

PART 1 - GENERAL

- 1.1 PRECEDENCE .1 Division 1 sections take precedence over technical specification sections in other Divisions of this specification.
- 1.2 EXISTING CONDITIONS .1 Existing Services
- .1 The structure is currently vacant.
- .2 The subject property is located on the south side of Tulita St. and the east side of Woodland Ave. in the village of Norman Wells. The property is approximately 28 m by 25 m and is occupied by a single story 109 m² area four bay garage structure built in the early 1950's, a fenced in compound, used for the storage of snow machines and ATVs, and a parking area for motor vehicles in front to the garage.
- .3 The building is not serviced with either water or sewer however there is an electrical service sources from a pole located to the south west of the subject site. No transformers were observed on the pole. Water is supplied to the building by an exterior 2,000 litre tank, connected to an interior pump and expansion tank located inside the garage. The building is heated by one ceiling mounted oil-fired furnace located at the north end of the building exhausted through the north wall. There is one aboveground 1,135 L fiberglass oil tank, manufactured in 2011, located outside on the north end of the east side of the building. There is no evidence of leakage on the ground immediately beneath or around the existing above ground fuel tank.
- .4 The garage structure is a single storey wood frame building with an asphalt shingled roof founded on shallow cribbing. The building is approximately 7.39 m by 14.75 m in size with an approximate footprint of 109 m². The exterior cladding is split between an aluminum composite wall covering on the lower 1.16 m (aluminum siding over asphalt paper and particle board) while the upper 1.84 m is painted 12 mm thick plywood. The roof system comprises wooden trusses covered with plywood sheet and asphalt shingles. The interior walls, ceiling and floor are all of plywood

construction. The walls and ceiling are insulated with glass fiber batt insulation. The floor is also constructed of plywood on 50 x 150 mm wood frame, mounted on timbers and concrete blocks.

- .5 The roof construction is comprised of wooden roof trusses, plywood sheathing with asphalt shingles; there is one roof vent which was likely connected to a furnace at one time. The ceiling is of plywood construction.

.2 Special Requirements

- .1 Submit Schedule in accordance with Section 01 32 18 - Construction Progress Schedules - Bar (GANTT) Chart.
- .2 No work adjacent to open water may commence until appropriate measures are taken to control sediment releases in water as prescribed under Sections 01 35 43 - Environmental Protection and 01 41 00 - Regulatory Requirements.

1.3 BACKGROUND
INFORMATION

- .1 SENES Consultants (SENES) was retained by Public Works and Government Services Canada (PWGSC) to conduct a demolition waste survey of the Four Bay Garage located at on the corner of Woodland Drive and Tulita Street within the community of Norman Wells in 2013.
- .2 The Norman Wells 4 Bay Garage was historically has been used as either a parking garage or for material storage since it was constructed in the 1950's. The building is currently heated by an oil fired ceiling mounted furnace. The building is not serviced with either water or sewer. The NWT Power Corporation provides electricity to the building from its Norman Wells generators.
- .3 The demolition waste survey was completed to is to identify and quantify all building materials and infrastructure including hazardous building materials and associated components of the Four Bay Garage prior to demolition.
- .4 The results of previous assessments have identified potential hazards remaining on site which include, but are not limited to, the following:
 - .1 Non-Hazardous Waste and Debris
 - .2 Hazardous materials (e.g. mercury-containing materials, such as lights)
 - .3 Hazards that may be encountered at the site include, but are not limited to:
 - .1 Site conditions
 - .2 Debris
 - .3 Petroleum hydrocarbon contaminated soil
 - .4 Hazardous waste

- .5 Lead
 - .6 Asbestos
 - .5 Supporting Documents include, but are not limited to:
 - .1 Demolition Waste Survey Four-Bay Garage, Lot 63, Group 1158, Plan 748, Norman Wells, Northwest Territories, SENES Consultants, November 2013
- 1.4 DESCRIPTION OF WORK
 - .1 Work for this Contract comprises the activities of demolition of the Four-Bay Garage in Norman Wells, including, but not limited to, the following:
 - .1 Mobilization and demobilization of personnel, equipment, support facilities and materials required to complete the Work as often as required.
 - .2 Upgrading and Maintenance of on-site access routes and laydown areas, as required, to facilitate construction activities and temporary storage.
 - .3 Utility decommissioning.
 - .4 Segregating and packaging Hazardous Materials. Hazardous Materials may include, but are not limited to:
 - .1 Mercury-containing materials (e.g. thermostats, fluorescent lamps)
 - .2 Lead-containing materials (e.g. paint);
 - .5 Transportation and disposal of Hazardous Materials to the Contractor's Designated Off-Site Disposal Facility.
 - .6 Decommission and remove from site all equipment associated with the heating fuel system on site including tanks and associated piping.
 - .7 Collecting, segregating and consolidation of non-hazardous waste and debris from across the site as well as transportation and disposal.
 - .8 Re-grading and re-shaping of site as required.
 - .9 Provision of the following site support services:
 - .1 Safety, fire protection, and medical services
- 1.5 DEFINITIONS
 - .1 Departmental Representative: Within the context of these Specifications, the term Departmental Representative refers to the person exercising the roles and attributes of Canada under the contract.
 - .2 Departmental Representative's Authorized Personnel: Within the context of these Specifications, the term Departmental Representative's Authorized Personnel refers to personnel appointed by Departmental Representative or authorized on site by Departmental Representative. Departmental Representative's Authorized Personnel provide recommendations/technical guidance to Departmental Representative as required, for the enforcement of these specifications.
 - .3 Contractor: Contractor retained to undertake the remediation Work as defined within the context of

these specifications.

- .4 Contractor's Site Superintendent: Contractor's resident site representative, who is authorized to make decisions on behalf of Contractor.
- .5 The word "provide" means supply and install, operate, submit or any other procedure necessary to complete the work as intended.

1.6 SUBMITTALS

- .1 All submittals in accordance with Section 01 33 00 - Submittal Procedures. A submittal list for reference purposes only is attached at the rear of the document.

1.7 ON-SITE DOCUMENTS

- .1 Maintain at job site, one copy each of the following:
 - .1 Contract drawings.
 - .2 Specifications.
 - .3 Requests for Clarification and responses.
 - .4 Addenda.
 - .5 Change Orders.
 - .6 Reviewed shop drawings.
 - .7 Other modifications to Contract.
 - .8 Previous site reports.
 - .9 Copy of approved Work Schedule.
 - .10 Material and Safety Data Sheets.
 - .11 Health and Safety Response Plan.
 - .1 Spill Contingency Plan.
 - .2 Fire Safety Plan.
 - .3 Emergency Response Plan.
 - .12 Waste Disposal Work Plan.
 - .13 Labour conditions and wage Schedules.
 - .14 Up-to-date record drawings.
 - .15 All applicable Territorial permits and licenses.
 - .16 All applicable Federal permits and licenses.
 - .17 All applicable municipal permits and licenses.
 - .18 Copies of manifests and bills of lading.
 - .19 Workers' Safety and Compensation Commission (WSCC) Notification of Project.
 - .20 Letter of Good Standing with WSCC.
 - .21 Other documents as specified.

