

## **Client**

### **National Capital Commission Gatineau Park**

**Scott Rd, Gatineau, PQ – DC3022-02-10**

#### **Type of Document:**

Demolition / Deconstruction Specifications

#### **Project Name:**

Specifications for the dis-assembly of a the Old Chelsea Picnic Area Pedestrian Bridge

#### **Project Number:**

DC3022-02-10

#### **Prepared By:**

**National Capital Commission**

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Canada

#### **Date Submitted:**

30 October 2013

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List of Drawings

Dwg No.

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Old Chelsea Bridge (Topo Map/Site Plan/Vegetation Plan) October 2013 NCC ACAD #13072

For Information Purposes:

Gatineau Park – Chelsea Creek Pedestrian Bridge Rehabilitation Project, RD2390-28 June 2004

- S1 Plan, Elevation, Section General Notes and Description of Work
- S2 General Survey and Information Drawing

List of Images

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Carte de localisation Aire de pique-nique Old Chelsea Zone d'étude (aerial photo) 20 Mar 2013

Old Chelsea Picnic Area (Kingsmere) Bridge Condition For dis-assembly contract 30 Oct 2013

Figure 2 : Localisation des neuf espèces de plantes a statut particulier (Dendroica, Oct 2013, 2p.)

List of Specifications

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**ANNEX A - WASTE REDUCTION SUBMISSION FORM**

PART I - GENERAL

1.1 Invitation

- .1 The National Capital Commission (NCC) is requesting bids from qualified firms for the demolition/deconstruction of the Old Chelsea Picnic Area timber pedestrian bridge.

1.2 Intent

- .1 Intent of this Bid call is to obtain an offer to remove the bridge, abutment material and 2/3 of the height of the timber pier located in the centre of the creek in accordance with the tender documents while at the same time achieving the best value in terms of price, energy conservation, waste minimization and the use and promotion of the 3R's (Reduce, Reuse, Recycle) philosophy.
- .2 This work shall be performed in an environmentally sustainable manner maximizing the reuse and/or recycling of materials. All work shall be carried out in accordance with the requirements contained herein and the successful contractor's accepted Waste Reduction Workplan (WRW).

1.3 Contract Documents Identification

- .1 Contract Documents are identified as Demolition/Deconstruction of a timber pedestrian bridge.

1.4 Site Assessment

- .1 Visit project site and surrounding area before submitting Bid.
- .2 A Site Visit will be held at the bridge site.
- .3 During the site visit, bidders will have the opportunity to ask questions on any aspect of this project including the project scope, WRW requirements, tendering procedures, etc.
- .4 Representatives of the NCC will be in attendance to provide access to the site and to address all questions related to the project.

1.5 Bid Submission

- .1 The Bid Submission is comprised of two parts- Firm Price Quotation Submission and Waste Reduction Workplan Submission.
- .2 Firm Price Quotation Submission

- .1 Submit **one copy of executed firm price quotation on the attached Tender Form provided by the National Capital Commission**, signed and with corporate seal together with required bid security in the separate sealed opaque envelope, clearly identified with Bidder's name, project name and Owner's name on outside.
- .2 The total price, in Canadian dollars, including GST and QST are to be quoted in the tender form.
- .3 Bidders are advised that they are responsible for their own quantities and take-off for the purpose of bidding.
- .4 Your price offer will not be compliant if a minimum of 70% has not been achieved for the WRW.

.3 Waste Reduction Workplan Submission

- .1 Submit **three copies of the Waste Reduction Workplan (WRW) in a separate envelope** clearly identified with Bidder's name, WRW submission for project name, and Owner's name on outside.
- .2 The WRW form is provided in Appendix A; Waste Reduction Workplan Submission Form.
- .3 The WRW shall include the contractor's project management plan, proposed methodology, work plan, work schedule, and an estimate of the volume and weight of material to be removed from the site (Sect 00020 Art 3.1).
- .4 WRW submission requirements and evaluation criteria are defined in Section 00020 of this document.
- .5 The WRW shall contain sufficient detail to allow NCC and their project management representative to evaluate them in accordance with the requirements of the project Specifications.
- .6 Your price offer will not be compliant if a minimum of 70% has not been achieved for the WRW

1.6 Evaluation Matrix

- .1 The Waste Reduction Workplan (WRW) will be evaluated in accordance with the evaluation matrix in Section 0002 00 of this document.

- .2 In Summary, bidders must score a minimum of 70 out of a possible 100 points on the WRW Submission in order for their price offer to be considered compliant.
- .3 Of the bidders who receive a 70% passing mark on the WRW, the lowest price (including tax) will be awarded the contract.

END OF SECTION

## PART I - GENERAL

### 1.1 Introduction

- .1 A waste audit has not been conducted on this structure. However, NCC has observed that it is composed of untreated timber, standard steel fasteners, a limited quantity of synthetic mesh material and four steel beams.

### 1.2 Waste Management

- .1 Include all information requested for Reuse, Recycling, Qualitative Reuse Evaluation, Project Management and Methodology, and Waste Management System Prior of this Section.
- .2 NCC's Waste Management Goal is 70 percent of total Project Waste to be diverted from landfill sites.
- .3 The WRW will become part of the successful bidder's contract. Waste diversion performance must meet the forecasted percentages of reuse and recycling itemized in the WRW.
- .4 Accomplish maximum control of solid construction waste.
- .5 Preserve environment and prevent pollution and environment damage.

### 1.3 Waste Audit Findings

- .1 It is the responsibility of the contractor to conduct a material quantity estimate as part of their bid submission (Sect 00010, Art 1.5.3.3).

### 1.4 Reuse

- .1 Reuse applies to removal of material from the site for the reuse in other facilities in both the intact original form and as a component of constituent structures.
- .2 The evaluation score for reuse is based on the percentage of material reused, relative to the overall quantity of material produced during the project. The percentage of material reused is converted to a score as shown in Table 1. A full score of 35 is achieved by resuming 100% of the material generated during the course of the project.
- .3 The reuse category carries a greater relative weighting than the recycling category to reflect the environmental advantages of reuse (energy

conservation, social benefits, etc. and the order of precedence of the 3Rs' protocol; Reduce, Reuse and Recycle.

- .4 The verification of the percentage of reuse subsequent to project commencement will be performed by analysis of data obtained as per the submittal requirements as provided in this Section.
- .5 Submission Requirements: On the form provided all bidders shall:
  - .1 Clearly identify the percentage of material to be reused relative to the **total amount** of material produced.
  - .2 Specify details of the proposed method of reuse including:
    - .1 Name and address of reuse facility.
    - .2 Specific materials to be reused.
    - .3 Method and schedule of material transport.

