Applications for payment on account as provided in Article A-5 of the Agreement – PAYMENT shall be submitted monthly to the *Owner* and the *Consultant* simultaneously as the *Work* progresses.
- 5.2.2 Applications for payment shall be dated the last day of each payment period, which is the last day of the month or an alternative day of the month agreed in writing by the parties.
- 5.2.3 As of the last day of the payment period, the amount claimed shall be:
- .1 the value of *Unit Price Work* performed, being the sum of the products of the actual quantities that are incorporated in or made necessary by the *Work*, multiplied by the appropriate *Unit Prices* stated in the *Schedule of Values*; plus
 - .2 the value of lump sum *Work* performed, proportionate to the amount of the lump sum item; plus
 - .3 the value of *Products* delivered to the *Place of the Work*.
- 5.2.4 The *Contractor* shall submit to the *Consultant*, at least 15 calendar days before the first application for payment, a schedule of values for the lump sum items of *Work*, aggregating the total amount of each lump sum item, so as to facilitate evaluation of applications for payment.
- 5.2.5 The schedule of values for lump sum items of *Work* shall be made out in such form and supported by such evidence as the *Consultant* may reasonably require and when accepted by the *Consultant*, shall be used as the basis for applications for payment for lump sum items, unless it is found to be in error.
- 5.2.6 The *Contractor* shall include with each application for payment:
- .1 a statement based on the schedule of values for the lump sum items of *Work*; and
 - .2 quantity measurements and other evidence as requested by the *Consultant* for each *Unit Price* item.
- 5.2.7 Applications for payment shall comply with the provisions of *Payment Legislation*.
- 5.2.8 Each application for payment shall include evidence of compliance with workers' compensation legislation at the *Place of the Work* and after the first payment, a declaration by the *Contractor* as to the distribution made of the amounts previously received using document CCDC 9A 'Statutory Declaration'.
- 5.2.9 Applications for payment for *Products* delivered to the *Place of the Work* but not yet incorporated into the *Work* shall be supported by such evidence as the *Consultant* may reasonably require to establish the value and delivery of the *Products*.

GC 5.3 PAYMENT

- 5.3.1 After receipt by the *Consultant* and the *Owner* of an application for payment submitted by the *Contractor* in accordance with GC 5.2 – APPLICATIONS FOR PAYMENT:
- .1 The *Consultant* will issue to the *Owner* and copy to the *Contractor*, no later than 10 calendar days after the receipt of the application for payment, a certificate for payment in the amount applied for, or in such other amount as the *Consultant* determines to be properly due. If the *Consultant* certifies a different amount, or rejects the application or part thereof, the *Owner* shall promptly issue a written notice to the *Contractor* giving reasons for the revision or rejection, such written notice to be in compliance with *Payment Legislation*,
 - .2 The *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement – PAYMENT on or before 28 calendar days after the receipt by the *Owner* and the *Consultant* of the application for payment, and in any event, in compliance with *Payment Legislation*.
- 5.3.2 Where the basis of payment for an item is by *Unit Price*, quantities in progress payments shall be considered estimate until all *Work* required by that *Unit Price* item is complete.

GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK

- 5.4.1 The *Consultant* will review the *Work* to certify or verify the validity of the application for *Substantial Performance of the Work* and will promptly, and in any event, no later than 20 calendar days after receipt of the *Contractor's* application:
- .1 advise the *Contractor* in writing that the *Work* or the designated portion of the *Work* is not substantially performed and give reasons why, or
 - .2 state the date of *Substantial Performance of the Work* or a designated portion of the *Work* in a certificate and issue a copy of that certificate to each of the *Owner* and the *Contractor*.
- 5.4.2 Where the holdback amount required by the applicable lien legislation has not been placed in a separate lien holdback account, the *Owner* shall, no later than 10 calendar days prior to the expiry of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*, place the holdback amount in a bank account in the joint names of the *Owner* and the *Contractor*.
- 5.4.3 Subject to the requirements of any *Payment Legislation*, all holdback amount prescribed by the applicable lien legislation for the *Work* shall become due and payable to the *Contractor* no later than 10 *Working Days* following the expiration of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*.
- 5.4.4 The *Contractor* shall submit an application for payment of the lien holdback amount in accordance with GC 5.3 –PAYMENT.
- 5.4.5 Where legislation permits progressive release of the holdback for a portion of the *Work* and the *Consultant* has certified or verified that the part of the *Work* has been performed prior to *Substantial Performance of the Work*, the *Owner* hereby agrees to release, and shall release, such portion to the *Contractor* in accordance with such legislation.
- 5.4.6 Notwithstanding any progressive release of the holdback, the *Contractor* shall ensure that such parts of the *Work* are protected pending the issuance of a final certificate for payment and be responsible for the correction of defects or work not performed regardless of whether or not such was apparent when the holdback was released.

GC 5.5 FINAL PAYMENT

- 5.5.1 When the *Contractor* considers that the *Work* is completed, the *Contractor* shall submit an application for final payment.
- 5.5.2 The *Consultant* will, no later than 10 calendar days after the receipt of an application from the *Contractor* for final payment, review the *Work* to verify the validity of the application and when the *Consultant* finds the *Contractor's* application for final payment valid, the *Consultant* will promptly issue a final certificate for payment to the *Owner*, with a copy to the *Contractor*.
- 5.5.3 If the *Consultant* rejects the application or part thereof, the *Owner* will promptly issue a written notice to the *Contractor* giving reasons for the revision or rejection, such written notice to be in compliance with *Payment Legislation*.
- 5.5.4 Subject to the provision of paragraph 10.4.1 of GC 10.4 – WORKERS' COMPENSATION, and any legislation applicable to the *Place of the Work*, the *Owner* shall, no later than 5 calendar days after the issuance of a final certificate for payment, pay the *Contractor* as provided in Article A-5 of the Agreement – PAYMENT and in any event, in compliance with *Payment Legislation*.

GC 5.6 DEFERRED WORK

- 5.6.1 If because of climatic or other conditions reasonably beyond the control of the *Contractor*, or if the *Owner* and the *Contractor* agree that, there are items of work that must be deferred, payment in full for that portion of the *Work* which has been performed as certified by the *Consultant* shall not be withheld or delayed by the *Owner* on account thereof, but the *Owner* may withhold, until the remaining portion of the *Work* is finished, only such an amount that the *Consultant* determines is sufficient and reasonable to cover the cost of performing such deferred *Work*.

GC 5.7 NON-CONFORMING WORK

- 5.7.1 No payment by the *Owner* under the *Contract* nor partial or entire use or occupancy of the *Work* by the *Owner* shall constitute an acceptance of any portion of the *Work* or *Products* which are not in accordance with the requirements of the *Contract Documents*.

PART 6 CHANGES IN THE WORK

GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

- 6.1.1 The *Owner*, through the *Consultant*, without invalidating the *Contract*, may make:
- .1 changes in the *Work* consisting of additions, deletions or other revisions to the *Work* by *Change Order* or *Change Directive*, and
 - .2 changes to the *Contract Time* for the *Work*, or any part thereof, by *Change Order*.
- 6.1.2 The *Contractor* shall not perform a change in the *Work* without a *Change Order* or a *Change Directive*.

GC 6.2 CHANGE ORDER

- 6.2.1 When a change in the *Work* is proposed or required, the *Consultant* will provide the *Contractor* with a written description of the proposed change in the *Work*. The *Contractor* shall promptly present to the *Consultant*, in a form that can be reasonably evaluated, a method of adjustment or an amount of adjustment for the *Contract Price*, if any, and the adjustment in the *Contract Time*, if any, for the proposed change in the *Work*.
- 6.2.2 The method of adjustment of the *Contract Price* presented by the *Contractor* may be:
- .1 *Unit Prices* listed in the *Schedule of Prices* that are applicable to the change in the *Work* or, if *Unit Prices* listed in the *Schedule of Prices* are not directly applicable, by unit prices deduced or extrapolated from such *Unit Prices*,
 - .2 a lump sum or unit price quotation, or
 - .3 the cost plus method.
- 6.2.3 When the *Owner* and the *Contractor* agree to the adjustments in the *Contract Price* and *Contract Time* or to the method to be used to determine the adjustments, such agreement shall be effective immediately and shall be recorded in a *Change Order*. The value of the work performed as the result of a *Change Order* shall be included in the applications for progress payment.

GC 6.3 CHANGE DIRECTIVE

- 6.3.1 If the *Owner* requires the *Contractor* to proceed with a change in the *Work* prior to the *Owner* and the *Contractor* agreeing upon the corresponding adjustment in *Contract Price* and *Contract Time*, the *Owner*, through the *Consultant*, shall issue a *Change Directive*.
- 6.3.2 A *Change Directive* shall only be used to direct a change in the *Work* which is within the general scope of the *Contract Documents*.
- 6.3.3 A *Change Directive* shall not be used to direct a change in the *Contract Time* only.
- 6.3.4 Upon receipt of a *Change Directive*, the *Contractor* shall proceed promptly with the change in the *Work*.
- 6.3.5 For the purpose of valuing *Change Directives*, changes in the *Work* that are not substitutions or otherwise related to each other shall not be grouped together in the same *Change Directive*.
- 6.3.6 The adjustment in the *Contract Price* for a change carried out by way of a *Change Directive* shall be determined on the basis of the cost of the *Contractor's* actual expenditures and savings attributable to the *Change Directive*, valued in accordance with paragraph 6.3.7 and as follows:
- .1 If the change results in a net increase in the *Contractor's* cost, the *Contract Price* shall be increased by the amount of the net increase in the *Contractor's* cost, plus the *Contractor's* percentage fee on such net increase.
 - .2 If the change results in a net decrease in the *Contractor's* cost, the *Contract Price* shall be decreased by the amount of the net decrease in the *Contractor's* cost, without adjustment for the *Contractor's* percentage fee.
 - .3 The *Contractor's* fee shall be as specified in the *Contract Documents* or as otherwise agreed by the parties.
- 6.3.7 The cost of performing the work attributable to the *Change Directive* shall be limited to the actual cost of the following in as much as it contributes directly to the implementation of the *Change Directive*:

Labour

- .1 rates that are listed in the schedule or as agreed by the *Owner* and the *Contractor* including wages, benefits, compensation, contributions, assessments, or taxes incurred for such items as employment insurance, provincial or territorial health insurance, workers' compensation, and Canada or Quebec Pension Plan for:
 - (1) trade labour in the direct employ of the *Contractor*;
 - (2) the *Contractor's* personnel when stationed at the field office;
 - (3) the *Contractor's* personnel engaged at shops or on the road, in expediting the production or transportation of materials or equipment; and

- (4) the *Contractor's* office personnel engaged in a technical capacity, or other personnel identified in Article A-3 of the Agreement – CONTRACT DOCUMENTS for the time spent in the performance of the *Work*.

Products, Construction Equipment and Temporary Work

- .2 cost of all *Products* including cost of transportation thereof;
- .3 in the absence of agreed rates, cost less salvage value of *Construction Equipment*, *Temporary Work* and tools, exclusive of hand tools under \$1,000 owned by the *Contractor*;
- .4 rental cost of *Construction Equipment*, *Temporary Work* and tools, exclusive of hand tools under \$1,000;
- .5 cost of all equipment and services required for the *Contractor's* field office;

Subcontract

- .6 subcontract amounts of *Subcontractor* with pricing mechanism approved by the *Owner*;

Others

- .7 travel and subsistence expenses of the *Contractor's* personnel described in paragraph 6.3.7.1;
- .8 deposits lost provided that they are not caused by negligent acts or omissions of the *Contractor*;
- .9 cost of quality assurance such as independent inspection and testing services;
- .10 charges levied by authorities having jurisdiction at the *Place of the Work*;
- .11 royalties, patent license fees, and damages for infringement of patents and cost of defending suits therefor subject always to the *Contractor's* obligations to indemnify the *Owner* as provided in paragraph 10.3.1 of GC 10.3 – PATENT FEES;
- .12 premium for all contract securities and insurance for which the *Contractor* is required, by the *Contract Documents*, to provide, maintain and pay in relation to the performance of the *Work*;
- .13 losses and expenses sustained by the *Contractor* for matters which are the subject of insurance under the policies prescribed in GC 11.1 – INSURANCE when such losses and expenses are not recoverable because the amounts are in excess of collectible amounts or within the deductible amounts;
- .14 taxes and duties, other than *Value Added Taxes*, income, capital, or property taxes, relating to the *Work* for which the *Contractor* is liable;
- .15 charges for voice and data communications, courier services, expressage, transmittal and reproduction of documents, and petty cash items;
- .16 cost for removal and disposal of waste products and debris;
- .17 legal costs, incurred by the *Contractor*, in relation to the performance of the *Work* provided that they are not:
 - (1) relating to a dispute between the *Owner* and the *Contractor* unless such costs are part of a settlement or awarded by arbitration or court,
 - (2) the result of the negligent acts or omissions of the *Contractor*, or
 - (3) the result of a breach of this *Contract* by the *Contractor*;
- .18 cost of auditing when requested by the *Owner*; and
- .19 cost of *Project* specific information technology in accordance with the method determined by the parties.

- 6.3.8 Notwithstanding any other provisions contained in the General Conditions of the *Contract*, it is the intention of the parties that the cost of any item under any cost element referred to in paragraph 6.3.7 shall cover and include any and all costs or liabilities attributable to the *Change Directive* other than those which are the result of or occasioned by any failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* attention to the *Work*. Any cost due to failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* performance of the *Work* attributable to the *Change Directive* shall be borne by the *Contractor*.
- 6.3.9 The *Contractor* shall keep full and detailed accounts and records necessary for the documentation of the cost of performing the *Work* attributable to the *Change Directive* and shall provide the *Consultant* with copies thereof.
- 6.3.10 For the purpose of valuing *Change Directives*, the *Owner* shall be afforded reasonable access to all of the *Contractor's* pertinent documents related to the cost of performing the *Work* attributable to the *Change Directive*.
- 6.3.11 Pending determination of the final amount of a *Change Directive*, the undisputed value of the *Work* performed as the result of a *Change Directive* is eligible to be included in progress payments.
- 6.3.12 If the *Owner* and the *Contractor* do not agree on the proposed adjustment in the *Contract Time* attributable to the change in the *Work*, or the method of determining it, the adjustment shall be referred to the *Consultant* for a finding.
- 6.3.13 When the *Owner* and the *Contractor* reach agreement on the adjustment to the *Contract Price* and to the *Contract Time*, this agreement shall be recorded in a *Change Order*.

GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

- 6.4.1 If the *Owner* or the *Contractor* discover conditions at the *Place of the Work* which are:
- .1 subsurface or otherwise concealed physical conditions which existed before the commencement of the *Work* and differ materially from those indicated in the *Contract Documents*; or
 - .2 physical conditions, other than conditions due to weather, that are of a nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the *Contract Documents*,
- then the observing party shall give *Notice in Writing* to the other party of such conditions before they are disturbed and in no event later than 5 *Working Days* after first observance of the conditions.
- 6.4.2 The *Consultant* will promptly investigate such conditions and make a finding. If the finding is that the conditions differ materially and this would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Owner*, through the *Consultant*, shall issue appropriate instructions for a change in the *Work* as provided in GC 6.2 – CHANGE ORDER or GC 6.3 – CHANGE DIRECTIVE.
- 6.4.3 If the *Consultant* finds that the conditions at the *Place of the Work* are not materially different or that no change in the *Contract Price* or the *Contract Time* is justified, the *Consultant* will promptly inform the *Owner* and the *Contractor* in writing.
- 6.4.4 The *Contractor* shall not be entitled to an adjustment in the *Contract Price* or the *Contract Time* if such conditions were reasonably apparent prior to the time of bid closing.

GC 6.5 DELAYS

- 6.5.1 If the *Contractor* is delayed in the performance of the *Work* by the *Owner*, the *Consultant*, or anyone employed or engaged by them directly or indirectly, contrary to the provisions of the *Contract Documents*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.2 If the *Contractor* is delayed in the performance of the *Work* by a stop work order issued by a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or any person employed or engaged by the *Contractor* directly or indirectly, resulting in the failure of the *Contractor* to attain *Ready-for-Takeover* by the date stipulated in Article A-1 of the Agreement – THE WORK, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.3 If the *Contractor* is delayed in the performance of the *Work* by:
- .1 labour disputes, strikes, lock-outs (including lock-outs decreed or recommended for its members by a recognized contractors' association, of which the *Contractor* is a member or to which the *Contractor* is otherwise bound),
 - .2 fire, unusual delay by common carriers or unavoidable casualties,
 - .3 abnormally adverse weather conditions, or
 - .4 any cause beyond the *Contractor's* control other than one resulting from a default or breach of *Contract* by the *Contractor*,
- then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The extension of time shall not be less than the time lost as the result of the event causing the delay, unless the *Contractor* agrees to a shorter extension. The *Contractor* shall not be entitled to payment for costs incurred by such delays unless such delays result from actions by the *Owner*, the *Consultant* or anyone employed or engaged by them directly or indirectly.
- 6.5.4 No extension shall be made for delay unless *Notice in Writing* of the cause of delay is given to the *Consultant* not later than 10 *Working Days* after the commencement of the delay. In the case of a continuing cause of delay only one *Notice in Writing* shall be necessary.
- 6.5.5 If no schedule is made under paragraph 2.2.12 of GC 2.2 – ROLE OF THE CONSULTANT, then no request for extension shall be made because of failure of the *Consultant* to furnish instructions until 10 *Working Days* after demand for such instructions has been made.

GC 6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE

- 6.6.1 If the *Contractor* intends to make a claim for an increase to the *Contract Price*, or if the *Owner* intends to make a claim against the *Contractor* for a credit to the *Contract Price*, the party that intends to make the claim shall give timely *Notice in Writing* of intent to claim to the other party and to the *Consultant*.

- 6.6.2 Upon commencement of the event or series of events giving rise to a claim, the party intending to make the claim shall:
- .1 take all reasonable measures to mitigate any loss or expense which may be incurred as a result of such event or series of events, and
 - .2 keep such records as may be necessary to support the claim.
- 6.6.3 Within 30 *Working Days* after commencement of the event or series of events giving rise to the claim, or such other reasonable time as may be agreed by the *Consultant*, the party making the claim shall submit to the *Consultant* a detailed account of the amount claimed and the grounds upon which the claim is based and the *Consultant* will make a finding upon such claim.
- 6.6.4 Where the event or series of events giving rise to the claim has a continuing effect, the detailed account submitted under paragraph 6.6.3 shall be considered to be an interim account and the party making the claim shall, at such intervals as the *Consultant* may reasonably require, submit further interim accounts giving the accumulated amount of the claim and any further grounds upon which it is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.
- 6.6.5 The *Consultant's* findings, with respect to a claim made by either party, will be given by *Notice in Writing* to both parties within 30 *Working Days* after receipt of the claim by the *Consultant*, or within such other time period as may be agreed by the parties.
- 6.6.6 If such finding is not acceptable to either party, the claim shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION.

GC 6.7 QUANTITY VARIATIONS

- 6.7.1 The *Owner* or the *Contractor* may request an adjustment to a *Unit Price* contained in the *Schedule of Prices* provided that the actual quantity of the item in the *Schedule of Prices* exceeds or falls short of the estimated quantity by more than 15%.
- 6.7.2 Where the actual quantity exceeds the estimated quantity by more than 15%, a *Unit Price* adjusted pursuant to paragraph 6.7.1 shall apply only to the quantity that exceeds 115% of the estimated quantity.
- 6.7.3 Where the actual quantity falls short of the estimated quantity by more than 15%, a *Unit Price* adjusted pursuant to paragraph 6.7.1 shall not exceed the *Unit Price* that would cause the extended amount to equal the original extended amount derived from the original *Unit Price* and estimated quantity.
- 6.7.4 If either party requests adjustment of a *Unit Price*, both parties shall make all reasonable efforts to agree on a revised *Unit Price*. The agreed revised *Unit Price* shall be recorded in a *Change Order*.
- 6.7.5 If agreement on a revised *Unit Price* is not reached, the matter shall be subject to final determination in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION. Pending determination of the revised *Unit Price*, payment for the *Work* performed shall be included in progress payments based on the unrevised *Unit Price*.

PART 7 DEFAULT NOTICE

GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT

- 7.1.1 If the *Contractor* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Contractor's* insolvency, or if a receiver is appointed because of the *Contractor's* insolvency, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, terminate the *Contractor's* right to continue with the *Work*, by giving the *Contractor* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.
- 7.1.2 If the *Contractor* neglects to perform the *Work* properly or otherwise fails to comply with the requirements of the *Contract* to a substantial degree and if the *Consultant* has given a written statement to the *Owner* and *Contractor* which provides the detail of such neglect to perform the *Work* properly or such failure to comply with the requirements of the *Contract* to a substantial degree, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, give the *Contractor Notice in Writing*, containing particulars of the default including references to applicable provisions of the *Contract*, that the *Contractor* is in default of the *Contractor's* contractual obligations and instruct the *Contractor* to correct the default in the 5 *Working Days* immediately following the receipt of such *Notice in Writing*.
- 7.1.3 If the default cannot be corrected in the 5 *Working Days* specified or in such other time period as may be subsequently agreed in writing by the parties, the *Contractor* shall be in compliance with the *Owner's* instructions if the *Contractor*:
- .1 commences the correction of the default within the specified time,
 - .2 provides the *Owner* with an acceptable schedule for such correction, and
 - .3 corrects the default in accordance with the *Contract* terms and with such schedule.

- 7.1.4 If the *Contractor* fails to correct the default in the time specified or in such other time period as may be subsequently agreed in writing by the parties, without prejudice to any other right or remedy the *Owner* may have, the *Owner* may by giving *Notice in Writing*:
- .1 correct such default and deduct the cost thereof from any payment then or thereafter due the *Contractor* for the *Work* provided the *Consultant* has certified such cost to the *Owner* and the *Contractor*, or
 - .2 terminate the *Contractor*'s right to continue with the *Work* in whole or in part or terminate the *Contract*.
- 7.1.5 If the *Owner* terminates the *Contractor*'s right to continue with the *Work* as provided in paragraphs 7.1.1 and 7.1.4, the *Owner* shall be entitled to:
- .1 take possession of the *Work* and *Products* at the *Place of the Work*; subject to the rights of third parties, utilize the *Construction Equipment* at the *Place of the Work*; finish the *Work* by whatever method the *Owner* may consider expedient, but without undue delay or expense,
 - .2 withhold further payment to the *Contractor* until a final certificate for payment is issued,
 - .3 charge the *Contractor* the amount by which the full cost of finishing the *Work* as certified by the *Consultant*, including compensation to the *Consultant* for the *Consultant*'s additional services and a reasonable allowance as determined by the *Consultant* to cover the cost of corrections to work performed by the *Contractor* that may be required under GC 12.3 – WARRANTY, exceeds the unpaid balance of the *Contract Price*; however, if such cost of finishing the *Work* is less than the unpaid balance of the *Contract Price*, the *Owner* shall pay the *Contractor* the difference, and
 - .4 on expiry of the warranty period, charge the *Contractor* the amount by which the cost of corrections to the *Contractor*'s work under GC 12.3 – WARRANTY exceeds the allowance provided for such corrections, or if the cost of such corrections is less than the allowance, pay the *Contractor* the difference.
- 7.1.6 The *Contractor*'s obligation under the *Contract* as to quality, correction and warranty of the work performed by the *Contractor* up to the time of termination shall continue in force after such termination of the *Contract*.

GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT

- 7.2.1 If the *Owner* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Owner*'s insolvency, or if a receiver is appointed because of the *Owner*'s insolvency, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.
- 7.2.2 If the *Work* is suspended or otherwise delayed for a period of 20 *Working Days* or more under an order of a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or of anyone directly or indirectly employed or engaged by the *Contractor*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* *Notice in Writing* to that effect.
- 7.2.3 The *Contractor* may give *Notice in Writing* to the *Owner*, with a copy to the *Consultant*, that the *Owner* is in default of the *Owner*'s contractual obligations if:
- .1 the *Owner* fails to furnish, when so requested by the *Contractor*, reasonable evidence that financial arrangements have been made to fulfill the *Owner*'s obligations under the *Contract*,
 - .2 the *Consultant* fails to issue a certificate as provided in Part 5 of the General Conditions – PAYMENT,
 - .3 the *Owner* fails to pay the *Contractor* when due the amounts certified by the *Consultant* or awarded by adjudication, arbitration or court, or
 - .4 the *Owner* fails to comply with the requirements of the *Contract* to a substantial degree and the *Consultant*, except for GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER, gives a written statement to the *Owner* and the *Contractor* that provides detail of such failure to comply with the requirements of the *Contract* to a substantial degree.
- 7.2.4 The *Contractor*'s *Notice in Writing* to the *Owner* provided under paragraph 7.2.3 shall advise that if the default is not corrected within 5 *Working Days* following the receipt of the *Notice in Writing*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, suspend the *Work* or terminate the *Contract*.
- 7.2.5 If the *Contractor* terminates the *Contract* by giving a *Notice in Writing* to the *Owner* under the conditions set out above, the *Contractor* shall be entitled to be paid for all work performed including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor* may have sustained as a result of the termination of the *Contract*.

PART 8 DISPUTE RESOLUTION

GC 8.1 AUTHORITY OF THE CONSULTANT

- 8.1.1 Differences between the parties to the *Contract* as to the interpretation, application or administration of the *Contract* or any failure to agree where agreement between the parties is called for, herein collectively called disputes, which are not resolved in the first instance by findings of the *Consultant* as provided in GC 2.2 – ROLE OF THE CONSULTANT, shall be settled in accordance with the requirements of Part 8 of the General Conditions – DISPUTE RESOLUTION.
- 8.1.2 If a dispute arises under the *Contract* in respect of a matter in which the *Consultant* has no authority under the *Contract* to make a finding, the procedures set out in paragraph 8.1.3 and paragraphs 8.3.3 to 8.3.8 of GC 8.3 – NEGOTIATION, MEDIATION AND ARBITRATION, and in GC 8.4 – RETENTION OF RIGHTS apply to that dispute with the necessary changes to detail as may be required.
- 8.1.3 If a dispute is not resolved promptly, the *Consultant* will give such instructions as in the *Consultant's* opinion are necessary for the proper performance of the *Work* and to prevent delays pending settlement of the dispute. The parties shall act immediately according to such instructions, it being understood that by so doing neither party will jeopardize any claim the party may have. If it is subsequently determined that such instructions were in error or at variance with the *Contract Documents*, the *Owner* shall pay the *Contractor* costs incurred by the *Contractor* in carrying out such instructions which the *Contractor* was required to do beyond what the *Contract Documents* correctly understood and interpreted would have required, including costs resulting from interruption of the *Work*.

GC 8.2 ADJUDICATION

- 8.2.1 Nothing in this *Contract* shall be deemed to affect the rights of the parties to resolve any dispute by adjudication as may be prescribed by applicable legislation.

GC 8.3 NEGOTIATION, MEDIATION AND ARBITRATION

- 8.3.1 In accordance with the rules for mediation as provided in CCDC 40 'Rules for Mediation and Arbitration of Construction Industry Disputes' in effect at the time of bid closing, the parties shall appoint a Project Mediator
- .1 within 20 *Working Days* after the *Contract* was awarded, or
 - .2 if the parties neglected to make an appointment within the 20 *Working Days*, within 10 *Working Days* after either party by *Notice in Writing* requests that the Project Mediator be appointed.
- 8.3.2 A party shall be conclusively deemed to have accepted a finding of the *Consultant* under GC 2.2 – ROLE OF THE CONSULTANT and to have expressly waived and released the other party from any claims in respect of the particular matter dealt with in that finding unless, within 15 *Working Days* after receipt of that finding, the party sends a *Notice in Writing* of dispute to the other party and to the *Consultant*, which contains the particulars of the matter in dispute and the relevant provisions of the *Contract Documents*. The responding party shall send a *Notice in Writing* of reply to the dispute within 10 *Working Days* after receipt of such *Notice in Writing* setting out particulars of this response and any relevant provisions of the *Contract Documents*.
- 8.3.3 The parties shall make all reasonable efforts to resolve their dispute by amicable negotiations and agree to provide, without prejudice, frank, candid and timely disclosure of relevant facts, information and documents to facilitate these negotiations.
- 8.3.4 After a period of 10 *Working Days* following receipt of a responding party's *Notice in Writing* of reply under paragraph 8.3.2, the parties shall request the Project Mediator to assist the parties to reach agreement on any unresolved dispute. The mediated negotiations shall be conducted in accordance with the rules for mediation as provided in CCDC 40 in effect at the time of bid closing.
- 8.3.5 If the dispute has not been resolved at the mediation or within such further period as is agreed by the parties, the Project Mediator will terminate the mediated negotiations by giving *Notice in Writing* to the *Owner*, the *Contractor* and the *Consultant*.
- 8.3.6 By giving a *Notice in Writing* to the other party and the *Consultant*, not later than 10 *Working Days* after the date of termination of the mediated negotiations under paragraph 8.3.5, either party may refer the dispute to be finally resolved by arbitration under the rules of arbitration as provided in CCDC 40 in effect at the time of bid closing. The arbitration shall be conducted in the jurisdiction of the *Place of the Work*.
- 8.3.7 On expiration of the 10 *Working Days*, the arbitration agreement under paragraph 8.3.6 is not binding on the parties and, if a *Notice in Writing* is not given under paragraph 8.3.6 within the required time, the parties may refer the unresolved dispute to the courts or to any other form of dispute resolution, including arbitration, which they have agreed to use.

- 8.3.8 If neither party, by *Notice in Writing*, given within 10 *Working Days* of the date of *Notice in Writing* requesting arbitration in paragraph 8.3.6, requires that a dispute be arbitrated immediately, all disputes referred to arbitration as provided in paragraph 8.3.6 shall be:
- .1 held in abeyance until:
 - (1) *Ready-for-Takeover*,
 - (2) the *Contract* has been terminated, or
 - (3) the *Contractor* has abandoned the *Work*,whichever is earlier; and
 - .2 consolidated into a single arbitration under the rules governing the arbitration under paragraph 8.3.6.

GC 8.4 RETENTION OF RIGHTS

- 8.4.1 It is agreed that no act by either party shall be construed as a renunciation or waiver of any rights or recourses, provided the party has given the *Notice in Writing* required under Part 8 of the General Conditions – DISPUTE RESOLUTION and has carried out the instructions as provided in paragraph 8.1.3 of GC 8.1 – AUTHORITY OF THE CONSULTANT.
- 8.4.2 Nothing in Part 8 of the General Conditions – DISPUTE RESOLUTION shall be construed in any way to limit a party from asserting any statutory right to a lien under applicable lien legislation of the jurisdiction of the *Place of the Work* and the assertion of such right by initiating judicial proceedings is not to be construed as a waiver of any right that party may have under paragraph 8.3.6 of GC 8.3 – NEGOTIATION, MEDIATION AND ARBITRATION to proceed by way of arbitration to adjudicate the merits of the claim upon which such a lien is based.

PART 9 PROTECTION OF PERSONS AND PROPERTY

GC 9.1 PROTECTION OF WORK AND PROPERTY

- 9.1.1 The *Contractor* shall protect the *Work*, the *Owner's* property and property adjacent to the *Place of the Work* from damage which may arise as the result of the *Contractor's* operations under the *Contract*, and shall be responsible for such damage, except damage which occurs as the result of:
- .1 errors or omissions in the *Contract Documents*; or
 - .2 acts or omissions by the *Owner*, the *Consultant*, *Other Contractors*, or their agents and employees.
- 9.1.2 Before commencing any work, the *Contractor* shall determine the location of all underground utilities and structures indicated in the *Contract Documents* or that are reasonably apparent in an inspection of the *Place of the Work*.
- 9.1.3 Should the *Contractor* in the performance of the *Contract* damage the *Work*, the *Owner's* property or property adjacent to the *Place of the Work*, the *Contractor* shall be responsible for making good such damage at the *Contractor's* expense.
- 9.1.4 Should damage occur to the *Work* or the *Owner's* property for which the *Contractor* is not responsible, as provided in paragraph 9.1.1, the *Contractor* shall make good such damage to the *Work* and, if the *Owner* so directs, to the *Owner's* property. The *Contract Price* and *Contract Time* shall be adjusted as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.

GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

- 9.2.1 For the purposes of applicable legislation related to toxic and hazardous substances, the *Owner* shall be deemed to have control and management of the *Place of the Work* with respect to existing conditions.
- 9.2.2 Prior to the *Contractor* commencing the *Work*, the *Owner* shall,
- .1 take all reasonable steps to determine whether any toxic or hazardous substances are present at the *Place of the Work*, and
 - .2 provide the *Consultant* and the *Contractor* with a written list of any such substances that are known to exist and their locations.
- 9.2.3 The *Owner* shall take all reasonable steps to ensure that no person's exposure to any toxic or hazardous substance exceeds the time weighted levels prescribed by applicable legislation at the *Place of the Work* and that no property is damaged or destroyed as a result of exposure to, or the presence of, toxic or hazardous substances which were at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.4 Unless the *Contract* expressly provides otherwise, the *Owner* shall be responsible for taking all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to dispose of, store or otherwise render harmless any toxic or hazardous substance which was present at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.5 If the *Contractor*
- .1 encounters toxic or hazardous substances at the *Place of the Work*, or

- .2 has reasonable grounds to believe that toxic or hazardous substances are present at the *Place of the Work*, which were not brought to the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible and which were not disclosed by the *Owner* or which were disclosed but have not been dealt with as required under paragraph 9.2.4, the *Contractor* shall
 - .3 take all reasonable steps, including stopping the *Work*, to ensure that no person's exposure to any toxic or hazardous substance exceeds any applicable time weighted levels prescribed by applicable legislation at the *Place of the Work*, and
 - .4 immediately report the circumstances to the *Consultant* and the *Owner* in writing.
- 9.2.6 If the *Owner* and the *Contractor* do not agree on the existence, significance of, or whether the toxic or hazardous substances were brought onto the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and the *Contractor*.
- 9.2.7 If the *Owner* and the *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were not brought onto the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall promptly at the *Owner's* own expense:
- .1 take all steps as required under paragraph 9.2.4;
 - .2 reimburse the *Contractor* for the costs of all steps taken pursuant to paragraph 9.2.5;
 - .3 extend the *Contract Time* for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in paragraph 9.2.6 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay; and
 - .4 indemnify the *Contractor* as required by GC 13.1 – INDEMNIFICATION.
- 9.2.8 If the *Owner* and the *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were brought onto the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Contractor* shall promptly at the *Contractor's* own expense:
- .1 take all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to safely remove and dispose the toxic or hazardous substances;
 - .2 make good any damage to the *Work*, the *Owner's* property or property adjacent to the *Place of the Work* as provided in paragraph 9.1.3 of GC 9.1 – PROTECTION OF WORK AND PROPERTY;
 - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.2.6; and
 - .4 indemnify the *Owner* as required by GC 13.1 – INDEMNIFICATION.
- 9.2.9 If either party does not accept the expert's findings under paragraph 9.2.6, the disagreement shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraph 9.2.7 or 9.2.8 it being understood that by so doing, neither party will jeopardize any claim that party may have to be reimbursed as provided by GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.

GC 9.3 ARTIFACTS AND FOSSILS

- 9.3.1 Fossils, coins, articles of value or antiquity, structures and other remains or things of scientific or historic interest discovered at the *Place of the Work* shall, as between the *Owner* and the *Contractor*, be deemed to be the absolute property of the *Owner*.
- 9.3.2 The *Contractor* shall take all reasonable precautions to prevent removal or damage to discoveries as identified in paragraph 9.3.1, and shall advise the *Consultant* upon discovery of such items.
- 9.3.3 The *Consultant* will investigate the impact on the *Work* of the discoveries identified in paragraph 9.3.1. If conditions are found that would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Owner*, through the *Consultant*, shall issue appropriate instructions for a change in the *Work* as provided in GC 6.2 – CHANGE ORDER or GC 6.3 – CHANGE DIRECTIVE.

GC 9.4 CONSTRUCTION SAFETY

- 9.4.1 The *Contractor* shall be responsible for establishing, initiating, maintaining, and supervising all health and safety precautions and programs in connection with the performance of the *Work* in accordance with the applicable health and safety legislation.
- 9.4.2 The *Owner* and the *Contractor* shall comply with all health and safety precautions and programs established at the *Place of the Work*.
- 9.4.3 The *Owner* and the *Contractor* shall comply with the rules, regulations and practices required by the applicable health and safety legislation.

- 9.4.4 The *Owner* shall cause the *Consultant*, *Other Contractors* and the *Owner's* own forces to comply with all health and safety precautions and programs established by the *Contractor* at the *Place of the Work*.
- 9.4.5 Nothing in this Contract shall affect the determination of liability under the applicable health and safety legislation.

GC 9.5 MOULD

- 9.5.1 If the *Contractor* or the *Owner* observes or reasonably suspects the presence of mould at the *Place of the Work*, the remediation of which is not expressly part of the *Work*,
- .1 the observing party shall promptly report the circumstances to the other party in writing,
 - .2 the *Contractor* shall promptly take all reasonable steps, including stopping the *Work* if necessary, to ensure that no person suffers injury, sickness or death and that no property is damaged as a result of exposure to or the presence of the mould, and
 - .3 if the *Owner* and the *Contractor* do not agree on the existence, significance or cause of the mould or as to what steps need be taken to deal with it, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and the *Contractor*.
- 9.5.2 If the *Owner* and the *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was caused by the *Contractor's* operations under the *Contract*, the *Contractor* shall promptly, at the *Contractor's* own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould,
 - .2 make good any damage to the *Work*, the *Owner's* property or property adjacent to the *Place of the Work* as provided in paragraph 9.1.3 of GC 9.1 – PROTECTION OF WORK AND PROPERTY,
 - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.5.1.3, and
 - .4 indemnify the *Owner* as required by GC 13.1 – INDEMNIFICATION.
- 9.5.3 If the *Owner* and the *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was not caused by the *Contractor's* operations under the *Contract*, the *Owner* shall promptly, at the *Owner's* own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould,
 - .2 reimburse the *Contractor* for the cost of taking the steps under paragraph 9.5.1.2 and making good any damage to the *Work* as provided in paragraph 9.1.4 of GC 9.1 – PROTECTION OF WORK AND PROPERTY,
 - .3 extend the *Contract Time* for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in paragraph 9.5.1.3 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay, and
 - .4 indemnify the *Contractor* as required by GC 13.1 – INDEMNIFICATION.
- 9.5.4 If either party does not accept the expert's finding under paragraph 9.5.1.3, the disagreement shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraphs 9.5.2 or 9.5.3, it being understood that by so doing neither party will jeopardize any claim the party may have to be reimbursed as provided by GC 9.5 – MOULD.

PART 10 GOVERNING REGULATIONS

GC 10.1 TAXES AND DUTIES

- 10.1.1 The *Contract Price* shall include all taxes and customs duties in effect at the time of the bid closing except for *Value Added Taxes* payable by the *Owner* to the *Contractor* as stipulated in Article A-4 of the Agreement – CONTRACT PRICE.
- 10.1.2 Any increase or decrease in costs to the *Contractor* due to changes in taxes and duties after the time of the bid closing shall increase or decrease the *Contract Price* accordingly.

GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

- 10.2.1 The laws of the *Place of the Work* shall govern the *Work*.
- 10.2.2 The *Owner* shall obtain and pay for development approvals, building permit, permanent easements, rights of servitude, and all other necessary approvals and permits, except for the permits and fees referred to in paragraph 10.2.3 or for which the *Contract Documents* specify as the responsibility of the *Contractor*.
- 10.2.3 The *Contractor* shall be responsible for the procurement of permits, licences, inspections, and certificates, which are necessary for the performance of the *Work* and customarily obtained by contractors in the jurisdiction of the *Place of the Work* after the issuance of the building permit. The *Contract Price* includes the cost of these permits, licences, inspections, and certificates, and their procurement.

- 10.2.4 The *Contractor* shall give the required notices and comply with the laws, ordinances, rules, regulations, or codes which are or become in force during the performance of the *Work* and which relate to the *Work*, to the preservation of the public health, and to construction safety.
- 10.2.5 The *Contractor* shall not be responsible for verifying that the *Contract Documents* are in compliance with the applicable laws, ordinances, rules, regulations, or codes relating to the *Work*. If the *Contract Documents* are at variance therewith, or if, subsequent to the time of bid closing, changes are made to the applicable laws, ordinances, rules, regulations, or codes which require modification to the *Contract Documents*, the *Contractor* shall advise the *Consultant* in writing requesting direction immediately upon such variance or change becoming known. The *Consultant* will issue the changes required to the *Contract Documents* as provided in GC 6.1 – OWNER’S RIGHT TO MAKE CHANGES, GC 6.2 – CHANGE ORDER and GC 6.3 – CHANGE DIRECTIVE.
- 10.2.6 If the *Contractor* fails to advise the *Consultant* in writing; fails to obtain direction as required in paragraph 10.2.5; and performs work knowing it to be contrary to any laws, ordinances, rules, regulations, or codes; the *Contractor* shall be responsible for and shall correct the violations thereof; and shall bear the costs, expenses and damages attributable to the failure to comply with the provisions of such laws, ordinances, rules, regulations, or codes.
- 10.2.7 If, subsequent to the time of bid closing, changes are made to applicable laws, ordinances, rules, regulations, or codes of authorities having jurisdiction which affect the cost of the *Work*, either party may submit a claim in accordance with the requirements of GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.

GC 10.3 PATENT FEES

- 10.3.1 The *Contractor* shall pay the royalties and patent licence fees required for the performance of the *Contract*. The *Contractor* shall hold the *Owner* harmless from and against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of the *Contractor*’s performance of the *Contract* which are attributable to an infringement or an alleged infringement of a patent of invention by the *Contractor* or anyone for whose acts the *Contractor* may be liable.
- 10.3.2 The *Owner* shall hold the *Contractor* harmless against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of the *Contractor*’s performance of the *Contract* which are attributable to an infringement or an alleged infringement of a patent of invention in executing anything for the purpose of the *Contract*, the physical model, plan or design of which was supplied to the *Contractor* as part of the *Contract*.

GC 10.4 WORKERS’ COMPENSATION

- 10.4.1 Prior to commencing the *Work*, and again with the *Contractor*’s applications for payment, the *Contractor* shall provide evidence of compliance with workers’ compensation legislation at the *Place of the Work*.

