



March 1, 2020
Version 6.0

www.tradedefinitions.com



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Apri's North

2020 REVISIONS

Note to Readers and Users of this Document

The **2020 edition, Version 6.0 of the Alberta Trade Definitions** has completed minor revisions to select trade definitions, most notably to:

- Structural Steel,
- Heavy Timber Construction,
- Mass Timber Construction,
- Siding and Soffits,
- Roofing and Related Sheet Metal,
- Entrance, Storefronts, and Windows,
- Curtain Wall and Glazed Assemblies,
- Glass and Glazing,
- Lath, Plaster and Stucco,
- Gypsum Board and Metal Framing,
- Prefinished Demountable Partitions,
- Mechanical A. Common Items,
- Mechanical B. Prime Mechanical - Plumbing Systems,
- Mechanical C. Ventilation and Sheet Metal Ductwork,
- Mechanical D. Building Management Systems,
- Mechanical E. Refrigeration, Electrical,
- Electrical B. Prime Electrical,
- Electrical D. Photo-Voltaic (Solar) Systems,
- Modular Block and Mechanically Stabilized Earth (Retaining Walls)

The Trade Definition Committee has introduced at the beginning of each Trade Definition a “Scope Narrative”, which is a statement in general terms, a brief description of the synopsis of the work of each trade and is not intended to be, nor is it to be construed as part of the Trade Definition. This statement is to provide a brief outline of the work to those that may be unfamiliar with the Trade, and has no bearing on what is to be “Included or Excluded” from the Trade Definition that follows.

PLEASE NOTE: It is the responsibility of each General Contractor, Trade Contractor, Manufacturer and Supplier, to review each of the respective trade definition scopes, as revisions have been made throughout the document that may or may not be different from previous versions.

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Introduction

The following trade definitions were developed and refined with the assistance of the appropriate trade associations and trade contractors to establish a set of guidelines for trades to use when tendering a project. The definitions herein are intended to supplement the specifications by providing the contractor a comprehensive list of “Inclusions and Exclusions” pertaining to the work scope being tendered.

These definitions do not add work items nor exclude them from a prime contract, but where work under each scope is included in the contract documents, **the trade definitions designate which contractor is responsible to do that work**. It does not eliminate the requirements of the contractor to follow and abide by all applicable codes including but not limited to the **Worker’s Compensation Board, Occupational Health and Safety Act**, applicable **Building Codes**, and the requirements of the tendering documents.

These trade definitions will be reviewed on a yearly basis. All member companies and trade associations may request changes to any or all trade definitions by providing their request in writing to the Alberta Construction Association or the Edmonton Construction Association, care of the Trade Definitions Committee, before **December 1st** of each year. The request must include the change, reason for the change and the effect on the other scopes. The Trade Definitions Committee will review and rule on all requests. Changes to the definitions will be finalized and published on March 1st each year.

This document is for use during the tender process and is intended to provide clarity to the tendering process and eliminate potential trade conflicts on the jobsite.

Building Information Modeling (BIM)

SCOPE NARRATIVE

BIM is a computer aided design system that renders a 4D accurate digital representation of a building being designed or built. In addition, 3D graphic attributes for all components in the building can be added. Specifications for all the components of the building can be attached to each item.

If specified in the tender documents, each trade will allow for associated costs in their tender, to provide personnel, computer equipment and software necessary to complete their portion of the Building Information Modeling.

If the tender documents require each trade to assist in the development of a BIM model with no detailed outline of the assistance requirements, ALL contractors shall include and exclude the following items in their tender:

TRADE DEFINITION

INCLUDED

1. Supply appropriate personnel to assist in development of the BIM model by providing information with respect to the individual trade scope with regards to:
 - a. Equipment and material being supplied;
 - b. Installation requirements of material and equipment being installed;
 - c. Provide the appropriate information (dimensions, sizes, clearances, quantities) of all products being installed to assist with interference and coordinate the final installation of equipment and systems;
 - d. Supply personnel to attend meetings as specified to assist in the development of the BIM model.

Note: If meeting requirements are not detailed in the tender documents it will be assumed that one (1) person will be required to attend one (1) meeting weekly with a duration of four (4) hours for a duration appropriate to their scope.

EXCLUDED

1. Supply of equipment, software or computer operators;
2. Computer generated drawings.

Note: Unless otherwise specifically noted in the tender documents all computer drafting is to be carried out by the General Contractor, Engineer or personnel designated by the Owner with no costs to be borne for this service by the Sub Contractor.

Commissioning

SCOPE NARRATIVE

Commissioning is the verification of a product or system's functionality by checking all aspects of the system and comparing the results with the requirements of the tender documents. Costs for all commissioning items as they pertain to each scope including system and equipment start-ups and adjustments, demonstration and training as well as administrative and procedural requires for commissioning facilities and facility systems are to be included in each trade scopes tender.

Commissioning applies to all trade scopes within this document.

All contractors shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Administrative and procedural requirements for commissioning facilities and facility systems as specified;
2. Equipment start-up and adjustments of systems and equipment by appropriately trained or manufacturer certified technicians as specified;
3. Verification of equipment, materials and systems to ensure they meet design intent and specifications;
4. Documentation for completed system and equipment commissioning and/or testing as specified;
5. Completing and submitting commissioning documents as required by the contract documents;
6. Demonstration and training of equipment and systems as specified;

EXCLUDED

1. 3rd party commissioning;
2. Development and supply of commissioning sheets required for 3rd party commissioning.

Concrete Formwork (Concrete Forming and Accessories)

SCOPE NARRATIVE

This scope includes the supply and installation of permanent and temporary forms for structural and architectural cast-in-place concrete for a complete installation including the installation of the concrete provided by others.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED

TRADE DEFINITION

1. Formwork for all cast-in-place concrete elements shown on structural drawings including strip footings, spread footings, raft slabs, pile caps, grade beams, foundations walls, retaining walls, shear walls, core walls, columns, column capitals, suspended slab soffits, edges and openings, suspended beams, suspended drop panels, bulkheads, upstands, downturns, slab depressions, wall openings, floor openings, trench drains, utility pits and corridors, sump pits, elevator pits, suspended stairs, stairs on grade, housekeeping pads, concrete bases for mechanical and electrical equipment or piping;
2. Formwork, place and finish structural slab on grade where poured monolithically with a suspended slab;
3. Place concrete into forms for strip footings, spread footings, raft slabs, pile caps, grade beams, foundations walls, retaining walls, shear walls, core walls, columns, upstands, trench drains, utility pits, sump pits, elevator pits;
4. Form and pour infills where access openings were left to facilitate construction when indicated in the tender documents;
5. Place and finish suspended slabs;
6. Reshoring of all new concrete elements as required to support the work of this trade;
7. Reshoring of all existing structure as required to support the work of this trade;
8. Design of all temporary support systems including scaffolding, formwork, falsework and reshoring. Design and erection drawings to be prepared by an approved professional engineer as specified in the contract documents and as required by the authority having jurisdiction;
9. Ensure adequate soil bearing capacity for shoring systems and mudsill surfaces;
10. Maintain scaffolding, formwork, falsework and reshoring;
11. Remove formwork, falsework and reshoring;
12. Abandon stay-in-place formwork;
13. Architectural concrete requirements including curing and protection;
14. Place concrete to all concrete forms listed herein unless specifically excluded in this Section;
15. Formwork and provide loose dowels for construction joints;
16. Drill and grout dowels;
17. Set column anchor bolts and all concrete embedded items supplied by others;
18. Form utility block outs;
19. Supply and installation of void form;
20. Supply and installation of water stop;
21. Set stair treads and nosing's in cast-in-place concrete stairs;
22. Finish to top of concrete walls, footings, ledges, sills, corbels, grade beams, suspended beams;
23. Form, place and finish shrinkage strips when indicated in tender documents;
24. Temporary guardrails, fall protection system, stairs, ladders, walkways and barricades to facilitate the work of this trade;
25. Unload and hoist reinforcing steel;
26. Provide all layout from principle references and main elevations, namely a benchmark and two intersecting base lines provided by others, to correct lines and levels for all work of this trade scope;
27. Coordinate with trades requiring sleeves or other materials to be cast into concrete;
28. Rigging equipment, hoisting, scaffolding and elevating work platforms necessary to complete the work of this trade;
29. Maintain mushroom cap rebar protection and replace caps as necessary for the duration of the work of this trade;

30. Cleaning of dirt and debris from forms prior to pouring concrete;

Concrete Formwork - continued

31. Assist the general contractor by coordinating the concrete quantity, timing and the arrival of the concrete trucks to the job site;
32. Assist and cooperate with the independent concrete testing agency as required;
33. Form watch in the event of a formwork failure during a concrete pour;
34. Material handling, including unloading and hoisting;
35. Trade specific lighting to perform tasks;
36. Trade cleanup – cleanup for work performed by this trade;
37. Warranty or Guaranty;
38. Submittals and Operation and Maintenance documentation as specified in the tender documents;
39. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
40. Protection of other trades' work from damage when performing this trade's scope of work;
41. Building Information Modeling (BIM) as it applies to this trade scope;
42. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup.

EXCLUDED

1. Concrete not shown on structural drawings;
2. Inspection and testing;
3. Supply of ready-mix concrete;
4. Supply and placement of reinforcing steel and wire mesh;
5. Architectural precast concrete;
6. Precast stairs;
7. Precast sumps pits and utility structures;
8. Control joint saw cutting;
9. Formwork, place and finish slab on deck and steel stair pans;
10. Formwork, place and finish non-structural slab on grade;
11. Site concrete curbs and walkways;
12. Scaffolding/man lifts required to perform reinforcing steel installation;
13. Rigging equipment and labor for unloading and hoisting reinforcing steel;
14. Concrete curbs, housekeeping pads and equipment pads not shown on structural drawings by General Contractor;
15. Supply and install waterproofing and drainage board to excavation shoring systems where one-sided forms are being used;
16. Place and finish concrete toppings;
17. Supply of steel embeds;
18. Survey control (two intersecting base lines and one benchmark elevation to be supplied by others);
19. Traffic topping;
20. Supply stair treads and nosing's;
21. Supply and install caisson and pile dowels;
22. Common scaffold or platform when required to perform work by multiple trades;
23. Temporary heat, general lighting, power, sanitation and water for general construction;
24. Hoarding;
25. Final Cleaning before turnover;
26. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
27. Firestopping;
28. Supply and maintenance of garbage and recycling bins for construction waste;
29. Removal of construction waste from job site;
30. General site security.

Reinforcing Steel (Concrete Reinforcing)

SCOPE NARRATIVE

This scope includes the supply and installation of reinforcement utilizing reinforcement steel bars or wire fabric reinforcement to all types of concrete to increase the structural capabilities of the concrete, including supply and delivery to site of all reinforcing steel bars and welded mesh or structural wire fabric required for poured-in-place concrete.

This scope can be submitted as combined or two separate tenders - supply and/or installation.

A. Reinforcing Steel (Concrete Reinforcing) - Supply

SCOPE NARRATIVE

This scope includes for the supply only and delivery to site of all steel bars or wire fabric reinforcement.

This scope for supply only includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Stud Rails;
2. Epoxy coated rebar and patch kit;
3. One-hour free unloading time;
4. Fabrication of bars; this shall include smooth rods for joints and threaded reinforcing bars cut, bent, bundled and tagged or color coded;
5. Mechanical and exothermic couplers - supply only;
6. Preparation of placing drawings and bar lists;
7. Supply reinforcing steel for concrete filled masonry and similar type blocks;
8. Supply of welded wire mesh or structural wire fabric in flat sheets or rolls;
9. Support and/or spacer bars when specified or specifically shown on the drawings;
10. Welded wire mesh or structural wire fabric for concrete encased conduits or duct;
11. Warranty or Guaranty;
12. Submittals and Operation and Maintenance documentation as specified in the tender documents;
13. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
14. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Accessories for masonry or similar type blocks, including 9 ga. (3.8 mm) wire ties or similar type ties;
2. Continuity strip;
3. Inspection or testing;
4. Light gauge forms and temperature reinforcement when specified to be included in the structural steel documents, see Structural Steel Included;
5. Accessories, tie wire and epoxy coated tie wire, inserts;
6. Rock or soil anchors or equivalent bars;
7. Post tensioning cables and accessories, see Post Tensioning, Included;
8. Embedded plates with rebar welded to it;
9. Supply of reinforcing bar supports for composite floor decking, see Cold Rolled Metal Framing, Included;
10. Reinforcing steel used in drilled cast-in-place piles, dynamically cast-in-place piles and pipe piles, see Bored and Caisson Piles, Included;
11. Supply of caisson and pile dowels, see Bored and Caisson Piles, Included;
12. Dowel protection;
13. Hoisting equipment and Operators for off-loading;

14. Dowels welded to Pile Plates.

B. Reinforcing Steel (Concrete Reinforcing) - Installation

SCOPE NARRATIVE

This scope includes the installation of concrete reinforcing including providing labor only to facilitate the receiving, unloading, handling and storage of reinforcing steel material at the project site, including moving to final location, assembling, pre-assembling, installation, initial correction and adjustment.

Hoisting shall mean raising and lowering only of all reinforcing steel materials on site from delivery trucks, site storage areas and pre-assembly areas to another designated place at the work site. Hoisting includes equipment and operator but does not include labor or rigger.

This scope for the installation only includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Installation of mechanical and exothermic couplers, including machinery and labor to install;
2. Installation of reinforcing steel and welded wire fabric;
3. Supply and installation of accessories, tie wire, epoxy coated tie wire, and inserts;
4. Supply all materials required for temporary and/or permanent connection of the component parts of the reinforcing steel;
5. Supply and installation of support and spacer bars not specified nor specifically shown on the drawings;
6. Touching up/repairing defects or damage to epoxy coated reinforcing bars;
7. Installation only of composite floor reinforcing bar supports, supplied by others, see Cold Rolled Metal Framing, Included;
8. Material handling, including receiving and unloading of materials;
9. Rigging equipment and labor for unloading and hoisting;
10. Trade specific lighting to perform tasks;
11. Trade cleanup - cleanup for work carried out by this trade;
12. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
13. Warranty or Guaranty;
14. Submittals and Operation and Maintenance documentation as specified in the tender documents;
15. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
16. Protection of other trades' work from damage when performing this trade's scope of work;
17. Commissioning as it applies to this trade scope;
18. Building Information Modeling (BIM) as it applies to this trade scope.

B. Reinforcing Steel (Concrete Reinforcing) - Installation - continued

EXCLUDED

1. Caisson and pile dowels;
2. Post tension cables, accessories, supports and anchorage reinforcement, see Post Tensioning, Included;
3. Expansion sleeves, caps, wrapping, greasing and accessories;
4. Field welding;
5. Hoisting;
6. Inserts;
7. Lifting of mesh during pouring of concrete;
8. Chairing of mesh prior to pour;
9. Lines, templates and grades;
10. Placing bars and supply and placing of accessories to masonry or similar type blocks;
11. Reinforcing steel for masonry including dowels;
12. Tying reinforcing steel to water stops;
13. Tying reinforcing into cages for masonry where shown on drawings, see Masonry, Included;
14. Scaffolding which supports concrete formwork;
15. Maintenance of Dowel protection after initial installation;
16. Drilling and grouting of Dowels;
17. Aerial work platform with Operator;
18. Fall protection anchor points;
19. Common scaffold or platform when required to perform work by multiple trades;
20. Temporary heat, general lighting, power, sanitation and water for general construction;
21. Hoarding;
22. Final Cleaning before turnover;
23. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
24. Supply and maintenance of garbage and recycling bins for construction waste;
25. Removal of construction waste from job site;
26. General site security.

Concrete Finishing (Flatwork)

SCOPE NARRATIVE

This scope includes the supply and installation for the placing and finishing of all concrete flatwork and all components required for a complete installation including concrete finishing, concrete topping and concrete curing.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Place and finish slab on grade, structural slab on grade, slab on metal or composite metal deck, stairs, landings and concrete toppings;
2. Place and finish concrete to steel stair tread pans and landings;
3. Concrete slab wet cure;
4. Concrete slab chemical cure, seal and hardener;
5. Troweled in concrete slab hardener;
6. Troweled in concrete coloring;
7. Herring bone, tined, stamped patterns in a concrete surface as indicated on the tender documents;
8. Assist the general contractor by coordinating the concrete quantity, timing and the arrival of the concrete trucks to the jobsite;
9. Layout, setting, and maintaining all top of concrete grades including supply and install screed pins;
10. Place and finish column diamond infills and other slab opening infills required to facilitate construction;
11. Ensure welded wire mesh reinforcing is chaired and or lifted into proper location within concrete slabs;
12. Rigging equipment and labor to hoist concrete finishing equipment;
13. Assist and cooperate with the independent concrete testing agency as required;
14. Trade specific lighting to perform tasks;
15. Trade cleanup – cleanup for work performed by this trade;
16. Warranty or Guaranty;
17. Submittals and Operation and Maintenance documentation as specified in the tender documents;
18. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
19. Protection of other trades' work from damage when performing this trade's scope of work;
20. Building Information Modeling (BIM) as it applies to this trade scope.

Concrete Finishing (Flatwork) - continued

EXCLUDED

1. Concrete supply;
2. Concrete pumping;
3. Hoisting;
4. Place and finish suspended slabs;
5. Formwork, place and finish structural slab on grade where poured monolithically with a suspended slab;
6. Formwork, falsework and reshoring;
7. Exterior concrete paving;
8. Inspection and testing;
9. Supply and place reinforcing steel, wire mesh and reinforcing steel accessories;
10. Architectural precast concrete;
11. Precast stairs;
12. Concrete curbs, housekeeping pads and equipment pads not shown on structural drawings;
13. Survey control (two intersecting base lines and one benchmark elevation to be supplied by others);
14. Traffic topping;
15. Concrete slab polishing;
16. Control joint saw cutting;
17. Supply and set loose dowels;
18. Common scaffold or platform when required to perform work by multiple trades;
19. Temporary heat, general lighting, power, sanitation and water for general construction;
20. Hoarding;
21. Final Cleaning before turnover;
22. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
23. Firestopping;
24. Supply and maintenance of garbage and recycling bins for construction waste;
25. Removal of construction waste from job site;
26. General site security.

Post Tensioned Concrete Reinforcing

SCOPE NARRATIVE

This scope includes the supply and installation of all material required for a complete poured-in-place concrete post tension system, including all post-tensioning tendon materials required for cast-in-place concrete complete with stressing tendons and jacking to apply load on tendons.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Preparation of placing drawings and friction/elongation calculations;
2. Layout for locations where tendons penetrate formwork;
3. Tendon anchorages;
4. Anchorage seal caps;
5. Couplers;
6. Local zone burst reinforcing;
7. Sheathing for pre-stressing tendons (bonded or un-bonded);
8. Installation of sheathing (ducting) for bonding tendons;
9. Pre-stressing steel (strand or thread-bars);
10. Installation of pre-stressing steel and anchorages;
11. Cement grout (in the case of bonded tendons);
12. Tendon supports, spacers and applicable accessories as required;
13. Post-tensioning specific installation equipment required to perform task;
14. Stressing equipment required to perform task;
15. Grouting equipment for bonded tendons required to perform task;
16. Stressing tendons and cutting after approval;
17. Grout, seal and/or cap pockets of un-bonded tendons;
18. Grouting equipment for bonded tendons;
19. Stripping plastic sheath of un-bonded tendon tails after concreting;
20. Trade specific lighting to perform tasks;
21. Trade cleanup – cleanup for work carried out by this trade;
22. Protection of other trades' work from damage when performing this trades scope of work;
23. Warranty or Guaranty;
24. Submittals and Operation and Maintenance documentation as specified in the tender documents;
25. Material handling, including unloading and hoisting;
26. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
27. Protection of other trades' work from damage when performing this trade's scope of work;
28. Building Information Modeling (BIM) as it applies to this trade scope

Post Tensioned Concrete Reinforcing - continued

EXCLUDED

1. Concrete, supplied and installed by Others;
2. Inspection or testing including lock tests;
3. General zone burst reinforcing steel;
4. Pour break couplers, if not shown;
5. Formwork block-outs;
6. Forming and patching of recess pockets;
7. Power for post-tensioning equipment;
8. Potable water for grouting tendons when required for bonded tendons;
9. Testing agency to perform cement grout testing for bonded tendons;
10. Engineering review of stressing results;
11. Lines, templates and grades;
12. Scaffolding which supports concrete formwork;
13. Work platform around perimeter of concrete pour;
14. Aerial work platform with operator when required;
15. Fall protection anchor points;
16. Scaffolding when required to perform work by multiple trades;
17. Temporary heat, general lighting, power, sanitation and water for general construction;
18. Hoarding;
19. Final cleanup before turnover;
20. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
21. Supply and maintenance of garbage and recycling bins for construction waste;
22. Removal of construction waste from job site;
23. General site security;

Masonry

SCOPE NARRATIVE

This scope includes the supply and installation of all types of masonry systems including stone, clay, concrete, cinder, adobe or glass, or other manufactured masonry units installed as a non-load bearing veneer, or in single and multiple wythe masonry assemblies that are either load or non-load bearing construction, including associated accessories integral to the wall assembly.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Concrete Masonry Units, including blocks and veneer units;
2. Clay Unit Masonry, including brick and adobe veneer, clay flue units and tiles, or structural clay and terra cotta blocks and bricks;
3. Refractory brick when forming part of a masonry heating receptacle or appliance;
4. Glass Unit Masonry, including blocks and bricks;
5. Natural Stone Assemblies, including marble, granite, slate, travertine, and limestone cladding panels and stone veneers, attached to structural substrates utilizing mechanically fastened anchors, or with ties and mortar;
6. Manufactured Unit Masonry, including calcium silicate and cast bricks, blocks or stone and another manufactured unit masonry, not described above;
7. Thin Veneer Assemblies, cement adhered using mesh or lath, and scratch coat installation systems, and including attachment girts and cementitious sheathing panels forming a part of thin veneer assemblies;
8. Building envelope components such as weather, air and vapor membranes, and rigid or semi-rigid board insulation integral to masonry wythes, veneers, facings and cladding including:
 - a. Cavity wall flexible sheet or liquid applied weather, air or vapor membranes, behind masonry and when masonry is the last component being installed, including connection to work of the preceding trade where required. If connection is required by any trade following the masonry installation, then the masonry contractor provides a minimum of 200 mm of compatible overlap material beyond the exterior point of the masonry system;
 - b. Cavity wall insulation including adhesives, anchors, and other fastenings and attachments, behind masonry, where masonry is the last component being installed;
 - c. Loose fill or foam insulation forming a part of masonry assemblies.
9. Masonry laid with mortar containing bonding agents regardless of being pre-laid or otherwise:
 - a. Mortar;
 - b. Concrete and grout fill in masonry only.
10. Flashings:
 - a. Built-in metal flashing - supplied by others;
 - b. Non-rigid and fabric flashing when built into masonry.
11. Caulking (other than firestopping):
 - a. Masonry to masonry and;
 - b. Caulking of joints in masonry or masonry to other materials, including caulking where it forms part of the expansion or control joint, where masonry is the last work being installed.
12. Accessories for masonry or similar type blocks, which are integral to the masonry assembly including:
 - a. Anchors and ties;
 - b. Z-girts, rigid or semi-rigid board insulation and cement board integral to thin veneer assemblies;
 - c. Weep holes and venting devices;
 - d. Wire reinforcing to mortar joints up to 9-gauge (3.8 mm) wire ties or similar type ties;
 - e. Reinforcing steel placed only in masonry - supplied by others to the job site, clearly tagged and identified as to end use, See Reinforcing Steel (Concrete Reinforcing) – Supply, Included;
 - f. Tying reinforcing into cages for masonry where shown on drawings as supplied by Reinforcing Steel (Concrete Reinforcing) – Supply Included, see Reinforcing Steel (Concrete Reinforcing) - Installation, Excluded;
 - g. Precast concrete band courses, copings, sills and heads which are an integral part of masonry cladding, including board insulation and weather, air or vapor membranes behind these items;
 - h. Damp proofing membrane in masonry.

Masonry - continued

13. Installation of miscellaneous metals (supplied by others) in masonry, See Miscellaneous Steel (Metal Fabrications – Supply, Included;
14. Clay flue lining;
15. Clay tiles;
16. Cleaning of masonry;
17. Clear penetrating waterproofing or graffiti resistant coatings applied to exterior masonry only, see Painting, Excluded, see Special Wall Coatings, Included;
18. Cutting required for other trades in new work only;
19. Removal of existing masonry when the materials are being re-used, recovered or retained as specified;
20. Parging of cavity masonry walls only when specified;
21. Samples/mockups only when specified in the tender documents;
22. Testing of materials of this trade only when specified in the tender documents;
23. Receiving, unloading and handling of all materials supplied by others for work of this trade;
24. Scaffolding/man lifts where required to perform work by this trade scope;
25. Material handling, including unloading and hoisting;
26. Trade specific lighting to perform tasks;
27. Trade cleanup - cleanup for work carried out by this trade;
28. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
29. Warranty or Guaranty;
30. Submittals and Operation and Maintenance documentation as specified in the tender documents;
31. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
32. Protection of other trades' work from damage when performing this trades scope of work;
33. Building Information Modeling (BIM) as it applies to this trade scope.

Masonry - continued

EXCLUDED

1. Refractory brick forming an integral part of an industrial furnace, boiler, retort and/or incinerator;
2. Potable water for mixing of mortar;
3. Temporary wind-bracing;
4. Temporary support and shoring for lintels;
5. Temporary heat for mortar shack;
6. Anchor slot;
7. Demolition of masonry assemblies not being re-used or salvaged, see Included;
8. Supply of reinforcing steel for masonry cages, see Reinforcing Steel (Concrete Reinforcing) – Supply, Included;
9. Installation of door and window frames, supplied by others, see Metal Doors and Frames, Included;
10. Installation of preformed metal deck fillers used as part of a listed firestop system and to maintain fire and smoke barriers to walls and partitions as specified, see Firestopping;
11. Steel stud reinforcement due to masonry loading;
12. Exterior plywood, gypsum or other exterior sheathing;
13. Permanent lateral support devices on top of masonry walls;
14. Welding;
15. Firestopping;
16. Waterproof coatings and other coating materials, specified under Painting or Special Wall Coatings Trade Definitions;
17. Inspection;
18. Common scaffold or platform when required to perform work by multiple trades;
19. Temporary heat, general lighting, power, sanitation and water for general construction;
20. Hoarding;
21. Final Cleaning before turnover;
22. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
23. Supply and maintenance of garbage and recycling bins for construction waste;
24. Removal of construction waste from job site;
25. General site security.

Structural Steel

SCOPE NARRATIVE

This scope includes the supply and installation of structural metal elements and all components for a complete installation including permanent bracing and bridge members, metal columns, beams, girders, joists, purlins, studs, trusses, and other metal framing.

This scope should be read in conjunction with the Miscellaneous Steel trade definition.