1.8 WORK SCHEDULE

- .1 Provide and maintain Work Schedule in accordance with instructions of Section 01 32 18 - Construction Progress Schedules - Bar (GANTT) Chart.
- .2 Keep the Departmental Representative advised of planned Work activities in accordance with the instructions of Section 01 33 00 - Submittal Procedures.

1.9 CONTRACTOR USE
OF SITE

- .1 Use of site is unrestricted until substantial performance.
- .2 Coordinate use of premises under direction of Departmental Representative.

<u>1.10 EXAMINATION OF SITE</u>	.1	Prior to mobilization of equipment and supplies, check the field conditions to ensure that the correct equipment, and supplies are being mobilized to site for the execution of the Work, and notify Departmental Representative in writing, of all matters which could prejudice proper execution of the Work. Provide a minimum of three (3) days notice to Departmental Representative prior to examining the site.
	.2	Commencement of mobilization constitutes acceptance of existing conditions, and verification of dimensions.
<u>1.11 DEPARTMENTAL REPRESENTATIVE FURNISHED ITEMS</u>	.1	Not used.
<u>1.12 PERMITS AND LICENSES</u>	.1	Be responsible for obtaining and paying for permits, licenses and approvals associated with the site work.
	.2	Register, obtain and pay for all required licenses and permits for individual tradesmen employed for Work as referenced in the various Sections of the Contract Specifications for the duration of employment.
	.3	Obtain and pay for any other licenses or permits required to perform the activities required on site.
	.4	Provide supplemental information to the regulators for any necessary license amendments or reporting requirements.
	.5	Pay all costs associated with complying with the requirements for the permits and licenses noted in the above clauses.
<u>1.13 SITE SUPERVISION</u>	.1	Designate Contractor's Site Superintendent to be on site at all times during construction, to have full authority to make decisions for Contractor, to be knowledgeable of the requirements of the contract, and to act upon Departmental Representative's instructions.
	.2	Notify Departmental Representative one (1) week in advance of Site Superintendant change and provide updated organizational chart.
<u>1.14 ADDITIONAL DRAWINGS</u>	.1	Departmental Representative may furnish additional drawings to assist with proper execution of the Work. These drawings will be issued for clarification only. Such drawings have the same meaning and intent as if they were included with plans referred to in Contract documents.

PART 2 PRODUCTS

2.1 NOT USED .1 Not used.

PART 3 EXECUTION

3.1 NOT USED .1 Not used.

END OF SECTION

PART 1 - GENERAL

1.1 DEFINITIONS

- .1 Project Start-Up Teleconference: conference call to be held within ten (10) days after Contract Award and to include the Contractor and Departmental Representatives.
- .2 Pre-Construction Meeting: teleconference meeting to be held prior to Contractor Mobilization to include the Contractor and Departmental Representatives. Interested persons representing Authorities Having Jurisdiction (AHJ) may also attend meeting.
- .3 Pre-Mobilization Site Visit: Contractor's visit to the site to check field conditions and obtain actual conditions required to ensure correct execution of the Work prior to site mobilization.
- .6 Construction Meeting: meeting to be held on-site at approximate half-way point during the demolition project and to include the Contractor and Departmental Representative.
- .7 Tailgate Meeting: meeting to be held on-site daily during the project and to include Contractor, construction staff and Departmental Representative.
- .8 Compliance Meeting: meeting to be held on-site in conjunction with the Construction Meeting and to include the Contractor and Departmental Representative. Persons representing AHJ may also attend.
- .9 Pre-Demobilization Meeting (Final Walk Over): meeting to be held on site and to include the Contractor and Departmental Representatives. Meeting to be held prior to the demobilization of personal, machinery, and equipment.

1.2 ADMINISTRATIVE

- .1 Responsibilities of Departmental Representative
 - .1 Schedule and administer Project meetings throughout the progress of the Work.
 - .2 Distribute written notice of each meeting five (5) days in advance of meeting date to the meeting participants.
- .2 Responsibilities of Contractor
 - .1 Provide physical space and make arrangements for meetings.
 - .2 Prepare agenda for meetings unless otherwise specified.
 - .3 Preside at meetings unless otherwise specified.
 - .4 Record the meeting minutes unless otherwise specified. Include significant proceedings and decisions. Identify actions by parties.
 - .5 Reproduce and distribute copies of minutes within three (3) days after meetings and transmit to meeting participants and affected parties not

in attendance.

.2 Representative of Contractor, Sub-Contractor and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.

1.3 PROJECT START-UP
TELECONFERENCE MEETING

- .1 Within ten (10) days after award of Contract, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities. The meeting will be a teleconference between all parties in attendance.
- .2 Departmental Representative, Contractor, major Sub-Contractors, field inspectors and supervisors will be in attendance.
- .3 Establish time and location of meeting and notify parties concerned minimum five (5) days before meeting.
- .4 Departmental Representative will chair the meeting and take minutes. Meeting will be informal and agenda to include the following:
 - .1 Appointment of official representative of participants in the Work.
 - .2 Preliminary Schedule of Work.
 - .3 Preliminary Schedule of submission of Work Plan and Cost Breakdown and other submissions.
 - .4 Preliminary requirements for temporary facilities, site security, equipment and proposed methods of mobilization and demobilization.
 - .5 Set-up of Pre-Construction Meeting.

1.4 PRE-CONSTRUCTION
MEETING

- .1 Request a teleconference meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2 Departmental Representative, Contractor, major Sub-Contractors, and supervisors will be in attendance.
- .3 Establish time of meeting and notify parties concerned minimum five (5) days before meeting.
- .4 Incorporate mutually agreed variations to Contract Documents into Agreement, prior to signing.
- .5 Agenda to include:
 - .1 Schedule of Work: in accordance with Section 01 32 18 - Construction Progress Schedules - Bar (GANTT) Chart.
 - .2 Submittal requirements in accordance with Section 01 33 00 - Submittal Procedures, and Section 01 78 00 - Closeout Submittals
 - .3 Schedule of submission in accordance with Section 01 33 00 - Submittal Procedures including but not limited to:
 - .1 Health and Safety Response Plan;
 - .1 Emergency Response Plan;
 - .2 Spill Contingency Plan;
 - .2 Equipment to be used by Contractor.
 - .3 Location of equipment and proposed methods for mobilization and demobilization.
 - .4 Requirements for temporary facilities.
 - .5 Delivery Schedule of specified equipment.

