

1 DEFINITIONS

- 1.1 Definitions and interpretations contained in the Construction Contract Documents apply to this document.
- 1.2 "Design Builder" shall mean the same as "Contractor" in the Construction Contract Document.

2 DESIGN BUILDERS RESPONSIBILITIES

- 2.1 The Design Builder is responsible for the provision of all design, labour, materials, equipment, products and services required for a complete project.
- 2.2 This specification specifies the minimum acceptable requirements and provides a minimum acceptable level of functional and aesthetic characteristics. Provide a complete and functional facility where finishes, finish items, systems and components are compatible, consistent with each other and which meet the intent of the Specifications.
- 2.3 This specification is not all inclusive. Any errors, contradictions or omissions do not relieve the Design Builder of the obligations noted above.
- 2.4 The Design Builder is responsible for obtaining and paying for all permit applications, permits, testing and inspections necessary to complete the work.

3 CODES, STANDARDS AND PERMITS

- 3.1 Perform Work in accordance with the Ontario Building Code of Canada (OBC) current edition and any other code of provincial or local application, provided that in the case of conflict or discrepancy, the more stringent shall apply.
- 3.2 Meet or exceed requirements of the contract documents, specified standards, codes and referenced documents.
- 3.3 The Design Builder is responsible for meeting or exceeding the requirements of all applicable industry standards (latest edition) including, but not limited, to the following:
 - 3.3.1 AABC: American Air Balance Council.
 - 3.3.2 ACI: American Concrete Institute.
 - 3.3.3 AEIC
 - 3.3.4 ALUMINUM ASSOCIATION
 - 3.3.5 ANSI: American National Standards Institute.
 - 3.3.6 ARI: Air-Conditioning and Refrigeration Institute
 - 3.3.7 ASHRAE: American Society of Heating, Refrigerating and Air-Conditioning Engineers.

- 3.3.8 ASME: American Society of Mechanical Engineers.
- 3.3.9 ASTM: American Society for Testing and Material.
- 3.3.10 AWMAC: Architectural Woodwork Manufacturers Association of Canada.
- 3.3.11 CGA: Canadian Gas Association.
- 3.3.12 CGSB: Canadian General Standards Board.
- 3.3.13 CISC: Canadian Institute of Steel Construction.
- 3.3.14 CISC/CPMA: Canadian Institute of Steel Construction/Canadian Paint Manufacturers
- 3.3.15 CRCA: Canadian Roofing Contractors Association.
- 3.3.16 CSA: Canadian Standards Association.
- 3.3.17 CSDFMA: Canadian Steel Door and Frame Manufacturer's Association.
- 3.3.18 CSSBI: Canadian Sheet Steel Building Institute.
- 3.3.19 EEMAC: Electrical Equipment Manufacturers Association of Canada.
- 3.3.20 ENVIRONMENT CANADA
- 3.3.21 IAO: Insurers Advisory Organization.
- 3.3.22 ICEA: Insulated Cable Engineers Association.
- 3.3.23 IEEE: Institute of Electrical and Electronics Engineers.
- 3.3.24 IESNA: Illuminating Engineering Society of North America.
- 3.3.25 IPCEA:
- 3.3.26 NATIONAL RESEARCH COUNCIL OF CANADA
- 3.3.27 NEMA: National Electrical Manufacturers Association.
- 3.3.28 NFPA: National Fire Protection Association.
- 3.3.29 NLGA: National Lumber Grades Authority.
- 3.3.30 RSIO: Reinforcing Steel Institute of Ontario.
- 3.3.31 SMACNA: Sheet Metal & Air Conditioning Contractor National Association.
- 3.3.32 TTMAC: Terrazzo Tile and Marble Association of Canada.
- 3.3.33 UL: Underwriters Laboratories.
- 3.3.34 ULC: Underwriters Laboratories of Canada.
- 3.3.35 OPSS: Ontario Provincial Standard Specification.
- 3.3.36 RSIC: Reinforcing Steel Manual of Standard Practice