This scope for supply and installation includes and excludes the following items when specified and/or detailed in the Structural tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Anchors for structural steel;
2. Base plates and bearings for structural steel members;
3. Beams, purlins, girts forming part of the structural steel frame;
4. Bearing plates and angles for structural steel members for the support of steel deck;
5. Bins and hoppers of 6 mm plate or heavier, attached to the structural steel frame;
6. Bracing for steel members, trusses or frames;
7. Brackets attached to the structural steel;
8. Bridge bearings connected to the structural steel members;
9. Cables for permanent bracing or suspension systems;
10. Canopy framing if attached to the structural steel frame;
11. Cold rolled channels and girts as specified when used as structural members;
12. Columns;
13. Conveyor galleries and supporting bents (exclusive of conveyor stringers, deck plate and supporting posts which are normally part of the conveyor assembly);
14. Crane rails and stops, excluding unless otherwise noted final alignment of the rails;
15. Curb angles and plates attached to the structural steel frame if shown on the structural steel drawings;
16. Diaphragms for bridges;
17. Deck support angles at columns, walls, if shown on the structural steel drawings;
18. Door frame supports attached to the structural steel frame;
19. Structural metal purlins, girts, channels, or cross bracing required to frame overhead door openings, when detailed on the structural drawings;
20. Structural framing members to support ground mounted racking systems for Photo-Voltaic (Solar) systems and fixed and multi-axis trackers, when detailed on the structural drawings;
21. Structural framing members for supporting a wind turbine to a building or free-standing structure, when detailed on the structural drawings;
22. Structural framing members for supporting mechanical equipment;
23. Embedded items connecting structural steel;
24. Expansion joints connected to the structural steel frame (excluding expansion joints for bridges);
25. Field bolts to connect structural steel components;
26. Floor plates, roof plates (raised pattern or plain) and steel grating connected to the structural steel frame;
27. Girders;
28. Grillage beams of structural steel;
29. Hangers supporting structural steel framing;
30. Jacking girders;
31. Lintels if attached to steel frame and shown on the structural drawings;
32. Mechanical roof support and floor opening framing shown on structural drawings;
33. Monorail beams of standard structural steel shapes;

Structural Steel - continued

34. Open-web steel joists, including anchors, bridging, headers and trimmers; also, when specified-to be included in the structural steel contract documents, light-gauge forms and temperature reinforcement;
35. Sash angles attached to the structural steel frame, see Reinforcing Steel, Excluded;
36. Separators, angles, tees, clips and other detail fittings essential to the structural steel frame;
37. Shear connectors/studs, except when installed through sheet steel deck, see Metal Deck, Included;
38. Steel framing for curtain wall soffits;
39. Shelf angles attached to the structural steel frame, if shown on structural drawings;
40. Shop fasteners or welds, and fasteners required to assemble parts for shipment;
41. Steel tubes or cores for composite columns;
42. Steel window sills attached to the structural steel frame;
43. Struts;
44. Tie, hanger and sag rods forming part of the structural steel frame;
45. Trusses;
46. Steel stairs, walkways, ladders and handrails forming part of the structural steelwork. Only if shown on the structural drawings and specifically noted by the structural engineer to be supplied by the structural fabricator;
47. Catwalks, ladders and gratings supporting and/or servicing equipment forming part of the structural steelwork detailed on the structural drawings, see Mechanical Common Items, Included and Excluded, see Miscellaneous Steel, Included;
48. Field Connection Materials:
 - a. When the fabricator erects the structural steel, he shall supply all material required for temporary and for permanent connection of the component parts of the structural steel;
 - b. When the connection to or the erection of the structural steel is not part of the fabricator's contract, the fabricator will supply sufficient bolts, nuts washers, and special fasteners, of suitable size, quality and quantity for all field connections of steel to steel and steel to heavy and mass timber as required, plus an over-allowance of five (5) per cent of each size to cover waste;
 - c. Unless otherwise specified in the tender documents, welding electrodes, back-up bars, temporary shims, leveling plates, fitting-up bolts and drift pins required for the structural steel shall not be furnished by the fabricator when the erection of the structural steel is not part of the fabricator's contract;
49. Priming, where specified;
50. Prepare steel finish to receive special coatings, where specified;
51. Material handling, including unloading and hoisting;
52. Inspection when specified in the tender documents;
53. Hoarding when required for special welding procedures;
54. Scaffolding/man lifts where required to perform work by this trade scope;
55. Trade specific lighting to perform tasks;
56. Trade cleanup - cleanup for work carried out by this trade;
57. Warranty or Guaranty;
58. Submittals and Operation and Maintenance documentation as specified in the tender documents;
59. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
60. Protection of other trades' work from damage when performing this trade's scope of work;
61. Commissioning as it applies to this trade scope;
62. Building Information Modeling (BIM) as it applies to this trade scope.

Structural Steel – continued

EXCLUDED

1. Loose bolts other than for fastening items of structural steel;
2. Placing of embedded items;
3. Steel deck regardless of specification;
4. Supply and installation of grouting;
5. Supply and/or installation of shear connectors which penetrate steel deck;
6. V-rib pans;
7. Inspection – when not specified in the tender documents;
8. Bins and hoppers not covered in Structural Steel Included;
9. Bridge bearings not connected to structural steel items;
10. Catch basin frames;
11. Concrete for filling HSS columns. Concrete is to be supplied and poured in columns by others;
12. Connection material for other trades (e.g. precast concrete);
13. Conveyor stringers, deck plate and supporting posts;
14. Drain pipes;
15. Drilling of holes into masonry or concrete, including core drilling of anchor rods for bridges and drilling for deck support angles;
16. Edge forming less than 3.2mm thick for steel deck;
17. Grout;
18. Hoppers and chutes;
19. Lag bolts, machine bolts and shields or inserts for attaching shelf angles, trimmer angles and channels to masonry, or concrete;
20. Machine bases, rollers and pulleys;
21. Metal-clad doors and frames;
22. Miscellaneous steel, see Miscellaneous Steel, Included and Excluded;
23. Catwalks, ladders and gratings supporting and/or servicing equipment other than forming part of the structural steelwork, see Common Mechanical Items, Included and Excluded, see Miscellaneous Steel, Included and Excluded;
24. Shear connectors through sheet steel deck, see Metal Deck, Included;
25. Sheet steel cladding;
26. Sheet steel deck, see Metal Deck, Included;
27. Sheet steel flashing;
28. Shoring under composite floors and stub girders;
29. Steel doors;
30. Steel sash;
31. Steel stacks;
32. Steel tanks and pressure vessels;
33. Temporary bracing for other trades;
34. Common scaffold or platform when required to perform work by multiple trades;
35. Temporary heat, general lighting, power, sanitation and water for general construction;
36. Hoarding;
37. Final Cleaning before turnover;
38. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
39. Firestopping;
40. Supply and maintenance of garbage and recycling bins for construction waste;
41. Removal of construction waste from job site;
42. General site security.

Metal Deck

SCOPE NARRATIVE

This scope includes the supply and installation of metal decking and associated accessories for metal floor and roof deck of fluted, ribbed, and cellular configurations, metal decking used as forms for concrete or lightweight insulating concrete fill, acoustic roof deck (pre-painted or unfinished), and all related fastenings and shop-applied coatings.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Metal roof and floor deck;
2. Acoustic roof deck;
3. Pre-painted roof deck;
4. Metal deck to wall areas;
5. Steel and foam cell deck closures where installed between structural support and decking;
6. Supply only, notched metal or foam cell deck closures incorporated into other construction from top or underside of deck;
7. Cutting of openings in deck marked by other trades at the time of deck installations;
8. Reinforcing of pre-marked openings in roof deck up to 450 mm across the flutes and 300 mm in floor decking;
9. Shear connectors when shown field welded through the metal deck;
10. Touch up top (and bottom side of decking where architecturally exposed), where metallic coating has been burned or marred by welding, see Excluded;
11. Metal cover plates over deck at change of plane or direction;
12. Acoustic insulation strips for acoustic roof deck supply only to the trade requiring;
13. Edge forming less than 3.2 mm thick for steel deck;
14. Material handling, including unloading and hoisting;
15. Scaffolding/man lifts where required to perform work by this trade scope;
16. Trade specific lighting to perform tasks;
17. Trade cleanup - cleanup for work carried out by this trade;
18. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
19. Warranty or Guaranty;
20. Submittals and Operation and Maintenance documentation as specified in the tender documents;
21. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
22. Protection of other trades' work from damage when performing this trade's scope of work;
23. Commissioning as it applies to this trade scope;
24. Building Information Modeling (BIM) as it applies to this trade scope.

Metal Deck – continued

EXCLUDED

1. Reinforcing or structural framing of openings larger than mentioned, see Included;
2. Field painting including touch-up to the underside of deck, top cords or flanges of supporting steel members where discoloration due to welding has occurred on non-exposed deck;
3. Mechanical clips, nails, adhesives or other fasteners for securing insulation, thermal barrier or vapor retarder to steel deck;
4. Cutting and drilling of holes for attachment of suspended ceiling hangers or for attachment of any work by other trades;
5. Bearing plates, shelf angles, supports at steel columns and/or other structural materials required to support the steel deck;
6. Wood nailers, cants, vapor retarder, insulation, thermal barrier, waterproofing membrane and ballast;
7. Architectural trim;
8. Forming at floor deck perimeter or openings;
9. Cutting openings in floor deck after concreting;
10. Shoring under composite floors;
11. Supply and/or installation of shear connectors not welded through metal deck;
12. Shear transfer elements;
13. Metal deck when part of the Cold Rolled Steel Framing assembly, see Cold Rolled Steel Framing, Included;
14. Metal cladding, see Siding and Soffits, Included;
15. Metal roofing, see Sheet Metal Roofing, Included;
16. Caulking;
17. Common scaffold or platform when required to perform work by multiple trades;
18. Temporary heat, general lighting, power, sanitation and water for general construction;
19. Hoarding;
20. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
21. Firestopping;
22. Supply and maintenance of garbage and recycling bins for construction waste;
23. Removal of construction waste from job site;
24. Final cleaning before turnover;
25. General site security.

Panelized Structural Cold Rolled Assemblies

SCOPE NARRATIVE

This scope includes the supply and installation of all load bearing metal framing and exterior gypsum sheathing as required for a complete installation including bracing, fasteners, and related accessories for all light gauge, load-bearing metal elements.

GENERAL NOTE: If Panelized Structural Cold-Formed Steel Assemblies are specified on the project, then all exterior walls, soffits, and parapet assemblies excluding interior finishes and insulations, are included in this trade's scope of work, otherwise it is supplied and installed by this Gypsum Board and Metal Framing contractor.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Load bearing steel studs for exterior walls, interior walls, stairwells and elevator or mechanical shafts as specified on the structural drawings, which includes all studs from 33 mil to 97 mil (20 gauge to 12 gauge, inclusive) (metric equivalents 0.84 mm to 2.46 mm);
2. Steel stud framing for all exterior walls subject to wind loads or lateral forces;
3. Steel stud framing for all parapets when steel stud framing specified on the project;
4. Steel framing for all exterior soffits, including hangers and supports, when part of the light gauge load bearing assembly;
5. Steel stud framing for metal roof trusses or floor joists systems;
6. Cross bracing for lateral loads;
7. Composite floor decking, perimeter metal and foam closure strips trims, end enclosures, side-lap washers and restraint straps which are supported by load bearing steel studs;
8. Supply only, reinforcing bar supports for composite floor, installation by others, see Reinforcing Steel Installation;
9. Steel deck when screwed to steel stud joists or trusses;
10. Cutting of openings in deck materials marked by other trades at the time of deck installations;
11. Reinforcing of pre-marked openings in roof deck up to 450 mm across flutes and 300 mm in floor decking;
12. Metal cover plates over deck at change of plane or direction;
13. Temporary shoring and bracing of metal decking, including removal of shoring;
14. Man-lifts, scaffolding and cranes when required for hoisting and material handling and to perform work by this trade scope;
15. Insulation - thermal and acoustical insulation to all box beams, lintels, sills and jamb stud assemblies when insulations are specified on the project;
16. Miscellaneous caulking and sealants to acoustical rated walls when specified and attached to metal framing;
17. Installation of flexible sheet membrane; placed under roof curb framing and parapet walls, which forms part of the building air barrier or vapor barrier and when installation of curb framing is the first component installed. If connection is required by any trade following installation of cold formed steel framing, then the trade contractor responsible for installation of cold formed steel framing will provide a minimum 200 mm overlap material to each side of the roof curb framing.
18. Exterior gypsum sheathing applied to exterior walls, bulkheads, parapets, and soffits when this work forms a part of a complete assembly;
19. Fasteners (including Engineering of same) for attachment of all items in this scope;
20. Installation only, of welded pressed metal door and window frames incorporated into interior or exterior panelized structural stud wall assemblies, as supplied by others, see Metal Doors and Frames, Included;
21. Engineering of all load bearing walls, floor decks and roof systems in this scope if not provided by Engineer of Record;
22. Engineering of connection details and wind-load walls, when specified by Engineer of Record;
23. Shop drawings for all panelized wall systems and floor deck layout;
24. Material handling, including unloading and hoisting;
25. Trade specific lighting to perform tasks;
26. Trade cleanup – cleanup of work performed by this trade;

Panelized Structural Cold Rolled Assemblies - continued

27. General cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
28. Warranty or Guaranty;
29. Submittals and Operation and Maintenance documentation as specified in the tender documents;
30. Cash allowances and/or contingency funds when a specific dollar amount is listed in this trade's specification section;
31. Protection of other trades' work from damage when performing this trade scope of work;
32. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Plywood sheathing;
2. Supply and installation of wood or metal backing - by others;
3. Firestopping;
4. Supply and installation of access panels;
5. Building paper and exterior membranes;
6. Temporary safety handrails, or alternative safety tie-off system;
7. Snow removal;
8. Structural steel;
9. Metal deck when attached to structural steel;
10. Welding;
11. Wire mesh, reinforcing bars and concrete;
12. Temporary access to each floor level;
13. Non-load bearing steel stud framing unless incorporated as part of the load bearing steel framing system;
14. Interior finishes to steel stud framing;
15. Insulation - except as noted in work included, see Included;
16. Reinforcing or structural framing of openings larger than mentioned, see Included;
17. Hoarding;
18. Temporary heat, general lighting, power, sanitation and water for general construction;
19. Security costs. Where Security is required for trades to complete their work these services and cost for same will be provided by the General Contractor;
20. Supply and maintenance of garbage and/or recycling bins for construction waste;
21. Removal of construction waste from the jobsite;
22. General site security.

Miscellaneous Steel (Metal Fabrications)

SCOPE NARRATIVE

This scope includes the supply and installation of custom fabricated metal items fabricated from metal shapes and plates that are not classified in other locations, including all related connections and fastenings.

This scope should be read in conjunction with the Structural Steel trade definition.

Installation shall mean providing labor only to facilitate the receiving, unloading, handling and storage of miscellaneous steel material at the project site, including moving to final location, assembling, pre-assembling, installation, initial correction and adjustment.

Hoisting shall mean raising and lowering only of all miscellaneous steel materials on site from delivery trucks, site storage areas and pre-assembly areas to another designated place at the work site. Hoisting includes equipment and operator but does not include labor or rigger.

Unless otherwise specified in the tender documents, the following items are considered miscellaneous steel and shall be supplied, fabricated, shipped to site and installed under this section.

When the miscellaneous steel fabricator erects miscellaneous steel, all material required for temporary and/or permanent connections of the component parts of the miscellaneous steel shall be supplied by that contractor.

A. Miscellaneous Steel (Metal Fabrications) - Supply

This scope for supply includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Access doors and frames - except trade-name items and those required for servicing mechanical and electrical equipment;
2. Angles and channel frames for doors and wall openings - drilling and tapping by others;
3. Benches and brackets;
4. Bolts - only include those bolts and anchors required for anchoring miscellaneous steel supplied under this list;
5. Bumper posts and rails;
6. Burglar/security bars;
7. Clothes line poles, custom fabricated types only;
8. Coat rods, custom fabricated types only;
9. Corner protection angles;
10. Expansion joint angles, plates custom fabricated, etc., including types made from steel, or a combination of steel and non-ferrous metal;
11. Fabricated convector frames and enclosures;
12. Fabricated items when clearly detailed or specified and made from 2.0 mm (14 ga.) and heavier steel, except where included in another division;
13. Fabricated steel framing for curtain walls, storefronts and soffits where shown on architectural drawings, not detailed on structural drawings and not enclosed by architectural metal;
14. Fabricated wire mesh and expanded metal partitions and screens;
15. Fire escapes;
16. Flag poles - steel custom fabricated excluding hardware;
17. Custom fabricated foot scrapers, mud and foot grilles, including pans, but less chains;
15. Embedded plates with rebar welded to them;
16. Frames, grating and plate covers for manholes, catch basins, and sumps, except cast iron, frames and covers, see Prime Mechanical - Plumbing, Excluded and Included, cast iron, frames and covers required for site services by Others;
17. Frames and covers for trenches, hatches, except cast iron, frames and covers, pits, see Prime Mechanical - Plumbing, Included and Excluded;
18. Gratings and cover plates for poured in place sumps, see Prime Mechanical - Plumbing, Excluded;

A. Miscellaneous Steel (Metal Fabrications) - Supply - continued

19. Gates, grilles, grillwork and architectural louvres, excluding baked enamel or when **NOT** forming part of mechanical system;
20. Grating type floors and catwalks - excluding those forming part of active mechanical system;
21. Catwalks, ladders and gratings supporting and/or servicing equipment other than forming part of the structural steel work and integral to mechanical equipment, see Common Mechanical Items, Included and Excluded, see Structural Steel, Included and Excluded;
22. Handrails, balusters and any metal brackets attached to steel rail including plastic cover, excluding steel handrails forming part of structural steel framing;
23. Joist hangers, custom fabricated types only as specified on tender drawings;
24. Joist strap anchors;
25. Lintels, unless shown on structural drawings;
26. Mat recess frames, custom fabricated types only;
27. Mobile chalk and tack board frames, custom fabricated types only;
28. Monorail beams of standard shapes, excluding trade name items, unless shown on structural drawings;
29. Shop drawings and/or erection diagrams;
30. Shop preparation; and/or priming;
31. Sleeves if specified, except for mechanical and electrical division;
32. Steel ladders and ladder rungs not forming part of structural steel or mechanical work, see Structural Steel, Included, Mechanical Common Items, Included;
33. Steel stairs and landings not forming part of structural steel;
34. Steel hangers for the support of stair mid-landings or stringers;
35. Table and counter legs, frames and brackets, custom fabricated types only;
36. Thresholds and sills, custom fabricated types only;
37. Vanity and valance brackets, custom fabricated types only;
38. Steel fill plates – steel;
39. Bins and hoppers not included in structural steel, see Structural Steel, Included;
40. Canopy framing not attached to structural steel;
41. Door and corner guards;
42. Overhead Door frames not covered in structural steel, see Structural Steel, Included;
43. Structural purlins, girts, channels, or cross bracing required to frame door openings or support motorized door operators or structural support of door rails, unless detailed on structural drawings, see Structural Steel, Included;
44. Fabrication of metal fabrications required for complete installation;
45. Edge forming less than 3.2 mm thick for steel deck, see Metal Deck, Included;
46. Embedded steel parts not required for structural steel or metal deck;
47. Flagpoles and supports;
48. Floor plates, roof plates and grating not attached to structural steel;
49. Hose and tire storage brackets;
50. Lintels over wall recesses;
51. Lintels which are either an integral part of door frames or not attached to the structural steel frame;
52. Members made from gauge material except cold-formed channels indicated in structural steel, see Structural Steel, Included;
53. Shelf angles not covered in structural steel, see Structural Steel Included;
54. Steel stairs, landings, walkways, ladders and handrails;
55. Steel window sills not covered in structural steel, see Structural Steel Included;
56. Support for sheet steel deck at column cut outs and for openings not requiring framing connected to structural steel;
57. Trench covers;
58. Trim angles, eave angles or fascia plates not directly attached to the structural steel frame;
59. Warranty or Guaranty;
60. Submittals and Operation and Maintenance documentation as specified in the tender documents;
61. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
62. Building Information Modeling (BIM) as it applies to this trade scope.

A. Miscellaneous Steel (Metal Fabrications) - Supply - continued

EXCLUDED

1. Bases and supports for mechanical and electrical equipment where detailed on mechanical or electrical drawings;
2. Bolts other than for anchoring items of miscellaneous steel;
3. Cast iron frames and covers for manhole and catch basins, see Mechanical B. Prime Mechanical, Included and Excluded;
4. Chain link and woven wire mesh;
5. Glulam connections and anchorages;
6. Joist hangers, trade-name type;
7. Metal cladding and covering;
8. Precast concrete connections and anchorages in building structure;
9. Reinforcing steel or mesh;
10. Roof and floor hatches when trade-name items;
11. Sheet metal items, steel decking and siding steel deck closures;
12. Shoring under composite floors and stub-girders;
13. Steel stacks;
Steel reinforcement for architectural metal storefronts, curtain walls and windows;
14. Stud shear connectors when used with steel deck;
15. Stone anchors;
16. Thimbles and breeching, also mechanical fire dampers;
17. Window and area wells;
18. Bins and hoppers constructed of steel less than 2.0 mm (14 ga.);
19. Drilling and tapping for angles and channel frames for doors and wall openings;
20. Material handling, including unloading and hoisting.

B. Miscellaneous Steel (Metal Fabrications) – Installation

This scope for installation only includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Inspection;
2. Installation of stairs, handrails, wall rails which require field welding for installation and other steel items which require field welding for installation;
3. Coordination with overhead door installer for the installation of steel support brackets, and steel jambs required for installation of overhead doors;
4. Supply of all materials and equipment required for temporary and/or permanent connection of the component parts of the miscellaneous steel;
5. Welding to install or join together supplied items which require field welding or assembly or would be unreasonable to be shipped in one piece for others to install;
6. Material handling, including unloading and hoisting;
7. Scaffolding/man lifts where required to perform work by this trade scope;
8. Trade specific lighting to perform tasks;
9. Trade cleanup - cleanup for work carried out by this trade;
10. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup.
11. Warranty or Guaranty;
12. Protection of other trades' work from damage when performing this trade's scope of work.

EXCLUDED

1. Coring and grouting;
2. Placing of embedded items;
3. Metal/Steel deck regardless of specifications;
4. Any items which do not require field welding for installation.
5. Common scaffold or platform when required to perform work by multiple trades;
6. Temporary heat, general lighting, power, sanitation and water for general construction;
7. Hoarding;
8. Final Cleaning before turnover;
9. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
10. Firestopping;
11. Supply and maintenance of garbage and recycling bins for construction waste;
12. Removal of construction waste from job site;
13. General site security.

Heavy Timber Construction

SCOPE NARRATIVE

This scope includes for the supply and installation of pre-milled and pre-machined Heavy Timber components made of solid sawn timber of a minimum cross-sectional dimension of 125mm in cross section, including the connecting hardware for timber to timber members.

This scope can be submitted as combined or two separate tenders - supply and installation.

A. Heavy Timber Construction - Supply

This scope includes the supply only and delivery to site of pre-milled and pre-machined heavy timber components, including the connections of timber to timber members and specialty engineering limited to the complete heavy timber design scope within the project.

This scope for supply includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. Timber grade compliance certification;
2. Drying certification if specified;
3. Pressure treatment, fire retardant pre-treatments if specified, with certification of compliance;
4. Staining, oiling, painting and other finishes, specified as part of the shop fabrication;
5. Timber columns, beams, rafters, purlins, knee braces, wind braces or other types of timber bracing forming parts of the structural and/or architectural design;
6. Timber ledgers supporting deck or deck members;
7. Connecting hardware, fasteners and pins as specified in shop drawings for;
 - a. Timber to timber connections;
 - b. Timber to concrete connection if the connection is drilled and epoxied or drilled and wedge anchored;
 - c. Timber to steel if the connector is a wood lag screw;
 - d. Fastening devices for connecting heavy timber and mass timber to structural steel columns and beams;
Provide sufficient bolts, nuts washers, and special fasteners, of suitable size, quality and quantity for all field connections of timber to timber, timber to concrete and timber to steel as required, plus an over-allowance of five (5) per cent of each size to cover waste;
8. Connecting metal plates as specified in shop drawings for;
 - a. Timber to timber connections
 - b. Timber to concrete connection if the connection is drilled and epoxied or drilled and wedge anchored;
9. Shop drawings for supplied timber components;
10. Specialty engineering for timber components and connections;
11. Warranty or Guaranty;
12. Submittals and Operation and Maintenance documentation as specified in the tender documents;
13. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
14. Protection of other trades' work from damage when performing this trade's scope of work;
15. Commissioning as it applies to this trade scope;
16. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Staining, painting or other finishes or other treatments if site applied;
2. Timber to Steel connections if the connection is welded to the steel member;
3. Round log members or log components;

Heavy Timber Construction - continued

B. Heavy Timber Construction - Installation

This scope includes the installation of pre-milled and pre-machined heavy timber components including all directly associated connection hardware to provide a complete structural system.

This scope for installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. Layout, drilling, setting of anchor bolts which are not cast in place by others;
2. Offloading of timber package at job site;
3. Provision of a raising plan including temporary bracing provisions prior to handling heavy timber package;
4. All necessary rigging;
5. All necessary powered equipment for hoisting heavy timber;
6. All necessary man lifts and/or scaffolding to perform work by this trade scope;
7. Rigging and hoisting of heavy timber components into final position;
8. Supply, installation and removal of temporary bracing materials including miscellaneous incidentals required to perform the work;
9. All connection hardware;
10. Assist in the coordination of the layout and setting of anchor bolts applicable to this scope;
11. Material handling, including unloading and hoisting;
12. Scaffolding/man lifts where required to perform work by this trade scope;
13. Trade specific lighting to perform tasks;
14. Trade cleanup - cleanup of work performed by this trade;
15. General Clean up – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
16. Warranty or Guaranty;
17. Submittals and Operation and Maintenance documentation as specified in the tender documents;
18. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
19. Protection of other trades' work from damage when performing this trade's scope of work;
20. Commissioning as it applies to this trade scope;
21. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Cast in place bolt anchors or other embedded items;
2. Supply and installation of grouting;
3. Welding of any connections;
4. End bearing conditions if not heavy timber;
5. Staining, painting, or other finishes;
6. Round log installation;
7. Scaffolding when required to perform work by multiple trades;
8. Temporary heat, general lighting, power, sanitation and water for general construction;
9. Hoarding;
10. Final Cleaning before turnover;
11. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
12. Firestopping;
13. Supply and maintenance of garbage and recycling bins for construction waste;
14. Removal of waste from job site;
15. General site security.

Mass Timber Construction

SCOPE NARRATIVE

This scope includes for the supply and installation of all mass timber products made of solid wood which is either glued or mechanically fastened together into columns, beams or panels, including:

- a. Glue-laminated Beams and Columns;
- b. Nail laminated panels;
- c. Glue-laminated Panels;
- d. Cross Laminated Panels.

This scope can be submitted as combined or two separate tenders - supply and installation.

A. Mass Timber Construction - Supply

TRADE DEFINITION

This scope includes the supply and delivery to site of shop fabricated mass timber framing components. Shop fabrication is to include all machining required to all members, sized to final field dimensions, cut to final length and shape, pre-drilled, slotted, dapped and prepared for all connection hardware. Mass timber package is to include the connections of members and specialty engineering limited to the mass timber design scope within the project. Non-machined or "billet" packages will require specific instructions in bidding documents on scope division and trade responsibilities for site machining and connection fabrication.

INCLUDED

1. Glulam grade compliance certification;
2. Drying certification if specified;
3. Pressure treatment and fire-retardant pre-treatments if specified with certifications of compliance;
4. Staining, oiling, painting and other finishes, specified as part of the shop fabrication;
5. Glulam columns, beams, rafters, purlins, knee braces, wind braces or other types of Glulam bracing forming parts of the structural and/or architectural design;
6. Glulam ledgers supporting deck or deck members;
7. Cross Laminated Timber Panels;
8. Glulam Timber Panels;
9. Nail Laminated Panels;
10. Connecting hardware, fasteners and pins as specified in shop drawings for;
 - a. Glulam to Glulam connections;
 - b. Glulam to concrete connection if the connection is drilled and epoxied or drilled and wedged;
 - c. Glulam to steel if the connector is a wood lag screw;
 - d. Fastening devices for connecting mass timber to structural steel columns and beams;

Provide sufficient bolts, nuts washers, and special fasteners, of suitable size, quality and quantity for all field connections of timber to timber, timber to concrete and timber to steel as required, plus an over-allowance of five (5) per cent of each size to cover waste;

11. Connecting metal plates as specified in shop drawings for;
 - a. Glulam to Glulam connections
 - b. Glulam to concrete connection
12. Shop drawings for supplied timber components;
13. Specialty engineering for timber components and connections;
14. Warranty or Guaranty;
15. Submittals and Operation and Maintenance documentation as specified in the tender documents;
16. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
17. Protection of other trades' work from damage when performing this trade's scope of work;
18. Commissioning as it applies to this trade scope;
19. Building Information Modeling (BIM) as it applies to this trade scope.

Mass Timber Construction - continued

EXCLUDED

1. Staining, painting or other finishes or other treatments if site applied;
2. Mass Timber to steel connections if the connection is welded to the steel member.

B. Mass Timber Construction - Installation

This scope includes the installation of Mass Timber components to provide a complete structural system including the installation of all associated connection hardware.

TRADE DEFINITION

INCLUDED

1. Layout, drilling, setting of anchor bolts which are not cast in place by others;
2. Offloading of timber package at job site;
3. Provision of a raising plan including temporary bracing provisions prior to handling mass timber package;
4. All necessary rigging;
5. All necessary powered equipment for hoisting mass timber;
6. All necessary man lifts and/or scaffolding to perform work by this trade scope;
7. Rigging and hoisting of mass timber components into final position;
8. Supply, installation and removal of temporary bracing materials including miscellaneous incidentals required to perform the work;
9. All connection hardware;
10. Assist in the coordination of the layout and setting of anchor bolts applicable to this scope;
11. Material handling, including unloading and hoisting;
12. Scaffolding/man lifts where required to perform work by this trade scope;
13. Trade specific lighting to perform tasks;
14. Trade cleanup - cleanup of work performed by this trade;
15. General Clean up – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
16. Warranty or Guaranty;
17. Submittals and Operation and Maintenance documentation as specified in the tender documents;
18. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
19. Protection of other trades' work from damage when performing this trade's scope of work;
20. Commissioning as it applies to this trade scope;
21. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Cast in place bolt anchors or other embedded items;
2. Supply of anchor bolts of any kind;
3. Supply and installation of grouting;
4. Drilling of steel beams, steel hangers or any steel member required to receive lag screws or bolts specific to the mass timber component attachment;
5. Supply of structural lags associated with Mass Timber components;
6. Welding of any connections;
7. End bearing conditions if not mass timber;
8. Staining, painting, or other finishes;
9. Scaffolding when required to perform work by multiple trades;
10. Temporary heat, general lighting, power, sanitation and water for general construction;

B. Mass Timber Construction - continued

11. Hoarding;
12. Final Cleaning before turnover;
13. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
14. Firestopping;
15. Supply and maintenance of garbage and recycling bins for construction waste;
16. Removal of waste from job site;
17. General site security.