- .6 Site safety in accordance with the Contractor's Site Specific Health and Safety Plan.
 - .7 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, administrative requirements.
 - .8 Departmental Representative provided products.
 - .9 Monthly progress claims, administrative procedures, photographs, hold backs.
 - .10 Appointment of inspection and testing agencies or firms.
 - .11 Regulatory Issues.
 - .12 Project photograph requirements.
- 1.5 PRE-MOBILIZATION
SITE VISIT
- .1 Prior to mobilization, perform a Pre-Mobilization Site Visit to check field conditions and obtain actual conditions required to ensure correct execution of the Work. Notify Departmental Representative in writing by submitting a Pre-Mobilization Site Visit Report within seven (7) days of completing the visit, of all matters which could prejudice proper execution of the Work.
- 1.6 CONSTRUCTION
MEETINGS
- .1 During course of Work, Departmental Representative will schedule and chair construction meeting.
 - .2 Contractor, major Sub-Contractors involved in Work and Departmental Representative are to be in attendance.
 - .3 Departmental Representative will record minutes of meetings and circulate to attending parties and affected parties not in attendance shortly after meeting.
 - .4 Agenda should include but not limited to the following:
 - .1 Review of previous meetings.
 - .2 Review of Work progress.
 - .3 Field observations, problems, conflicts.
 - .4 Problems which impede construction Schedule.
 - .5 Review of off-site fabrication delivery Schedules.
 - .6 Project Schedule review, identifying activities that are behind Schedule and providing measures to regain slippage.
 - .7 Corrective measures and procedures to regain Projected Schedule.
 - .8 Revision to construction Schedule.
 - .9 Progress Schedule, during succeeding Work period.
 - .10 Review submittal Schedules: expedite as required.
 - .11 Maintenance of quality standards.
 - .12 Review proposed changes for affect on construction Schedule and on completion date.
 - .13 Environmental, Health, Safety and Security issues.
 - .14 Compliance items, correspondence from or

expected visits from AHJ.

.15 Health and Safety Compliance

.16 Other business.

- .5 Provide written explanations on activities which are overrunning estimated time. If any such activities are on the critical path, indicate what corrective action will be taken to bring them back on Schedule.

1.7 TAILGATE MEETINGS

- .1 Contractor to preside over daily tailgate meetings with all construction staff and document minutes with daily reporting requirements.

1.8 PRE-DEMOBILIZATION MEETING (FINAL WALK OVER)

- .1 A meeting of parties in contract to discuss the demobilization and close-out, and to resolve issues arising from same.
- .2 Departmental Representative, Contractor, major Sub-Contractors, field inspectors and supervisors will be in attendance.
- .3 Departmental Representative will preside over meeting unless otherwise specified.
- .4 Agenda may include:
- .1 Health, safety and security issues.
 - .2 Schedules and action Contractor plans to remove material and equipment including packaged hazardous and non-hazardous materials from site and demobilization of equipment.
 - .3 Confirmation of quantities.
 - .4 Summary of interactions with Authority Having Jurisdiction (AHJ).
 - .5 Submittals relating to the transportation all waste (i.e. bills of lading).
- .5 Departmental Representative will record minutes of meetings and circulate to attending parties and affected parties not in attendance within seven (7) days after meeting.

1.9 SUBMITTALS

- .1 Submit Preliminary Construction Schedule to Departmental Representative within five (5) working days of Contract Award which is to also include a chart for planning, monitoring and reporting of Project progress.
- .2 Submit requests for payment for review, and for transmittal to Departmental Representative.
- .3 Submit requests for interpretation of Contract Documents, and obtain instructions through Departmental Representative.
- .4 Submit and process substitutions through Departmental Representative.
- .5 Submit and process change orders through Departmental Representative.
- .6 Deliver closeout submittals for review to Departmental Representative.
- .7 Provide submittals to the Departmental Representative for review. Include submittals as noted in Section 01 33 00 - Submittal Procedures.

PART 2 PRODUCTS

2.1 NOT USED .1 Not used.

PART 3 EXECUTION

3.1 NOT USED .1 Not used.

END OF SECTION

PART 1 - GENERAL1.1 DEFINITIONS

- .1 Activity: element of Work performed during course of Project. Activity normally has expected duration, and expected cost and expected resource requirements. Activities can be subdivided into tasks.
- .2 Bar Chart (GANTT Chart): graphic display of Schedule-related information. In typical bar chart, activities or other Project elements are listed down left side of chart, dates are shown across top, and activity durations are shown as date-placed horizontal bars. Generally Bar Chart should be derived from commercially available computerized Project management system.
- .3 Baseline: original approved plan (for Project, Work package, or activity), plus or minus approved scope changes.
- .4 Construction Work Week: Monday to Sunday, inclusive, will provide seven (7) days Work week and define Schedule calendar working days as part of Bar (GANTT) Chart submission.
- .5 Duration: number of Work periods (not including holidays or other nonworking periods) required to complete activity or other Project element. Usually expressed as workdays or workweeks.
- .6 Milestone: significant event in Project, usually completion of major deliverable.
- .7 Project Schedule: planned dates for performing activities and the planned dates for meeting milestones. Dynamic, detailed record of tasks or activities that must be accomplished to satisfy Project objectives. Monitoring and control process involves using Project Schedule in executing and controlling activities and is used as basis for decision making throughout Project life cycle.

1.2 REQUIREMENTS

- .1 Ensure detailed Schedule is practical and remains within specified Contract duration.
- .2 Plan to complete Work in accordance with prescribed milestones and time frame.
- .3 Provide and maintain a work schedule showing anticipated progress stages and final completion of work within time period required by Contract.
- .4 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.
- .5 Prepare the schedule using critical path analysis techniques, showing resource loading. Identify tasks that lie on the critical path. Show float

where possible.

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| <u>1.3 SUBMITTALS</u> | .1 | Provide submittals in accordance with Section 01 33 00 - Submittal Procedures. |
| | .2 | Submit Project Schedule to Departmental Representative within five (5) working days of receipt of acceptance. |
| <u>1.4 PROJECT SCHEDULE</u> | .1 | Develop detailed Project Schedule. |
| | .2 | Ensure detailed Project Schedule includes as a minimum milestone and activity types as follows: <ul style="list-style-type: none"> .1 Award. .2 Permits. .4 Mobilization. .5 Site Activities (expand as required to suit Contractor's task breakdown). .6 Interim Certificate of Completion .7 Demobilization .8 Closeout Submittals .9 Final Certificate of Completion |
| | .3 | Submit preliminary construction progress Schedule in accordance with Section 01 33 00 - Submittal Procedures to Departmental Representative coordinated with Departmental Representative's Project Schedule. |
| | .4 | After review, revise and resubmit Schedule to comply with revised Project Schedule. |
| | .5 | During progress of Work revise and resubmit as directed by Departmental Representative. |
| <u>1.5 PROJECT SCHEDULE REPORTING</u> | .1 | Update Project Schedule on a daily basis reflecting activity changes and completions, as well as activities in progress. |
| | .2 | Include as part of Project Schedule a narrative summary report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation. |
| <u>1.6 PROJECT MEETINGS</u> | 1 | Discuss Project Schedule at regular site meetings, identify activities that are behind Schedule and provide measures to regain slippage. Activities considered behind Schedule are those with projected start or completion dates later than current approved dates shown on baseline Schedule. |
| | .2 | Weather related delays with their remedial measures will be discussed and negotiated. |
| <u>1.7 COST AND QUANTITY CONTROL</u> | .1 | Provide a Contract Work Breakdown Structure (CWBS) based on Contractor's Cost Breakdown and any modifications requested by Departmental Representative as follows: <ul style="list-style-type: none"> .1 CWBS to be an organization of the Work to be performed, services to be provided and data to be submitted by Contractor, as well as payments to be |

made to Contractor under the terms of the Contract.