#### 1.5 Recycling

- .1 Recycling applies to the transformation of project material into another saleable or otherwise useable product.
- .2 No on site recycling facilities will be permitted.
- .3 The evaluation score for recycling is based on the percentage of material recycled, relative to the overall quantity of material produced during the project. The percentage of material recycled is converted to a score as shown in Table 1. A full score of 25 is given for 100% recycling.
- .4 The lower relative weighting assigned to recycling reflects the lower positioning of recycling in the 3Rs' protocol; Reduce, Reuse and Recycle.
- .5 The verification of the percentage of reuse subsequent to project commencement will be performed by analysis of data obtained as per the submittal requirements as provided in this Section.
- .6 Submission Requirements: On the form provided all bidders shall:
  - .1 Clearly identify the percentage of material to be recycled relative to the **total amount** of material produced.
  - .2 Specify details of the proposed method of reuse including:
    - .1 Name and address of recycling facilities.

- .2 Source separation plan and tippage schedules.
- .3 Specific materials to be recycled.
- .4 Method, names of carrier and schedule of material transport.
- .5 Site set up details, if on site recycling facilities are utilized.

#### 1.6 Qualitative Reuse Evaluation

- .1 The Qualitative Reuse Evaluation provides an evaluation of the proposed reuse and recycling plan and efforts made to promote maximization of reuse over recycling.
- .2 The qualitative evaluation will be evaluated on the basis of organization, completeness and the clear demonstration of a coordinated plan to maximize reuse of materials.
- .3 The technical adequacy and application of tracking documentation will also be evaluated.
- .4 Submission Requirements: All bidders shall provide:
  - .1 The completed Waste Audit Summary Chart indicating forecasted percentages of reuse, recycling and landfill.
  - .2 A statement of company commitment/policy which will be used to ensure that reuse opportunities are maximized; and
  - .3 A description of the mechanisms which will be utilized throughout the project to track quantities of reuse and recycling to ensure forecasted diversion percentages are met.

#### 1.7 Project Management And Methodology

- .1 Project management and methodology consists of the manpower, resources and management to meet the project performance and scheduling objectives
- .2 This part of the submission must demonstrate that the firm's proposed approach and methodology follows an efficient and logistical sequence that will meet the contract requirements. The applicant must demonstrate that the project team has the necessary background and experience to carry out the requirements of the contract.



- .3 Submission Requirements: On the attached form the bidders shall provide:
  - .1 A summary of the proposed project management team, schedule, and methods to be used to manage the work.

1.8 Waste Management System

- .1 The Waste Management System applied to the proposed method of managing material generated as a result of this project. It includes the preparation and implementation of a high recovery demolition/deconstruction plan including all reporting and documentation required to effectively utilize these strategies.
- .2 The WRW should include details regarding selective demolition, the expected composition of waste generated, the strategies employed to minimize waste generation and in turn maximize landfill diversion, dust control, and noise abatement strategies, the specific method of source separation, energy conservation of demolition activities, material management strategies, etc.
- .3 Submission Requirement: On the attached form all bidders to provide:
  - .1 Clear and concise presentation of all information of this clause on the attached form.
  - .2 Only project specific information is requested. (No brochures or generic company literature.)
- .4 The submissions will be evaluated on the basis of organization, completeness and the clear demonstration of a coordinated plan to manage generated materials. The technical adequacy and application of tracking documentation will be evaluated.

1.9 Waste Reduction Workplan (WRW) Evaluation Matrix

- .1 The following evaluation matrix will be used in the evaluation of the WRW.

EVALUATION CATEGORY	SCORE
% REUSE	Varies from 0 to 35 as per Table 2
% RECYCLING	Varies from 0 to 25 as per Table 2
QUALITATIVE REUSE	Varies from 0 to 10
PROJECT MANAGEMENT & METHODOLOGY	Varies from 0 to 10
WASTE MANAGEMENT SYSTEM	Varies from 0 to 20
TOTAL	/100

1.10 Scores For Reuse And Recycling

REUSE (%)	SCORE	RECYCLE (%)	SCORE
100	35	100	25
90	32	90	22
80	29	80	19
70	26	70	16
60	23	60	13
50	20	50	10
40	17	40	8
30	14	30	6
20	11	20	4
10	8	10	2
0	0	0	0

1.11 Waste Processing Sites

- .1 The list of facilities provided at Sect 01742 Art 1.9 may help in identifying local opportunities that exist for the reuse and recycling of the materials that will be generated on the project.
- .2 This list should not be considered exhaustive, nor does NCC support or endorse the services of activities of any of the companies listed herein.
- .3 All this information for the facilities should be verified prior to its use and should not be relied upon to estimate job costing.
- .4 All of the phone numbers and contact names are accurate at the time of publication and should be used to verify all information prior to use. For more information regarding the reuse and recycling of used building materials contact: The Building Materials Reuse Association at [www.ubma.org](http://www.ubma.org) or 1-800-990-2671.

**PART II - PRODUCTS**

2.1 Not Used

.1 Not Used.

**PART III - EXECUTION**

3.1 Waste Audit

.1 Table for Estimating Material Removal Quantity and Weight

Structure Component	Wood		Metal		Other	
	Volume (m <sup>3</sup> )	Mass (kg)	Volume (m <sup>3</sup> )	Mass (kg)	Volume (m <sup>3</sup> )	Mass (kg)
Deck and railing	Untreated Timber:				Debris:	
Pier	Untreated Timber:				Debris:	
Abutment	Untreated Timber:				Debris:	
Beams			Steel:			
Guardrail Mesh					Synthetic, Recyclable: Debris:	
Miscellaneous			Metal Fasteners:		Debris:	
Others						

END OF SECTION

## PART I - GENERAL

### 1.1 References

- .1 Latest version of National Building Code of Canada (NBC) including all amendments up to tender closing date.

### 1.2 Description of Work

- .1 Work includes full removal of existing 20m (approx.) wood and steel pedestrian bridge, removal of top 2/3 (approx.) of centre timber crib pier, and removal of remnants of two timber abutments on Chelsea Creek adjoining the Old Chelsea picnic area as shown in the enclosed site plan. Work also includes mobilization/ demobilization, traffic protection and environmental mitigation measures, the removal and return or off-site disposal of material removed as part of the bridge dis-assembly, site remediation to natural or original use state, and clean-up at all locations affected by the work. The period of work shall be between contract award and January 24, 2014 unless otherwise stipulated in contract documents.

### 1.3 Codes

- .1 Perform work in accordance with latest version of National Building Code of Canada (NBC) and any other code of provincial or local application provided that in any case of conflict or discrepancy, the more stringent requirements shall apply.
- .2 Meet or exceed requirements of:
  - .1 contract documents,
  - .2 specified standards, codes, and referenced documents.

### 1.4 Documents Required

- .1 Maintain at job site, one copy each of following:
  - .1 Contract drawings.
  - .2 Specifications.
  - .3 Addenda.
  - .4 Reviewed shop drawings if required.
  - .5 Change orders.

- .6 Other modifications to Contract.
- .7 Copy of approved work schedule.
- .8 Instructions for the installation and operation of structures, devices, or temporary equipment to be installed or utilized by the contractor
- .9 Safety and Environmental protection documentation as required by Federal and Provincial legislation and regulations.