Architectural Woodwork - Interior

NOTE:

All references to Exterior Woodwork items have been deleted from this trade definition and will be addressed in a separate trade definition at a future date.

Some Exterior Woodwork items are also included in the Exterior Landscaping trade definition.

A. Architectural Woodwork Supply – Interior

SCOPE NARRATIVE

This scope includes the supply of custom fabricated architectural woodwork, in a finished state, delivered to site, built-up or knocked-down depending on job conditions. Includes all custom fabricated woodwork including trims, doors, tables, cabinets etc. and accessories including associated glass/glazing if attached or integral to work associated with this trade scope.

Finished state means surfaces are to be sanded, dusted, cleaned and marks, stains and spots removed, ready for receipt of any specified undercoat and finish coat, or where specified to be shop applied finished, with the finish already applied, or constructed from a prefinished material (standing and running trim or site constructed millwork not included). In addition to above, when finish is specified to be shop applied then this contractor shall also fill nail holes.

This scope for supply only includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

INCLUDED

1. Custom Fabricated architectural woodwork constructed of solid or veneered wood complete with all integral hardware and accessories including countertops and back splashes of plastic laminate, solid surface products whether of natural stone or engineered surfaces, and shop applied finishes as detailed on the tendering documents;
2. Wood display cases supplied only as architectural woodwork factory fabricated fixture including glass, standards, brackets and sliding track. Interior lining other than wood and plastic laminate material not included;
NOTE: To jobsite-built showcases; plastic laminate, hardwood and wood trim only supplied loose for jobsite fitting;
3. Wood lockers;
4. Computer keyboard trays and Central Processing Unit (CPU) holders where factory fabricated or Name-Brand and integral to cabinets or casework;
5. Mirrors where installed in wood frames;
6. Plastic laminate and fiberboard base and kick plates to architectural woodwork. (Supplied only, no screws or material for attaching);
7. Wood boards, interior siding, battens and moldings when exposed to view for decorative and display purposes;
8. Hardwood plywood, (unfinished, if specified) for all wall or ceiling paneling (no backing material);
9. Wood or wood composite valances, including plastic laminate faced, plywood or overlay plywood type, solid wood or plastic laminate, (not including blocking unless specified as clear material);
10. Wood or wood composite moldings, rails, random lengths unless otherwise specified (no end trimming or factory assembling);
11. Pressure treated fireproofing of architectural woodwork items where specified. Does not include sanding after treatment;
12. Wood shelves for metal standards or metal frames where detailed (no metal framing, standards, or brackets);
13. Wood or wood composite trim for notice or bulletin boards;
14. Glass and plastic glazing and fiberboard supplied and installed where it is completely surrounded by architectural woodwork and in wood doors, including sealed units and/or removable glazing panels;
15. Interior wood trim to metal or trade name windows as, and if, detailed on drawings;

A. Architectural Woodwork Supply - Included – Continued

16. Openings cut out, wood moldings and glass supplied and fitted in wood doors (does not include metal glazing stops unless specified);
17. Openings cut out and wood moldings supplied and fitted for metal grilles in wood doors (does not include metal grilles or installation of same);
18. Plastic laminate wall rails and window stools when applied to wood substrate. Plastic laminate coverings to walls and ceilings (strapping, backing, glue, and installations not included). Plastic laminate paneling complete with wood substrate where specifically called for "factory fabricated";
19. All **wood** doors and frames, including slab doors, bi-fold doors, plastic laminate covered, overlay plywood or fiberboard faced, mineral core, sound rated doors c/w seals when specified, lead lined doors and wood cores. Metal cladding for wood cores by others. (Supply of hardware for doors, beveling, fitting or machining for hardware or other specialty doors, not included);
20. Bi-fold door hardware included when provided by Name-Brand door manufacturer;
21. Preparation of both doors and frames to accept windows, grilles and approved hardware;
22. Metal astragal when attached to fire rated labeled wood doors;
23. Interior wood frames and wood sidelight light frames;
24. Wood and plastic faced cabinets and casework, complete with wood bases and splash-back, tables, benches (items constructed from dimensional lumber regardless of location - not included), pews, seats, desks, shelving, convector covers of wood and plastic laminate attached to architectural woodwork;
25. All hardware and miscellaneous accessories **integral** to custom fabricated cabinets and casework only, including installation and machining for same;
26. Reconstruction of existing cabinets and casework scheduled to be patched and repaired, extended and/or upgraded including the storage and refinishing thereof and when specified and detailed on the tender documents. Removal of existing cabinets and casework not included, see Architectural Woodwork – Installation, Included;
27. Wood ironing boards in wood cabinets (including workable hardware);
28. Wood, plastic, or wood-and-metal tote drawers or trays in architectural woodwork cabinets including metal or wood slides;
29. Custom fabricated solid surface counter tops with integral sink or basin, including counter tops, splash-backs and fascia of the same material connected thereto, see Prime Mechanical B. Plumbing, Excluded;
30. Wood, plastic laminate, fiberboard, polymer, plastic and synthetic marble counter tops, including splash backs, aluminum molding for same, or self-edge, (no jobsite labor). Wood counter tops for metal cladding (no cladding). (Does not include glue for jobsite installation);
31. Wood stairs (knocked-down with stringers long), wood balustrades and handrails (not cut to length), wood plugs included;
32. Factory applied finishes to architectural woodwork, when specified, excluding site touch-up. Matching materials to be provided by this trade to others for site touch-up;
33. Shop drawings;
34. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
35. Warranty or Guaranty;
36. Submittals and Operation and Maintenance documentation as specified in the tender documents;
37. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED (Supply)

1. All exterior woodwork items;
2. Structural framing material, rough bucks, cant strips, furring strips, blocking or backing;
3. Electrical fixtures, plumbing fixtures, and Heating, Ventilating and Air Conditioning fixtures attached to architectural woodwork;
4. Caulking or door weather-stripping;
5. Chalkboard, whiteboard, tackboard or corkboard of any kind;
6. Cleaning of glass or plastic (other than confined areas);
7. Cloth, burlap, or vinyl fabric of any kind;
8. Coat rods or coat hooks or supports for coat rods/hooks of any material except wood, unless within a cabinet or attached to wood shelf;
9. Cutting of holes for metal grilles, grommets, sinks, specialty items, or electrical and mechanical fittings into architectural woodwork fixtures;

A. Architectural Woodwork Supply - Excluded – Continued

10. Glass blocks;
11. Glue or adhesive for jobsite installation;
12. Items or materials not constructed entirely of wood or composite materials containing wood fiber other than those listed as included;
13. Jobsite assembly and/or installation and/or fitting of architectural woodwork;
14. Linoleum, carpet, tile or any other floor covering material for covering of wood fixtures, cabinets or stairs, or metal trim for same;
15. Materials for floor covering of any kind;
16. Metal covering of doors, frames, windows, counter tops, and splash backs;
17. Metal feet, metal legs, decorative legs and leveling feet and brackets made of non-wood products, or pipe hanging rods;
18. Mirrors in metal frames, or attached with rosettes or clips;
19. Re-supply of glass, plastic, or plastic laminate, broken or damaged on the job after delivery in good order;
20. Sanding of standing and running trim other than drum sanding of flats;
21. Site measurements;
22. Structural framing material, rough bucks, cant strips, furring strips, blocking or backing;
23. Upholstery work;
24. Wood, fiberboard or plastic letters;
25. Wood and/or plastic laminated rails when they are an integral part of Entrances, Storefronts and Windows or Curtainwall;
26. Wall protection of plastic or non-wood materials;
27. Decking or sheathing to walls, ceilings, floors;
28. Materials for interior coverings to walls, beams, ceilings and posts (except siding solid wood boards and battens and hardwood plywood and plastic laminate panels);
29. Plastic skylights or domes;
30. Name-Brand pre-manufactured toilet and shower partitions;
31. Name-Brand pre-manufactured wall and ceiling tile and panels, linear wood panels, wood egg-crate louvres;
32. Wall mounted shelf standards, or clips and brackets to same;
33. Counter balanced hardware to interior pass through doors;
34. Door cores, frames, or trim for metal cladding;
35. Machining, beveling or fitting of doors to receive hardware (except fire rated doors);
36. Metal clad wood doors, frames, panels, or glazing of same;
37. Metal astragal (unless forming an integral part of a fire labeled wood doors);
38. Metal inserts into doors and other architectural woodwork; metal frames to cabinets, tables and benches; metal casing, base or other metal trims; metal fastening brackets;
39. Metal louvres, grilles, kick-plates or thresholds;
40. Metal sash, frames, doors, corner posts, glass or glazing, or panels of any kind for same;
41. Metal screens, shades, blinds, or guards, except fly screens to sash;
42. Overhead garage-type doors, or glass and hardware for same (wood frames and trim supplied knocked-down where detailed and specified as clear material);
43. Specialty folding or sliding doors of fabric covered wood and/or metal;
44. Trade-name cooler or freezer doors;
45. Wood frames, outside trim to same, for vinyl, plastic and metal covered windows, except where combined in mullion, or transom frames with custom wood windows and/or glazing in wood;
46. Metal fixtures and counter-tops or wood bases to same;
47. Trade-name furniture, cabinet work, or counter tops and wood bases to same;
48. Ceramic tile and concrete countertops field applied to cabinets and casework;
49. Removal of existing cabinets and casework not included, see Architectural Woodwork – Installation, Included;
50. Stair landings of any kind, structural or support material for same;
51. Painting, priming, acid-proofing, staining, oiling, preservative treatment, (unless shop applied) or fireproofing other than pressure treating;
52. Providing space for painting contractor or others for any painting or priming of interior architectural woodwork.

B. Architectural Woodwork Installation - Interior

This scope includes the installation of all Interior items delivered freight to site under the Architectural Woodwork Supply Scope and all other items from the following list which are clearly indicated to be required by the plans and specifications.

Installation shall mean receiving, unloading, handling, uncrating and storage of Architectural Woodwork at the project site, including moving to final location, assembling, installation, correction and adjustment.

This scope for installation only includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope

TRADE DEFINITION

INCLUDED

1. Complete installation of all supplied interior architectural woodwork components;
2. Supply of nails, screws, glue, caulking and fasteners required to install Architectural Woodwork;
3. Caulking of millwork to millwork;
4. Cabinets and casework including countertops as supplied by Architectural Woodwork;
5. Cut outs for grommets, electrical and mechanical fixtures incorporated in Architectural Woodwork;
6. Closet rods and coat hooks where attached to Architectural Woodwork (closet rods and coat hooks supplied by others);
7. Metal grilles to Architectural Woodwork, see Mechanical C. Ventilation and Sheet Metal Ductwork, Included;
8. Wall mounted standards and brackets (supply by others);
9. Wood siding and paneling to interior walls and ceilings;
10. Machining, beveling or fitting for door hardware and the installation of the door hardware. Door hardware to be supplied by others;
11. Provide sizes and location of all backing required for millwork installation in walls or ceilings, on millwork shop drawings (Backing to be supplied and installed by others);
12. Wood ceilings (except those which are part of component ceiling system or a proprietary systems) and wood light boxes;
13. Wood stops to glazed screens finish nailed on one side, other side tacked only;
14. All architectural millwork supplied with a factory finish shall have the fastening holes filled and touched up by the installer;
15. Removal of existing cabinets and casework installations when the materials are to be re-used or retained as specified (when specifications call for refinishing of existing installation, this contractor shall remove the items so specified and deliver to factory for refinishing);
16. Provide all physical site measurements required for fabrication of all millwork items;
17. Temperature and humidity testing where specifically required by the specifications;
18. Receiving, unloading, distribution and hoisting of all millwork items required for the project;
19. Scaffolding/man lifts where required to perform work by this trade scope;
20. Trade specific lighting to perform tasks;
21. Trade cleanup - cleanup for work carried out by this trade;
22. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in the general jobsite cleanup;
23. Warranty or Guaranty;
24. Protection of other trades work from damage when performing this trades scope of work;
25. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
26. Commissioning as it applies to this trade scope.

B. Architectural Woodwork Installation – Continued

EXCLUDED (Installation)

1. Architectural Woodwork excluded under supply scope, unless otherwise noted under Included in this scope;
2. Exterior Architectural Woodwork of any kind;
3. Metal doors and metal door frames;
4. Rough bucks and nailing strips, blocking wood or metal brackets concealed behind gypsum board;
5. Caulking and filling of nail holes on site finished woodwork, see Painting, Included;
6. Prefinished wood ceiling tiles and panels, linear wood ceilings that are brand named, See Component Ceiling Systems, Included;
7. Suspension systems and backing support for wood ceilings;
8. Installation of counter tops not supplied by the Architectural Woodwork trade;
9. Final cleaning before turnover;
10. Firestopping;
11. Hoarding;
12. Temporary heat, light, power and sanitation and water;
13. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
14. Supply and maintenance of garbage and recycling bins for construction waste;
15. Removal of construction waste from job site;
16. General site security.

Architectural Metal Panels - Interior and Exterior

SCOPE NARRATIVE

This scope includes the supply and installation of wall panels, and roof panels with or without integral interior panels or insulation. Custom fabricated panel assemblies including framing, sheathing, insulation, substrates, interior finish, and exterior finish. The surface can be flat faced or custom curved. The metal panels may be formed from aluminum, steel, galvanized steel or galvalume, stainless steel, copper or other metals. The finish or coating is shop applied, pre-painted, anodized or porcelain enamel.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

This tender shall be for the supply and installation of Architectural Metal Panels for interior and exterior locations.

INCLUDED

1. Architectural Metal Panels formed from aluminum or steel or other metals, with either a shop applied, pre-painted, anodized or porcelain enamel, finish/coating;
2. Aluminum composite panel systems;
3. Factory insulated metal building panels;
4. Related caulking, flashing and fasteners incorporated into the system;
5. Clips and sub-girts;
6. Plywood or gypsum board when forming part of the panel system (i.e. Laminated);
7. Related insulation, adhesives, vapor barriers and air barriers;
8. Flexible sheet membrane which forms part of the building air barrier directly behind the Architectural Panel System including connection to work of the preceding trade, where required. If connection is required by any trade following the metal panel installation then the metal panel contractor provides a maximum 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the Architectural Metal Panel System;
9. Manufacturer's warranty only beyond the normal one-year maintenance warranty;
10. When any prefinished metal flashing of the Architectural Panel System is required by other trades that specifically matches the panel color and gauge and is not duplicated by the supply of the prefinished flat sheets applicable to preformed metal wall and metal roofing, then it is to be supplied by this trade freight included to the contractor's shop, see Excluded;
11. Material handling, including unloading and hoisting;
12. Scaffolding/man lifts where required to perform work by this trade scope;
13. Trade specific lighting to perform tasks;
14. Trade cleanup - cleanup for work carried out by this trade;
15. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
16. Warranty or Guaranty;
17. Submittals and Operation and Maintenance documentation as specified in the tender documents;
18. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
19. Protection of other trades' work from damage when performing this trade's scope of work;
20. Commissioning as it applies to this trade scope;
21. Building Information Modeling (BIM) as it applies to this trade scope.

Architectural Metal Panels - continued

EXCLUDED

1. Fabrication and/or installation of any flashing material not incorporated into Architectural Metal Panel System (i.e. Flat prefinished sheet material for built-up roofing contractor);
2. Extruded aluminum wall or soffit cladding;
3. Metal spandrel and infill panels incorporated into glazed systems;
4. Metal roofing and metal wall and soffit cladding;
5. Wood or metal components of the wall (unless incorporated in the panel system) used to construct parapets, pony walls, structural frames, etc.;
6. Factory pre-assembled translucent panels;
7. Insulation or vapor barrier behind structure which panel system is fastened to;
8. Backing and support for other trades;
9. Stainless steel items which do not form a part of the Architectural Metal Panel System;
10. Common scaffold or platform when required to perform work by multiple trades;
11. Temporary heat, general lighting, power, sanitation and water for general construction;
12. Hoarding;
13. Final Cleaning before turnover;
14. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
15. Firestopping;
16. Supply and maintenance of garbage and recycling bins for construction waste;
17. Removal of construction waste from job site;
18. General site security.

Siding and Soffits

SCOPE NARRATIVE

This scope includes the supply and installation of the following to provide a complete system of exterior siding and soffits including boards or panels used as exterior surface of a wall or soffit, including associated flashing, trim and associated accessories.

A. Preformed Metal Wall Cladding and Soffits

This scope includes the supply and installation of preformed metal wall cladding and soffits.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. Cladding roll formed from sheet steel (pre-painted, galvanized, galvalume finish), stainless or weathering steel, aluminum or other metals;
2. Liner panel of materials forming part of a preformed metal wall and/or soffit cladding assembly;
3. Aluminum soffit, fascia, siding, gutter and downspouts;
4. Gutter and downspouts that form an integral part of the preformed metal wall and soffit cladding;
5. Related closures, caulking, flashings and fasteners incorporated into the system;
6. Internal sub-grits;
7. Related insulation, adhesives, vapor barriers and air barriers including other materials from the barriers to the finished metal surface;
8. Stationary metal louvres of matching cladding/siding materials (installed in cladding) including wire mesh or bird screens;
9. Translucent panels to match cladding profile;
10. Flexible sheet membrane which forms part of the building air barrier directly behind the metal cladding system including connection work of the preceding trade, where required. If connection is required by any trade following the metal cladding installation then the cladding contractor provides a minimum 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the metal cladding system;
11. When any pre-finished metal flashing of the cladding system is required by other trades that specifically matches in color and gauge that specified for the metal wall cladding, then the pre-finished flat sheets are to be supplied by this trade freight included to the contractor's shop, **NOTE** - the supply of flashing material does not apply to this trade if duplicated under the Metal Sheet Roofing scope;
12. Installation of flexible membranes around or onto window framing or openings;
13. Flashings for equipment openings as they pertain to wall penetrations;
14. Material handling, including unloading and hoisting;
15. Scaffolding/man lifts where required to perform work by this trade scope;
16. Trade specific lighting to perform tasks;
17. Trade cleanup - cleanup for work carried out by this trade;
18. General cleanup - provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
19. Manufacturer's warranty only beyond the normal one-year maintenance warranty;
20. Warranty or Guaranty;
21. Submittals and Operation and Maintenance documentation as specified in the tender documents;
22. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
23. Protection of other trades' work from damage when performing this trade's scope of work;
24. Testing where specifically required by the specifications;
25. Building Information Modeling (BIM) as it applies to this trade scope.

A. Preformed Metal Wall Cladding and Soffits – continued

EXCLUDED

1. Metal deck;
2. Fabrication and/or installation of any prefinished flashing material not incorporated into metal cladding system, see Metal Sheet Roofing, and Roofing and Related Sheet Metal, Included;
3. Wood or metal components of the wall (unless incorporated in the preformed metal wall system) used to construct parapets, pony walls, structural frames, etc.;
4. Gypsum board and metal support for same;
5. Metal spandrel and infill panels incorporated into glazed systems;
6. Extruded aluminum wall cladding;
7. Metal roofing;
8. Insulation or vapor barrier behind structure which cladding system is fastened to;
9. Metal soffit and/or wall cladding if profile, gauge and color is to match metal roofing;
10. Architectural Metal Panels;
11. Factory pre-assembled translucent panels;
12. Backing and supports for other trades;
13. Structural purlins and girts;
14. Metal linear ceiling profiles used as a wall ceiling or soffit, see Component Ceiling Systems, Included;
15. Mechanical louvres and matching non-functioning metal louvres, See Mechanical C – Ventilation and Sheet Metal Ductwork, Included;
16. Common scaffold or platform when required to perform work by multiple trades;
17. Temporary heat, general lighting, power, sanitation and water for general construction;
18. Hoarding;
19. Final Cleaning before turnover;
20. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
21. Firestopping;
22. Supply and maintenance of garbage and recycling bins for construction waste;
23. Removal of construction waste from job site;
24. General site security.

Siding and Soffits - continued

B. Vinyl Siding, Metal Siding and Metal Soffits

This scope includes the supply and installation of vinyl and metal siding.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. Cladding roll formed from sheet steel (pre-painted, galvanized, galvalume finish), stainless or weathering steel, aluminum or other metals;
2. Liner panel of materials listed forming part of a preformed metal wall and/or soffit cladding assembly;
3. Aluminum soffit, fascia, siding, gutter and downspouts;
4. Gutter and downspouts that form an integral part of the preformed metal or vinyl siding and soffit;
5. Related closures, caulking, flashings and fasteners incorporated into the system;
6. Internal sub-grits;
7. Related insulation, adhesives, vapor barriers and air barriers including other materials from the barriers to the finished metal surface;
8. Stationary metal louvres of matching cladding/siding materials (installed in cladding) including wire mesh or bird screens;
9. Flexible sheet membrane which forms part of the building air barrier directly behind the vinyl and metal siding including connection work of the preceding trade where required. If connection is required by any trade following the vinyl and metal siding installation then the cladding contractor provides a minimum 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the metal cladding system;
10. When any pre-finished metal flashing of the cladding system is required by other trades that specifically matches in color and gauge that specified for the vinyl and metal siding, then the pre-finished flat sheets are to be supplied by this trade freight included to the contractor's shop, **NOTE** - the supply of flashing material does not apply to this trade if duplicated under the Metal Sheet Roofing scope;
11. Flashings for equipment openings as they pertain to wall penetrations;
12. Installation of flexible membranes around or onto window framing or openings;
13. Material handling, including unloading and hoisting;
14. Scaffolding/man lifts where required to perform work by this trade scope;
15. Trade specific lighting to perform tasks;
16. Trade cleanup - cleanup for work carried out by this trade;
17. General Cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup;
18. Manufacturer's warranty only beyond the normal one-year maintenance warranty;
19. Warranty or Guaranty;
20. Submittals and Operation and Maintenance documentation as specified in the tender documents;
21. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
22. Protection of other trades' work from damage when performing this trade's scope of work;
23. Testing where specifically required by the specifications;
24. Building Information Modeling (BIM) as it applies to this trade scope.

B. Vinyl Siding, Metal Siding and Metal Soffits - continued

EXCLUDED

1. Metal deck;
2. Fabrication and/or installation of any prefinished flashing material not incorporated into metal cladding system, see Metal Sheet Roofing, and Roofing and Related Sheet Metal, Included;
3. Wood or metal components of the wall (unless as incorporated in the preformed metal wall system) used to construct parapets, pony walls, structural frames, etc.;
4. Gypsum board and metal support for same;
5. Metal spandrel and infill panels incorporated into glazed systems;
6. Extruded aluminum wall cladding;
7. Metal roofing;
8. Insulation or vapor barrier behind structure which cladding system is fastened to;
9. Metal soffit and/or wall cladding if profile, gauge and color is to match metal roofing;
10. Architectural Metal Panels;
11. Factory pre-assembled translucent panels;
12. Backing and supports for other trades;
13. Structural purlins and girts;
14. Metal linear ceiling profiles, see Component Ceiling Systems;
15. Mechanical louvres and matching non-functioning metal louvres, See Mechanical C – Ventilation and Sheet Metal Ductwork, Included;
16. Common scaffold or platform when required to perform work by multiple trades;
17. Temporary heat, general lighting, power, sanitation and water for general construction;
18. Hoarding;
19. Final Cleaning before turnover;
20. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
21. Firestopping;
22. Supply and maintenance of garbage and recycling bins for construction waste;
23. Removal of construction waste from job site;
24. General site security.

Metal Sheet Roofing

SCOPE NARRATIVE

This scope includes the supply and installation of metal sheet roofing for a complete system which includes custom fabricated or field formed roofing composed of single layer of metal sheets installed over structural substrate. Aluminum, copper, steel, stainless steel, sheet metal roofing.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. Related closures, caulking, flashings and fasteners incorporated into the system;
2. Internal sub-girts and clip systems;
3. Liner panel of materials forming part of the preformed metal roofing assembly;
4. Gypsum board when applied over a roof deck as part of the roofing system;
5. Auxiliary boards such as plywood and/or wood strapping when applied over a roof deck as part of the metal roofing system;
6. Related insulation, adhesives, vapor barriers and air barriers;
7. Flexible sheet membranes which form part of the building air barrier directly behind the metal roofing system including connection to work of the preceding trade where required. If connection is required by any trade following the metal roofing installation then the metal roofing contractor provides a minimum 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the metal roofing system;
8. Gutter and downspouts that form an integral part of the preformed metal roofing system;
9. Installation only of acoustical insulation strips for acoustic steel deck which is supplied by others in a preformed custom fitted condition;
10. Metal soffits and/or wall cladding if profile, gauge and color is to match metal roofing including related insulation, vapor barrier and sub-girts;
11. Acrylic or polycarbonate skylights, fiberglass skylights (when same profile as metal roof), smoke or access hatches, all when used within the "Preformed metal roofing" area;
12. When any prefinished metal flashing is required by other trades that specifically match in color and gauge that is specified for the metal roofing, then the prefinished flat sheets are to be supplied by this trade freight included to the contractor's shop, see Siding and Soffits, Roofing and Related Sheet Metal, Included and Excluded;
13. Installation of flashings for drains and plumbing vents supplied by others;
14. Installation of flashings for plumbing vents – as supplied by Others;
15. Material handling, including unloading and hoisting;
16. Scaffolding/man lifts where required to perform work by this trade scope;
17. Trade specific lighting to perform tasks;
18. Trade cleanup - cleanup for work carried out by this trade;
19. Warranty or Guaranty;
20. Submittals and Operation and Maintenance documentation as specified in the tender documents;
21. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
22. Protection of other trades' work from damage when performing this trade's scope of work;
23. Commissioning as it applies to this trade scope;
24. Building Information Modeling (BIM) as it applies to this trade scope.

Metal Sheet Roofing – continued

EXCLUDED

1. Fabrication and/or installation of any prefinished flashing material not incorporated into metal roof system, see Siding and Soffits, Included and Excluded;
2. Wood or metal components of the roofing (unless incorporated in the preformed metal roofing system) used to construct; parapets, perimeter and curb blocking, curbs, control joints and sleeper supports;
3. Metal soffits and/or wall cladding, see Included;
4. Aluminum/glass or aluminum/fiberglass skylight systems or skylights outside the preformed metal roofing area;
5. Separate curbs for skylights or hatches, etc.;
6. Through wall flashing;
7. Backing and supports for other trades;
8. Purlins or other structural materials;
9. Insulation or vapor barrier behind structure which metal roofing is fastened to;
10. Roof drains connected to an internal system;
11. Installation of counter flashings for mechanical vents, ducts and chimneys is by others;
12. Structural metal deck or any component below the decking;
13. Supply and installation of fall arrest anchors;
14. Inspection and testing;
15. Common scaffold or platform when required to perform work by multiple trades;
16. Temporary heat, general lighting, power, sanitation and water for general construction;
17. Hoarding;
18. Final Cleaning before turnover;
19. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
20. Firestopping;
21. Supply and maintenance of garbage and recycling bins for construction waste;
22. Removal of construction waste from job site;
23. General site security.

Applied Fireproofing

SCOPE NARRATIVE

This scope includes the supply and installation of spray applied fireproofing including all components necessary for a complete installation including mineral fiber, fire-retardant and cementitious coverings to provide fire resistance to building components.

Spray applied fireproofing may comprise various products performing the function of providing a fire-resistant surface as an integral part of an overall construction assembly. The governing factor and criteria are the Classification of Assemblies based on Fire Resistance Tests performed by Underwriters Laboratories Canada and Underwriters Laboratories Inc..

Spray fireproofing is normally applied by a franchised applicator appointed by the manufacturer.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Fibrous fireproofing, cementitious fireproofing, surface sealers, primers and paints as recommended by the manufacturer;
2. Fire-retardant, mineral fiber and cementitious coverings;
3. Materials performing a dual function of providing spray fireproofing and spray insulation when specified under spray applied fireproofing;
4. Special ventilation when required during application;
5. Surface treatment;
6. Scaffolding/man lifts where required to perform work by this trade scope;
7. Material handling, including unloading and hoisting;
8. Inspection;
9. Trade specific lighting to perform tasks;
10. Trade cleanup - cleanup for work carried out by this trade;
11. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
12. Warranty or Guaranty;
13. Submittals and Operation and Maintenance documentation as specified in the tender documents;
14. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
15. Protection of other trades' work from damage when performing this trade's scope of work;
16. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Firestopping;
2. Gypsum board fireproofing;
3. Plaster and stucco fireproofing;
4. Ductwork or piping fire wrap, see Mechanical F. Insulation, Included;
5. Sprayed soundproofing and sprayed air seal including spray applied fire retardant to same;
6. Vermiculite, vermiculite concrete;
7. Common scaffold or platform when required to perform work by multiple trades;
8. Temporary heat, general lighting, power, sanitation and water for general construction;
9. Hoarding;
10. Final Cleaning before turnover;
11. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
12. Supply and maintenance of garbage and recycling bins for construction waste;
13. Removal of construction waste from job site;
14. General site security.