.2 The CWBS to clearly define the Work elements of each item of the CWBS.

.3 Prepare the CWBS in computerized spreadsheet format compatible with the most recent release of Microsoft Excel software. Provide CWBS in hard copy format.

.4 Submit the CWBS within 15 days following contract award date.

.2 Equipment and Material Control:

.1 Record data on status of construction material and equipment and report upon Departmental Representative's request.

.3 Manpower Performance Measures:

.1 Record and report manpower listing for each company employed under this Contract, including Sub-Contractors, detailing daily man-hours during the current month and cumulative total to date and report upon Departmental Representative's request.

.2 Provide statistics related to lost time accidents upon Departmental Representative's request.

.3 Provide statistical reporting as part of progress claim submission.

PART 2 PRODUCTS

2.1 NOT USED .1 Not used.

PART 3 EXECUTION

3.1 NOT USED .1 Not used.

END OF SECTION

PART 1 - GENERAL

1.1 DEFINITION .1 Not used.

1.2 ADMINISTRATIVE .1 Submit to Departmental Representative submittals listed for review. Submittal list is bound into specification section and is for information only. Submit with reasonable promptness and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.

.2 Work affected by submittal is not to proceed until review is complete.

.3 Present submittals in SI Metric units.

.4 Where items or information is not produced in SI Metric units, converted values are acceptable.

.5 Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific Project will be returned without being examined and will be considered rejected.

.6 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.

.7 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.

.8 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative review.

.9 Keep one reviewed copy of each submission on site.

1.3 PHOTOGRAPHS .1 Provide digital photos in "Joint Photographic Experts Group" (.jpg) format for Progress Photographs and Final Photographs.

.2 Digital photographs to have a minimum of 2,592 x 1,944 pixel (5 Megapixel) resolution.

.3 Progress and Final Photographs to be submitted on one compact disc (CD). Provide two (2) copies of the Photograph CD.

.4 Printed (colour) copies of digital photographs:
.1 Size: 100 mm x 125 mm.

- .2 Two digital photographs per 215 x 280 mm page.
- .3 Pages to be white, of photographic quality paper and to be three-hole punched, ready for insertion into a three-ring binder. Binder(s) to be vinyl, hard-covered, 3 inch D ring, sized for 215 x 280 mm paper, with spine pocket.
- .5 Identification: Typewritten or generated by computer, the name and number of the Project on cover and spine of binder and CD case. Each photograph to be labelled with the digital photo file name positioned so as to not interfere with the view of the main activity or feature presented on the photograph. Also provide a description of each photograph in photographic log format. Photographic log to be included with each computer disk, CD, and binder. Description to include:
 - .1 Digital photograph file name
 - .1 Name and description of feature
 - .2 View direction
 - .3 Date of exposure.
 - .4 GPS location
 - .5 Before and after photographs of location.
- .6 Quantity: Provide sufficient number of photographs to adequately describe the Work activities carried out. A minimum of two photographs taken from two viewpoints are to be provided for each activity.
- .7 Provide two sets in two binders of digital photographs.
- .8 Submit final photographs prior to final progress payment request.

PART 2 PRODUCTS

2.1 NOT USED .1 Not used.

PART 3 EXECUTION

3.1 NOT USED .1 Not used.

END OF SECTION

PART 1 - GENERAL

- 1.1 DEFINITIONS .1 Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade environment aesthetically, culturally and/or historically.
- .2 Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction. Control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants
- 1.2 REGULATORY OVERVIEW .1 Comply with all applicable environmental laws, regulations and requirements of Federal, Territorial and other regional authorities, and acquire and comply with such permits, approvals and authorizations as may be required.
- .2 Comply with and be subject to those permits and approvals obtained from Departmental Representative to conduct the Work.
- 1.3 SUBMITTALS .1 Submit all required Contractor submittals to satisfy environmental requirements directly to the responsible agency and AHJ.
- .2 Submit one complete copy of all submittals and agency approvals to Departmental Representative.
- .3 All submittals in accordance with Section 01 33 00 - Submittal Procedures.
- 1.4 RELICS AND ANTIQUITIES .1 Relics and antiquities and items of historical or scientific interest found on-site will remain the property of the appropriate AHJ.
- .2 Give immediate notice to Departmental Representative if evidence of archaeological finds are encountered during construction/remediation activities, and await Departmental Representative's written instructions before proceeding with Work in this area.
- .3 Protect archaeological finds and similar objects found during course of Work.
- 1.5 SITE MAINTENANCE .1 Keep the site free from the accumulation of waste materials and debris as specified in this section.
- .2 Upon completion of the Work, clean away and dispose of all surplus material, supplies, rubbish and

temporary works leaving the site neat and tidy to the requirements of Departmental Representative.

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| <u>1.6 FIRES</u> | .1 | Fires and burning of rubbish on site are not permitted. |
| <u>1.7 DISPOSAL OF WASTES</u> | .1 | Do not bury rubbish and waste materials on site. |
| | .2 | Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways. |
| <u>1.8 WATER MANAGEMENT</u> | .1 | Provide potable water for drinking. |
| <u>1.9 DRAINAGE</u> | .1 | Provide temporary drainage and pumping as necessary to keep site free from water. |
| | .2 | Do not pump water containing suspended materials into waterways. |
| | .3 | Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements. |
| | .4 | Provide erosion and sediment control plan that identifies type and location of erosion and sediment controls to be provided. Plan to include monitoring and reporting requirements to assure that control measures are in compliance with erosion and sediment control plan, Federal, and Territorial laws and regulations. |
| <u>1.10 SITE CLEARING AND PLANT PROTECTION</u> | .1 | Minimize stripping of topsoil and vegetation. |
| <u>1.11 WORK ADJACENT TO WATERWAYS</u> | .1 | Not Used |
| <u>1.12 POLLUTION CONTROL</u> | .1 | Maintain temporary erosion and pollution control features installed under this contract. |
| | .2 | Control emissions from equipment and plant so as to comply with the local authorities emission requirements. |
| | .3 | Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary access routes. |
| <u>1.13 ENVIRONMENT PROTECTION SUPPLIES</u> | .1 | Comply with federal and territorial fisheries and environmental protection legislation, including preventing the loss or destruction of fish habitat, and minimizing the impact of sedimentation, siltation or otherwise causing a degradation in water quality. |
| | .2 | Silt Fence |
| | .1 | Provide as required polypropylene silt fence (typical height of 0.9 m) and the necessary stakes for installation. This will be used as necessary to prevent sediment transport into water bodies |

- .3 Sorbent Boom
 - .1 Provide a minimum of 10 lineal metres, or more as required, of 200 mm diameter hydrophobic, sorbent booms. This will be used as necessary to prevent the potential migration of hydrocarbons.
- .4 Supply, transport, install and maintain erosion, sediment and drainage controls necessary to complete the Work in accordance with the requirements of Departmental Representative.
- .5 At the completion of construction, dispose of used silt fence off-site as non-Hazardous Waste. Dispose of used absorbent boom in accordance with Section 02 61 33 - Hazardous Waste Material.
- .6 Unused Erosion, Sediment and Drainage Control supplies will remain the property of Departmental Representative until the end of the contract.