- 3.3.37 CPCA: Canadian Painting Contractors Association.
- 3.3.38 Asphalt Institute.
- 3.3.39 Canadian Nursery Trades Association.
- 3.3.40 NAAMM: National Association of Architectural Metal Manufacturers
- 3.3.41 Steel Structures Painting Council.
- 3.3.42 NHLA: National Hardwood Lumber Association.
- 3.3.43 NEBB: National Environmental Balancing Bureau.
- 3.3.44 Air Diffusion Council.
- 3.4 The Design Builder is responsible for meeting or exceeding the installation requirements of the manufacturers of products and materials.
- 3.5 All work must conform to barrier free design of the Ontario Building Code, Barrier Free Requirements for Provincial Buildings, and the accessibility guidelines of the Owner (refer to the appendices).

4 PRECEDENCE OF DOCUMENTATION

- 4.1 In the event of conflict between the performance specification and the other contract documents, unless previously agreed to in writing, the performance specification shall govern.
- 4.2 In the event of conflict between requirements and performance as called for in the performance specification and that contained in the Design Builders proposal, unless previously agree to in writing, the performance specifications shall govern.

5 DOCUMENTS REQUIRED

- 5.1 Maintain bound and updated set at job site, one copy each of following:
 - 5.1.1 Contract Specifications and drawings.
 - 5.1.2 Design Builders proposal.
 - 5.1.3 Construction drawings.
 - 5.1.4 Construction specifications.
 - 5.1.5 Addenda.
 - 5.1.6 Reviewed shop drawings.
 - 5.1.7 Change orders.
 - 5.1.8 Other modifications to Contract.
 - 5.1.9 Field test reports.

- 5.1.10 Copy of approved work schedule.
- 5.1.11 Manufacturers installation and application instructions.
- 5.1.12 Up to date Record Drawings.
- 5.1.13 Job meeting minutes.
- 5.1.14 Ontario Building Code (latest edition)
- 5.2 Prepare and provide to Owner, drawings and specifications as outlined in the progress submission requirements and as required to:
 - 5.2.1 Provide sufficient information to construct the buildings.
 - 5.2.2 Satisfy the Owner and Authorities having jurisdiction that requirements of codes and standards are being met.
 - 5.2.3 Satisfy the Owner that the requirements of the Specifications are being met.
- 5.3 Prepare drawings using AutoCAD Release 14.0 and specifications using NMS Edit, WordPerfect 6.1 or Microsoft Word 97. Obtain from the Project Manager latest version of the Owner's CADD Standards and prepare CADD drawings to these standards. The Project Manager will specify the drawing document formats including sheet size, titleblock and other details.
- 5.4 The Design Builder shall remain entirely responsible for the complete design and construction of the building and related site work under this Contract.
- 5.5 Reviews of any design and construction documentation by the Project Manager is for interest and record purposes only and shall not be construed to be a check of the Design Builder's work.
- 5.6 Reviews and subsequent comments by authorities having jurisdiction shall be acted upon by the Design Builder.

6 DOCUMENT REVIEW

- 6.1 Provide drawings for review at various stages of completeness as directed by the Project Manager. After contract award, Project Manager will provide a list of reviews required.
- 6.2 Review of any construction documentation by the Project Manager is for conformance to the specifications only and does not constitute a check of the Design Builders design or work.
- 6.3 Reviews by the City of Nepean or other authorities having jurisdiction shall be acted upon by the Design Builder.

7 PROFESSIONAL QUALIFICATIONS

- 7.1 Provide complete construction documentation, including drawings and written specifications, signed and sealed by registered architects and professional engineers, licensed to practise in the Province of Ontario, for the respective portions of the Work.
- 7.2 Provide all special consultants as required by the Work such as civil or municipal engineers, landscape architects, acoustic engineers, geotechnical engineers, environmental engineers, firing range consultants, audio visual consultants, and registered land surveyors as required.
- 7.3 Obtain services of accredited roofing consultant for the design and construction of the roof system and assembly. Obtain approval of roofing consultant from Project Manager.

8 TELECOMMUNICATION SYSTEMS

- 8.1 Engage and coordinate Owner-designated subcontractors for the supply and installation of telecommunication wiring systems. Refer to the Instructions to Proponents.