Firestopping

SCOPE NARRATIVE

This scope includes the supply and installation of materials and components, including incidental items required for the sealing of cavities, around penetrations, and openings in floors, walls, partitions, and other building components to prevent spread of fire and smoke including firestopping for mechanical, electrical, communications and structural penetrations with fire-resistant rated assemblies.

Firestopping materials shall be those that will remain in place and prevent the passage of flame or hot gasses when subject to the standard fire exposure as required to meet the applicable building codes.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. Trade specific Firestopping. The Firestopping contractor will submit separate prices to the following trade scopes:
 - a. Prime Mechanical – the prime mechanical contractor will carry the Firestopping costs for all trades in the mechanical scope;
 - b. Electrical – will carry the Firestopping costs for all Electrical;
 - c. General Contractor – will carry the Firestopping costs for all trade scopes other than Mechanical and Electrical;
2. Forms or damming;
3. Primers;
4. Testing when specified to be part of this subcontract;
5. Installation of preformed metal deck fillers used as part of a listed firestop system and to maintain fire and smoke barriers to walls and partitions as specified, see Gypsum and Metal Framing, Excluded, Masonry, Excluded;
6. Scaffolding/man lifts where required to perform work by this trade scope;
7. Trade specific lighting to perform tasks;
8. Trade cleanup - cleanup for work carried out by this trade;
9. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
10. Warranty or Guaranty;
11. Submittals and Operation and Maintenance documentation as specified in the tender documents;
12. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
13. Protection of other trades' work from damage when performing this trade's scope of work;
14. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Applied fireproofing;
2. Backing, supports and finishes for other trades;
3. Caulking (other than firestopping);
4. Centering or alignment of pipes, conduit or devices passing through a penetration;
5. Fire rating to recessed fixtures in gypsum board systems, see Gypsum Board and Metal Framing, Included;
6. Fire rating to recessed fixtures in lath, plaster and stucco systems, see Lath, Plaster and Stucco, Included;
7. Fire rating to recessed fixtures in component ceiling systems, see Component Ceiling Systems, Included;
8. Common scaffold or platform when required to perform work by multiple trades;
9. Temporary heat, general lighting, power, sanitation and water for general construction;
10. Hoarding;
11. Final Cleaning before turnover;
12. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
13. Supply and maintenance of garbage and recycling bins for construction waste;
14. Removal of construction waste from job site;
15. General site security.

Architectural (Finishing) Hardware - Supply Only

SCOPE NARRATIVE

This scope includes the supply only of door hardware for doors and windows not supplied as part of the Curtain Wall and Entrances, Store Fronts and Windows scopes. The Architectural hardware supplied is to be included as required for all wood doors, custom fabricated, hollow metal doors installed in wood or metal frames, demountable partitions frames and for detention doors.

This scope for supply only includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Provide architectural hardware to all:
 - a. Wood doors and frames;
 - b. Hollow metal doors and frames;
 - c. Doors and frames in demountable partitions;
 - d. Detention doors and frames;
2. Butts, pivots, hinges, floor hinges, spring hinges (double and single acting);
3. Locksets, latch sets, privacy sets and exit devices complete with standard or electric strikes, deadlocks and padlocks. cylinders for all master keyed items;
4. Door lock cylinders and keying for Overhead Doors;
5. Electrified locksets, throw bolts, hinges, exit devices, and magnetic locks;
6. Push and pull plates, push and pull bars;
7. Kick plates, armor, mop and stretcher except hardboard, see Excluded;
8. Closing devices, including surface, concealed, overhead and floor type, complete with all required brackets to ensure proper and complete installation;
9. Stops, holders and bumpers, including the following types: overhead, surfaces and concealed, wall and floor mounted, crash chain stops;
10. Handrail brackets (name brand only);
11. Weather-stripping, sound proofing and threshold:
 - a. Threshold – aluminum, brass or bronze;
 - b. Weather-stripping for head, jamb, meeting stile and door bottom;
 - c. Automatic door bottoms;
12. Fire safety devices (these components must be compatible with the main fire safety system as provided under the electrical scope). These devices are attached to (or concealed in) the door or/and frame and are part of the door control system;
13. Door silencers – rubber mutes;
14. Door bolts – manual and automatic, including flush, surface, cane, cremone, barrel, chain and slide;
15. Coordinators;
16. Mullion – removable type (name brand only);
17. Door viewers;
18. Letter box plates;
19. Keys, key blanks and key control cabinets;
20. Chain door guards;
21. Exit alarms - battery operated;
22. Pocket door hardware, including frame, track and hangers;
23. Electrically assisted or operated closers;
24. All hardware for doors in demountable partitions;
25. Card readers, proximity readers, door position switches including all components required for a complete and working access control system;
26. Push button access controls;
27. Key switches relating to electrified door hardware;
28. Security bars (name brand only);
29. Uninterrupted power supply – battery backup only for hardware supplied in the Hardware trade definition;
30. Warranty or Guaranty;

Architectural (finishing) Hardware - Supply - continued

31. Submittals and Operation and Maintenance documentation as specified in the tender documents;
32. Hardware templates;
33. Building Information Modeling (BIM) as it applies to this trade scope;
34. Commissioning as it applies to this trade scope.

EXCLUDED

1. Installation of all hardware (except auto openers/closers as described in Included);
2. Electrical hook-up or connection of alarms, locks, magnets, strikes, detectors or magnetic holders and door closers;
3. Custom-made handrail brackets, kick, push and pull plates and bars, thresholds or sills;
4. Window hardware;
5. Hardboard, plastic laminate, Poly Vinyl Chloride (PVC) kick plates and push plates when they are to match the wall protection that is specified;
6. Cabinet hardware;
7. Wood locker hardware;
8. Overhead door hardware;
9. Bi-fold door and hardware package;
10. Sliding door and hardware package;
11. Folding door and hardware package;
12. Aluminum sliding and automatic door hardware;
13. Aluminum door hardware;
14. Metal toilet partition hardware;
15. Smoke and ionization detectors (wall or ceiling mounted) that are not part of the door closer/holder unit;
16. Mail chutes or holding units;
17. Surface mounted wood or plastic laminated push-pull or guard bars for aluminum, wood or metal doors or sidelights;
18. Door signs, nameplates or numbers;
19. Weld-on hinges supplied complete with steel frame;
20. Supply of all wire for electronic hardware;
21. Fastening devices used to install millwork to walls or floors;
22. Cutting of tactile cues to handrail, unless dimensions are provided by the General Contractor in a timely fashion;
23. Metal handrail brackets;
24. Offload of hardware at site;
25. Unless otherwise noted in the tender documents finishing hardware is to be installed by the General Contractor.

Roofing and Related Sheet Metal

SCOPE NARRATIVE

This scope includes the supply and installation of weather proof covering on top of a roof deck structure that together with the walls forms a separator between the inside and outside environments of a building. A roofing assembly generally consists of a membrane or primary roof covering designed to weather proof the roof deck structure and may incorporate thermal insulation, and a vapor retarder, to improve the building's thermal resistance. A roofing system is an external assembly of interacting roofing components installed to complete the roof assembly above the roof deck structure and inner face and top of adjacent parapet walls.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. Demolition of the existing roofing system when it is to be immediately followed with the installation of a new roofing system;
2. Control joint covers including roof area dividers and expansion joints;
3. All types of membrane flashing when they form part of and are installed in conjunction with the roofing system;
4. Acoustical deck insulation when supplied by others in a pre-formed custom fit condition;
5. Thermally formed skylights, smoke and access hatches which incorporate a base frame in a single unit;
6. Supply and installation of roofing materials including:
 - a. Primary roof membrane systems;
 - b. Gypsum board when applied over a roof deck as part of the roofing system;
 - c. Auxiliary leveling surfaces, strapping and Z-bars;
 - d. Roof Air/Vapor barriers;
 - e. Preformed rigid roof insulation;
 - f. Cants manufactured from insulation;
 - g. Bitumen including hot and cold process asphalt, pitch and modified bitumen and roofing adhesives;
 - h. Aggregates for membrane protection and gravel ballast, including concrete pavers not exceeding a unit mass of 45 kg;
 - i. Bituminous emulsions;
 - j. Bituminous primers;
 - k. Roof walkways;
 - l. Caulking, sealants, sealing compounds, gaskets, backing rod and packing;
 - m. Coatings;
 - n. Reinforcing fabric and membranes;
 - o. Mechanical roof fasteners;
 - p. Protection mats, filter fabrics and separator sheets;
 - q. Steep-slope roofing materials, underlayment's and flashings;
7. Flexible sheet membranes which form part of the building's air barrier or vapor retarders which are installed in a location that does not require another trade to construct components over the flexible sheet membrane. The roofing contractor will make connection to flexible sheet membranes install by other trades prior to the application of the roofing system, provided that a minimum of 200 mm of compatible membrane/material is accessible to complete the tie-in. Unless otherwise specified, the roofing contractor will provide a minimum 200 mm of overlapping material extending beyond the exterior point of the roofing system for any membrane connections required by any trade after installation of the roofing system;
8. Sheet Metal Flashing of all metal types forming part of the roofing system including:
 - a. Eaves troughs, downspouts and metal splash pans;
 - b. Gum cups/pots/boxes;
 - c. Parapet, curb and control joint flashing;
 - d. Control joint covers;
 - e. Any prefinished metal flashing of the roofing system in stock and chosen from standard 8000 or 10,000 color series in 22, 24, and 26-gauge metal (0.72 mm, 0.58 mm and 0.43 mm);
9. One-hour fire watch regarding hot-work;
10. Installation of flashings for drains and plumbing vents – as supplied by others;

Roofing and Related Sheet Metal - continued

11. Installation of metal base flashings (counter flashings) for mechanical vents, ducts and chimneys;
12. Flashing all roof curbs and sleepers if required (seal into roof membrane);
13. Shop drawings for sloped insulation systems and roof accessories;
14. Protection of other trades work from damage when performing this trade's scope of work;
15. Material handling, including unloading and hoisting;
16. Scaffolding/man lifts where required to perform work by this trade scope;
17. Trade specific lighting to perform tasks;
18. Trade cleanup - cleanup for work carried out by this trade;
19. Warranty or Guaranty;
20. Submittals and Operation and Maintenance documentation as specified in the tender documents;
21. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
22. Protection of other trades' work from damage when performing this trade's scope of work;
23. Commissioning as it applies to this trade scope;
24. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Supply of roof specialties including mechanical roof drains, vent flashings, fall arrest anchors and roof jacks;
2. Metal sleeves for through deck openings, vents, etc.;
3. Preformed or field cut reglets;
4. Separate curbs for skylights, hatches and roof mounted mechanical equipment;
5. Insulating of roof curbs;
6. Structural decking or deck infill, including any component below the decking;
7. Through wall flashing;
8. Wood or metal roofing system components used to construct parapets, perimeter and curb blocking, curbs, control joints and sleeper supports;
9. Any membrane to be covered by material not installed by the roofing contractor;
10. Poured-in-place, light, medium or heavy concrete fill and paving blocks exceeding 45 kg each in mass;
11. Inspection and/or testing;
12. Metal roofing and related flashings;
13. Wood and metal walkways;
14. Installation of metal cap flashings vents, ducts and chimneys is by others, see Mechanical, A. Common Mechanical Items, Included, and C. Ventilation and Sheet Metal Ductwork, Included;
15. Common scaffold or platform when required to perform work by multiple trades;
16. Temporary heat, general lighting, power, sanitation and water for general construction;
17. Hoarding;
18. Final Cleaning before turnover;
19. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
20. Firestopping;
21. Supply and maintenance of garbage and recycling bins for construction waste;
22. Removal of construction waste from job site;
23. General site security.

Natural Roof Coverings (Green Roofing)

SCOPE NARRATIVE

This scope includes the supply and installation of natural roof coverings. A natural roof covering is a waterproof roofing assembly on top of a roof deck structure, together with exterior walls, and overburden forming a roof assembly, able to support living plants while separating the inside and outside environments of a building.

Natural roof covering systems are also termed as vegetated roofs, green roofs, eco-roofs, or landscaped roofs, of varying slopes include both conventional and protected membrane systems. The components above the roofing membrane consists of rigid insulation for protected membrane systems, and must include a membrane protection layer for conventional membrane systems, a root barrier, drainage layer, filter layer, growing medium (engineered soil), paving stones or loose gravel for non-vegetated zones, and specially selected living plants. The assembly may include a moisture retention layer, an irrigation system, ponds or landscape features.

Natural Roof Coverings are categorized based on type of installation:

- a. **Substrate System:** growing medium is conveyed onto a combination of components required for containment, drainage, and protection from root penetration. The vegetation is planted onsite.
- b. **Modular System:** self-contained trays of growing medium and plants grown offsite and placed onto the roof surface. A protection layer is installed between the roof membrane and trays.
- c. **Pre-Grown Vegetated Blanket System:** thin mats or rolls of vegetation grown offsite and placed over a combination of components required for containment, drainage, and protection from root penetration. Additional thickness of growing medium may also be installed in accordance with project requirements.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Supply and installation of vegetated roof components includes:
 - a. Roof membrane protection layer in sheets, mats or boards, see Excluded;
 - b. Root barrier;
 - c. Drainage layer;
 - d. Moisture retention layer;
 - e. Filter cloth;
 - f. Growing medium; (maximum depth of 200 mm)
 - g. Modular pre-grown vegetated trays;
2. Curbs or dividers to contain and separate the vegetated roof assembly from non-vegetated zones, see Excluded;
3. Placement of gravel (maximum grain size of 64 mm) or concrete pavers (not exceeding 45 kg) in non-vegetated zones;
4. Compaction and leveling of growing medium substrate to specified minimum thickness, see Excluded;
5. Supply and installation of soil stabilization systems or materials for steep sloped applications;
6. Specified electronic leak detection system installation including testing prior to and after completion of vegetated roof assembly included in the roofing contractors' scope of work, see Excluded;
7. Installation of subsurface irrigation drip lines when supplied by others;
8. Scaffolding/man lifts where required to perform work by this trade scope;
9. Installation of flashings for drains and plumbing vents – as supplied by others;
10. Flashing all roof curbs and sleepers if required (seal into roof membrane);
11. Material handling, including unloading and hoisting;
12. Trade specific lighting to perform tasks;
13. Trade cleanup - cleanup for work carried out by this trade (including cleaning all debris from roof drains);
14. Warranty or Guaranty;
15. Submittals and Operation and Maintenance documentation as specified in the tender documents;
16. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;

Natural Roof Covering (Green Roofing) – continued

17. Protection of other trades' work from damage when performing this trade's scope of work;
18. Commissioning as it applies to this trade scope;
19. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Supply, connection, and commissioning of integrated irrigation systems;
2. Supplemental irrigation including supply of water, hoses, and spraying equipment;
3. Temporary protection from other trades of the roof membrane surface, plants and growing medium, or other components not installed by the roofing contractor;
4. Electronic leak detection testing after planting or successive work by others on or adjacent to the vegetated roof section;
5. Prevention measures for growing medium erosion or displacement from wind or rain, as well as prevention of over compaction of growing medium caused by storage of materials or traffic from other trades;
6. Poured-in-place or pre-cast concrete curbs or planter boxes, concrete fill, and paving blocks exceeding 45 kg each in mass;
7. Landscaping or decorative features on or adjacent to the growing medium including ponds, fountains, lighting, large rocks greater than 64 mm in size, etc.;
8. Patios, decks, or decorative pathways for use by people for non-maintenance purposes on the roof surface, including safety railings or barriers;
9. Planting or seeding including ongoing maintenance of the plants and growing medium during and after vegetation establishment period;
10. Growing medium preparation such as watering, fertilizing, and amending to meet planting, landscaping or irrigation requirements of the project;
11. Growing medium infill for planter boxes greater than 200 mm in depth;
12. Common scaffold or platform when required to perform work by multiple trades;
13. Installation of counter flashings for mechanical vents, ducts and chimneys is by others;
14. Temporary heat, general lighting, power, sanitation and water for general construction;
15. Hoarding;
16. Final Cleaning before turnover;
17. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
18. Firestopping;
19. Supply and maintenance of garbage and recycling bins for construction waste;
20. Removal of construction waste from job site;
21. General site security.

Metal Doors and Frames (Hollow Metal Doors and Pressed Steel Frames) - Supply Only

SCOPE NARRATIVE

This scope includes the supply only of metal doors including hinged or pivoting doors, fixed panels within frames, and frames either roll formed and/or of pressed metal for doors, sidelights, transoms, borrowed lights, and other openings.

Including all the preparation required to accommodate the following shall apply as they relate to:

1. Finish Door Hardware;
2. Access Control;
3. Security Systems.

This scope for supply only includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. All Hollow Metal Doors and Pressed Steel Frames (except access doors for Mechanical and Electrical equipment), see Mechanical, Included, see Electrical, Included;
2. Preparation of both Doors and Frames to accept windows, grilles and approved hardware, (except mounting holes 12mm diameter or smaller);
3. Reinforcing of Doors and Frames for surface applied Hardware;
4. Provide suitable low voltage connection boxes on both Doors and Frames to allow for electrified hardware connections;
5. Provide suitable Electrical Raceways in Doors and Frames to accommodate wiring for electrified hardware (unless directed otherwise in the tender documents);
6. Suitable Anchoring System to allow for the proper installation of frames;
7. Suitable Frame Spreader Bars for maintaining Frame integrity during transport;
8. Preparation of Doors to accept glass as described in the tender documents;
9. Touch-up priming where coating abraded during the assembly process for the purpose of reducing the incidence of oxidation (rust) (not as a final prime coat);
10. Glazing Bead or Stop complete with suitable fastening devices;
11. Warranty or Guaranty;
12. Submittals and Operation and Maintenance documentation as specified in the tender documents;
13. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
14. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Installation of Doors and Frames;
2. Blast Resistant Doors and Frames;
3. Detention Doors and Frames;
4. Stainless Steel Doors and Frames;
5. Acoustic Doors and Frames;
6. Glass and Glazing;
7. Caulk and Caulking;
8. Insulation within Frames;
9. Hoarding;
10. Flashings;
11. Finish painting or full priming;
12. Pre-hanging of doors;
13. Final cleaning or prepping of doors or frames to receive finish Paint;
14. Termination of electrified Hardware;
15. Supply of door or window hardware;
16. Fastening devices other than required to meet Fire Rating parameters (existing masonry application);
17. Cladding of doors and frames;

18. Access doors and frames for Mechanical and Electrical.

Overhead Doors

SCOPE NARRATIVE

This trade scope includes for the supply and installation of overhead doors such as panelized sectional doors, single panel doors, multi-leaf vertical lift doors or telescoping vertical lift doors, flexible traffic doors, roll-up coiling doors, roll-up coiling grilles, high speed doors and shutters, including all associated hardware and accessories.

The contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

DEFINITION

INCLUDED

1. Overhead door assemblies and counter balance mechanisms:
 - a. Panelized sectional doors;
 - b. Single panel doors;
 - c. Multi-leaf vertical lift doors;
 - d. Telescoping vertical lift doors;
 - e. Flexible traffic doors;
 - f. Roll-up coiling doors and grilles;
 - g. High speed doors;
 - h. Roll-up shutters.
2. Hardware including:
 - a. Tracks, guides and hinges;
 - b. Push/pull handles/step plates;
 - c. Chain keepers/locks;
 - d. Weather seals;
 - e. Pusher or bumper springs;
 - f. Hangers and support rods.
3. Accessories including:
 - a. Windows / View lites;
 - b. Pass doors;
 - c. Break-away panels;
 - d. Manual operating devices;
 - e. Lift safety, obstruction detection and person protection devices.
4. Electrical operators including supply and installation of the following including:
 - a. Obstruction detection and personal protection devices;
 - b. Reduction mechanisms;
 - c. Safety interlocks when door is power operated;
 - d. Motors;
 - e. Hoist mechanism including sprocket, pulley and chain;
 - f. Emergency operators;
 - g. Electrical enclosures appropriate for installation conditions;
 - h. Limit switches and motor controls.

NOTE: All electrical line voltage wiring and connections by Electrical, see Prime Electrical, Included;
5. Control accessories including supply and installation of the following:
 - a. Detector loops;
 - b. Presence sensors;
 - c. Light curtains;
 - d. High capacity receivers;
 - e. Dry contacts for connection to parking control equipment, air curtains and other third-party accessories;
 - f. Supply only of low voltage control stations, connection by Electrical, see Prime Electrical, Included.

Overhead Doors – continued

NOTE: All interconnections to Building Management System or Facility Management Systems, see Mechanical D. Building Management Systems, Included and Excluded, see Integrated Automation (Facility Management Systems), Included and Excluded, see Access Control Systems, Included and Excluded;

6. Structural wind load calculations and operational cycle determination based on operational requirements for door type and location;
7. Anchoring devices, tracks, track reinforcements required for complete installation;
8. Minor preparation of substrates including shimming and leveling devices;
9. Coordination with concrete placement when automatic door operation detector loops are required for the project;
10. Coordination with metal fabrications metal for supply and installation of steel support brackets, and steel jambs required for installation of overhead doors;
11. Removal of existing overhead door installations when materials are being re-used or retained (salvaged);
12. Start-up and adjustment services, and demonstration of overhead door operating and maintenance requirements;
13. Material handling, including unloading and hoisting;
14. Scaffolding/man-lifts where required to perform work by this trade;
15. Commissioning as it applies to this trade scope;
16. Trade specific lighting to perform tasks;
17. Trade cleanup – cleanup of work performed by this trade;
18. General cleanup by General Contractor;
19. Warranty or Guaranty;
20. Submittals and Operation and Maintenance documentation as specified in the tender documents;
21. Cash allowances and/or contingency funds when a specific dollar amount is listed in the General Conditions or in this trade's specification section;
22. Protection of other trades' work from damage when performing this trade scope of work;
23. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Placement of concrete;
2. Coring, cutting and grouting of concrete;
3. Placing of embedded items not otherwise supplied and installed by this trade definition;
4. Fabrication of metal fabrications required for complete installation, jamb extensions, spring pads and operator pads;
5. Structural purlins, girts, channels, or cross bracing required to frame door openings or support motorized door operators or structural support of door rails, see Structural Steel, Included and Excluded, see Miscellaneous Steel (Metal Fabrications), Included and Excluded;
6. Air curtains, see Mechanical B: Prime Mechanical – Hydronic Systems, Included and Excluded; see also Mechanical C: Ventilation and Sheet Metal Ductwork, Included and Excluded, see Electrical, Included and Excluded;
7. Electrical services and connections including power disconnect switch (by power operator) for powered operators and accessories, see Electrical, Included and Excluded;
8. Low voltage wiring /conduit for control and safety accessories;
9. Door lock cylinders and keying;
10. Site applied painting and coatings;
11. Parking control equipment for management of vehicular access and security (must be compatible to operator);
12. Hoarding in opening;
13. Removal of construction waste from the jobsite;
14. Temporary heat, general lighting, power, sanitation and water for general construction;
15. Security costs, where security is required for trades to complete their work these services and cost for same will be provided by the General Contractor;
16. Supply and maintenance of garbage and recycling bins for construction waste;
17. General site security.

Entrances, Storefronts and Windows

SCOPE NARRATIVE

This scope includes the supply and installation of materials and components within the fenestration, connected to, and forming an integral part of this scope, and for extruded aluminum wall cladding, aluminum laminated panels, and aluminum formed sheet panels, porcelain panels and cement panels, except for infill panels forming part of other trade scopes.

Fenestration means within a floor span.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Anchoring devices:
 - a. Anchors which are part of the framing;
 - b. Supply only of anchors or inserts which are part of the structure;
2. Architectural glass and metal doors including sliding, swinging, revolving and balanced doors, complete with hardware including plastic and/or plastic laminate push pulls where an integral part of the door, see Architectural Woodwork, Included;
3. All components for complete installation of automatic doors including any interconnecting wiring, when they form an integral part and are within the fenestration of this scope, commissioning NOT included, see Electrical, Included;
4. Architectural metal patio or balcony doors, complete with hardware;
5. Stationary metal louvres, metal sills, flashing and trims forming part of entrances, storefronts and windows and other metal sills, flashing and trims of matching materials, see Excluded;
6. Caulking (other than firestopping), joint backing and perimeter sealing;
7. Removal of existing installations when the materials are to be re-used or retained as specified;
8. Darkroom revolving doors of architectural metals;
9. Electrical security and monitoring devices, mounted on doors and door frames within this scope, i.e. locks, card readers, door monitors, switches, strike release, panic devices, magnets, etc., supplied and installed; wiring by electrical. Installation only of components for trade name security and monitoring systems specified to be furnished by one supplier to the electrical contractor and which must be mounted on doors and frames within this scope; supplied by the electrical contractor for installation by this contractor, see Electrical, Included;
10. Extruded aluminum wall cladding;
11. Factory pre-assembled translucent panels;
12. Flexible sheet membrane which forms part of the building air barrier and is an integral part of the entrances, storefronts and windows system including connection to work of the preceding trade where required. If connection is required by any trade following the entrances, storefronts and windows installation then the entrances, storefronts and windows contractor provides a minimum of 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the entrances, storefronts and windows system;
13. Fly screens to venting windows;
14. Architectural metal framing;
15. Glass, glazing and glazing materials;
16. Glazing and architectural metal framing that is sloped more than 15 degrees beyond vertical, or curved which is connected to and forming part of this scope;
17. Guard rails including architectural metal and wood and plastic laminate where they are an integral part of, and built into metal entrances and storefronts and special windows (installation only of rails other than metal attached to special windows);
18. Industrial steel sash;
19. Infill panels, including insulation where it forms an integral part of a panel;
20. Initial cleaning between removable/non-removable multiple glazing;
21. Insulation within the fenestration;
22. Interior architectural metal glazed partitions, including recreational arena and court glass and glazing;

Entrances, Storefronts and Windows - continued

23. Entrances and storefronts (interior or exterior);
24. Preparation of framing for hardware supplied by others for doors not covered under Included;
25. Single glazing, multiple glazing and sealed units, plastic, fiberglass and similar materials;
26. Spandrel and infill panels, including extruded aluminum wall cladding, cement, porcelain and including insulation where it forms an integral part of a panel;
27. Stiffeners and/or steel reinforcement where required and where it is enclosed by the architectural metal section, see Excluded;
28. Supply only of architectural framing to be embedded in concrete;
29. Supply and installation of operating hardware;
30. Testing where specifically required by the specifications;
31. Thermally formed wall domes or pyramids which are not part of or connected to the roofing system;
32. Venetian blinds between glass supplied under this scope;
33. Scaffolding/man lifts where required to perform work by this trade scope;
34. Shop drawings and engineering of entrances, storefronts and windows to the specified design criteria;
35. Material handling, including unloading and hoisting;
36. Trade specific lighting to perform tasks;
37. Trade cleanup - cleanup for work carried out by this trade;
38. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
39. Manufacturer's warranty only beyond the normal one-year maintenance warranty;
40. Warranty or Guaranty;
41. Submittals and Operation and Maintenance documentation as specified in the tender documents;
42. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
43. Protection of other trades' work from damage when performing this trade's scope of work;
44. Commissioning as it applies to this trade scope;
45. Building Information Modeling (BIM) as it applies to this trade scope.

Entrances, Storefronts and Windows - continued

EXCLUDED

1. Concrete;
2. Doors, door frames and entrances, storefronts and window frames of steel, wood, metal clad wood, plastic laminate, polyvinyl chloride and fiberglass;
3. Glass or plastic panels when supplied and installed under Architectural Woodwork;
4. Installation of membranes or flashing, included under this scope, which cannot be installed or fastened during entrances, storefronts and windows installation;
5. Insulation, support or furring members, within entrance and storefront systems and windows, that are normally supplied and erected by others;
6. Interior wood sills or surrounds;
7. Insulation within framing supplied and erected by others;
8. Pressed steel frames;
9. Moveable, demountable partitions;
10. Shower doors;
11. Structural steel, see Included;
12. Sun control devices not between glass (venetian blinds, drapes, sunshades, louvres) unless connected to the aluminum window frame system;
13. Sun screens, bird screens, guard screens;
14. Supply of flashing, sills or trim prefinished to match any materials not included in this scope, see Included;
15. Supply and installation of non-rigid membrane air/vapor barriers which form part of the structure and connects to the entrances, storefronts and windows, see Included;
16. Mechanical louvres and matching non-functioning metal louvres, See Mechanical C – Ventilation and Sheet Metal Ductwork, Included;
17. Common scaffold or platform when required to perform work by multiple trades;
18. Temporary heat, general lighting, power, sanitation and water for general construction;
19. Hoarding;
20. Final Cleaning before turnover;
21. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
22. Firestopping;
23. Supply and maintenance of garbage and recycling bins for construction waste;
24. Removal of construction waste from job site;
25. General site security.