1.14 HISTORICAL
ARCHAEOLOGICAL CONTROL

- .1 Plan: include methods to assure protection of discovered resources and identify lines of communication between Contractor personnel and Departmental Representative.

1.15 NOTIFICATION

- .1 Departmental Representative will notify Contractor in writing of observed non-compliance with Federal, Territorial, Provincial or Municipal environmental laws or regulations, permits, etc.
- .2 Contractor: after receipt of such notice, inform Departmental Representative of proposed corrective action and take such action for approval by Departmental Representative.
- .3 Departmental Representative will issue stop order of Work until satisfactory corrective action has been taken.
- .4 No time extensions granted or equitable adjustments allowed to Contractor for such suspensions.

PART 2 PRODUCTS

2.1 NOT USED .1 Not used.

PART 3 EXECUTION

3.1 NOT USED .1 Not used.

END OF SECTION

PART 1 - GENERAL

1.1 REFERENCES AND
CODES

- .1 Perform Work in accordance with National Building Code of Canada (NBC) including all amendments and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.
- .2 Meet or exceed requirements of:
 - .1 Contract documents.
 - .2 Specified standards, codes and referenced documents.
- .3 Perform Work in accordance with the Specifications and meet or exceed all codes, standards and regulations applicable to the Work and issued under the authority of the Government of Canada and the Government of Northwest Territories. Advise Departmental Representative of any discrepancies in the codes, standards and regulations applicable to the Work.

1.2 REFERENCES AND
CODES - FEDERAL

- .1 Meet or exceed the most recent amendments or revisions to the governing codes, standards and guidelines, and regulations applicable to Work and issued under the authority of the Government of Canada including, but not limited to:
 - .1 Canada Labour Code Part II-Occupational Health and Safety (R.S.1985,c.L-2).
 - .2 Canada Occupational Health and Safety Regulations (SOR/86-304).
 - .3 Canadian Environmental Protection Act, (S.C. 1999, c.33)
 - 1. Storage Tanks Systems for Petroleum and Allied Petroleum Products Regulations, SOR/2008-197, under the Canadian Environmental Protection Act.
 - .4 Canadian Council of Ministers of the Environment (CCME) - Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, 2003.
 - .5 Controlled Products Regulations (SOR/88-66)
 - .6 Interprovincial Movement of Hazardous Waste Regulations (SOR/2002-301).
 - .7 Federal Halocarbon Regulations, 2003.
 - .8 National Construction, Renovation and Demolition Non-hazardous Solid Waste Management Protocol, PWGSC 2002
 - .9 National Fire Code of Canada, 2005
 - .10 National Building Code of Canada, 2005
 - .11 Ozone Depleting Substances Regulations, 1998 (SOR/99-7).
 - .12 Transportation of Dangerous Goods Act, 1992

- (S.C. 1992, c.34)
- .13 Transportation of Dangerous Goods Regulations (SOR/2001-286)
- .14 Territorial Land Use Regulations (C.R.C., c.1524)
- .15 Fisheries Act (R.S., 1985, c. F-14)
- .16 Health Canada Guidelines for Canadian Drinking Water Quality, May 2008
- .17 Arctic Waters Pollution and Prevention Act (A.S. 1985 CA-12).
- .18 Northwest Territories Waters and Northwest Territories Surface Rights Tribunal Act (SOR/2002-253)

1.3 REFERENCES AND
CODES - NORTHWEST
TERRITORIES

- .1 Meet or exceed the most recent amendments or revisions to the governing codes, standards and guidelines, and regulations applicable to Work and issued under the authority of the Government of Northwest Territories including, but not limited to:
 - .1 Environmental Protection Act (Northwest Territories) (R.S.N.W.T. 1988, c. E-7)
 - .2 Labour Standards Act (Northwest Territories) S.N.W.T. 2003,c.15
 - .3 Public Health Act, R.S.N.W.T. 1988, c.P-12.
 - .4 Spill Contingency Planning and Reporting Regulations NU R-068-93.
 - .5 Fire Prevention Act, R.S.N.W.T. 1988, c.F-6.
 - .6 Transportation of Dangerous Goods Act, S.N.W.T. 1990, c.36 2008,c.8
 - .7 Transportation of Dangerous Goods Regulations, N.W.T. Reg. 049-2002
 - .8 Used Oil and Waste Fuel Management Regulations, N.W.T. R-064-2003
 - .9 Work Site Hazardous Materials Information System Regulations, R.R.N.W.T. 1990, c.S-2.

1.4 STANDARD AND
GUIDELINES

Standards, Guidelines And Policies

- .1 Meet or exceed the most recent amendments or revisions to the governing standards, guidelines, and policies applicable to the Work, including, but not limited to:
 - .1 Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, (PN 1326), 2003 CCME.
 - .2 Guidelines for Canadian Drinking Water Quality, April 2004, Canadian Council of Ministers of the Environment.
 - .3 Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments, April 1976, Environmental Conservation Directorate.
 - .4 Environmental Guideline for Waste Batteries, January 2002, Government of the Northwest Territories.
 - .5 Guideline for the Management of Waste Lead

and Lead Paint, Northwest Territories, 2011.

.6 Environmental Guideline for Waste Solvents, January 2002, Government of the Northwest Territories.

.7 Environmental Guideline for Site Remediation, January 2002, Government of the Northwest Territories.

.8 Environmental Guideline for Air Quality - Sulphur Dioxide and Suspended Particulates, January 2002 - Government of the Northwest Territories.

.9 Environmental Guideline for Dust Suppression, January 2002, Government of the Northwest Territories.

.10 Environmental Guideline for the General Management of Hazardous Waste, January 2002, Government of Northwest Territories.

.11 Environmental Guideline for Ozone Depleting Substances, January 2002, Government of the Northwest Territories.

1.5 PERMITS AND
LICENSES

- .1 Any deviations from the current appended Demolition Waste Survey may require Permit amendments or field authorizations. Notify Departmental Representative of any proposed deviations.
- .2 Respond to all regulatory inquiries in order to get permits and licenses and provide Departmental Representative with a copy of each response.