PART 11 INSURANCE

GC 11.1 INSURANCE

- 11.1.1 Without restricting the generality of GC 13.1 – INDEMNIFICATION, the *Contractor* shall provide, maintain and pay for the following insurance coverages, the requirements of which are specified in CCDC 41 ‘CCDC Insurance Requirements’ in effect at the time of bid closing except as hereinafter provided:
- .1 General liability insurance in the name of the *Contractor* and include, or in the case of a single, blanket policy, be endorsed to name, the *Owner* and the *Consultant* as insureds but only with respect to liability, other than legal liability arising out of their sole negligence, arising out of the operations of the *Contractor* with regard to the *Work*. General liability insurance shall be maintained from the date of commencement of the *Work* until one year from the date of *Ready-for-Takeover*. Liability coverage shall be provided for completed operations hazards from the date of *Ready-for-Takeover*, as set out in the certificate of *Ready-for-Takeover*, on an ongoing basis for a period of 6 years following *Ready-for-Takeover*.
 - .2 Automobile Liability Insurance from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.
 - .3 Unmanned aerial vehicle aircraft, manned aircraft or watercraft Liability Insurance when owned or non-owned manned or unmanned aircraft or watercraft are used directly or indirectly in the performance of the *Work*.
 - .4 “Broad form” property insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The “Broad form” property insurance shall be provided from the date of commencement of the *Work* until the earliest of:
 - (1) 10 calendar days after the date of *Ready-for-Takeover*;
 - (2) on the commencement of use or occupancy of any part or section of the *Work* unless such use or occupancy is for construction purposes, habitational, office, banking, convenience store under 465 square metres in area, or parking purposes, or for the installation, testing and commissioning of equipment forming part of the *Work*; and

- (3) when left unattended for more than 30 consecutive calendar days or when construction activity has ceased for more than 30 consecutive calendar days.
- .5 Boiler and machinery insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as insureds all *Subcontractors*. The coverage shall be maintained continuously from commencement of use or operation of the boiler and machinery objects insured by the policy and until 10 calendar days after the date of *Ready-for-Takeover*.
- .6 The “Broad form” property and boiler and machinery policies shall provide that, in the case of a loss or damage, payment shall be made to the *Owner* and the *Contractor* as their respective interests may appear. In the event of loss or damage:
 - (1) the *Contractor* shall act on behalf of the *Owner* for the purpose of adjusting the amount of such loss or damage payment with the insurers. When the extent of the loss or damage is determined, the *Contractor* shall proceed to restore the *Work*. Loss or damage shall not affect the rights and obligations of either party under the *Contract* except that the *Contractor* shall be entitled to such reasonable extension of *Contract Time* relative to the extent of the loss or damage as the *Consultant* may recommend in consultation with the *Contractor*;
 - (2) the *Contractor* shall be entitled to receive from the *Owner*, in addition to the amount due under the *Contract*, the amount which the *Owner*’s interest in restoration of the *Work* has been appraised, such amount to be paid as the restoration of the *Work* proceeds in accordance with the progress payment provisions. In addition the *Contractor* shall be entitled to receive from the payments made by the insurer the amount of the *Contractor*’s interest in the restoration of the *Work*; and
 - (3) to the *Work* arising from the work of the *Owner*, the *Owner*’s own forces or *Other Contractors*, the *Owner* shall, in accordance with the *Owner*’s obligations under the provisions relating to construction by the *Owner* or *Other Contractors*, pay the *Contractor* the cost of restoring the *Work* as the restoration of the *Work* proceeds and as in accordance with the progress payment provisions.
- .7 Contractors’ Equipment Insurance from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.
- .8 Contractors’ Pollution Liability Insurance from the date of commencement of the *Work* until one year after the date of *Ready-for-Takeover*.
- 11.1.2 Prior to commencement of the *Work* and upon the placement, renewal, amendment, or extension of all or any part of the insurance, the *Contractor* shall promptly provide the *Owner* with confirmation of coverage and, if required, a certified true copy of the policies certified by an authorized representative of the insurer together with copies of any amending endorsements applicable to the *Work*.
- 11.1.3 The parties shall pay their share of the deductible amounts in direct proportion to their responsibility in regards to any loss for which the above policies are required to pay, except where such amounts may be excluded by the terms of the *Contract*.
- 11.1.4 If the *Contractor* fails to provide or maintain insurance as required by the *Contract Documents*, then the *Owner* shall have the right to provide and maintain such insurance and give evidence to the *Contractor* and the *Consultant*. The *Contractor* shall pay the cost thereof to the *Owner* on demand or the *Owner* may deduct the cost from the amount which is due or may become due to the *Contractor*.
- 11.1.5 All required insurance policies shall be with insurers licensed to underwrite insurance in the jurisdiction of the *Place of the Work*.
- 11.1.6 If a revised version of CCDC 41 is published, which specifies reduced insurance requirements, the parties shall address such reduction, prior to the *Contractor*’s insurance policy becoming due for renewal, and record any agreement in a *Change Order*.
- 11.1.7 If a revised version of CCDC 41 is published, which specifies increased insurance requirements, the *Owner* may request the increased coverage from the *Contractor* by way of a *Change Order*.
- 11.1.8 A *Change Directive* shall not be used to direct a change in the insurance requirements in response to the revision of CCDC 41.

PART 12 OWNER TAKEOVER

GC 12.1 READY-FOR-TAKEOVER

- 12.1.1 The prerequisites to attaining *Ready-for-Takeover* of the *Work* are limited to the following:
 - .1 The *Consultant* has certified or verified the *Substantial Performance of the Work*.
 - .2 Evidence of compliance with the requirements for occupancy or occupancy permit as prescribed by the authorities having jurisdiction.
 - .3 Final cleaning and waste removal at the time of applying for *Ready-for-Takeover*, as required by the *Contract Documents*.
 - .4 The delivery to the *Owner* of such operations and maintenance documents reasonably necessary for immediate operation and maintenance, as required by the *Contract Documents*.
 - .5 Make available a copy of the as-built drawings completed to date on site.
 - .6 Startup, testing required for immediate occupancy, as required by the *Contract Documents*.

- .7 Ability to secure access to the *Work* has been provided to the *Owner*, if required by the *Contract Documents*.
- .8 Demonstration and training, as required by the *Contract Documents*, is scheduled by the *Contractor* acting reasonably.
- 12.1.2 If any prerequisites set forth in paragraphs 12.1.1.3 to 12.1.1.6 must be deferred because of conditions reasonably beyond the control of the *Contractor*, or by agreement between the *Owner* and the *Contractor* to do so, *Ready-for-Takeover* shall not be delayed.
- 12.1.3 When the *Contractor* considers that the *Work* is *Ready-for-Takeover*, the *Contractor* shall deliver to the *Consultant* and to the *Owner* a comprehensive list of items to be completed or corrected, together with a written application for *Ready-for-Takeover* for review. Failure to include an item on the list does not alter the responsibility of the *Contractor* to complete the *Contract*.
- 12.1.4 The *Consultant* will review the *Work* to verify the validity of the application and will promptly, and in any event, no later than 10 calendar days after receipt of the *Contractor*'s list and application:
 - .1 advise the *Contractor* in writing that the *Work* is not *Ready-for-Takeover* and give reasons why, or
 - .2 confirm the date of *Ready-for-Takeover* in writing to each of the *Owner* and the *Contractor*.
- 12.1.5 Immediately following the confirmation of the date of *Ready-for-Takeover*, the *Contractor*, in consultation with the *Consultant*, shall establish a reasonable date for finishing the *Work*.
- 12.1.6 The provision of GC 12.1 – READY-FOR-TAKEOVER shall be subject to GC 12.2 – EARLY OCCUPANCY BY THE OWNER.

GC 12.2 EARLY OCCUPANCY BY THE OWNER

- 12.2.1 The *Owner* may take occupancy of a part or the entirety of the *Work* before *Ready-for-Takeover* has been attained only as agreed by the *Contractor* which agreement shall not be unreasonably withheld.
- 12.2.2 The *Owner* shall not occupy a part or the entirety of the *Work* without prior approval by authorities having jurisdiction.
- 12.2.3 If the *Owner* takes occupancy of a part of the *Work* before *Ready-for-Takeover* has been attained:
 - .1 The part of the *Work* which is occupied shall be deemed to have been taken over by the *Owner* as from the date on which it is occupied.
 - .2 The *Contractor* shall cease to be liable for the care of such part as from this date, when responsibility shall pass to the *Owner*.
 - .3 The warranty period specified in paragraph 12.3.1 of GC 12.3 – WARRANTY for that part of the *Work* shall start from the date on which it is occupied.
- 12.2.4 If the *Owner* takes occupancy of the entirety of the *Work* before all the prerequisites are met as described in paragraph 12.1.1 of GC 12.1 – READY-FOR-TAKEOVER, the *Work* shall, subject to the requirements of the applicable lien legislation, be deemed to achieve *Ready-for-Takeover*. This shall not relieve the *Contractor*'s responsibility to complete the *Work* in a timely manner.

GC 12.3 WARRANTY

- 12.3.1 Except for extended warranties as described in paragraph 12.3.6, the warranty period under the *Contract* is one year from the date when *Ready-for-Takeover* has been attained.
- 12.3.2 The *Contractor* shall be responsible for the proper performance of the *Work* to the extent that the design and *Contract Documents* permit such performance.
- 12.3.3 The *Owner*, through the *Consultant*, shall promptly give the *Contractor Notice in Writing* of observed defects and deficiencies which occur during the one year warranty period.
- 12.3.4 Subject to paragraph 12.3.2, the *Contractor* shall correct promptly, at the *Contractor*'s expense, defects or deficiencies in the *Work* which appear prior to and during the one year warranty period.
- 12.3.5 The *Contractor* shall correct or pay for damage resulting from corrections made under the requirements of paragraph 12.3.4.
- 12.3.6 Any extended warranties required beyond the one year warranty period as described in paragraph 12.3.1, shall be as specified in the *Contract Documents*. Extended warranties shall be issued by the warrantor to the benefit of the *Owner*. The *Contractor*'s responsibility with respect to extended warranties shall be limited to obtaining any such extended warranties from the warrantor. The obligations under such extended warranties are solely the responsibilities of the warrantor.

PART 13 INDEMNIFICATION AND WAIVER

GC 13.1 INDEMNIFICATION

13.1.1 Without restricting the parties' obligation to indemnify respecting toxic and hazardous substances, patent fees and defect in title claims all as described in paragraphs 13.1.4 and 13.1.5, the *Owner* and the *Contractor* shall each indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings whether in respect to losses suffered by them or in respect to claims by third parties that arise out of, or are attributable in any respect to their involvement as parties to this *Contract*, provided such claims are:

- .1 caused by:
 - (1) the negligent acts or omissions of the party from whom indemnification is sought or anyone for whose negligent acts or omissions that party is liable, or
 - (2) a failure of the party to the *Contract* from whom indemnification is sought to fulfill its terms or conditions; and
- .2 made by *Notice in Writing* within a period of 6 years from the *Ready-for-Takeover* date or within such shorter period as may be prescribed by any limitation statute of the Province or Territory of the *Place of the Work*.

The parties expressly waive the right to indemnity for claims other than those provided for in this *Contract*.

13.1.2 The obligation of either party to indemnify as set forth in paragraph 13.1.1 shall be limited as follows:

- .1 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is to be provided by either party pursuant to GC 11.1 – INSURANCE, the minimum liability insurance limit for one occurrence, of the applicable insurance policy, as referred to in CCDC 41 in effect at the time of bid closing.
- .2 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is not required to be provided by either party in accordance with GC 11.1 – INSURANCE, the greater of the *Contract Price* as recorded in Article A-4 – CONTRACT PRICE or \$2,000,000, but in no event shall the sum be greater than \$20,000,000.
- .3 In respect to indemnification by a party against the other with respect to losses suffered by them, such obligation shall be restricted to direct loss and damage, and neither party shall have any liability to the other for indirect, consequential, punitive or exemplary damages.
- .4 In respect to indemnification respecting claims by third parties, the obligation to indemnify is without limit.

13.1.3 The obligation of either party to indemnify the other as set forth in paragraphs 13.1.1 and 13.1.2 shall be inclusive of interest and all legal costs.

13.1.4 The *Owner* and the *Contractor* shall indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of their obligations described in GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.

13.1.5 The *Owner* shall indemnify and hold harmless the *Contractor* from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings:

- .1 as described in paragraph 10.3.2 of GC 10.3 – PATENT FEES, and
- .2 arising out of the *Contractor's* performance of the *Contract* which are attributable to a lack of or defect in title or an alleged lack of or defect in title to the *Place of the Work*.

13.1.6 In respect to any claim for indemnity or to be held harmless by the *Owner* or the *Contractor*:

- .1 *Notice in Writing* of such claim shall be given within a reasonable time after the facts upon which such claim is based become known; and
- .2 should any party be required as a result of its obligation to indemnify another to pay or satisfy a final order, judgment or award made against the party entitled by this contract to be indemnified, then the indemnifying party upon assuming all liability for any costs that might result shall have the right to appeal in the name of the party against whom such final order or judgment has been made until such rights of appeal have been exhausted.

GC 13.2 WAIVER OF CLAIMS

13.2.1 Subject to any lien legislation applicable to the *Place of the Work*, the *Contractor* waives and releases the *Owner* from all claims which the *Contractor* has or reasonably ought to have knowledge of that could be advanced by the *Contractor* against the *Owner* under the *Contract*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the *Ready-for-Takeover* date, except as follows:

- .1 claims arising prior to or on the *Ready-for-Takeover* date for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* no later than 5 calendar days before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work* or 20 calendar days following the *Ready-for-Takeover* date, whichever is later;
- .2 indemnification for claims advanced against the *Contractor* by third parties for which a right of indemnification may be asserted by the *Contractor* against the *Owner* pursuant to the provisions of this *Contract*;

- .3 claims respecting toxic and hazardous substances, patent fees and defect in title matters for which a right of indemnity could be asserted by the *Contractor* pursuant to the provisions of paragraphs 13.1.4 or 13.1.5 of GC 13.1 – INDEMNIFICATION; and
 - .4 claims resulting from acts or omissions which occur after the *Ready-for-Takeover* date.
- 13.2.2 The *Contractor* waives and releases the *Owner* from all claims resulting from acts or omissions which occurred after the *Ready-for-Takeover* date except for:
- .1 indemnification respecting third party claims, and claims respecting toxic and hazardous substances, patent fees and defect in title matters, all as referred in paragraphs 13.2.1.2 and 13.2.1.3; and
 - .2 claims for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* within 395 calendar days following the *Ready-for-Takeover* date.
- 13.2.3 Subject to any lien legislation applicable to the *Place of the Work*, the *Owner* waives and releases the *Contractor* from all claims which the *Owner* has or reasonably ought to have knowledge of that could be advanced by the *Owner* against the *Contractor* under the *Contract*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the *Ready-for-Takeover* date, except as follows:
- .1 claims arising prior to or on the *Ready-for-Takeover* date for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* no later than 20 calendar days following the *Ready-for-Takeover* date;
 - .2 indemnification for claims advanced against the *Owner* by third parties for which a right of indemnification may be asserted by the *Owner* against the *Contractor* pursuant to the provisions of this *Contract*;
 - .3 claims respecting toxic and hazardous substances for which a right of indemnity could be asserted by the *Owner* against the *Contractor* pursuant to the provisions of paragraph 13.1.4 of GC 13.1 – INDEMNIFICATION;
 - .4 damages arising from the *Contractor*'s actions which result in substantial defects or deficiencies in the *Work*. "Substantial defects or deficiencies" mean those defects or deficiencies in the *Work* which affect the *Work* to such an extent or in such a manner that a significant part or the whole of the *Work* is unfit for the purpose intended by the *Contract Documents*;
 - .5 claims arising pursuant to GC 12.3 – WARRANTY; and
 - .6 claims arising from acts or omissions which occur after the *Ready-for-Takeover* date.
- 13.2.4 Respecting claims arising upon substantial defects and deficiencies in the *Work*, as referenced in paragraph 13.2.3.4, and notwithstanding paragraph 13.2.3.5, the *Owner* waives and releases the *Contractor* from all claims except claims for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* within a period of six years from the *Ready-for-Takeover* date, provided that any limitation statute of the Province or Territory of the *Place of the Work* permit such agreement. If the applicable limitation statute does not permit such agreement, the time within which any such claim may be brought shall be such shorter period as may be prescribed by any limitation statute of the Province or Territory of the *Place of the Work*.
- 13.2.5 The *Owner* waives and releases the *Contractor* from all claims arising from acts or omissions which occur after the *Ready-for-Takeover* date, except for:
- .1 indemnification for claims advanced against the *Owner* by third parties, as referenced in paragraph 13.2.3.2;
 - .2 claims respecting toxic and hazardous substances for which a right of indemnity could be asserted by the *Owner* against the *Contractor*, as referenced in paragraph 13.2.3.3;
 - .3 claims arising under GC 12.3 – WARRANTY; and
 - .4 claims for which *Notice in Writing* has been received by the *Contractor* from the *Owner* within 395 calendar days following the *Ready-for-Takeover* date.
- 13.2.6 "Notice in Writing of claim" as provided for in GC 13.2 – WAIVER OF CLAIMS to preserve a claim or right of action which would otherwise, by the provisions of GC 13.2 – WAIVER OF CLAIMS, be deemed to be waived, must include the following:
- .1 a clear and unequivocal statement of an intention to claim;
 - .2 a statement as to the nature of the claim and the grounds upon which the claim is based; and
 - .3 a statement of the estimated quantum of the claim.
- 13.2.7 A claim for lien asserted under the lien legislation prevailing at the *Place of the Work* shall qualify as notice of claim for the purposes of this *Contract*.
- 13.2.8 The party giving the *Notice in Writing* of claim as provided for in GC 13.2 – WAIVER OF CLAIMS shall submit within a reasonable time a detailed account of the amount claimed.
- 13.2.9 Where the event or series of events giving rise to a claim made under paragraphs 13.2.1 or 13.2.3 has a continuing effect, the detailed account submitted under paragraph 13.2.8 shall be considered to be an interim account and the party making the claim shall submit further interim accounts, at reasonable intervals, giving the accumulated amount of the claim and any further grounds upon which such claim is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.
- 13.2.10 Nothing in GC 13.2 – WAIVER OF CLAIMS shall be deemed to affect the rights of the parties under any lien legislation or limitations legislation prevailing at the *Place of the Work*.

Part 2 – Tender Forms

Keewatin Channel Bridge
Recoating and Steel Repair



SECTION 1 TENDER FORMS

TENDER NUMBER: KCB-312-001-24

TENDER TITLE: KEEWATIN CHANNEL BRIDGE RECOATING AND STRUCTURAL REPAIRS

WE, _____
(COMPANY)

OF _____
(BUSINESS ADDRESS)

HAVING EXAMINED THE TENDER DOCUMENTS AS ISSUED BY: THE CITY OF KENORA (THE "CITY"), AND HAVING VISITED THE SITE(S) OF WHERE THE WORK IS REQUIRED TO BE UNDERTAKEN; HEREBY OFFER TO ENTER INTO A CONTRACT TO PERFORM THE WORK REQUIRED BY THE TENDER DOCUMENTS FOR THE TENDER SUM AS FOLLOWS:

1. Keewatin Channel Bridge Recoating and Structural Repairs \$ _____

2. _____
(Tender Sum written in words)

3. _____
(Tender Sum in figures)

4. Ontario Harmonized Sales Tax (HST = 13%) \$ _____

5. Tender Sum (Summation of Items 3 & 4 above) \$ _____

6. _____
(Total including HST written in words)

7. _____
(Total including HST in figures)

IN CANADIAN FUNDS, WHICH PRICE INCLUDES ANY SPECIFIED CASH AND CONTINGENCY ALLOWANCES AND THE APPLICABLE TAXES IN FORCE AT THIS DATE AND EXCEPT AS MAY BE OTHERWISE PROVIDED IN THE TENDER DOCUMENTS.

The Unit Price Schedule shall be completed in accordance with the Tender Documents, any errors will be corrected as identified in Article 3.0.



SCHEUDLE OF PRICES

Keewatin Channel Bridge

ITEM NO.	DESCRIPTION	UNIT	APPROX. QTY.	UNIT PRICE	AMOUNT
1	Mobilization, Demobilization, and Site Work	L.S.	1	\$	\$
2	Signs, Traffic Control, and Minimizing Traffic Obstructions	L.S.	1	\$	\$
3	Construction Layout	L.S.	1	\$	\$
4	Field Office and Weather Monitoring Equipment	Month	10	\$	\$
5	Containment and Disposal of Waste Material	L.S.	1	\$	\$
6	Containment Emergency Dismantling and Replace	L.S.	1	\$	\$
7	Bridge Cleaning and Painting (Polysiloxane Two-Coat System)	L.S.	1	\$	\$
8	Steel Repair Type 1*	each	4	TBD	TBD
9	Steel Repair Type 2*	each	2	TBD	TBD
10	Steel Repair Type 3	each	2	\$	\$
11	Steel Repair Type 4	each	15	\$	\$
12	Steel Repair Type 5	each	2	\$	\$
13	Steel Repair Type 6	each	150	\$	\$
14	Steel Repair Type 7	each	2	\$	\$
15	Steel Repair Type 8	each	2	\$	\$

SUB-TOTAL BID (CAD) \$

HST (CAD) \$

TOTAL BID PRICE KEEWATIN CHANNEL BRIDGE (CAD) \$

**Refer to the technical specifications and drawings for further clarification as these items require follow-up inspection prior to repair development and subsequent pricing.*



SECTION 2 APPENDICES TO TENDER FORM:

- .1 The information required by the Instructions to Tenderers is provided in the attached Appendices and forms an integral part of this Tender.

Declarations:

- .1 We hereby acknowledge and declare that:
- a. we agree to perform the Work in compliance with the required completion schedule stated in the Contract;
 - b. no person, firm or corporation other than the undersigned has any interest in this Tender or in the proposed Contract for which this Tender is made;
 - c. the Tender Security is attached to this Tender. We specifically acknowledge and agree that the Tender Security may be forfeited to the City pursuant to the terms set forth in the Instructions to Tenderers;
 - d. we hereby acknowledge and confirm that the City has the right to accept any tender or to reject any or all tenders in accordance with the Instructions to Tenderers;
 - e. this Tender is open to acceptance for a period of sixty (60) days from the date of Tender Closing.



SUPPLEMENTS TO TENDER FORM

In order to aid the Owner in determining responsibility, complete the following statements:

FORM A: Tenderer's Experience in Similar Work

Year	Description of Contract	Owner's Name	Value
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

NOTE: Failure of the bidder to complete FORM A may be grounds for rejecting the Tender.

Signature of Witness

Signature of Tenderer

Seal



SUPPLEMENTS TO TENDER FORM

FORM C: Alternatives

List any material, equipment, or construction method proposed as an alternate to the material specified, together with all costs and supporting information required in accordance with the "INSTRUCTIONS TO BIDDERS". Attach supporting description and technical data to the Tender. Use separate sheet if space below is not sufficient.

NOTE: Indicate "N/A" or "none" if no alternatives are submitted at the time of tendering.

Name of Item to be Substituted	Specification Reference	Alternative	Addition to Total Tender Price	Deduction from Total Tender Price

NOTE: Failure of the bidder to complete FORM C may be grounds for rejecting the Tender.

Signature of Witness

Signature of Tenderer (Seal)

Seal



SUPPLEMENTS TO TENDER FORM

FORM D: Undertaking to Comply

Name of Contractor _____ (the "Contractor")

Description of Contract _____ (the "Contract")

Name of Authorized Representative
of the Contractor _____

1. I / We hereby undertake:
 - (a) to comply with all applicable health and safety and environmental legislation in the performance of this contract:
 - (b) to maintain a safe and healthy work environment during the performance of this contract.
 - (c) that a Joint Health & Safety Committee or the appointment of a Health & Safety Representative is undertaken as applies to the Occupational Health & Safety Act.
2. I / We hereby agree:
 - (a) that compliance with all health & safety and environmental legislation is a condition of the contract and that noncompliance with same may, at the Corporation of the City of Kenora's (hereinafter the Corporation or the City) discretion, lead to the termination of this Contract;
 - (b) to permit the Corporation to audit my / our health and safety and environmental records during the term of the contract and upon its conclusion and to co-operate fully with any such audit(s).
3. I / We understand that contractor safety deficiencies will be addressed by the Corporation in the following progressive steps:
 - (a) The infraction(s) will be identified to the Contractor (site supervisor) verbally and documented as such.
 - (b) The Contractor's Head Office will be contacted about the infraction(s), orally and in writing.
 - (c) if the infraction(s) remain, a written notice will be presented to the Contractor's Head office and a fine of a minimum of \$100.00 up to a maximum of \$1,000.00 per infraction will be deducted from the payment due to the Contractor.
 - (d) if required by law to immediately report the infraction(s), the Corporation shall report the infraction to the appropriate Ministry(ies).
 - (e) If not required by law to report the infraction(s), the Corporation may report the infraction to appropriate Ministry(ies)
 - (f) The Corporation may, in the Corporation's discretion, suspend or terminate the contract and/or withhold payment by the Corporation.
4. I / We acknowledge and agree:
 - (a) Depending upon the nature and/or seriousness of the deficiency, the Corporation reserves the right to bypass any or all of the steps described in section 3 sections (a) through (f).
5. I / We hereby acknowledge:
 - (a) Receipt of a copy of the Corporation's Contractor Safety Policy and that I/we understand and undertake to adhere to the terms of this Policy and to co-operate with the Corporation in its efforts to ensure compliance thereunder.



I / We have the authority to bind the Contractor,

_____(DATE)

SIGNED, SEALED AND DELIVERED

in the presence of

Per:

WITNESS

NAME OF CONTRACTOR

SEAL

SIGNATURE

Name of Administrator of Contractors Health & Safety Program:

NOTE: Failure of the bidder to complete FORM D may be grounds for rejecting the Tender.



SUPPLEMENTS TO TENDER FORM

FORM E: Indemnification Agreement

In consideration of the Corporation of the City of Kenora (the City) agreeing to contract with the undersigned

(name of contractor)

hereby agrees and covenants that it/he/she shall indemnify and save harmless the City and all persons for whom it is in law responsible, from any and all claims, action suits, damages, or costs arising or alleged to arise from the action, default or negligence of the undersigned, its agents or servants in its/his/her performing work or supplying materials on City property, or elsewhere at the City's request.

This indemnity shall include all administrative costs, adjusting costs, and legal costs on a substantial indemnity basis.

This indemnity shall be limited in respect to work performed or services supplied between June 23, 2025 to December 31, 2025, or longer should the construction contract be extended.

Dated _____, 2025

(name of contractor)

Per:

(signature)

Seal

NOTE: Failure of the bidder to complete FORM E may be grounds for rejecting the Tender.



Part 3 – Technical Specifications

Keewatin Channel Bridge
Recoating and Steel Repair



SECTION 1 GENERAL

1.1 WORK INCLUDED

- .1 The Work, unless specifically stated otherwise, shall include the furnishing of all material, product, plant, labor, and transportation necessary to complete the Work. The intent is that the Contractor provides a complete job.
- .2 The Work shall not be deemed complete until all components are placed in operation by the Contractor, and are operating to the satisfaction of the Contract Administrator.
- .3 Any minor items of the Work not called for in the Specifications or shown on the Drawings but clearly required to meet the intent of design and normally provided for the proper operation of the Work shall be provided as if specifically called for in the Contract Documents.
- .4 The use of the word "provide" means "supply and install"; or "supply labor and materials for the installation of". It does not mean supply only.
- .5 Where there is an ambiguity between a Standard and any term of these Contract Documents, the Contract Administrator shall, in the first instance, give an interpretation of the intent of the Contract.

1.2 PERMITS, LICENSES, REGULATIONS, AND ACTS

- .1 The Contractor shall be responsible for obtaining and paying for any and all permits or licenses as may be required for any portion of this contract. The Contractor will be responsible for meeting the requirements of all permits and licenses granted, as well as compliance with all applicable Acts and Regulations.
- .2 The Contractor shall ensure compliance on their part and on the part of all of Subcontractors with Fisheries and Oceans Canada, and the Canadian Navigable Waters Act.

1.3 ENVIRONMENTAL PROTECTION

- .1 No in-water works are permitted or required as part of this scope of work. All Contractor activities must conform to the applicable environmental protection laws and regulations. Appendix A provides DFO's Interim Code of Practice: Bridge Repair and Maintenance to avoid causing harm to fish and provides general advice to comply with these Acts. This document shall only be considered as advice and it shall be the Contractor's responsibility to adhere to all required laws, acts, and regulations.
- .2 Applicable codes and standards related to the Environmental Protections, particularly with regards to Ontario Provincial Standards.
- .3 Any work adjacent to waterways or which may result in sediment or debris entering the waterway will require the Contractor to implement control measures to contain the debris or control the sediment. Such measures shall be installed prior to the commencement of construction.
- .4 Protect trees and plants on site and adjacent properties with removal only as approved by the Contract Administrator.



1.4 WEATHER CONSTRAINTS

- .1 The Contractor shall maintain safety of the Worksite with respect to wind forces acting on the work platform and enclosure system.
- .2 The Contractor shall ensure that there is a weather station operating on the Bridge at all times during construction, that records the maximum 3 second gust wind speed and direction, visibility, precipitation, humidity and temperature, and reports them at intervals of not more than ten minutes. This weather station shall be calibrated and certified and the data shall be presented locally and remotely in real time. The data is to be stored from the start of mobilization to Contract to the completion of demobilization.

The data from the weather station shall be made available to the Consultant and the City remotely and in real time.

The Contractor shall install a weather station, including an anemometer, on a pole sufficiently stiff so that wind induced vibrations are not experienced and located so that it is clear and free of obstructions or shielding from structures. The anemometer shall be installed on the Bridge Deck near midspan or on one of the adjacent spans.

- .3 The Contractor shall have a system of forecasting the weather to ensure that critical operations will not occur during unacceptably bad weather. Forecasting shall be accurate enough to predict the weather from the point at which the decision is made, to six hours after the anticipated end of the operation in question. Forecasting shall be conducted by an independent, competent meteorologist using sufficient available data. The Contractor shall arrange for additional data to facilitate accurate forecasting from external sources such as Environment Canada. The Contractor shall submit detailed forecasts with closure requests and shall identify activities and specified constraints for the activities.
- .4 It shall be the responsibility of the Contractor to decide at any time if an operation is to proceed despite inclement weather. However, the Consultant reserves the right to veto a Closure and to suspend the Work if it determines, in its sole discretion, that proceeding during bad weather would put at risk the safety of the Bridge or the public.

Notwithstanding any other provision of the Contract Documents, there shall be no claim against Stantec or the City by the Contractor if the Consultant decides to veto a closure.

1.5 WATERCRAFT NAVIGATION

- .1 The Contractor shall adhere to the Canadian Navigable Waters Act (CNWA) and shall maintain a navigable waterway beneath the Keewatin Channel Bridge with appropriate clearance signage and warnings provided upstream and downstream of the structure.
- .2 At a minimum, the Contractor shall adhere to the following:
 - a. Maintain at site a copy of the pending Transport Canada approval documentation during construction;
 - b. All vessels navigating the watercourse must be allowed access through or around the worksite at all times during construction and must be assisted as necessary.
 - c. Signs stating "Construction Ahead" must be placed and maintained 50 metres upstream and 50 metres downstream of the work for the duration of construction within the navigable (open water) season.
 - i. Signs stating "Construction Ahead" must be legible from a minimum distance of 50 metres.



- ii. Signs stating "Construction Ahead" must be placed on both banks of the river.
- iii. Signs stating "Construction Ahead" must display black lettering on a yellow or orange background.
- d. Temporary works within the wetted width of the watercourse must be marked during construction in the navigable (open water) season:
 - i. With cautionary buoy(s) (yellow), at each end (corner) and at any other location alongside the temporary work(s) so that the buoys are spaced not more than 10 metres apart; or
 - ii. With a turbidity curtain, that has a yellow or orange flotation system, which encircles the temporary work or runs from the bank upstream of the temporary work to the same bank downstream of the temporary work.
- e. Temporary work(s) must be removed immediately upon completion of the permanent work.
- f. The Minister or his representatives must be allowed unimpeded access to any site related to the project for inspection and/or monitoring purposes.

1.6 CONSTRUCTION SCHEDULE

- .1 Upon award of the Contract the Contractor shall provide the Consultant with a detailed work schedule at least five (20) Working Days prior to the commencement of any Work on site. The Construction Schedule shall be in critical path method format showing all the principal phases of the WORK. No Progress Payment Claim shall be certified until an acceptable Construction Schedule has been received and approved by the Consultant.
- .2 The Construction Schedule, as stated above, will be held as a baseline. The Construction Schedule shall be updated every two weeks against actual progress of the work by the Contractor. The updated Construction Schedules do not relieve the Contractor from the obligation of the Completion Date.
- .3 If, in the opinion of the Consultant, the Construction Schedule is inadequate as a control tool or if it does not show the work being fully completed by the Contract Completion Date, the Consultant may reject it and the Contractor shall provide a Construction Schedule and work program that is acceptable to the Consultant.
- .4 The Contractor shall require written permission from the City of Kenora for any work to be performed between the hours of 21:00 and 07:00. Such work shall conform to all applicable laws and by-laws.

1.7 PROJECT MEETINGS

- .1 A Preconstruction meeting will be arranged by the Consultant after the award of Contract.
- .2 The meeting will be held at the City of Kenora office.
- .3 The agenda for the Preconstruction Meeting shall include, but is not limited to, the following:
 - a. Confirm the superintendent, contractor's project manager, and the Consultant Resident personnel on the worksite.



- b. Establish worksite protocols for communication, reporting, inspection, etc.
 - c. Clear up any ambiguities or questions of interpretation known at that time.
 - d. Review the detailed work schedule.
 - e. Occupational Health and Safety relationships and responsibilities.
 - f. Review and discuss contractor's site safety plan.
 - g. Discuss other responsibilities of the Owner, the contractor, and the Consultant
- .4 Progress meetings will be held on a regular monthly basis or more frequently if requested by the Consultant.
- .5 The Consultant will give to all parties advance notice of meeting dates, times and locations.
- .6 The Contractor shall have in attendance the Superintendent, the Contractor's Project Manager and representatives of the subcontractors if requested by the Consultant.
- .7 The Owner may have a representative in attendance.
- .8 Construction Schedule, Occupational Health and Safety incidents, records and procedures shall be part of the agenda for every progress meeting.
- .9 Minutes will be taken by the Consultant and copies will be distributed to all attendees.

1.8 FIELD ENGINEERING

- .1 The Contractor shall be responsible for setting all temporary benchmarks required to complete the Work.
- .2 Throughout the course of the work, the Contractor shall confirm the accuracy of their temporary benchmarks. Claims will not be entertained for work installed incorrectly due to survey error.
- .3 The Contractor shall be responsible for the true and proper layout of the work and for the correctness of the location, levels, dimensions, and alignment of all aspects of the work. The Contractor shall provide all required instruments and competent personnel for performing all layouts.
- .4 Should any error appear or arise in location, levels, dimensions, and/or alignments during the WORK, the Contractor shall promptly rectify such errors to the satisfaction of the Consultant at their own expense.
- .5 The Consultant shall be notified at least two (2) working days prior to any Work being commenced in order to have the option to check and review all elevations and layouts at the Consultant's discretion.

1.9 TEMPORARY FACILITIES AND CONTROLS

- .1 The Owner will allow the Contractor to set a worksite within the right of way. The limits of the worksite have not been noted on the Drawings.
- .2 The Contractor shall have agreements in place with landowners for any work requiring access onto private property. Such agreements shall be the responsibility of the Contractor. Copies of these agreements shall be provided to the Consultant. It shall be the



- responsibility of the Contractor to confirm the extents and locations of all private property lines adjacent to the proposed works.
- .3 The Contractor shall have exclusive use and control of the worksite, provided that the Contractor shall permit access to the Owner, the Consultant, and other contractors for purposes of inspections, reviews, tests and carrying out work related to the work.
 - .4 Contractor's use of the worksite for storage is limited to the areas within the right of way.
 - .5 During the Contractor's use of a particular area of the worksite to execute the work, the Contractor shall be responsible primarily for security and for ensuring compliance with Health and Safety Regulations.
 - .6 The Contractor shall be responsible for access to the worksite by means of temporary roads, tote roads, or agreements with the appropriate authorities or land owners to use existing means of access.
 - .7 The Contractor shall return the areas of the worksite used for construction access, laydown, storage, etc. to the condition before the construction commenced or as agreed upon in the applicable land Owner agreement.
 - .8 The Contractor shall provide and pay all costs for natural gas, gasoline and other fuels, water, electricity and lighting, telephone, heating and ventilating, sanitary facilities, fire protection, temporary plants, temporary enclosures, false work, temporary construction supports, temporary excavation, access roads, and tree protection as required to complete the Work.
 - .9 The Contractor shall be responsible for location, protection, temporary support, removal, or replacement of existing utilities and structures, or for repair of any damage which may occur during construction including all required designs.
 - .10 Existing utilities that exist near or are attached to the bridges shall be safely supported and protected by the Contractor through the duration of the work and to the satisfaction of the utility Owner(s) and the Consultant.
 - .11 The Contractor shall pay all costs and be responsible for establishing locations and state of use of all existing utilities that may affect the Work. The Contractor shall make satisfactory arrangements with the utilities companies involved for the location, protection, and inspection of existing utilities.
 - .12 The Contractor shall pay all the costs involved in protection of utilities, inspection of utilities, and all costs due to delays because of existing utilities and structures.
 - .13 The Contractor shall provide for the uninterrupted flow of all water courses, sewers, and drains encountered during the WORK.
 - .14 Access shall be maintained to all existing structures such as valves, hydrants, meter chambers and control structures at all times during construction.
 - .15 If interruption of service provided by an existing utility is necessary, the planned shut down shall be approved by the Owner of the utilities.
 - .16 Unless otherwise specified the Contractor shall make arrangements for relocation of existing utilities that the Consultant requests to be relocated; and the actual relocation shall be constructed by the Owner of the utility. The Contractor will be reimbursed the invoiced cost of the relocation. No extra payment is permitted for delays, or standby time.
 - .17 Controls:



- a. Perform the Work in conformity with all municipal by laws with respect to noise, hours of work, night work, and holiday work.
 - b. Perform the Work in a manner that will not produce an objectionable amount of dust. Dust control measures shall be paid for by the Contractor.
 - c. Perform the Work in conformance with the applicable sections of the Provincial Regulations with respect to air and water pollution control requirements.
- .18 Disposal of Wastes:
- a. Burying of rubbish and waste on the worksite is not permitted.
 - b. Disposal of waste or volatile materials into waterways, storm or sanitary sewers is not permitted.
 - c. Pumping or draining water containing silt in suspension into waterways, sewers, or drainage systems is prohibited.
 - d. Abide by requirements of Statute, Bylaw, and Regulations respecting disposal of wastes.
 - e. Obtain required Permits for waste disposal.
- .19 Do not operate construction equipment in waterways, nor remove borrow material nor dump fill material into waterways, except as approved and permitted by the appropriate authorities. The regulatory approvals must be strictly followed when working adjacent to the waterway.
- .20 The Contractor shall maintain haul routes. They shall be kept open to traffic and shall be clean at all times. Any damage done to the haul routes by the Contractor shall be repaired as approved by the Consultant and all costs shall be borne by the Contractor.
- .21 Obtain permits as required to use public roads or streets for haul routes.
- .22 Special care shall be taken to avoid damage to all existing adjacent structures or properties during the course of the work. Any damage caused by the Contractor to the existing adjacent structures or properties shall be repaired at their own expense and to the satisfaction of the Consultant.

1.10 HEALTH AND SAFETY POLICY

- .1 The Contractor shall adhere to the City of Kenora Health and Safety Policy and shall be responsible for all site safety aspects of the Work.
- .2 During construction, health and safety meetings shall be conducted as required by the Occupational Health and Safety Act (OHSA).

1.11 MEASUREMENT FOR PAYMENT

- .1 Notify the Consultant sufficiently in advance of operations to allow required measurements for payment. Unless otherwise specified, measurements shall be taken in accordance with the General and Supplementary Conditions.



1.12 DOCUMENTS REQUIRED ON SITE

- .1 Maintain at the worksite at least one copy of each of the following:
 - a. Contract drawings
 - b. Specifications
 - c. Addenda
 - d. Change Orders, Field Orders, Notices
 - e. Reviewed shop drawings
 - f. Modifications to the Contract
 - g. Field Test Reports
 - h. Construction Schedule
 - i. Manufacturer's Installation and Application Instructions
 - j. Occupational Health and Safety Regulations and Workers' Compensation Board Regulations
 - k. Environmental Applications, Authorizations or Assessments
 - l. Have readily available any referenced or specified Standards.

1.13 MATERIAL AND INSTALLATION

- .1 Material and product supplied and installed shall be new and shall conform to these Specifications and to the specified standards.
- .2 Workmanship shall be the best quality, executed by workers experienced, and skilled in their respective trades.
- .3 Ensure full cooperation among all trades and coordination of the WORK with continuous supervision.
- .4 Use product for which replacement parts and service are readily available.
- .5 Unless otherwise specified, comply with the manufacturer's / supplier's instructions for material or product and installation methods.
- .6 Provide metal fastenings and accessories in the same texture, colour, and finish as the base metal in which they occur. Prevent electrolytic action between dissimilar metals. Use non-corrosive fasteners, anchors, and spacers for securing exterior Work, or Work that may be located in a corrosive atmosphere.
- .7 Space anchors within limits of load bearing or shear capacity and ensure that they provide positive permanent anchorage. Space fasteners evenly and lay out neatly.

1.14 DELIVERY AND STORAGE OF MATERIALS

- .1 Deliver, store, and maintain packaged material and product with manufacturer's seals and labels intact.



- .2 Prevent damage and soiling of material and product and store in accordance with instructions of the manufacturer / supplier.
- .3 Provide suitable areas or buildings where storage is weatherproof, if the manufacturer / supplier recommends dry areas.
- .4 Comply with Work Place Hazardous Materials Information Systems requirements.
- .5 Material that is improperly stored resulting in damage due to the Contractor's negligence shall be replaced at the Contractor's expense.

1.15 QUALITY CONTROL

- .1 The Contractor is totally responsible for the quality of material and product which the Contractor provides and for the work.
- .2 The Contractor is responsible for quality control and shall perform such inspections and tests as are necessary to ensure that the Work conforms to the requirements of the Contract Documents.
- .3 During the progress of the Work, a sufficient number of tests shall be performed by the Contractor to determine that material, product, and installation meet the specified requirements.
- .4 Minimum requirements regarding quality control are specified in various sections of the Specifications, however, the Contractor shall perform as many inspections and tests as are necessary to ensure that the work conforms to the requirements of the Contract Documents.
- .5 Testing shall be in accordance with pertinent codes and regulations, and with selected standards of the American Society for Testing and Materials (ASTM) and Canadian Standards Association (CSA).
- .6 The Contractor shall retain the services of an independent testing agency under supervision of a registered Professional Engineer, and pay the cost of testing services for quality control including, but not limited to, the following:
 - a. Sieve analysis of sands and aggregates to be supplied to the work.
 - b. Any product testing that is required and is specified under various sections of the Specifications.
 - c. Base coat and topcoat thickness testing.
 - d. Adhesion testing of new coatings.
- .7 The Contractor shall promptly process and distribute all required copies of test reports and test information. Any product that does not meet required specifications shall be replaced at the Contractor's expense. Performing such work is not cause of an extension of the Contract Time.
- .8 When tests on product, material, or completed portions of the work carried out by the Contractor or the Contractor's testing agency or by the Owner's testing agency yield results not meeting the requirements of the Contract Documents, the Contractor, in addition to carrying out remedial Work or replacement of the Product or Material shall cover all costs for retesting of the remedied Work and the replacement Product and Material. Retesting shall be at the Contractor's expense.



- .9 If the Contractor fails or refuses to do remedial Work or replace unacceptable material or product, the Consultant may refuse to certify payment and the Owner may refuse to make payment, in addition to any other remedies the Owner may have.

1.16 SHOP DRAWINGS

- .1 The Contractor shall arrange for the preparation of clearly identified Shop Drawings and submit one (1) electronic PDF Shop Drawing to be reviewed by the Consultant.
- .2 Shop Drawings shall be in accordance with the International System of Units (S.I.) metric units
- .3 Prior to submission to the Consultant, the Contractor shall review all Shop Drawings. The Contractor's review of each Shop Drawing shall be indicated by stamp, with the date and signature of a responsible person.
- .4 The Contractor shall submit Shop Drawings to the Consultant for review with reasonable promptness and in orderly sequence so as to cause no delay in the Work
- .5 At the time of submission, the Contractor shall notify the Consultant in writing of any deviations in the Shop Drawings from the requirements of the Contract Documents.
- .6 The Consultant's review shall be for conformity to the design concept and for general arrangement only and such review shall not relieve the Contractor of responsibility for errors or omissions in the Shop Drawings or of responsibility for meeting all requirements of the Contract Documents.
- .7 The Contractor shall make any changes to the Shop Drawings which the Consultant may require consistent with the Contract Documents and resubmit unless otherwise directed by the Consultant.
- .8 Where the Contractor is required, either by law, regulation or by the Contract to provide engineering design, they shall use the services of a Professional Engineer registered in the Province of Ontario and shall submit Shop Drawings bearing the Seal and Signature of that Registered Professional Engineer.

1.17 CONTRACT CLOSE-OUT

- .1 Maintain the working area in a clean and orderly manner as the Work progresses, and upon completion of construction, remove all waste Materials, and all temporary facilities from the Worksite.
- .2 Haul surplus or salvage materials that are the property of the Owner to the Owner's storage site. Remove surplus or salvaged materials belonging to the Contractor from the worksite.
- .3 Clean haul routes and restore haul roads to their pre-construction condition.
- .4 Broom clean paved surfaces; rake clean other surfaces of ground.
- .5 The Contractor shall notify the Consultant when the Work is considered for Substantial Performance. The Contractor shall accompany the Consultant on the Substantial Performance walk-through.
- .6 The Contractor shall comply with the Consultant's instructions for correction of items of Work listed to be corrected in conformance with the Contract Documents.



1.18 WARRANTY INSPECTION

- .1 The Consultant shall arrange and conduct with the Owner and the Contractor a warranty inspection at the site prior to the expiration of the warranty period.

1.19 MEASUREMENT AND PAYMENT

- .1 Refer to Section 5 Measurement and Payment

END OF SECTION



SECTION 2 MOBILIZATION, DEMOBILIZATION, AND SITE WORK

2.1 DESCRIPTION

- .1 This Specification shall cover the Mobilization, Demobilization, and Site Work required for the Work of this project. The Work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.