Curtain Wall and Glazed Assemblies

SCOPE NARRATIVE

This scope includes the supply and installation of components within the fenestration, connected to, and forming an integral part of this scope. This includes single and multi-story cladding fabricated from glass and other materials for interior and exterior applications including framing members, sash, glazing, and sealants for a complete enclosure including insulated and non-insulated spandrel and infill panels, architectural louvres and fixed sun screens integral to the curtain wall.

Curtain Wall is that fenestration which continues past one or more floor spans.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. Architectural glass and metal doors including sliding, swinging, revolving and balanced doors, complete with hardware (including plastic and/or plastic laminate push pulls where an integral part of the door, see architectural woodwork, all components for complete installation of automatic doors including any interconnecting wiring, when they form an integral part and are within the fenestration of this scope, see Electrical, Included;
2. Stationary metal louvres, metal sills, flashing and trims forming part of the curtain wall and other metal sills, flashing and trims of matching materials/finish, see Excluded;
3. Stationary metal louvres, except all mechanical louvres and non-functioning metal louvres when specified to match mechanical louvres, see Mechanical C. Ventilation and Sheet Metal Ductwork, Excluded;
4. Caulking (other than firestopping), joint backing and perimeter sealing;
5. Removal of existing installations when the materials are to be re-used or retained as specified;
6. Electrical security and monitoring devices, mounted on doors and door frames within this scope, i.e. locks, card readers, door monitors, switches, strike release, panic devices, magnets, etc., supplied and installed; wiring by electrical, see Electrical, Included;
7. Installation only of components for trade name security and monitoring systems specified to be furnished by one supplier to the electrical contractor and which must be mounted on doors and frames within this scope supplied by the electrical contractor for installation by this contractor;
8. Factory pre-assembled translucent panels;
9. Flexible sheet membrane which forms part of the building air barrier and is an integral part of the curtain wall system including connection to work of the preceding trade where required. If connection is required by any trade following the curtain wall installation then the curtain wall contractor provides a maximum of 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the curtain wall system;
10. Fly screens to venting windows;
11. Glass, glazing and glazing materials;
12. Glazing and architectural metal framing that is sloped in excess of 15 degrees beyond vertical, or curved, within the curtain wall;
13. Guard rails including architectural metal and wood and plastic laminate where they are an integral part of and built into the curtain wall (installation only of rails other than metal attached to the curtain wall);
14. Initial cleaning between removable/non-removable multiple glazing;
15. Insulation within the curtain wall;
16. Preparation of framing for hardware supplied by others where doors are not part of this trade;
17. Shop drawings and engineering of curtain wall system to the specified design criteria;
18. Skylights - glazed architectural metal framing, flat or sloped greater than 15 degrees, or curved, not attached to window framing, entrances and storefronts framing and not included under Roofing scope;
19. Spandrel and infill panels, such as cement, porcelain, extruded aluminum wall cladding, etc. including insulation where it forms an integral part of a panel;
20. Stiffeners and/or steel reinforcement where required and where it is enclosed by the architectural metal section;
21. Venetian blinds between glass supplied under this scope;

Curtain Wall and Glazed Assemblies - continued

22. Anchoring devices:
 - a. Anchors which are part of the grid;
 - b. Supply only of anchors or inserts which are part of the structure;
23. Scaffolding/man lifts where required to perform work by this trade scope;
24. Material handling, including unloading and hoisting;
25. Trade specific lighting to perform tasks;
26. Trade cleanup - cleanup for work carried out by this trade;
27. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
28. Manufacturer's warranty only beyond the normal one-year maintenance warranty;
29. Testing where specifically required by the specifications;
30. Warranty or Guaranty;
31. Submittals and Operation and Maintenance documentation as specified in the tender documents;
32. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
33. Protection of other trades' work from damage when performing this trade's scope of work;
34. Building Information Modeling (BIM) as it applies to this trade scope;
35. Commissioning as it applies to this trade scope.

EXCLUDED

1. Concrete work;
2. Doors, door frames and curtain wall frames of steel, wood, metal clad wood, plastic laminate, polyvinyl chloride and fiberglass;
3. Flashing, sills or trim prefinished to match any materials not included in this scope;
4. Glass or plastic panels when supplied and installed under Architectural Woodwork;
5. Insulation, support or furring members, within curtain wall systems, that are normally supplied and erected by others;
6. Interior wood sills or surrounds;
7. Shower doors;
8. Skylights which are thermally formed and incorporate a base frame only which relate to the roofing system;
9. Structural steel, see Included;
10. Sun control devices not between glass i.e. Venetian blinds, drapery, etc.;
11. Sun screens, bird screens, guard screens, sunshades and louvres attached to the frame unless connected to the aluminum window frame system;
12. Mechanical louvres and matching non-functioning metal louvres, See Mechanical C – Ventilation and Sheet Metal Ductwork, Included;
13. Common scaffold or platform when required to perform work by multiple trades;
14. Temporary heat, general lighting, power, sanitation and water for general construction;
15. Hoarding;
16. Final Cleaning before turnover;
17. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
18. Firestopping;
19. Supply and maintenance of garbage and recycling bins for construction waste;
20. Removal of construction waste from job site;
21. General site security.

Glass and Glazing

SCOPE NARRATIVE

This scope includes the supply and installation of glass and plastic glazing for doors, sidelights, transoms, borrowed lights, windows, skylights, and glazed structures.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Caulking (other than firestopping), joint backing and perimeter sealing to glass and glazing;
2. Removal of existing installations when the materials are to be re-used or retained as specified;
3. Glass doors (except in architectural woodwork) and sliding hardware, including locks, for site fabricated display cases;
4. Handcrafted leaded stained glass, glass, plastics, x-ray and infill panels to:
 - a. Balustrades (other than escalators);
 - b. Hollow metal;
 - c. Metal clad wood doors;
 - d. Metal display cases;
 - e. Metal frames other than those falling under: curtain wall scope, entrances, storefronts and windows scope;
 - f. Pressed steel (frames and applied stops to be pre-drilled, fitted and installed complete with fastening devices by supplier prior to glazing by this trade);
 - g. Prefinished demountable partitioning;
5. Glass shelving (except in architectural woodwork) including shelf standards, clips and brackets, see Architectural Woodwork, Included;
6. Glass smoke baffles and sprinkler baffles including shimming, fasteners and caulking for fastening of the glass to the supporting system (supporting system supplied and installed by others);
7. Installation of glass stops and or glazing beads supplied by the demountable partitions' contractor, see Prefinished Demountable Partitions, Included;
8. Material handling, including unloading and hoisting;
9. Manufacturer's warranty only beyond the normal one-year maintenance warranty;
10. Mirrors, including glass, plastics, stainless steel, chrome plated in standard and tilting tamperproof frames, J molds and clips, unless specified to be part of architectural woodwork, see Architectural Woodwork, Included;
11. Shop drawings and engineering of glass and glazing to the specified design criteria;
12. Scaffolding/man lifts where required to perform work by this trade scope;
13. Trade specific lighting to perform tasks;
14. Trade cleanup - cleanup for work carried out by this trade;
15. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
16. Warranty or Guaranty;
17. Submittals and Operation and Maintenance documentation as specified in the tender documents;
18. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
19. Protection of other trades' work from damage when performing this trade's scope of work;
20. Commissioning as it applies to this trade scope;
21. Building Information Modeling (BIM) as it applies to this trade scope.

Glass and Glazing – continued

EXCLUDED

1. Glass to architectural woodwork;
2. Glass to overhead doors;
3. Glass to curtain wall and entrances, storefronts and windows;
4. Mirrors, glass, polycarbonate and acrylic when installed in wood frames or standard manufactured cabinets, display cases, furniture, fixtures, casework, countertops and tabletops;
5. Railing, capping and supports to balustrades and wall rails;
6. Recreational arena and court glass and glazing;
7. Shower doors;
8. Common scaffold or platform when required to perform work by multiple trades;
9. Precut glass stops and beads for demountable partitions to be supplied by the demountable partition trade scope;
10. Glass and glazing to factory-built prefabricated panelized wall systems not constructed of metal stud framing and gypsum board systems;
11. Temporary heat, general lighting, power, sanitation and water for general construction;
12. Hoarding;
13. Final Cleaning before turnover;
14. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
15. Firestopping;
16. Supply and maintenance of garbage and recycling bins for construction waste;
17. Removal of construction waste from job site;
18. General site security.

Lath, Plaster and Stucco

SCOPE NARRATIVE

This scope includes the supply and installation of plaster including metal laths, trim and accessories to provide a finished wall or ceiling surface. Including non-structural framing systems, ceiling suspension systems, furring systems, cement plastering interior and exterior plaster (stucco) finishes, acrylic and lime-based plastering and veneer plastering.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Acrylic plaster systems;
2. Beads, plaster stop and expansion joints, casing and trim which are an integral part of the work;
3. Building paper for lathing, plastering and stucco systems;
4. Caulking (other than firestopping) to structural, mechanical or electrical penetrations in lath and plaster or stucco systems;
5. Caulking (other than firestopping) where it forms part of the expansion or control joint;
6. Fire rating to recessed fixtures when constructed of materials within this scope;
7. Flexible sheet membrane which forms part of the building air barrier directly behind a plaster or stucco system including connection to work of the preceding trade where required. If connection is required by any trade following the plaster or stucco installation then the lath, plaster and stucco contractor provides a minimum of 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the plaster or stucco system;
8. Inserts, hangers, trim and support moldings capable of supporting light fixtures (electrical light fixtures exceeding 610 mm x 1220 mm shall be independently supported by others);
9. Inserts, hangers, trim and support moldings capable of supporting radiant panels and mechanical grilles (panels and grilles exceeding 610 mm x 1220 mm shall be independently supported by others);
10. Installation only of access doors;
11. Installation only of metal door frames supported by steel stud and plaster system only;
12. Installation of preformed metal deck fillers when required to maintain sound transmission ratings;
13. Installation of preformed metal deck filler strips used to maintain fire and smoke barriers to walls and partitions as provided by others, see Firestopping, Included;
14. Installation only of plaster trims (frames) for lighting fixtures (excluding lighting fixture components);
15. Lathing systems and metal furring for plaster and stucco;
16. Metal channels lighter than 2.0 mm (14 ga.) for plaster systems;
17. Plastering and stucco - plain, acoustical, ornamental, cast or molded, textured plaster applied to concrete, including veneer plaster systems, veneer board and all other gypsum plaster-based casts and molded shapes;
18. Aggregates for stucco system installations;
19. Parging;
20. Plaster sound baffles;
21. Rigid insulation when used as plaster or stucco base;
22. Sound insulation to plaster and stucco system only (mineral wool, fibrous batt, fibre board, noise stop board, resilient sound board, gasket and caulking) all directly behind plaster and stucco only;
23. Steel stud partitions for plaster systems only, including load bearing steel studs, 12 ga. or lighter, (2.6 mm/97 mils) where required to support lath and plaster systems and where lath and plaster is specified for both sides of the wall, see Gypsum Board and Metal Framing, Included;
24. Testing of material where specified;
25. Thermal insulation (batt, rigid or loose fill attic insulation) directly behind plaster, including where walls are strapped (not to include cavity wall insulation);
26. Vapor barrier directly behind plaster;
27. Supply and installation of prefinished metal moldings for support of radiant panels when installed as an integral part of the Lath and Plaster Ceiling Systems;
28. Material handling, including unloading and hoisting;
29. Scaffolding/man lifts where required to perform work by this trade scope;

Lath, Plaster and Stucco - continued

30. Trade specific lighting to perform tasks;
31. Trade cleanup - cleanup for work carried out by this trade;
32. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
33. Warranty or Guaranty;
34. Submittals and Operation and Maintenance documentation as specified in the tender documents;
35. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
36. Protection of other trades' work from damage when performing this trade's scope of work;
37. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Building paper under finishes other than lath, plaster or stucco;
2. Corner guards or expansion joint covers which are pre-manufactured and surface mounted;
3. Exterior gypsum sheathing and metal suspension for same;
4. Installation of air grilles, access panels and accessories if independently suspended;
5. Poly vapor hats, see Electrical, Included;
6. Installation of preformed metal deck fillers used as part of a listed firestop system and maintain fire and smoke barriers to walls and partitions as specified, see Firestopping;
7. Supply of preformed metal or foam cell deck closures as required to maintain sound barriers, see Steel Deck, Included;
8. Installation only, of welded pressed steel door and window frames incorporated into interior or exterior light gauge steel stud wall assemblies, as supplied by others, see Metal Doors and Frames, Included;
9. Steel studs or suspension systems when any material other than lath, plaster or stucco is applied to one or both sides;
10. Supply of access doors;
11. Supports for light fixtures and radiant panels exceeding 610 mm x 1220 mm;
12. Thermal insulation except for batt insulation directly behind plaster system only and rigid insulation where used as a plaster or stucco base;
13. Supply of trims and/or moldings for radiant panels when specified to be supplied with the radiant panel. This contractor to install, see Mechanical B. Prime Mechanical, Included;
14. Load bearing steel studs when part of the Cold Rolled Steel Framing system section;
15. Supply and installation of backing in steel stud partitions – by others;
16. Lathing systems for ceramic, mosaic tile, see Tile, Terrazzo, Marble, Granite and Stone, Included;
17. Common scaffold or platform when required to perform work by multiple trades;
18. Temporary heat, general lighting, power, sanitation and water for general construction;
19. Hoarding;
20. Final Cleaning before turnover;
21. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
22. Firestopping;
23. Supply and maintenance of garbage and recycling bins for construction waste;
24. Removal of construction waste from job site;
25. General site security.

Gypsum Board and Metal Framing

SCOPE NARRATIVE

This scope includes the supply and installation of unfinished and pre-finished gypsum board on metal and/or wood framing including trim and accessories, and joint taping and finishing ready for the application of finishing coating or covering. Metal framing consisting of structural and non-structural metal framing systems, ceiling suspension systems, and furring systems for gypsum board and other applications.

GENERAL NOTE: If Panelized Structural Cold-Formed Steel Assemblies are specified on the project, then all exterior walls, soffits, and parapet assemblies excluding interior finishes and insulations, are included in that trade's scope of work, otherwise it is supplied and installed by this trade division.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. All light gauge steel stud framing assemblies, for exterior walls, interior walls, stairwells and elevator or mechanical shafts or plenums, bulkheads, pony walls including lateral load bearing studs for exterior wind-load bearing walls, complete with all associated fasteners, pins, hangers, screws, wall channels, and cross bracing, excluding the framing assemblies of other sections, see Gypsum Board and Metal Framing, Excluded, Panelized Structural Cold-Formed Steel Assemblies, Included; Lath and Plaster, Included, Demountable Partitions, Included and Excluded;
2. Light gauge steel stud framing assemblies whether or not covered by gypsum board, or when gypsum is applied one side or both sides;
3. Light gauge steel studs shall be manufactured from 18 mil to 97 mil (25 gauge to 12 gauge) (metric equivalents 0.50 mm to 2.46 mm) and roll formed;
4. Specialized framing assemblies to shaft walls;
5. Light gauge steel stud framing for all parapet and curb walls except when Panelized Structural Cold-Formed Steel Assemblies is specified on the project, see, Panelized Structural Cold-Formed Steel Assemblies, Included;
6. Metal suspensions, Panelized Structural Cold-Formed Steel Assemblies system and/or metal furring capable of supporting all appurtenances supported by ceiling or exterior soffits, for suspended gypsum board or spray-textured ceilings, or as a suspended substrate for plywood sheathing or other materials, applied by others;
7. Flexible sheet membrane which forms part of the building air barrier directly behind a gypsum board system including connection to work of the preceding trade where required. If connection is required by any trade following the gypsum board installation then the Gypsum Board and Metal Framing contractor provides a minimum of 200 mm, unless otherwise specified, of overlap material beyond the exterior point of the gypsum board system;
8. Installation of flexible sheet membrane; placed under roof curb framing, exterior walls and parapet walls, which forms part of the building air barrier or vapor barrier and when installation of curb framing is the first component installed. If connection is required by any trade following installation of metal framing, then the trade contractor responsible for installation of metal framing will provide a minimum 200 mm overlap material to each side of the roof curb framing;
9. Sound insulation for metal or wood stud framing only (mineral wool, ceramic, fibrous batt, fiber board), including application of noise stop board, resilient sound bars, gaskets and caulking;
10. Thermal insulation for steel or wood stud framing assemblies, (fibrous batt, mineral wool, rigid or loose fill attic insulation) directly behind gypsum board, including where walls are strapped (not to include cavity wall insulation);
11. Supply and installation of all sheet lead sound baffles and sound barriers where required for sound attenuation and which are integral to the gypsum board system or above gypsum board partitions installed by this trade;
12. Supply and installation of security mesh or panels up to 3.8 mm (9 gauge) incorporated into or behind gypsum board or ceiling assemblies;
13. Gypsum board to steel or wood wall and ceiling framing assemblies, including joint treatment where applicable;
14. Vapor barrier directly behind gypsum board;
15. Cementitious wall board or Magnesium oxide board except where used as backing for Tile, Terrazzo, Marble and Granite, see Tile, Terrazzo, Marble, Granite and Stone, Included;

Gypsum Board and Metal Framing – continued

16. Exterior gypsum sheathing and rigid or semi-rigid insulation when used as a sheathing material and applied directly to the exterior surface of light gauge steel studs only, excluding gypsum sheathing forming a part of other assemblies, see Gypsum Board and Metal Framing, Excluded, Panelized Structural Cold-Formed Steel Assemblies, Included;
17. Factory laminated vinyl gypsum board complete prefinished metal or plastic trims and accessories, if when there are no prefinished demountable partitions on the project to be tendered;
18. Gypsum board backing and/or metal suspension system where ceiling is partially or wholly covered with acoustic tile or wood or other material. Joint treatment on exposed or unexposed to be included;
19. Sprayed texture to gypsum board ceilings and to concrete surfaces including the primer paint for same, see Painting, Excluded;
20. Inserts, hangers, trim and support moldings capable of supporting light fixtures (electrical light fixtures exceeding 610 mm x 1220 mm or exceeding 22.5 kg per square metre in weight shall be independently supported by others);
21. Inserts, hangers, trim and support moldings capable of supporting radiant panels and mechanical grilles (panel and grilles exceeding 610 mm x 1220 mm or exceeding 22.5 kg per square metre in weight shall be independently supported by others);
22. Fire protection boxes to recessed fixtures in gypsum board systems where required for fire rated assemblies;
23. Gypsum board metal trim accessories, such as corner bead, casing bead, metal trims and reveals;
24. Installation of access doors and lightweight steel framing as required and incorporated into wall and ceiling assemblies as provided and located by others, see Mechanical A. Common Mechanical Items, Prime Electrical A. Common Electrical Items;
25. Caulking (other than firestopping) to structural, mechanical or electrical penetrations in gypsum board surfaces;
26. Installation only of gypsum board trims (frames) to gypsum board surfaces for lighting fixtures (excluding lighting fixture components);
27. Supply and installation of prefinished metal moldings for support of radiant heating panels when installed as an integral part of the gypsum board ceiling system;
28. Installation preformed metal deck filler strips when covered with gypsum board where required to maintain sound transmission ratings;
29. Installation of preformed metal deck filler strips used to maintain fire and smoke barriers to walls and partitions as provided by others, see Firestopping, Included;
30. Installation only, of welded pressed steel door and window frames incorporated into interior or exterior light gauge steel stud wall assemblies, as supplied by others, see Metal Doors and Frames, Included;
31. Sound baffles made of materials described in this scope, including lead sound barriers;
32. Engineering costs associated with this trade required for the design of light gauge steel stud framing and/or wall systems to suit a specific project, as indicated in the tender documents;
33. Material handling, including unloading and hoisting;
34. Scaffolding/man lifts where required to perform work by this trade scope;
35. Trade specific lighting to perform tasks;
36. Trade cleanup – cleanup for work carried out by this trade;
37. General cleanup – provide 1 in 10 workers to assist for 4 hours weekly to assist in general jobsite cleanup;
38. Warranty and Submittals and Operation and Maintenance documentation as specified in the tender documents;
39. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
40. Protection of other trades' work from damage when performing this trade's scope of work;
41. Building Information Modeling (BIM) as it applies to this trade scope;
42. Commissioning as it applies to this trade scope.

Gypsum Board and Metal Framing - continued

EXCLUDED

1. Light gauge steel studs for lath and plaster systems, both sides, and no sheathing or other materials attached, see Lath, Plaster and Stucco, Included and Excluded;
2. Light gauge steel studs for prefinished demountable partitions;
3. Axial load bearing cold-formed steel stud assemblies when part of the Panelized Structural Cold-Formed Steel Assemblies, see Panelized Structural Cold-Formed Steel Assemblies, Included;
4. Steel framing for exterior soffits, including hangers and supports, when part of the Panelized Structural Cold-Formed Steel Assemblies, see Panelized Structural Cold-Formed Steel Assemblies, Included;
5. Supply and installation of metal or wood backing in steel stud partitions – by others;
6. Installation of preformed metal deck fillers used as part of a listed firestop system and to maintain fire and smoke barriers to walls and partitions as specified, see Firestopping;
7. Poly vapor hats, see Electrical, Included;
8. Supports for light fixtures and radiant panels exceeding 610 mm x 1220 mm or exceeding 22.5 kg per square metre in weight;
9. Metal furring for direct attachment of metal siding;
10. Gypsum board or exterior gypsum sheathing when applied over a roof deck as part of the roofing system;
11. Cementitious wall board or magnesium oxide board when used as a backing for tile, terrazzo, marble, granite and stone, see Tile, Terrazzo, Marble, Granite and Stone, Included;
12. Exterior gypsum sheathing when part of the Panelized Structural Cold-Formed Steel Assemblies, see Panelized Structural Cold-Formed Steel Assemblies, Included;
13. Supply of trims and/or moldings for radiant panels when specified to be supplied with the radiant panel. This contractor to install, see Mechanical B. Prime Mechanical, Included;
14. Building paper;
15. Plywood or wood sheathing installed to steel stud framing and or furring systems;
16. Lead shielding for x-ray protection and medical imaging;
17. Corner guards or expansion joint covers which are pre-manufactured and surface mounted;
18. Firestopping;
19. Installation of air grilles, access panels and accessories if independently suspended;
20. Temporary heat, light, power, sanitation and water;
21. Common scaffold or platform when required to perform work by multiple trades;
22. Temporary heat, general lighting, power, sanitation and water for general construction;
23. Hoarding;
24. General and final clean up;
25. Final Cleaning before turnover;
26. Security costs. Where security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
27. Supply and maintenance of garbage and recycling bins for construction waste;
28. Removal of construction waste from job site;
29. General site security.

Prefinished Demountable Partitions

SCOPE NARRATIVE

This scope includes the supply and installation of prefinished demountable partition systems which are site constructed complete with all components and accessories integral and part of the finished wall system. Demountable Partitions are designed to be easily relocated or modified without damaging the permanent surrounding surfaces.

Prefinished – means exposed components that do not require jobsite finishing.

Demountable – means readily dismantled and re-erected using prefinished component parts.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. Light gauge steel stud framing assemblies, for prefinished demountable partitions and other prefinished vinyl coated wall surfaces complete with all associated fasteners, pins, hangers, screws, wall channels, and cross bracing, except where gypsum board is installed on one side and excluding the framing assemblies of other sections, see Gypsum Board and Metal Framing, Included and Excluded;
2. Sound Insulations and internal linings for prefinished demountable partitions;
3. Factory applied vinyl covered board, (except where used as lay in panels for component ceiling systems):
 - a. Be supplied and installed by the prefinished demountable partition contractor when prefinished demountable partitions are specified on the project;
 - b. Be supplied and installed by the Gypsum Board and Metal Framing contractor when prefinished demountable partitions are not specified on the project;
4. Unfinished gypsum board installed above the ceiling line or behind vinyl wall surfaces required to be part of a fire-rated partition;
5. Aluminum door and window frames for use in demountable partitions;
6. Installation only of hollow metal door and window frames in demountable partitions;
7. All prefinished components and accessories for prefinished demountable partitions including aluminum, plastic and pre-finished metal frames, battens, bases, ceiling trim, which are part of the demountable manufacturer's system;
8. Matching perimeter prefinished panels and/or trims as specified;
9. Supply of glass stops and or glazing beads for installation by the Glass and Glazing contractor, see Glass and Glazing, Included;
10. Chalkboards, tack-boards and display boards which are incorporated and an integral part in the prefinished demountable partition system;
11. Prefinished surfaces which form part of the prefinished demountable system;
12. Scaffolding/man lifts where required to perform work by this trade scope;
13. Material handling, including unloading and hoisting;
14. Trade specific lighting to perform tasks;
15. Trade cleanup - cleanup for work carried out by this trade;
16. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
17. Warranty or Guaranty;
18. Submittals and Operation and Maintenance documentation as specified in the tender documents;
19. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
20. Protection of other trades' work from damage when performing this trade's scope of work;
21. Building Information Modeling (BIM) as it applies to this trade scope.

Prefinished Demountable Partitions – continued

EXCLUDED

1. Factory-built prefabricated panelized wall systems not utilizing standard metal stud framing and gypsum board systems;
2. Supply and installation of backing in steel stud partitions – by others;
3. All gypsum board application requiring taping and filling on the jobsite;
4. Vinyl coated gypsum lay in panels, see Component Ceiling Systems, Included;
5. Folding partitions, operable walls and moveable acoustical screens;
6. Supply and installation of glass and glazing;
7. Supply and installation of wood frames, doors, hardware etc.;
8. Supply and installation of all doors and hardware;
9. Surface mounted chalkboards, tack-boards, display cabinets, chair rails, handrails and any prefinished millwork items;
10. Staining, varnishing or painting of doors and metal frames;
11. Supply of hollow metal frames or lights and the sorting and loading of hollow pressed steel door and/or window frames;
12. Supply of preformed metal deck fillers used to maintain fire and smoke barriers to walls and partitions as specified, see Firestopping;
13. Backing and preparation of aluminum frames to receive hardware;
14. Rubber base;
15. Temporary heat, general lighting, power, sanitation and water for general construction;
16. Hoarding;
17. Final Cleaning before turnover;
18. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
19. Firestopping;
20. Supply and maintenance of garbage and recycling bins for construction waste;
21. Removal of construction waste from job site;
22. General site security.

Component Ceiling Systems and Manufactured Acoustical Units

SCOPE NARRATIVE

This scope includes the supply and installation of the following including accessories to provide a complete system:

1. Pre-finished manufactured acoustical units when used for the primary purpose of acoustical sound absorption;
2. Pre-finished manufactured components that form an integral part of a suspended ceiling system installed as an interior ceiling finish and/or exterior soffit;
3. The same manufactured component materials as above when used as an interior wall finish and/or exterior cladding
4. Ceiling suspension assemblies.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Component ceiling systems consisting of one or more of the following:
 - a. Wood fibre, mineral or glass fiber acoustical tile;
 - b. Wood fibre, mineral or glass fiber acoustical ceiling lay-in-panels;
 - c. Gypsum ceiling lay-in panels;
 - d. Perforated and/or un-perforated metal pan ceiling panels;
 - e. Vinyl or plastic ceiling panels;
 - f. Wood veneer ceiling panels;
 - g. Linear metal and/or wood linear ceiling and/or soffit system;
 - h. All luminous ceiling, decorative lenses and/or valance lay in panels, leaf-type reflectors, egg crate louvres, and/or light diffusers whether made of metal plastic wood or glass;
 - i. Preformed decorative ceilings;
2. Component ceiling suspension systems specifically designed for the support of component ceiling system or when used as a wall finish consisting of:
 - a. Adhesives, staples, nails, screws, etc. for attachment of ceiling systems components and/or manufactured acoustical units;
 - b. Carrying channels and furring channels (not exceeding 2.0 mm thick or 14 ga. materials) when used:
 - i as an integral part of component ceiling systems;
 - ii to meet Underwriters Laboratories Canada designs;
 - iii to support manufactured acoustical units;
 - c. Concealed and/or semi-concealed suspension systems;
 - d. Exposed metal grid suspension systems;
 - e. Inserts and hangers capable of supporting component ceiling systems and all superimposed loads (electrical light fixtures exceeding 610 mm x 1220 mm shall be independently supported by other);
 - f. Inserts, hangers, trim and support moldings capable of providing perimeter support for edge radiant heat panels when installed as an integral part of the component ceiling system, and when trim and support materials are specified to match the ceiling system;
 - g. Metal and/or wood linear ceiling suspensions and furring systems;
 - h. Metal and plastic moldings required in conjunction with the direct support of the component ceiling suspension systems installed by this trade (see Electrical, Excluded);
 - i. Metal furring required to accept materials installed by this trade;
 - j. Sound isolation hangers which form an integral part of the hanger assembly of a component ceiling suspension system;
3. Removal of existing installations when the materials are to be re-used or retained as specified;
4. Fire protective boxes and/or blankets for electrical fixtures and mechanical diffusers as required in Underwriters Laboratories Canada designs for floor/roof – ceiling assemblies;
5. Insulating blankets laid directly on top of ceiling suspension system installed by this trade;
6. Luminous light and/or decorative lenses and/or louvres, including metal and/or plastic support molding when installed in architectural valances not constructed by this trade, see Electrical, Excluded;

Component Ceiling Systems and Manufactured Acoustical Units - continued

7. Manufactured acoustical units consisting of:
 - a. Sound absorbing wall panels;
 - b. Sound absorbers;
 - c. Suspended sound baffles;
8. Preformed architectural light coves and valances when used as a direct support or forming an integral part of a component ceiling system installed by this trade;
9. Preformed metal break-shapes (not exceeding 2.0 mm thick or 14-gauge material) when used as a direct support of or forming an integral part of a ceiling system installed by this trade;
10. Preformed valance and curtain pockets when used as a direct support or forming an integral part of a component ceiling system installed by this trade;
11. Material handling, including unloading and hoisting;
12. Scaffolding/man lifts where required to perform work by this trade scope;
13. Trade specific lighting to perform tasks;
14. Trade cleanup - cleanup for work carried out by this trade;
15. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup.
16. Warranty or Guaranty;
17. Submittals and Operation and Maintenance documentation as specified in the tender documents;
18. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
19. Protection of other trades' work from damage when performing this trade's scope of work;
20. Building Information Modeling (BIM) as it applies to this trade scope.