1.6 HAZARDOUS MATERIAL
DISCOVERY

- 1 Asbestos: Collection of spray or trowel-applied asbestos or asbestos containing insulation is hazardous to health. Should material resembling spray or trowel-applied or insulation material with asbestos be encountered in course of demolition Work, immediately stop Work and notify Departmental Representative.
- .2 Stop Work immediately and notify Departmental Representative upon discovery of following materials during course of Work:
 - .1 Designated substances other than those listed in the project specifications, such as PCBs, asbestos, halocarbons, and mercury.
 - .2 PHC (total petroleum hydrocarbons) impacted soils.
- .3 Work at site will involve contact with:
 - .1 Hazardous liquids in storage tank and pipes.
 - .2 Surfaces with visible mould growth
 - .3 Lead-containing materials.
 - .4 PCB-containing materials.
 - .5 Mercury-containing materials.

- 1.7 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, HRSDC and Health Canada.
- .2 Deliver copies of WHMIS data sheets to Departmental Representative on delivery of materials.

- 1.8 SUBMITTALS .1 All submittals in accordance with Section 01 33 00
- Submittal Procedures

PART 2 PRODUCTS

- 2.1 NOT USED .1 Not used.

PART 3 EXECUTION

- 3.1 NOT USED .1 Not used.

END OF SECTION

PART 1 - GENERAL

- 1.1 INSPECTION
- .1 Allow Departmental Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
 - .2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Departmental Representative instructions, or law of Place of Work.
 - .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
 - .4 Departmental Representative may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such Work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction. If such Work is found in accordance with Contract Documents, Departmental Representative will pay cost of examination and replacement.
- 1.2 SUBMITTALS
- .1 All submittals in accordance with Section 01 33 00 - Submittal Procedures
- 1.3 INDEPENDENT INSPECTION AGENCIES
- .1 Independent Inspection/Testing Agencies will be engaged by Departmental Representative for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by Departmental Representative.
 - .2 Provide access for executing inspection and testing by appointed agencies.
 - .3 Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
 - .4 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by Departmental Representative at no cost to Departmental Representative. Pay costs for retesting and re-inspection.
- 1.4 ACCESS TO WORK
- .1 Allow inspection/testing agencies access to Work, off site manufacturing and storage areas.
 - .2 Co-operate to provide reasonable facilities for such access.

- 1.5 PROCEDURES
- .1 Notify appropriate agency and Departmental Representative in advance of requirement for tests, in order that attendance arrangements can be made.
 - .2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in Work.
 - .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.
- 1.6 REJECTED WORK
- .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Departmental Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
 - .2 If in opinion of Departmental Representative it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Departmental Representative may deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which will be determined by Departmental Representative.
- 1.7 REPORTS
- .1 Departmental Representative will distribute copies of reports.
 - .2 Provide copies to Sub-Contractor of Work being inspected or tested and manufacturer or fabricator of material being inspected or tested.

PART 2 PRODUCTS

- 2.1 NOT USED
- .1 Not used.

PART 3 EXECUTION

- 3.1 NOT USED
- .1 Not used.

END OF SECTION

PART 1 - GENERAL

- | | | |
|--|----|---|
| <u>1.1 MOBILIZATION AND DEMOBILIZATION</u> | .1 | Provide all labour, equipment and materials, and performance of all Work necessary for mobilization to, and demobilization from site. |
| | .2 | Mobilization to include transportation to site of Contractor's labour, equipment, materials, and assembling, erecting, and preparing site in readiness to start Work, all in accordance with Contractor's Schedule. |
| | .3 | Demobilization to include dismantling and removal from site, of all Contractor's equipment and materials, and transportation of labour from site. |
| | .4 | Decontaminate and clean all equipment used on the Project prior to demobilization. |
| | .5 | Do not mobilize to the site without written authorization from the Departmental Representative. |
| | .6 | All mobilization and demobilization methods to comply with the requirements of all applicable codes, standards, guidelines and AHJ. |
| | .7 | All personnel supervising or operating equipment will be properly certified. |
| | .8 | A Final Walk Over will be required prior to Demobilization as per Section 01 77 00 - Closeout Procedures. |
| <u>1.2 SUBMITTALS</u> | .1 | All submittals in accordance with 01 33 00 - Submittal Procedures |

PART 2 PRODUCTS

- | | | |
|---------------------|----|-----------|
| <u>2.1 NOT USED</u> | .1 | Not used. |
|---------------------|----|-----------|

PART 3 EXECUTION

- | | | |
|---------------------|----|-----------|
| <u>3.1 NOT USED</u> | .1 | Not used. |
|---------------------|----|-----------|

END OF SECTION

PART 1 - GENERAL

- 1.1 WASTE MANAGEMENT GOALS
- .1 Prior to start of Work conduct meeting with Departmental Representative to review and discuss PWGSC's Waste Management Plan and Goals.
 - .2 Provide Departmental Representative documentation certifying that waste management, recycling, reuse of recyclable and reusable materials have been considered and practiced if possible.
 - .4 Accomplish maximum control of solid construction waste.
 - .5 Preserve environment and prevent pollution and environment damage.
- 1.2 REFERENCES
- .1 Not used.
- 1.3 DEFINITIONS
- .1 Class III: non-hazardous waste - construction renovation and demolition waste.
 - .2 Cost/Revenue Analysis Workplan (CRAW): based on information from WRW, and intended as financial tracking tool for determining economic status of waste management practices.
 - .3 Demolition Waste Audit (DWA): relates to actual waste generated from project.
 - .4 Inert Fill: inert waste - exclusively asphalt and concrete.
 - .5 Materials Source Separation Program (MSSP): consists of series of ongoing activities to separate reusable and recyclable waste material into material categories from other types of waste at point of generation.
 - .6 Recyclable: ability of product or material to be recovered at end of its life cycle and re-manufactured into new product for reuse.
 - .7 Recycle: process by which waste and recyclable materials are transformed or collected for purpose of being transferred into new products.
 - .8 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.
 - .9 Reuse: repeated use of product in same form but not necessarily for same purpose. Reuse includes:
 - .10 Salvaging reusable materials from re-modelling projects, before demolition stage, for resale, reuse on current project or for storage for use on future projects.
 - .11 Returning reusable items including pallets or unused products to vendors.

- .12 Salvage: removal of structural and non-structural materials from deconstruction/disassembly projects for purpose of reuse or recycling.
- .13 Separate Condition: refers to waste sorted into individual types.
- .14 Source Separation: acts of keeping different types of waste materials separate beginning from first time they became waste.
- .15 Waste Audit (WA): detailed inventory of materials in building. Involves quantifying by volume/weight amounts of materials and wastes generated during construction, demolition, deconstruction, or renovation project. Indicates quantities of reuse, recycling and landfill. Refer to Schedule A.
- .16 Waste Management Co-ordinator (WMC): contractor representative responsible for supervising waste management activities as well as coordinating related, required submittal and reporting requirements.
- .17 Waste Reduction Workplan (WRW): written report which addresses opportunities for reduction, reuse, or recycling of materials. Refer to Schedule B. WRW is based on information acquired from WA (Schedule A).

1.4 DOCUMENTS

- .1 Maintain at job site, one copy of following documents:
 - .1 Waste Audit.
 - .2 Waste Reduction Workplan.
 - .3 Material Source Separation Plan.
 - .4 Schedules A, B, C, D, E completed for project.