9 SITE CONDITIONS

- 9.1 Subsurface investigation report prepared for this project is Report No. SF-4512, dated September 11, 1998, on subsurface investigations for Proposed Police/Justice Training Facility, by McRostie Genest St-Louis & Associates Ltd.
- 9.2 Determine adequacy of sub-surface investigation report and make additional investigations at no extra cost if required.
- 9.3 The Owner will provide the topographical survey, including existing site services documentation. Determine adequacy of topographical/site services survey and make additional investigations at no extra cost if required.
- 9.4 Design Builders are required to submit their tender upon the express condition that they shall have satisfied themselves before tendering, by personal investigation of the location of the proposed works, or by such other means as they may prefer, as to the actual conditions and requirements of the work.
- 9.5 The subsurface investigation reports record properties of the soils and recommendations for the design of foundations, prepared primarily for the use of the Design Builder. The recommendations given shall not be construed as a requirement of the contract unless also contained in the Contract Documents.

10 EXISTING SERVICES

- 10.1 Where Work involves breaking into or connecting to existing services, carry out work at times directed by governing authorities and/or the Owner with minimum of disturbance to pedestrian and vehicular traffic.

- 10.2 Before commencing work, establish location and extent of existing service lines in area of Work and notify Owner of findings.
- 10.3 Submit schedule to, and obtain approval from, all governing authorities and the Owner for any shut-down or closure of active service or facility. Adhere to approved schedule and provide notice to all affected parties.
- 10.4 Where unknown services are encountered, immediately advise Owner and confirm findings in writing.
- 10.5 Remove abandoned service lines encountered during the work to within 2000 mm of structures. Cap or otherwise seal lines at cut-off points as directed by Owner.
- 10.6 Record locations of maintained, re-routed and abandoned service lines.

11 PREPARATION

- 11.1 Examine all areas undergoing, involved in, connected with new construction, renovation, alteration and demolition work. Examine site and adjacent site features. Report any discrepancies from contract documents to Owner immediately.

12 USE OF SITE

- 12.1 The site is located on the Woodroffe Campus, Algonquin College, a fully operational community college. The limits of site are as outlined in the Statement of Requirements.
- 12.2 Restrict work to the limits of site and immediate area of the building under construction or as required to provide appropriate service to the construction site.
- 12.3 Adhere to Owners restrictions and limitations.
- 12.4 Confine construction activities, parking of workers vehicles, construction equipment, areas for storage, stockpiling and plant set-up to limits of site and other areas as directed by Owner.
- 12.5 Do not unreasonably encumber site with materials or equipment.
- 12.6 Move stored products or equipment which interfere with operations of consultants or other contractors.

13 WORK SCHEDULE

- 13.1 Unless otherwise authorized by Owner, limit all on-site construction activities to:
07:00 to 18:00 hrs. - Monday to Friday.
07:00 to 18:00 hrs. - Saturday, Sunday and Statutory Holidays.
- 13.2 Provide within 7 working days after Contract award, construction schedule showing anticipated progress stages and final completion of the work within the time period required by the Contract Documents.

13.3 Interim reviews of work progress based on work schedule will be conducted as decided by the Project Manager and schedule updated by the Design Builder in conjunction with and to the approval of the Project Manager.

14 SETTING OUT OF WORK

- 14.1 Engage registered Ontario land surveyor to survey control points and set such benchmarks necessary to define general location, alignment, and elevations of work. Obtain approval of Owner for bench marks prior to carrying out detailed grade and layout work. Provide this service at no extra cost to the Owner.
- 14.2 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated.
- 14.3 Provide devices needed to lay out and construct work. Supply stakes and other survey markers required for laying out work.
- 14.4 Provide and pay for preparation of a post construction survey drawing. The survey drawings will show and dimension the locations of the building, underground services, asphalt and concrete paving curbs, fencing, new trees and shrubs and any other elements, to the satisfaction of the Project Manager. Provide Owner with two (2) diskette copies of Autocad 14.0 file, one (1) mylar copy and six (6) white prints.