Component Ceiling Systems and Manufactured Acoustical Units – continued

EXCLUDED

1. Acoustical plaster ceiling finishes and suspension systems;
2. Acoustical wall treatment where constructed of materials that are not a manufactured acoustical material and recognized as an acoustically rated unit e.g. carpet underlay, sprayed wall coatings and coverings, etc.;
3. Caulking;
4. Gypsum board, plaster or wood fabricated valance pockets, curtain pockets, architectural light coves and valances;
5. Gypsum board and/or plaster ceiling finishes and suspension systems;
6. Inserts and hanger supports for Electrical and Mechanical fixtures exceeding 610 mm x 1220 mm;
7. Trims and/or molding for radiant panels when specified to be supplied with the radiant panel;
8. Gypsum board backing including suspension systems;
9. Job fabricated enclosures for acoustical batt and/or blankets;
10. Light lenses, egg crate lenses or louvres when forming an integral part of an individual light fixture when part of electrical scope;
11. Luminous light and/or decorative lenses, including metal and/or plastic support molding when installed as a sign band;
12. Metal flashing when not of the same color or material as the prefinished metal linear fascia and soffits;
13. Metal moldings or suspension that is not an integral part of work done by this trade;
14. Non-factory applied finishes or site finishing of any work under this trade section except for touch-up;
15. Perforated or un-perforated metal and/or hardboard liners, wall cladding or exterior soffits when comprised of metal siding or decking products;
16. Preparation of concrete, wood or gypsum surfaces to receive work by this trade;
17. Preparation of reflected ceiling drawings;
18. Demolition of existing materials except as provided in Included;
19. Sound absorption panels and/or sound dampening systems used for mechanical and equipment;
20. Sound attenuation barriers where used in plenum space above partitions connected and/or sealed to ceiling system or structure above;
21. Sprayed applied acoustical materials;
22. Structural components required to meet specific Underwriter Laboratory Canada designs other than that forming an integral part of component ceiling systems;
23. Supplementary safety chains and support devices as may be required for electrical, mechanical, etc. fixtures;
24. Wood blocking, furring, strapping, trims and casings for materials other than those used by this trade;
25. Common scaffold or platform when required to perform work by multiple trades;
26. Temporary heat, general lighting, power, sanitation and water for general construction;
27. Hoarding;
28. Final Cleaning before turnover;
29. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
30. Firestopping;
31. Supply and maintenance of garbage and recycling bins for construction waste;
32. Removal of construction waste from job site;
33. General site security.

Tile, Terrazzo, Marble, Granite, and Stone

SCOPE NARRATIVE

This scope includes for the supply and installation of tile units not exceeding 50 mm in thickness and consisting of baked clay and/or other materials including stone, glass and metal to provide a finished floor surface, stair treads, stair risers, stair base and stringer, promenade roofs, walks, walls, ceilings, swimming pools and all places where tile is used to form a finished interior or exterior surface for practical use, sanitary finish or decorative purposes.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. Tile is the following products provided they do not exceed 50 mm in thickness, as follows:
 - a. Burned clay products (including pavers) unglazed porcelain pavers or natural clay tile, as used in the tile industry;
 - b. Ceramic tile, porcelain mosaic tile, glazed wall tile, monocottura tile, bicottura tile and quarry tile;
 - c. Glass mosaic tile, plastic and metal tile;
 - d. Stone (natural or artificial), marble, concrete, brick tiling, granite, precast terrazzo or cultured marble, where used as a floor or wall finish;
 - e. Stone (Natural and Artificial) marble, granite, slate, travertine, limestone, precast terrazzo or cultured marble where used as an interior or exterior floor or wall finish;
 - f. Conductive Tiles – installation of electrically conductive tiles which are static conductive to prevent spark discharge;
 - g. Chemical resistant tile, tiling with chemical-resistant tile, mortar and grout;
 - h. Masonry flooring – fired clay unit masonry and natural, simulated and cast stone flooring;
 - i. Stone facing – dimension stone facing for interior walls.
 - j. Terrazzo flooring – cast in place, sand cushion bed, monolithic, bonded and adhesively- bonded Portland cement terrazzo, poured in place epoxy, polyester, and conductive plastic matrix terrazzo, and precast terrazzo;
2. Terrazzo where used as a finish for walls, floors, bases, curbs, stair treads, stair risers, stair bases and stair stringers which are poured in place, containing graded colored chips of marble, granite or other composition chips of various sizes, which is to be ground. Includes rustic terrazzo, either ground or not;
3. Cementitious and coated glass mat backer wallboard when used as a backing for this trade;
4. Application of surface preparation materials and primers and setting material such as cement mortar, epoxy mortars, furan resins, prepared to proper tolerance to receive tile on floors, walls and ceilings, setting of tiles by the adhesive method with organic and/or inorganic thin bed bonding materials where such bonding material is applied to the backing surface and/or the backs of the tile units' sheets of tile;
5. Setting of tiles by the adhesive method with organic and /or inorganic thin bed bonding materials where such bonding material is applied to the backing surface and/or the backing of tile units or sheets of tile;
6. Mortar bed for tile work, dry set mortar bed including welded wire or fabric reinforcing, when specified;
7. Lathing systems for ceramic, mosaic tile, see Lath, Plaster and Stucco, Excluded;
8. Installation of a cast in place, sand and cement base for terrazzo flooring;
9. Embedded metal divider and expansion joint strips for terrazzo flooring as specified;
10. Caulking/grouting (other than firestopping) between the individual tiles, marble, granite, slate, or precast terrazzo panels;
11. Laying, cutting, setting and sealing of all tile where used on floors, bases, walls, ceilings, walks, promenade roofs, exterior veneers, stair treads, stair risers, facings, hearth, fireplaces and decorative inserts, together with any marble plinths, thresholds or window stools used in connection with any tile work;
12. Scratch and leveling coats for tile work;
13. Rubber or neoprene pans for shower floors and steam rooms;
14. Exposed metal trims to baseboard and edge of wall tiles;
15. Crack isolation, uncoupling, sound reduction and water proofing membranes;
16. Electric in floor heating mats and cables installed under tiles installed by this trade. Electrical connections by electrician, see Electrical, Included;
17. Cleaning of installed products (such as acid wash);
18. Waterproofing material or coating when part of the backing system for installation of materials used by this trade;

Tile, Terrazzo, Marble, Granite, and Stone - continued

19. Testing where specifically required by the specifications;
20. Supply of non-slip tile nosing for poured concrete stairs;
21. Material handling, including unloading and hoisting;
22. Scaffolding/ man lifts where required to perform work by this trade scope;
23. Trade specific lighting to perform tasks;
24. Trade cleanup – cleanup for work carried out by this trade;
25. General cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
26. Warranty or Guaranty;
27. Submittals and Operation and Maintenance documentation as specified in the tender documents;
28. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
29. Protection of other trade's work from damage when performing this trades scope of work;
30. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Resilient floor tile coverings, acoustic or ceiling tile;
2. Cementitious backing board for installations other than provided by this trade.
3. Caulking between materials in this scope and other trades materials (metal, glass, brick etc.);
4. Continuous metal supporting angles, metal slots, boxes or anchorages which are built into a structural wall;
5. Expansion joints except in terrazzo floors;
6. Exterior flashing at doors and windows;
7. Lead pans;
8. Metal lath;
9. Miscellaneous iron work and manufactured specialty items (mat sinkage frames);
10. Testing of pools and showers;
11. Waterproof membranes when not used in conjunction with materials used by this trade;
12. Wood grounds;
13. Common scaffold or platform when required to perform work by multiple trades;
14. Temporary heat, general lighting, power, sanitation and water for general construction;
15. Hoarding;
16. Final Cleaning before turnover;
17. Security costs. Where security is required for trades to complete their work these services and costs for same will be provided by the general contractor;
18. Firestopping;
19. Supply and maintenance of garbage and recycling bins for construction waste;
20. Removal of construction waste from job site;
21. General site security.

Finished Flooring

SCOPE NARRATIVE

This scope includes the supply and installation of finished flooring as per the definitions below including all accessories to provide a complete finished floor surface:

- A. **Hardwood Flooring** - includes flooring composed of wood with various types of backing including athletic, gymnasium, sports hardwood flooring;
- B. **Laminated Wood Flooring** - includes all laminated wood flooring;
- C. **Specialty Flooring** - includes bamboo, cork, leather, acoustic, acid-resistant, athletic flooring other than hardwood and other types of flooring not listed in other sections;

The Finished Flooring scopes can be tendered separately or can be submitted as one combined tender.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

A. Hardwood Flooring

SCOPE NARRATIVE

This scope includes the supply and installation of hardwood flooring with various types of backing wood includes sleepers and subfloor installation and adhesives and all accessories to provide a finished floor surface. This flooring is used as an aesthetic finish and athletic, gymnasium and sports wood flooring;

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Verification of moisture and alkalinity testing that was not done by others. This may mean conducting moisture indicator testing (not moisture testing);
2. Minor preparation of substrate surfaces including filler and primer, sub-floors to be made level and true by others (General Contractor);
3. Acclimatization of all materials;
4. Approved moisture barrier or sheathing membrane when specified;
5. Approved resilient / acoustical underlayment when specified;
6. All hardwood flooring including, but not limited to the following:
 - a. Solid strip and plank flooring;
 - b. Solid parquet flooring including self-adhesive parquet flooring;
 - c. Engineered strip and plank flooring;
 - d. Engineered parquet flooring including self-adhesive engineered parquet flooring;
 - e. Acrylic impregnated wood flooring;
 - f. Strip block flooring;
 - g. Sports flooring including sub-floors, resilient pads, vent-cove base, and floor sockets;
 - h. Special proprietary hardwood flooring systems;
 - i. Wood base and quarter round trim;
 - j. Wood stair assemblies including wood treads, risers, nosing's, and stringers and excluding metal nosing's where indicated;
7. Hardwood flooring accessories, including:
 - a. Moldings and trims;
 - b. Reducing / transition strips;
 - c. Thresholds;
 - d. Expansion fillers;
8. All adhesives required for installation;

A. Hardwood Flooring - continued

9. All fasteners required for installation including nails, staples, screws;
10. All site-applied surface finishes, seals, stains, and bleaches, including site touch-up of factory applied finishes;
11. Layout / pattern plans when so specified;
12. Removal of packaging material and remnants specifically pertaining to this trade;
13. Provision and packaging of maintenance materials and excess stock as specified;
14. Material handling, including unloading and hoisting;
15. Scaffolding/man lifts where required to perform work by this trade scope;
16. Trade specific lighting to perform tasks;
17. Trade cleanup - cleanup for work carried out by this trade;
18. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
19. Warranty or Guaranty;
20. Submittals and Operation and Maintenance documentation as specified in the tender documents;
21. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
22. Protection of other trades' work from damage when performing this trade's scope of work;
23. Supply of the appropriate personnel for assisting in the coordination of system installations;
24. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Substrate testing including moisture (vapor emission) and alkalinity tests;
Note: that this work may be included in the work where flooring is the only contract (as in the installation of hardwood flooring in existing rooms or areas) subject to prior agreement with the Owner;
2. All other preparation of surfaces required for installation of resilient flooring including substrate preparation, and supply and installation of self-leveling cementitious underlayment and poured latex toppings;
3. Maintenance and protection of installed hardwood flooring prior to Substantial Performance. Such protection shall be provided by others using materials and methods acceptable to the hardwood flooring manufacturer;
4. Repairs to damage by others during and after completion of work;
5. Barricades;
6. Common scaffold or platform when required to perform work by multiple trades;
7. Temporary heat, general lighting, power, sanitation and water for general construction;
8. Hoarding;
9. Final Cleaning before turnover;
10. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
11. Firestopping;
12. Supply and maintenance of garbage and recycling bins for construction waste;
13. Removal of construction waste from job site;
14. General site security.

B. Laminated Wood Flooring

SCOPE NARRATIVE

This scope includes the supply and installation of laminated flooring, adhesives and accessories to provide a finished flooring surface.

Laminated Flooring is a multi-layer synthetic flooring product fused together with a lamination process. Laminate flooring simulates wood (or sometimes stone) with a photographic applique layer under a clear protective layer. The inner core layer is usually composed of melamine resin and fiber board materials.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Verification of moisture and alkalinity testing that was not done by others. This may mean conducting moisture indicator testing (not moisture testing);
2. Minor preparation of substrate surfaces including filler and primer, sub-floors to be made level and true by others (General Contractor);
3. Acclimatization of all materials;
4. Approved panel underlayment when specified prior to the installation of laminate flooring;
5. Approved moisture barrier or sheathing membrane when specified;
6. Approved resilient / acoustical underlayment when specified;
7. All laminate flooring;
8. Laminate flooring accessories; including:
 - a. Moldings and trims;
 - b. Reducing / transition strips;
 - c. Thresholds;
9. Layout / pattern plans when so specified;
10. Site touch-up of factory applied finishes after installation as required;
11. Removal of packaging material and remnants specifically pertaining to this trade;
12. Provision and packaging of maintenance materials and excess stock as specified;
13. Material handling, including unloading and hoisting;
14. Scaffolding/man lifts where required to perform work by this trade scope;
15. Trade specific lighting to perform tasks;
16. Trade cleanup - cleanup for work carried out by this trade;
17. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
18. Warranty or Guaranty;
19. Submittals and Operation and Maintenance documentation as specified in the tender documents;
20. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
21. Protection of other trades' work from damage when performing this trade's scope of work;
22. Commissioning as it applies to this trade scope;
23. Building Information Modeling (BIM) as it applies to this trade scope.

B. Laminated Wood Flooring – continued

EXCLUDED

1. Substrate testing including moisture (vapor emission) and alkalinity tests;
Note: that this work may be included in the work where flooring is the only contract (as in the installation of hardwood flooring in existing rooms or areas) subject to prior agreement with the Owner;
2. All other preparation of surfaces required for installation of resilient flooring including substrate preparation, and supply and installation of self-leveling cementitious underlayment and poured latex toppings;
3. Final cleaning and vacuuming;
4. Maintenance and protection of installed laminate flooring prior to Substantial Performance. Such protection shall be provided by others using materials and methods acceptable to the laminate floor covering manufacturer;
5. Repairs to damage by others during and after completion of work;
6. Barricades;
7. Temporary heat, general lighting, power, sanitation and water for general construction;
8. Hoarding;
9. Final Cleaning before turnover;
10. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
11. Firestopping;
12. Supply and maintenance of garbage and recycling bins for construction waste;
13. Removal of construction waste from job site;
14. General site security.

C. Other Flooring (Specialty Flooring)

SCOPE NARRATIVE

This scope the supply and installation of the associated flooring, adhesives and accessories to provide a finished flooring surface.

Other Flooring - includes bamboo, cork, leather, chemical-resistant, athletic flooring other than hardwood and other types of flooring not listed in other sections;

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Verification of moisture and alkalinity testing that was not done by others;
2. Minor preparation of substrate surfaces including filler and primer, sub-floors to be made level and true by others (General Contractor);
3. Approved panel underlayment when specified prior to the installation of flooring;
4. Approved moisture barrier or sheathing membrane when specified;
5. Acclimatization of all materials;
6. Approved resilient / acoustical underlayment when specified;
7. Following types of flooring:
 - a. Bamboo flooring;
 - b. Cork flooring;
 - c. Athletic flooring other than hardwood floors;
 - d. Other flooring types not listed in other sections;
8. Vinyl and rubber base;
9. Flooring accessories, including:
 - a. Moldings and trims;
 - b. Reducing / transition strips;
 - c. Thresholds;
 - d. Expansion fillers;
10. Adhesives with application;
11. All site-applied surface sealers, stains, and finishes including site touch-up of factory applied finishes or pre-finished flooring;
12. Removal of packaging material and remnants specifically pertaining to this trade;
13. Provision and packaging of maintenance materials and excess stock as specified;
14. Caulking to own work where required;
15. Material handling, including unloading and hoisting;
16. Trade specific lighting to perform tasks;
17. Trade cleanup – cleanup for work carried out by this trade;
18. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
19. Warranty or Guaranty;
20. Submittals and Operation and Maintenance documentation as specified in the tender documents;
21. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
22. Protection of other trades' work from damage when performing this trade's scope of work;
23. Commissioning as it applies to this trade scope;
24. Building Information Modeling (BIM) as it applies to this trade scope.

C. Other Flooring (Specialty Flooring) – continued

EXCLUDED

1. Substrate testing including moisture (vapor emission) and alkalinity tests;
Note: that this work may be included in the work where flooring is the only contract (as in the installation of hardwood flooring in existing rooms or areas) subject to prior agreement with the Owner;
2. All other preparation of surfaces required for installation of resilient flooring including substrate preparation, and supply and installation of self-leveling cementitious underlayment and poured latex toppings;
3. Athletic and gymnasium flooring composed of hardwood;
4. Troweled on latex underlayment except when specified in conjunction with specific installation systems;
5. Maintenance and protection of installed flooring prior to Substantial Performance. Such protection shall be provided by others using materials and methods acceptable to the floor covering manufacturer;
6. Repairs to damage by others during and after completion and acceptance of the work;
7. Cleaning and sealing or the application of any other type of protective coatings, unless specified;
8. Final cleaning;
9. Base to demountable partitions, unless specified;
10. Barricades;
11. Temporary heat, general lighting, power, sanitation and water for general construction;
12. Hoarding;
13. Final Cleaning before turnover;
14. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
15. Firestopping;
16. Supply and maintenance of garbage and recycling bins for construction waste;
17. Removal of construction waste from job site;
18. General site security.

Resilient Floor Coverings

SCOPE NARRATIVE

This scope includes the supply and installation of resilient floor tile and sheet floor coverings including resilient baseboards, stair treads and risers, stair nosing's, edging, and transitions to other flooring materials and all the accessories required to provide a finished floor surface.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Verification of moisture and alkalinity testing that was not done by others. This may mean conducting moisture indicator testing (not moisture testing);
2. Minor preparation of substrate surfaces including filler and primer, sub-floors to be made level and true by others (General Contractor);
3. Acclimatization of all materials;
4. Approved panel underlayment when specified prior to the installation of resilient flooring;
5. Following types of resilient flooring:
 - a. Vinyl sheet and tile flooring including solid vinyl and vinyl composition tile;
 - b. Linoleum sheet and tile flooring;
 - c. Rubber sheet and tile flooring;
 - d. Specialty resilient flooring (safety flooring, athletic and gym flooring, etc.);
 - e. Conductive flooring;
6. Following types of bases:
 - a. Vinyl and rubber base;
 - b. Self-cove and flash coved resilient sheet flooring bases including trim capping;
7. Vinyl and rubber stair coverings (treads, risers, stringers, nosing's, landing coverings, and hazard warning strips);
8. Resilient floor coverings for exterior locations;
9. Fixed resilient flooring mats and runners when specified in conjunction with regular resilient flooring installation, or when sold separately;
10. Resilient flooring accessories, including:
 - a. Reducing / transition strips;
 - b. Nosing's, including metal;
11. Adhesives with application;
12. Custom installation requirements when specified (such as heat welding, flash coving, provision of special drains, water jet cutting for inlay work, etc.);
13. Seaming plans when so specified;
14. Removal of packaging material and remnants specifically pertaining to this trade;
15. Provision and packaging of maintenance materials and excess stock as specified;
16. Caulking to own work where required;
17. Material handling, including unloading and hoisting;
18. Trade specific lighting to perform tasks;
19. Trade cleanup - cleanup for work carried out by this trade;
20. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
21. Warranty or Guaranty;
22. Submittals and Operation and Maintenance documentation as specified in the tender documents;
23. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
24. Protection of other trades' work from damage when performing this trade's scope of work;
25. Building Information Modeling (BIM) as it applies to this trade scope.

Resilient Floor Coverings - continued

EXCLUDED

1. Athletic and gymnasium flooring composed of hardwood, see Finished Flooring - Hardwood, Included;
2. Substrate testing including moisture (vapor emission) and alkalinity tests;
Note: This work may be included where flooring is the only contract (as in the installation of resilient flooring in existing rooms or areas) subject to prior agreement with the Owner;
3. All other preparation of surfaces required for installation of resilient flooring including substrate preparation, and supply and installation of self-leveling cementitious underlayment and poured latex toppings;
4. Troweled on latex underlayment except when specified in conjunction with specific installation systems;
5. Maintenance and protection of installed resilient flooring prior to Substantial Performance. Such protection shall be provided by others using materials and methods acceptable to the resilient floor covering manufacturer;
6. Repairs to damage by others during and after completion and acceptance of the work;
7. Cleaning and sealing or the application of any other type of protective coatings, unless specified;
8. Base to demountable partitions, unless specified;
9. Loose laid resilient mats and runners;
10. Resilient flooring as an integral part of access flooring systems, unless specified;
11. Resilient bulletin / tack boards on walls, unless specified;
12. Resilient desk top coverings to millwork, unless specified;
13. Barricades;
14. Temporary heat, general lighting, power, sanitation and water for general construction;
15. Hoarding;
16. Final Cleaning before turnover;
17. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
18. Supply and maintenance of garbage and recycling bins for construction waste;
19. Removal of construction waste from job site;
20. General site security

Carpeting

SCOPE NARRATIVE

This scope includes the supply and installation of carpet to floors and walls, underlay (carpet cushions) and all adhesives and accessories required to provide a complete finished floor surface.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Verification of moisture and alkalinity testing that was not done by others;
2. Minor preparation of substrate surfaces including filler and primer, sub-floors to be made level and true by others (General Contractor);
3. Acclimatization of all materials;
4. Approved panel underlayment when specified prior to the installation of carpet flooring;
5. Carpet cushion (underlay);
6. Broadloom carpet for:
 - a. Tacked installations;
 - b. Tack-less installations;
 - c. Direct glue down installations;
 - d. Wall carpet;
 - e. Base, excluding metal wall capping, incorporated in wall structure;
 - f. Specialty installation such as display stands, etc.;
 - g. Outdoor / exterior installation;
7. Modular carpet or tile for loose laid and glue-down installations;
8. Fixed carpet mats and runners when specified in conjunction with regular carpet installation, or when sold separately;
9. Carpet accessories, including:
 - a. Binder bars;
 - b. Reducing strips;
 - c. Nosing's (other than wood or metal);
10. Resilient (rubber and vinyl) and wood base and stair stringers when so specified;
11. Adhesives with application;
12. Seaming plans when so specified;
13. Removal of packaging material and remnants specifically pertaining to this trade;
14. Provision and packaging of maintenance materials and excess stock as specified;
15. Material handling, including unloading and hoisting;
16. Scaffolding/man lifts where required to perform work by this trade scope;
17. Trade specific lighting to perform tasks;
18. Trade cleanup - cleanup for work carried out by this trade;
19. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
20. Warranty or Guaranty;
21. Submittals and Operation and Maintenance documentation as specified in the tender documents;
22. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
23. Protection of other trades' work from damage when performing this trade's scope of work;
24. Commissioning as it applies to this trade scope;
25. Building Information Modeling (BIM) as it applies to this trade scope.

Carpeting – continued

EXCLUDED

1. Substrate testing including moisture (vapor emission) and alkalinity tests;
Note: that this work may be included in the work where flooring is the only contract (as in the installation of hardwood flooring in existing rooms or areas) subject to prior agreement with the Owner;
2. All other preparation of surfaces required for installation of resilient flooring including substrate preparation, and supply and installation of self-leveling cementitious underlayment and poured latex toppings;
3. Troweled-on latex underlayment except when specified in conjunction with specific installation systems;
4. Base to demountable partitions, unless specified;
5. Loose laid carpet mats and runners;
6. Carpet as an integral part of access flooring systems, unless otherwise specified;
7. Carpet bulletin and tack boards on walls;
8. Maintenance and protection of installed carpet flooring prior to Substantial Performance. Such protection shall be provided by others using materials and methods acceptable to the carpet manufacturer;
9. Repairs to damage by others during and after completion of work;
10. Barricades;
11. Common scaffold or platform when required to perform work by multiple trades;
12. Temporary heat, general lighting, power, sanitation and water for general construction;
13. Hoarding;
14. Final Cleaning before turnover;
15. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
16. Firestopping;
17. Supply and maintenance of garbage and recycling bins for construction waste;
18. Removal of construction waste from job site;
19. General site security.

Seamless (Fluid-Applied) Flooring

SCOPE NARRATIVE

This scope includes the supply and installation of fluid-applied, seamless flooring applied to floors and other horizontal surfaces, to provide an aesthetic, slip resistant or wear resistant surface. Fluid-applied floors are resinous or liquid-applied, durable systems generally comprised of multiple layer application of epoxy, polyester, polyurethane, polyaspartic, methyl-methacrylate, polyurea or other similar high-build coating material.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Fluid-applied flooring material when it is applied to:
 - a. Bases;
 - b. Curbs and gutters;
 - c. Floors;
 - d. Treads, risers, stair base and stringers;
 - e. Walls and coves, when forming a continuation of the flooring application;
2. Fluid-applied flooring components incorporating the use of natural or synthetic fillers, aggregates or binders including the following to provide an aesthetic, chemical resistant, slip resistant (improved traction), wear resistant or thermal shock resistant surface:
 - a. Flake or granular, natural, rubber and synthetic fillers;
 - b. Natural aggregates and compositions when used with polyurethane, epoxy, poly-acrylate, polyurea, polyaspartic, methyl-methacrylate, or urethane;
 - c. Natural or synthetic binders;
 - d. Anti-microbial additives;

And producing a dry film thickness of 250 μm (0.250 mm) (10 mil.) or greater, not including primers and filler coats;
3. Manufactured accessories, such as metallic termination and transition strips, metal nosing's and other components specified as forming part of the seamless fluid-applied flooring system only;
4. Examination of surfaces and testing to confirm compatibility and acceptable surface conditions between substrates and fluid-applied coatings;
5. Mechanical profiling of sub surface to receive fluid-applied flooring;
6. Preparation of surfaces required for installation of fluid-applied flooring including substrate preparation, and supply and installation of self-leveling cementitious underlayment and poured latex toppings specified as forming a part of the fluid-applied flooring system only;
7. Waterproof membranes, sloping and leveling coats when used as part of fluid-applied flooring system;
8. Installation of sealants and caulking between the floor and base termination when specified as forming a part of the fluid-applied floor system only;
9. Submittals and Operation and Maintenance documentation as specified in the tender documents;
10. Shop drawings, sample installations or mock-ups when specified;
11. Trade specific temporary ventilation, if required during the application of the fluid-applied flooring system to control air quality arising from off-gassing, curing and noxious odors associated with installation of materials of this trade;
12. Material handling, including unloading and hoisting;
13. Trade specific lighting to perform tasks;
14. Trade cleanup – cleanup for work carried out by this trade;
15. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;

Seamless (Fluid-Applied) Flooring – continued

16. Warranty or Guaranty;
17. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
18. Protection of other trades' work from damage when performing this trade's scope of work;
19. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Paint products described as forming a part of the Painting Trade Definition;
2. Temporary protection of finished fluid-applied flooring;
3. The soundness or composition of sub surface;
4. Caulking at floor and base terminations when not forming a part of the specific work of fluid-applied flooring;
5. Other resinous flooring systems such as epoxy matrix terrazzo, that have a greater proportion of aggregate to liquid-content, and which requires abrasive grinding and polishing as a component of installation.
6. Temporary heat, general lighting, power, sanitation and water for general construction;
7. Hoarding;
8. Final Cleaning before turnover;
9. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
10. Firestopping;
11. Supply and maintenance of garbage and recycling bins for construction waste;
12. Removal of construction waste from job site;
13. General site security.