#### 1.5 Work Schedule

- .1 Provide in a form acceptable to the NCC Project Manager (PM), within 5 working days after Contract award, a detailed schedule that complies with timings required by Contract documents and shows at a minimum mobilization date(s), start of work, delivery of equipment and materials, anticipated progress stages if appropriate, and final completion of work. Any work by subcontractors shall be shown in similar detail.
- .2 Construction works shall be done within the hours of 7h00 and 19h00 Monday to Saturday understanding that NCC and Gatineau Park staff will only be available for consultation during the hours of 08h00 to 16h30 Monday to Friday.
- .3 The PM may conduct reviews of work progress in view of the contractor's work schedule. Schedule amendments will be made in consultation between the Contractor and PM, and are subject to the approval of the PM.

#### 1.6 Contractor's Use of Site

- .1 Work and staging areas, as well as the stair case accessing the site from the west, will be closed and secured by the Contractor during construction. Pathways leading to work areas will remain open to public during construction.
- .2 Use of site: as specified in contract documents and as per PM's instructions. The NCC will designate and stake out staging area(s) near the sites upon request of the Contractor if required. The Contractor is not to use the picnic area parking lot for this purpose. Stockpile area must be fenced and secured from public access. Small amounts of material for immediate use and equipment may be brought to spaces immediately adjoining the bridge site although. Contractor is to keep the access roads to the parking lot open at all times. The Contractor shall install proper signage to indicate to pedestrians the closure of the stairwell and trails immediately adjacent to work areas.

- .3 Contractor's vehicles and equipment will remain on designated parking, trail, and staging areas; no incursion onto naturalized areas is permitted except where specified in the scope of work. Main access to the work area will be from the picnic area parking lot. Access to the site will be via an undeveloped grass field from the west and undeveloped trail from the east (if absolutely required). Small equipment (e.g. ATVs, Bob-Cat loader, Gator) will be permitted to move materiel and equipment from the picnic parking area to the site. No motorized equipment will be permitted to traffic the trails/paths on the east bank.
- .4 Contractor shall be responsible for all damages, dirt, oil, etc., in areas trafficked by Contractor equipment or personnel, and shall remove them.
- .5 A fence shall be installed during non-working hours to isolate the working areas and staging areas for public safety.
- .6 Contractor will conduct snow removal as required to safely conduct the work. Snow removal will be done in a manner consistent with the environmental protection and remediation requirements of the project.

#### 1.7 Project Meetings

- .1 Hold project meetings at times and locations approved by PM.
- .2 Provide 48 hour notice to participants of date and time of meetings.
- .3 Record minutes of meetings, and distribute to participants within 7 days of meeting.

#### 1.8 Setting Out of Work

- .1 Assume full responsibilities for, and execute complete layout of work to locations, lines, and elevations indicated.
- .2 Provide devices needed for lay out, construction, and demolition work including means of collecting and removing debris.

#### 1.9 Written Warranties

- .1 Contractor will warranty installation and material such as geotextiles, fencing, vegetation, stone, etc, required to return site to original use or natural condition and stabilize the site against erosion for a period of twelve (12) months from satisfactory inspection of the work by the PM.

1.10 Additional Drawings

- .1 PM may furnish additional drawings for clarification. These additional drawings have same meaning and intent as if they were included with plans referred to in Contract documents.

1.11 Interpretation of “Engineer”

- .1 Unless otherwise distinguished the designation “Engineer” in subsequent Sections is interchangeable with “NCC Project Manager (PM)” or “PM”.

END OF SECTION

**UNIT PRICE TABLE**

**Project Title:**

**Date:**

Pay Item	<u>Tender Quantity</u> a	<u>Unit</u> <sup>1</sup>	<u>Unit Cost</u> b	<u>Amount</u> <sup>2</sup> a x b
1 – Mobilization / Demobilization	1.0	LS	\$	\$
		Sub-total		\$
2 – Site Preparation	1.0	LS	\$	
		Sub-total		\$
3 – Bridge Removal	1.0	LS	\$	\$
		Sub-total		\$
		Lump Sum Total		\$
		GST/TPS		\$
		PST/TVQ		\$
		TOTAL:		\$
Note 1: LS = (Lump Sum Price)				
Note 2: These amounts to be carried forward to Page 1 of the Tender Document.				



PART I - GENERAL

1.1 General

- .1 Work includes full removal of existing wood and steel pedestrian bridge, removal of top of centre timber crib pier, and removal of remnants of two timber abutments on Chelsea Creek adjoining the Old Chelsea picnic area as shown in the enclosed site plan. Work also includes mobilization/ demobilization, traffic protection and environmental mitigation measures, the removal and off-site disposal of remaining material removed as part of the bridge dis-assembly, site remediation to an erosion resistant natural or original use state, and clean-up at all locations affected by the work.
- .2 Payment at the lump sum contract price shall be full compensation for all labor, services, equipment, and materials to complete the work, for all pay items described in the following paragraphs and listed in the Form of Tender.

1.2 Pay Item 1 – Mobilization / Demobilization

- .1 The work includes the protection measures to protect public traffic (vehicular and pedestrian) including traffic signs, fencing, snow removal for access to construction work areas, all environmental protection and mitigation measures, site clean-up during and at the end of contract, as well as re-instatement of all sites to original condition, removal and transportation off-site of debris and demolition materials.
- .2 As shown in the specifications and drawings this item includes the following mobilization / demobilization activities:
  - .1 Install fencing and rails to secure bridge site access
  - .2 Secure staging area
  - .3 Improve ground for staging area if required
  - .4 Install (and stake down) water permeable erosion control cloth (hessian/jute or equivalent) in areas of pedestrian and equipment traffic as well as under temporary structures (stairs, boardwalks, etc.) constructed to access the work area over the banks and within the watercourse.
  - .5 Temporary improvement of access where permitted (soil and vegetation protection, vegetation removal where permitted, placement of material to improve traffic-ability, safety barriers, site information for public)

- .6 Improvement of work areas to prevent damage to surrounding soil and vegetation (in particular area secure area within the drip line of designated trees from access by contractor or public)
- .7 Soil and vegetation remediation as required.
- .8 Dispose of debris
- .9 Close and return staging area to previously existing condition.
- .3 Work of this item is also described in Sections 01005, 01500, 01545, 01600, 01705, 01710, 1742, and 02070.
- .4 This item will be paid on a lump sum basis at the price included in the Form of Tender and summarized in the Unit Price Table.
- .5 No measurement for payment will be made for this item.

