Part 1 GENERAL

1.1 GENERAL REQUIREMENTS

1. Conform to Section 01 01 00 - General Requirements.

1.2 RELATED WORK SPECIFIED ELSEWHERE

1. Environmental Protection - Section 01 35 43

1.3 EXAMINATION OF SITE AND EXISTING BUILDING

1. Carefully examine the site and building to ensure that all factors concerning demolition of existing building are known.

2. Owner assumes no responsibility for actual condition of buildings or site elements to be demolished or selectively demolished.

3. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

1.4 REQUIREMENTS OF REGULATORY AGENCIES

1. Canadian Standards Association CSA S350, Code of Practice for Safety in Demolition of Structures.

2. Occupational Health and Safety Act and regulations for Construction Projects.

3. National Building Code of Canada, Part 8, "Safety Measures at Construction and Demolition Sites", and Provincial requirements.

4. Regulation 447 - Environmental Protection Act.

5. The Construction Safety Act, (as currently amended), local by-laws and all other regulations of the Ontario Ministry of Labour relating to the work of this section.

1.5 QUALIFICATIONS

1. Employ for this work demolition company having 5 years Canadian experience in this type of work. If requested, submit proof of experience and list of projects.

2. Use skilled personnel having substantial experience in careful removal of heritage building materials identified to be salvaged for re-use.

1.6 CO-ORDINATION AND CO-OPERATION

1. Co-ordinate the work of the Section with the work of all other sections affected to ensure proper sequencing and the safety and stability of the structure at all times.

1.7 PRE-DEMOLITION MEETING

1. Prior to start of work, arrange for Site meeting of all parties associated with work of this Section. Presided over by Consultant, meeting shall include General Contractor, Demolition Subcontractor, Testing Company's Representative and Structural Design Engineer.

2. Prior to the meeting, examine the site and review the Specification for work included under this section and determine complete understanding of requirements and responsibilities relative to work including, storage and handling of materials, methods to be used, sequence and quality control, project staffing, restrictions due to environmental protection requirements, adjacent

building to remain, driveways and other matters affecting demolition, to permit compliance with intent of this Section.

3. While the drawings indicate parts of the building to be demolished, they do not specifically cover or note all of the items and parts of the building which are to be removed or demolished, nor do they indicate sequence of removals. Extent of demolition to suit the design intent of the proposed final project.

1.8 SCHEDULE

1. Scheduling of the work shall be discussed with, and be subject to, the approval of the Owner.

1.9 WORK INCLUDED IN THIS SECTION

1. This work of this section shall consist of furnishing labour, material, tools, equipment and special services necessary to complete all demolition work including but not limited to the following:

    1. Selective Demolition of services, infrastructure, partitions and finishes within the existing building.

    2. Disposal of all materials at landfill site authorized by authorities having jurisdiction.

1.10 SUBMITTALS

Where required by authorities having jurisdiction, submit Engineered drawings, diagrams of details showing sequence of dismantling work and shoring of structures during demolition.

1. Drawings for structural elements shall bear signed professional seal of Structural Engineer licensed to practice in Ontario.

2. As-built drawings Record drawings at Project closeout according to Section 01 77 00 "Project Closeout."

3. Identify and accurately locate capped services and other subsurface structural, electrical, or mechanical conditions.

4. Landfill records indicating receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

5. A sample of the existing brick and mortar is to be retained during demolition and provided to the Consultant.

1.11 DEFINITIONS

1. Hand Demolition/Excavation: systematic demolition/excavation of structures/materials by workers using hand-held tools.

2. Mechanical Demolition: systematic demolition of structures using powered equipment.

3. Systematic Demolition: methodical dismantling of structure piece by piece, usually carried out in reverse order of construction.

Part 2 PRODUCTS

2.1 MATERIALS

1. All demolished materials become the Contractor's property and the Contractor must remove them from the site except for specific heritage items to be retained for re-use or turned over to the