15 GENERAL QUALITY OF WORK

- 15.1 Perform Work in accordance with standard accepted industry practices for type of Work.
- 15.2 Do Work in neat and careful manner to retain work plumb, square, and straight.
- 15.3 Ensure work is properly related to form close joints and appropriately aligned junctions, edges and surfaces and is free of warp, twist, wind, wave or other irregularities,
- 15.4 When required by specifications or by manufacturers recommendations, have manufacturer, supplier or accredited agent, inspect work which incorporates their products.
- 15.5 Do not permit materials to come in contact with other materials whether in presence of moisture or otherwise if conditions will result in corrosion, stain or discolouration or deterioration of completed Work. Provide compatible, durable separators where contact is unavoidable.
- 15.6 Materials and equipment shall be provided and installed by specialist or skilled tradesmen experienced with the specific type of material and equipment application. This also applies to drilling, cutting, fitting and patching of their work to accommodate other installations.

16 COMPLETION DATE

16.1 The building, site and associated services shall be Substantially Complete, ready for use and occupancy as outlined in the Instructions to Proponents section.

17 CASH FLOW SCHEDULE

17.1 Provide within 7 working days after contract award, a cash flow schedule showing anticipated monthly cash flow for the duration of the design and construction period. Indicate relation of cash flow schedule to work schedule referred to in this Section.

17.2 Interim reviews of cash flow schedule based on work schedule and work completed will be conducted by the Project Manager and schedule updated by the Design Builder in conjunction with and the approval of the Project Manager.

18 COST BREAKDOWN

18.1 Before submitting first progress claim, submit a complete, itemized and aggregating breakdown of Contract price to Project Manager for approval. Indicate monetary values for the various parts of work. Approved cost breakdown will be used as basis for progress payment.

19 MATERIALS, SPECIALTIES, FURNITURE AND COLOURS

19.1 Provide new material only. Incorporate salvaged or used material ONLY where specifically identified herein and only with Owners written permission. Provide purpose made items, materials, products and equipment specifically designed for the intended use and constructed to suit requirements of this project.

19.2 Provide samples and mock-ups of proposed materials, finishes, and colours which are consistent with the design requirements specified for all key areas of the building. Submit in accordance with Shop Drawings, Product Data, Samples and Mock-Ups.

19.3 Use same brands of materials of each component for entire project.

20 LOCATION OF EQUIPMENT AND FIXTURES

20.1 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space in accordance with manufacturers recommendations for safety, access and maintenance.

21 ENVIRONMENTAL REQUIREMENTS

21.1 Perform Work in accordance with Federal, Provincial, and Municipal environmental regulations.

21.2 Remove designated hazardous components and waste in accordance with Federal and Provincial environmental regulations. In the case of conflict or discrepancy, the more stringent requirements shall apply.

- 21.3 Store material in a manner to prevent contamination of air, soil and waterways.
- 21.4 Control noise emissions to levels designated by Owner.
- 21.5 Take active role in implementing environmentally sound business practices and producing goods and services that lessen burden on environment in production, use and final disposition. Support implementation of reduction, reuse and recycling strategies and use of environmentally sound products.
- 21.6 Implement waste reduction by reducing or eliminating excessive packaging practices. Adhere to Canadian Code of Preferred Packaging Practices. Promote use of environmentally responsible packaging practices.
- 21.7 Use, where appropriate, combination of packaging materials such as re-usable containers, blanket wrap or cushioning material provided that all reasonable requirements of materials handling, transportation and storage are observed.