1.3 Pay Item 2 – Site Preparation

- .1 This work will require the emplacement by hand of protective measures for the stream bed, embankments, hillside leading to the parking area and any other work area from the effects of this work. These will include wooden deck boards bridging the watercourse and stream bed, temporary wooden stairs to traverse the embankments, wood sheathing to protect the stairs and/or earthen hillside leading to the site, and suspended tarpaulins or other netting to prevent the loss of material, waste or equipment into the streambed. Carrier cable(s) anchored above each embankment or other means shall be installed to ensure safety of workers in accordance with relevant legislation. Separate carrier cables should also be considered for carrying large structural pieces from their origin to a point on the embankment where they can be lifted to the contractor's means of disposal.
- .2 As detailed in the specifications and drawings this item includes:
  - .1 Installation of temporary stairs and boardwalks for watercourse access in keeping with the intent and purpose of the Federal Department of Fisheries and Oceans' (DFO) Operational Statement for Temporary Stream Crossing at <http://www.dfo-mpo.gc.ca/habitat/what-quoi/os-eo/qc/crossings-eng.asp>
  - .2 Installation of debris collection devices (tarps, nets, etc)

- .3 Installation of means to carry large components out of the watercourse and to disposal/staging area. (earth anchors, cable carriers, pulleys, winches, ropes, etc)
- .4 Remove component carrying and debris collection devices.
- .5 Inspect site for debris that has escaped collection measures.
- .6 Remove temporary access stairs and boardwalk.
- .7 Remove any improvements required to protect soil/vegetation
- .3 These activities will involve using hand and power tools, and the movement of material all without contamination of the watercourse, stream bed or embankments in any manner.
- .4 Work of this item is also described in Sections Sections 01005, 01500, 01545, 01600, 01705, 01710, 1742, and 02070.
- .5 This item will be paid on a lump sum basis at the price included in the Form of Tender and summarized in the Unit Price Table.
- .6 No measurement for payment will be made for this item.

1.4 Pay Item 3 – Bridge Removal

- .1 As shown in the specifications and drawings this item includes:
  - .1 Removal and disposal of entire bridge structure including but not limited to, rail, mesh, decking, stringers and steel beams.
  - .2 Dis-assemble existing pier from the top to a point just above the high water mark.
  - .3 Removal of residual timber that forms old abutments to level of surrounding soil only.
- .2 This work will require the dis-assembly and removal of the steel and timber structure using hand and power tools. It may require supply and erection of temporary bracing, cutting, drilling, connectors and screws, cables, chain hoisting, cable winching, block and tackle lifting, and the movement of material without contamination of the watercourse or embankments in any manner by timber, debris, sawdust, fasteners, etc.
- .3 Work of this item is also described in Sections Sections 01005, 01500, 01545, 01600, 01705, 01710, 01742, and 02070.

- .4 This item will be paid on a lump sum basis at the price included in included in the Form of Tender and summarized in the Unit Price Table.
- .5 No measurement for payment will be made for this item.

END OF SECTION

## PART I - GENERAL

### 1.1 Access

- .1 Provide and maintain adequate access to project site.
- .2 If authorised to use existing roads and pathways for access to project site, maintain such roads and pathways for duration of Contract and make good any damage resulting from Contractors' use of roads, pathways and staging areas.
- .3 In the event access to the work site and/or the work site itself are restricted due to snow or other natural phenomenon is the contractor's responsibility to facilitate their own access by snow removal and other activities approved by the PM to ensure the continuity of the work. This will be done in a manner which will incur minimal damage to the surrounding terrain, trees and vegetation.
- .4 NCC will authorize the contractor sole access to all of the parking lot during the work if required. The parking lot is normally closed to the public and left uncleared once snow accumulation blocks access. If the contractor is required to clear snow to facilitate access then the contractor will be responsible for securing this parking area from public access until the project is complete and until such time as snow accumulation does this naturally once again.
- .5 Clean all areas daily where used by Contractor's equipment.

### 1.2 Sanitary Facilities

- .1 Contractor to provide and pay for on-site sanitary facilities in accordance with governing regulations and ordinances.
- .2 Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.

### 1.3 Power

- .1 Arrange, pay for, and maintain temporary electrical power supply in accordance with governing regulations and ordinances. No power facilities exist on site. Due to the potential of damage from exhaust fumes fuel burning temporary power generation equipment must be located at least 5m from the drip line of any tree in the work area.

1.4 Water Supply

- .1 Arrange, pay for, and maintain temporary water supply in accordance with governing regulations and ordinances. No water facilities exist on site.

1.5 Shoring

- .1 Get approval of shoring and scaffolding to dis-assemble bridge including all temporary structures erected during construction.

1.6 Equipment on Site

- .1 Get approval for all mechanical means for removal and moving of bridge components and material on site.

1.7 Temporary Facilities

- .1 Remove temporary facilities from site when directed by PM.
- .2 When work on site is stopped for a period of time keep temporary facilities operational until close down or removal is approved by PM.

1.8 Staging Areas

- .1 Establish staging and temporary work areas in locations approved by PM. Secure staging and temporary work areas from public access and operate in a manner that ensures public safety.
- .2 Remove or relocate staging areas as directed by PM.
- .3 When work on site is stopped for a period of time Contractor may with the approval of the PM close or relocate staging areas.
- .4 Contractor is responsible for security of material, equipment and structures left on or near site.

END OF SECTION

## PART I - GENERAL

### 1.1 References

- .1 CSA S269.1-1975 Falsework for Construction Purposes.
- .2 CAN/CSA-S269.2-M87 Access Scaffolding for Construction Purposes.
- .3 FCC No. 301-1982 Standard for Construction Operations.

### 1.2 Construction Safety Measures

- .1 Observe construction safety measures of latest version of National Building Code Part 8, or of Provincial Government, Workers'/Workmen's Compensation Board and municipal authority provided that in any case of conflict or discrepancy more stringent requirements shall apply.
- .2 Comply with requirements of FCC No. 301, Construction Works, June 1982, issued by Fire Commissioner of Canada.

### 1.3 Overloading

- .1 Ensure no part of work is subjected to loading that will endanger its safety or will cause permanent deformation.

### 1.4 Structural Stability

- .1 Ensure components of existing structure (ie. centre pier) and Contractor's temporary structures are braced adequately to ensure stability during work (loss of supporting material or members) and in the event of inclement weather (snow or wind loading).

### 1.5 Falsework

- .1 Design and construct falsework in accordance with CSA S269.1.

### 1.6 Scaffolding

- .1 Design and construct scaffolding in accordance with CSA S269.2

### 1.7 Fall Arrest

- .1 Design, construct and employ fall arrest systems in accordance applicable federal and provincial regulations.

1.8 Traveller Cables / Winching

- .1 Design, construct, and operate traveller cables, anchors, and winch systems in accordance with federal and provincial safety regulations and manufacturer specifications.

1.9 WHMIS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada and Health and Welfare Canada.
- .2 Deliver copies of WHMIS data sheets to PM on delivery of materials.

END OF SECTION



## PART I - GENERAL

### 1.1 Fires

- .1 Fires and burning of rubbish on site not permitted.

### 1.2 Disposal of Waste

- .1 Do not bury rubbish and waste materials on site unless approved by PM.
- .2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways and storm or sanitary sewers.