Owner on wood skids. Carefully remove, store and protect items identified to be salvaged. Salvage all wood windows, doors, door hardware, unique items of heritage value, trim, casing, wainscotting, veranda columns, column bases, column capitols, slates (at roofing), brick and stone to be removed. Salvaged items are to be identified in an itemized list, labeled with numbering corresponding to the itemized list and safely stored for future use to the satisfaction of Town of Newmarket Heritage staff. Removed heritage items are to be protected from weather. Where the Town of Newmarket decides that a removed item does not need to be retained, the item becomes the property of the Contractor and is to be removed from site. Labeling to be done with permanent marker on Tyvek shipping tags attached with cotton string. No markings are to be made on the heritage material. Original brick being salvaged is to have mortar removed. Any materials proposed not to be salvaged due to their condition should be identified to the satisfaction of Town of Newmarket Heritage staff. The itemized list is to contain photographs of each salvaged heritage element in its original position, and a description of the location including room, room number and surface (e.g. "west wall", or "trim at window W12"). Windows are to be photographed from the exterior and interior. The conservation work shall generally be carried out in accordance with the heritage permit for the renovation of the house, approved subject to conditions, dated March 14, 2024.

2. Remove contaminated and hazardous material from Site and dispose of in a safe manner according to regulations of authorities having jurisdiction to minimize danger involved at Site or anytime during disposal.

Part 3 EXECUTION

3.1 PRLIMINARY SURVEY AND PREPERATION

1. Before commencing demolition operations, examine Site and when requested, provide engineering survey to determine type of construction, condition of structure and Site conditions. Assess strength and stability of damaged or deteriorated structures.

2. Assess potential effect of removal of any part or parts on the remainder of structure before such part(s) are removed.

3. Assess effects of demolition on adjacent properties, buildings and structures and consider need for underpinning, shoring and/or bracing.

4. Investigate for following conditions:
   - loadbearing walls and floors
   - effects of soils, water, lateral pressures on retaining on foundations walls
   - basement, vaults or similar underground construction extending beyond extent of structure to be demolished.
   - presence of tanks, wells, other piping systems
   - presence of hazardous materials.

5. Contact municipal authorities or utility companies for assistance in locating and marking services passing under, through, or adjacent to building parts to be demolished. Such services include:

   - electrical power lines
   - gas mains
   - oil pipelines
   - communication cables
   - water mains
   - drainage piping (storm and sanitary)

6. After determining demolition methods, determine area of possible vibration. Carefully inspect beyond those adjacent areas. List potential damage areas and photograph each for record purposes before starting work.

7. Obtain permission from adjacent property Owner(s) regarding use of outriggers, swinging cranes and similar equipment.

8. Site measure to confirm dimensions shown on drawings. Elements of the new additions or alterations that are to align, co-ordinate, or repeat existing conditions are to be dimensionally verified to existing. All discrepancies to be reported to Consultant.

3.2 PROTECTION

1. Protect adjacent property against damages which might occur from falling debris or other causes. Do not interfere with use of adjacent buildings and structures and maintain free, safe passage to and from same.

2. Protect heritage materials, structures and elements.

3. Take precautions to guard against movement or settlement of adjacent buildings; provide and place bracing or shoring; be responsible for safety and support of such buildings; be liable for any such movement or settlement, any damage or injury caused thereby or resulting there from. If at any time, safety of any adjacent structure or buildings appear to be endangered, cease operations, notify the Consultant; take precautions to support such buildings; do not resume operations until permission has been granted.

4. Contractor is responsible for the design and installation of all necessary bracing or shoring for the superstructure for all phases of the demolition.

5. Provide appropriate protection in all areas, which will be accessed by construction staff for the duration of the project

6. Contractor shall only remove areas of construction that can be made weathertight during one shift. At no time shall systems be left unprotected and the building be at risk of water, wind or other damage

7. Install temporary protection for all materials and building components, which have been exposed during demolition as specified.

8. Provide, erect and maintain required hoarding and other protection around Site before commencing work. Maintain such areas free of snow, ice, mud, water and debris. Lighting levels shall be equal to that prior to erection.

9. Provide flagmen where necessary or appropriate to provide effective and safe access to Site to vehicular traffic and protection to pedestrian traffic.

10. Ensure scaffolds, ladders, equipment and other such equipment are not accessible to public. Protect with adequate fencing or remove and dismantle at end of each day or when no longer required.

11. Where necessary to temporarily seal fire exits, provide other exits in compliance with applicable fire safety and building regulations. Maintain fire exits from Site.

12. Where demolition operations prevent normal access to buildings, provide and maintain suitable alternative access.

13. If at any time safety of adjacent buildings or structures appear to be endangered, cease operations and notify Consultant; take precautions to support buildings; do not resume operations until permission is granted by Consultant.

14. If Consultant considers additional bracing and shoring necessary to safeguard and prevent such movement or settlement, install bracing or shoring upon Consultants orders. Should Contractor fail to comply promptly with such request, such bracing or shoring may be placed by Consultant at Contractor's expense.