2.2 SCOPE OF WORK

- .1 Mobilization, Demobilization, and Site Work shall include the Contractor's costs of mobilization at the beginning of the Work and the costs of demobilization at the end of the Work.
- .2 Included in Mobilization, Demobilization, and Site Work are such items as permits, moving personnel, bonding and insurance, lodging expenses, materials, and equipment to and from the site, setting up temporary facilities, temporary land use agreements, temporary utilities, and all site preparation for performing the Work.
- .3 All costs associates with site cleanup, general grading, and restoration to the original condition of the Site and any disturbed areas upon completion shall be included herein this pay item.
- .4 All regulatory body required costs (material, labour) shall be included herein this pay item.
- .5 The Contractor is responsible for obtaining all utility clearances and the costs associated with the clearances shall be included herein this pay item.
- .6 The supply and placement of any and all erosion protection and silt fence barriers shall be considered a part of this pay item.
- .7 This pay item shall include final site clean-up, grading, seeding and revegetation, and placement of Erosion Control Blanket (ECB) required to restore the worksite to preconstruction condition.

2.3 MEASUREMENT AND PAYMENT

- .1 Refer to Section 5 Measurement and Payment.

END OF SECTION



SECTION 3 TRAFFIC CONTROL AND PEDESTRIAN ACCOMMODATION

3.1 DESCRIPTION

- .1 This Specification shall cover all operations relating to the provision of traffic control and pedestrian accommodation for single-lane, two-way traffic operation at the bridge locations.
- .2 The work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies, and all things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.

3.2 SCOPE OF WORK

- .1 Traffic control and pedestrian accommodation shall include supply, installation, operation, relocation, maintenance, and removal of all traffic control devices, portable temporary traffic signals, pedestrian accommodation devices, as well as the provision of flag persons. The provision and implementation of traffic control shall be in accordance with the Ontario Traffic Manual (OTM) Book 7 except as otherwise specified herein and directed / approved by the Contract Administrator.
- .2 At least 72 hours prior to restricting traffic, notify the following:
 - a. Roadway Authority
 - b. Public Works Departments
 - c. Utilities Companies
 - d. Fire Department
 - e. Police Department
 - f. Ambulance
- .3 The Contractor shall prepare and submit a Traffic Control and Pedestrian Accommodation Plan to the Consultant for review and comment at least 5 Working days prior to proceeding with on-site traffic control and pedestrian accommodation. The Contractor shall co ordinate the Work with the Consultant, and the Owner to reduce traffic and pedestrian problems.
- .4 The Contractor shall be responsible for all construction zone barriers, barricades, warning signs, detours, fences, flag persons, and all other devices required to protect the public. All applicable safety standards will be followed. Under no circumstances will hand painted lettering, diagrams, or symbols be permitted.
- .5 No lane restrictions nor closures on Highway 17 shall be permitted between June 28 to September 2, 2019, inclusive.
- .6 If required to complete the work, the Contractor shall design, supply, install, and remove temporary traffic signals at each end of the bridge(s) throughout the duration of construction, which will allow for one, two-way traffic lane to function to accommodate traffic in both directions.



- a. The Contractor shall be responsible for traffic signal timing design and shall make required adjustments in the field to properly accommodate the flow of traffic.
- b. A minimum of one, two-way traffic lane must be maintained at all times. Traffic flow shall be managed with either traffic signals or through flag person operations.
- c. When performing recoating activities, the use of mobile equipment for debris removal or air purification will require staging on the bridge deck. The Contractor shall provide a sufficient traffic management plan to demarcate the staging/work area and safely manage traffic. This may involve the provision of temporary concrete barriers, or delineators, depending on the specific regulatory requirements.
- d. Pedestrian accommodations to cross the bridge shall be provided throughout the duration of the project. Pedestrian accommodation shall consider the requirements needed to properly protect the public from the Construction activities, hazards, and traffic. The width of the pedestrian accommodation shall match the existing sidewalk and shall provide universal access.

3.3 MATERIALS AND EQUIPMENT

- .1 The Contractor shall be responsible for the supply, safe storage, and handling of all materials and equipment set forth in this Specification.
- .2 All materials shall be handled and stored in a careful and workmanlike manner, to the satisfaction of the Consultant.
- .3 All traffic control devices (signage, channelization devices, barricades), portable temporary traffic signals, and flag persons shall be in accordance with the OTM Book 7, and as specified herein.

3.4 CONSTRUCTION METHODS

- .1 General
 - a. The Contractor shall supply and install traffic control devices and portable temporary traffic signals and have them ready for putting into operation before the work affecting vehicle and pedestrian traffic begins. The Contractor shall coordinate and undertake the installation and operation of all required traffic control devices, portable temporary traffic signals, and temporary concrete barriers. Traffic control signs shall be temporarily covered or laid down until such time as needed to be visible for the work affecting traffic.
 - b. Prior to setting up and after removing the traffic control installation for single-lane two-way traffic operation, both lanes of traffic must remain open at all times with the exception of temporary single lane closures as may be required by the Contractor for purposes such as loading/unloading.
 - c. The Contractor shall be required to arrange, coordinate, and pay for public notification via local radio stations of approved single lane closures and for advance lane closure.
- .2 Maintenance
 - a. The Contractor shall be responsible for the maintenance of all traffic control devices and portable temporary traffic signals for the entire duration of the work so as to ensure the traffic control devices and portable temporary traffic signals are functioning as required to provide for safe traffic operation throughout the worksite at all times. The



Contractor shall regularly inspect the traffic control devices and portable temporary traffic signals to ensure proper and safe conditions and shall designate personnel to undertake such inspections and implement corrective measures as required. Such regular inspection shall be undertaken at all times during the course of the work including times when work is being undertaken at the site as well as during times when the work is temporarily shut down such as off-work hours, weekends and holidays.

- b. The Contractor shall supply and install all signage and utilize flag persons as required in accordance with OTM Book 7. The Contractor shall submit and confirm the actual on-site sign locations with the Consultant prior to proceeding with installation.

3.5 MEASUREMENT AND PAYMENT

- .1 Refer to Section 5 Measurement and Payment

END OF SECTION



SECTION 4 STEEL REPAIR AND PROTECTIVE COATING

4.1 DESCRIPTION

- .1 This Specification shall cover the repair of select structural steel elements, the removal for the original coating system, cleaning, and preparation and installation of the new corrosion protection for the new and existing steel.
- .2 The work to be done under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.
- .3 The work shall also include required platforms and containment to allow easy and safe access and collection of waste materials as well as requires surface preparation, necessary testing, quality reviews and pull tests of the installed coating as required to satisfy the requirements as noted within this specification.

4.2 SCOPE

- .1 The work under this specification shall generally involve:
 - a. Mobilization/Demobilization;
 - b. Provision for all traffic control as required for all stages of the work;
 - c. Site preparation and layout;
 - d. Site safety and security;
 - e. Site survey and measurements;
 - f. All required submissions as noted in clause 8.3;
 - g. Design, fabrication, supply, install and perform daily inspections and maintenance of a work platform/access system, construction staging, and erection of temporary works and temporary containment enclosures.
 - h. Removal of bird droppings, nests and debris cleaning.
 - i. Cleaning, abrasive blasting and surface preparation for coating applications.
 - j. Detailing, fabrication, supply and installation of steel repairs and replacements.
 - k. Testing and disposal of removed materials and waste products.
 - l. Supply and application of protective coating.
 - m. Protection of existing structures during construction.
 - n. Provision for all repairs for incidental damages to the coating and steel elements.
 - o. Temporary relocation and reinstatement of electrical cables, conduits, cable trays and other utilities and services to permit the Work and reinstate after completion of the Work.



- p. Temporary removals and reinstallation of structural components as indicated in the Drawings.
- q. Site safety, fall protection, and prevention of any objects from falling from the bridge.
- r. Maintenance of secure perimeters throughout the work.
- s. Environmental protections.
- t. Temporary relocation of stored material and equipment, where it hinders the work, and reinstatement at end of the Work in original condition or better.
- u. Close coordination and communication with the Consultant.
- v. Making good all defects, including damage to existing facilities.
- w. Clean up and reinstatement.

4.3 CONSTRUCTION SEQUENCE

- .1 Construction sequence shall satisfy the requirements of the Contract documents. The containment size for each phase shall be determined by the contractor based on the allowable loads placed on the structure pre-steel repair and post-steel repair. The containment size per phase maybe limited based on the contractor's means and methods to meet any load restrictions as listed in the plans.
- .2 Construction sequence for work at the Keewatin Channel Bridge shall occur in the following order:
 - a. Field verification and design of repairs and access/containment systems;
 - b. Installation of access system and containment tarps
 - c. Cleaning by pressure washing and removal of existing coatings by blasting
 - d. Prime coat of existing blasted steel area
 - e. Identify repair locations and repair structure steel members.
 - f. Steel inspection for possible additional repairs, identification by the Consultant;
 - g. Final, surface preparation and new coating application; stripe coats, intermediate, caulking and finish coats
 - h. Final cleaning and coating touch-up.
 - i. Removal of access system and containment tarps and demobilization.

4.4 CODE AND STANDARDS

- .1 The work shall be done in compliance with the most current edition of the following references:
- .2 Canadian Standards Association
 - a. CAN/CGSB-48.9712, Qualification and Certification of NDT Personnel.



- b. Canadian Highway Bridge Design Code CAN/CSA S6:19.
 - c. CAN/CSA S269.1-1975 False work for Construction Purposes
 - d. CAN/CSA S350-M1980, Code of Practice for Safety in Demolition of Structures
 - e. CAN/CSA S6, Annex A10.1, Construction requirements for structural steel.
 - f. CAN/CSA-W59, Welded Steel Construction (Metal Arc Welding).
 - g. CAN/CSA-S269.2-M87 Access Scaffolding for Construction Purposes
 - h. CAN/CSA-W48.1-M, Filler Metal and Allied Materials for Metal Arc Welding.
 - i. CSA-W178.2, Certification of Welding Inspectors.
 - j. CSA-W47.1, Certification of Companies for Fusion of Welding of Steel.
 - k. CAN/CSA-Z321- Signs and Symbols for the Workplace
 - l. G40.20-13/G40.21.-13, General Requirements for Rolled or Welded Structural Quality Steel / Structural Quality Steel.
- .3 Environmental, Health and Safety, Guides, Acts and Standards
- a. Government of Ontario
 - i. Ontario Regulation 347/90 of the Revised Regulations of Ontario, amended to Ontario Regulation 461/05 and 217/08, General – Waste Management (R.R.O., 1990, Reg. 347), under the Environmental Protection Act (EPA)
 - ii. Occupational Health and Safety Act, R.S.O. 1990, c. O.1
 - iii. Ontario Regulation 490/09 Designated Substances, under the Occupational Health and Safety Act (OHSA)
 - iv. O. Reg. 89/20: TRAFFIC MANAGEMENT, under the Emergency Management and Civil Protection Act, R.S.O. 1990, c. E.9
 - v. Dangerous Goods Transportation Act, R.S.O. 1990, c. D.1
 - vi. Guideline: Lead on Construction Projects, issued by the Ministry of Labor, Immigration, Training and Skills Development of Ontario (MLITSD), April 2011
 - b. Environmental Abatement Council of Canada (EACC):
 - i. Guideline: Lead Guideline for Construction, Renovation, Maintenance or Repair, January 2025
 - ii. Guideline: Mould Abatement Guidelines, Edition 3, 2015
 - c. Department of Justice Canada (Jus):
 - i. Transportation of Dangerous Goods Act, 1992 (TDG Act) 1992, (c. 34).
 - ii. Transportation of Dangerous Goods Regulations (T-19.01-SOR/2001-286).
- .4 ASTM International



- a. ASTM A123/123M Standard Specification for Zinc (Hot Dip Galvanized) Coatings on Iron and Steel.
 - b. ASTM A153/153M Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
 - c. ASTM A563 Standard Specification for Carbon and Alloy Steel Nuts
 - d. ASTM D4138, Standard Test Method for Measurement of Dry Paint Thickness of Protective Coating Systems by Destructive Means.
 - e. ASTM D4285, Standard Test Method for Indicating Oil or Water in Compressed Air.
 - f. ASTM D4414, Standard Practice for Measurement of Wet Film Thickness by Notch Gages.
 - g. ASTM D4417, Standard Test Methods for Field Measurement of Surface Profile of Blast Cleaned Steel.
 - h. ASTM D7091, Non-destructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to Ferrous Metals and Nonmagnetic, Nonconductive Coatings Applied to Non-Ferrous Metals
 - i. ASTM F3125/F3125M Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength
 - j. ASTM F436 Standard Specification for Hardened Steel Washers
- .5 SSPC The Society for Protective Coatings
- a. SSPC-AB 1 Mineral and Slag Abrasives
 - b. SSPC-AB 2 Cleanliness of Recycled Ferrous Metallic Abrasives;
 - c. SSPC-AB 3 Ferrous Metallic Abrasives
 - d. SSPC Guide 6, Guide for Containing Surface Preparation Debris Generated During Paint Removal Operations.
 - e. SSPC Guide 7, Guide for the Disposal of Lead Contaminated Surface Preparation Debris
 - f. SSPC-Guide 12, Guide for Illumination of Industrial Painting Projects;
 - g. SSPC-Guide 15, Field Methods for Extraction and Analysis of Soluble Salts on Steel and Other Nonporous Substrates;
 - h. SSPC-AB 1 Mineral and Slag Abrasives
 - i. SSPC-AB 2 Cleanliness of Recycled Ferrous Metallic Abrasives;
 - j. SSPC-AB 3 Ferrous Metallic Abrasives
 - k. SSPC-PA2 Procedure for Determining Conformance to Dry Coating Thickness Requirements



- l. SSPC-PA 17, Procedure for Determining Conformance to Steel Profile/Surface Roughness/Peak Count Requirements
 - m. SSPC-SP 1 Solvent Cleaning;
 - n. SSPC-SP 2 Hand Tool Cleaning;
 - o. SSPC-SP 3 Power Tool Cleaning;
 - p. SSPC-SP 10 Near-White Blast Cleaning;
 - q. SSPC-SP 11 Power Tool Cleaning to Bare Metal;
 - r. SSPC-SP WJ-4, Waterjet Cleaning of Metals – Light Cleaning;
 - s. SSPC-SP16 Brush Off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steels and Non-Ferrous Metals;
 - t. SSPC-Technology Update No. 7 Conducting Ambient, Air, Soil and Water Sampling of Surface Preparation and Paint Disturbance Activities.
 - u. SSPC VIS 1 Guide and Reference Photographs for Steel Surfaces Prepared by Dry Abrasive Blasting;
 - v. SSPC VIS 3 Guide and Reference Photographs for Steel Surfaces Prepared by Power and Hand Tools.
- .6 OPSS Ontario Provincial Standard Specifications
- a. OPSS.MUNI 182 Environmental Protection for Construction in Waterbodies and on Waterbody Banks
 - b. OPSS.MUNI 706 Temporary Traffic Control Devices
 - c. OPSS.MUNI 708 Portable Temporary Traffic Signals
 - d. OPSS.MUNI 741 Temporary Concrete Barriers
 - e. OPSS.MUNI 805 Temporary Erosion and Sediment Control Measures
 - f. OPSS.MUNI 906 Structural Steel for Bridges
 - g. OPSS.MUNI 911 Construction Specification for Coating Structural Steel Systems
 - h. OPSS.MUNI 1441 Load Transfer Assemblies
 - i. OPSS.MUNI 1704 Paint Coating Systems for Structural Steel

4.5 SUBMITTALS

- .1 The Contractor shall provide shop drawings and submittals per Section 4.5.1 Shop Drawings 10 working days prior to the beginning of construction.
- .2 The Contractor shall prepare and submit a list of Shop drawings and include all elements required to perform the safe removal and application of the structural repairs and painting system. The list shall include critical path items and proposed delivery dates for each item. The list shall be updated regularly and shall be submitted to the Consultant on a timely basis. Shop Drawings should be submitted a minimum of 14 days ahead of the Work. The



following partial Shop Drawings list noted below but not limited to shall be forwarded to the Consultant for review;

- a. Traffic and pedestrian control.
 - b. Scaffolding, access and platform shop drawings for phase 1, 2 and 3.
 - c. Structural steel mill tests.
 - d. Detailing and installation procedures for steel repairs.
 - e. Material/technical data sheets.
 - f. Cleaning, blasting and surface preparation for coatings application procedure.
 - g. Coating installation procedure.
 - h. Coating application and Quality Control results.
 - i. Coating pull testing procedures and results.
 - j. Waste material test results and disposal requirements.
 - k. Site safety and fall protection systems
- .3 Work affected by the submittal or technical data sheet shall not proceed prior to the review by the Consultant. The contractor shall review by accompanied by the a signed review stamp for all submittal prior to sending them to the Consultant. The Contractors review represents the necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with the requirements of the Work and the Contract Documents.
- .4 Submittals that have engineering content shall be stamped by a professional engineer registered in the province of Ontario, signed, dated and identified as to the specific project. Submittals with engineering content that are not stamped, signed, dates and properly identified will be returned without being reviewed and shall be considered rejected.
- .5 The contractor shall verify all site measurements and coordinate with others for any affected adjacent work.
- .6 The Contractor's responsibility for errors and omissions is not relieved by the review of the Consultant.
- .7 The Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by the Consultant's review of the submittals.
- .8 The Contractor shall keep one reviewed and current copy of each submission on the construction site.
- .9 The Contractor shall not construe the Consultant's review of the Contractor submittals to imply approval of any particular method or sequence for:
- a. Conducting the work;
 - b. Addressing health issues;
 - c. Addressing environmental issues; or
 - d. Addressing safety issues.



- .10 Review of the submission does not relieve the Contractor from the responsibility to conduct the Work in strict accordance with the standard requirements, or to adequately protect the health and safety of all workers involved in the project including any members of the public who may be affected by the project. The Contractor remains solely responsible for the adequacy and completeness of the procedure, means, method and work practices, and adherence to them. Submittals shall include, but not be limited to, the following:
- a. Project Shop Drawings to comply with Section 4.5.1;
 - b. Materials samples to comply with Section 4.5.2;
 - c. Project Specific Detailed Safety Plan to comply with Section 4.5.3
 - d. Quality Control Plan to comply with the requirements of Section 4.5.4;
 - e. Work plan to comply with Section 4.5.5;
 - f. Access and Containment Plan to comply with Section 4.5.6;
 - g. Emergency Containment Demobilization Plan to comply with Section 4.5.7
 - h. Lead Health and Safety Compliance Plan to comply with Section 4.5.8;
 - i. Environmental Protection Plan to comply with Section .1.

4.5.1 Shop Drawings

- .1 The Contractor shall submit Shop drawings with shop and erection details.
- .2 Shop drawings that have engineering content shall be signed and stamped by the Contractor's Professional Engineer registered to practice in the Province of Ontario.
- .3 All temporary works and all work methods for temporary supports, utility supports and maintaining stability during demolition and restoration, bearing design and drawings shall be designed by the Contractor's Professional Engineer registered to practice in the Province of Ontario who shall affix his seal to all designs and work methods.
- .4 The design of all works and work methods shall be submitted to the Consultant for review a minimum of fourteen (14) days prior to commencement of the Work. Such review shall not relieve the Contractor of any responsibility of liability in execution of the Work. The Contractor shall comply with any requirements of the Consultant following its review of the Contractor's intended temporary work and work methods.

4.5.2 Material Samples

- .1 The Contractor shall submit samples in triplicate or as requested in respective specification sections for the Consultant review. Label samples as to origin and intended use in the Work.
- .2 Colour and application samples for all primer and topcoats and stripe coats shall be provided prior to beginning of coating removals on-site. Samples for all coating stages shall be applied to a single 6 mm thick steel plate as in the field, with consecutive coating stages exposed; refer to Table 1 below. Each exposed sample zone shall be minimum 75 mm x 100 mm. The following demonstrates the various layers (zones) of a typical 2-coat coating system, applied to a plate 100 mm x 530 mm x 6 mm.



Table 1 - Coating sample zone description

Sample Zone					
	1	2	3	4	5
Steel	Top	Y	Y	Y	Y
Primer Stripe		Top	Y	Y	Y
Primer Spray			Top	Y	Y
Topcoat Stripe				Top	Y
Topcoat Spray					Top

- .3 Materials samples for all types of coating products applied during the course of the project (primer, topcoats and stripe coats, galvanizing touch-ups, etc.) shall be supplied to the Consultant after demobilization from site. Material samples shall be supplied in 1-gallon (minimum) kits, unopened and unmixed, as delivered from the coating manufacturer. Each container shall be physically marked with product name, batch number, and expiry date, as well as project name (T2024-G –). Samples shall be accompanied by copies of product data sheets (PDS), safety data sheets (SDS) and manufacturer's quality certification for the specific batches provided. Expiry date of samples shall be minimum 12 months from date of delivery to the Consultant.
- .4 The Contractor shall deliver samples prepaid to the Consultant's business address.
- .5 The Contractor shall notify the Consultant in writing, at the time of submission of deviations in samples from requirements of Contract Documents.
- .6 Adjustments made on samples by the Consultant are not intended to change the Contract Price. If adjustments affect the value of Work, the Contractor shall state such in writing to the Consultant and obtain the Consultant's approval of the additional cost prior to proceeding with the Work.
- .7 Any substitutions proposed by the Contractor shall be submitted in writing to the Consultant for review and decision
- .8 The Contractor shall submit supporting technical data showing comparative data for the substitution. The acceptance of any substitutions shall not relieve the Contractor from any responsibility under the Contract.

4.5.3 Safety

- .1 The Contractor shall take all precautions necessary for working on, above and around facilities being used by traffic and pedestrians/personnel.
- .2 The Contractor shall take every precaution that is reasonable in the circumstances to ensure the health and safety of persons at or near the Project.
- .3 The Contractor shall observe and enforce construction safety measures required by all Applicable Laws, including Federal and Provincial Acts, latest edition of National Building Code, municipal statutes and authorities and all applicable regulations and by-laws. In the event of conflict between any provisions of the above authorities, the most stringent provision shall govern.
- .4 The Contractor shall be familiar with the Internal Responsibility System which is the foundation of the Occupational Health and Safety Act.



-
- .5 The Contractor shall be responsible for safety and for compliance with all applicable health and safety acts and regulations. The Contractor shall be the "constructor" and the Consultant will be the "Owner" as defined by the Occupational Health and Safety Act.
 - .6 The Contractor shall indemnify and hold harmless the Consultant with respect to the Contractor's failure to comply with Applicable Laws, including Federal, Provincial, and Municipal Acts, Codes, By-Laws, Regulations, etc. including the Ontario Occupational Health and Safety Act and Regulations, that pertain to all portions of the Work.
 - .7 The Contractor shall pay all regulatory authorities' fines/charges against the Contractor, and/or the Consultant resulting from the Contractor's failure to comply fully with .1Section 1.2.1.
 - .8 The Contractor shall provide the Consultant with any warnings or compliance orders issued by the Department of Labour within 24 hours of receipt.
 - .9 The Contractor shall maintain first aid materials and trained first aiders at the Worksite and have a working phone turned on at all times during the course of Work.
 - .10 The Contractor shall conduct a hazard assessment, prepare a health and safety plan and provide copies to the Consultant at least 14 days prior to starting work. The Bridge is a high volume facility and all of the Contractor's plans must contemplate this and protection of the public. The Contractor shall make its own assessment of all of the factors/considerations.
 - .11 The Contractor shall prepare and submit a health and safety Plan to the Consultant for Review. The Contractor's health and safety Plan shall address the following as a minimum:
 - .12 System assessments:
 - a. Hazard assessment process;
 - b. Job task analysis;
 - c. Job safety analysis;
 - d. Risk assessment progress;
 - e. Control measures; and
 - f. Permits and special procedures.
 - .13 Management and communication:
 - a. Management procedures;
 - b. Orientation process;
 - c. Safety meetings; and
 - d. Joint occupation health and safety committee.
 - .14 Validation monitoring:
 - a. Observation process;
 - b. Observer qualifications;
 - c. Audit process; and



-
- d. Enforcement.
 - .15 Supporting programs:
 - a. Training programs; and
 - b. Trainer qualifications.
 - .16 Documentation control:
 - a. Availability of documents. e.g. toolbox meeting records, orientations and inspection reports.
 - .17 Incident investigation:
 - a. Mitigation implementation; and
 - b. Lessons learned.
 - .18 Policies:
 - a. Alignment with and exceed legislation and regulations.
 - .19 Emergency preparedness.
 - a. Emergency response
 - b. Rescue contingencies
 - c. Rescue procedures
 - d. Rescue plan
 - .20 The Contractor shall receive an orientation provided by the Consultant prior to starting work at the Worksite. The Contractor shall deliver an orientation to any subcontractor employed by the Contractor and records of such shall be provided to the Consultant
 - .21 The Contractor shall provide workers who are “competent” as defined by the Occupational Health & Safety (OH&S) Act, experienced and capable in the work to be undertaken. The Contractor shall provide evidence of OH&S training for each worker.
 - .22 All of the Contractor's Personnel shall wear personal protective equipment (hard hats, steel toe boots, hearing protection, safety glasses as dictated by the work), safety harness / lanyards and high visibility (yellow) safety vests. The Contractor shall take all precautions necessary for working on and below a Bridge open to vehicular traffic, adjacent traffic and adjacent or over railways and waterways.
 - .23 The Contractor shall acknowledge in writing that the Contractor has read and understands the Safety Policies and Procedures, Contractor Handbook of the Owner and that as a part of the obligations under this Agreement, the Contractor will abide by and respect all standards set out by the Owner's Policies and Procedures.
 - .24 The Contractor shall provide the Consultant with a copy of its current Health and Safety (H&S) policy signed by senior management, and its OH&S procedures.
 - .25 The Contractor shall supply and maintain SDS at each Worksite for all controlled substances.



- .26 When working on property used by any other private or public entity, the Contractor shall ensure that all equipment, materials, tools and personal gear are tethered to a structure or to a person, such that nothing can fall onto property or person at any time, including when it is being used or when it is being raised or lowered over traffic or people.
- .27 Contractor's Personnel shall comply with the health and safety requirements outlined in the Owner's Health & Safety policy.

4.5.4 Quality Control Plan

- .1 The Contractor shall develop detailed Quality Control Plans (QCP) for steel work and coating work (separately), and submit to the Consultant for Review. The Contractor shall not commence production work until the applicable QCPs have been accepted by the Consultant. QCP shall include all aspects of the quality activities to be conducted by the Contractor. The QCP shall clearly define:
 - a. The quality and standard operating procedures that will be followed during the execution of all project tasks;
 - b. The roles, responsibilities and qualifications of the personnel conducting the Contractors Quality Control (QC) activities;
 - c. Details in the inspection report which will be completed daily to document compliance with all technical requirements of the Specification;
 - d. Attach a sample Inspection Report;
 - e. How daily Quality Control Reports will be turned in to the Consultant every day;
 - f. Detail the Contractor's Non-Conformance process which will be used to identify and detail Non-Conformances. This section shall also detail how Non-Conformances will be reported to the Consultant, and addressed by the Contractor in a timely manner;
 - g. Attach a sample Non-Conformance Report;
 - h. Detail how Non-Conformances identified by the Consultant's QA team will be processed by the Contractor's quality process;
- .2 The Contractor shall acknowledge that daily Quality Control Reports will be submitted to the Consultant every day.
- .3 Detail the inspection and Testing Plan, which shall include:
 - a. The inspections that will be conducted;
 - b. Instrumentation used;
 - c. Test frequency;
 - d. The individual industry standard or specification that is applicable to the task being conducted;
 - e. The Consultant, Contractor and Coating Manufacturer's inspection hold points
- .4 The following minimum coating Quality Control inspections are required each day as applicable and will be included in the Inspection and Testing Plan (ITP):



-
- a. Grinding of sharp edges;
 - b. Solvent cleaning;
 - c. Proper accessibility and lighting to perform the work;
 - d. Removal of pack rust;
 - e. Ambient conditions for surface preparation;
 - f. Compressed air cleanliness;
 - g. Abrasive blast cleanliness and profile (Note: prior to production cleaning,
 - h. test areas must be performed to accept the degree of cleaning);
 - i. Remediation of chloride;
 - j. Confirmation of degree of cleaning, including removal of dust, prior to painting;
 - k. Ambient conditions for painting;
 - l. Verification of coating products type, Lot #, and expiry dates;
 - m. Mixing and thinning;
 - n. Application of each coat (wet film thickness, dry film thickness, coverage, continuity, and freedom from defects);
 - o. Dry time and cleanliness between coats;
 - p. Touch up of damage and areas shielded by the containment;
 - q. Proper installation of caulking where required;
 - r. Final drying prior to exposure to the elements;
 - s. Provide detailed daily reports.
- .5 The Contractor shall clearly define hold points for QA inspections and acceptance within the construction sequence.
- .6 The Contractor shall allow adequate time for QA inspections and acceptance built in construction sequence and schedule.
- .7 Submit Qualifications of the Painting Contractor/Subcontractor including experience, training and certifications for key personnel who are to be assigned to this scope of work. Qualifications for all personnel conducting work on the project at both the shop and/or site locations shall be provided to the Consultant QA representative onsite. The painting contractor shall demonstrate their experience through the following:
- a. Current certifications for the painting contractor through SSPC-The Society for Protective Coatings (QP-1, QP-2, QP-3) or AISC Sophisticated Paint Endorsement (SPE) for fabrication shops that paint. As an alternative to the AISC SPE or QP-3 certification, the fabrication shop may contract with a certified QP-1 contractor to perform the painting.
 - b. Training and Certifications for Quality Control personnel including NACE CIP, SSPC PCI and SSPC BCI.



- c. Training, Education, Certifications for Environmental, Health and Safety Personnel
 - d. Training certificates and experience of trade workers gained through organizations such as The International Union of Painters and Allied Trades (IUPAT), SSPC or others.
 - e. Contractors that do not possess the SSPC or AISC certifications must have (and must demonstrate) recent and relevant painting experience involving quality planning and control documentation demonstrating that the painting contractor performs painting work in accordance with detailed written quality control plans and procedures.
 - f. Recent field work is a minimum of 2 bridge projects spanning water in the last 5 years, each of a minimum duration of 6 months. The projects shall involve abrasive blast cleaning removal of lead paint within a ventilated containment, including all required monitoring to assure the protection of the workers and the environment, the proper handling and disposal of lead waste, and the application of a multi-coat system with a zinc primer. The project duration, contract value, and contact information for Owner representatives shall be provided.
 - g. Recent shop painting is a minimum of 2 bridge projects with a minimum of 50 tons of steel each in the last 5 years, blast cleaned and painted with a multi-coat system including a zinc primer. The project duration, contract value, and contact information for Owner representatives shall be provided.
 - h. Copies of the quality manual for cleaning, painting, and inspection shall be provided together with all forms used to document the quality of the work, and procedures for the correction of non-conforming work. The manual shall include an organization chart and the responsibilities of key personnel.
 - i. Training and Certifications for Quality Control personnel including NACE CIP, SSPC PCI and SSPC BCI.
 - j. Training, Education, Certifications for Environmental, Health and Safety Personnel
 - k. Training certificates and experience of trade workers gained through organizations such as the International Union of Painters and Allied Trades (IUPAT), SSPC or others."
- .8 Submit materials certifications and documentation for coatings, abrasives, caulk, structural steel and weld material. Certifications, samples and documentation shall be submitted to the Consultant for Review prior to delivery of materials to site. Submission shall include:
- a. Product Data Sheets for the approved paint system.
 - b. All published testing information, historical data, product data sheets, and application instructions. Include the Class A and Class B Certification for the primer.
 - c. Material characteristics of the approved paint system as submitted to NTPEP for testing and approved by NEPCOAT, together with the paint manufacturer's written certification that the paint system complies with the paint system requirements specified in this specification.
 - d. Note: the manufacturer must also provide a letter with each batch of material supplied to the project that certifies that the material is the same composition as the material supplied for NTPEP testing.
 - e. Paint manufacturer's letter verifying compliance with VOC requirements.



- f. Product data sheets for the caulking material. The Contractor shall provide a letter from the paint manufacturer and the caulk manufacturer stating that the caulking is compatible with the approved paint system, and will perform properly when used between the prime and finish, or on top of the finish, with a stripe coat of finish applied over it.
- g. Mill certifications and traceability information for structural steel.
- h. Supplemental steel test data (as applicable).
- i. Applicable CWB approved weld procedures.

4.5.5 Work Plan

- .1 The Contractor shall develop a detailed work plan to be submitted to the Consultant.
- .2 The Contractor shall submit the Work Plan to the Consultant for review minimum 14 days in advance of proposed use to allow for its review, comment, and revision if required, without delay to the Work.
- .3 Work Plan shall include but not be limited to:
 - a. Proposed procedures for surface preparation (including the proposed method for chloride remediation) and proposed coating application procedures and stripe coating;
 - b. Proposed procedures for steel repair;
 - c. Provisions for overspray and blasting protection;
 - d. Hoisting plan for lifting of equipment and materials
 - e. Safety signage during blast cleaning, painting, steel repair and roadway closures;
 - f. Protection against and remediation for spills; etc.

4.5.6 Access and Containment Plan

- .1 Submit an Access and Containment Plan for temporary structures and access system with working drawings, design calculations, weights of stored materials, weights and operational data of the proposed construction equipment to be supported on existing and temporary structures (Temporary Works) including the containment enclosure and supporting data in sufficient detail to permit a structural review of the Contractor's proposed design of temporary work/Scaffolding/Staging. All calculations and drawings prepared by the Contractor shall be designed by a Professional Engineer experienced in the type of access containment systems proposed in the plan, who shall affix his seal to all designs and work methods.
- .2 The Access and Containment Plan shall be submitted sufficiently in advance (minimum 21 days in advance) of proposed use to allow for its review, comment, and revision if required, without delay to the Work.
- .3 The Submittal shall detail the proposed containment enclosure and include the following information:
 - a. Plan and elevation of the containment enclosure in relation to the bridge structure. The type of solid or rigid floor and working platform with appropriate safety and fall



- protection measures. A description of the method that will be used to provide worker access to the enclosure (personnel lifts, scaffolds, staircase etc.), and the procedures and equipment that will be used to protect workers from falls shall be specified in conformance to Ontario Occupational Health and Safety Requirements. A description of the method how the debris will be collected and off-loaded, and a description of how the drainage run-off from existing deck drains and expansion joints will be routed through the enclosure.
- b. Containment shall be watertight, to eliminate leakage and water ingress, including at underside of roadway expansion joint.
 - c. Access to all levels of containment for full duration of the project shall be possible without entering any contaminated areas. This is typically accomplished through staircase outside primary containment.
 - d. Provision to be made for access along catwalks through the containment shall be provided. Access through containment, along catwalks, will be used in coordination with the Contractor, and following the Contractor's procedures.
 - e. Plan to manage water coming off bridge structure through deck drains and through expansion joint is required.
 - f. The type of rigid or flexible support structure used for the floor, walls, and ceiling, including the method by which the containment enclosure materials are to be affixed to the support structure and how the support structure is to be affixed to the bridge. Welded connections and drilling holes on the permanent bridge elements will not be acceptable.
 - g. Drawings of the cleaning and recovery system.
 - h. Drawings of the protection system for the areas adjacent to and underneath the structure.
 - i. Location of temporary waste storage site, waste disposal site and waste transporter information.
 - j. A design analysis of the loads on the bridge due to the containment enclosure is required.
 - k. Lighting inside containment for cleaning, painting, and inspection shall be per SSPC Guide 12.
- .4 The containment system shall be in accordance with SSPC Technology Guide No. 6, Guide for Containing Surface Preparation Debris Generated During Paint Removal Operations, Class 1A, Assessment Method A, Level 2, plus Assessment Methods B, C, D, E & F. The containment system shall fully enclose the steel to be painted and not allow any material to escape the containment system. Contractor shall protect the surrounding environment from all debris or damage resulting from the Contractor's operations.
- .5 Contractor shall design the containment support system based on the capacity of the structure, area of containment, safety of construction crew and equipment, and wind speed/gust threshold specified in the next provision. The containment system shall not cause any damage to the existing structure. Attachment devices shall not mark or otherwise damage the steel member to which they are attached. Field-welding of attachments to the existing structure will not be allowed. Contractor shall not drill holes into the existing structure or through existing structural members unless otherwise authorized by the Engineer.



- .6 Emissions shall be assessed by Visible Emission Observations (Method A) Level 2, plus assessment methods C, D, E & F shall meet all requirements of SSPC Guide 6, current edition at the time of award of contract. If visible emissions occur or if failure to the containment system occurs or if signs of failure to the containment system are present, Contractor shall stop work immediately. Work shall not resume until the failure has been corrected to the satisfaction of the Engineer.
- .7 Contractor will provide ground covers beneath the containment area and all equipment where spills are possible to capture inadvertent spills or leaks of debris. Extend the covers a minimum of 1.5 m beyond the area to be covered. Debris shall be removed from the covers at least once per shift, or as directed by the Engineer. If the ground beneath the structure serves as the base of the containment, install and maintain air and dust impenetrable materials such as solid plywood panels or flexible materials such as tarpaulins.
- .8 The containment system shall not be removed until all cleaned and painted surface have been inspected and accepted by the Engineer.
- .9 Prior to beginning work each day, all containment systems shall be inspected by the Contractor to verify they are in place and functioning properly. Any necessary maintenance to restore full function shall be completed prior to beginning work.
- .10 Design analysis shall include: maximum dead and live loads of the enclosure, the workers, blast abrasive, and equipment; maximum allowable load for the floor and working platform; wind loads imposed on the structure by the enclosure; and, maximum wind velocity that the containment enclosure is designed to withstand. The Contractor shall not start the construction of any temporary work, for which working drawings are required, until the working drawings have been reviewed by the Consultant and all comments have been addressed to Consultant's full satisfaction. Such review will not relieve the Contractor of responsibility for results obtained by implementing the Work Plan, or any other responsibilities under this Contract.
- .11 Drawings submitted for review shall include details necessary for the Consultant's review including: factored and unfactored horizontal loads on the bridge, wind speed limits shall be clearly shown on the drawings including maximum mean hourly wind speed and maximum 3-second gust wind speed. Drawings submitted for review shall be signed and sealed by the Contractor's Professional engineer, registered to practice in the Province of Ontario.
- .12 Containment and access design, load restriction and containment design criteria shall meet all requirements of the project plans and containment notes.

4.5.7 Emergency Containment Demobilization Plan

- .1 The Contractor shall submit an Emergency Demobilization Containment Plan to the Consultant for review.
- .2 The Emergency Demobilization Containment Plan shall:
 - a. Demonstrate the Contractor's ability to remove containment in the event of an extreme weather event or other emergency;
 - b. Clearly define thresholds (wind speed, fire, etc.) which require emergency demobilization; and



- c. Define the process that the Contractor will follow to initiate and carry out emergency demobilization.
- .3 When wind events are forecast to exceed 100km/hr, or thresholds identified in Project plans, the Contractor shall:
 - a. Notify the Consultant in writing, minimum 12 hours in advance of forecast wind event;
 - b. Implement (or continue, as appropriate) Emergency Containment demobilization plan;
 - c. Notify the Consultant in writing when containment demobilization is complete; and
 - d. Notify the Consultant in writing, or any damage to the containment and structure within 12 hours of completion of wind event, and Contractor's planned date to resume regular operations.

4.5.8 Lead (Toxic Metal) Health and Safety Compliance Program

- .1 The requirements identified below are based on the guidance provided in the following:
 - a. Guideline: Lead on Construction Projects, issued by the Ministry of Labor, Immigration, Training and Skills Development of Ontario (MLITSD), April 2011
 - b. EACC Guideline: Lead Guideline for Construction, Renovation, Maintenance or Repair, January 2025
 - c. EACC Guideline: Mould Abatement Guidelines, Edition 3, 2015
- .2 The Contractor must protect the employees from exposure to any of the other toxic metals or other hazards which may be present on surfaces, in the paint and/or abrasive, as applicable, in addition to lead. Submit the following information addressing worker health and safety from exposure to lead, other toxic metals and biological contaminants (e.g. bird droppings):
 - a. Exposure Control Plan and Site-Specific Safe Work Practices.
 - i. The Contractor shall have a Certified Industrial Hygienist (CIH) certified by the American Board of Industrial Hygiene, or Registered Occupational Hygienist (ROH) certified by the Canadian Registration Board of Occupational Hygienists develop, review, and approve their site specific written exposure control plan (ECP) and safe work practices (SWPs) to address actions that will disturb coatings containing lead and/or bird droppings and other biological wastes. The plan must include the following:
 - 1. The CIH/ROH, or a technician working under the direction of the CIH/ROH, shall be present during the first three days of work and at least twice a month thereafter.
 - 2. The CIH/ROH shall certify in writing during the first week of work and at the end of the work that the ECP/SWPs fully complied with all regulations and that the plans were fully implemented.
 - 3. Daily inspections of the work area shall be made by the project "competent person". The Contractor shall have identified the "competent person" by name in both the CIH/ROH's written ECP and the Access and Containment Plan. The ECP shall also include the



"competent person's" qualifications and the frequency of inspections to be taken.

- .3 The Contractor shall provide respiratory protection and protective clothing and other necessary equipment for up to 2 Owner representatives at the site.

4.6 ENVIRONMENTAL PROTECTION PLAN (EPP)

- .1 The EPP shall define the Contractor's program and procedures regarding Environmental Protection and provide a comprehensive overview of known or potential environmental issues to be addressed during the Project.
- .2 Minimum 14 days prior to site mobilization, the Contractor shall submit an (EPP), prepared by a qualified person, for Review by Consultant.
- .3 The EPP shall include, but not be limited to:
 - a. Name of person(s) responsible for ensuring adherence to the EPP, i.e., the EM;
 - b. Name and qualifications (education and experience) of EM, including an overview if his/her role ensuring that the qualifications are met at minimum;
 - c. Outline of the Contractor's Environmental Protection briefings and awareness program for employees and Subcontractors;
- .4 The EPP shall include the following Project specific plans:
 - a. Environmental Emergency and Contingency Plan;
 - b. Hazardous Materials Management Plan;
 - c. Reduce, Reuse, Recycling and Waste Disposal Plan;
 - d. Air Emissions Control Plan;
 - e. Marine Environment Protection Plan;
 - f. Land Based Work Plan;
 - g. Wildlife Management Plan;
 - h. Sound Mitigation Plan; and
 - i. Environmental Monitoring Plan.
- .5 The EM shall review the EPP monthly for its appropriateness and shall ensure that all required incident response materials are on site and in adequate supply and that all Project employees, including Subcontractors, are familiar with the requirements of the plan.
- .6 The EM shall review the EPP monthly for its appropriateness and shall ensure that all required incident response materials are on site and in adequate supply and that all Project employees, including Subcontractors, are familiar with the requirements of the plan.

4.6.1 Environmental Emergency and Contingency Plan

- .1 The Contractor shall prepare an Environmental Emergency and Contingency Plan which shall include at a minimum:



- a. A list of reasonably likely environmental emergencies associated with the Project;
- b. Detailed protocols for response to each potential environmental emergency;
- c. A list and contact information for federal, provincial, municipal, the Consultant and the Contractor's environmental emergency first responders; and
- d. The 24-hour Marine Environmental Response Numbers and procedures for reporting an incident.

4.6.2 Hazardous Materials Management Plan

- .1 The Contractor shall prepare a Hazardous Materials Management Plan which shall include, but not be limited to:
 - a. A list of all regulated or hazardous substances associated with the Project;
 - b. A list of provisions for compliance with federal, provincial, and municipal laws and regulations for the storage and handling of those regulated or hazardous substances (i.e. WHMIS Safety Data Sheets);
 - c. Preventive handling procedures, instructions and reports to be used in the event of a spill of regulated or hazardous substances; and
 - d. Quantities of fuel or other hazardous materials likely to be stored on site at any one time.
- .2 No fuel or other hazardous materials are to be stored at Project staging areas.
- .3 Hazardous Materials are to be stored, mixed and transferred on land and not on the Bridge, to the extent practical, to aid in preventing these materials from entering any water course in the event of a spill.
- .4 Regulations and Guidelines that are specific to this section of the EPP are listed below for guidance only; these include but are not limited to:
 - a. 2012 Emergency Response Guidebook, Transport Canada;
 - b. Transportation of Dangerous Goods Act, Transport Canada;
 - c. Ontario Regulation 347/90 of the Revised Regulations of Ontario, amended to Ontario Regulation 461/05 and 217/08, General – Waste Management (R.R.O., 1990, Reg. 347), under the Environmental Protection Act (EPA)
 - d. Dangerous Goods Transportation Act, R.S.O. 1990, c. D.1
 - e. Transportation of Dangerous Goods Regulations (T-19.01-SOR/2001-286).