### 1.3 Drainage

- .1 Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .2 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

### 1.4 Site Clearing and Plant Protection

- .1 Protect trees and plants on site and adjacent properties where indicated by NCC representative. If trees are accidentally damaged or removed as a result of the works, the contractor will plant two trees for each tree damaged or removed (a 2:1 ratio). Contractor will monitor the success of all plantings and re-vegetation for two years and will undertake any remedial actions that may be required.
- .2 Wrap in burlap, trees and shrubs adjacent to construction work, staging/storage areas and trucking lanes, and encase with protective wood framework from grade level to height of 2 m.
- .3 Protect roots of trees from trunk to drip line during excavation, site grading and material movements to prevent disturbance, damage or compaction of soil. Avoid unnecessary traffic, dumping and storage of materials over root zones. Reduce to a minimum the removal of vegetal soil and vegetation.

### 1.5 Pollution Control

- .1 Control emissions from equipment to local authorities' requirements.
- .2 Prevent extraneous materials from contaminating air and water beyond application area, by providing temporary enclosures.

- .3 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads, construction site and roads during construction.
- .4 No fuel powered equipment is permitted within 15 metres of the high water mark (HWM). Electrical or compressed air power tools are permitted within this zone.
- .5 To minimize the risk of spills, the contractor will be required to use construction machinery and equipment in good working order and to relocate the equipment for refueling to a location no less than 60 metres from the high water mark. In all locations fuel powered equipment shall be equipped with drip pans.
- .6 Emergency Response Plan: In case of Soil and Water Contamination due to accidental spills or leaks from construction equipment, the contractor must prepare an Emergency Response Plan, have spill containment equipment on-site, comply with provincial and federal regulations, and notify the NCC's Environmental Services Section if a spill occurs (Telephone: 613-239-5353).

#### 1.6 Work Adjacent to Waterways

- .1 Do not operate construction equipment in waterways and marshes.
- .2 Do not use waterway beds and marshes for borrow material.
- .3 Do not dump excavated fill, waste material or debris in waterways and marshes.
- .4 Cutting and drilling of new material to facilitate dis-assembly must be done outside the wetland area.
- .5 For dis-assembly of the bridge, fine netting and/or tarpaulins shall be erected/suspended under the entire structure to capture all debris, cuttings, fasteners, etc, and prevent them from falling into the water course or embankments within the HWM area. Any debris not captured in this system must be removed immediately with no damage to the watercourse, and the system must be adapted to prevent future material losses.

#### 1.7 Special Requirements

- .1 This work is being permitted under special authorization due to the stringent protection and mitigation measures specified for the site. All environmental protection measures must be rigorously adhered to and are

subject to regular inspection else the work will be stopped and future authorizations of this nature will be jeopardized.

- .2 Embankments in the area of work must be protected with geotextile or hessian to prevent damage to soil and erosion due to traffic.
- .3 To enable work and facilitate capturing of debris wooden walk ways shall be prefabricated, and installed above the water on the surface of existing stones in the waterway paralleling both sides of the bridge. These walkways are to be accessed via prefabricated wooden stairwells installed to protect the embankments (with an underlay of geotextile or hessian).
- .4 Special attention must be given to construction and clean up because of the sensitive nature of marsh environments, and the permanence of any scarring or damage to their surfaces.
- .5 Digging / excavation should be limited to the minimum required to retrieve abutment timbers above ground level. No excavation is permitted within the watercourse. Some minor leveling by hand may be needed during remediation of old abutment areas. At no time will motorized equipment be allowed between the banks of the watercourse.
- .6 The NCC Representative and the Contractor will conduct a site visit to determine the extent of remediation required. The contractor will be required to reinstate the areas used for the staging of machinery and construction materials to its original condition or better. If required, reseedling of affected areas must be done with approved NCC grass seed mix. The timing for reseedling will depend on the season in which the works are completed. If seeding is unlikely to be successful given the time of year, the Contractor will protect the damaged areas with jute fabric and make good the work in the spring prior to May 15 as this increases reinstatement success.
- .7 To prevent potential damage to species listed under the SARA, the contractor shall conduct a visual survey of the worksite prior to and during the work in order to locate and protect the Butternut (Noyer Cendré) trees and the Walking Fern (Doradille Ambulant) vegetation areas identified in plans and drawings provided. In addition to the locales and species identified by NCC Environmental Services, the Contractor is obliged to report any other protected species, species at risk, or species of interest they may come across in the performance of this work.

1.8 Construction Methodology

- .1 Contractor shall use construction methodology approved by the Ministère du Développement durable, de l'Environnement, de la Faune et des Parcs (MDDEFP) of the Province of Québec (under section 22 of the Loi sur la qualité de l'environnement du Québec), and the National Capital Commission.

END OF SECTION

## PART I - GENERAL

### 1.1 General

- .1 Use new material and equipment unless otherwise specified.
- .2 Within 5 days of written request by PM, submit following information for materials and equipment proposed for supply and to be retained by the project:
  - .1 name and address of manufacturer,
  - .2 trade name, model and catalogue number,
  - .3 performance, descriptive and test data,
  - .4 manufacturer's installation or application instructions, and
  - .5 evidence of arrangements to procure.
- .3 Use products of one manufacturer for material and equipment of same type or classification unless otherwise specified.

### 1.2 Manufacturers' Instructions

- .1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods.
- .2 Notify PM in writing of any conflict between these specifications and manufacturers instructions. PM will designate which document is to be followed.

### 1.3 Delivery and Storage

- .1 Deliver, store and maintain packaged material and equipment with manufacturer's seals and labels intact.
- .2 Prevent damage, adulteration and soiling of material and equipment during delivery, handling and storage. Immediately remove rejected material and equipment from site.
- .3 Store material and equipment in accordance with suppliers' instructions.

### 1.4 Contractor's Options for Selection of Materials for Tendering

- .1 Materials specified by referenced standard, select any material that meets or exceeds the specified standard.

- .2 Materials specified by naming one or more materials, select any material named. For this specification, the expression "acceptable material" designates a complete product in good shape as per description given by manufacturer`s name, catalogue number, trademark or any combination of these elements.
- .3 When materials are specified by a Standard, Prescriptive or Performance specifications, upon request of the PM, obtain from manufacturer an independent testing laboratory reporting, showing that the material or equipment meets or exceeds the specified requirements.

1.5 Substitution

- .1 No substitutions will be permitted without prior written approval of PM. Refer to **GI15 Approval of Alternative Materials** in the Instructions To Tenderers for instructions on submitting substitution.
- .2 Should proposed substitution be accepted, an addendum will be issued to all bidders.

1.6 Conformance

- .1 When material or equipment is specified by standard or performance specifications, upon request of Engineer, obtain from manufacturer an independent testing laboratory report, stating that material or equipment meets or exceeds specified requirements.