15. Erect and maintain dustproof partitions as required to prevent spread of dust, fumes and smoke to other parts of building. On completion, remove partitions and make good surfaces to match adjacent surfaces of building.

3.3 WORKMANSHIP

1. Demolition shall be carried out in strict accordance with provincial, local and municipal authorities and the Ontario Building Code.

2. Drain, purge, or otherwise remove, collect, and dispose of chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with demolition operations.

3. During demolition operations, keep work dampened down to prevent dust and dirt rising.

4. Do not remove present work, where such removal may endanger the structure or mechanical and electrical functions, where such are to remain. All doubtful instances shall be brought to the Consultant's attention before commencement of the work.

5. Saw cut or otherwise neatly form, junction between construction being removed and that which remains.

6. Rerouting of existing services which occur in or at the building, shall be done by Mechanical and Electrical and Site Services Trade Contractors

7. All mechanical and electrical devices shall be disconnected and removed by licensed electricians and plumbers.

8. If during demolition work hazardous material other than specified to be removed is discovered, then stop work in the affected area and immediately notify the Consultant.

9. Dispose of demolished materials except where noted otherwise and in accordance with authorities having jurisdiction.

10. At end of each day's work, leave work in safe condition so that no part is in danger of toppling or falling or unprotected excavations are exposed.

11. Demolish to minimize dusting. Keep dusty materials wetted.

12. Demolish masonry and concrete walls in small sections. Carefully remove and lower structural framing and other heavy or large objects.

13. Do not sell or burn materials on site.

14. Materials and debris shall not be stacked in building to extent that overloading of any part of structure will occur.

15. Remove contaminated or dangerous and hazardous materials from site and dispose of in safe manner to minimize danger at site or during disposal. Comply with all regulations and by-laws of Municipal and Provincial Authorities having jurisdiction. Separate and recycle all building materials that are recyclable, see Section 01 35 23 Environmental Protection Requirements. Provide separate bins for each recyclable material.

16. Drawings and notes are intended to convey the general intent of demolition and removal required for the work of this Contract but are not intended to highlight or point out every element requiring demolition or removal. Contractor is to review drawings and specifications which indicate the required finished project and perform the demolition required to allow the indicated changes and/or construction to take place.

17. Contractor is to plan and bid the work of this contract as a demolition project. As such, the Contractor must allow for removal and demolition of items which are not fully visible during the bidding phase. It is not possible to indicate all specific items requiring demolition on the drawings.

18. Contractor to allow for cutting, patching, holes, sealing of existing openings which will be required to accomplish the construction work indicated.

19. Hand and mechanical demolition shall be acceptable methods for work of this Section. Verify with the Consultant whether proposed methods of demolition are acceptable. The use of rapid progress failure methods for demolition (explosives) will not be permitted.

20. Inform the Consultant immediately if conditions are encountered during demolition which are significantly beyond those which could have reasonably been anticipated or inferred based upon the Contract Documents and examination of the building prior to commencement of work.

21. Selective Demolition:

    1. Systematically demolish, part exterior walls, windows, roof, slab-on-grade, foundations to extent shown in drawings, and to allow the performance of the work and remove materials from Site.

    2. Systematically demolish and remove interior partitions, walls, ceilings, stairs and floors to extent shown in drawings and to allow the performance of the work and remove materials from site.

    3. Separate attached structures by hand demolition prior to general demolition.

    4. Systematically demolish masonry and concrete walls in small sections or individual units. Remove and handle structural members and other heavy objects with safe and suitable equipment.

    5. Remove existing trees and roots indicated in drawing.

6. Methods:

    1. Hand and mechanical demolition shall be acceptable methods for work of this Section. Verify with Consultant whether proposed methods of demolition are acceptable.

    2. Following methods of demolition will not be permitted in work of this Contract:
    - use of rapid progress failure methods (explosives).
    - Mechanical method of demolition whereby wrecking is accomplished by smashing walls or floors with heavy weight suspended by cable from boom or hoist or where walls are collapsed using power shovel, tractor or other mechanical contrivance.

3.4 EXISTING SERVICES

1. Provide and maintain temporary services required during demolition to satisfaction of authorities having jurisdiction, fire departments and utility companies.

3.4 ADDITIONAL WORK TO BE INCLUDED IN THIS SECTION

1. Reserved.

End of Section 02 41 00