4.6.3 Reduce, Reuse, Recycling and Waste Disposal Plan

- .1 In accordance with Owner's Environmental Policy, efforts shall be made to divert removed Bridge structure materials from the landfill, when possible.
- .2 Hazardous materials, including lead coatings, shall be handled transported and disposed of in a safe and secure manner.



- .3 Regulations and Guidelines that are specific to this section of the EPP are listed below for guidance only; these include but are not limited to:
 - a. Dangerous Goods Transportation Act, R.S.O. 1990, c. D.1
 - b. Transportation of Dangerous Goods Regulations (T-19.01-SOR/2001-286).
 - c. Canadian Construction Association (CCA), A Guide on Construction Environmental Management Planning, Standard Construction Document CCA 81; and
 - d. CCA, A Best Practices Guide to Solid Waste Reduction, Standard Construction Document CCA 27.
- .4 The Contractor shall prepare a Reduce, Reuse, Recycle and Waste Disposal Plan, in the form of a Waste Audit (See Guide on Construction Environmental Management Planning, Standard Construction Document CCA 81). This plan shall include at a minimum:
 - a. A list of all anticipated Project materials resulting from the removal of the existing Bridge structure;
 - b. Estimated material quantities; and
 - c. Handling options considered and end use or disposal plans for each material type.

4.6.4 Air Emissions Control Plan

- .1 The Contractor shall adopt the Owner's Anti-idling Policy.
- .2 The Contractor shall exercise effective dust control measures at all times. Dust and debris shall be cleaned up daily during the Work, or more often if required by the Consultant.
- .3 Dust control methods shall include spraying surfaces with water or other environmentally approved product. Use purposely suited equipment or machinery and apply in sufficient quantity and frequency to provide effective result and continued dust control during the entire course of the Work. Do not use oil or any petroleum products for dust control.
- .4 The protective coatings on this Bridge structure contain lead. This is considered toxic to workers and the Environment. The Contractor shall implement measures to safely contain and dispose of these and any other deleterious materials generated by his Work. It is the intention of the Consultant that no material be released into the Environment.
- .5 The primary goal of the containment is to stop the escape of deleterious material from protective coating works. Secondly, it enables control of the atmosphere inside the containment, which can be an aid to blasting, coating and curing coatings. The containment typically is the industry standard shrink wrap on scaffolding.

4.6.5 Containment:

- .1 The Contractor shall establish and maintain a regulated area surrounding the work site at the Action Level for lead and other toxic metals in the paint being removed. Post caution signs around each regulated area. Use the legend for the CAUTION sign as found in the EACC Guideline: Lead Guideline for Construction, Renovation, Maintenance or Repair, January 2025 as the basis, and insert the name(s) of the other toxic metals. Signs shall be posted in sufficient numbers to warn of the lead hazard and shall state in large clearly visible letters that, i) there is a lead hazard, and ii) access to the work area is restricted to persons wearing protective clothing.



- .2 Visible emissions from the containment shall be no greater than Level 1 (cumulative duration of no greater than 1% of the work day) per SSPC-Technology Update No. 7. Method PD/Lead A4 of SSPC Publication 95-06 provides guidance on visible emissions assessments.

4.6.6 Air Monitoring Plan

- .1 Compliance with air monitoring as described in the previous sections. Monitoring, including siting shall follow the guidance of SSPC-TU7.
- .2 Sidewalk and Bikeway will remain open to the public during the Work, conduct area air monitoring on the open sidewalk and bikeway deck utilizing low flow sampling pumps for a minimum of two days per week on days that surface preparation activities occur. Locate the monitors on the deck immediately adjacent to the work area. Collect samples throughout the entire work shift using a minimum of two sampling pumps operating at a flow rate of 2.0 litres per minute. Have the laboratory provide results within 72 hours of the field sampling. Provide the test results to the Consultant within five days of sampling.
- .3 If dust or debris escape the containment, stop work and undertake immediate clean up using HEPA filtered vacuuming equipment. Repair the conditions responsible for the escape before resuming the work.
- .4 The collected debris and waste shall be disposed of in a safe and secure manner. Disposal of the debris collected above according to the Province of Ontario and any other such bodies as may have regulatory authority.
- .5 Regulations and Guidelines that are specific to this section of the EPP include but are not limited to:
 - a. Ontario Environmental Protection Act, R.S.O. 1990;
 - b. Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities, Environment Canada, 2005; and
 - c. Occupational Health and Safety Act, R.S.O. 1990, c. O.1
 - d. Guideline: Lead on Construction Projects, issued by the Ministry of Labor, Immigration, Training and Skills Development of Ontario (MLITSD), April 2011
 - e. EACC Guideline: Lead Guideline for Construction, Renovation, Maintenance or Repair, January 2025
- .6 The Contractor shall prepare an Air Emissions Control Plan which shall include but is not limited to:
 - a. Detailed protocols for the management of Project related emissions, dust and particulate matter;
 - b. Detailed protocols for the handling of lead-based paint.
 - c. Engineered containment design drawings.

4.6.7 Marine Environment Protection Planning

- .1 The Contractor shall ensure that equipment required is mechanically sound, having no leaking fuel tanks or hydraulic connections.



- .2 All hydraulic machinery entering the watercourse uses environmentally sensitive hydraulic fluids that are non-toxic to marine life and readily or inherently biodegradable (brands such as Hydrosafe or Environs).
- .3 Storage, refuelling and cleaning of all machinery and fuels shall, where practical, be completed at a minimum, 30 m away from the shore to prevent any deleterious substance from entering the water.
- .4 Regulations and Guidelines that are specific to this section of the EPP are listed below for guidance only; these include but are not limited to:
 - a. Environment Canada, Canadian Environmental Protection Act;
 - b. DFO, Fisheries Act;
 - c. DFO, Interim Code of Practice: Bridge Repair and Maintenance
 - d. Transport Canada, Pollutant Discharge Reporting Regulations 1995;
 - e. Canadian Environmental Quality Guidelines (CCME) Water Quality for the Protection of Aquatic Life; and
- .5 The Contractor shall prepare a Marine Environment Protection Plan which shall include but not be limited to:
 - a. Details of plans to prevent the release of silt, sediment, sediment laden water or any other deleterious substance from the Bridge, including cleaning and removal of debris, bird feces and sediment from the arch; and
 - b. Details of plans to contain and prevent paint particles, blasting abrasives, protective coatings, rust and grease from entering the watercourse.

4.6.8 Land Based Work Planning

- .1 The EM shall be responsible for the monitoring of erosion control devices for their continued effectiveness, maintenance and stability. This may include periodic water quality sampling and analyses for total suspended solids during heavy precipitation if indicated via visual observation by the EM of turbidity in runoff from the site.
- .2 The EM shall halt heavy equipment activity in construction staging areas during excessively heavy precipitation when potential for erosion is unacceptably high. The EM will advise the Contractor's Project Manager if these conditions are occurring.
- .3 If relevant, the EM shall mark clearing and grubbing limits for the Project staging area adjacent to the bridge.
- .4 Land based Work or Access associated with the Project is anticipated to occur in the following staging areas:
 - a. Land belonging to the Owner;
 - b. Land belonging to third-party owners
- .5 Regulations and Guidelines that are specific to this section of the EPP which are listed below are for guidance only; these include but are not limited to:
 - a. Environment Canada, Sections 35 and 36 of the Fisheries Act;



- b. National Guide to Erosion and Sediment Control on Roadway Projects, Transportation Association of Canada (TAC).
- .6 Should there be any earth movement required the Contractor shall prepare a Land Based Work Plan, which shall include but not be limited to:
 - a. Erosion and sediment control plan;
 - b. Pre- and post- construction surveys;
 - c. Approval requirements and processes;
 - d. Restoration plan;
 - e. Monitoring;
 - f. Erosion and sediment control engineered drawings for Project staging areas; and
 - g. Details of plans to control run-off and prevent sediment from leaving the site.

4.6.9 Wildlife Management Planning

- .1 The Contractor, Subcontractors and their respective Personnel shall not harass wildlife, waterfowl, fish or marine mammals. Any contravention of environmental requirements, including employee actions, accidental or otherwise, resulting in environmental damage will not be tolerated.
- .2 Regulations and Guidelines that are specific to this section of the EPP which are listed below are for guidance only; these include but are not limited to:
 - a. Fish and Wildlife Conservation Act;
 - b. Migratory Bird Convention Act;

4.6.10 Sound Mitigation Planning

- .1 The Contractor shall reduce noisy work outside of the agreed upon project working hours.
- .2 The Contractor shall liaise with and co-operate with Consultant in addressing public concerns and complaints related to noise and nuisance and take all necessary measures to resolve noise problems.

4.6.11 Environmental Monitoring Plan

- .1 The EM will conduct visual monitoring to ensure compliance with the EPP requirements, regulatory permit terms and conditions, letters of advice/authorizations and environmental commitments through regular inspection of construction and operation activities. Through general effects monitoring, the EM shall determine if environmental impacts are occurring and if so, are they occurring at predicted levels. Effects monitoring will provide a measure of validity of the predictions and provide a means of assessing and re-evaluating whether or not mitigation has achieved its purpose.
- .2 This structure is in an urban environment and it is suggested that the Contractor consider collection of background level information of possible pre-existing air, water and soil contamination as appropriate prior to commencing Work.



- .3 The EM shall monitor and maintain a record of incidents pertaining to soil or water contamination that may affect any wildlife, migratory birds, and/or fish/marine mammals.
- .4 Monitoring shall be sufficient to ensure that no material is released to the Environment and that levels of Contaminants in the surrounding Environment have not increased during the course of the Work. This shall include environmental sampling before and after the remediation work, as well as Quality Control of emissions during the Work.
- .5 The Contractor shall test spent abrasive material and any other effluent generated by paint remediation operations to determine whether or not it requires special handling as hazardous waste. All material generated hazardous waste or not, shall be disposed of in accordance with the Ontario Environment Regulations.
- .6 Fugitive emissions shall be strictly controlled during washing, cleaning and painting operations.

4.6.12 Compliance Reporting

- .1 Within 60 days of the Project's Substantial Performance the EM shall complete and submit a Final Environmental Report.
- .2 The Final Environmental Report will include but is not limited to:
 - a. A summary of environmental mitigation measures used and mitigation effectiveness;
 - b. Explanation of all design changes implemented/recommended for environmental reasons;
 - c. Summary of environmental concerns encountered, new mitigation measures taken and "lessons learned";
 - d. A copy of all monthly reports;
 - e. Colour photo history of environmental concerns encountered, mitigation measures implanted and design changes; and
 - f. Records of the safe disposal or recycling of all waste streams.

4.7 CONSTRUCTION FACILITIES

4.7.1 Installation and Removal

- .1 The Contractor shall provide all labour tools and equipment and construction facilities required to execute the Work.
- .2 The Contractor shall remove all temporary construction facilities from site after use.

4.7.2 Hoisting

- .1 The Contractor shall provide, operate and maintain hoists required for moving of workers, materials and equipment.
- .2 Cranes and lifts shall be operated by qualified operator(s).



4.7.3 Equipment, Tool and Materials Storage

- .1 The Contractor shall assume full responsibility for storage, protection and safekeeping of materials, equipment, and products.
- .2 Coatings shall be stored out of sunlight and at temperatures in compliance with the manufacturer's requirements.
- .3 The Contractor shall provide and maintain, in a clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
- .4 The Contractor shall locate materials not required to be stored in weatherproof sheds on site in a manner to cause least interference with work activities. The Contractor shall obtain and pay for additional storage on site required for the work of this contract. Coordinate location of temporary storage with Owner.
- .5 The Contractor shall provide adequate strapping, padding, and dunnage, during loading and transfer of materials. Bare hooks, chains or cables shall not be used for the handling of material. If electro-magnets are used, residual magnetism shall be checked and remedied as appropriate. The Contractor shall be responsible for the cargo securing during shipping/transport, and any associated engineering.
- .6 Material shall be stacked using soft-faced spacers, racks, pallets and wedges to ensure safety, and to avoid damage. If damage due to handling or conditions of storage occurs, the Contractor shall take immediate corrective action at the Contractor's sole expense.
- .7 Material shall be stored safely such that during entire time of storage material is clear of the ground and water, and debris and mud cannot accumulate.
- .8 All structural steel materials shall be stored above ground on supports in a way which does not cause any damage to the materials.
- .9 Storage of materials shall be such that identification and inspection of each item can be easily performed.

4.7.4 Removal of Temporary Facilities

- .1 Remove temporary facilities from the site when directed by the Consultant.

4.7.5 Demolition Works and Work Methods

- .1 All temporary works and all work methods for bracing, shoring, and maintaining stability during demolition and restoration, shall be designed by the Contractor's Professional Engineer registered in the Province of Ontario who shall affix his seal to all designs and work methods.
- .2 The design of all works and work methods shall be submitted to the Consultant for review a minimum of fourteen (14) days prior to commencement of the Work. Such review shall not relieve the Contractor of any responsibility or liability in execution of the Work. The Contractor shall comply with any requirements of Consultant following its review of the Contractor's intended temporary work and work methods.



4.8 MATERIALS

4.8.1 General

- .1 All materials shall be in accordance with CAN/CSA S6 clause 10.4 "Materials" unless otherwise specified.

4.8.2 Structural Steel

- .1 Structural steel shall be fabricated by a company certified to CAN/CSA W47.1.
- .2 Structural steel for plates, angles and wide flange shapes shall conform to CAN/CSA G40.20/G40.21 Grade 350WT unless otherwise noted on the Drawings.
- .3 Structural steel for lattice bars shall conform to CAN/CSA G40.20/G40.21 Grade 350W unless otherwise noted on the drawings.
- .4 The Contractor shall submit erection diagrams, shop details, welding procedures, and erection procedure drawings and calculations to the Consultant as outlined in CSA S6:19 Annex A10.1.2 Submissions.

4.8.3 Welding

- .1 Welding shall be in accordance with CSA W59 and CAN/CSA S6:19.
- .2 Welding electrodes shall be suitable for the grade of steel being welded and shall conform to Canadian Standard CAN/CSA-W48.1-M.
- .3 The Contractor shall prepare and submit Canadian Welding Bureau (CWB) approved welding procedures specifications, data sheets, and repair procedures for the Consultant's review.
- .4 Weld procedures for welding to existing steel will require testing of existing steel to satisfy CWB; this testing will be considered part of the scope of the repair.
- .5 All welding completed both onsite and in the Contractor's shop shall be completed under the supervision of a CWB W47.1 certified welding supervisor.
- .6 The Contractor shall perform all testing outlined in S6:19 Annex A10.1.8.2 Non-destructive testing of welds.
- .7 The Contractor's weld inspector shall be CWB certified to the requirements of CSA W178.2. and Canadian General Standard Board (CGSB) 48.9712. Level 1 CWB Inspections shall be under the direct supervision of a minimum Level 2 Inspector.
- .8 The Contractor shall also perform and document results of the following inspections:
 - a. 100% Visual Inspection of all welds;
 - b. 100% Magnetic Particle Inspection of all field fillet welds;
 - c. 100% Ultrasonic Testing of all Complete and Partial Joint Penetration field welds.
 - d. 100% Visual Inspection of all locations where existing welds were removed by grinding; and



- e. 100% Magnetic Particle Inspection of all locations where existing welds were removed by grinding.

4.8.4 Bolts, Nuts and Washers

- .1 This specification covers the assembly of structural connections using high-strength bolts and nuts with hardened washers where initial tension in the bolt produces friction on the contact surfaces of the connected pieces sufficient in magnitude to resist shear.
- .2 Connections Using High-Strength Bolts:
 - a. Bolts shall conform to ASTM F3125 Grade A325 Type 1 unless noted otherwise.
 - b. Heavy Hex Nuts shall conform to ASTM A563 Grade DH and Hardened Steel Washers shall conform to ASTM F436 Type 1.
 - c. ASTM A563 nuts may be substituted with ASTM A194 Grade 2H nuts with approval by the Consultant.
- .3 Bolted Connections shall be in accordance to CSA S6:19 Section A.10.1.6. The contractor shall submit installation plan as stated in Section 4.5 and QC plan per Section 4.5.4 prior to installation of any bolts.

4.8.5 Coatings (Paint)

- .1 All coating materials, thinners, and reducers shall be from the same manufacturer. See Table 2 for acceptable coating systems.
- .2 Acceptable coating systems are approved by NEPCOAT (List 'C') – organic zinc-rich primer / polysiloxane finish; these approved coatings change from time to time, so alternative products may be found to be acceptable at time of application. Acceptable coating systems employ organic zinc primers. Moisture-cure coatings are not acceptable.
- .3 The Contractor shall supply all coating related materials necessary to meet the specification and complete the work.
- .4 All materials used in the work shall comply with VOC emission requirements- EPA Clean Air Act 1977.
- .5 The finish coat shall meet the gloss and colour requirements of Table 3.

Table 2 - Acceptable Coating Systems and Requirements

Product: (OZ/EP/PU)	DFT mils (µm)	VOC g/l (lb./g) EPA Method 24	Primer Slip Rating	Primer Restrictions when Applied to Joints
Primer: Zinc Clad 4100	3-5 (75-125)	336	B	5 mil max. DFT 72 hr. cure 5% max. thin
Topcoat: Sher-Loxane 800 Polysiloxane	4-6 (100-150)	122		



Table 3 - Acceptable Bridge Coating Colours and Gloss

Where Used	Gloss	RAL Number	RGB Coordinates
General Bridge Topcoat	Gloss	7040	154, 162, 164

4.8.6 Abrasive Blast Cleaning Media

- .1 Blast grit shall be free from Contaminants, moisture and oils, greases and other materials that will interfere with the adhesion or longevity of the coating system to be applied.
- .2 The abrasives used for all blasting shall meet the guidelines set forth in SSPC AB1 for mineral and slag abrasives, and AB3 for ferrous metallic abrasives. Any additive mixed with the abrasive shall be approved by the Engineer prior to use. The abrasives used shall produce a height of profile between 2.0 and 3.0 mils (50 µm and 75 µm).
- .3 In addition, the container or bag of abrasive shall include the name of the abrasive, the name of the manufacturer, and the size of the abrasive. If any additive has been included with the abrasive, the name and the percentage of the additive shall be on the container or bag.
- .4 Silica sand is not permitted to be used.
- .5 Blast media shall be completely removed from containment and all surfaces cleaned prior to steel repair identifications.

4.8.7 Caulking Materials

- .1 Provide caulking materials acceptable to the coating manufacturer and compatible with the coating products being applied.
- .2 Supply application and installation instructions for the caulk/sealant, including but not limited to the minimum/maximum joint width and depth that can be caulked/sealed; proper size and type of backer rod, if any, needed; application in lifts, if needed; and other installation instructions from the caulk/sealant manufacturer.
- .3 Include written procedures for painting the caulking/sealant, including coating and caulking/sealant drying and overcoating times for installing the sealant after the application of the intermediate coat prior to the finish. If the Contractor prefers to install the caulking/sealant after the application of the finish, provide detailed procedures for the installation, followed by the application of a stripe coat of the finish coat to the caulk/sealant after it adequately dries.

4.9 COATING REQUIREMENTS

- .1 Coating materials shall be delivered to the Worksite in sealed, original, labelled containers, bearing the Manufacturer's name, type of paint, brand name, colour designation, batch number, date of manufacture and instructions for mixing, thinning, and curing. Each batch of coating shall be accompanied by product/application data sheets, SDS, and if applicable the Class B and Class A certificate for the primer.
- .2 Coating materials shall be stored at all times, including onsite, in accordance with the coating Manufacturer's requirements for temperature and humidity.



- .3 The system used shall be from among those as stated in Table 2 above and in the detailed coating scope below. The Consultant will unilaterally decide if a proposed alternative material is acceptable.
- .4 Coatings shall not be mixed and matched. The entire coating system as outlined in Table 2 above shall be used as stated for both the shop and field work.
- .5 The use of "quick cure" additive components is not permitted.
- .6 Each layer of coating shall be coloured to differentiate it from the layers above and/or below, with the exception of topcoat stripe and topcoat, which shall both be coloured per Table 3, above. Each application of paint; primer, penetrating sealer, stripe coat, mid-coat and/or topcoat is considered a separate layer of coating for this specification.
- .7 Field tinting is not permitted. Tinting shall be accomplished by the dry-grinding process during manufacturing.
- .8 The coating system shall consist of an Organic Zinc/Polysiloxane (OZPS) system. A stripe coat of primer shall be applied after the full coat of primer.
- .9 Field weld surfaces shall be masked, and faying surfaces shall receive a prime coat only.

4.9.1 Surface Cleaning, Preparation and Coating

- .1 The cleaning work shall consist of three phases of cleaning. Phase-One will be a dry, pre-wash cleaning, followed by two-phase water cleaning. All dry, pre-wash cleaning shall be performed prior to any water cleaning, and all water cleaning shall be performed prior to surface preparation and painting operations. With approval of the Engineer, the Contractor may break this work up into sections or bays.
 - a. Phase One
 - i. This phase shall consist of cleaning by dry methods all loose dirt and debris from all areas as noted in the plans. This phase shall be completed prior to any washing operations. Collection may include the use of brooms, brushes, shovels, wheelbarrows, buckets, vacuums, or other suitable means.
 - b. Phase Two
 - i. This phase shall consist of washing completely with low pressure plain water the entire bridge deck, curbs, parapets, sidewalks and expansion joints, and any other areas as noted in the plans. All drains shall be thoroughly flushed and shall be free flowing. All debris and trash shall be removed from the drains. At the nozzle end, the washing equipment shall have a minimum pressure of 3,000 PSI and a maximum pressure of 4,500 PSI.
 - c. Phase Three
 - i. This phase shall consist of washing with a mixture of low-pressure water and a solution of a commercial brand soluble salt remover, any areas as noted in the plans. This washing shall be accomplished with a low-pressure washer at a minimum pressure of 3,000 PSI and a maximum pressure of 4,500 PSI, at the nozzle end with the nozzle 4" to 8" from the surface. Remove all surface abnormalities such as rust scale, peeling paint, or blistered paint that would prevent the soluble salt remover from coming into contact with the salt contamination. Typically, low pressure water washing is not capable of removing intact coating material. The nozzle type shall be a rotary nozzle. The



contractor shall follow the Manufacturer's recommendations or specifications for method and rate of application of the soluble salt remover. Water shall be from an approved source of drinking water, and the soluble salt remover shall be CHLOR*RID (or approved equal). The contractor is to place special emphasis on the top surface of all flanges, connection plates, bearings, and excessively rusty or pitted areas. Any areas of the structure that exhibit mineral deposits of black iron oxide called "black rust" after any abrasive blasting shall be considered contaminated with chlorides and will need an additional washing with the soluble salt remover solution and another abrasive blasting.

- .2 Testing of Structural steel: The maximum level of chloride contamination shall be 5 micrograms/cm². Testing method shall be in accordance with The Society for Protective Coatings (SSPC) Technology Guide 15, Section 5.2.5, Latex Sleeve Methodology.
- .3 In the first 150 square foot of cleaning the contractor is to determine by sufficient testing of the most deteriorated areas (after rust has been removed), the rate of application, nozzle pressure, nozzle distance from surface, and dilution ratio of mixture to achieve the desired level of cleanliness.
- .4 Thereafter, the contractor is to perform test in areas designated by the Consultant to ensure that the entire structure has attained the specified level of cleanliness. The Consultant is to verify the degree of cleanliness. The Consultant's decision shall be final.

4.9.2 General Contractor Responsibility

- .1 The Contractor's washing sequence and plans shall not allow the possibility of recontamination of the structure before blast cleaning and/or painting operations are completed. No cleaning shall be performed when temperatures are such that freezing could occur or that it is anticipated that temperatures could drop to freezing while the structure is wet. Equipment, methods, and materials shall meet the approval of the Consultant. All applicable Sections of the Specifications shall be followed when washing over the embankments, shorelines, roadways, navigational waterways, lots and regarding dirt and debris from cleaning, paint chips, and dirt and debris containing paint chips.

4.9.3 Surface Preparation:

- .1 All structural steel shall undergo a near-white blast cleaning in accordance with SSPC SP 10. All structural steel is to include 100% of the Exterior and Interior stringers, diaphragms, floor beams, upper and lower chord members, etc. In general, all accessible steel surfaces not galvanized, aluminium, or weathering steel shall be blast cleaned. All laminar and stratified rust that has formed on the existing steel surfaces shall be removed. The Contractor is to exercise care while cleaning and painting around expansion joints, weathering steel, and galvanized surfaces. Any damage to these surfaces found by the Consultant as a result of the cleaning and painting operation shall be repaired and/or replaced, to the satisfaction of the Consultant, at the Contractor's expense.

4.9.4 New steel

- .1 Fabrication, cleaning and coating of the new steel shall be performed in shop, off-site with the finished component being transported to the Bridge site and erected.
- .2 The contractor may field modify plate sections and fabricated shop sections to expedite the work, that meets all the requirements of the plans and specifications. The contractor



- shall submit to the Consultant, for approval a detailed plan of the steel sections that are to be made on site prior to performing the work.
- .3 The Contractor shall provide the Consultant minimum 36-hour notice prior to planned blasting and coating activities, so the Consultant's QA may attend the shop.
 - .4 Test new steel for chlorides. When results are greater than $5 \mu\text{g}/\text{cm}^2$, the steel shall be washed to remove non-visible chlorides to below $5 \mu\text{g}/\text{cm}^2$.
 - .5 The new steel structural segments are fabricated from various steel components welded together. Weld detritus such as weld spatter shall be removed or ground smooth. Materials deposited by the welding process such as, but not limited to, excess flux oxides shall be removed prior to abrasive blasting. In addition, all sharp edges including welds shall be reduced to a minimum 2 mm radius with no burrs.
 - .6 Compressed air for blast cleaning and blow down shall be clean and dry by testing according to D4285.
 - .7 Grease, oil, and cutting fluids shall be removed by solvent cleaning in accordance with SSPC-SP1 prior to blast cleaning. The steel shall be cleaned by abrasive blasting to specified values of surface profile and cleanliness as specified.
 - .8 The steel shall be cleaned by abrasive blasting to specified values of cleanliness (SSPC-SP 10) and angular surface profile (50 to $100 \mu\text{m}$ [2 to 4 mils]).
 - .9 Final blast cleaning shall not be performed unless the temperature of the steel is at least 3°C (5°F) above the dew point temperature.
 - .10 Areas to be welded on site shall be left uncoated then touched up after welding and prepared on site.
 - .11 The coating system shall consist of an Organic Zinc/Polysiloxane (OZ/PS) system. A stripe coat of primer shall be applied after the full coat of primer.
 - .12 Field weld surfaces shall be masked, and faying surfaces shall receive a prime coat only.
 - .13 Primer shall be applied within 12 hours of blast cleaning and before rust back has formed. Surfaces exhibiting rust back or that are not coated within 12 hours shall be re-blast cleaned. Coatings shall be applied within the manufacturer's written restrictions for air and surface temperature and relative humidity. The surface temperature shall be at least 3°C (5°F) above the dew point temperature. The conditions shall be maintained until the coatings have cured for exposure to weather according to the manufacturer's instructions.
 - .14 The Contractor shall regulate temperature and relative humidity using heaters, humidifiers, and/or dehumidifiers as required, for the full duration of blasting, coating and curing activities. Failure to maintain conditions within the Manufacturer's Recommendations shall be cause for rejection by the Consultant. Coatings not applied or cured within Manufacturer's Recommendations shall be removed and replaced at the Contractor's expense.
 - .15 New galvanizing that is painted, after cleaning (SSPC-SP16), one of the above coats is applied, Polysiloxane (PS)

4.10 EXISTING STEEL

- .1 The repair areas to be prepared to be coated are shown in the drawings provided and receive same the OZPS system used for shop painting new steel.



- .2 The Contractor shall provide the Consultant minimum 24-hour notice prior to planned washing, blasting or coating activities so that the Consultant's QA may attend the site.
- .3 Field weld surfaces shall be masked, and faying surfaces shall receive a prime coat only. A stripe coat of intermediate shall be applied before the full coat of intermediate.
- .4 Prior to beginning production work in field, site sample area(s) representative of the coating condition and surface configurations shall be blast cleaned to SSPC-SP10. SSPC-VIS 1 can be used as a visual aid in determining compliance. Work shall not proceed until the site sample area(s) are accepted by the coating manufacturer's technical representative and the Consultant. Test areas can be photographed for future reference, but in the event of a dispute, the written words of SSPC-SP10 take precedence over the photographs or SSPC-VIS 1.
 - a. Site sample area(s) shall be minimum 1m x 1m square, and include flat surfaces, rivet and/or bolt heads, and steel overlap areas.
 - b. Site sample area(s) locations shall be selected and agreed between QC representative and the Consultant's QA representative.
- .5 The compressed air used for nozzle blasting shall be free of water and oil. The cleanliness of each compressed air system shall be verified at least once per shift using the blotter test in accordance with ASTM D4285, "Standard Test Method for Indicating Oil or Water in Compressed Air".
- .6 Grease, oil, and cutting fluids shall be removed by solvent cleaning in accordance with SSPC-SP1 prior to blast cleaning.
- .7 Painting shall not be done when the ambient temperature is below 40° F (5° C) or above 100° F (38° C), or the relative humidity above 90 percent. The temperature of the steel must be at least 5° F (3° C) above the dew point. Painting shall not be performed when the surface to be coated is sufficiently hot to cause blistering of the film or too rapid solvent release. Painting will only be permitted between the dates of April 15th through October 15th. There will be no painting permitted to occur in a heated containment.
- .8 Paint and thinners shall be stored in a temperature-controlled environment between 40° F (5° C) and 100° F (38° C). At no time will paint be used beyond the manufacturer's shelf life.
- .9 Additional chloride testing shall be performed on existing steel after blast cleaning, but before coating. If the results are greater than 5 µg/cm², the surfaces shall be re-cleaned and retested at the same frequency required above.
- .10 Immediately prior to coating, the steel shall meet the SSPC SP10 Near-White Blast specification, be free of dust or other surface interference material, and meet the chloride requirements of less than 5 µg/cm². Surface cleaning shall be by blow down and vacuuming.
- .11 Blast profile shall be 50 to 100 µm (2 to 4 mils) and be angular. If the steel is torch cut, grind the edge to remove the hardened steel. If grinding occurs after blast cleaning, re-blast the area. Confirm that the correct profile is achieved on this surface. Surface profile shall be measured by Methods B or C of ASTM D4417, and at the frequencies established in SSPC-PA17.
- .12 The blast cleaned surface shall be painted within 24 hours. In the event rust bloom or flash rusting occurs, the affected members shall be re- cleaned by blasting. The paint shall be applied by spray methods, except those areas inaccessible to spray application may be



brushed or rolled. Brushes or rollers, when used, shall have sufficient body and length of bristle or roller nap to spread a uniform coat. Small touch-up areas may be brushed or rolled, if approved by the Consultant.

- .13 Use of an agitated pot shall be mandatory in spray application of zinc-rich primer. The agitator or stirring rod shall reach within 25 mm, of the bottom of the pot and shall be in motion at all times during paint application. Coatings shall be mixed in strict accordance with the coating manufacturer's written instructions. Under certain conditions, it may be necessary to thin or adjust the solvent balance of the paint. The type and amount of solvent to be used shall be that listed on the coating manufacturer's product data sheet for that material. Upon thinning, the dry film thickness requirement shall still be met by appropriately increasing the wet film thickness.
- .14 Application requirements and drying times between coats shall be in accordance with the manufacturer's recommendations. Exposed steel surfaces of expansion dams shall be painted as specified for structural steel.
- .15 Spray guns must be equipped with the recommended size tip for the paint product being applied and shall be held perpendicular (90 degrees) to, and at, the proper distance from the receiving surface. Complete protection shall be provided by the contractor against paint spatter, spillage, overspray, wind-blown paint, or similar releases.
- .16 Appropriate containment shall be placed around the work area to protect public and private property. Staging must be adequate to provide access to all areas being painted. Violation of these requirements causing excessive paint waste will be justification for the Consultant to order the Contractor to cease all work on the project until corrective action has been taken. The method of cleaning and/or replacement shall be submitted to the Consultant in advance for approval.
- .17 Faying surfaces and splice plates shall receive only primer which shall be applied and cured according to the information on the manufacturer's Class B Certification Sheet unless otherwise noted on the Contract Drawings. The intermediate coat shall be stepped back 15 to 30 cm (6 to 12 in) from the connection area and feathered. The finish coat shall be stepped back 15 to 30 cm (6 to 12 in) from the edge of the intermediate coat and feathered. The purpose is to eliminate a butt joint of the intermediate and finish coats in the field.

4.10.1 Coating for Galvanized members

- .1 Previously painted galvanized steel shall be clean and painted.

4.10.2 Painting over Galvanized Surfaces:

- .1 Painting Galvanized surfaces shall be in accordance with the paint manufacturer's recommendations. Painting of existing galvanized surfaces is only allowed if the existing condition is painted. The Contractor shall review preparation and painting means and methods in the area of galvanized surfaces and propose means and methods to prevent damage that may be different than other areas of the bridge.

4.10.3 Damage to Galvanized Surfaces:

- .1 The Contractor is to exercise care while cleaning and painting around expansion joints and galvanized surfaces. Any damage to the expansion joints or galvanized surfaces found by the Consultant, as a result of the cleaning and painting operation shall be repaired and/or replaced, to the satisfaction of the Consultant, at the Contractor's expense.



4.10.4 Temporary Steel

- .1 All steel used for temporary works shall be coated with grey primer to CISC/CPMA 1-73a except for components identified on the Contract drawings remaining permanently attached to the structure.
- .2 All temporary steel remaining in the field after construction shall be treated as new steel and coated in accordance with plans and specifications.

4.10.5 In-fill Areas in the field

- .1 Sharp areas of weld shall be ground to a 2 mm radius. All weld spatter and other detritus shall be removed. Infill surfaces may be cleaned to either SSPC SP10 or SSPC SP11. Surface profile shall be a minimum 50 to 100 µm (2-4 mils) and sharp. Primer thickness shall be measured from the top of profile. This area will be filled in by lapping the successive layers of in-fill coating over the feathered edges of the existing coating. The in-fill coating shall be the OZPS coating system.

4.10.6 Organic Zinc Polysiloxane (OZ/PS)

- .1 This is the standard coating system for the Work. It assumes that washing and surface preparation has been done and the surface meets these Specifications immediately prior to coating application.
- .2 The system consists of a full coat of zinc primer, stripe coat of zinc primer, stripe coat of polysiloxane finish, and a full coat of polysiloxane finish.
- .3 Each coat shall be mixed, thinned, and applied according to the coating manufacturers' instructions and this specification. Required thicknesses are shown in Table 2, in Section 4.8.5 Coatings (Paint). All coats shall be free of skips, misses, dry spray, overspray, runs, sags, or other defects. Coating thickness shall be measured using wet film thickness gages according to ASTM D4414 during application. Dry film thickness shall be measured according to SSPC-PA2. Verification of gage accuracy shall be according to ASTM D7091. In the event of a dispute, destructive testing according to ASTM D4138 can be used. The Contractor shall touch up all test areas.
- .4 Stripe coats of the primer shall be applied to all edges, outside corners, seams, bolt heads and nuts, all rivet heads, edges of flanges and plates, welds, sharp edges, in general all edges, shall receive one stripe coat, by brush or roller application, of the same primer as the Full Prime Coat. Striping shall extend a minimum of 25 mm from the edge. The prime coat shall at a minimum, be set-to-touch before the stripe coat is applied. No dry film thickness is specified for this coat. This coat shall be tinted as allowed by the manufacturer to be in contrast to the full prime coat. The tinting agent shall be the paint manufacturer's approved tinting agent.
- .5 Once the full coat of primer is dry-to-recoat per the manufacturer's written instructions, a stripe coat of polysiloxane finish shall be applied, followed by full application of finish coat. the full coat of finish shall be applied by spray.
- .6 All full coats shall be a colour that contrasts with the coating layer(s) above and/or below. Coating colours shall be provided in the sample described in 0.
- .7 Topcoat colour shall be per Table 3, in Section 4.8.5 Coatings (Paint).



4.10.7 Faying surface

- .1 Faying surfaces shall be cleaned to SSPC-SP10. The profile shall be 50 to 100 µm (2-4 mils) and sharp.
- .2 Where Class B surfaces are required by the Contract Drawings, Organic Zinc Primer shall be applied to the thickness on the Class B certificate for that primer and shall be cured under conditions listed on the Class B certificate. No over thickness will be tolerated. No thinning shall be done unless it is noted in the primer's Class B certificate. Rejected faying surfaces shall be re-blasted and coated at the Contractor's expense.
- .3 Where Class B surfaces are not required by the Contract Drawings, Organic Zinc Primer shall be applied to the thickness on the Class A certificate for that primer and shall be cured under conditions listed on the Class A certificate. No over thickness will be tolerated. No thinning shall be done unless it is noted in the primer's Class A certificate. Rejected faying surfaces shall be re-blasted and coated at the Contractor's expense.

4.10.8 Field touch-up of coating

- .1 Damaged areas of the new OZ/PS system will be assessed by the Owner's representative. Minor damage shall be repaired by taking the damaged area back to a clean, profiled metal surface, by abrasive blast cleaning to SSPC-SP10 or SSPC-SP11 then feathering out the damaged area into surrounding sound coating. Then successive layers of coating are added, each overlapping the previous by a minimum 25 mm until the coating system is fully reinstated. Note that the surrounding topcoat shall be lightly abraded to enhance the adhesion of the repair topcoat. The Consultant may at their sole discretion allow alternative repair procedures, if the damage is very minor. Major damage will be assessed on a case by case basis.
- .2 Areas shielded by the containment shall be prepared with vacuum shrouded power tool to SSPC-SP11, the surrounding coating feathered, and all coats spot-applied.
- .3 New steel surfaces shall be painted as a minimum unless noted otherwise (i.e. no bare surface).

4.10.9 Field installed steel and bolts

- .1 Except for connections and areas to be field welded, the new steel is to be coated with the full Organic Zinc Polysiloxane System (OZ/PS). Welded areas are bare steel and connections and splice plates are primed only. New bird screens and hatch covers are to be hot dipped galvanized prior to coating.
- .2 Welded areas shall be blast cleaned to SSPC-SP10 according to Section 6.7.1.5 and the surrounding coating feathered. Upon approval of, SSPC-SP11 may be used in lieu of blast cleaning. SSPC VIS 3 can be used as an aid in determining the appearance of SSPC-SP11. All three coats of the Organic Zinc / Polysiloxane System (OZ/PS) system shall be applied, overlapping onto the surrounding feathered coating.
- .3 Bolted connections and splice plates shall be pressured washed to remove dirt, dust, grease, oil, and surface interference material. Galvanized bolts and nuts shall be prepared 4.8.14 The step-down area of the intermediate and overlap areas of the finish shall be sanded to remove gloss.
- .4 Damage to the primer shall be prepared according to SSPC-SP11 and the area spot-primed with organic zinc.



- .5 The polysiloxane stripe and full finish coats shall be applied to all exposed zinc primer, galvanized bolts and nuts, and overlapped onto the exposed primer in the step-down area.

4.10.10 High strength bolts (galvanized) – after installation

- .1 These items shall be treated as follows:
- .2 If used to join galvanized surfaces, no further treatment;
- .3 If used to join painted surfaces, then the protruding bolts, threads and washers shall be solvent cleaned, and hand or power wire brushed according to SSPC-SP2 or SP3 to remove lubricant and rust. Slight staining from the lubricant dye is permitted to remain, if after cleaning, it is not transferred to a white cloth that is vigorously rubbed across the surface.
- .4 If used to join painted and galvanized surfaces, the galvanized surface shall get no further treatment and the painted side shall be treated per b);
- .5 Coating application and curing shall be as per the Manufacturer's product data sheets.
- .6 Coating damage from tensioning bolts shall be repaired at the same time as the touch up. If the area is excessive in the opinion of the Consultant's, it shall be repaired by cleaning to SSPC SP 11, then primed, striped and finally topcoated;

4.11 SPECIAL CLEANING, GRINDING, SURFACE PREPARATION, PENETRATING SEALER, CAULKING AND PAINTING AREAS

4.11.1 Grinding and painting of sharp edges

- .1 Sharp edges at floor beam cut-out troughs and the flanges of previously rusted members shall be ground to a 2 mm radius before abrasive blast cleaning. Grinding shall be controlled to eliminate the creation of additional sharp edges.
- .2 After blast cleaning all coats, including stripe coats, shall be applied to these areas along with the painting of the surrounding steel. Due to accessibility of the interior of connections at pins, additional striping may be required to achieve complete and thorough coverage of these areas.

4.11.2 Removal of pack rust and painting

- .1 Pack rust formed along the perimeter of mating surfaces of connected plates or shapes shall be removed to the extent feasible without mechanically detaching the mating surface. Any rust remaining after cleaning shall be tight and intact when examined using a dull putty knife. The tools used to remove these corrosion products shall be identified in the submittals and accepted by the Consultant. If the surface preparation or removal of rust results in nicks or gouges, the work shall be suspended, and the damaged areas repaired to the satisfaction of the Consultant, at the Contractor's expense.
- .2 After blast cleaning and application of Zinc Rich primer, the application of a penetrating sealer prior to intermediate coat, shall be applied to locations where pack rust is still present.



4.11.3 Inaccessible Areas

- .1 The Owner intends that all areas shall be blast cleaned and receive the 2-coat system as required by 4.8 however, the existing structure does have areas where access does not permit reasonable effort to achieve the required surface preparation. Where Contractor's QC representative and Consultant's QA representative agree that 'best effort' has been applied without achieving the necessary surface preparation, then penetrating sealer shall be applied as part of the 2-coat system.

4.11.4 Caulking

- .1 Caulking shall be applied before the application of the topcoat. This includes all seams between diaphragm connections to stiffeners and splices; and seams between any connection that is riveted or bolted. Any welded connections that are not fully sealed by the weld shall be caulked with a paste type caulk. The caulk shall be pressed into the seams between the adjoining surfaces, by wetted finger or specialty tool, to ensure bond and provide a smooth uniform surface. Bottom seams shall not be caulked on vertical surfaces.
- .2 Caulking in a 2-coat system (exterior) shall be applied after the prime coat has cured. Caulking on a 2-coat system (interior) shall be applied after prime coat has cured. The topcoat shall not be applied until the caulking has fully cured in accordance with the manufacturer's recommendations.
- .3 The caulking material shall be compatible with the paint system being applied and letter stating compatibility submitted to the Engineer from the paint manufacturer. The caulking material shall be tested for compatibility with the paint system at the same time that the paint is tested for intercoat compatibility. Caulking operations shall be performed only when weather conditions are within the parameters as specified above.

4.11.5 Incidental blast damage

- .1 Parts of the structure not to be coated or already coated with paint or hot dip galvanizing shall be protected from over blast. Where unintended blasting causes damage, the Contractor shall repair these areas as directed by project specifications. The Contractor shall repair these areas at his expense.
- .2 Incidental damage to bearings and expansion joints is not acceptable. These components cannot be easily repaired, and may be replaced at the Contractor's expense, at Consultant's sole discretion.

4.12 ACCEPTANCE OF PAINT WORKS

4.12.1 General

- .1 Paint works include all aspects of coating work including washing, cleaning, coating application and curing, and caulking.
- .2 The Contractor shall furnish suitable safe access and shall provide a time mutually agreed to for inspecting the structural steel prior to and after each coating. The Consultant and/or its representative shall approve all repairs.
- .3 If in the opinion of the Consultant the coating has flaws other than deficiencies in the prescribed dry film thickness, the material shall be repaired or shall be removed and



replaced. Defects in the film, including but not limited to runs, sags, mud-cracking, lifting, overspray, dry spray, pinholes, and holidays shall be corrected until a continuous uniform film has been applied.

- .4 Excessive film thickness shall be reduced, and insufficient film thickness shall be increased. If the thickness of the finish coat is reduced, a thin coat of the finish shall be reapplied to seal the surface and to blend the area into the surrounding coating. Depending on the defect, total removal and replacement of the effected coating may be required. No unsightly runs or sags shall be visible. All "mud-cracking" and/or "dry overspray" in the paint film shall be removed. Excessive bubbles or pinholes shall not be visible in the coat after examination under 8X magnification.
- .5 The following defects will be cause for rejection:
 - a. Runs, sags, holidays or shadowing;
 - b. Evidence of poor coverage at bolts, plate edges, lap joints, crevices, pockets, corners and re-entrant angles;
 - c. Evidence of inadequate grinding or application of caulking.
 - d. Surfaces which have been struck, scraped, spotted by rain or otherwise damaged;
 - e. Surfaces which exhibit an objectionable texture such as heavy runs and sags, orange peel, mud cracking, fish eyes, or uneven gloss;
 - f. Surfaces damaged by over spray; or
 - g. Other defects that will in the judgment of the Consultant reduce the effectiveness, the aesthetics or the longevity of the coating system.
- .6 The Contractor shall demonstrate that coatings have been applied and cured in compliance with the Manufacturer's standard recommendations.
- .7 The Contractor shall demonstrate that coatings applied have cured and adhered to the substrate. Locations for testing shall be coordinated with the Consultant, and testing shall be witnessed by the Consultant.