Raised Access Flooring

SCOPE NARRATIVE

This scope includes the supply and installation of pre-manufactured, pre-finished free-standing raised access floor systems and related accessories to provide a complete free-standing elevated floor system including ramps, stairs, air outlets and inlets integral with floor panels and forming an under-floor cavity that may be used for utility services.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Access floor panels prefinished or unfinished, constructed of one or more of the following:
 - a. Light weight concrete;
 - b. Steel clad wood core;
 - c. Welded metal/aluminum;
 - d. Prefinished floor finishes when incorporated as integral part of the access floor panel:
 - i. Carpet;
 - ii. High pressure plastic laminate;
 - iii. Resilient floor coverings;
 - iv. Other;
2. Access floor substructure consisting of:
 - a. Adhesives, screws, bolts and anchors;
 - b. Pedestal base plates;
 - c. Pedestal heads;
 - d. Sound deadening pads and/or covers;
 - e. Stringers;
3. Accessories (pre-manufactured only):
 - a. Electrical service centers (packaged equipment) when incorporated into floor panels, when specified;
 - b. Fascia trims;
 - c. Gaskets;
 - d. Grilles that are part of the integrated floor system;
 - e. Grommets;
 - f. Handrails;
 - g. Metal and rubber nosing;
 - h. Panel lifting devices;
 - i. Panel trims and moldings;
 - j. Perforated access floor panels with or without dampers when specified;
 - k. Ramps complete with rubber mats and runners;
 - l. Steps complete with floor finish;
 - m. Under floor baffles and/or plenum dividers;
4. Cleaning and final preparation of prefinished panels as specified;
5. Cutting of panels for electrical and mechanical services and equipment when indicated on drawings;
6. Material handling, including unloading and hoisting;
7. Maintenance material;
8. Metal and/or wood shims;
9. Protection of finished surfaces;
10. Testing where specifically required by the specifications;
11. Under-floor cross bridging when specified;
12. Trade specific lighting to perform tasks;
13. Trade cleanup - cleanup for work carried out by this trade;
14. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
15. Warranty or Guaranty;
16. Submittals and Operation and Maintenance documentation as specified in the tender documents;

Raised Access Flooring - continued

17. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
18. Protection of other trades' work from damage when performing this trade's scope of work;
19. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Baseboards:
 - a. Carpet base and moldings (unless material finish of access floor), see Carpeting;
 - b. Prefinished extruded vinyl plastic, see Prefinished Demountable Partitioning;
 - c. Rubber and vinyl baseboard, see Resilient Floor Coverings;
2. Caulking;
3. Connection of building ground, see Electrical, Included;
4. Electrical connection of service centers;
5. Floor finishes when jobsite applied over access floor panels, such as carpet or floor tile;
6. Ledger angles and anchors set into concrete;
7. Mechanical grilles which are not a part of the integrated floor system;
8. Preparation of access floor panels to receive jobsite applied floor coverings;
9. Under-floor subfloor preparation;
10. Wood blocking, trims and casings for materials other than those used by this trade.
11. Temporary heat, general lighting, power, sanitation and water for general construction;
12. Hoarding;
13. Final Cleaning before turnover;
14. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
15. Firestopping;
16. Supply and maintenance of garbage and recycling bins for construction waste;
17. Removal of construction waste from job site;
18. General site security.

Painting

SCOPE NARRATIVE

This scope includes the supply and application of interior and exterior painting and wall coverings and required accessories to provide a decorative finish to walls, ceilings and exposed surfaces. Including priming, sealing, finish painting and decorative finishes such as vinyl-coated fabrics, cork, wall paper and textile wall covers.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Application and/or removal of protective and/or decorative coatings except those covered under High Performance/Special Coatings;
2. Application of Coatings of:
 - a. Bitumen's applied as paints;
 - b. Emulsions;
 - c. Fibreglass;
 - d. Hypalon;
 - e. Lacquers;
 - f. Primers;
 - g. Mastic;
 - h. Paints;
 - i. Plastics;
 - j. Stains;
 - k. Varnishes;
 - l. Sealers and fillers;
3. Application, using pastes or adhesives, of:
 - a. Burlap;
 - b. Cambric-backed wood veneers;
 - c. Cottons;
 - d. Damasks;
 - e. Grass cloth;
 - f. Cork;
 - g. Muslin;
 - h. Paper;
 - i. Paper backed metal foils;
 - j. Rubber sheeting for tank linings;
 - k. Vinyl wall fabrics;
4. Filling of nail holes, on-site only (see Architectural Woodwork, Included and Excluded);
5. Fire-retardant paint and clear coating to architectural woodwork and wood paneling, excluding pressure treated items;
6. Material handling, including unloading and hoisting;
7. Inspection;
8. Miscellaneous Applications of:
 - a. Gold leaf;
 - b. Metalizing;
 - c. Silver leaf;
9. On-site mechanical and electrical painting, including primary color coding of all pipes, ducts and equipment. Mechanical or electrical contractor to identify where required, see Electrical, Included, Mechanical A. Common Mechanical Items, Included;
10. Protecting sprinkler heads from painting processes, see Mechanical G. Sprinklers and Fire Protection, Excluded;
11. Painting of recreational lines and markings on resilient floor coverings;
12. Scaffolding/man lifts where required to perform work by this trade scope;
13. Trade specific lighting to perform tasks;
14. Trade cleanup - cleanup for work carried out by this trade;
15. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
16. Warranty or Guaranty;
17. Submittals and Operation and Maintenance documentation as specified in the tender documents;
18. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
19. Protection of other trades' work from damage when performing this trade's scope of work;
20. Building Information Modeling (BIM) as it applies to this trade scope.

Painting – continued

EXCLUDED

1. Clear finishes or hardeners to concrete floors;
2. Clear finishes to exterior masonry, see Masonry, Included;
3. Fluid applied high-build coating material when thicker than 250um (0.250mm) (10mil) or greater, see High Performance/Special Coatings, Included;
4. Filling of nail holes in Architectural Woodwork specified to be shop applied finished;
5. Mechanical and electrical stenciling, plastic decals for flow arrows, identification, plastic and/or canvass, colored tape and/or secondary banding;
6. Painting of recreational lines and markings and finishes on hardwood floors;
7. Painting to temporary hoardings or dust walls;
8. Primer paint and priming for sprayed gypsum board texture to gypsum board ceilings and concrete surfaces, see Gypsum Board and Metal Framing, Included;
9. Priming to miscellaneous metals and structural steel as defined in miscellaneous steel, structural steel and mechanical scopes, see Miscellaneous Steel, Included, Structural Steel, Included, Mechanical, Included;
10. Shop applied finishes to architectural woodwork, see Architectural Woodwork, Included;
11. Common scaffold or platform when required to perform work by multiple trades;
12. Temporary heat, general lighting, power, sanitation and water for general construction;
13. Hoarding;
14. Final Cleaning before turnover;
15. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
16. Firestopping;
17. Supply and maintenance of garbage and recycling bins for construction waste;
18. Removal of construction waste from job site;
19. General site security.

Special High-Performance Wall Coatings

SCOPE NARRATIVE

This scope includes the supply and installation of high-performance coating systems applied to walls and other vertical substrates, and overhead surfaces. High performance wall coatings are resinous or liquid-applied, durable systems generally comprised of multiple layer application of epoxy, polyester, polyurethane, polyaspartic, methyl-methacrylate, polyurea or other similar high-build coating material producing a dry film thickness of 250 µm (0.250 mm) (10 mil.) or greater, not including primers and filler coats.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. High-performance coating systems that produce a dry film thickness of 250 µm (0.250 mm) (10 mil.) or greater, not including primers and filler coats, incorporating the use of natural or synthetic fillers, aggregates or binders including the following to provide an aesthetic wear resistant surface on interior or exterior surfaces:
 - a. Decorative components when required by the specification such as rock aggregates, marble chips, colored ceramic granules, rubber, vinyl acrylics, sound attenuating particles or textures;
 - b. Reinforcing components when required by high-performance coating system such as fiberglass or other fabric scrim materials;
 - c. Organic or synthetic coating materials and binders such as epoxy, polyurethane, polyurea, methyl-methacrylate, polyaspartic, urethane, or neoprene - hypalon;
 - d. Membranes and other accessories forming a part of the specified system;
2. Coatings inclusive of primers, under coatings and finish coatings, filler coatings, and other cementitious, rubber or vinyl particles forming the composite requirements for specified high-performance, high-build coating systems;
3. Examination of surfaces to confirm compatibility and acceptable surface conditions between substrates and high-performance coatings;
4. Surface preparation including the removal of any temporary protection and subsequent restoration of wall plates, machined surfaces, including cleaning, abrading and remediating surfaces of substances that could impair bond between substrates and coating materials;
5. Protection of work adjacent to application areas from activities associated with application of high-performance coatings described in this scope and similar items that may have been installed prior to work of this trade and that do not require coatings;
6. Sample installations or mock-ups when specified;
7. Trade specific temporary ventilation, if required during the application of the special high-performance wall coatings;
8. Material handling, including unloading and hoisting;
9. Scaffolding/man lifts where required to perform work by this trade scope;
10. Trade specific lighting to perform tasks;
11. Trade cleanup - cleanup for work carried out by this trade;
12. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup.
13. Warranty or Guaranty;
14. Submittals and Operation and Maintenance documentation as specified in the tender documents;
15. Cash allowances and/or contingency funds when a specific dollar amount is listed in the General Conditions or this trades specification section;
16. Protection of other trades' work from damage when performing this trades scope of work;
17. Building Information Modeling (BIM) as it applies to this trade scope;

Special High-Performance Wall Coatings - continued

EXCLUDED

1. Paint products described as forming part of the Painting Trade Definition;
2. Protection of finished High Performance Wall Coatings;
3. Caulking at High Performance Wall Coatings terminations.
4. Common scaffold or platform when required to perform work by multiple trades;
5. Temporary heat, general lighting, power, sanitation and water for general construction;
6. Hoarding;
7. Final Cleaning before turnover;
8. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
9. Firestopping;
10. Supply and maintenance of garbage and recycling bins for construction waste;
11. Removal of construction waste from job site;
12. General site security.

Food Service Equipment

SCOPE NARRATIVE

This scope includes the supply and installation of all equipment used for food storage, preparation, delivery, serving, cooking, dispensing and cleanup in commercial and institutional kitchens, bars and restaurants, including fabricated refrigerated cases, coolers, walk-in coolers and freezers and other displace equipment.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Supply and installation of all commercial kitchen equipment excluding final electrical and mechanical connections, see Electrical and Mechanical, Included;
2. Flexible connectors, fixture drains and any other specialty accessories for connection to Foodservice equipment beyond piping isolation valves and sanitary drain connections, see Prime Mechanical – Plumbing, Excluded;
3. Prefabricated coolers and freezers and associated refrigeration equipment when there is a Foodservice Equipment scope of work on the project, see Mechanical E. Refrigeration;
4. Equipment:
 - a. Soda Fountain equipment;
 - b. CO2 systems;
 - c. Ice machines;
 - d. Service line equipment;
 - e. Dishwashers, food disposers;
 - f. Kitchen hoods, (cooking and dishwashing) and associated fire dampers and fire suppression systems when specified in the Food Service Equipment specifications;
5. Delivery, uncrate and place all appliances and equipment;
6. Pre-wire of commercial kitchen equipment to a single point of hook-up:
 - a. If there is more than five (5) pieces of equipment requiring an electrical junction box or panel – panel to be supplied by the Electrical contractor;
 - b. Connection of line voltage to Food Service Equipment by Electrical, see Prime Electrical, Included;
7. Refrigeration requirements for all coolers and freezers;
8. Drains for refrigeration equipment associated with fridges and freezers;
9. Material handling, including unloading and hoisting;
10. Scaffolding/man lifts where required to perform work by this trade scope;
11. Trade specific lighting to perform tasks;
12. Trade cleanup - cleanup for work carried out by this trade;
13. Warranty or Guaranty;
14. Submittals and Operation and Maintenance documentation as specified in the tender documents;
15. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
16. Protection of other trades' work from damage when performing this trade's scope of work;
17. Building Information Modeling (BIM) as it applies to this trade scope;
18. Commissioning as it applies to this trade scope.

Foodservice Equipment - continued

EXCLUDED

1. Final connection to electrical and mechanical services, see Electrical, Included, Mechanical A. Mechanical Common Items, Included;
2. Kitchen hoods, associated fire dampers and fire suppression systems when not specified to be provided by this trade scope in the tender documents;
3. Drain line from coolers;
4. Plumbing fixtures noted on the mechanical drawings as supplied by the mechanical contractor;
5. Exhaust fan ducting;
6. Fire suppression;
7. Common scaffold or platform when required to perform work by multiple trades;
8. Temporary heat, general lighting, power, sanitation and water for general construction;
9. Hoarding;
10. Final Cleaning before turnover;
11. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
12. Firestopping;
13. Supply and maintenance of garbage and recycling bins for construction waste;
14. Removal of construction waste from job site;
15. General site security.

Elevators, Lifts and Dumbwaiters

SCOPE NARRATIVE

This scope includes the supply and installation of elevators and all components necessary for a complete installation. Including passenger, freight, residential, and service elevators of all types and covering all components such as car cabs, entrances, controls, safety equipment, hoist way equipment, and elevator machinery.

Elevators, lifts and dumbwaiters are used to convey passengers and materials vertically from one elevation to another.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Electric traction passenger, service and freight elevators systems;
2. Hydraulic passenger, service and freight elevators systems;
3. Limited Use Light Application lifts (LULA) systems;
4. Wheelchair lift systems;
5. Procurement of dumbwaiter equipment from third party supplier as per specifications, including coordination of shop drawing process;
6. Electrical wiring and conduit from all controllers to signals and operating circuits;
7. Elevator controllers;
8. Elevator machines and governors;
9. Hydraulic tanks and pumping units;
10. Elevator platforms;
11. Elevator cab frame and safeties;
12. Counterweight for traction elevators;
13. Counterweight safeties when there is occupied space below a traction elevator;
14. Hoist way sills and cab thresholds;
15. Door operating equipment;
16. Door protection devices;
17. Buffers;
18. Guide rails and attachments;
19. Positioning system;
20. Emergency stop switch in pit;
21. Terminal stopping switches;
22. Means of suspension;
23. Fascia as required;
24. Elevator entrances (except freight elevator entrance frames), including Underwriters Laboratory of Canada rated frames and doors, entrance jamb braille plates and sight guards;
25. Cab fixtures as specified;
26. Cab finishes or allowance for custom interiors as specified;
27. Emergency cab lighting;
28. Cab fan;
29. Car operating panel as specified;
30. Hall fixtures as specified;
31. Hoist way access switches;
32. Travelling cable, including card reader or security camera wiring provisions as required;
33. Battery lowering devices as specified;
34. Adjustment and fine tuning;
35. Parking garage hoists;
36. Piping incidental to hydraulic elevators;
37. Maintenance services during warranty period as specified;

Elevators, Lifts and Dumbwaiters - continued

38. Supply and installation of temporary hoisting beams as required for elevator installation only;
39. Scaffolding/man lifts where required to perform work by this trade scope;
40. Inspection;
41. Licenses and permits for construction;
42. Material handling, including unloading and hoisting;
43. Trade specific lighting to perform tasks;
44. Trade cleanup - cleanup for work carried out by this trade;
45. Warranty or Guaranty;
46. Submittals and Operation and Maintenance documentation as specified in the tender documents;
47. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
48. Protection of other trades' work from damage when performing this trade's scope of work;
49. Building Information Modeling (BIM) as it applies to this trade scope;
50. Commissioning as it applies to this trade scope;

EXCLUDED

1. Barricades and hoardings as required;
2. Permanent hoist and divider beams, see Structural Steel, Included;
3. Pit ladders (one per elevator);
4. Support for entrances and rails;
5. Freight elevators entrance frames;
6. Auto parking elevators or platforms;
7. Excavation for cylinder well casing for hydraulic elevators;
8. Waterproofing of elevator pit;
9. Pit drains and sump pumps as required, including oil separators/detectors for hydraulic elevators;
10. Providing feeder wires to controllers;
11. Providing the hoist way structure including supports for both guide rails and machine beams;
12. Separation of multi-car hoist ways during phased construction (one elevator running next to an elevator being installed);
13. Counterweight guarding in multi-car hoist ways where the counterweight is located in between elevators;
14. Providing the pit and machine room;
15. Providing ventilation of pit, hoist way and machine room;
16. Mainline disconnects for each elevator as required;
17. Disconnecting device to elevator equipment prior to activation of sprinkler system;
18. Installation of dedicated GFCI receptacles in the pit and overhead;
19. Lighting in controller area, machine area and pit;
20. Wiring for telephone service to controller;
21. Emergency generator for elevator operation;
22. Fire and smoke detectors and interconnecting devices;
23. Fire alarm signal lines to contacts in the machine area; Building-in and grouting hoist way door frames;
24. Building-in around hall fixtures;
25. Grouting thresholds;
26. Common scaffold or platform when required to perform work by multiple trades;
27. Temporary heat, general lighting, power, sanitation and water for general construction;
28. Final Cleaning before turnover;
29. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
30. Firestopping;
31. Supply and maintenance of garbage and recycling bins for construction waste;
32. Removal of construction waste from job site;
33. General site security;

Escalators and Moving Walks

SCOPE NARRATIVE

This scope includes the supply and installation of moving walks, escalators and ramps and all components necessary for a complete installation. Including passenger conveying systems composed of moving belts or treads installed in horizontal or inclined position, including associated components, hardware, controls, safety equipment, and related items.

Escalators, moving walks and ramps are used to convey passengers from one elevation to another or horizontally by mechanical means. They play a critical role in moving large numbers of people and maintaining traffic patterns in public spaces.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Moving walks and ramps;
2. Escalators;
3. Passenger conveying systems composed of moving belts or treads installed in horizontal or inclined position, including associated components, hardware, controls, safety equipment, and related items;
4. Electrical wiring and conduit from all controllers;
5. Balustrades as specified;
6. Steps/belts as specified;
7. Drive machine and brake;
8. Step chain and drive;
9. Motor and controller;
10. Operating device;
11. Handrails;
12. Escalator truss frames;
13. Steps and risers;
14. Skirt panels;
15. Combs;
16. Floor plates;
17. Controller;
18. Protective devices;
19. Lubrication system;
20. Adjustment and fine tuning;
21. Maintenance services during warranty period as specified;
22. Inspection;
23. Licenses and permits for construction;
24. Material handling, including unloading and hoisting;
25. Scaffolding/man lifts where required to perform work by this trade scope;
26. Trade specific lighting to perform tasks;
27. Trade cleanup - cleanup for work carried out by this trade;
28. Warranty or Guaranty;
29. Submittals and Operation and Maintenance documentation as specified in the tender documents;
30. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
31. Protection of other trades' work from damage when performing this trade's scope of work;
32. Building Information Modeling (BIM) as it applies to this trade scope;
33. Commissioning as it applies to this trade scope;

Escalators and Moving Walks - continued

EXCLUDED

1. Protection of floors for movement of equipment into place;
2. Reinforcement of floors and building structures for movement of equipment into place;
3. Structural concrete work and setting of sleeves, inserts and anchoring devices;
4. Structural steel supports, see Structural Steel, Included;
5. Intermediate steel supports as required for higher rises;
6. Miscellaneous metal supports as required;
7. Providing conduit, power supply, electrical feeders and grounding conductors to terminal block in junction box in escalator machine space, see Electrical, Included;
8. Duplex electrical outlets with ground fault circuit interrupt protection at lower landing and machine space;
9. Drywall or stainless-steel cladding of truss and soffit;
10. Flooring finishes adjacent to landing plates;
11. Ventilation of escalator machine space;
12. Barricades and hoardings as required;
13. Common scaffold or platform when required to perform work by multiple trades;
14. Temporary heat, general lighting, power, sanitation and water for general construction;
15. Final Cleaning before turnover;
16. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
17. Firestopping;
18. Supply and maintenance of garbage and recycling bins for construction waste;
19. Removal of construction waste from job site;
20. General site security.

Mechanical

SCOPE NARRATIVE

The mechanical trades provide the building environmental systems and controls as well as some life safety systems, sprinklers and fire protection, including heating, cooling and humidification systems to condition the building interior environment.

The Mechanical Division includes the following trades for the supply and installation of all mechanically related systems including plumbing, heating and cooling, ventilation, refrigeration, fire protection, building management and mechanical thermal insulation systems.

Unless otherwise stipulated in the tender documents the Prime Mechanical contractor carries all mechanical trade scopes in their tender submittal.

Packaged equipment, so specified under the mechanical scopes, shall mean pre-wired equipment supplied in a completely electrically operable state after one final connection of power wiring, and building management system connections if specified.

The Mechanical Division consists of the following individual trade definitions;

- A. **Common Mechanical Items common to ALL sections of the Mechanical Division:**
- B. **Prime Mechanical;**
 - Plumbing Systems;
 - Hydronic Systems – Heating and Cooling;
- C. **Ventilation and Sheet Metal Ductwork;**
- D. **Building Management System;**
- E. **Refrigeration;**
- F. **Insulation;**
- G. **Sprinklers and Fire Protection.**

A. Common Mechanical Items

EACH MECHANICAL TRADE SHALL INCLUDE AND EXCLUDE ALL COMMON MECHANICAL ITEMS AS IT APPLIES TO THEIR INDIVIDUAL TRADE, AS WELL AS THE ITEMS IN THEIR INDIVIDUAL TRADE DEFINITION

Items to be included and excluded by all mechanical trades.

The following items and requirements are common to all trade divisions in the Mechanical Division and, wherever applicable, each trades scope in this section shall include-or exclude these items in their submitted tender, unless specifically noted otherwise in that individual trade definition.

All mechanical trade scopes include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in their scope:

INCLUDED

1. Access panels and doors, supply only, to provide access for servicing mechanical systems/components supplied under this section, including marking out of same;
2. Alignment and grouting for mechanical equipment;
3. Anchor bolts, bases and supports made of steel for mechanical equipment;
4. Catwalks, ladders and gratings supporting and/or servicing equipment, where shown on mechanical drawings only, see Miscellaneous Steel, Included, see Structural Steel, Included;
5. Interior excavation (up to 1 m outside of the building) including shoring, pumping, bedding and first 300 mm of protective cover, see Mechanical A., Excluded;

A. Common Mechanical Items – continued

6. Identification and labeling, including plastic decals for arrow flow, plastic and/or canvas, colored tape and/or secondary color banding and stencils (including the painting of stencils) but excluding painting of piping or other portions of mechanical systems, see Painting, Included, Mechanical B. Prime Mechanical, Excluded;
7. Manufacturer's warranty only beyond the normal one-year warranty period;
8. Operation and maintenance manuals and as-built and/or record drawings. Sub-trade contractors are responsible to provide such items specific to their work, of such quality and quantity as may be specified, to the Prime Mechanical contractor who shall be responsible for tabulating, binding, coordinating and final submission of such documentation, including transfer drafting and final as-built as specified;
9. Permits, licenses and inspections as required for work under this scope;
10. Priming to catwalks, ladders, gratings, steel supports, hangers and other miscellaneous support steel supplied under this scope, see Painting, Excluded;
11. Roughing-in and connecting only for specialty items, cabinets or equipment that is supplied and installed by others, as shown on the tender documents;
12. Final mechanical connections for all commercial kitchen equipment that is supplied and installed by others;
13. Sleeving as specified for mechanical systems, round sleeves only. Rectangular sleeves/buck outs shall be provided by Others. Locating and marking of sleeves to be provided by the trade requiring sleeves;
14. Supply of trims and/or moldings for radiant panels when specified to be supplied with the radiant panel. Installation by others;
15. Variable speed controllers including those which are mechanically or hydraulically initiated and operated and those which are electrical when specified as part of packaged equipment;
16. Vibration isolation for equipment supplied under this scope including steel and metal frames/inertia bases for equipment bases. Prime Mechanical contractor shall include isolation for Building Management System air compressors;
17. Heat trace to mechanical piping either internally or externally. Each Mechanical Sub-Trade is required to provide heat tracing as it applies to their work as shown in the tender documents, connection by Electrical contractor, see Electrical, Included and Excluded;
18. Firestopping for mechanical installations;
19. Removal of existing installations when the materials are to be re-used or retained as specified;
20. Mark out backing in walls as required for all equipment provided by this scope;
21. Metal cap flashing, to mechanical roof penetrations, see also Roofing and Related Sheet Metal, Included and Excluded;
22. Material handling, including unloading and hoisting; to perform work by this trade scope;
23. Trade specific lighting to perform tasks;
24. Trade cleanup - cleanup for work carried out by this trade;
25. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
26. Warranty or Guaranty;
27. Submittals and Operation and Maintenance documentation as per the tender documents. To be provided by each trade scope;
28. Cash allowances and/or contingency funds when a specific dollar amount is listed in the General Conditions or this trades specification section. Prime Mechanical contractor to include Cash Allowance and/or contingency funds for mechanical sub-trade contractors;
29. Scaffolding and /or man lifts where required
30. Protection of other trades' work from damage when performing this trade's scope of work;
31. Building Information Modeling (BIM) as it applies to this trade scope;
32. Commissioning as it applies to this trade scope;

A. Common Mechanical Items – continued

EXCLUDED

1. Alterations of services, as specified in the tender documents, required for specialty items, cabinets or equipment not supplied under this subcontract;
2. Site services to within 1 meter of the building exterior envelope:
 - a. Gas services to building;
 - b. Water service to within 1m of the building envelope;
 - c. Storm and sanitary services to within 1m of the building envelope;
3. Backfill, and compaction of mechanical excavations is by Others;
4. Removal and disposal of surplus excavated material from mechanical excavations by Others;
5. Swimming pool equipment and associated accessories and piping. This work to be completed by the Others;
6. Backing and backing materials, supply and installation;
7. Rectangular sleeves/rough bucks shall be provided by the Others;
8. Metal base flashings (counter flashing) for mechanical roof penetrations, see also Roofing and Related Sheet Metal, Included and Excluded;
9. Back-plastering for fire protection;
10. Building permits;
11. Catwalks, ladders, gratings and supports where detailed on architectural or structural drawings, see Mechanical A. Common Mechanical Items, Included;
12. Cutting, coring and patching - when pertaining to renovations, alterations or additions;
13. Electrical: All 120V wiring is supplied and installed by the electrical contractor;
 - a. Motor starters, multi-speed and protection switches, including variable speed drives which are electrically initiated or operated, without exception other than that equipment which forms an integral part of packaged equipment requiring one power connection only;
 - b. Electrical wiring for controls which directly switch the power line to motors and duct heaters ("directly" means not through the magnetic coil), see Electrical, Included;
14. Frost boxes for mechanical installations;
15. On-site painting, see Painting, Included;
16. Poured-in-place concrete for concrete curbs, housekeeping, equipment, piping and ductwork pads;
17. Supply and installation of concrete for equipment metal frames/inertia bases;
18. Structural framing members for supporting mechanical equipment, see Structural Steel;
19. Variable speed drives which are electrically initiated or operated unless specified to be part of packaged equipment;
20. Supply of fuel for the emergency generator system. Including fuel for generator testing and final fill for turnover to the Owner;
21. Transformers, voltage regulators, controls and any wire connections associated with heat tracing, see Electrical, Included;
22. Waterproofing and/or sound proofing to wall, floor and ceiling penetrations;
23. Common scaffold or platform when required to perform work by multiple trades;
24. Temporary heat, general lighting, power, ventilation, sanitation and water for general construction;
25. Temporary filtration for ventilation systems when utilized for temporary heating during construction;
26. Hoarding;
27. Final Cleaning before turnover;
28. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
29. Supply and maintenance of garbage and recycling bins for construction waste;
30. Removal of construction waste from job site;
31. General site security.