END OF SECTION

PART I - GENERAL

1.1 Reference

- .1 Government of Canada NBC Part 8
- .2 Canada Labour Code, Canada Occupational Safety and Health Regulations
- .3 Province of Ontario Occupational Health and Safety Act and Regulations for Construction Projects, R.S.O. 1990
- .4 Province of Quebec An Act Respecting Occupational Health and Safety, R.S.Q. 1997
- .5 Safety Code for the Construction Industry 1997
- .6 Canadian Standards Association (CSA) CSA S350-M1980, Code of Practice for Safety in Demolition of Structures

1.2 Submittals

- .1 Health and Safety Plan
  - .1 Submit site-specific plan before contract award.
  - .2 PM will review Plan and provide comments to Contractor within seven (7) days after receipt of plan.
  - .3 Revise Plan as appropriate and resubmit to PM within seven (7) days after receipt of comments from PM.
  - .4 Submit two (2) copies of Contractor health and safety inspection reports at least once every two (2) weeks.
  - .5 PM's review of Plan or inspection reports does not provide an approval and does not diminish Contractor responsibility for health and safety.
- .2 Submit immediately upon receipt or completion:
  - .1 construction safety checklists,
  - .2 reports or directions issued by health and safety inspectors,
  - .3 incident and accident reports,
  - .4 Material Safety Data Sheets (MSDS), and
  - .5 health and safety training records including names of personnel and alternates responsible for site safety and health, hazards present on site, and use of personal protective equipment.
- .3 Certification of medical surveillance for site personnel
  - .1 Where prescribed by legislation, regulation or safety program, submit Certification within seven (7) days after date of Notice to Proceed and prior to site mobilization.

- .2 Update and submit Certification as personnel are sent to site.
- .4 On-site Contingency and Emergency Response Plan: Address standard operating procedures to be implemented during emergency situations.

1.3 General requirements

- .1 In general: none.
- .2 Health and Safety Plan
  - .1 Perform site-specific hazard assessment.
  - .2 Attend health and safety pre-construction meeting.
  - .3 Develop and submit written site-specific Plan based on hazard assessment prior to contract award.
  - .4 Include in Plan safety and health risk or hazard analysis for site tasks and operations.
  - .5 Plan must address project specifications.
  - .6 File required health and safety notices with Provincial authorities prior to commencement of Work.
  - .7 Continue to implement, maintain, and enforce Plan until final demobilization from site.
- .3 Responsibility
  - .1 Be responsible for safety of persons and property on site and for protection of persons off site and environment to extent that they may be affected by conduct of Work.
  - .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.
- .4 Compliance requirements
  - .1 Applicable legislation, regulations
    - .1 NBC Part 8, WHMIS, FC 301, FC 302
    - .2 Canada Labour Code, Canada Occupational Safety and Health Regulations
    - .3 For work in Ontario: Ontario Health and Safety Act
    - .4 For work in Québec: Occupational Health and Safety Act, Industrial and Commercial Establishments Regulation, R.R.Q.
    - .5 Specified standards and regulations to ensure safe operations at site containing hazardous or toxic materials.



- .2 Document postings and availability
  - .1 Comply with provincial general posting requirements and other safety-related postings as the PM may direct.
  - .2 Maintain one copy of each applicable health and safety standard at job site.
- .5 Designated substances, volatile compounds, unforeseen hazards
  - .1 Notify PM 48 hours in advance of work in occupied areas involving designated substances (under applicable provincial legislation), hazardous substances (Canada Labour Code Part II Section 10), and before works or using volatile compounds.
  - .2 Should any unforeseen or peculiar safety-related factor, hazard, or condition become evident during performance of Work, immediately stop work immediately and advise PM verbally and in writing.
- 1.4 Health and Safety Coordinator
  - .1 Employ and assign to Work, competent and authorized representative as Health and Safety Coordinator must:
    - .1 have minimum two (2) years' site-related working experience specific to activities associated with the work.
    - .2 have basic working knowledge of specified occupational safety and health regulations,
    - .3 be responsible for completing health and safety training session and ensuring that personnel not successfully completing the required training are not permitted to enter site to perform Work,
    - .4 be responsible for implementing, enforcing daily and monitoring site-specific Health and Safety Plan, and
    - .5 be on site during execution of Work.
- 1.5 Construction Safety Checklist
  - .1 Obtain Construction Safety checklist from PM.
  - .2 Review and implement applicable health and safety checklists provided by PM in collaboration with NCC Construction Safety personnel.
- 1.6 Correction of non-compliance
  - .1 Immediately address health and safety non-compliance issues identified by PM.
  - .2 Provide PM with written report of action taken to correct non-compliance of health and safety issues identified.

- .3 PM may stop Work if non-compliance of health and safety regulations is not corrected.

1.7 Power Activated Fasteners

- .1 Power-activated fasteners
  - .1 Use power actuated devices only after receipt of written permission from PM.

1.8 Work stoppage

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.
- .2 Assign responsibility and obligation to Health and Safety Coordinator to stop or start Work when, at Health and Safety Coordinator's discretion, it is necessary or advisable for reasons of health or safety. Engineer may also stop Work for health and safety considerations.

PART II - PRODUCTS

- .1 NOT APPLICABLE

PART III - IMPLEMENTATION

- .1 NOT APPLICABLE

END OF SECTION

PART I - GENERAL

1.1 General

- .1 Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
- .2 Store volatile waste in covered metal containers, and remove from premises at end of each working day.

1.2 Materials

- .1 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

1.3 Cleaning During Construction

- .1 Provide on-site containers for collection of waste materials, and debris.
- .2 Dispose of waste materials, and debris off site.
- .3 Remove grease, dust, dirt, stains, and other foreign materials from timber stairs, concrete and asphalt parking areas, and associated structures on a daily basis and always before staining occurs.

1.4 Final Cleaning

- .1 Remove debris and surplus materials from site.
- .2 Remove grease, dust, dirt, stains, and other foreign materials from timber stairs, concrete and asphalt parking areas, and associated structures.
- .3 Broom clean paved surfaces; rake clean other surfaces of grounds.

END OF SECTION

## PART I - GENERAL

### 1.1 Waste Management Goals

- .1 Accomplish maximum control of solid construction waste.
- .2 Preserve environment and prevent pollution and environment damage.

### 1.2 References

- .1 Canadian Standards Association (CSA)
  - .1 CSA S350-M1980 (R2003), Code of Practice for Safety in Demolition of Structures.
- .2 Federal Legislation
  - .1 Canadian Environmental Protection Act (CEPA) 1999. 1999, c.33, C-15.31, (Assented to September 14, 1999), 2004, c. 15; 2005, c. 23.
  - .2 Canadian Environmental Assessment Act (CEAA) (2012) L.C. 2012, c. 19, art. 52 Assented to 2012-06.
  - .3 Transportation of Dangerous Goods Act (TDGA) 1992. 1992, c. 34, T-19.01, (Assented to June 23, 1992), 1992, c. 34; 1994; c. 26; 1997, c. 9; 1999, c. 31.
  - .4 Motor Vehicle Safety Act (MVSA) 1995. 1993, c. 16, M-10.01, (Assented to May 6, 1993, Act in force April 12, 1995), 1993, c. 16, 2.2; 1999, c. 33, s. 350.