4.13 MEASUREMENT AND PAYMENT

- .1 Refer to Section 5 Measurement and Payment

END OF SECTION



SECTION 5 MEASUREMENT AND PAYMENT

5.1 GENERAL

- .1 This Section covers the measurement of Work done for payment purposes, and generally covers the scope of the Work included in the various items in the SCHEDULE OF PRICES.
- .2 It is the intention of this contract to provide for a finished piece of Work, complete in all essentials, including all items reasonably inferable from the Contract Drawings and Specifications.
- .3 The aggregate of all unit prices and lump sum payments shall constitute full compensation for the entire Work of the Contract, as shown, specified and intended.
- .4 There shall be no measurement or payment for Work carried out beyond the limits defined on the Contract Drawings or as otherwise approved by Consultant.
- .5 The estimated quantities shown are provided for the purposes of comparing tenders, and they are not guaranteed to be final, accurate or complete. Actual quantities may vary from those initially estimated and will not be grounds for renegotiations of tendered unit prices, except as defined in CCDC 4-2023. The unit prices shall be applicable to greater or lesser quantities. Payment shall be at the unit prices tendered.
- .6 Unless otherwise specified, all materials necessary to complete the items listed in the Schedule of Quantities and Prices and the finished Work are to be new materials supplied by the Contractor and the cost of such material is to be included in the Contractor's prices.
- .7 All measurements for payment purposes shall be taken jointly by the Contractor and The Owner.
- .8 All measurements shall be in the plane of the finished surface unless otherwise indicated.
- .9 Items indicated as provisional, if any, may or may not be included in the final scope of the Work at the sole discretion of the Owner.
- .10 The following shall be considered incidental to the Work:
 - a. Attendance at Consultant Startup Meeting;
 - b. Protection of public
 - c. Transportation of equipment;
 - d. Transportation of labour to and from the site;
 - e. Coordination and supervision of construction,
 - f. All administration costs, profit and contractual warranty;
 - g. Drawings;
 - h. Labour;



- i. Provision of services;
 - j. Colour and material samples;
 - k. Meetings;
 - l. Regular progress updates and reporting;
 - m. Field measurements and sketches;
 - n. Inspection, quantity survey and measurement assistance for the Consultant;
 - o. Submissions;
 - p. Shop drawings;
 - q. Project record drawings;
 - r. Quality control;
 - s. Provision of adequate heating systems for cold weather coating works;
 - t. Cold weather protection and curing of materials;
 - u. Shoring and bracing;
 - v. Temporary works;
 - w. Temporary barriers/barricades;
 - x. Protection, relocation, moving, storing and final location of stored equipment;
 - y. Reinstatement of damaged surfaces; and
 - z. All ancillaries required to complete the Work to the full satisfaction of the Consultant.
- .11 Progress payments for lump sum items shall be approximately equivalent to the percentage of the total Work of the item completed, to the full satisfaction of the Owner, and as described under individual items.

5.2 MOBILIZATION, DEMOBILIZATION, AND SITE WORK

- .1 Measurement for this item is Lump Sum
- .2 Payment for this item shall be at the lump sum price bid for Item No. 1 in SCHEDULE OF PRICES.
- .3 This item shall include all costs associated with mobilizing and demobilizing from project.
- .4 This item shall include permits and site access, property leasing/rental, site grading, the supply and mobilization of all labour, material, equipment, and other costs associated with the Project, and shall include the demobilization of all equipment and material from the site on completion of the Work as well as all measures necessary to contain and safely dispose of hazardous materials, and to return site to initial (or better) condition.



- .5 This item also includes: Storage of machinery, materials, equipment, accessories and tools appropriate to the job site. Supply of the Contractor's site trailer. All temporary services and connections, such as water, electricity and sanitation.
- .6 This item also includes: Provision of all necessary guards, fencing and other security measures to protect the machinery, labour, materials, equipment, tools, access devices and any other installations. Maintenance of traffic lanes adjacent to or under work areas. Inspection of each phase of work. Snow removal from work areas, if required.
- .7 Sixty percent (60%) of the price for Mobilization, Demobilization, and Site Work item shall be considered as relating to mobilization and the balance to demobilization.

A partial payment for mobilization shall be included in the first payment certificate issued for the Contract subject to the Consultant being satisfied that total mobilization has been performed. The payment amount shall be paid in part over a number of payments until totally paid out.

The payment for demobilization shall become due following substantial performance of the Work and subject to the Consultant being satisfied that full demobilization has been performed. The Consultant may, in their discretion, allow partial payment for demobilization before total demobilization has been effected.

- .8 Nothing herein shall be construed to limit or preclude partial payments otherwise provided for by the contract.
- .9 No deduction will be made, nor will any increase be made, in the lump sum mobilization item regardless of decrease or increase in the final total contract amount or for any other clause.

5.3 SIGNS, TRAFFIC CONTROL AND MINIMIZING TRAFFIC OBSTRUCTIONS

- .1 Payment for this item shall be at the lump sum price bid for Item No. 2 in SCHEDULE OF PRICES.
- .2 This item shall include all traffic control, signs, barricades, concrete barriers, cones, safety nets, safety wires and any other safety measures required that is not provided by The Owner as stated in Section 3.3. The price shall include all jersey and other traffic barriers, traffic drums, and cones, temporary steel plating and fasteners/clamps, signs, traffic control persons, vehicle marking/signage/lights and any other equipment, placement, adjustment, relocation of traffic control devices, temporary pavement markings, material or labour required to ensure full and proper traffic control and the full safety of the travelling public and work crews at all times.
- .3 This item shall also include all navigation signage required by the local authority or by Nav Canada for boat safety and boat traffic during all stages of the work. This shall include costs for signage maintaining and setting up or removing of signage and also include all methods of display for beacons, printed signs etc that may require anchorage to the shore, pier or bridge.
- .4 A maximum of 30% of the Lump Sum price shall be paid on the first progress claim in respect to this item and a maximum of 10% of the Lump Sum price shall be paid on each subsequent progress claim to a total not exceeding 70%. A minimum of 30% of the Lump



Sum price shall be paid on the progress claim following Substantial Performance. Total payment shall not exceed 100% of the Lump Sum price.

5.4 CONSTRUCTION LAYOUT

- .1 Payment for this item shall be at the lump sum price bid for Item No. 3 in SCHEDULE OF PRICES.
- .2 This item shall include:
 - a. Precise on-site surveys and measurements of all existing components to prepare the Contractor's Drawings and as built drawings.
 - b. Engineering services on site and at the Contractor's offices for calculations, sketches and drawings.
 - c. Review, validation and/or modification of the design shown on the Contractor's drawings
 - d. Review, validation and/or required modifications to the engineer's design
- .3 A maximum of 30% of the Lump Sum price shall be paid on the first progress claim in respect to this item and a maximum of 10% of the Lump Sum price shall be paid on each subsequent progress claim to a total not exceeding 70%. A minimum of 30% of the Lump Sum price shall be paid on the progress claim following Substantial Performance. Total payment shall not exceed 100% of the Lump Sum price.

5.5 FIELD OFFICE AND WEATHER MONITORING EQUIPMENT

- .1 Measurement for this item is per month usage.
- .2 Payment for this item shall be at the month price bid for Item No. 4 in SCHEDULE OF PRICES.
- .3 This item shall include:
 - a. Furnishing, erecting, insuring, maintaining and removing the field office, and sanitary conveniences for the Owner; all labour and materials, and all other work necessary and incidental thereto. All cost associated with the weather monitoring system and site specific weather forecasting will be paid for by the contractor. The field office, furniture, fixtures, and facilities shall remain the property of the Contractor and shall be removed after the project has been completed. The field office shall be allowed to remain for a maximum 45 days after final acceptance of the project.

5.6 CONTAINMENT AND DISPOSAL OF WASTE MATERIAL

- .1 Measurement for this item is Lump Sum
- .2 Payment for this item shall be lump sum price bid for Item No. 5 in SCHEDULE OF PRICES



- .3 This item shall include all labour, materials and equipment including the scaffolding, staging, access system, containment, environmental protection and monitoring, waste management, and worker protection for the work.
- .4 Containment - price shall include full compensation for all labour, containment and ventilation materials and equipment; lighting; fuel; engineering; drawings; and any equipment or facilities needed to install, operate, move, maintain, clean, dismantle and remove the containment system from the project site; and documentation that the containment is installed and used per the accepted containment plan and drawings. Price includes compliance with all regulatory requirements and providing access for the Owner's representatives to conduct Quality Assurance observations.
- .5 Environmental Protection - Price shall include full compensation for all labour and equipment for TSP-Lead monitoring and laboratory analysis; visual assessments of the air, ground, and water; in-process clean-up of spills or releases; and final project clean-up activities. Price includes compliance with all regulatory requirements and documentation of test and inspection results.
- .6 Waste Management - Price shall include full compensation for all labour and equipment for the collection, testing, handling, storage, transportation, and disposal of all project waste, including, but not limited to: pressure washing water; spent abrasives; removed paint, rust, mill scale, and debris; used containment materials; paint and solvents; cans; rags; and discarded PPE. Price includes compliance with all regulatory requirements and documentation of proper disposal.
- .7 Worker Protection - Price shall include full compensation for all labour, equipment and laboratory analysis for the protection of all the Contractor's personnel, including exposure monitoring; protective clothing and equipment; medical surveillance; hygiene facilities; laundering; and establishment and maintenance of regulated areas. Price also includes protective clothing and equipment for the Owner's Representatives. Price includes compliance with all regulatory requirements and documentation of results.
- .8 Payment schedule will be agreed upon by Contractor and the Owner prior to the start of work. Percentage paid will capture percent progress of scaffold and containment erection and work performed. Total payment shall not exceed 100% of the Lump Sum price.

5.7 CONTAINMENT EMERGENCY DISMANTLING AND REINSTATEMENT (WHEN WINDS FORECASTED TO EXCEED 100KM/HR)

- .1 Payment for this item shall be at unit price bid for Item No. 6 in SCHEDULE OF PRICES.
- .2 This item shall include all labour, materials and equipment required for removal, repair and reinstatement of containment as defined in Section 4.5.7 (Emergency Containment Demobilization Plan).
- .3 Payment will be made on the basis of the Unit price, multiplied by the number of successful removal and reinstatements completed.

5.8 BRIDGE CLEANING AND PAINTING

- .1 Measurement for this item is Lump Sum



- .2 Payment for this item shall be at lump sum bid for Item No. 7 in SCHEDULE OF PRICES
- .3 Price includes full compensation for all labour, materials and equipment for all cleaning and painting activities, including, but not limited to: pressure washing; preparation of primed surfaces; soluble salt/chloride remediation; application of the three-coat paint system (intermediate coat) including stripe coats to all surfaces and fasteners; quality control inspections and documentation; and compliance with all requirements of regulatory agencies. For interior location items, two-coat paint system is required.
- .4 The price also includes protection of all surfaces not to be painted such as utilities, bearings, expansion joints and galvanized surfaces; repair of any damage resulting from the cleaning and painting operation; repair or removal/replacement of coating work that does not meet specifications; touch-up.
- .5 Payment schedule will be agreed upon by Contractor and the Owner prior to the start of work. Percentage paid will capture percent progress of bridge cleaning, surface preparation and painting of structural steel. Total payment shall not exceed 100% of the Lump Sum price.

5.9 STEEL REPAIR TYPES 1 TO 8

- .1 Payment for this item shall be at unit price bid for the following:
 - a. Steel Repair Types 1 and 2 are subject to inspection by the Consultant prior to development of a methodology, the prices for which are to be determined during construction and in accordance with CCDC 4-2023.
 - b. Steel Repair Type 3 - Item No. 8 in SCHEDULE OF PRICES.
 - c. Steel Repair Type 4 - Item No. 9 in SCHEDULE OF PRICES.
 - d. Steel Repair Type 5 - Item No. 10 in SCHEDULE OF PRICES.
 - e. Steel Repair Type 6 - Item No. 11 in SCHEDULE OF PRICES.
 - f. Steel Repair Type 7 - Item No. 12 in SCHEDULE OF PRICES.
 - g. Steel Repair Type 8 - Item No. 13 in SCHEDULE OF PRICES.
- .2 This item shall include all labour, materials and equipment required for removal, repair and reinstatement of the structural repair as detailed in the drawings.
- .3 Payment will be made on the basis of the Unit price, multiplied by the number of repairs successfully removed and replaced.

5.1.10 Charges by the Consultant

- .1 Costs for permits, licenses, and associated costs incurred by the Consultant will be deducted from progress payments. These charges allow the Consultant to recoup any additional costs incurred due to action (or inaction) by the Contractor.

END OF SECTION



Appendices

Keewatin Channel Bridge
Recoating and Steel Repair



Appendix A Kenora Health & Safety Policy





The Corporation of the City of Kenora Occupational Health and Safety Policy

The Corporation of the City of Kenora is committed to preventing occupational illness and injury in the workplace.

We recognize that an effective health and safety program, as indicated by following acceptable industry practices and compliance with legislative requirements, and communication of that program to all workers, will contribute to a reduced risk of injury or illness to workers.

We further recognize that health and safety is the shared commitment and responsibility of us all. Our program is based on the concepts of the Internal Responsibility System wherein responsibilities and authority for health and safety are delegated from the top down and accountability for performance is required from the bottom up.

Senior management is responsible for establishing health and safety policy and ensuring the development of a health and safety system.

Department managers are responsible for the development and implementation of health and safety programs in their departments and for ensuring that their supervisors are performing their required health and safety responsibilities.

Supervisors are responsible to enforce health and safety rules and regulations and to ensure that their workers have the appropriate training, skills, and qualifications to perform their tasks safely.

Workers are responsible to follow employer and regulatory procedures, use their initiative to reduce risk, and to report unresolved issues to their supervisor.

It is the intention of this policy that:

**"No job is so important and no service is so urgent
that we cannot take the time to perform our work safely"**


Chief Administrative Officer


Mayor

Approved by Municipal Council on January 20, 2015

Health and Safety Responsibilities - Contractors

Section Health and Safety Policies	Date March 19, 2012	Approved by By-law Number: 27-2012	Page 1	Of 4
Subsection Responsibilities and Accountabilities	Supersedes By-law Number: 105-2011		Policy Number: HS-05	

PURPOSE

It is the policy of the City of Kenora to require that the provisions of the Occupational Health and Safety Act (Act) and applicable Regulations are complied with:

- where the City of Kenora contracts the performance of work or services (non-construction); and
- where the City of Kenora contracts a “constructor” (as defined in section 1 of the Act) to undertake a project (construction).

The purpose of these requirements is to ensure that all reasonable precautions are taken:

- for the protection of workers; and
- so that the City of Kenora is duly diligent in their duties and responsibilities under the Act.

RESPONSIBILITY

Contract Personnel

Contract personnel are responsible to:

- comply with the requirements of this policy and guideline;
- use their training, knowledge and experience to protect the health and safety of themselves and others;
- report to their supervisor the absence of, or defect in any protective equipment or device; and
- report to their supervisor, any circumstances or conditions that may limit their ability to comply with the requirements of this policy and guideline.

Contractors

Contractors are responsible to:

- enforce and comply with the requirements of this policy and guideline; and
- ensure that their workers are aware of this policy and guideline.

Supervisors (Both City of Kenora and Contract Personnel)

Supervisors are responsible to ensure that:

- contract personnel (non-construction) work in compliance with the requirements of this policy and guideline;

Health and Safety Responsibilities - Contractors

POLICY NO.	PAGE	OF
HS-05	2	4

- contract personnel (non-construction) are aware of the requirements of this policy and guideline;
- protective equipment and devices required to carry out the requirements of this policy and guideline are provided; and
- protective equipment and devices that are provided are maintained in good condition.

Management

Managers are responsible for ensuring all City of Kenora operations are in compliance with applicable legislation and the requirements of this policy and guideline.

PROCEDURE

General

All contractors are required where applicable, to provide to the City of Kenora upon request the following:

- WSIB certificate of clearance;
- third party liability insurance (minimum \$2 million);
- where applicable, federal, provincial and municipal licensing, certification, notification, inspection and approvals;
- occupational health and safety policy and program;
- applicable training documentation for supervisors and workers as specified by The City of Kenora;
- hazardous materials and designated substance inventories; and
- records of health and safety violations and convictions under the Act.

Service Contractors (Non-construction)

In addition to the duties and responsibilities imposed on contractors under the Act, service contractors will ensure:

- the applicable requirements of the City of Kenora's health and safety program are communicated to, understood by and complied with by the workers of the contractor;
- the measures and procedures required by the Act and Regulations (applicable to the work) are carried out;
- appropriate documentation of instruction and communication are maintained and available for review by the City of Kenora; and
- any and all other precautions deemed necessary by the City of Kenora for safeguarding workers, equipment and property are carried out.

The City of Kenora will gauge contractor compliance with these requirements, and reserves the right to terminate services' contracts for any and all violations.

Contractors (and their workers) are required to attend any and all safety related meetings as deemed appropriate by the City of Kenora.

Project Contractors (Construction Projects)

In addition to the duties and responsibilities imposed on contractors (who undertake a construction project for the City of Kenora) under the Act, contractors will ensure:

- the City of Kenora's health and safety requirements for contractors (construction) are incorporated into the project health and safety program;
- a project hazard assessment review is conducted, prepared and submitted to the City of Kenora which includes;
 - analysis and evaluation of hazards;
 - application of controls;
 - instruction and information provided to supervisors and workers regarding hazards;
 - hazardous materials inventory;
 - operational, maintenance and emergency procedures specific to the project assessment; and
 - training in the necessary procedures;
- a written health and safety policy is available, posted and communicated to all workers on the project;
- a project safety program is developed and implemented that details how the contractor will ensure compliance with subsections 23(1), 25(1) and 25(2) of the Act;
- a designated safety representative coordinates health and safety on the project; and
- the designated safety representative attends a project pre-meeting with representatives of the City of Kenora.

Equipment

The contractor is responsible to provide, maintain and ensure that all equipment necessary, including personal protective equipment, is properly used or worn for the duration of the work.

All equipment used by the contractor shall conform to the manufacturer's specifications and comply with all applicable legislation. The City of Kenora reserves the right to prohibit the use of any equipment, methods or practices that do not conform to acceptable standards. Equipment shall be removed from the City of Kenora's premises immediately upon completion of the work.

Health and Safety Responsibilities - Contractors

POLICY NO.	PAGE	OF
HS-05	4	4

TRAINING

All City of Kenora personnel involved with contracting of work will be made aware of the contents of this policy. All training will be documented.

REFERENCES

Occupational Health and Safety Act (Ontario) – Section 23

Wrokwel Core Health and Safety Audit – Element 2.1 (i) and (j)



City of Kenora
Contractor Safety Program



City of Kenora Contractor Safety Program

Introduction

The City of Kenora is committed to the health and safety of all of our employees, and expects the same commitment from each contractor to their own employees.

The City of Kenora has developed this program for use by all contractors who perform work or provide services on City of Kenora premises. Contractors include all on-site service providers, construction contractors and all sub-contractors. Outside carriers, delivery, or pick-up personnel are generally not required to complete the Contractor Safety Program requirements unless the scope of the service that they provide will go beyond the routine delivery or pick-up of commodities at approved points within the City of Kenora. Outside Trainers or Consultants generally are not required to complete the Contractor Safety Program requirements unless the scope of the service that they provide will include health and safety hazards.

This program does not cover all of the site-specific or even project-specific health and safety issues that may arise. This program is by no means meant to be all inclusive of the requirements of the *Occupational Health and Safety Act* (hereinafter referred to as the *Act*) or any other applicable legislation.

The Contractor Safety Program consists of three elements:

1. The General Workplace Safety Requirements for Contractors

This section is a compilation of the specific information that Contractors need to know before and be aware of during the performance of work for the City of Kenora in order to ensure compliance with the program. Not all information in this section applies to all contractors. It is up to individual contractors to review this section and understand the applicable sections based on the work or service that they will be providing to the City of Kenora.

2. Contractor Declaration and Documentation Requirements Checklist

Prior to performing work for the City of Kenora, all new contractors must complete the Contractor Declaration and submit the documentation required as outlined on the form to the City Representative. The declaration must be signed by a representative of the Contractor who has the authority to commit the Contractor to comply with the General Workplace Safety Requirements for Contractors.

3. City of Kenora Contractor Orientation Checklist

It is the Contractor's responsibility to review the General Workplace Safety Requirements for Contractors document with their employees.

Prior to work commencing, the City Representative must complete the orientation checklist with the Contractor. This session will outline the site specific hazards, and emergency and reporting procedures.



City of Kenora Contractor Safety Program

City of Kenora

General Workplace Safety Requirements for Contractors

1. Unless explicitly referenced elsewhere in contract documentation, the Contractor will be designated as the Constructor, as defined by the **Act**, for the purposes of construction project work. As Constructor the Contractor will assume all of the responsibilities as set out in the **Act** and its regulations and shall enforce strict compliance therewith.
2. The Contractor must have an Occupational Health and Safety Policy and a program to implement that policy.
3. The Contractor shall ensure that work is conducted in a safe manner consistent with the intent of the **Act**, and any other Act, regulation, or by-law. Violations of any such legislation may result in the Contractor being removed from the project.
4. The Contractor shall appoint a person to supervise the work and that person shall be a **competent person**, as defined by the **Act**. The Contractor shall provide documentation **to the City's Representative as evidence of the individual's** competence. This could include training records or other such documentation as may be appropriate.
5. During the execution of the work, the Contractor shall ensure that:
 - a) worker safety is given first priority in planning, pricing, and performing the work;
 - b) its officers and supervisory employees have a working knowledge of the duties of a constructor and employer as defined by the Act and the provisions of the regulations applicable to the work, and a personal commitment to comply with them;
 - c) a copy of the most current printing of the Act and applicable regulations are available at the **Contractor's office within the working area or, in the absence of an office, in the possession of the supervisor responsible for the performance of the work;**
 - d) workers employed to carry out the work must possess the knowledge, skills, and protective devices required by law or recommended by a recognized industry association to allow them to work safely;
 - e) its supervisory employees are competent person as defined by the Act and they carry out their duties in a diligent and responsible manner with due consideration for the health and safety of the workers;
 - f) all subcontractors and their employees are properly protected from injury and illness while they are at the workplace.
6. Where required by the Act and its regulations, the Contractor shall register the project with the **Ministry of Labour's Construction Health and Safety** Branch prior to starting work on the site. The Contractor shall pay all registration fees. A copy of the registration must be posted in a visible location **at the site, and submitted to the City's Representative before starting work on site.**
7. The Contractor shall have a written emergency plan, which includes a process for addressing critical injuries, accidents, and incidents as required by sections 51, 52, and 53 of the Act/ The plan must be readily available. If work is on a project, the emergency plan shall be posted on site prior to any work commencement.
8. Where required, the contractor shall provide a telephone, appropriate first aid facilities, eye wash stations and any other measures required for emergency use as identified in the emergency plan.



City of Kenora Contractor Safety Program

9. The contractor shall conduct regular workplace inspections in accordance with the Act. The contractor must immediately address any preventive or corrective measures required to maintain site safety.

10. The contractor shall, throughout the course of the work, make **the City's representative** aware of all accidents/incidents that occur involving the **contractor or the contractor's employees**.

11. The City's representative will stop the work immediately for any violation of the Act or regulations that they become aware of. The contractor shall not resume the work until any such violation has been rectified.

12. The contractor shall be responsible for any delay in the progress of the work due to a violation of legislated requirements or City health and safety requirements of which the contractor has been advised, and shall take the necessary steps to avoid delay in the final completion of the work without additional cost to the City.



City of Kenora Contractor Safety Program

Declaration

I have received and read the "City of Kenora Contractor Safety Program". As the owner or authorized representative of the contracted services, I understand that I am fully responsible for ensuring that all of our employees, subcontractors, and visitors comply with all necessary rules and regulations outlined therein and with all applicable regulations made under the Occupational Health and Safety Act.

Name: _____

Signature: _____

Company Name: _____

Witness: _____



City of Kenora Contractor Safety Program

Contractor Document Requirements

The documentation required from the contractor will be dependent on the scope of the work to be performed. Prior to commencement of work the contractor will be advised as to which of the following documentation will need to be provided to the City of Kenora Representative for review. This list is not intended to be all inclusive and additional documentation may be requested at the discretion of the City of Kenora Representative.

- ☐ Contractor Safety Policy
- ☐ Certificate of Liability Insurance
- ☐ Valid WSIB Clearance Certificate
- ☐ Certificate of Personal Disability Coverage
- ☐ **Supervisor's Name and Phone Number**
- ☐ **Contractor's List of First Aiders**
- ☐ **Contractor's** Emergency Contact Numbers
- ☐ Training Records Supporting Competency of Supervisor
- ☐ Approved Registration Form (As per Section 5 of O. Reg. 213/91)
- ☐ Notice of Project Form if Required (As per Section 6 of O. Reg. 213/91)
- ☐ Generator Registration Number (if removing hazardous waste)

City Representative Name

Owner of the Contracted Services

Signature of City Representative

Signature of Owner



City of Kenora Contractor Safety Program

Contractor Initial Orientation

Prior to any "work" being done by the contractor, an initial orientation must be held. The City Representative shall conduct this orientation. Work must never begin before the orientation has taken place and information is conveyed to all contractor employees. If all contractor employees are not present for the orientation, it is the responsibility of the Contractor Representative to convey this information to the contractor employees.

Where there is an established scope of work, location, conditions, hazards, and they will not change during a twelve-month period, then a yearly orientation can be held.

The City's Representative is to review and check off the following items with the contractor:

- ☐ Inform the contractor of the Health and Safety hazards or requirements of the area in which they will be working. The contractor site supervisor (or appropriate designate) is responsible to convey this information to all contract personnel working on the project or job.
- ☐ The City of Kenora emergency procedures and evacuation procedures as they apply to the work being performed.

City Representative Name

Contractor Name

City Representative Signature

Contractor Signature

Date



City of Kenora Contractor Safety Program

Appendix

Internal Procedures for Hiring Contractors



City of Kenora Contractor Safety Program

The City of Kenora is committed to the health and safety of all our employees and expects the same commitment from each contractor to their own employees.

A City representative is the point of contact for the contractor while performing work for the City of Kenora.

Definitions (from the Occupational Health and Safety Act)

Competent person means a person who:

- (a) is qualified because of knowledge, training and experience to organize the work and its performance,
- (b) is familiar with this Act and the regulations that apply to the work, and
- (c) has knowledge of any potential or actual danger to health or safety in the workplace.

Construction includes erection, alteration, repair, dismantling, demolition, structural maintenance, painting, land clearing, earth moving, grading, excavating, trenching, digging, boring, drilling, blasting, or concreting, the installation of any machinery or plant, and any work or undertaking in connection with a project but does not include any work or undertaking underground in a mine.

Maintenance vs. Construction – According to the **Ministry of Labour's Construction vs. Maintenance** Policy, contract work is considered construction if the contract activities are mentioned in the definition of construction and are performed on objects mentioned in the definition of project. Those construction activities not performed on objects mentioned in the definition of project would be considered maintenance and would be covered by the industrial regulations. For example, an alteration, repair, or dismantling performed on a building, bridge, or structure, is construction, whereas the same activities carried out on machinery or equipment would be maintenance. Similarly, structural maintenance and installations are considered to be construction, whereas routine plant maintenance is considered to be maintenance.

Constructor means a person who undertakes a project for an owner and includes an owner who undertakes all or part of a project by himself or by more than one employer.

Employer means a person who employs one or more workers or contracts for the services of one or more workers and includes a contractor or subcontractor who undertakes with an owner, constructor, contractor, or subcontractor to perform work or supply services.

Owner includes a trustee, receiver, mortgagee in possession, tenant, lessee, or occupier of any lands or premises used or to be used as a workplace, and a person who acts for or on behalf of an owner as an agent or delegate.

Project means a construction project, whether public or private, including:

- (a) the construction of a building, bridge, structure, industrial establishment, mining plant, shaft, tunnel, caisson, trench, excavation, highway, railway, street, runway, parking lot, coffer dam, conduit, sewer, water-main, service connection, telegraph, telephone or electrical cable, pipe line, duct or well, or any combination thereof,



City of Kenora Contractor Safety Program

- (b) the moving of a building or a structure, and
- (c) any work or undertaking, or any lands or appurtenances used in connection with construction.

Supervisor means a person who has charge of a workplace or authority over a worker.

Worker means a person who performs work or supplies services for monetary compensation but does not include an inmate of a correctional institution or like institution or facility who participates inside the institution or facility in a work project or rehabilitation program.

Workplace means any land, premises, location or thing at, upon, in or near which a worker works.

Procedure

For all contracts for services:

- Determine the nature of the work
- Determine the health and safety hazards, and
- Classify the contract work.

a) A construction project that has significant health and safety hazards. Examples would include but are not limited to construction of a community centre, renovations, replacement of a boiler and other major equipment.

b) Maintenance with significant health and safety hazards. Examples would include but are not limited to window washing, annual inspection of roof top anchors, replacement of heating coils, or electrical repairs.

c) No significant health and safety hazards. Examples would include but are not limited to photocopier maintenance and using external training consultants.

For tender contracts it will be the responsibility of the department issuing the tender to obtain the required information from the contractors. For contracts that are not tendered, the City Representative will be responsible for obtaining this information.

For the contracts classified with health and safety hazards, those contractors must be given a copy of the City of Kenora Contractor Safety Program. The contractor must complete the Contractor declaration portion of this document and provide the **City's Representative with the required** documentation prior to the work commencing.

At the beginning of the work the **City's Representative will be responsible to provide the contractor** with the appropriate orientation which will include;

- Identification of all known hazards
- A walk through of the work area, and
- Locations of all emergency exits and the procedure for evacuation. (If applicable to the work being performed.)

If at any time a contractor is observed performing work unsafely or contrary to the Act or regulations this must be addressed immediately. The contractor must be made to stop what they are doing and the contractor will not resume the work until such contraventions have been rectified.

Appendix B DFO Interim Code of Practice





Government
of Canada

Gouvernement
du Canada

[Canada.ca](#) › [Fisheries and Oceans Canada](#) › [Projects near water](#) › [Codes of practice](#)

Interim code of practice: bridge repair and maintenance

On this page

- [About this code of practice](#)
- [Conditions](#)
- [Measures to protect fish and fish habitat](#)
- [Glossary](#)

1.0 About this code of practice

This code of practice outlines Fisheries and Oceans Canada's (DFO) national best practices for the repair and maintenance of bridges. Bridge repair and maintenance is generally undertaken to extend the life of the structure and to ensure that it functions as designed, thus ensuring public safety. This code of practice applies to structural bridge repairs and maintenance including:

- structural repair and maintenance of all bridge components (substructure, superstructure and deck)
- cleaning, sweeping and washing of all bridge components, including the removal and application of protective coatings
- removal of debris to protect piers and abutments

You can protect fish and fish habitat when proceeding with the repair and maintenance of bridges by following the measures listed below. When implemented correctly, these measures can mitigate risks to fish and fish habitat associated with the repair and maintenance work, which can include:

- disturbance of water body bed and banks
- release of sediments or other deleterious substances
- changes to aquatic habitat

DFO is responsible for the conservation and protection of fish and fish habitat across Canada. Under the *Fisheries Act*, no one may carry out works, undertakings and activities in or near water that result in the harmful alteration, disruption or destruction (HADD) of fish habitat, or the death of fish, unless it has been authorized by DFO. Prohibitions in the *Aquatic Invasive Species Regulations* must also be followed unless authorized under federal or provincial law. DFO's approval under the *Species at Risk Act* is also required if an activity affects an aquatic species at risk, any part of its critical habitat or the residences of its individuals.

The purpose of this code of practice is to describe the conditions under which it can be applied to your project and the measures to implement in order to avoid harmful impacts to fish and fish habitat and comply with the *Fisheries Act* and the *Species at Risk Act*. If you cannot meet all of the conditions and implement all of the applicable measures listed below, your project may result in a violation of the *Fisheries Act* and the *Species at Risk Act* and you could be subject to enforcement action.

If you are uncertain about whether this code of practice is applicable to your project, it is recommended that you consult our website or a qualified environmental professional to determine if other codes of practice should also be implemented, or if further review by DFO may be necessary. For any

remaining questions, please contact the Fish and Fish Habitat Protection Program office located in your area. It remains your responsibility to comply with the *Fisheries Act* and the *Species at Risk Act*.

It is your Duty to Notify DFO if you have caused, or are about to cause, the unauthorized death of fish by means other than fishing or the harmful alteration, disruption or destruction of fish habitat. Such notifications should be directed to the Fish and Fish Habitat Protection Program office located in your area.

This code of practice does not remove nor replace the obligation to comply with the requirements of any other federal, territorial, provincial or municipal regulatory agency including guidance regarding species and habitats managed by these jurisdictions.

It is good practice to notify nearby Indigenous communities before starting the project.

A project review by DFO is not required when the project activities meet the description in section 1 and the conditions in section 2 and when the measures to protect fish and fish habitat set out in section 3 of this code of practice are applied. Request a project review if your project does not meet all of these requirements.

2.0 Conditions

The following conditions describe when this code of practice can be applied:

- determine if there are aquatic species at risk within the affected area by consulting our aquatic species at risk map and confirm that the

work will not take place within:

- the distribution area of molluscs listed under schedule 1 of the *Species at Risk Act*
- the critical habitat or residences of any other aquatic species at risk
- this work does not include:
 - realigning the watercourse or replacing the existing bridge
 - placing fill, excavating or grading the bed or bank of the water body, or new dredging (for maintenance dredging, please see code of practice for Routine Maintenance Dredging for Navigation)
 - use of explosives
 - water withdrawal that exceeds 10% of the actual (instantaneous) flow
- ensure that there is no temporary or permanent increase in the existing footprint below the ordinary high water mark
- implement the measures in section 3 to protect fish and fish habitat when carrying out the works, undertakings and activities

As a condition of this code of practice, please submit a notification form to your regional DFO office 10 working days before starting work. Notification forms will inform the continuous improvement of the codes of practice over time.



To fill out a PDF form, you must:

1. download it to your computer
2. use PDF software to open it (such as, Adobe Reader or Foxit PDF)

For more information: [How to download and open a PDF form](#)

3.0 Measures to protect fish and fish habitat

3.1 Protection of fish

- carry out the project in accordance with timing windows
- limit the duration of in-water works, undertakings and activities
- screen intake pipes during all phases of the project
 - use interim code of practice: End-of-pipe fish protection screens for small water intakes in freshwater

3.2 Protection of fish passage

- maintain fish passage during all phases of the project
- ensure that reinforcement rock placed at the base of abutments, piers and wing walls does not interfere with fish passage or constrict the channel width

3.3 Protection of the riparian zone

- limit vegetation removal, pruning and grubbing to the area required for accessing the project site
 - use existing trails, roads, access points or cut lines
 - use methods to reduce soil compaction (e.g., swamp mats, pads)
- reinstate stream banks and slopes of the affected riparian zone
- re-vegetate the affected riparian zone with native species suitable for the project site

3.4 Protection of aquatic habitat

- limit operation of vehicles and machinery to the area required to carry out the project
- ensure equipment and machinery are clean and free of aquatic invasive species once on the project site

- operate machinery on land, from barges or on ice during all phases of the project

3.5 Protection of fish and fish habitat from sediment

- manage sediment laden water flowing onto or through the site during all phases of the project
 - install erosion and sediment control measures prior to beginning of project:
 - develop and implement an erosion and sediment control plan for all phases of the project
 - regularly observe the watercourse or water body for signs of sedimentation during all phases of the project and take corrective action where required
 - inspect the erosion and sediment controls regularly during all phases of the projects
 - repair the erosion and sediment controls during all phases of project
 - operate machinery on land in stable dry areas
 - use biodegradable materials for erosion and sediment controls whenever possible
 - remove all erosion and sediment controls (unless biodegradable) once the site has been stabilized
 - dispose of and stabilize all material on land in a designated area away from the ordinary high water mark of any water body
 - Keep erosion and sediment controls in place until all disturbed ground has been stabilized and suspended sediments have settled
- if replacement rock reinforcement is required to stabilize eroding piers and abutments:

- place appropriately-sized, clean rocks into the eroding area
- install rock at a similar slope to maintain a uniform stream bank and natural stream alignment

3.6 Protection of fish and fish habitat from other deleterious substances

3.6.1 Develop a prevention plan

- develop a plan to prevent deleterious substances from entering a watercourse or water body:
 - maintain all machinery on the project site in a clean condition and free of fluid leaks
 - wash, refuel and service machinery in such a way as to prevent any deleterious substances from entering a watercourse or a water body
 - store fuel and other materials for the machinery in such a way as to prevent any deleterious substances from entering a watercourse or water body
 - dispose of all waste material on land in a designated area away from the ordinary high water mark of any watercourse or water body
 - ensure that acid generating rock is not used where it does not exist already

Deck sweeping and washing

- seal drains and open joints before sweeping and washing
- clean and remove debris and sediment from drainage devices
- sweep deck prior to washing
- direct wash-water to a vegetated area to remove suspended solids, dissipate velocity and prevent sediment and other deleterious

substances from entering a watercourse or water body

Removal and application of protective coatings

- use measures such as barges or shrouding to trap and prevent sand blasting abrasives, protective coatings, rust and grease and cement from entering a watercourse or water body
- contain paint flakes, abrasives and other waste materials for safe disposal
- store, mix and transfer paints and solvents on land to prevent these materials from entering the watercourse or water body

Removal of debris (e.g., including woody debris, garbage, ice jams etc.)

- limit the removal of material to that which is necessary to protect piers and abutments
- remove debris with machinery operating from shore or a floating barge

Structural repairs and reinforcements

- use barges or shrouding to trap and prevent concrete and other bridge materials from entering a watercourse or water body

3.6.2 Implement a response plan

- implement a response plan immediately in the event of a spill of a deleterious substance (including sediment):
 - stop all works, undertakings and activities
 - report spill immediately, when a deleterious substance enters a watercourse or water body
 - contain water with deleterious substances
 - clean-up and dispose of water contaminated with deleterious substances

- use an emergency spill kit

4.0 Glossary

Affected area

The area within which all of the proposed project impacts are likely to occur either directly (i.e., project footprint) or indirectly (i.e., downstream or other surrounding areas).

Aquatic invasive species

Aquatic invasive species are fish, invertebrate or plant species that have been introduced into a new aquatic environment, outside of their natural range. See more information on [Aquatic invasive species](#).

Aquatic species at risk

Any aquatic species listed under Schedule 1 of the *Species at Risk Act* as endangered, threatened, or extirpated.

Deleterious substance

Any substance that, if added to any water, would degrade, alter, or form part of a process of degradation/alteration to the quality of that water so that it is possibly rendered deleterious to fish, fish habitat, or to the human use of fish that frequent that water. For example: fuel, lubricants, paint, primers, rust, solvents, degreasers, antifreeze, uncured concrete, creosote, chlorinated water, herbicides, debris etc.

Harmful alteration, disruption or destruction (HADD)

Any temporary or permanent change to fish habitat that directly or indirectly impairs the habitat's capacity to support 1 or more life processes of fish.

Ordinary high water mark

The usual or average level to which a body of water rises at its highest point and remains for sufficient time to change the characteristics of the land. In flowing waters (e.g., rivers, streams) this refers to the "active

channel/bank-full level" which is often the 1:2 year flood flow return level. In inland lakes, wetlands or marine environments it refers to those parts of the water body, bed and banks that are frequently flooded by water so as to leave a mark on the land and where the natural vegetation changes from predominately aquatic vegetation to terrestrial vegetation (excepting water tolerant species). For reservoirs this refers to normal high operating levels (i.e. full supply level).

Riparian vegetation

Occurs adjacent to the water body and directly contributes to fish habitat by providing shade, cover and areas for spawning and food production.

Riparian zone

Area located between a water body's ordinary high water mark and upland area. The width of the riparian zone may be further defined by provincial/territorial, municipal regulations or guidelines.

Qualified Environmental Professional (QEP)

A person who is experienced in identifying and assessing potential impacts to fish and fish habitat generated from various works, undertakings or activities conducted in or near water, and implementing management measures to avoid and mitigate them. QEPs possess a post-secondary degree or diploma in biological, geophysical or environmental sciences and are often referred to as:

- aquatic biologist
- fisheries biologist
- fluvial geomorphologist
- applied scientist
- fisheries technician
- environmental consultant
- natural resource consultant

Date modified:

2023-11-06

Appendix C Acuren Paint Testing Results



Client		Laboratory Report	
STANTEC CONSULTING LTD, 500-311 Portage Avenue, Winnipeg, MB, R3B 2B9			
Attention	Client's Order Number	Date	Report Number
Eric Tranquada	113733903	May. 6, 2024	128-24-STA025-J137305 Rev.00
Client's Material /Product Description		Date Sample Received	Material / Product Specification
Paint samples from the Keewatin Channel Bridge		Apr. 15, 2024	-----

1. Introduction

Acuren Group Inc. received 3 bags of paint samples removed from the Keewatin Channel bridge. It was requested to analyze the samples in each bag to identify any hazardous elements including Lead. Moreover, FTIR analysis was conducted to determine the polymeric nature of the paints.

2. SEM-EDS Analysis

The paint chips were transferred to carbon tape for analysis by means of SEM-EDS. The samples in the 3 bags were labeled as "NT V1 5 EXT. PAINT", "NT V1 5 SILVER", and "NT YELLOW" by the client, Figure 1. It was found that the NT V1 5 SILVER paint chips showed different colors on each side (dark and white), so the EDS analysis was conducted on both dark and white sides. Similar to NT V1 5 SILVER, NT YELLOW shows different colors on two sides (yellow and dark), therefore, the EDS analysis was conducted on both yellow and dark side for NT YELLOW. A list of the submitted paint samples and harmful toxins identified can be found in Table 1.