1.5 ACTION AND
INFORMATIONAL
SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Prepare and submit following prior to project start-up:
- .3 Submit 2 copies of completed Waste Audit (WA): Schedule A.
- .4 Submit 2 copies of completed Waste Reduction Workplan (WRW): Schedule B.
- .5 Submit 2 copies of completed Demolition Waste Audit (DWA): Schedule C.
- .6 Submit 2 copies of Contractor Work Breakdown Structure which includes a Cost/Revenue Analysis Workplan (CWBS/CRAW): Schedule D.
- .7 Submit 2 copies of Materials Source Separation Program (MSSP) description: Schedule E.
- .8 Submit before final payment summary of waste materials salvaged for reuse, recycling or disposal by project using deconstruction/disassembly material audit form.
- .9 Failure to submit could result in hold back of final payment.
- .10 Provide receipts, scale tickets, waybills, and show quantities and types of materials reused, recycled,

		co-mingled and separated off-site or disposed of.
	.11	For each material reused, sold or recycled from project, include amount in tonnes, quantities by number, type and size of items and the destination.
	.12	For each material land filled or incinerated from project, include amount in tonnes of material and identity of landfill, incinerator or transfer station.
<u>1.6 WASTE AUDIT (WA)</u>	.1	Conduct WA prior to project start-up.
	.2	Prepare WA: Schedule A.
	.3	Record, on WA - Schedule A, extent to which materials or products used consist of recycled or reused materials or products.
	.4	The appended Demolition Waste Survey can be utilized as reference to produce the WA.
<u>1.7 WASTE REDUCTION WORKPLAN (WRW)</u>	.1	Prepare WRW prior to project start-up.
	.2	WRW should include but not limited to: <ul style="list-style-type: none"> .1 Destination of materials listed. .2 Deconstruction/disassembly techniques and sequencing. .3 Schedule for deconstruction/disassembly. .4 Location. .5 Security. .6 Protection. .7 Clear labeling 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.
	.9	The appended Demolition Waste Survey can be utilized as reference to produce the WRW.
<u>1.8 COST/REVENUE ANALYSIS WORKPLAN (CRAW)</u>	.1	Prepare CRAW: Schedule D as part of CWBS.
<u>1.9 MATERIALS SOURCE</u>	.1	Prepare MSSP and have ready for use prior to

Project No. R.015992.547

Page 4

SEPARATION PROGRAM
(MSSP)

- project start-up.
- .2 Implement MSSP for waste generated on project in compliance with approved methods and as reviewed by Departmental Representative.
 - .3 Provide on-site facilities for collection, handling, and storage of anticipated quantities of reusable and recyclable materials.
 - .4 Provide containers to deposit reusable and recyclable materials.
 - .5 Locate containers in locations, to facilitate deposit of materials without hindering daily operations.
 - .6 Locate separated materials in areas which minimize material damage.
 - .7 Collect, handle, store on-site, and transport off-site, salvaged materials in separate condition.
 - .8 Transport to approved and authorized recycling facility or to users of material for recycling.
 - .9 Collect, handle, store on-site, and transport off-site, salvaged materials in combined condition.
 - .10 Ship materials to site operating under Certificate of Approval.
 - .11 Materials must be immediately separated into required categories for reuse or recycling.

1.10 STORAGE, HANDLING
AND PROTECTION

- .1 Store, materials to be reused, recycled and salvaged in locations as directed by Departmental Representative.
- .2 Unless specified otherwise, materials for removal become Contractor's property.
- .3 Separate non-salvageable materials from salvaged items. Transport and deliver non-salvageable items to licensed disposal facility.
- .4 Protect structural components not removed for demolition from movement or damage. Support affected structures. If safety of building is endangered, cease operations and immediately notify Departmental Representative.
- .5 Protect surface drainage, mechanical and electrical from damage and blockage.
- .6 Separate and store materials produced during dismantling of structures in designated areas.
- .7 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.

1.11 DISPOSAL OF
WASTES

- .1 Do not bury rubbish or waste materials.
- .2 Do not dispose of any liquid or solid waste into waterways, storm, or sanitary sewers.
- .3 Keep records of construction waste including:
 - .1 Number and size of bins.

	.2	Waste type of each bin.
	.3	Total tonnage generated.
	.4	Tonnage reused or recycled.
	.5	Reused or recycled waste destination.
.4		Remove materials from deconstruction as deconstruction/disassembly Work progresses.
.5		Prepare project summary to verify destination and quantities on a material-by-material basis as identified in pre-demolition material audit.
<u>1.12 USE OF SITE AND FACILITIES</u>	.1	Execute work with least possible interference or disturbance to normal use of premises.
	.2	Maintain security measures established by existing facility and provide temporary security measures approved by Departmental Representative.
<u>1.13 SCHEDULING</u>	.1	Co-ordinate Work with other activities at site to ensure timely and orderly progress of Work.
<u>PART 2 - PRODUCTS</u>	.1	Not used.
<u>PART 3 - EXECUTION</u>		
<u>3.1 APPLICATION</u>	.1	Do Work in compliance with WRW.
	.2	Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.
<u>3.2 CLEANING</u>	.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.
	.3	Source separate materials to be reused/recycled into specified sort areas.

3.3 DIVERSION OF MATERIALS .1 Not used.

3.4 WASTE AUDIT (WA) .1 The following pertains to Schedule A - Waste Audit (WA). Column-1 refers to the category of waste, and a physical description of the material (e.g. off-cuts, clean drywall, etc.). Column-2 refers to the total quantity of materials received by the Contractor. Measurement units must be specified. Column-3 refers to the estimated percentage of material that is waste. Column-4 refers to the total quantity of waste (column-2 x column-3). Column-5 refers to the areas(s) in which the waste was generated. Column-6 refers to the total percentage of recycled material from the specified total quantity of waste (column-4). Column-7 refers to the total percentage of reused material from the specified total quantity of waste (column-4).