### 1.3 Definitions

- .1 **Alternate Disposal:** The reuse and recycling of materials by a designated facility, user or receiving organization which has a valid License or Certificate of Approval to operate. The alternative to landfill disposal.
- .2 **Disassembly:** The physical detachment of materials from a structure. Includes prying, pulling, cutting, unscrewing, etc.
- .3 **Site Representative:** National Capital Commission (NCC) representative.
- .4 **High Recovery Demolition/Deconstruction:** The systematic dismantling of a structure to salvage materials for reuse. What cannot be reused is considered subsequently for recycling. The ultimate objective is to

recover potentially valuable resources while diverting what has traditionally been a significant portion of the waste stream from landfill.

- .5 Hauler: A company, possessing appropriate and valid License of Certificate of Approval, contracted to transport waste and/or reusable/recyclable materials off site to designated facility, user or receiving organization.
- .6 Hazardous Materials: Dangerous substances, dangerous goods, hazardous commodities and hazardous products, such as poisons, corrosive agent, flammable substances, ammunition, explosives, radioactive substances, or any other material that can endanger human health or well-being or the environment if handled improperly.
- .7 Inert Fill: inert waste - exclusively asphalt and concrete.
- .8 Processing: Tasks which are subsequent to disassembly. Includes moving materials, de-nailing, cleaning, separating, stacking, etc.
- .9 Recyclable: ability of product or material to be recovered at end of its life cycle and re manufactured into new product for reuse.
- .10 Recycling: process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for purpose of using in altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- .11 Reuse: repeated use of product in same form but not necessarily for same purpose. Reuse includes:
- .12 Salvaging reusable materials from re modelling projects, before demolition stage, for resale, reuse on current project or for storage for use on future projects.
- .13 Returning reusable items including pallets or unused products to vendors.
- .14 Separate Condition: refers to waste sorted into individual types.
- .15 Used Building Material Receipt: Receipt issued to end destination of materials designated for alternate disposal.
- .16 Waste Audit (WA): detailed inventory of materials in building. Involves quantifying by volume/weight amounts of materials and wastes to be generated during high recovery demolition/deconstruction. Indicates quantities of reuse, recycling and landfill.

- .17 Waste Management Co-ordinator (WMC): contractor representative responsible for supervising waste management activities as well as coordinating all related, required submittal and reporting requirements.
- .18 Waste Reduction Workplan (WRW): written report which addresses opportunities for reduction, reuse, or recycling of materials during high recovery demolition/deconstruction. WRW is based on information acquired from the Waste Audit.
- .19 Weigh Bill: Receipt received from a recycling facility indicating the weight and content of each load/bin of material.

1.4 Documents

- .1 Maintain at job site, one copy of following documents:
  - .1 Waste Audit – By Contractor.
  - .2 Waste Reduction Workplan.

1.5 Submittals

- .1 The WMC is responsible for the fulfilment of all reporting requirements.
- .2 Submit copies of receipts, scale tickets, waybills from authorized disposal sites and reuse and recycling facilities for all material removed from site to Engineer on a weekly basis or upon request.
- .3 Submittals shall provide:
  - .1 Time and date of removal.
  - .2 Description of materials.
  - .3 Weight, volume or quantities of materials.
  - .4 Container number and Licence Plate number.
  - .5 Breakdown of reused, recycled or landfilled quantities
  - .6 End destination of materials.
- .4 Written authorization from Engineer is required to deviate from the haulers, facilities or receiving organizations listed in the Waste Reduction Workplan.

.5 Sample Submittal

<b>3R's DEMOLITION WASTE REPORT</b>		
<b>Report Number 00001</b>		
<b>DATE</b>		<b>% REUSE</b>
<b>TIME</b>		<b>% RECYCLE</b>
<b>MATERIAL</b>		<b>% LANDFILL</b>
<b>QUANTITY</b>		
<b>CONTAINER AND LICENCE PLATE NO.</b>		
<b>DESTINATION</b>		
<b>Waste Management Coordinator's Name (print)</b>		
<b>Hauler / Recipient's Name (print)</b>		
<b>Hauler / Recipient's Signature</b>		

1.6 Qualifications

- .1 Provide adequate workforce training through meetings and demonstrations.
- .2 Have someone on site with high recovery demolition/deconstruction experience throughout the project for consultation and supervision purposes.
- .3 All workers, haulers and subcontractors shall possess current, applicable Certificates of Approval and Licenses in accordance with all applicable federal and provincial regulations to remove, handle and dispose of wastes (hazardous and non-hazardous). Provide proof of compliance within 24 hours upon written request of Engineer.

1.7 Regulatory Requirements

- .1 Ensure all work is performed in compliance with all federal and provincial legislation and applicable standards.

## 1.8 Waste Reduction Workplan (WRW)

- .1 Follow prepared WRW.
- .2 WRW should include but not limited to:
  - .1 Destination of materials listed.
  - .2 Deconstruction/disassembly techniques and sequencing.
  - .3 Schedule for deconstruction/disassembly.
  - .4 Location.
  - .5 Security.
  - .6 Protection.
  - .7 Clear labelling of storage areas.
  - .8 Details on materials handling and removal procedures.
  - .9 Quantities for materials to be salvaged for reuse or recycled and materials sent to landfill.
- .3 Structure WRW to prioritize actions and follow 3R's hierarchy, with Reduction as first priority, followed by Reuse, then Recycle.
- .4 Describe management of waste.
- .5 Identify opportunities for reduction, reuse, and recycling of materials based on information acquired from WA.
- .6 Post WRW or summary where workers at site are able to review content.
- .7 Set realistic goals for waste reduction, recognize existing barriers and develop strategies to overcome these barriers.
- .8 Monitor and report on waste reduction by documenting total volume and cost of actual waste removed from project.

## 1.9 Waste Processing Sites.

- .1 Quebec. Reference MRC des Collines de l'Outaouais report, Table 7.1 <http://www.mrcdescollinesdeloutaouais.qc.ca/images/pdf/PGMR%20-%20Final.pdf> :



.1 Centre de tri RMSO  
815, rue Vernon Aylmer Qc J9H 5E1 Téléphone : (819) 772-9151  
Télécopieur : (819) 772-9337

.2 Ontario.

.1 WM (Waste Management)  
2383 Carp Rd., Carp Telephone: 800-665-1898 or  
2301 Carp Rd., Carp Telephone: 800-267-7874

.2 BFI Navan  
3354 Navan Rd., Orleans Telephone: 613-824-7289

.3 Wood Source (wood)  
6178 Mitch Owens Manotick 613-822-6800

#### 1.10 Storage, Handling And Protection

- .1 Store, materials to be reused, recycled and salvaged in locations as directed by Engineer.
- .2 Unless specified otherwise, materials for removal become Contractor's property.
- .3 Protect, stockpile, store and catalogue salvaged items.
- .4 Separate non salvageable materials from salvaged items. Transport and deliver non salvageable items to licensed disposal facility.
- .5 Protect structural components not removed for demolition from movement or damage.
- .6 Protect surface drainage, mechanical and electrical from damage and blockage.
- .7 Separate and store materials produced during dismantling of structures in designated areas.
- .8 Prevent contamination of materials to be salvaged and recycled and handle materials in accordance with requirements for acceptance by designated facilities.
  - .1 On site source separation is recommended.
  - .2 Remove co-mingled materials to off-site processing facility for separation.