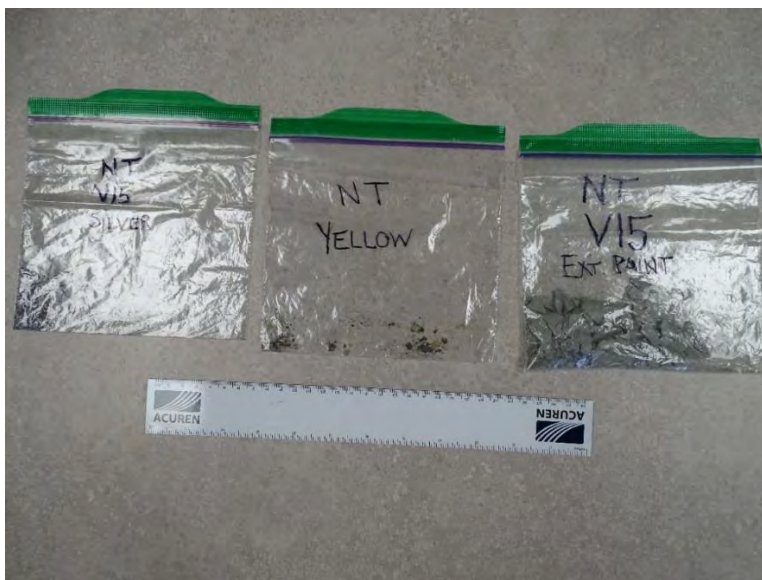


Figure 1. As-received paint samples

Table 1. List of tested paint samples

Sample Label	Harmful Toxins Detected (if any)	Reference
Chip #1, NT V15 EXT. PAINT	None	Figure 2 to Figure 4
Chip #2, NT V15 EXT. PAINT	None	Figure 5
Chip #3 (white side), NT V15 SILVER	Pb (31 Wt. %)	Figure 6 to Figure 8
Chip #4 (dark side), NT V15 SILVER	Pb (41 Wt. %)	Figure 9
Chip #5 (yellow side), NT YELLOW	Pb (3 Wt. %)	Figure 10 to Figure 12
Chip #6 (dark side), NT YELLOW	Pb (34 Wt. %)	Figure 13 to Figure 15

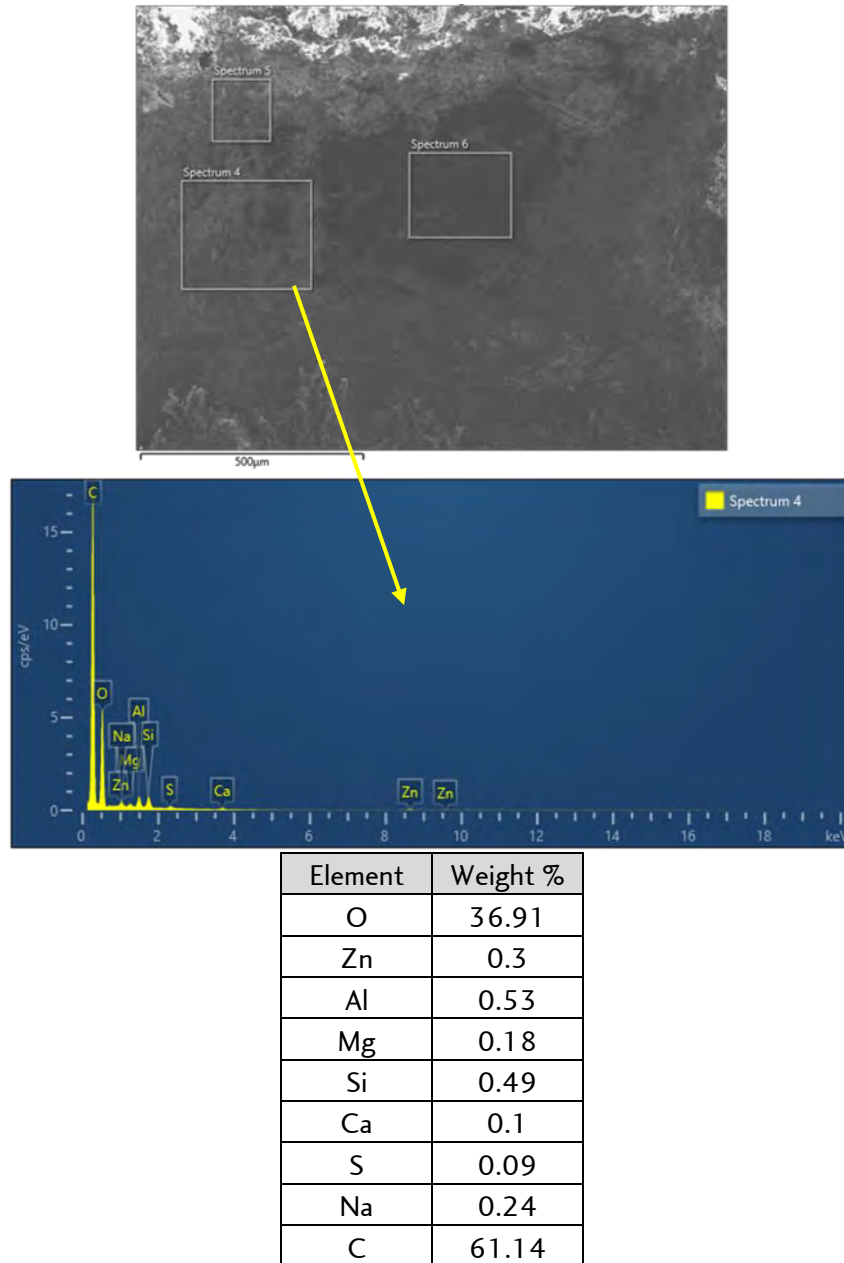


Figure 2. SEM image and EDS results of paint chip #1, NT V1 5 EXT. PAINT

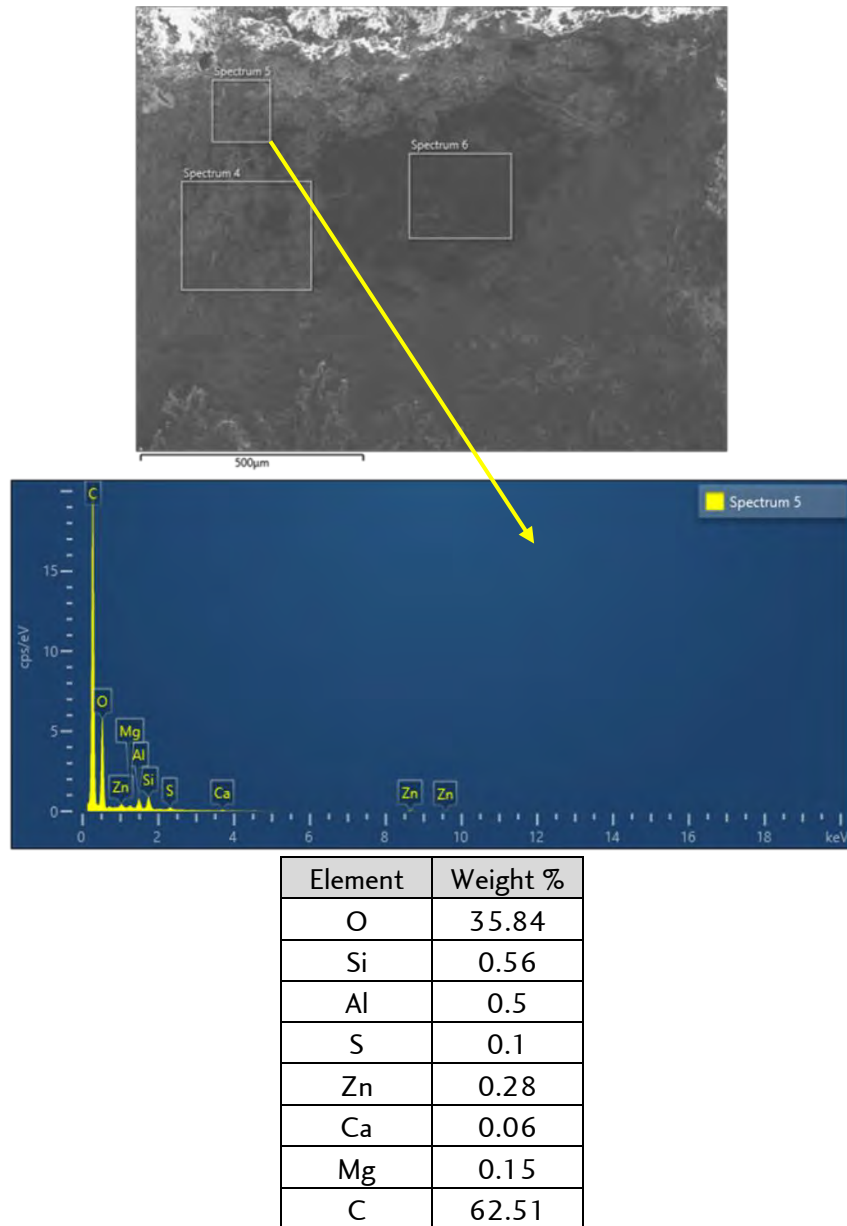


Figure 3. SEM image and EDS results of chip #1, NT V1 5 EXT. PAINT

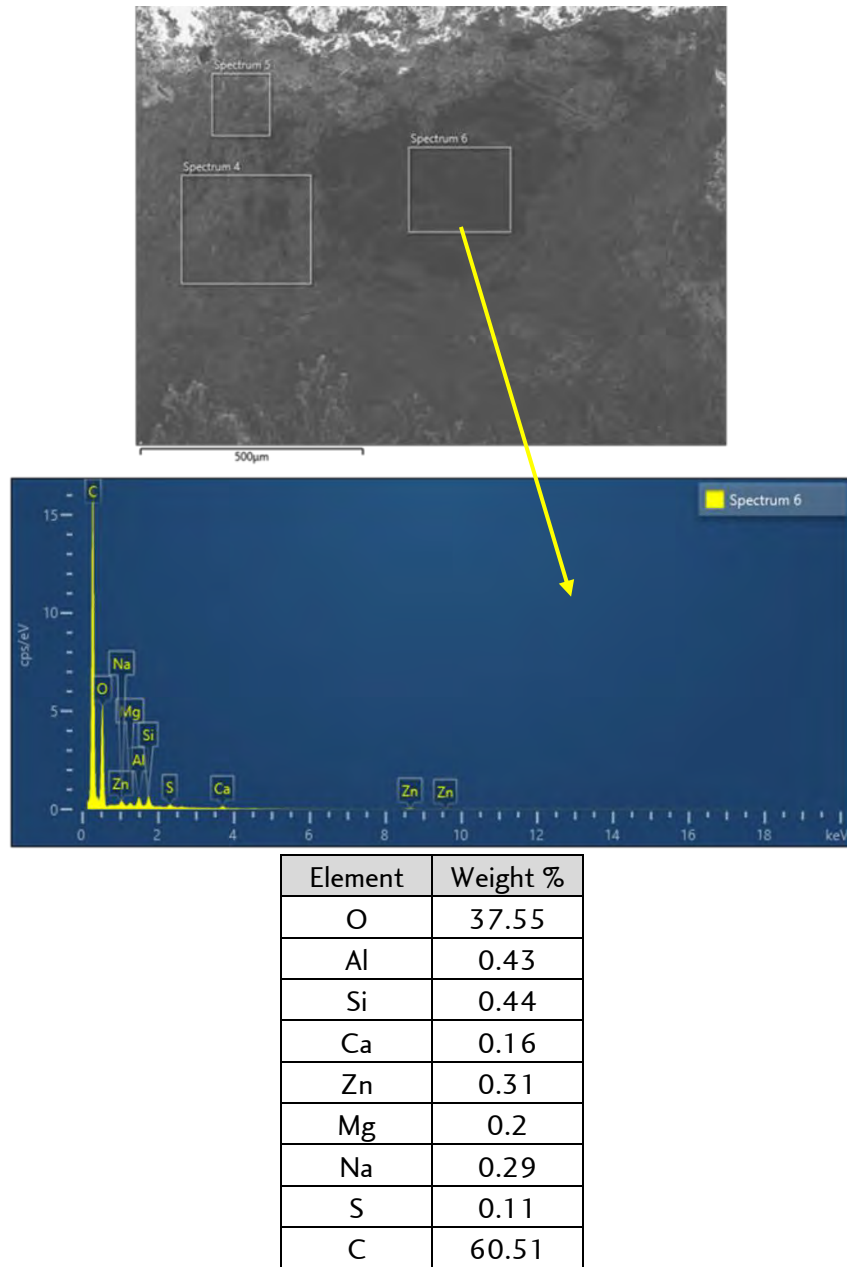


Figure 4. SEM image and EDS results of chip #1, NT V1 5 EXT. PAINT

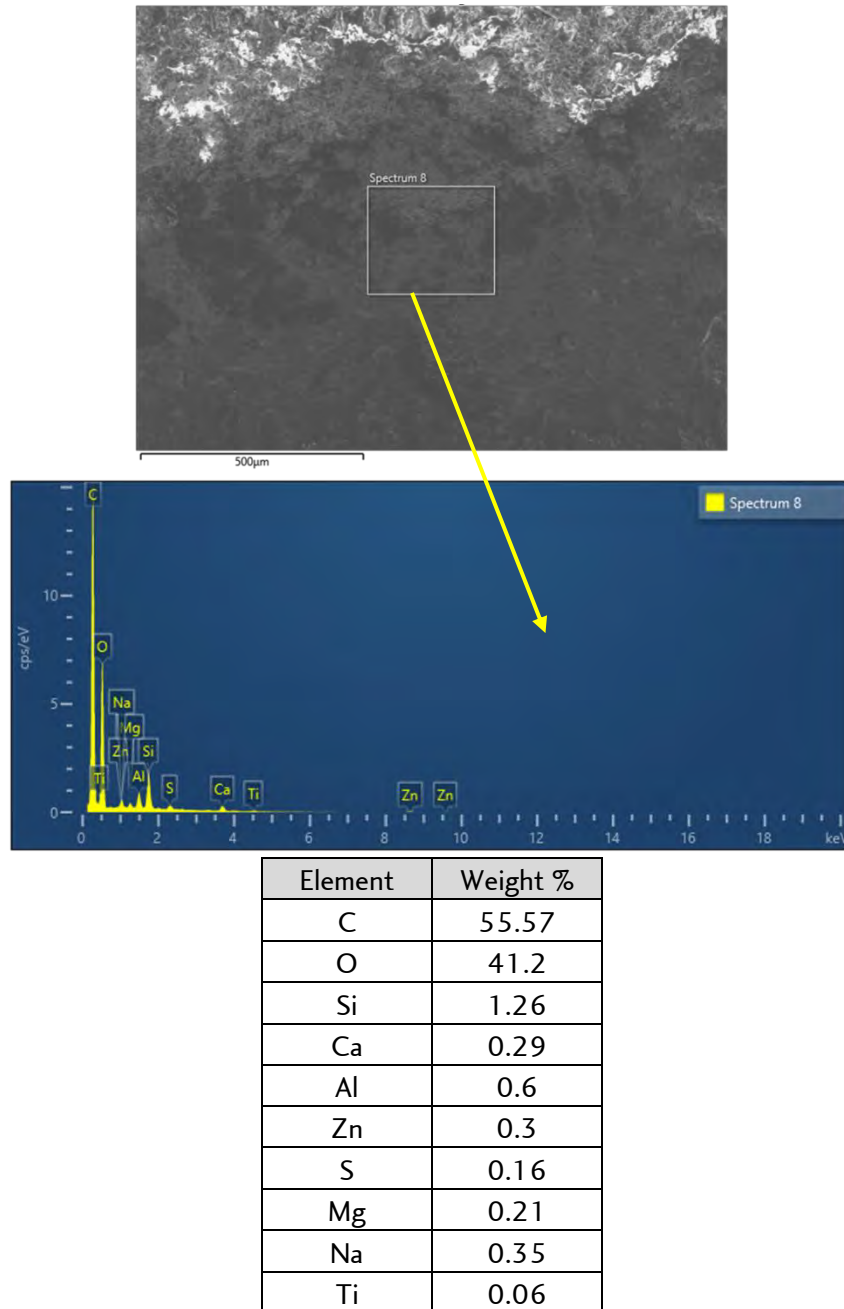


Figure 5. SEM image and EDS results of chip #2, NT V1 5 EXT. PAINT

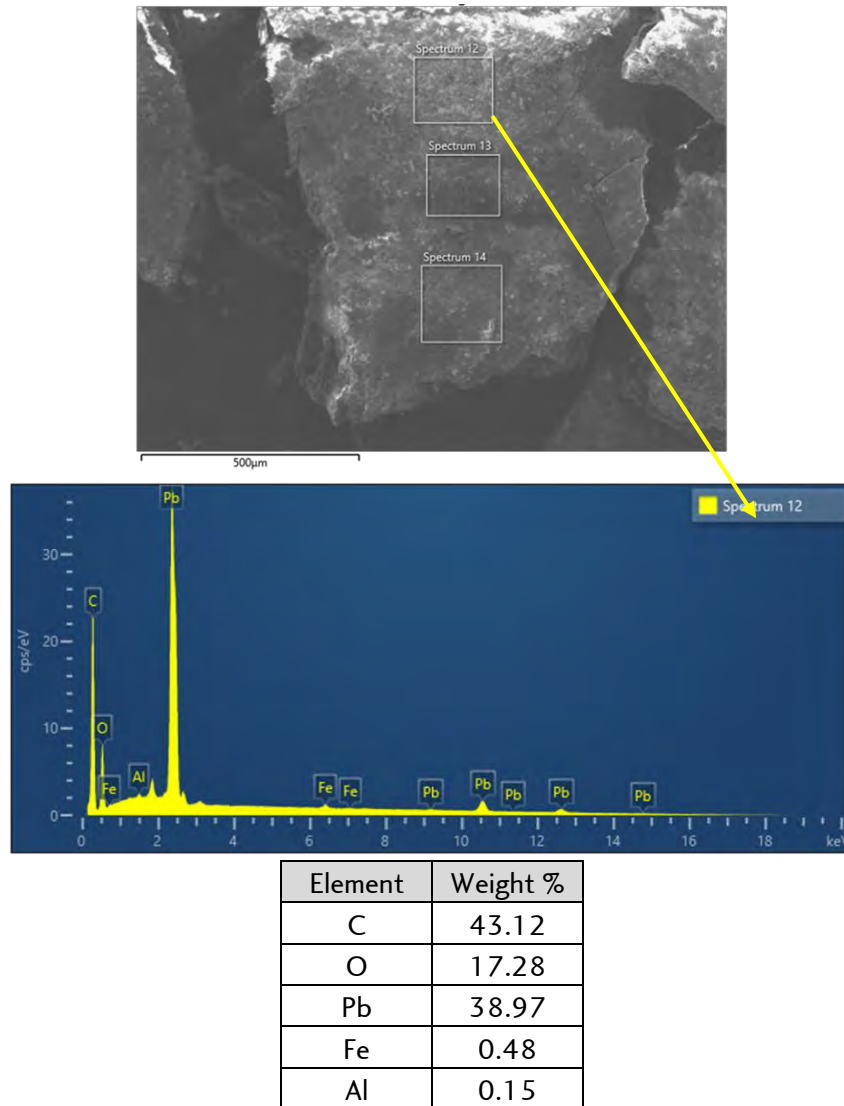


Figure 6. SEM image and EDS results of the paint chip #3 (white side), NT V1 5 SILVER

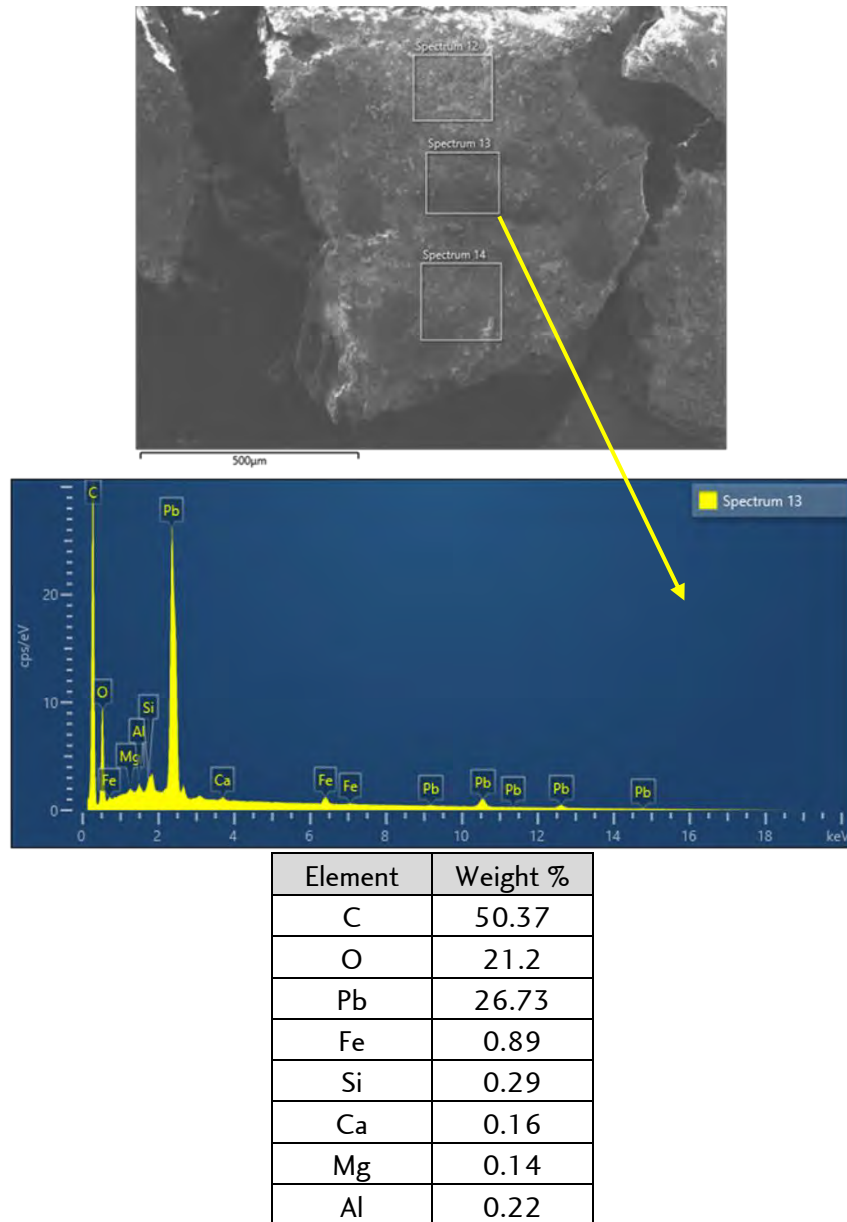


Figure 7. SEM image and EDS results of the paint chip #3 (white side), NT V1 5 SILVER

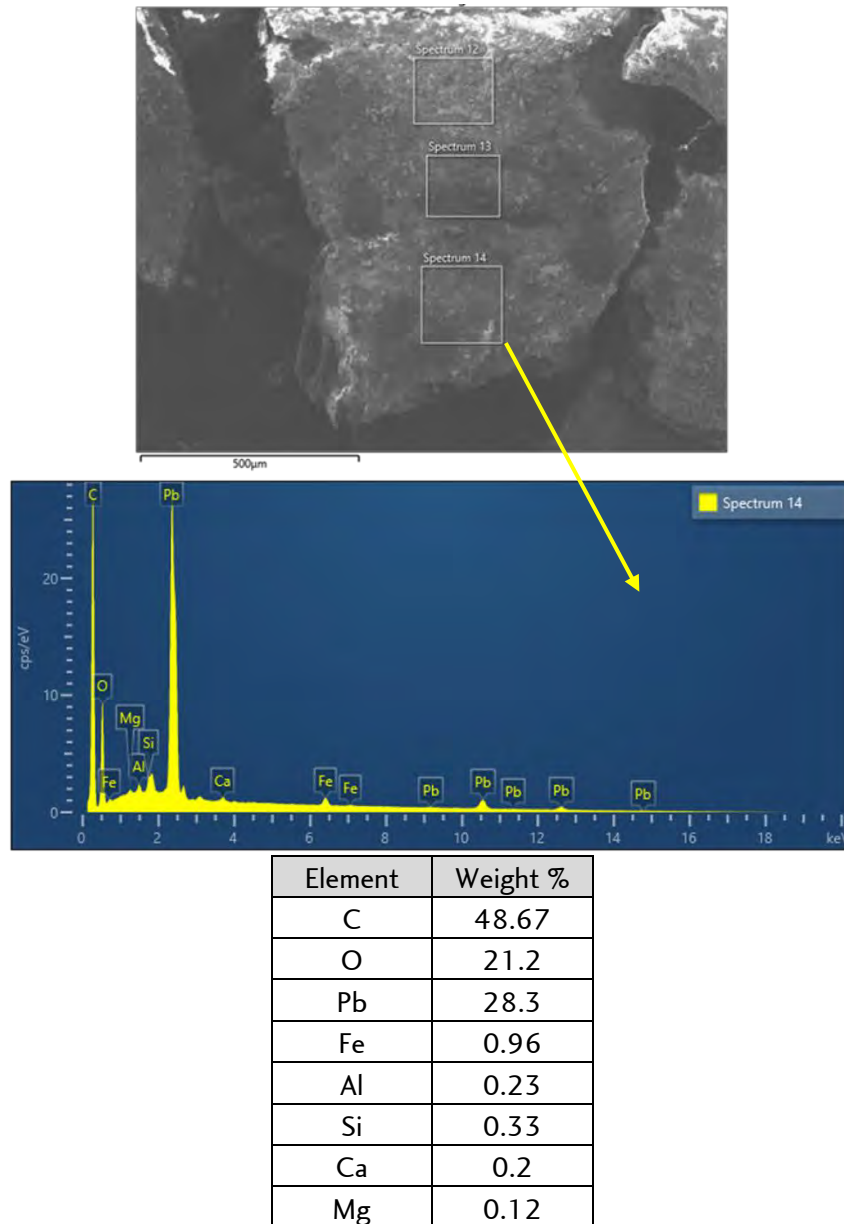


Figure 8. SEM image and EDS results of the paint chip #3 (white side), NT V1 5 SILVER

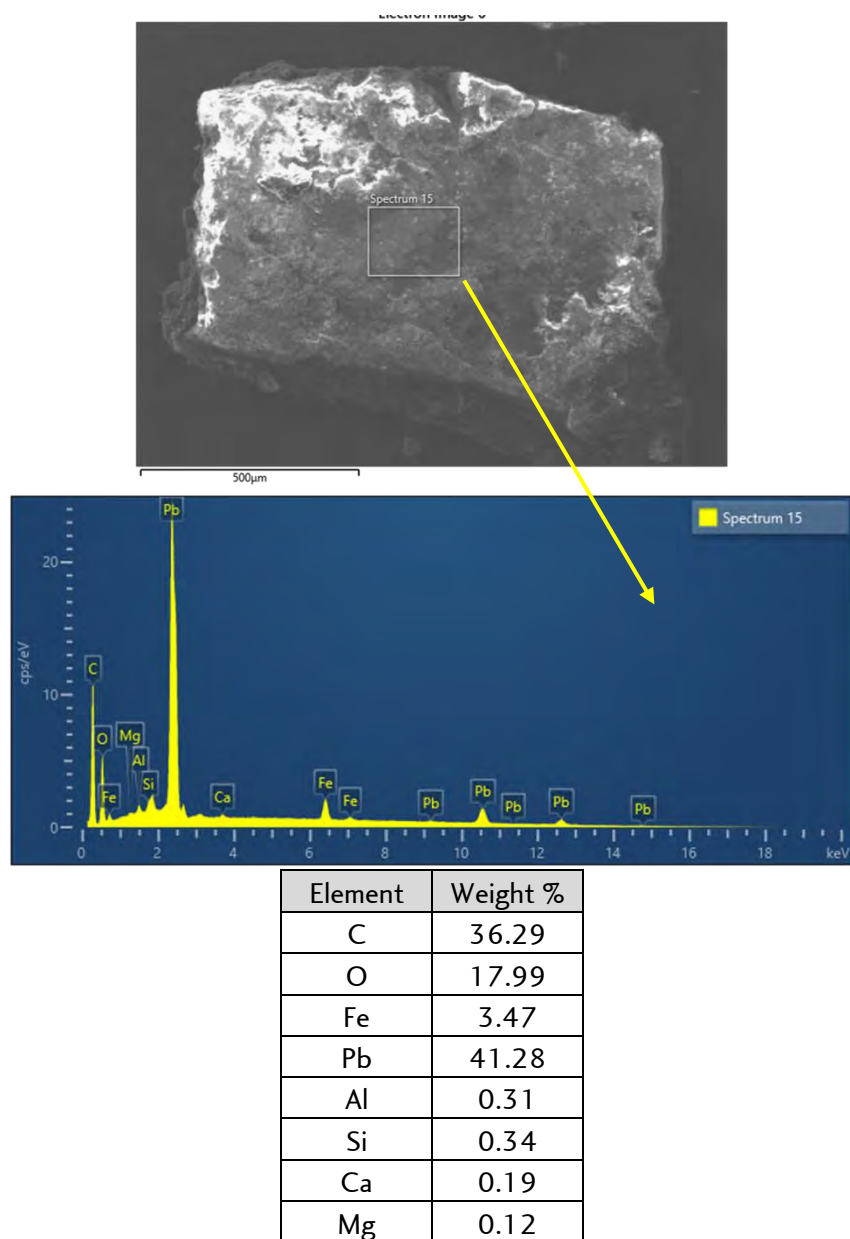


Figure 9. SEM image and EDS results of the paint chip #4 (dark side), NT V1 5 SILVER

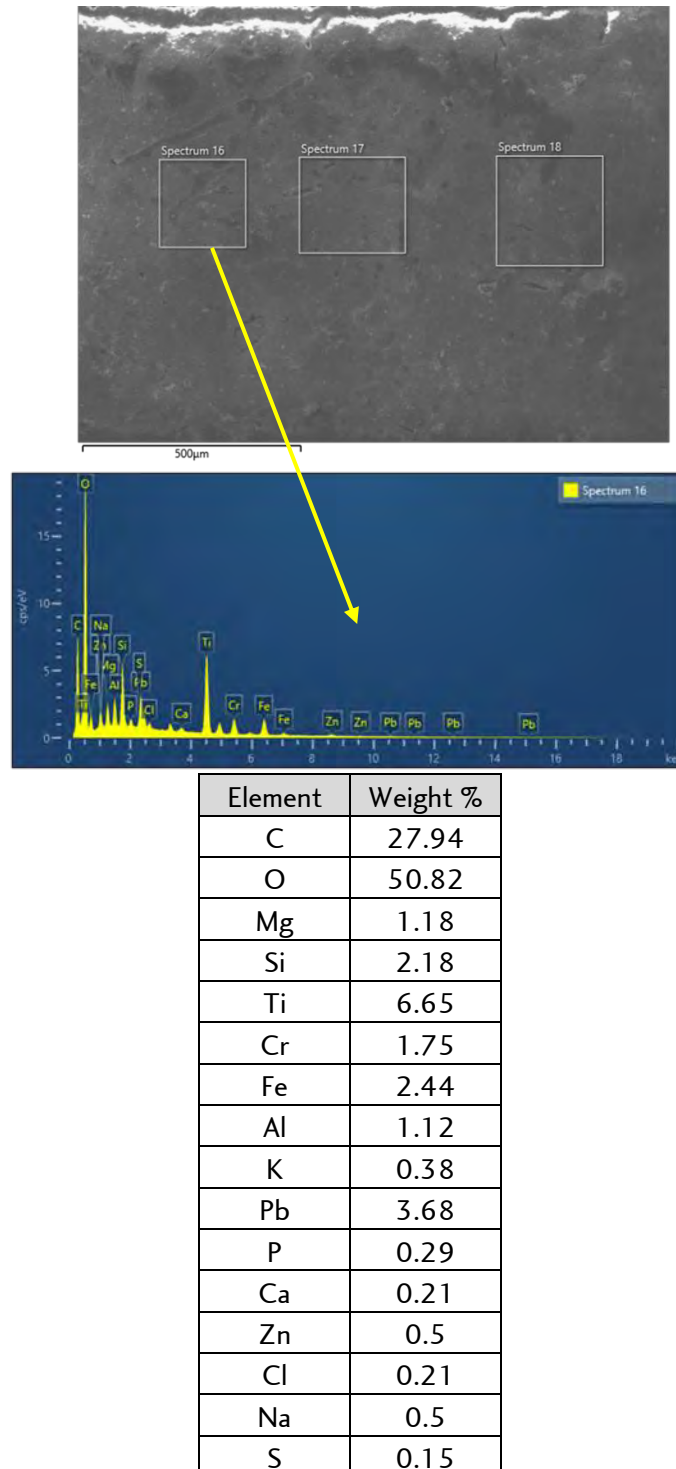
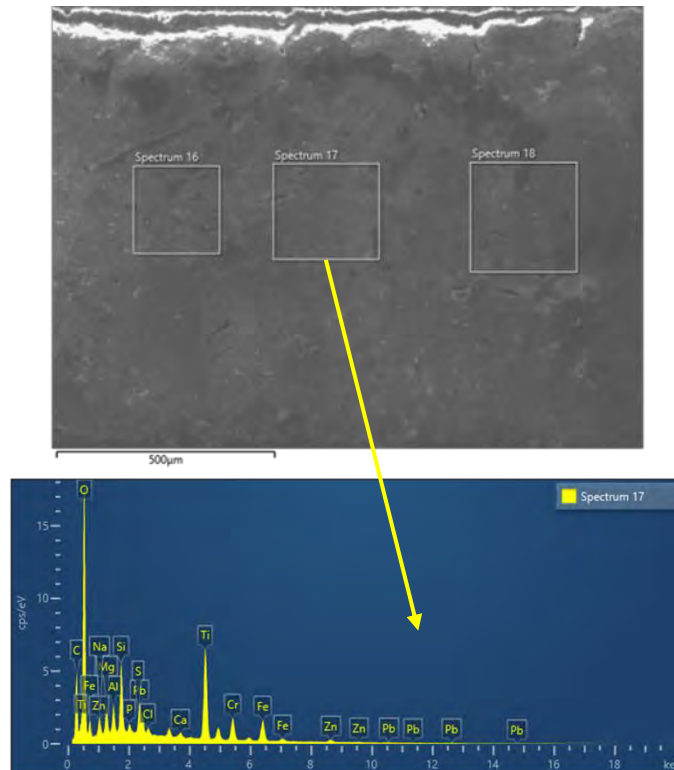


Figure 10. SEM image and EDS results of the paint chip #5 (yellow side), NT YELLOW



Element	Weight %
C	22.16
O	51.63
Mg	1.56
Si	2.69
K	0.45
Ti	7.94
Cr	2.65
Fe	3.38
Pb	3.88
Al	1.2
Zn	0.82
P	0.36
Ca	0.28
Cl	0.27
S	0.14
Na	0.57

Figure 11. SEM image and EDS results of the paint chip #5 (yellow side), NT YELLOW

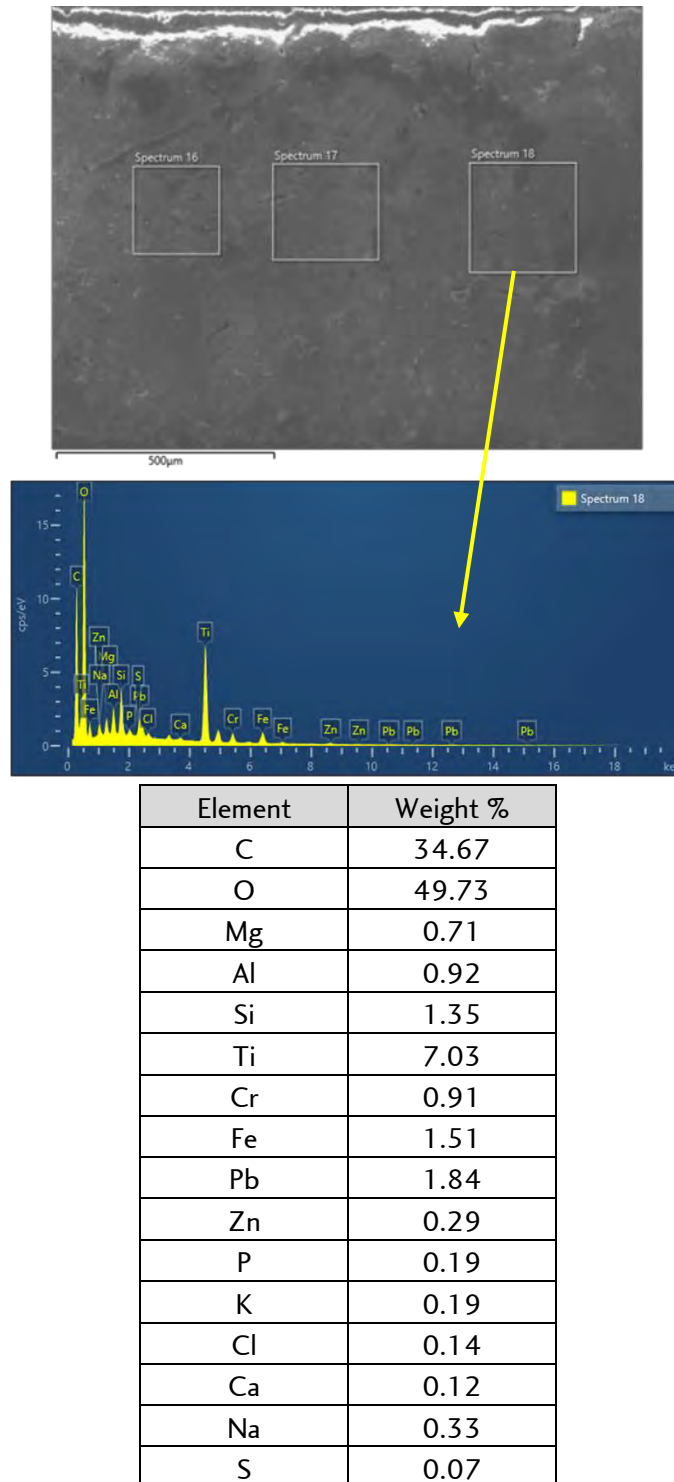


Figure 12. SEM image and EDS results of the paint chip #5 (yellow side), NT YELLOW

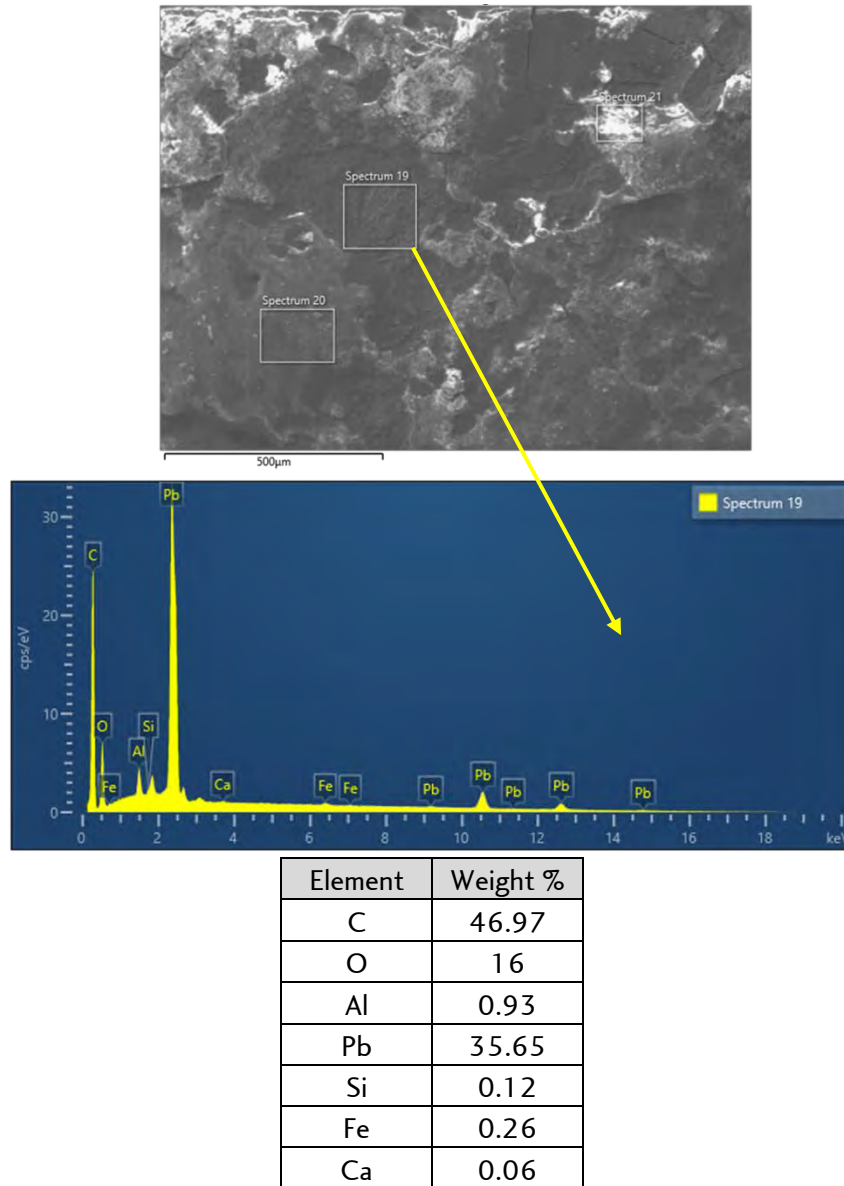


Figure 13. SEM image and EDS results of the paint chip #6 (dark side), NT YELLOW

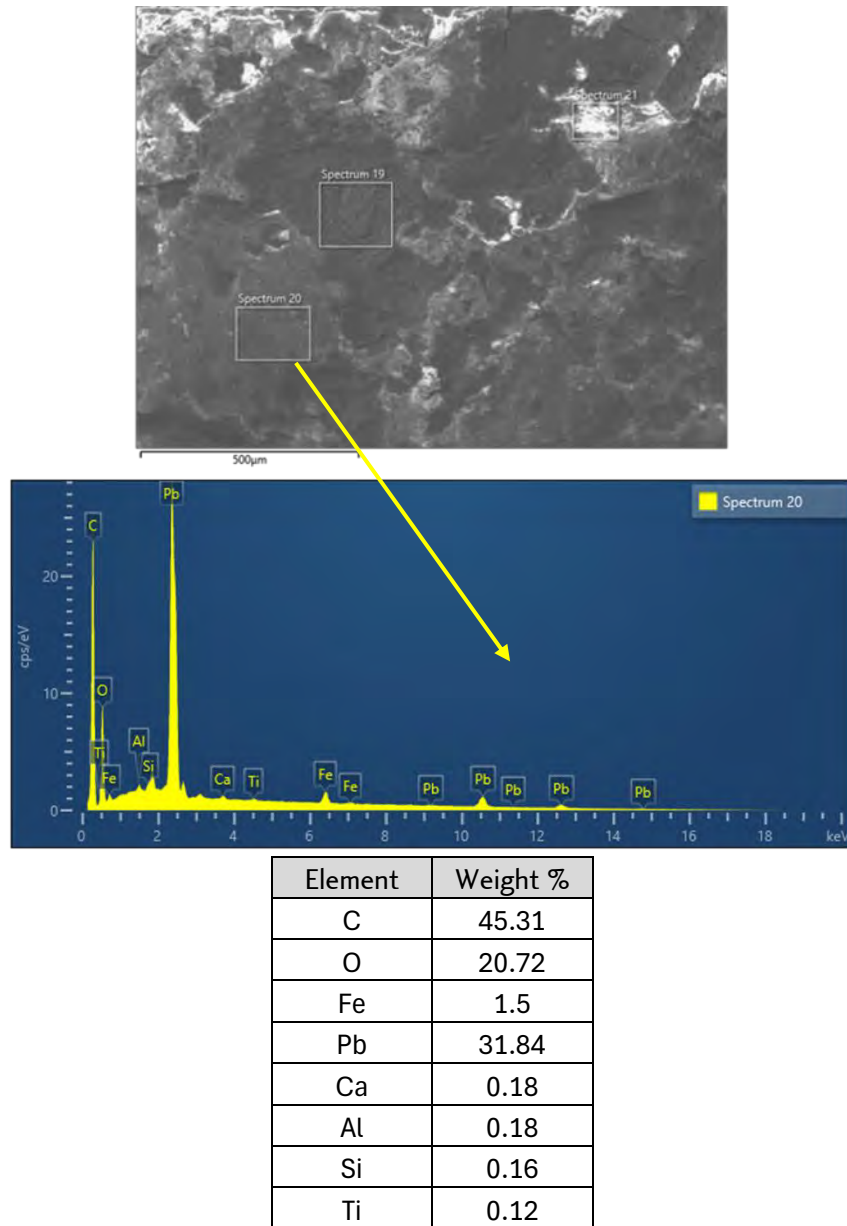


Figure 14. SEM image and EDS results of the paint chip #6 (dark side), NT YELLOW

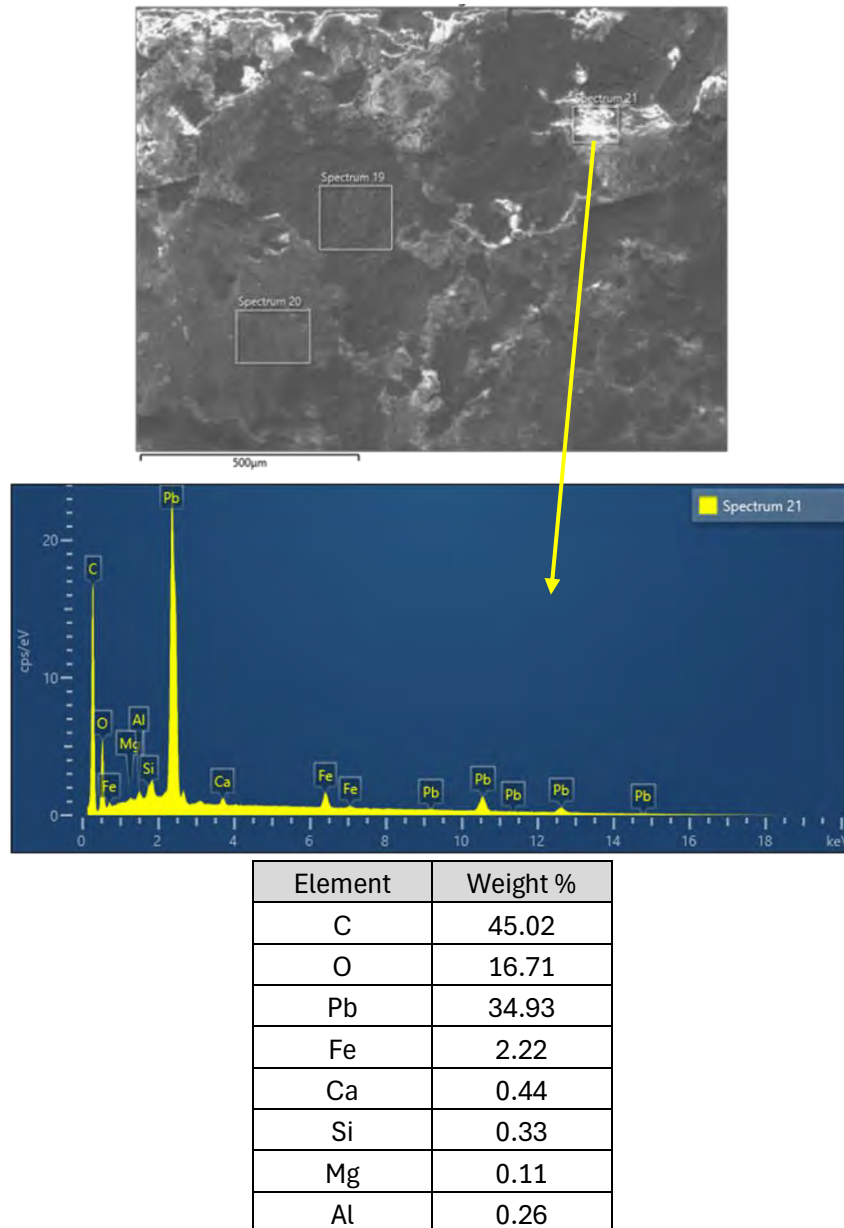


Figure 15. SEM image and EDS results of the paint chip #6 (dark side), NT YELLOW

3. FTIR Results*

The specimens were initially extracted in Acetone and filtrated. The collected extracts were infrascanned using a Fourier Transform Infrared (FTIR) Spectrometer as per ASTM E1252-98 (2021). FTIR Bio-Rad Sadtler Data Base Library was used to search for the best match of the generated spectra. The results are summarized in Table 2. The FTIR spectrum and the spectra library search for each sample are shown in Figure 16 to Figure 21.