22 CUTTING, PATCHING, ALTERATION AND MAKING GOOD

- 22.1 Verify dimensions and condition of existing work before commencing fabrication or installation. Report any discrepancy and potential problems to Owner. Do not commence operations until written clarification is received from Owner.
- 22.2 Perform cutting, patching and alteration work without compromise to the:
 - 22.2.1 Structural integrity of any element of project.
 - 22.2.2 Integrity of weather-exposed or moisture-resistant elements.
 - 22.2.3 Efficiency, maintenance, or safety of any operational elements.
 - 22.2.4 Visual qualities of sight-exposed elements.
 - 22.2.5 Integrity of required fire separations and/or fire rated assemblies.
- 22.3 Submit written request including a description of the proposed solution in advance of cutting or alteration which affects above.
- 22.4 Remove and replace defective and non-conforming Work. Resolve or make good work with new products in accordance with the specifications.
- 22.5 Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection. For an assembly, refinish entire unit.
- 22.6 Perform patching, extending, matching, and alterations with materials, products and workmanship as required to make work complete, consistent to identical quality standards of products, finishes and type of construction existing.

23 PROJECT MEETINGS

- 23.1 Hold project meetings at times and locations as directed by the Project Manager.

- 23.2 Notify all parties concerned of meetings.
- 23.3 No smoking shall be permitted during site meetings.
- 23.4 Record minutes of meetings and distribute within 3 working days of the meetings.

24 STAGED CONSTRUCTION

- 24.1 Prepare and submit sub-schedules for each separate stage of work specified as follows:
 - 24.1.1 Bridge link to existing Building 'N', Media Arts Building
 - 24.1.2 Main building,
 - 24.1.3 Connections of services and associated work to Building 'C' and Physical Plant.
- 24.2 Execute above noted work with the least possible interference or disturbance to the normal use of the campus and premises. Make arrangements with Owner to facilitate work as stated and adjust work schedule in conjunction with Owner's required usage of both areas noted above.

25 SAFETY REQUIREMENTS

- 25.1 Observe and enforce construction safety measures required by the Ontario Safety Act, Workmen's Compensation Board and municipal statutes and authorities.
- 25.2 In the event of conflict between any of above authorities the most stringent provision shall apply.
- 25.3 No part of the work shall be loaded with load which will endanger its safety or will cause permanent deformation.

26 REMOVED MATERIAL

- 26.1 Unless expressly stated otherwise in writing by the Owner, materials required to be removed become the Design Builder's property and shall be removed from the site.
- 26.2 Do not burn or bury rubbish and work materials on site.
- 26.3 Dispose of rubbish and surplus material off site.
- 26.4 Do not dispose of volatile or corrosive materials in sewers or drains.
- 26.5 Dispose of rubbish and waste in accordance with governing authorities.

27 PROTECTION

- 27.1 Protect completed work until final acceptance by the Owner.
- 27.2 Protect operatives and other users of the site from all hazards.

28 SITE VISITS

- 28.1 Contractor is required to visit and examine the site and note any conditions likely to affect the work. Submission or tender deemed confirmation the Design Builder has visited the site and is conversant with its conditions.

29 SITE SIGNAGE

- 29.1 The Design Builder will supply a project identification sign approximately 4.8m wide x 2.4m high. Assume complete responsibility for sign and dispose at Substantial Completion. Sign to be constructed of exterior grade plywood complete with 38 x89 framing. Provide 300mm diameter concrete pier foundations 1200mm min. below finished grade. Lettering and details to be furnished by Project Manager. Identify the following information on sign:

29.1.1 Name and location of project.

29.1.2 Owners

29.1.3 Project Manager

29.1.4 Advocate Architects/Consultants

29.1.5 Design Builder.

29.1.6 Prime Design Consultant.

29.1.7 Design Sub-consultants.

29.1.8 Major Sub-contractors.

- 29.2 No other signs will be accepted unless approved by the Owner.

30 TAKE-OVER PROCEDURES

- 30.1 Procedures outlined in OAA/OGCA Document no. 100 will be used for take-over procedures except where otherwise specified.

31 BUILDING SMOKING ENVIRONMENT

- 31.1 Comply with smoking restrictions of the Owner.

32 PERMITS

- 32.1 Obtain and pay for all permits and inspections required for this project.

- 32.2 Prior to construction, the Design Builder will be required to prepare the Waste Audit and Site Plan Control application required for the Owner to obtain necessary municipal Site Plan approvals. A preliminary submission has been provided to the City of Nepean for information purposes. The Design Builder will be required to provide a formal Site Plan Control application with all documentation in accordance with the City requirements.