.3 Provide waybills for separated materials.

.9 Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.

.10 Permitted duration of material storage on site is to be no longer than **January 24, 2014**. When this clause is implemented, a 30% holdback will be retained by the NCC until all materials have been removed from site.

#### 1.11 Stockpiling And Selling Of Materials

.1 On-site sale of salvaged materials is not permitted.

.2 WMC to be responsible to remove materials and administer sales on contractor's property.

.3 Issue used building material receipt for all materials sold on site, to include: date, time, material descriptions, quantities, name of recipient, bin and/or licence plate number and purchasers' signatures.

#### 1.12 Removal From Site

.1 All material designated for alternate disposal should be transported by/to approved haulers, facilities and receiving organizations listed in Waste Reduction Workplan and in accordance with all applicable regulations. Written authorization from Engineer is required to deviate from the haulers, facilities and receiving organizations listed in Waste Reduction Workplan

.2 Dispose of all materials not designated for alternate disposal in accordance with all applicable regulations. Disposal facilities must be those approved of and listed in Waste Reduction Workplan. Written authorization from Engineer is required to deviate from the disposal facilities listed in Waste Reduction Workplan.

#### 1.13 Disposal Of Wastes

.1 Do not bury rubbish or waste materials.

.2 Do not dispose of waste, or volatile materials, such as mineral spirits, oil, petroleum based lubricants, paint thinner into waterways, storm, or sanitary sewers.

.3 Remove materials from deconstruction as deconstruction/disassembly Work progresses.

- .4 Ensure proper disposal procedures in accordance with CEPA, TDGA and all applicable regulations are maintained throughout the project.
- .5 Prepare project summary to verify destination and quantities on a material by material basis as identified in pre demolition material audit.

1.14 Use Of Site And Facilities

- .1 Execute work with least possible interference or disturbance to normal use of premises.

1.15 Site Verification Of Conditions

- .1 Investigate site and structures to determine dismantling, processing and storage logistics required prior to commencement of work.
- .2 Develop strategy for high recovery demolition/deconstruction to facilitate optimum salvage of reusable and recyclable materials.

1.16 Scheduling

- .1 Project to be 100 % completed by January 24, 2014 or as directed in contract documents.
- .2 Employ all means necessary to meet project time lines without compromising the specified minimum rates of material diversion.
- .3 In an event of an unforeseen delay notify Engineer in writing to request project deadline extension.
- .4 Co-ordinate Work with other activities at site to ensure timely and orderly progress of Work.
- .5 Organize the site and workers in a manner which promotes the efficient flow of materials through disassembly, processing, stockpiling, and removal.

PART II - PRODUCTS

2.1 Not Used

- .1 Not Used.

PART III - EXECUTION

3.1 Application

- .1 Do work in compliance with WRW.
- .2 Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.

### 3.2 Diversion Of Materials

- .1 Separate materials from general waste stream and stockpile in separate piles or containers, as reviewed by Consultant, and consistent with applicable fire regulations.
  - .1 Mark containers or stockpile areas.
  - .2 Provide instruction on disposal practices.
- .2 Source separate materials to be reused/recycled into specified sort areas.
- .3 On site sale of salvaged, recovered, reusable, recyclable materials is not permitted.

### 3.3 Cleaning

- .1 Remove tools and waste materials on completion of Work, and leave work area in clean and orderly condition.
- .2 Clean up work area as work progresses.

END OF SECTION

## PART I - GENERAL

### 1.1 Storage and Protection

- .1 Protect existing items designated to remain and items designated or salvage. In event of damage to such items, immediately replace or make repairs to approval of PM and at no cost to the NCC.

### 1.2 Measurement Procedures

- .1 No separate measurement will be made for the removals.

## PART II - PRODUCT

- 2.1 Not Used.

## PART III - EXECUTION

### 3.1 Preparation

- .1 Inspect site with PM and verify extent and location of items designated for removal, disposal, salvage, return to owner, and items to remain.
- .2 Locate and protect utilities. Preserve active utilities traversing site in operating condition.
- .3 Notify and obtain approval of utilities before starting demolition.

### 3.2 Sequence of Operation

- .1 Contractor is to provide, for approval of the PM, a plan for the sequence of work and removal of material.
- .2 Execute the removal.
- .3 Dispose of materials off-site.

### 3.3 Reporting on Waste Diversion

- .1 It is the corporate policy of the NCC to achieve maximum level of waste diversion (away from landfill) during demolition and construction projects. Regarding material removed from site for disposal, Contractor is to provide certificate of disposal from licensed disposal facility/contractor indicating weight and type of material and disposal method. Contractor shall certify in writing to the NCC as to the disposition of all material removed from site.

3.4 Restoration

- .1 Restore areas and existing works outside areas of demolition/dis-assembly to conditions that existed prior to commencement of work or to match condition of adjacent, undisturbed areas as directed by the PM.

3.5 Clean-up

- .1 Upon completion of work, remove debris, trim surfaces and leave work site clean.

3.6 Recycling

- .1 Contractor is to maximize separation and recycling of material removed from the site.

END OF SECTION

## **Annex A**

# **Waste Reduction Submission Form**





Contractor's Name: \_\_\_\_\_  
\_\_\_\_\_

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**2.0 RECYCLING**

(Provide specific details on this page only of the method of Recycling including items outlined in Section 00020 WRW Submission Requirements, Waste Audit and the Project Specifications)

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Contractor's Name: \_\_\_\_\_  
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**3.0 QUALITATIVE REUSE EVALUATION**

(Complete the Waste Audit Summary Chart and provide brief summary on this page only of the proposed plan to maximize and promote reuse of demolition materials over recycling as per Section 00020 WRW Submission Requirements and the Project Specifications.)

**WASTE AUDIT SUMMARY CHART**

Material	Volume (m <sup>3</sup> ) Weight (kg)	% of Total Volume % of Total Weight	Forecast		
			% Reuse	% Recycled	% Landfilled
Metals					
Wood					
Other ()					
<b>Total Volume</b>					
<b>Total Weight</b>					

1. The % 's are to be filled in as best as possible, based on the Waste Audit information **produced by the contractor.**
2. The total % of material reused, recycled and landfilled shall equal 100%. Note that 90% of the project's materials are specified to be diverted from the landfill.



Contractor's Name: \_\_\_\_\_  
\_\_\_\_\_

**5.0 WASTE MANAGEMENT SYSTEM**

(Provide a brief summary on this page only of the proposed waste management system as per Section 00020 WRW Submission Requirements and the Project Specifications.)

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END OF WASTE REDUCTION WORKPLAN SUBMISSION

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