Table 2. FTIR spectrum results

Sample	Spectrum Results
NT YELLOW	The absorption spectrum is consistent with an Acrylic-based polymer
NT V15 SILVER	The absorption spectrum is consistent with an Acrylic-based polymer
NT V15 EXT. PAINT	The absorption spectrum is consistent with an Alkyd-based polymer

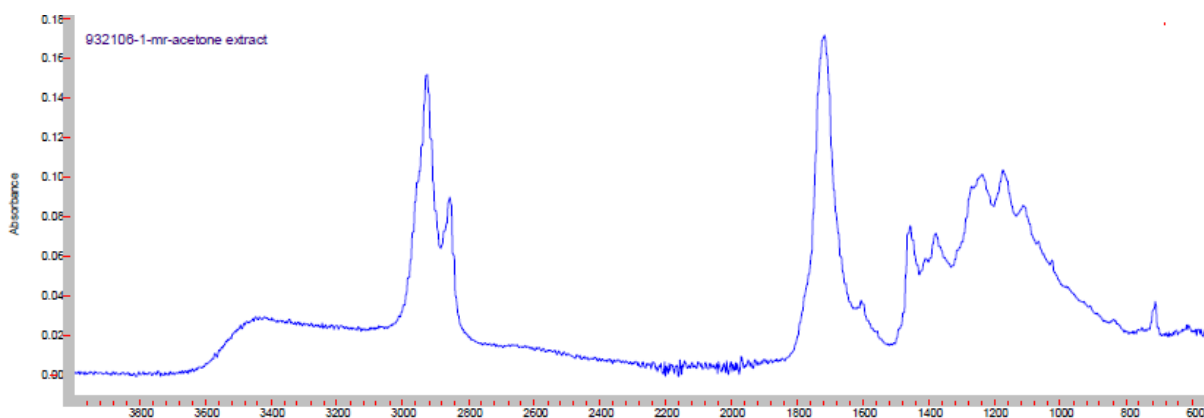
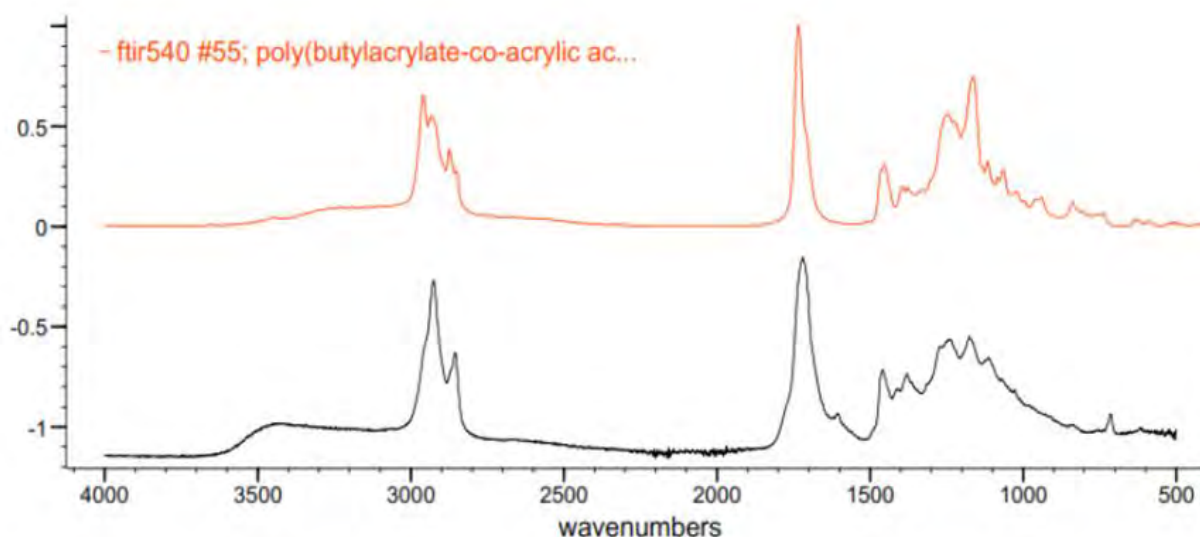


Figure 16. FTIR spectrum for NT YELLOW



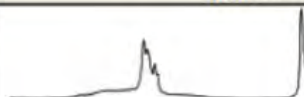
HQI	Tag	DB	ID	Name	Spectrum
825.49		ftir540	55	poly(butylacrylate-co-acrylic acid), Copyright © 2010 John Wiley & Sons, Hoboken, New Jersey	

Figure 17. FTIR spectra library search match for NT YELLOW

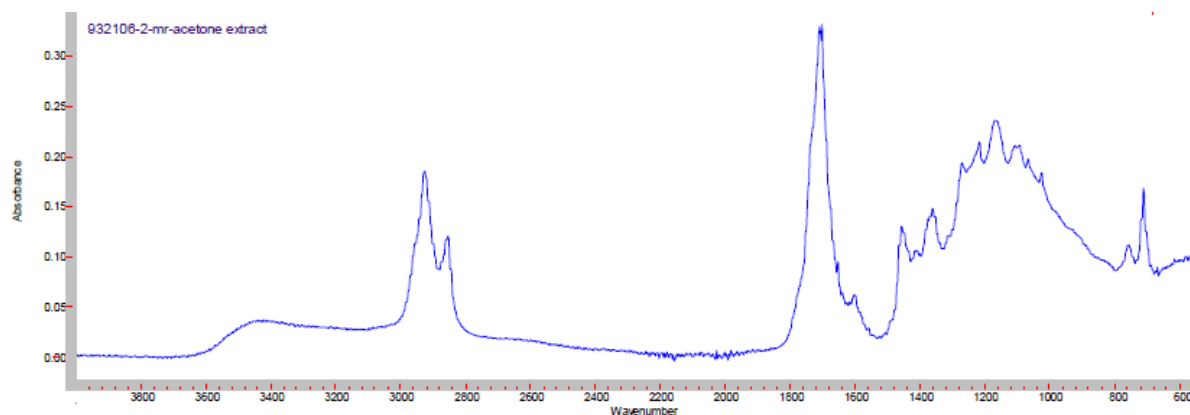
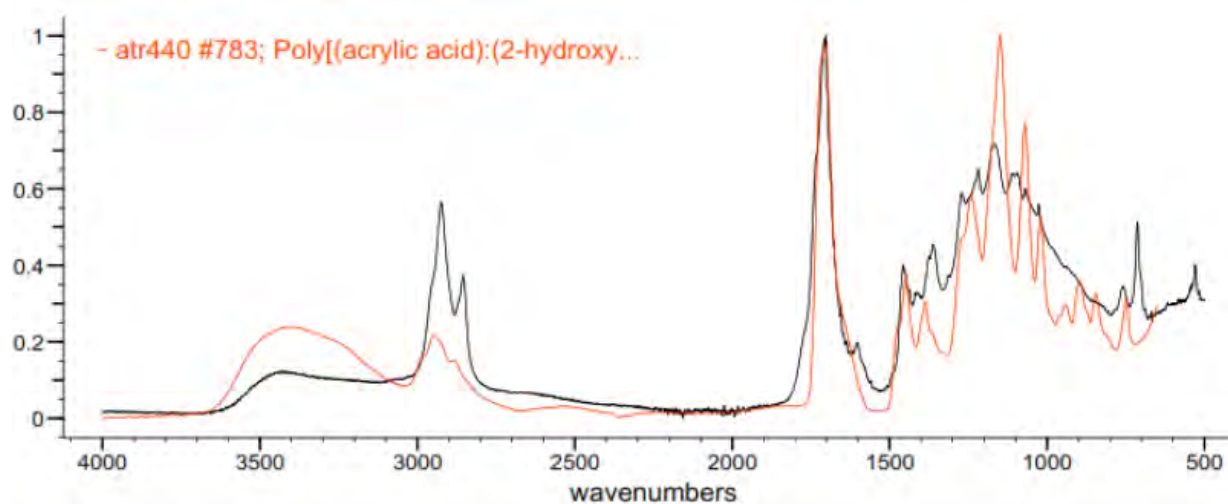


Figure 18. FTIR spectrum for NT V1 5 SILVER




HQI	Tag	DB	ID	Name	Spectrum
798.06		atr440	783	Poly[(acrylic acid):(2-hydroxyethyl methacrylate)], © 2010 Nicodan	

Figure 19. FTIR spectra library search match for NT V1 5 SILVER

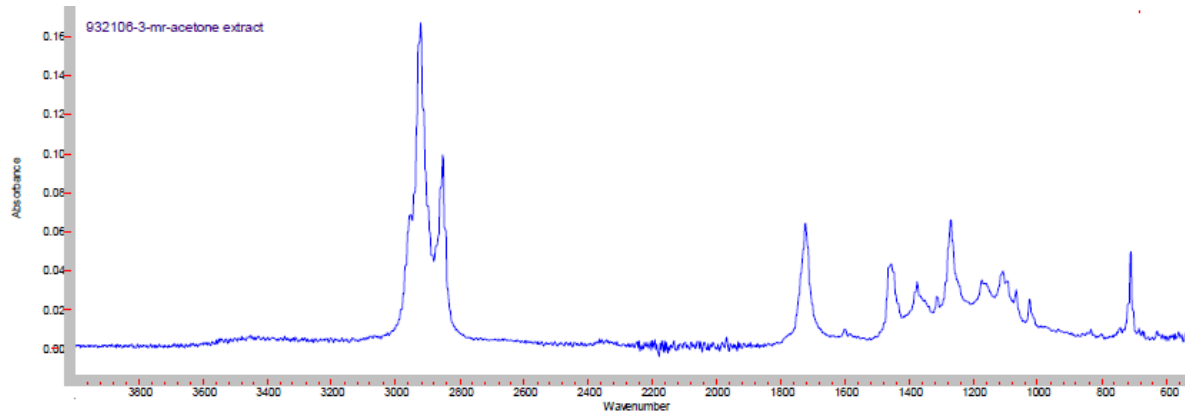
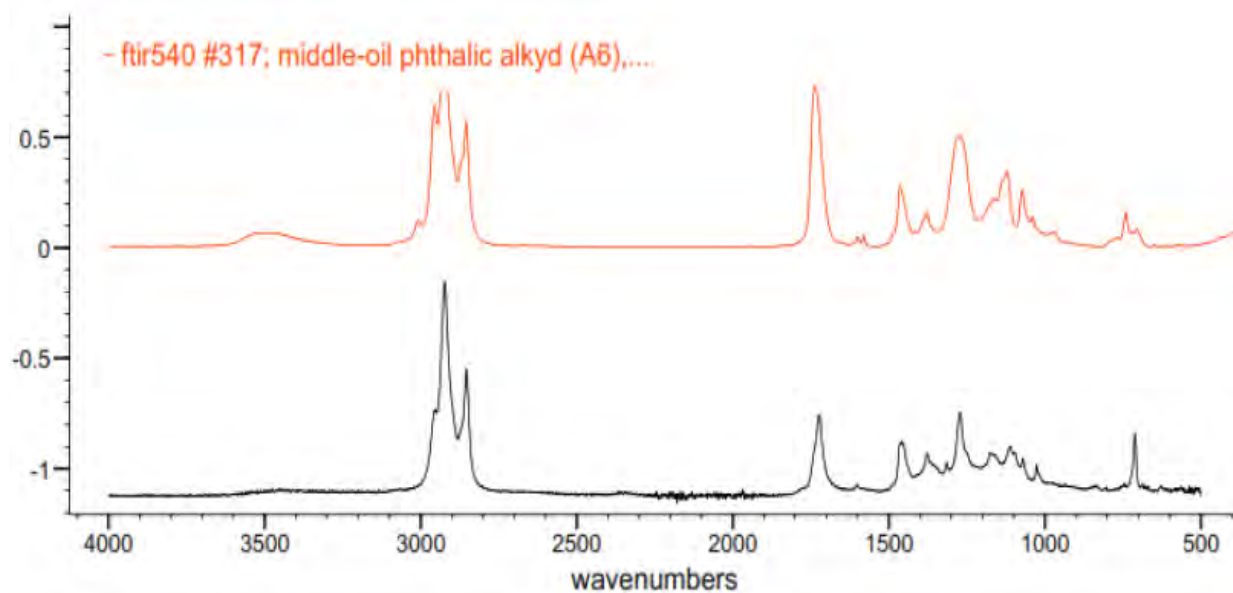


Figure 20. FTIR spectrum for NT V1 5 EXT. PAINT



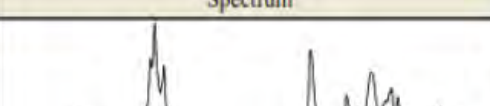
HQI	Tag	DB	ID	Name	Spectrum
846.44		ftir540	317	middle-oil phthalic alkyd (A6), Copyright © 2010 John Wiley & Sons, Hoboken, New Jersey	

Figure 21. FTIR spectra library search match for NT V1 5 EXT. PAINT

**Acuren Group Inc.**

2190 Speers Road
Oakville, ON, Canada L6L 2X8
www.acuren.com

Phone: 905.825.8595
Toll Free: 877.299.2857
Fax: 905.825.8598

A Higher Level of Reliability



Siyu Wu

Siyu Wu, Ph.D.

Materials Engineering and Failure Analysis

Changizian

Pooyan Changizian, Ph.D.

Materials Engineering and Failure Analysis

Client acknowledges receipt and custody of the report or other work ("Deliverable"). Client agrees that it is responsible for assuring that acceptance standards, specifications and criteria in the Deliverable and Statement of Work ("SOW") are correct. Client acknowledges that Acuren is providing the Deliverable according to the SOW, and not any other standards. Client acknowledges that it is responsible for the failure of any items inspected to meet standards, and for remediation. Client has 15 business days following the date Acuren provides the Deliverable to inspect it, identify deficiencies in writing, and provide written rejection, or else the Deliverable will be deemed accepted. The Deliverable and other services provided by Acuren are governed by a Master Services Agreement ("MSA"). If the parties have not entered into an MSA, then the Deliverable and services are governed by the SOW and the "Acuren Standard Service Terms" (www.acuren.com/service/terms) in effect when the services were ordered

The Client Representative who receives this report is responsible for verifying that any acceptance standards listed in the report are correct, and promptly notifying Acuren of any issues with this report and/or the work summarized herein. The owner is responsible for notifying Acuren in writing if they would like their samples returned or placed into storage (at their cost) otherwise, all samples/specimens associated with this report will be disposed of 60 days after the report date.

NOTES:

- A) Any tests subcontracted to an approved subcontractor are highlighted above (*)
- B) Levels of Services: Regular Service: 3 to 5 business days; Next Day Service: 8 to 16 business hours; Same Day Service: within 8 business hours; Super Rush: Work will commence immediately regardless of the time and will continue until it is completed
- C) The Client will be notified if completion of test will exceed the time specified as a result of the volume of work or the complexity of the test
- D) The Client should specify the standards used for testing/comparison purpose. We have a comprehensive library and online subscription of commonly used standards, however, we may ask the client to supply the standards if not common or the Client requests to purchase standard(s) on his behalf.
- E) Please provide all the necessary information/documents (MSDS) pertaining to any Toxic / Dangerous materials prior to their arrival in the Laboratory.

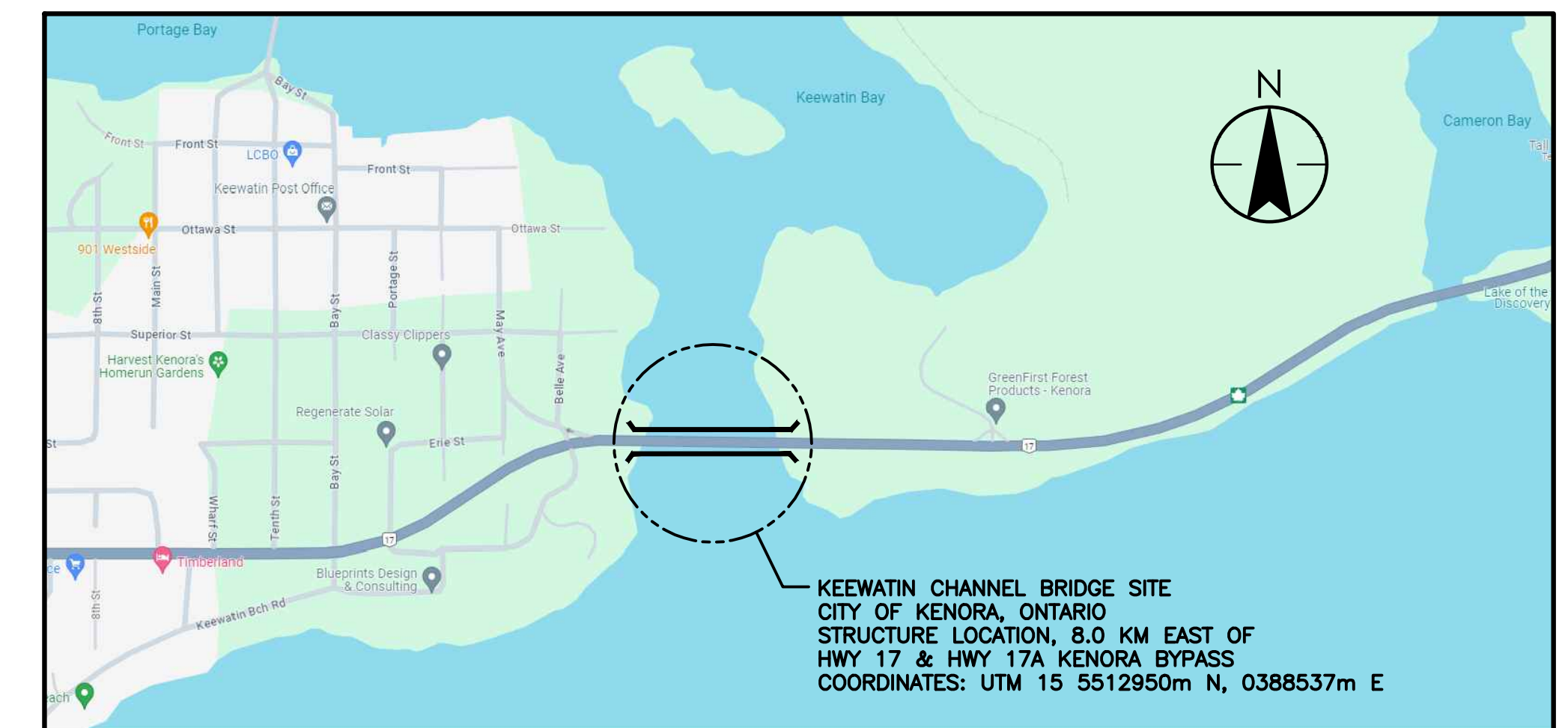
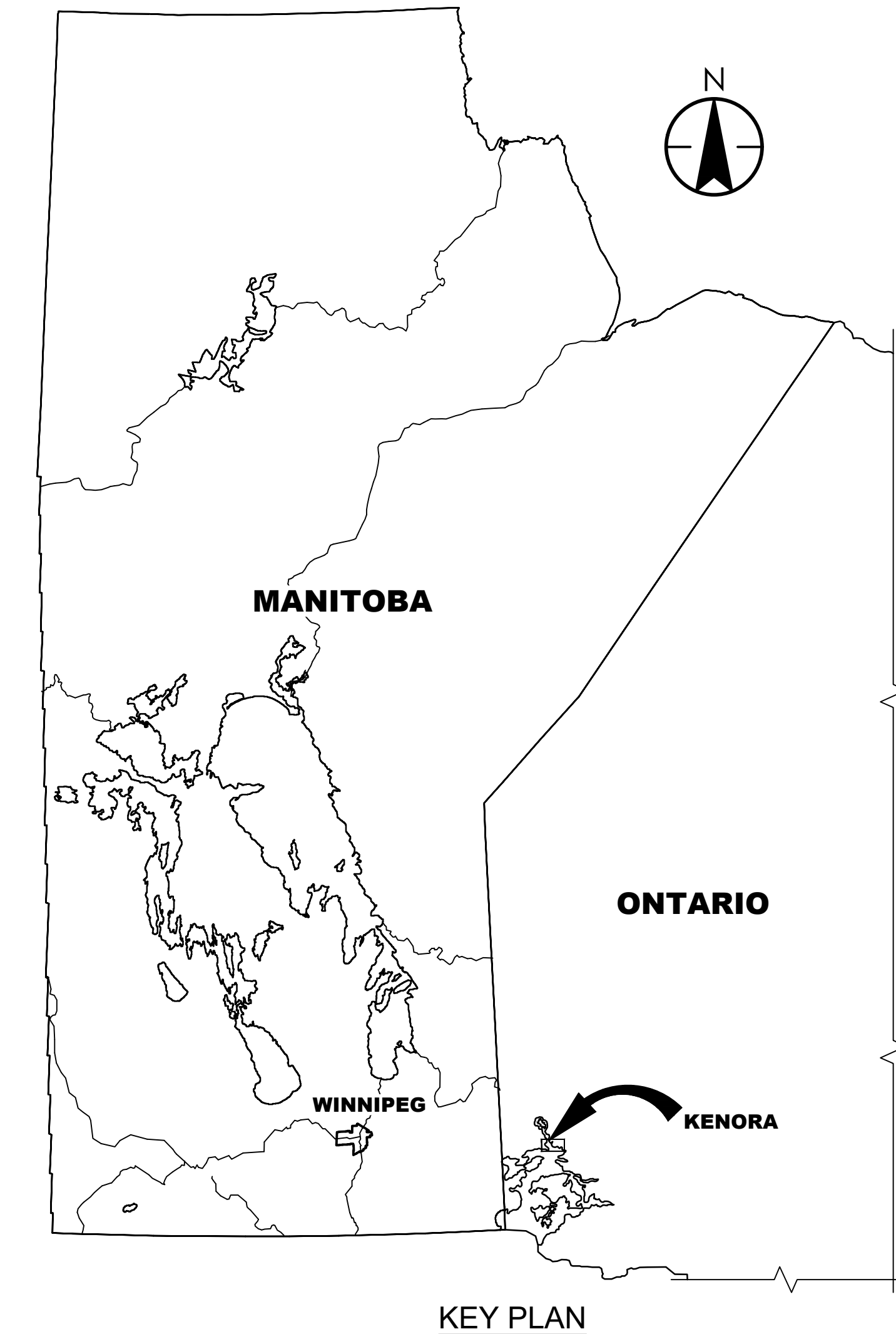
Appendix D Drawings





CITY OF KENORA

KEEWATIN CHANNEL BRIDGE RECOATING & STRUCTURAL STEEL REPAIR



LOCATION PLAN

DRAWING INDEX

CONSULTANT SHEET No.	SHEET TITLE	SHEET No.
G-001	TITLE PAGE & DRAWING INDEX	1 OF 8
G-002	GENERAL NOTES & ABBREVIATIONS	2 OF 8
S-101	STAGING AREA & PLANNING	3 OF 8
S-102	GENERAL ARRANGEMENTS & LOCATIONS OF REPAIR DETAILS	4 OF 8
S-103	ARCH LAYOUT & LOCATIONS OF REPAIR TYPES	5 OF 8
S-104	REPAIR TYPES & METHODS - SHEET 1 OF 3	6 OF 8
S-105	REPAIR TYPES & METHODS - SHEET 2 OF 3	7 OF 8
S-106	REPAIR TYPES & METHODS - SHEET 3 OF 3	8 OF 8

PROJECT NUMBER: 113733903

DESIGN SPECIFICATIONS

1. CANADIAN HIGHWAY BRIDGE DESIGN CODE (CHBDC) CSA S6:19.

STRUCTURAL STEEL

1. NEW LATTICE BARS SHALL CONFORM TO CSA G40.20/G40.21 GRADE 350W. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO CSA G40.20/G40.21 GRADE 350WT.

WELDING

1. SHOP AND FIELD WELDING TO CSA W59 WELDED STEEL CONSTRUCTION BY FABRICATORS OR CONTRACTORS CERTIFIED TO MINIMUM DIVISION 2 OF CSA W47.1 CERTIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL STRUCTURES.
2. ELECTRODES TO BE COMPATIBLE WITH BASE METAL. MINIMUM 6 mm FILLET WELDS UNLESS NOTED OTHERWISE AND TO BE COMPATIBLE WITH BASE METAL THICKNESS. WELD TERMINATIONS SHALL BE MINIMUM 3 mm MAXIMUM 6 mm. SEAL ALL WELDS.

FASTENERS

1. ALL STRUCTURAL BOLTS FOR STEEL WORK TO BE ASTM F3125 GRADE A325 TYPE 1, U.N.O. BOLTS C/W ASTM A563 GRADE DH HEAVY HEX NUTS AND ASTM F436 TYPE 1 HARDENED STEEL WASHERS. ASTM A563 NUTS MAY BE SUBSTITUTED WITH ASTM A194 GRADE 2H NUTS.
2. BOLTS NOTED TO BE ASTM A307 SHALL BE ASTM A307 GRADE A AND C/W ASTM A563 GRADE A HEX NUTS AND ASTM F844 WASHERS.
3. ALL BOLT HOLES SHALL BE DRILLED 2 mm LARGER THAN THE SPECIFIED BOLT DIAMETER, U.N.O.

GENERAL NOTES:

1. STEEL ARCH TRUSS COATING SCOPE OF WORK INCLUDES:
- a. DESIGN AND INSTALLATION OF APPROVED WORK PLATFORM SYSTEM.
 - b. DESIGN AND IMPLEMENTATION OF CONTAINMENT SYSTEM IN ACCORDANCE WITH THE SOCIETY FOR PROTECTIVE COATINGS (SSPC) GUIDE 6 FOR CONTAINING DEBRIS GENERATED DURING PAINT REMOVAL OPERATIONS.
 - c. CLEANING BY PRESSURE WASHING AND REMOVAL OF EXISTING COATING BY ABRASIVE BLASTING TO SSPC – SP10 NEAR WHITE METAL.
 - d. TESTING AND DISPOSAL OF ALL WASTE MATERIAL AS SPECIFIED IN THE CONTRACT DOCUMENTS.
 - e. PRIME COATING OF EXISTING BLASTED STEEL AREA.
 - f. FOLLOW-UP INSPECTION BY THE ENGINEER TO IDENTIFY REPAIR LOCATIONS AND IMPLEMENT ADDITIONAL REPAIR OF STRUCTURAL STEEL MEMBERS.
 - g. FINAL SURFACE PREPARATION AND APPLICATION OF NEW COATING INCLUDING STRIPE COATS, INTERMEDIATE, CAULKING AND FINISH COATS.
 - h. FINAL CLEANING AND COATING TOUCH-UP.
 - i. REMOVAL OF ACCESS SYSTEM AND CONTAINMENT TARPS AND DEMOBILIZATION.
2. PRIOR TO COMPLETION OF STEP 1.d., DUE TO THE PRESENCE OF HEAVY METALS, HAZARDOUS MATERIAL TESTING AND PROPER DISPOSAL OF BLASTED MATERIALS AND WASTE PRODUCTS IS REQUIRED PRIOR TO TRANSPORTATION TO APPROPRIATE DISPOSAL SITE(S). REMOVAL, TESTING AND DISPOSAL SHALL BE IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS AND THE ONTARIO ENVIRONMENTAL PROTECTION ACT (R.S.O., 1990, c.E. 19), ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT (R.S.O. 1990, c.o.1) AND TRANSPORTATION OF DANGEROUS GOODS REGULATION (SOR/2019–101).
3. THE PLATFORM AND CONTAINMENT SYSTEM SHALL BE DESIGNED FOR A 1/30 YEAR WIND PRESSURE AND SHALL BREAKAWAY AT THE 1/50 YEAR WIND LOADING.
4. PLATFORM AND CONTAINMENT SHALL BE DESIGNED TO WIND LOADS AS NOTED IN THE CANADIAN BRIDGE DESIGN CODE (CHBDC, S6–19).
5. PLATFORM AND CONTAINMENT STAGING SHOWN IS A SUGGESTED METHOD. THE CONTRACTOR CAN SUBMIT AN ALTERNATE PHASING FOR REVIEW. AT NO TIME SHALL MORE THAN ONE THIRD OF THE BRIDGE LENGTH BE ENCLOSED.
6. CONTRACTOR TO SUBMIT PLATFORM AND CONTAINMENT SHOP DRAWINGS AND RE–COATING PROCEDURE FOR ACCEPTANCE A MINIMUM OF 10 BUSINESS DAYS PRIOR TO PERFORMING ANY WORK.
7. CONTRACTOR TO INCLUDE DESCRIPTION AND DRAWING OF NAVIGATION PLAN FOR WATERCRAFT AS PART OF PLATFORM AND CONTAINMENT SHOP DRAWING PACKAGE.
8. SHOP DRAWINGS AND PLATFORM AND CONTAINMENT DESIGN SHALL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO WITH DEMONSTRABLE EXPERIENCE IN THE DESIGN OF SIMILAR SYSTEMS.
9. CLEARANCE BASED ON NORMAL OPERATING WATER LEVEL, CONTRACTOR TO CONFIRM CLEARANCE ON SITE.

SECTION AND DETAILS

- A

C

A

SECTION NUMBER OR DETAIL LETTER
- A

B

C

B

DRAWING WHERE SECTION OR DETAIL IS TAKEN
- A

B

C

C

DRAWING WHERE SECTION OR DETAIL IS DRAWN

LIST OF ABBREVIATIONS

- ⊗

A/F

ALT.

ALUM.

APPROX.

A.T.

B.O.

B/O

BOT.

B/R

BRG.

B.W.

C.I.P.

CJ.

☉

C/W

CONC.

CONT.

CL.

CS

CSP

DBL.

DIA.

DTL.

DWG.

DWL.

EA.

E.E.

E.F.

E.S.

E.W.

EQ.

EQ. SP.

EQ.

EXIST.

EXP. JT.

F.F.

EXP.

GRAN.

GT

HORIZ.

IB

I.D.

I.F.

LG.

LLH.

LLV.

MK.

MAX.

m

MIN.

mm

N.E.

N.F.

N.I.C.

N.T.S.

No.

N.W.

O/C

O.D.

O/H

OPNG.

O/O

PL.

PVC

QTY.

R

REINF.

SC

SHT.

S.A.

SRS

S.S.

STD.

STIRR.

STR.

S.U.

S.W.

THK.

TYP.

T

T/O

U/N

U.N.O.

U/S

VERT.

W.P.

W/
- AT

ACROSS FLATS

ALTERNATING

ALUMINUM

APPROXIMATE

ACTIVE TRANSPORTATION

BY OTHERS

BOTTOM OF

BOTTOM

BASE OF RAIL

BEARING

BOTH WAYS

CAST-IN–PLACE

CONTRUCTION JOINT

CENTRE LINE

COMPLETE WITH

CONCRETE

CONTINUOUS

CLEAR

COMBINED SEWER

CORRUGATED STEEL PIPE

DOUBLE

DIAMETER

DETAIL

DRAWING

DOWEL

EACH

EACH END

EACH FACE

EACH SIDE

EACH WAY

EQUAL

EQUAL SPACE

ELEVATION

EXISTING

EXPANSION JOINT

FAR FACE

GALVANIZING

GRANULAR

GROUP TELECOM

HORIZONTAL

IRON BAR

INSIDE DIAMETER

INSIDE FACE

LONG

LONG LEG HORIZONTAL

LONG LEG VERTICAL

MARK

MAXIMUM

METRE

MINIMUM

MILLIMETRE

NORTHEAST

NEAR FACE

NOT IN CONTRACT

NOT TO SCALE

NUMBER

NORTHWEST

ON CENTRE

OUTSIDE DIAMETER

OVERHEAD

OPENING

OUTSIDE TO OUTSIDE

PLATE

POLYVINYL CHLORIDE

QUANTITY

RADIUS

REINFORCEMENT

SAW CUT

SHEET

SOUTHEAST

STORM RELIEF SEWER

STAINLESS STEEL

STANDARD

STIRRUP

STRAIGHT

SUBSTRUCTURE UNIT

SOUTHWEST

THICK

TYPICAL

TOP

TOP OF

UNLESS NOTED

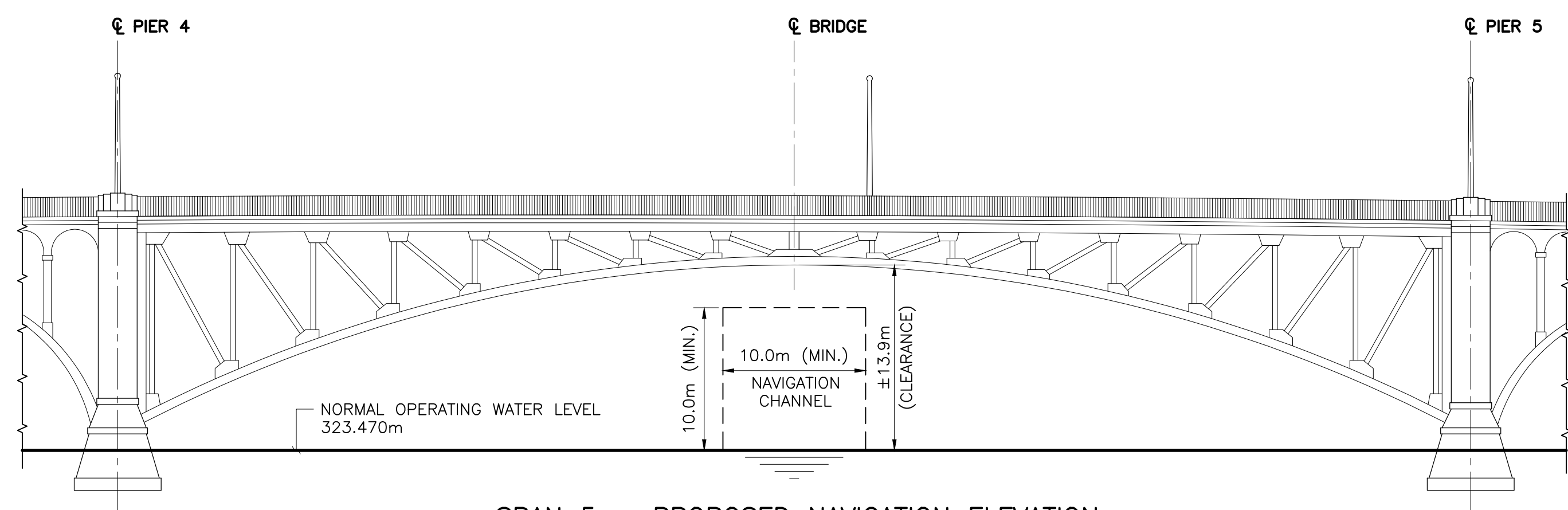
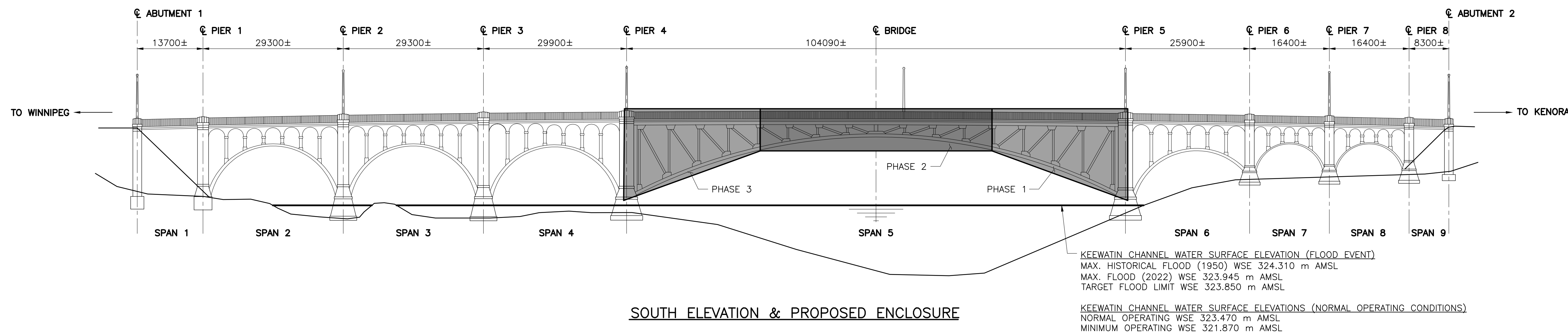
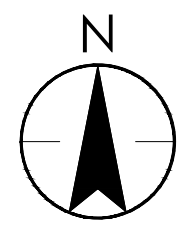
UNLESS NOTED OTHERWISE

UNDERSIDE

VERTICAL

WORKING POINT

WITH



SPAN 5 – PROPOSED NAVIGATION ELEVATION

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

US:113733903_0000.dwg 03/05/2025 10:00 AM J:\113733903_0000.dwg 3
2025/05/02 2:48 PM By: Bismarck, James

5			
4			
3			
2			
1			
Revision	By	Appd.	YY.MM.DD
E			
D			
C			
B			
A	J.M.B.	E.R.T.	2025.05.05
Issued	By	Appd.	YY.MM.DD

Client/Project Logo



Permit-Seal



Stantec Consulting Ltd.
Suite 500, 311 Portage Avenue
Winnipeg MB Canada R3B 2B9
Tel. 204.489.5900 Fax. 204.453.9012
www.stantec.com

The Contractor shall verify and be responsible for all dimensions.
DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
The Copyrights to all designs and drawings are the property of Stantec.
Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Client/Project
CITY OF KENORA

KEEWATIN CHANNEL BRIDGE RECOATING
& STRUCTURAL STEEL REPAIR
KENORA, ONTARIO

File Name: 33903-101-cck.dwg J.W. E.R.T. K.R. 2025.05.02
Dwn. Chkd. Dsgn. YY.MM.DD

Title

STAGING AREA & PLANNING

Project No.
113733903

Scale
1:1000

Drawing No.

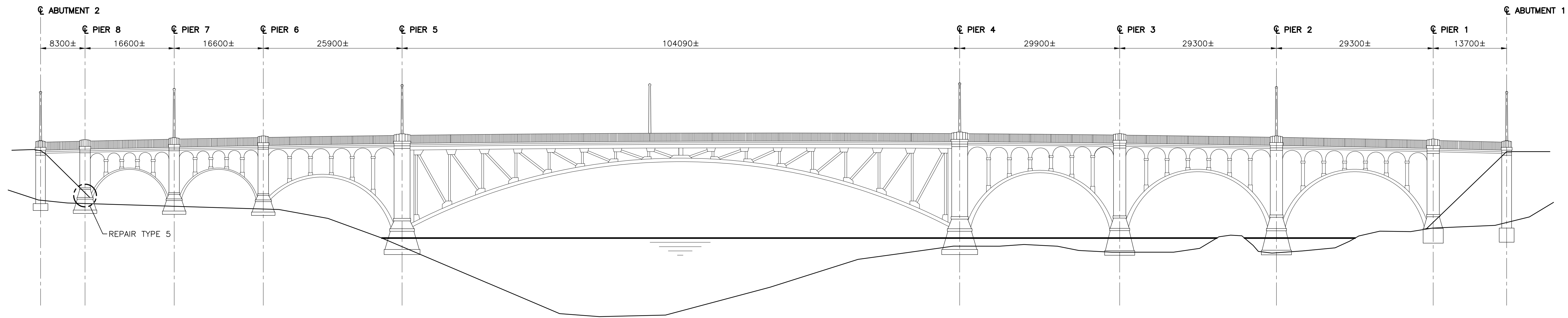
S-101

Sheet

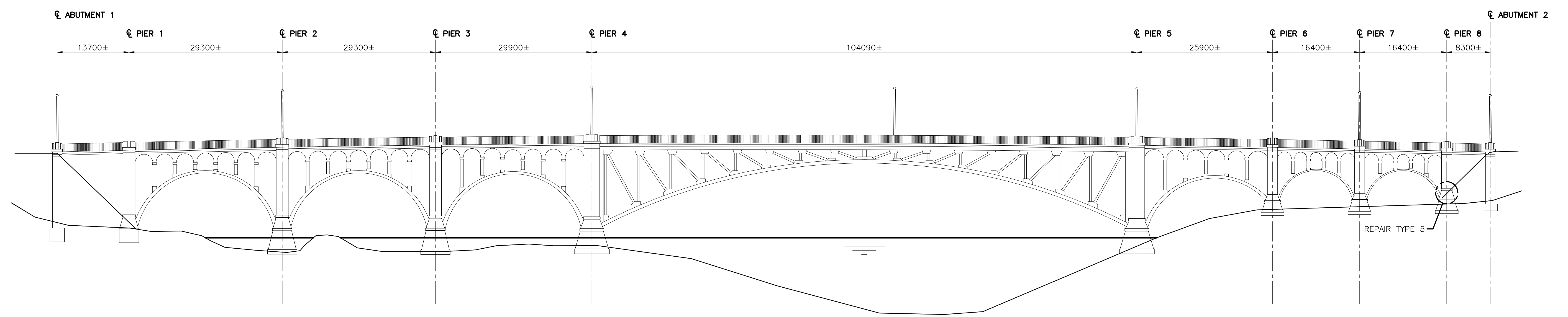
3 of 8

Revision

0



NORTH ELEVATION



SOUTH ELEVATION

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

U:\113733903\0300_drawing\0302_draw\03_struct\133903-101-cok.dwg 4
2025/05/02 2:48 PM By: Baerndraats, James

5			
4			
3			
2			
1			
Revision	By	Appd.	YY.MM.DD
E			
D			
C			
B			
A	J.M.B.	E.R.T.	2025.05.05
Issued	By	Appd.	YY.MM.DD

Client/Project Logo

Lake of the Woods

KENORA

Permit-Seal

Stantec

Stantec Consulting Ltd.
Suite 500, 311 Portage Avenue
Winnipeg MB Canada R3B 2B9
Tel. 204.489.5900 Fax. 204.453.9012
www.stantec.com

The Contractor shall verify and be responsible for all dimensions.
DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
The Copyrights to all designs and drawings are the property of Stantec.
Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Client/Project

CITY OF KENORA

KEEWATIN CHANNEL BRIDGE RECOATING
& STRUCTURAL STEEL REPAIR

KENORA, ONTARIO

File Name: 33903-101-cok.dwg

J.W. Dwn.

E.R.T. Chkd.

K.R. Dsgn.