.2 Schedule A - Waste Audit (WA):

(1) Material Category	(2) Material Quantity Unit	(3) Estimated Waste (%)	(4) Total Quantity of Waste (unit)	(5) Generation Point	(6) % Recycled	(7) % Reused
Wood and plastics						
Doors and windows						
Glass						
Wood						
Metal						
Concrete						
Other						

3.5 WASTE REDUCTION
WORKPLAN (WRW)

- .1 The following pertains to Schedule B - Waste Reduction Workplan (WRW). Column-1 refers to the category and type of waste materials. Column-2 refers to the persons responsible for completing the WRW. Column-3 refers to Column-4 of Schedule A. Column-4 refers to the amount of reused waste predicted and realized. Column-5 refers to the amount of recycled waste predicted and realized. Column-6 refers to the approved recycling facility.
- .2 Schedule B:

(1) Material Category	(2) Person(s) Responsible	(3) Total Quantity of Waste (unit)	(4) Reused Amount Projected (units)	(5) Recycled Amount Projected (units)	(6) Material(s) Destination
Wood and plastics					
Doors and windows					
Glass					
Wood					
Metal					
Concrete					
Other					

3.6 DEMOLITION WASTE
AUDIT (DWA)

- .1 The following pertains to Schedule C - Demolition Waste Audit (DWA). Column-1 refers to the type of material salvaged. Column-2 refers to the material quantity shown in column-1. Several columns may be required to identify specific demolition areas. Column-3 refers to the unit of measurement used to describe Column-2. Column-4 refers to the total quantity of salvaged material. Column-5 refers to the cumulative volume of salvaged material. Column-6 refers to the total weight in kilograms. Column-7 refers to remarks and assumptions made about the specified material.
- .2 Schedule C - Demolition Waste Audit (DWA):

(1) Material Description	(2) Quantity	(3) Unit	(4) Total	(5) Volume (cumulative)	(6) Weight (cumulative)	(7) Remarks and Assumptions
Wood						
Glazing						
Metal						
Concrete						
Other						

3.7 COST/REVENUE
ANALYSIS WORKPLAN
(CRAW)

- .1 The following pertains to Schedule D - Cost/Revenue Analysis Workplan (CRAW). Column-1 refers to the type of material salvaged. Column-2 refers to the total quantity of material shown in Column-1. Column-3 refers to the cumulative volume of salvaged material. Column-4 refers to the total weight in kilograms. Column-5 refers to either the cost associated with disposal indicated with a (-), or the credit received from disposal indicated with a (+). Column-6 refers to the sub-total of column-5 for individual categories. Row-7 refers to summation of all column-6. A negative total indicates a cost. A positive total indicates revenue.
- .2 Schedule D - Cost/Revenue Analysis Workplan (CRAW):

(1) Material Description	(2) Total Quantity (unit)	(3) Volume (cumulative)	(4) Weight (cumulative)	(5) Disposal Cost/Credit \$(+/-)	(6) Category subtotal \$(+/-)	(7) Cost \$(-) Revenue \$(+)
Wood						
Glazing						
Metal						
Concrete						
Other						

END OF SECTION

PART 1 - GENERAL

- 1.1 CLOSEOUT PROCEDURES
- .1 Notify Departmental Representative when Work is considered ready for substantial performance.
 - .2 Accompany Departmental Representative on preliminary inspection to determine items listed for completion or correction.
 - .3 Comply with Departmental Representative's instructions for correction of items of Work listed in executed Certificate of Substantial Completion.
 - .4 Notify Departmental Representative of instructions for completion of items of Work determined in Departmental Representative's final inspection.
- 1.2 INSPECTION AND DECLARATION
- .1 Contractor's Inspection: Conduct an inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
 - .1 Notify Departmental Representative in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.
 - .2 Request Departmental Representative's Inspection.
 - .2 Departmental Representative's Inspection: Departmental Representative and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor to correct Work accordingly.
 - .3 Completion: submit written certificate that following have been performed:
 - .1 Work has been completed and inspected for compliance with Contract Documents.
 - .2 Defects have been corrected and deficiencies have been completed.
 - .3 Work is complete and ready for Final Inspection.
 - .4 Final Inspection (Final Walk Over): when items noted above are completed, request final inspection of Work by Departmental Representative and Contractor. If Work is deemed incomplete by Departmental Representative, complete outstanding items and request re-inspection.

PART 2 PRODUCTS

- 2.1 NOT USED
- .1 Not used.

PART 3 EXECUTION

- 3.1 NOT USED
- .1 Not used.

END OF SECTION

PART 1 - GENERAL

- 1.1 FORMAT
- .1 Organize data in the form of an instructional manual.
 - .2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.
 - .3 Cover: Identify each binder with type or printed title 'Project Record Documents'; list title of Project and identify subject matter of contents.
 - .4 Arrange content by site feature under Section numbers and sequence of Table of Contents.
 - .5 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
 - .6 Text: Manufacturer's printed data, or typewritten data.
 - .7 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- 1.2 CONTENTS - EACH VOLUME
- .1 Table of Contents: provide title of Project;
 - .1 date of submission; names,
 - .2 addresses, and telephone numbers of Contractor with name of responsible parties
 - .3 Schedule of work including off-site transport of waste
 - .4 Bills of Lading and waste acceptance certificates
 - .5 Submittals
 - .6 Photographs
 - .2 For each aspect of the work:
 - .1 list names, addresses and telephone numbers of Sub-Contractors and suppliers, including local source of supplies and replacement parts.
 - .3 Drawings: supplement the summary of work with drawings to illustrate relations of component parts of equipment and systems.
 - .4 Typewritten Text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified.
- 1.3 PHOTOGRAPH REQUIREMENTS
- .1 Submit photographs as per Section 01 33 00 - Site Photographs.
- 1.4 DOCUMENTS
- .1 In addition to requirements in General Conditions, maintain at the site for Departmental Representative one record copy of:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Change Orders and other modifications to the

Contract.

.5 Field test records.

.6 Inspection certificates.

.7 Manufacturer's certificates.

.2 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.

.3 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.

.4 Keep record documents and samples available for inspection by Departmental Representative.

1.5 RECORDING ACTUAL
SITE CONDITION

.1 Record information on set of black line opaque drawings, and in copy of Project Manual, provided by Departmental Representative.

.2 Provide felt tip marking pens, maintaining separate colours for each major system, for recording information.

.3 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.

.4 Contract Drawings: legibly mark each item to record actual construction, including:

.1 Field changes of dimension and detail.

.2 Changes made by change orders.

.3 Details not on original Contract Drawings.

.5 References to related shop drawings and modifications.

.1 Field changes of dimension and detail.

.2 Changes made by Change Order or Field Order.

.6 Specifications: legibly mark each item to record actual construction, including:

.1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.

.2 Changes made by Addenda and change orders.

.7 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.

1.6 RECORD DRAWINGS

.1 Departmental Representative will provide to Contractor, one sets of white prints for record drawing purposes.

.2 Maintain Project record drawings and record accurately deviations from Contract documents on one set of prints.

.3 Record changes in red.

.4 At completion of Project and prior to final inspection, neatly transfer record notations to second set of drawings and submit both sets to Departmental Representative. Forward information on completed areas at the end of the construction season.

- 1.7 OTHER RECORDS .1 Prior to completion of Project, submit the following to the Departmental Representative:
- .1 Copies of all documents and permits obtained by the Contractor.
 - .2 Results of all testing carried out by the Contractor.
 - .3 Any other pertinent information.
 - .4 Copies of all shipping documents identifying the shipper, the receiver and all carriers involved in the transport of materials.
 - .5 information as required by the AHJ.
 - .6 Information as required by other applicable permits.
- .2 Consolidate the above information in one document and submit five copies to the Departmental Representative.

PART 2 PRODUCTS

- 2.1 NOT USED .1 Not used.

PART 3 EXECUTION

- 3.1 NOT USED .1 Not used.

END OF SECTION