2025.05.02 YY.MM.DD

Title

GENERAL ARRANGEMENTS &
LOCATIONS OF REPAIR DETAILS

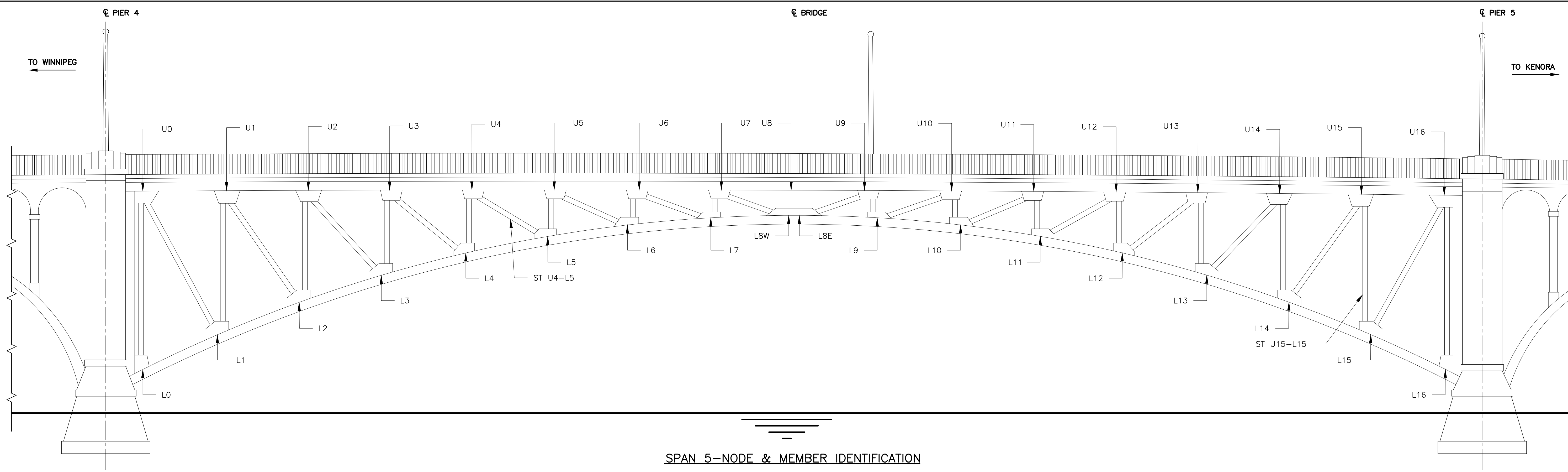
Project No.
113733903

Scale
1:400

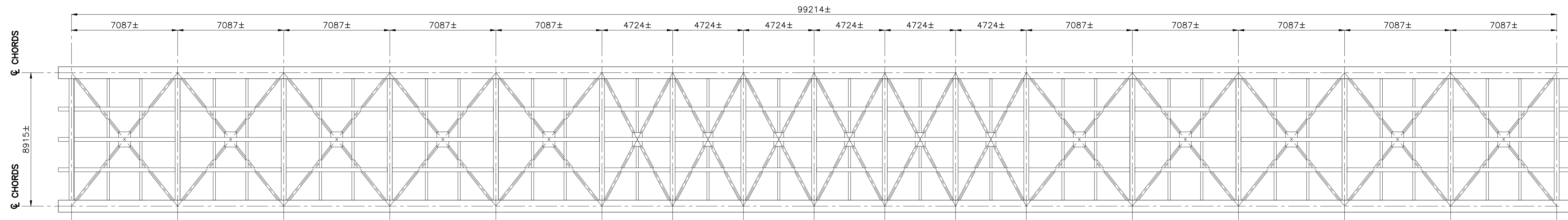
Drawing No.
S-102

Sheet
4 of 8

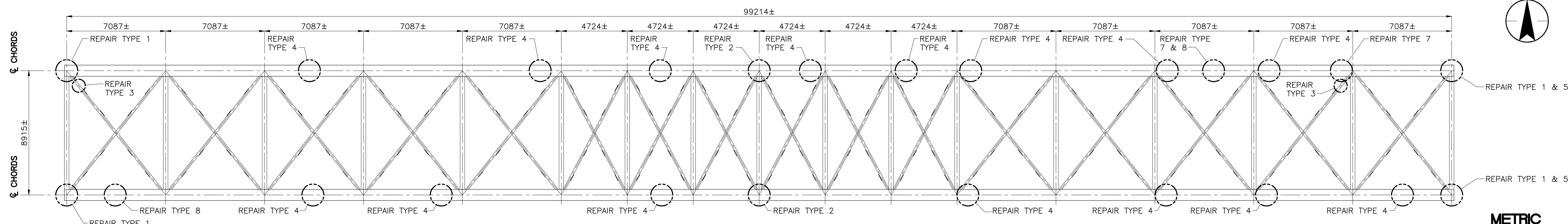
Revision
0



SPAN 5-NODE & MEMBER IDENTIFICATION



SPAN 5 - FLOOR SYSTEM - STEEL PLAN



SPAN 5 - LOWER CHORD PLAN - LOCATION AND TYPE OF REPAIR DETAILS

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

5			
4			
3			
2			
1			
Revision	By	Appd.	YY.MM.DD
E			
D			
C			
B			
A	J.M.B.	E.R.T.	2025.05.05
Issued	By	Appd.	YY.MM.DD

Client/Project Logo

Lake of the Woods
KENORA

Permit-Seal

 **Stantec**

Stantec Consulting Ltd.
Suite 500, 311 Portage Avenue
Winnipeg MB Canada R3B 2B9
Tel. 204.489.5900 Fax. 204.453.9012
www.stantec.com

The Contractor shall verify and be responsible for all dimensions.
DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
The Copyrights to all designs and drawings are the property of Stantec.
Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Client/Project
CITY OF KENORA

KEEWATIN CHANNEL BRIDGE RECOATING
& STRUCTURAL STEEL REPAIR
KENORA, ONTARIO

File Name: 33903-101-cok.dwg J.W. Dwn. E.R.T. Chkd. K.R. Dgn. 2025.05.05 YY.MM.DD

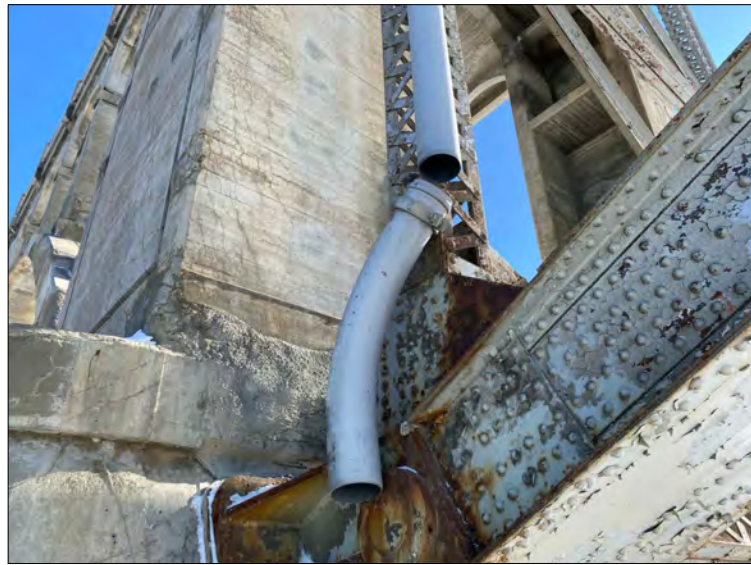
Title
ARCH LAYOUT &
LOCATIONS OF REPAIR TYPES

Project No. 113733903 Scale 1:200 OR AS SHOWN

Drawing No. S-103 Sheet 5 of 8 Revision 0

U:\113733903\0300_drawing\0300_drawing\03_struct\133903-101-cok.dwg 5
2025/05/02 2:52 PM By: beamonts_james

STEEL REPAIR TYPE 5

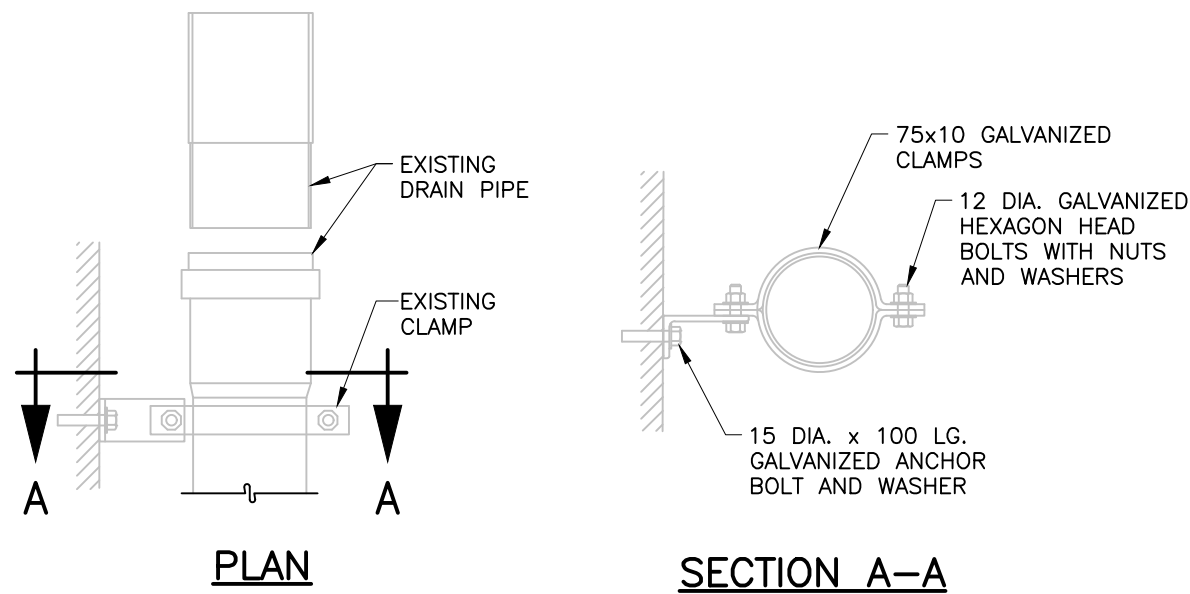


TYPICAL PHOTO OF DISCONNECTED DRAIN ELBOW



REPAIR TYPE 5 PROCEDURE

1. RE-CONNECT DISCONNECTED DRAIN ELBOWS WITH EXISTING CLAMPS AND BOLTED ASSEMBLY
2. DRAIN ELBOWS TO BE DIRECTED AWAY FROM STRUCTURE AT APPROXIMATELY 45 DEGREES



STAGE-5a

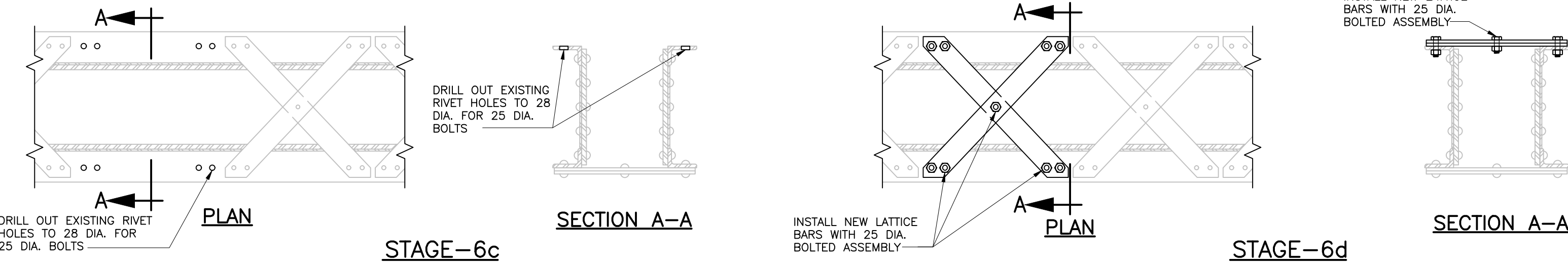
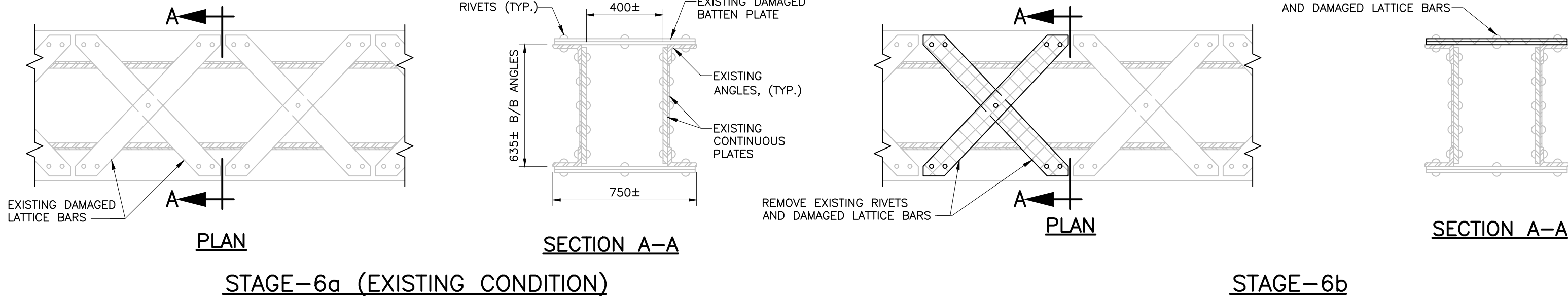
STEEL REPAIR TYPE 6



TYPICAL PHOTO OF LATTICE BARS

REPAIR TYPE 6 PROCEDURE

1. REMOVE RIVETS AND DAMAGED LATTICE MEMBERS/FILL PLATES. NOTE: MAXIMUM OF TWO ADJACENT LATTICE PAIRS MAY BE REMOVED AT ANY TIME.
2. DRILL HOLE RIVET HOLES TO 28 DIA. FOR 25 DIA. BOLTS.
3. INSTALL NEW LATTICE BARS, PLATE WASHERS AND BOLTS. REFER TO SHT. S-106 FOR LATTICE BAR DIMENSIONS.



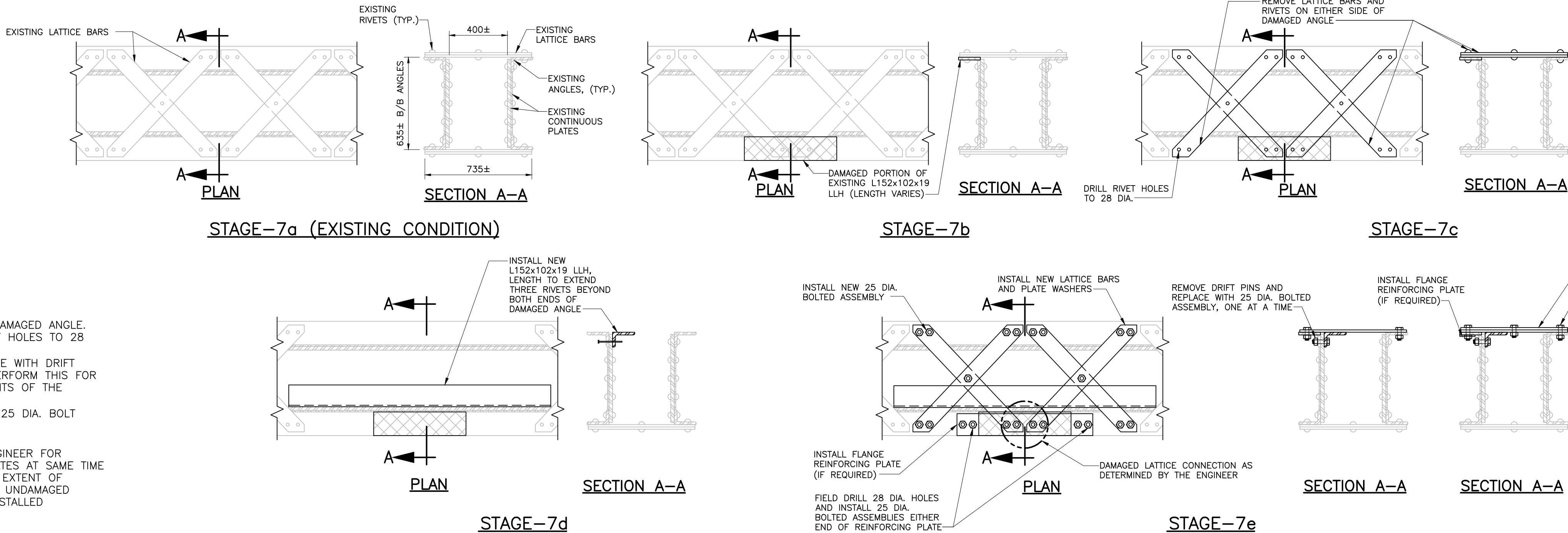
STEEL REPAIR TYPE 7



TYPICAL PHOTO OF SEVERE SECTION LOSS IN TOP FLANGE OF LOWER CHORD.

REPAIR TYPE 7 PROCEDURE

1. REMOVE LATTICE BARS AND LATTICE BAR RIVETS ADJACENT TO LENGTH OF DAMAGED ANGLE. ONLY TWO LATTICE BARS PAIRS MAY BE REMOVED AT ANY TIME. DRILL RIVET HOLES TO 28 DIA.
2. REMOVE RIVETS CONNECTING DAMAGED ANGLE SECTION TO WEB AND REPLACE WITH DRIFT PINS ONE AT A TIME, DRILLING TO INCREASE HOLE DIAMETER TO 28 DIA. PERFORM THIS FOR THREE ADDITIONAL RIVETS BEYOND EITHER END OF THE LONGITUDINAL EXTENTS OF THE DAMAGED SECTION.
3. INSTALL NEW ANGLE ASSEMBLY ON THE INTERIOR FACE OF THE WEB USING 25 DIA. BOLT ASSEMBLIES
4. INSTALL NEW LATTICE BARS USING 25 DIA. BOLT ASSEMBLIES
5. IF RIVETED LATTICE CONNECTION HAS ALSO BEEN DAMAGED, NOTIFY THE ENGINEER FOR VERIFICATION. IF DETERMINED NECESSARY, INSTALL FLANGE REINFORCING PLATES AT SAME TIME AS LATTICE BARS. REINFORCING PLATE LENGTH SHALL EXTEND 150 BEYOND EXTENT OF DAMAGED ANGLE. TWO 28 DIA. HOLES SHALL BE FIELD DRILLED IN THE 150 UNDAMAGED LENGTH AT BOTH ENDS OF THE REINFORCING PLATE, AND 25 DIA. BOLTS INSTALLED



METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

US:113733903_0300_Rev001.dwg 03/20/2025 2:59 PM By: Barmore, James

5			
4			
3			
2			
1			
Revision	By	Appd.	YY.MM.DD
E			
D			
C			
B			
A	J.M.B.	E.R.T.	2025.05.05
Issued	By	Appd.	YY.MM.DD

Client/Project Logo



Permit-Seal



Stantec Consulting Ltd.
Suite 500, 311 Portage Avenue
Winnipeg MB Canada R3B 2B9
Tel. 204.489.5900 Fax. 204.453.9012
www.stantec.com

The Contractor shall verify and be responsible for all dimensions.
DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
The Copyrights to all designs and drawings are the property of Stantec.
Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Client/Project

CITY OF KENORA

KEEWATIN CHANNEL BRIDGE RECOATING
& STRUCTURAL STEEL REPAIR
KENORA, ONTARIO

File Name: 33903-101-cok.dwg J.W. Dwn. E.R.T. Chkd. K.R. Dsgn. 2025.05.02

Title

REPAIR TYPES & METHODS - SHEET 2 OF 3

Project No.
113733903

Scale
1:20

Drawing No.

S-105

Sheet

7 of 8

Revision

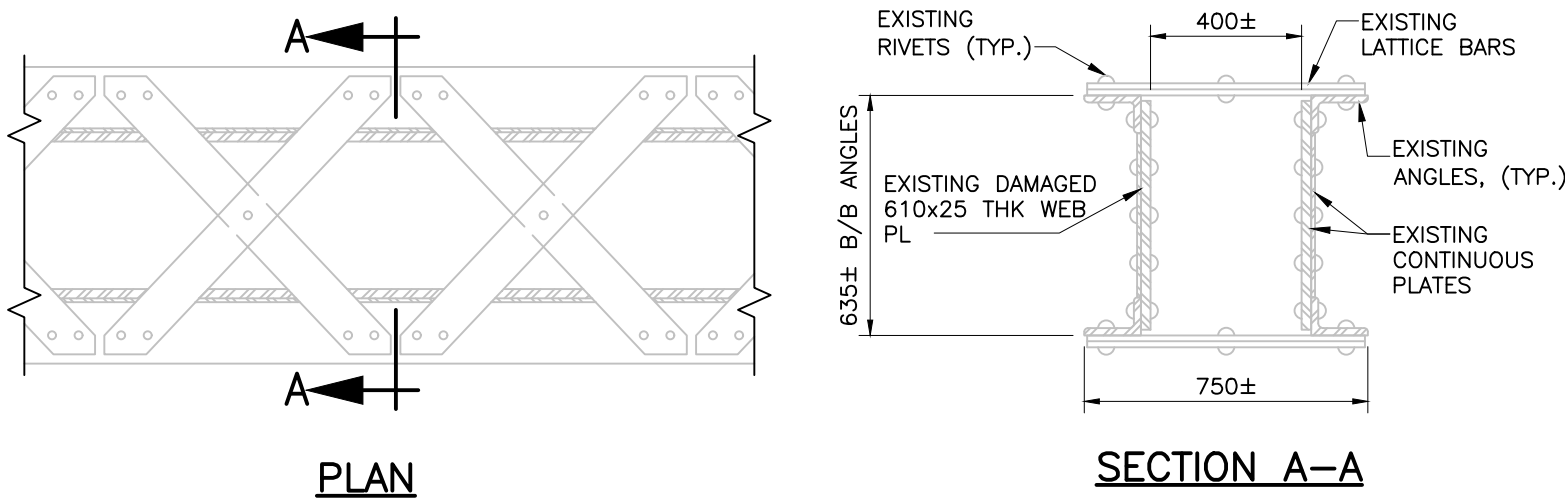
0



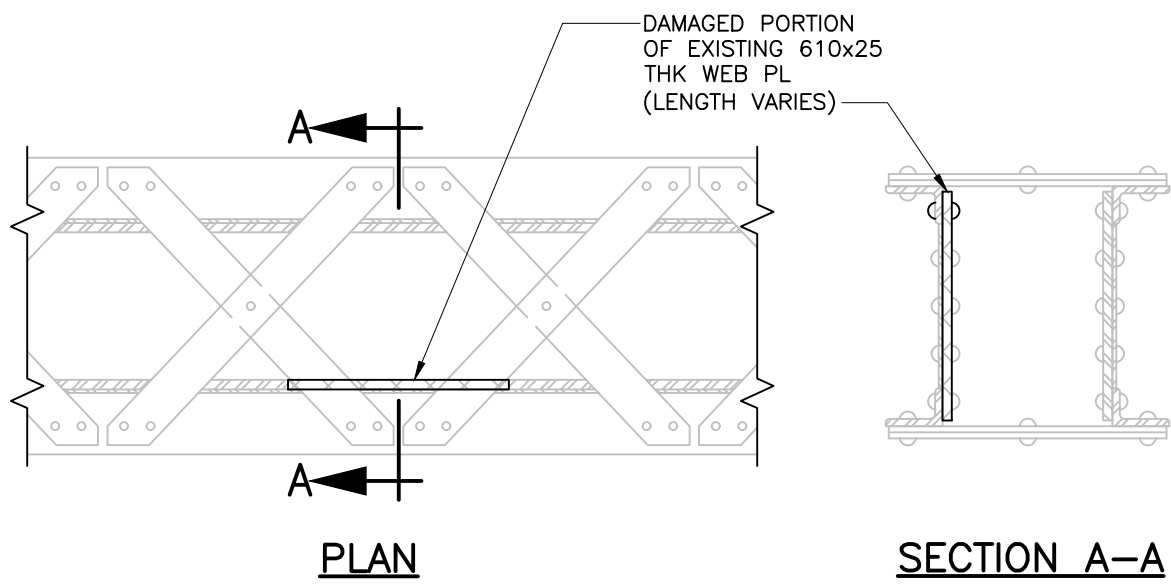
TYPICAL PHOTO OF SEVERE SECTION LOSS IN WEB OF LOWER CHORD.

REPAIR TYPE 8 PROCEDURE

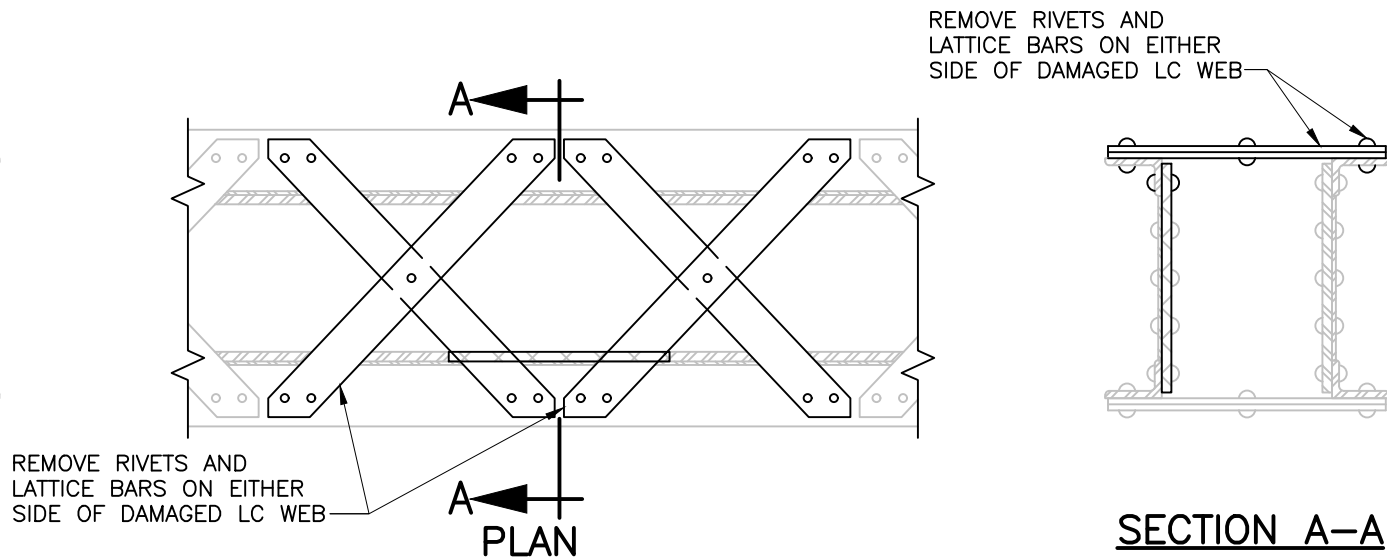
1. REMOVE LATTICE BARS AND LATTICE BAR RIVETS ADJACENT TO LENGTH OF DAMAGED WEB. ONLY TWO LATTICE BAR PAIRS MAY BE REMOVED AT ANY TIME. DRILL RIVET HOLES TO 28 DIA.
2. REMOVE RIVETS IN DAMAGED WEB PLATE AND REPLACE WITH DRIFT PINS ONE AT A TIME, DRILLING TO INCREASE HOLE DIAMETER TO 28 DIA. PERFORM THIS FOR FOUR ADDITIONAL VERTICAL LINES OF RIVETS BEYOND EITHER END OF THE LONGITUDINAL EXTENTS OF THE DAMAGED SECTION. THIS SHOULD ENCOMPASS APPROXIMATELY 18 RIVETS TOTAL BEYOND THE EITHER END OF THE DAMAGED SECTION.
3. INSTALL NEW PLATE ASSEMBLY ON THE INTERIOR FACE OF THE WEB USING 25 DIA. BOLTED ASSEMBLIES.
4. INSTALL NEW LATTICE BARS USING 25 DIA. BOLTED ASSEMBLIES.



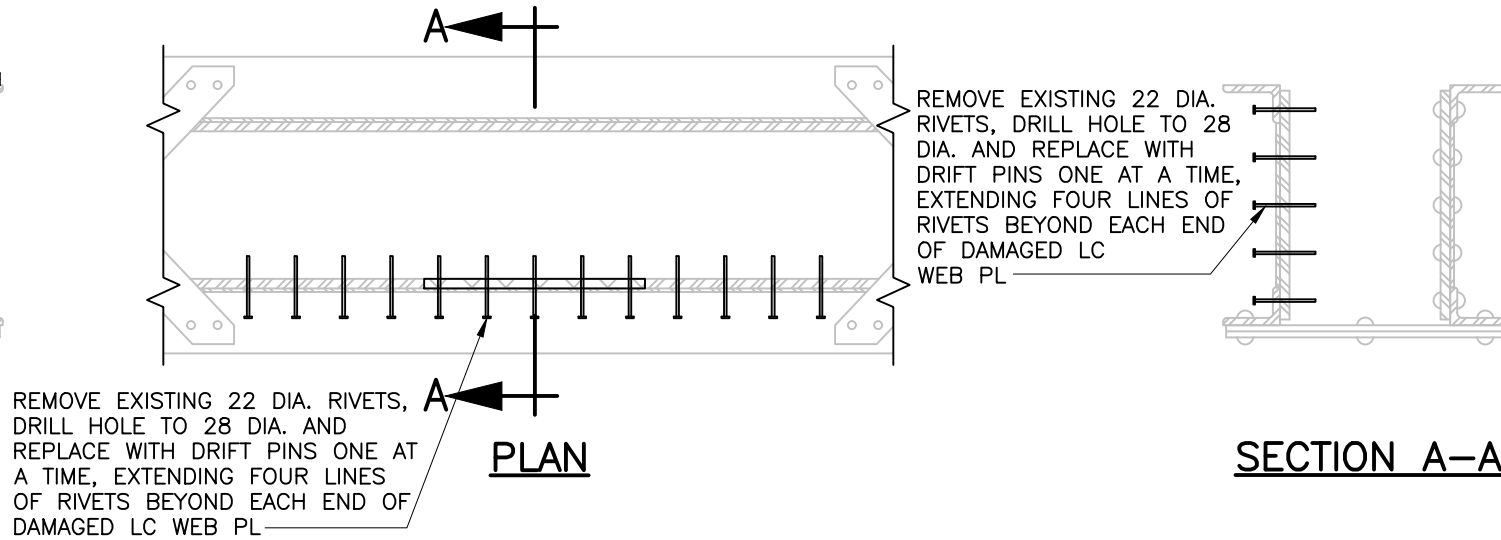
STAGE-8a (EXISTING CONDITION)



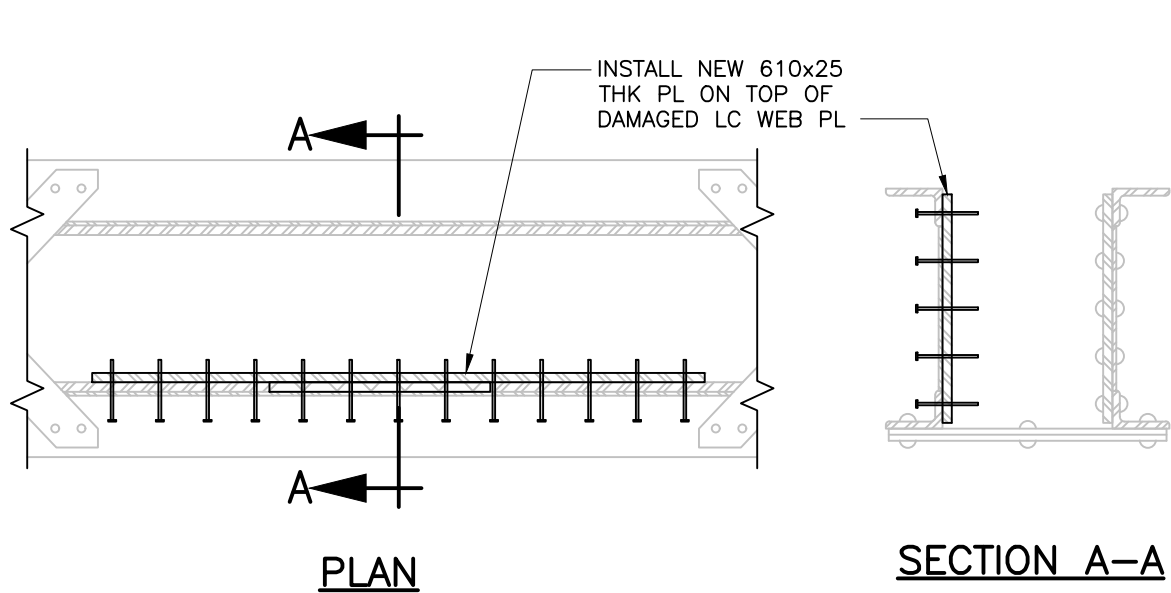
STAGE-8b



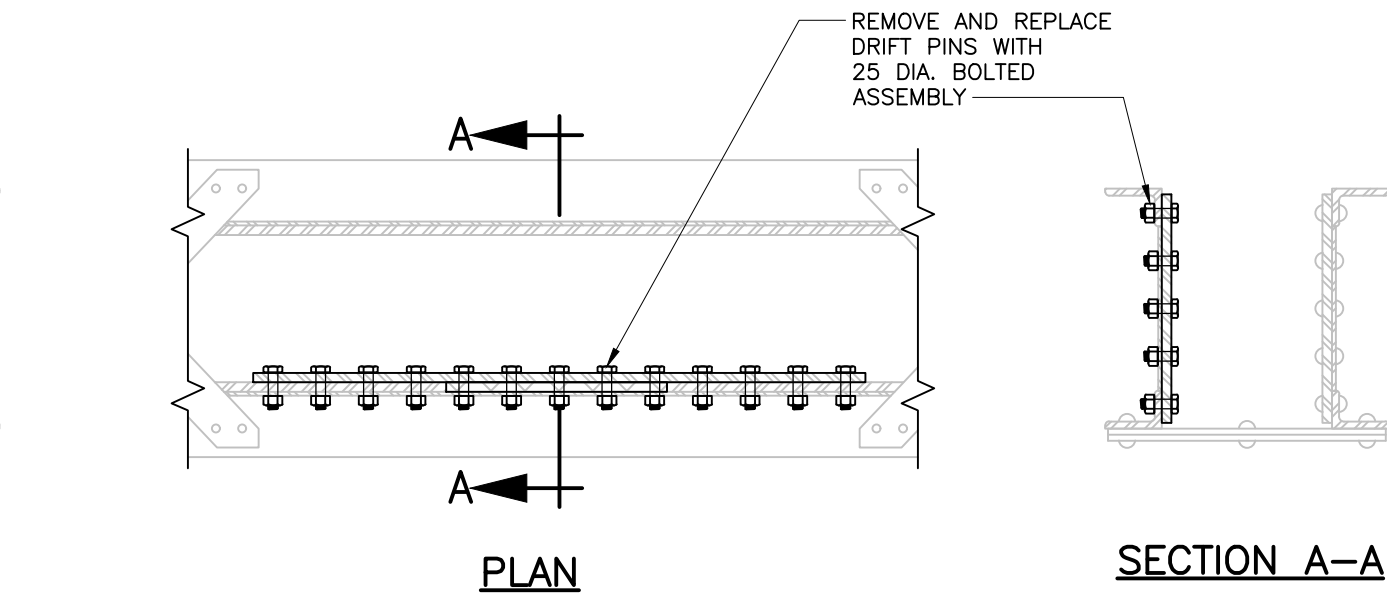
STAGE-8c



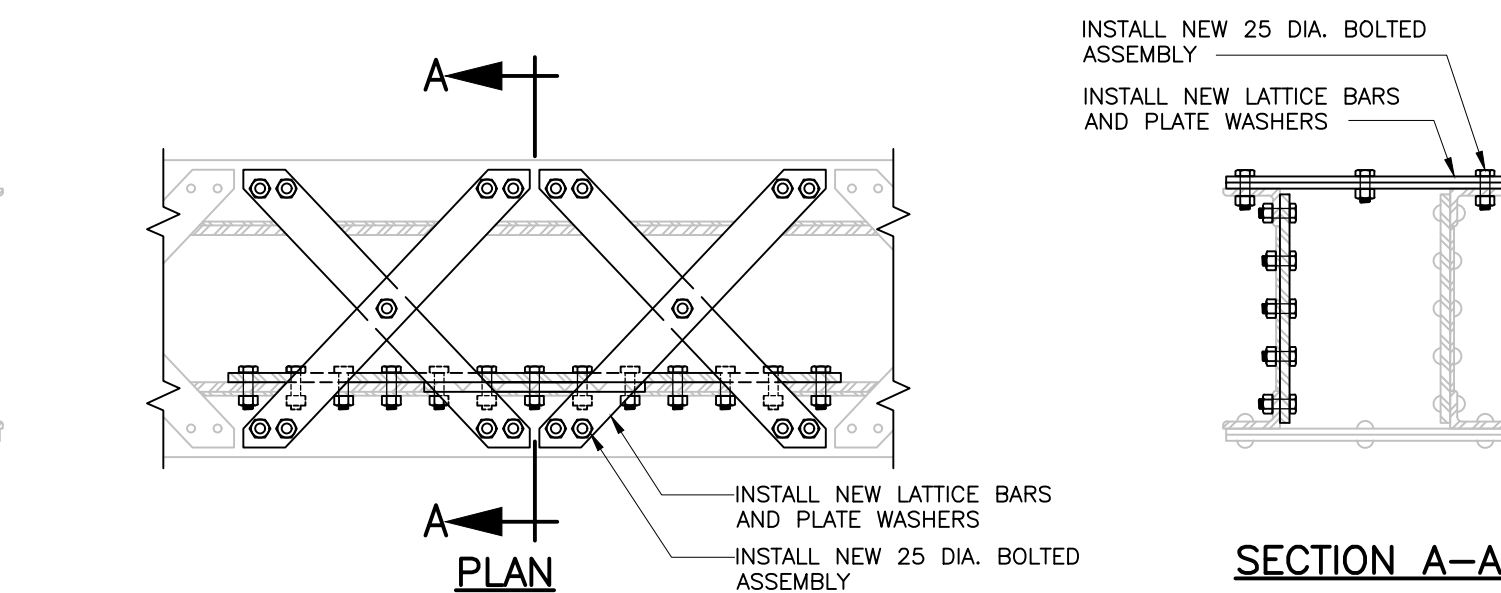
STAGE-8d



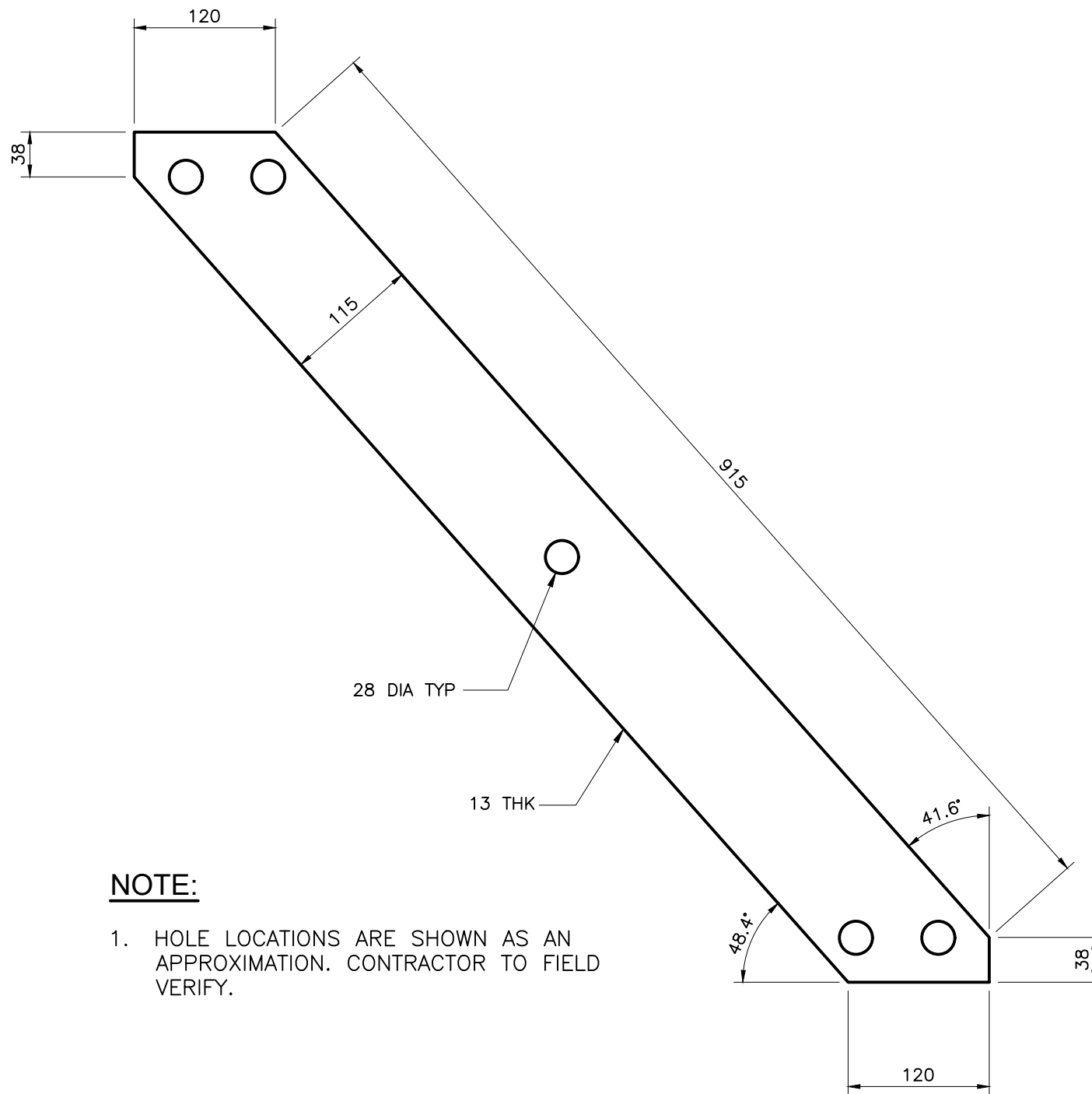
STAGE-8e



STAGE-8f



STAGE-8g



LATTICE BAR DIMENSIONS

NOTE:
1. HOLE LOCATIONS ARE SHOWN AS AN APPROXIMATION. CONTRACTOR TO FIELD VERIFY.

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

5			
4			
3			
2			
1			
Revision	By	Appd.	YY.MM.DD
E			
D			
C			
B			
A	J.M.B.	E.R.T.	2025.05.05
Issued	By	Appd.	YY.MM.DD

Client/Project Logo



Permit-Seal



Stantec Consulting Ltd.
Suite 500, 311 Portage Avenue
Winnipeg MB Canada R3B 2B9
Tel. 204.489.5900 Fax. 204.453.9012
www.stantec.com

The Contractor shall verify and be responsible for all dimensions.
DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
The Copyrights to all designs and drawings are the property of Stantec.
Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Client/Project
CITY OF KENORA

KEEWATIN CHANNEL BRIDGE RECOATING
& STRUCTURAL STEEL REPAIR
KENORA, ONTARIO

File Name: 33903-101-cok.dwg J.W. E.R.T. K.R. 2025.05.02
Dwn. Chkd. Dsgn. YY.MM.DD

Title

REPAIR TYPES & METHODS - SHEET 3 OF 3

Project No.
113733903

Scale
1:20

Drawing No.

Sheet

Revision

S-106

8 of 8

0

Appendix E Tender Checklist



SECTION 1 TENDER SUBMISSION CHECKLIST

The Tender Submission Checklist is provided for the convenience of Tenderers as a summary of mandatory submission requirements. In the event of any discrepancy between the Tender Articles and the Tender Submission Checklist, the Tender Articles shall govern. The Checklist is for reference only, and the City makes no representations or warranties regarding its accuracy or completeness. By submitting a Tender, the Tenderer acknowledges and agrees that the City shall not be held liable for any errors, omissions, or discrepancies in the Checklist and expressly waives any and all claims, demands, or legal actions against the City arising from or relating to its use.

- .1 Tender Form and Unit Price Schedule – Article 1.3 – Completed in the form provided in Part 2
- .2 Tender Deposit – Article 1.9 – Consent of Surety and a Bid Bond
- .3 Insurance – Article 1.11 – Certificate of insurance or a Letter of Insurability or Undertaking of insurance. Level of insurance detailed in CCDC 4.
- .4 Work Schedule – Article 1.12
- .5 Workers' Compensation – Article 1.19 – Letter of account from the Workplace Safety and Insurance Board – Ontario or alternatives as listed in Article 1.19
- .6 Tenderer's Experience in Similar Work – Form A, Part 2
- .7 Schedule of Subcontractors, Suppliers & Equipment – Form B, Part 2
- .8 Schedule of Alternative Proposals – Form C, Part 2
- .9 Undertaking to Comply – Form D, Part 2
- .10 Indemnification Agreement – Form E, Part 2



With every community, we redefine what's possible.



Stantec is a global leader in sustainable engineering, architecture, and environmental consulting. The diverse perspectives of our partners and interested parties drive us to think beyond what's previously been done on critical issues like climate change, digital transformation, and future-proofing our cities and infrastructure. We innovate at the intersection of community, creativity, and client relationships to advance communities everywhere, so that together we can redefine what's possible.

Stantec Consulting Ltd.
500–311 Portage Avenue
Winnipeg MB R3B 2B9
stantec.com