B. Prime Mechanical

SCOPE NARRATIVE

The Prime Mechanical contractor is responsible for all trade scopes in the Mechanical Division including the content and coordination of individual mechanical trade scopes, including ensuring that all items are included and excluded as required in the entire Mechanical Division. The Prime Mechanical directly includes the supply and installation of all plumbing hydronic heating and cooling systems.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

Prime Mechanical – Common Items

1. Coordination of all mechanical trades;
2. Sleeving as specified for this trade (Round sleeves only. Rectangular sleeves/buck outs shall be provided by the General Contractor);
3. Vibration Isolation and Seismic Controls;
- 4.
5. Air washers;
6. Coil supports and hangers;
7. Dry mop, wet mop and vacuum systems;
8. Fume cabinets;
9. Gas fired unit heaters and furnaces not requiring duct connections;
10. Gas vent grilles;
11. Gas, water, sanitary and storm sewage connections to Utility services;
12. Gauges indicating air flow and/or pressure and thermometers for packaged air handling Units supplied by the Prime Mechanical Contractor;
13. Spray eliminator units in packaged units only;
14. Steam grid humidifiers;
15. Vitrified pipe except when used in conjunction with air collection systems;
16. Scrubbers and odor and/or gas absorber units. (Dry type requiring only drain connections);
17. Liquid level controls for sumps, condensate pumps, cooling towers, and fuel storage tanks;
18. Safety high and low limit controls;
19. Self-Contained control valves:
 - a. Differential pressure;
 - b. Domestic hot water;
 - c. Pressure;
 - d. Temperature (including radiator valves);
20. Self-contained filter gauges;
21. Thermometers and pressure gauges for the heating and cooling system;
22. Thermostats not directly involving the Building Management System;
23. Cash allowances and/or contingency funds when a specific dollar amount is listed in the General Conditions or this trades specification section, carried by the Prime Mechanical Contractor;
24. Trade specific Firestopping. The Firestopping contractor will submit separate prices to the following trade scopes:
 - a. Prime Mechanical – the prime mechanical contractor will carry the Firestopping costs for ALL trades in the mechanical scope;
 - b. Electrical – will carry the Firestopping costs for all Electrical;
 - c. General Contractor – will carry the Firestopping costs for ALL trade scopes other than Mechanical and Electrical;

B. Prime Mechanical - continued

Plumbing Systems

SCOPE NARRATIVE

The scope includes the supply and installation of domestic water and other water distribution systems, storm and sanitary waste systems and venting systems including piping, equipment, and valves, specialties associated with domestic water distribution as well as plumbing fixtures, floor drains, interceptors, separators, and other components within and under structures to within 1m of the exterior of the structure.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. Work/materials/equipment listed in Mechanical A. Common Mechanical Items, Included;
2. Above ground sanitary sewage, grey water, storm piping systems and associated equipment;
3. Underground sanitary sewage and storm piping systems including pipe bedding and the first 300 mm of protective cover;
4. Piping for radon exhaust systems, methane extraction and soil gas extraction systems, see Building Management Systems - Building Life Safety Control and Equipment Safety Control, Included, and Electrical, Included;
5. Potable water systems and associated equipment including pressure booster systems;
6. Balancing of domestic water recirculation system (if applicable);
7. Water softeners and treatment systems;
8. Disinfection of the domestic water piping system;
9. Compressed air piping systems and associated equipment if specified;
10. Caulking of plumbing fixtures;
11. Laboratory sinks, faucets, gas outlets and factory-built fume hoods and/or cabinets, complete with all components, except when an integral part of casework;
12. Hospital and hydro-therapy equipment that is connected to water and/or sanitary waste system;
13. Shower cabinets and associated plumbing only, (manufactured receptors, doors or curtains and rods provided by Others);
14. Foodservice Equipment services:
 - a. Equipment piping and isolation valve provided to equipment as indicated in Foodservices drawings;
 - b. Connection to gas fired appliances and plumbing fixtures and equipment. Foodservice Equipment supplier to provide flexible connectors, fixture drains and any other specialty accessories for connection to this equipment;
 - c. Installation of the emergency shut-off solenoid gas valve supplied by Foodservice Fire Suppression contractor, see Foodservice Fire Suppression System, Included and Excluded;
15. Fabricated trench drains, gratings and sumps, see Excluded;
16. Natural gas piping systems;
17. Gas vent grilles;
18. Gas regulator vent piping;
19. Natural gas regulators for piping systems and equipment;
20. Connections to gas fired equipment;
21. Dry well pits;
22. Underground tanks - when installed on a structural or concrete base. General contractor to excavate and install structural or concrete base and Mechanical contractor is to install tanks and provide protective backfill around tanks. Final backfill to grade is by the General Contractor, see Mechanical B. Prime Mechanical i: Plumbing, Excluded;
23. Underground tanks - when **NOT** installed on a structural or concrete base. Mechanical contractor is responsible for excavation, installation and backfill around the tanks. Final backfill to grade is by the General Contractor;
24. Weeping Tile and Sanitary Sumps and Sump Pumps:
 - a. Sump frames and covers (cast iron only) not covered in miscellaneous steel, see Miscellaneous Steel, Included;
 - b. Sump pumps, floats, control panels and associated piping and equipment (supplied by Prime Mechanical), pulling and terminating of sump float wiring by Building Management Systems contractor, all other wiring above 24V by the Electrical contractor, see Electrical included, see Mechanical D. Building Management Systems, Included;

B. Prime Mechanical - continued

Plumbing Systems – continued

- c. Sump pump floats and panels, see Electrical, Excluded;
 - d. Sanitary, storm and weeping tile sumps within the building envelope;
 - e. Piping from weeping tile sumps to edge of building for weeping tile pipe connection. Final connection to weeping tile system, by Others;
25. Cast iron, frames and covers for manholes, catch basins, sumps, trenches, hatches, pits, within building envelope only, see also Miscellaneous Steel, Included;
 26. Air compressors, vacuum pumps, piping, regulators and accessories as applicable to mechanical systems, see Building Management System, Included;
 27. Oxygen and acetylene systems and accessories;
 28. Dry mop, wet mop and vacuum systems, see Electrical, Included;
 29. Emergency generators as provided by the Electrical contractor, except the following items:
 - a. Day/fuel tanks (not integral to the generator), complete with piping, equipment and accessories to connect the tanks to emergency generators as noted on the mechanical drawings, see Electrical, Included;
 - b. Fuel fill panels and associated piping as noted on the mechanical drawings. Wiring by Electrical, see Electrical;
 - c. Remote radiators only (supplied by Electrical), piping and associated equipment including valves, pumps, expansion tanks and coolant as noted on the mechanical drawings;
 30. Supply of roof flashings for drains and plumbing vents. Installation by others, see Roofing and Related Sheet Metal, Included;
 31. Standalone humidification systems including grids;
 32. Incinerators c/w burners and draft inducers. Breeching, stack and refractory lined chimneys c/w counter flashing, storm collars, wall brackets and supports;
 33. Lubrication equipment, fuel and oil storage tanks complete with dispensing units and piping;
 34. Medical gas systems, piping and equipment;
 35. Piping and connections to automotive hoists (hoists supplied and installed by others);
 36. Self-contained control valves (Non-BMS):
 - a. Differential pressure;
 - b. Domestic hot water;
 - c. Pressure;
 - d. Temperature;
 37. Sewage Disposal:
 - a. Prefabricated septic tanks complete with all associated fittings and piping;
 - b. Associated fittings and piping for poured- in-place septic tanks as installed by Others;
 - c. Leeching lines for sewage disposal systems including backfill of gravel, straw and loam to provide a complete installation for field to finish grade;
 38. Steam cleaners or pressure washers that are permanently connected to water or waste;
 39. Steel chimneys or breeching heavier than 3.5 mm (10 gauge) when not refractory lined;
 40. Water service piping for external irrigation systems, to exterior of building including such back-flow prevention devices, meters or other equipment as necessary to comply with all government codes and regulations, see Exterior Landscaping, Included;
 41. Meters and gauges (non-BMS) associated with plumbing systems;
 42. Piping and connections to pool and fountain plumbing systems as noted on the plumbing drawings. Supply and installation of equipment by Others;
 43. Gas and water meters (revenue meters) as indicated on the drawings and specification; other than main utility meters provided by utility services, see Excluded;
 44. Connection only of Hydrotherapy equipment;
 45. Interior excavation of underground plumbing systems up to 1m outside of building envelope including Sanitary, storm and domestic water. (General Contractor to have grade inside the building within 100mm of final grade before Mechanical contractor proceeds):
 - a. Including shoring, pumping, bedding and first 300 mm of protective cover, see Mechanical B. Prime Mechanical, Excluded;
 46. Selective demolition - unless otherwise noted this contractor will remove and store plumbing equipment that is to be reused on the project;
 47. Drain piping for drip trays or pans as indicated on drawings for all mechanical equipment or assemblies;

B. Prime Mechanical - continued

Plumbing Systems – continued

EXCLUDED

1. Work/materials/equipment listed in Mechanical A. Common Mechanical Items, Excluded;
2. Services and service charges for gas, water and sewer as levied by municipality or utility company;
3. Public Utility meters and connections to the Utility service feeds;
4. All site services to building from 1m outside the building to property line (as pertaining to utility services servicing the building from the public utility);
5. Flexible connectors, fixture drains and any other specialty accessories for connection to Foodservice equipment beyond piping isolation valves and sanitary drain connections, see Foodservices, Included;
6. Custom fabricated solid surface counter tops with integral sink or basin, including counter-tops, splash-backs and fascia of the same material connected thereto, see Architectural Woodwork, Included;
7. Supply and installation of hydrotherapy equipment;
8. Backfill and compaction, after the first 300mm of cover, for mechanical excavations by Others;
9. Removal and disposal of surplus excavated material from mechanical excavations by Others;
10. Poured in place sumps;
11. Non-metallic combustion air and flue venting for condensing boilers and water heaters, see Mechanical C. Ventilation and Air Distribution Systems, Included;
12. Soap and chemical dispensing systems for housekeeping complete with piping and tanks, by Others;
13. Gratings and cover plate for poured in place manholes, catch basins, sumps, trenches, hatches, pits, see Miscellaneous Steel, Included;
14. Frames, grating and plate covers for manholes, catch basins, sumps, trenches, hatches, pits, etc., except cast iron, frames and covers;
15. Clean-outs or clean-out access for building weeping tile systems;
16. Excavating and backfilling for underground tanks or dry well pits when installed on a structural or concrete base. General contractor to excavate and install structural or concrete base and Mechanical contractor is to install tanks or pits and provide protective backfill around tanks remainder of back fill by Others, see Mechanical B. Plumbing, Included;
17. Supply and installation of automotive hoists;
18. Underground sprinkler and/or irrigation systems, see Exterior Landscaping, Included;
19. Vapor barrier and insulation not applied to Mechanical system;
20. Washroom accessories;
21. Manufactured receptors, doors or curtains and rods for showers and shower cabinets;
22. Medical gas bottles or initial medical gas system charging;
23. Medical gas system certification costs;
24. Pneumatic tube systems and related controls;
25. Emergency generators, see Electrical Included;
26. Supply of the emergency shut-off solenoid gas valve, see Included; see Food Service Fire Suppression, Included;
27. Supply of fuel for the emergency generator system. Including fuel for generator testing and final fill for turnover to the Owner;
28. Drip pans under mechanical equipment and piping assemblies, see C. Ventilation and Sheet Metal Ductwork, Included.

B. Prime Mechanical – continued

Hydronic Systems – Heating and Cooling

SCOPE DESCRIPTION,

This scope includes the supply and installation of heating, cooling and humidification systems utilizing water, glycol and steam as a medium including piping, equipment, and valves, specialties associated with these systems.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Work/materials/equipment listed in Mechanical A. Common Mechanical Items, Included;
2. Heating systems using water, steam or glycol as a medium including all piping and associated equipment;
3. Cooling systems using water or glycol as a medium including all piping and associated equipment;
4. Steam heating and humidification systems (low and high pressure) including all piping and associated equipment;
5. Air handling equipment with fans utilizing water, steam or glycol as a medium including fan coil units, unit heaters, heat pumps, cabinet unit heaters;
6. Solar water or liquid (hydronic) heating systems, see Electrical, Excluded;
7. Air handling and makeup air units utilizing water, steam or glycol as a medium;
8. Gauges indicating air flow and/or pressure and thermometers for packaged air handling units supplied by the Prime Mechanical Contractor;
9. Gas fired unit heaters with no duct connection;
10. Air curtains that are hydronic, gas or oil-fired units, where no duct connections are required, see Mechanical C. Ventilation and Sheet Metal Ductwork, Included and Excluded;
11. Induction units;
12. Electric boilers;
13. Packaged self-contained air-cooled water chillers including start-up when no field installed inter-connecting refrigeration piping required for these chillers;
14. Radiant water or liquid heating panels and chilled beams;
15. Chemical treatment systems for heating, cooling and steam systems;
16. Glycol for systems utilizing glycol as a medium;
17. Balancing of hydronic systems;
18. Self-contained control valves (non-BMS):
 - a. Differential pressure;
 - b. Pressure;
 - c. Temperature (including radiator valves);
19. Supply and installation of supports from structure for radiant panels exceeding 610 mm x 1220 mm
20. Grilles for top outlet and bottom inlet for wall fin radiation, induction units and cabinet heaters when installed in architectural cabinets including extension collars (architectural cabinets supplied and installed by others);
21. Thermostats not directly involving building management systems;
22. Thermometers and pressure gauges not connected to the building management systems;
23. Vibration isolation for Building Management Systems air compressors;

B. Prime Mechanical - continued

Hydronic Systems – Heating and Cooling - continued

EXCLUDED

1. Work/materials/equipment listed in Mechanical A. Common Mechanical Items, Excluded;
2. Clean-outs or clean-out access for building weeping tile systems;
3. Instrumentation where not related to Building Management Systems controls;
4. Trims or moldings for radiant panels, except when supplied with the radiant panel;
5. Vapor barrier and insulation not applied to mechanical system;
6. Cooling systems utilizing refrigerants as a medium, see Mechanical E. Refrigeration, Included;
7. Solar power and electric heating systems, see Electrical, Included;
8. Fire Standpipe System: Stand-alone type when not connected to a combination sprinkler/standpipe system fire pump, and including:
 - a. Fire pumps, control panels, motors, engine and fuel system, fire hose cabinets, fire extinguishers and fire extinguisher cabinets, excluding wiring and connections, see Electrical, Included, Mechanical G. Sprinklers and Fire Protection, Included;
9. Carbon dioxide, dry chemical and halon systems including piping, outlets, associated detectors and control panels, including integrated kitchen equipment fire protection systems, excluding wiring and connections, see Electrical; Included, see Mechanical G. Sprinklers and Fire Protection, Included.

C. Ventilation and Sheet Metal Ductwork

SCOPE NARRATIVE

This scope includes the supply and installation of sheet metal ducting and equipment for air systems that provide heating, cooling, exhaust air, supply and return air for the building environment and specialty systems including dust collection, exhaust systems for vehicle repair facilities and paint booths including all components and accessories for a complete functional system.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Work/materials/equipment listed in Mechanical A. Common Mechanical Items, Included;
2. Forced air ducted furnaces;
3. Air curtains except equipment utilizing an external source of water or glycol as a medium;
4. Gas fired unit heaters and furnaces requiring duct connections;
5. Indirect fired self-contained heating and/or cooling units, including de-humidifiers, except where no duct connections are required;
6. Self-contained duct-mounted heat reclaiming units except equipment utilizing an external source of water or glycol as a medium;
7. Self-contained gas-fired classroom heating and ventilating units complete with all shelving, counters and accessories;
8. Direct-fired make-up air units except where no duct connections are required;
9. Electric heating that is fan powered and electric duct mounted heating coils (all other electric heat is by electrical contractor), see Prime Electrical - Mechanical Systems, Included;
10. Sheet metal and non-metallic air handling ductwork including hangers and supports for:
 - a. Supply air;
 - b. Return air;
 - c. Exhaust/Relief air;
 - d. Outside air;
 - e. Combustion air;
 - f. Welded sheet metal kitchen exhaust air including the supply and installation of associated metal liner to protect combustible materials. (High temperature insulation is supplied and installed by the insulation contractor, see Mechanical F: Insulation, Included);
 - g. Duct work and connection to fume, exhaust and kitchen exhaust hoods. Hoods provided by others;
 - h. Fume exhaust air;
 - i. Welding fume extraction systems complete with central blower/turbine dust collection unit complete with ducting to process equipment and related accessories;
 - j. Dust or material collector systems complete with associated equipment and accessories;
 - k. Carbon monoxide exhaust systems complete with associated equipment and accessories, excluding monitors;
 - l. Plenums and casings;
 - m. Flexible type air ducts;
 - n. Ventilation and exhaust ducting for emergency generators;except concrete, masonry and gypsum board construction duct, plenums, shafts or tunnels in which case only internal metal liner and/or internal insulation, if specified, will be provided;
12. Breaching and/or chimneys, sealed or otherwise, 3.5 mm (10 gauge) or lighter, Types A, B and C, not refractory lined;
13. Metallic and non-metallic combustion air and flue venting for all gas fired appliances inclusive of condensing boilers, water heaters and furnaces;
14. Canopies and hoods, domestic range hoods (ducted and non-ducted), except where called for under kitchen equipment;
15. Metal cap flashing (counter flashing), to mechanical roof penetrations provided by this trade, see also Roofing and Related Sheet Metal, Included and Excluded;
16. Metal cap flashing, (Counter flashing) for all exterior refrigeration units and related piping penetrations;
17. Drain pans for equipment under the mechanical scope (not packaged units);
18. Drip trays as indicated on Mechanical drawings for all mechanical equipment or assemblies, drain piping by Prime Mechanical;
19. Internal acoustic insulation in ductwork and plenums;

C. Ventilation and Sheet Metal Ductwork - continued

20. Dampers:
 - a. Manual balancing dampers;
 - b. Back-draft dampers, self-acting, and barometric dampers and motorized;
 - c. Motorized dampers - dampers provided by the ventilation contractor. Actuators are provided by the Building Management Systems, see Mechanical D. Building Management Systems, Included and Excluded;
 - d. Fire dampers and fire stop flaps;
 - e. Manual smoke dampers;
 - f. Motorized smoke dampers– dampers provided by the ventilation contractor. Actuators are provided by the Building Management Systems, see Mechanical D. Building Management Systems, Included and Excluded;
 - g. Combination fire/smoke Dampers and associated electric, electronic or pneumatic actuators and end switches for these dampers, see Mechanical D. Building Management System, Excluded;
21. Fans:
 - a. Booster fans;
 - b. Exhaust air fans;
 - c. Exhaust fans which are remote from factory-built fume hoods or fume cabinets;
 - d. Return air fans;
 - e. Stratification elimination fans;
 - f. Supply air fans except for packaged units with integral water, steam or glycol coils, where fan is not separated by ductwork or flexible connection;
 - g. Induced draft fans, except when in conjunction with incinerators and/or except when an integral part of a heating boiler;
22. Humidifiers when used in conjunction with furnaces;
23. Air duct silencers;
24. Air mixing baffles and air blenders;
25. Airflow measuring devices (self-contained) when used for measuring only and not interfaced with any other system or device;
26. Thermometers (self-contained) which indicate system air temperatures, and do not interface with controls system;
27. Gauges (self-contained) which indicate system air flow and/or pressure and do not interface with controls system;
28. Spray eliminators in built-up plenums;
29. Air filters: Except for packaged air handling units that include filter sections
 - a. Charcoal and odor filters;
 - b. Particulate filters;
 - c. Electronic/electrostatic filters;
 - d. Filter gauges;
 - e. Flat permanent type;
 - f. Grease filters (when canopy supplied by this contractor);
 - g. Roll type filters;
 - h. Throw-away type;
30. Air terminal boxes complete with pneumatic actuators, controllers and integral fan section, electric or water coils;
31. Attenuator boxes, tabulators and pressure reducing valves for air supply;
32. Variable Air Volume box operators, controllers pneumatic;
33. Registers, grilles, diffusers and supply only of door grilles;
34. Integrated ceiling system components as follows:
 - a. Linear air boots when installed into but not forming an integral part of the ceiling system;
 - b. Supply, installation and connection of flexible duct;
35. Air troffer boots;
37. Gravity relief vents and intakes;
38. Mechanical louvres and matching non-functioning metal louvres located in sheet metal or non-metallic air handling ductwork (inclusive of those mechanical and matching non-functioning metal louvres located in concrete, masonry and gypsum board construction ducts, plenums, shafts or tunnels) complete with bird screen, related insulated sheet metal blank-off panels and filler pieces, except louvres constructed of cladding and/or siding material, see, Curtain Wall and Glazed Assemblies, Included, Siding and Soffits, Included, Entrances, Storefronts and Glazing, Included;
39. Garbage and linen chutes of metal construction;

C. Ventilation and Sheet Metal Ductwork – continued

40. Paint spray booths;
41. Factory built solid fuel burning fireplaces and associated metal flues;
42. Balancing of air system including sound measurement pertaining to air systems;
43. Interior duct cleaning, when specified;
44. Disinfectant to interior of duct systems, when specified;
45. Startup and Operational tests of all equipment provided by this trade.

EXCLUDED

1. Work/materials/equipment listed in Mechanical A. Common Mechanical Items, Excluded;
2. Concrete, masonry and drywall shafts, tunnels or plenums;
3. External insulation of concrete, masonry and drywall shafts, tunnels or plenums;
4. Mud grilles and foot grilles, including those used in conjunction with ventilation systems;
5. Indirect fired, self-contained heating and/or cooling units, including dehumidifiers, except where duct connections are required;
6. Actuators for motorized dampers – dampers provided by the ventilation contractor. Actuators are provided by the Building Management systems contractor, see Mechanical D. Building Management Systems, Included and Excluded;
7. Electric/electronic motors, controllers and sensors required to meet a Variable Air Volume (VAV) box Direct Digital Control specification forming part of the Building Management System, see Mechanical D. Building Management System, Included;
8. Ventilation grilles, caps and/or louvres for:
 - a. Attic;
 - b. Soffit;
 - c. Crawl spaces;
 - d. Raised access flooring when part of the integrated floor system, see Raised Access Flooring, Included;
9. Architectural louvres, see Curtain Walls and Glazed Assemblies, Included;
10. Electric heat that is not fan powered or ducted;
11. Air curtains - hydronic, gas or oil-fired units, where no duct connections are required;
12. Kitchen hoods (cooking and dishwash) and associated fire dampers and fire suppression systems, when specified in the Food Service Equipment/Kitchen specifications, see Food Service Equipment, Included;
13. High temperature insulation for kitchen exhaust duct, see Mechanical F. Insulation, Included;
14. Cutting of wood and metal doors to accommodate grilles;
15. Air washers;
16. Coil supports and hangers;
17. Dry mop, wet mop and vacuum systems;
18. Fume cabinets;
19. Gas fired unit heaters and furnaces not requiring duct connections;
20. Gas vent grilles;
21. Gas, water and rain connections;
22. Gauges indicating air flow and/or pressure and thermometers for packaged air handling units supplied by the Prime Mechanical Contractor;
23. Cash allowances and/or contingency funds when a specific dollar amount is listed in the General Conditions or this trades specification section, carried by the Prime Mechanical Contractor;
24. Spray eliminator units in packaged air handling units supplied by the Prime Mechanical Contractor;
25. Steam grid humidifiers;
26. Vitrified pipe except when used in conjunction with air collection systems;
27. Scrubbers and odor and/or gas absorber units. (Dry type requiring only drain connections);
28. Metal base flashings for all mechanical roof penetrations, see also Roofing and Related Sheet Metal, Included and Excluded.

D. Building Management System

SCOPE NARRATIVE

This scope is for the supply and installation of a computer-based control system installed in buildings that controls and monitors the building's heating ventilation and air conditioning equipment, including digital control systems, control devices, piping, tubing, wiring, control panels, thermostats, aqua stats, timers, recording and alarm devices that monitor and adjust the heating ventilation and air conditioning equipment.

HVAC - Heating Ventilation Air Conditioning

BMS - Building Management System

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. Work/materials/equipment listed in Mechanical A. Common Mechanical Items, Included;
2. Building Information Modeling (BIM) as it applies to this trade scope;
3. Commissioning as it applies to this trade scope;
4. Instrumentation and control devices for HVAC including piping, tubing, wiring, control panels, thermostats, aqua-stats, timers, recording and alarm devices, related to HVAC equipment.

Environmental Control:

1. Air conditioning controls (manual and automatic);
2. Boiler controls (not specified as part of pre-wired package boilers);
3. Control compressor c/w accessories;
4. Cooling controls (manual and automatic);
5. Heating controls (manual and automatic);
6. Humidification controls (manual and automatic);
7. Supply and installation of standalone low voltage control devices, including conduit and wiring, for heating, cooling and ventilation systems not part of a building management system, see Prime Electrical, Excluded;
8. Supply and installation of operators for motorized dampers (dampers supplied and installed by Ventilation contractor);
9. Refrigeration controls (manual and automatic) and inter-locking wiring between the chiller control panel and remote chiller starters;
10. Remote reading gauges, transmitters and recorders for Building Management Systems controls;
11. Supply and installation of all electric/electronic motors, controllers and sensors required to meet a Variable Air Volume (VAV) box Direct Digital Control specification which forms part of the building management system;
12. Ventilation and air flow controls (manual and automatic);
13. Domestic hot water controls (not specified as part of a packaged hot water system);
 - a. Conduit and wire from lighting interface module to Facility Management System (FMS);
 - b. All network wiring and programming (including addressing and trend logs);
 - c. Qualified factory trained representative for programming and networking;
 - d. Commissioning of systems.

Building Management System (BMS):

1. Centralization of air conditioning, heating, ventilation, humidification and refrigeration equipment operation;
2. Centralized temperature, humidity, pressure and flow indication and recorders;
3. Centralized control and monitoring of equipment and devices provided by other trades when identified as part of the BMS (all items provided by other trades and controlled from the BMS shall be complete with electrical contacts), see Building Management Systems - 3rd Party Controls Integration.

D. Building Management Systems - continued

Building Life Safety Control and Equipment Safety Control:

1. High temperature warning thermostats (fire-stats);
2. Low temperature warning thermostats (freeze protection thermostats);
3. Shut-down safety devices forming part of HVAC controls;
4. Supply and installation of all gas detection and control devices inter-faced with HVAC equipment or BMS.

General Items:

1. HVAC control, raceways, wiring and/or air piping required for all Building Management System and HVAC controls supplied under this trade scope;
2. Electrical control wiring, additional:
 - a. Boiler feed water and water treatment control wiring;
 - b. Control wiring for gas detection and control devices interfaced with HVAC equipment or the Building Management System;
 - c. Building Management System, including interconnection of- Magnetic starter coils and relay coils supplied under the electrical scope and intended for HVAC controls or locking between starters, contactors and/or relays;
 - d. Remote thermostats and remote pre-wired auxiliary control panels for packaged HVAC equipment;
 - e. Control wiring for stand-alone Make Up Air complete with exhausts systems;
 - f. Water treatment and water softening equipment for mechanical systems.
3. Electrical or wireless thermostats and time clocks including guards for same, used only for equipment under mechanical scope intended for HVAC controls;
4. Actuators for motorized dampers – dampers provided by the ventilation contractor. Actuators are provided by the Building Management systems contractor, see Mechanical C. Ventilation and Sheet Metal Ductwork, Included and Excluded;
5. Supply and installation of pneumatic tubing to static pressure operated HVAC controls, BMS;
6. Low Voltage wiring for radon exhaust systems, methane extraction and soil gas extraction systems, see Prime Mechanical Plumbing included, Electrical Included;
7. Scaffolding/man lifts where required to perform work by this trade scope;
8. Trade specific lighting to perform tasks;
9. Trade cleanup - cleanup for work carried out by this trade;
10. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup.
11. Warranty or Guaranty;
12. Submittals and Operation and Maintenance documentation as specified in the tender documents;
13. Protection of other trades' work from damage when performing this trade's scope of work;
14. Sleeving as specified for this trade;
15. Addressing of lower level building systems;
16. Trend logs and alarms of lower level building systems;
17. Commissioning of lower level building systems;
18. Any wiring connecting to the Building Management System for the generator or associated equipment, see Electrical, Excluded;

3rd Party HVAC Controls Integration:

If package equipment controls are supplied by others and are required to interface the Building Management System via open protocols.

The supplier of the package equipment control shall provide personnel responsible for:

1. Programming, addressing, start-up and commissioning of the package equipment controls;
2. Installation and setup of any required software;
3. Addressing of equipment controls to match the BMS standard defined by the Building Management System Sub-Contractor;
4. Wiring of any "loose" or auxiliary controls devices required to make this supplied equipment operable;

D. Building Management Systems - continued

The Building Management System Sub-Trade Contractor is responsible for:

5. Low voltage wiring of thermostats, sensors, zone controller and valves for zone control devices supplied by the equipment supplier;
6. Wiring of the communication network between packaged zone controllers and the BMS interface device;
7. Programming and BMS graphics to display the required data from the package equipment control.

EXCLUDED

1. Work/materials/equipment listed in Mechanical A. Common Mechanical Items, Excluded;
2. Control power supply outlets as outlined in Electrical Included;
3. Installation of standalone line voltage control devices supplied by the mechanical trades for heating, cooling and ventilation systems not controlled by a building management system, see Prime Electrical, Included;
4. Control wiring for liquid level controls for sumps, condensate pumps, fuel storage tanks and control wiring for fire pumps, and booster pumps, see Electrical included;
5. Fire alarm fan shut-down and start-up relays and wiring, see Electrical included;
6. HVAC controls - when specified as integral part of packaged equipment, see Included;
7. Power/demand meters and associated contacts required for monitoring through a Building Management System;
8. Wiring of smoke or smoke/fire motorized dampers, end switches, electric damper operators and solenoid valves required for the activation of pneumatic smoke or smoke/fire damper operators, see Electrical, Included;
9. Wiring for plumbing fixtures, see Electrical, Included;
10. Wiring of pool system controls, see Electrical included;
11. Wiring of integrated systems other than network connections to the Building Management System other than items noted in 3rd Party HVAC Controls Integration;
12. Wiring of medical systems and equipment;
13. Wiring of stand-alone shop exhausts systems, unless wiring requirements are clearly defined in the Building Management System scope;
14. Air terminal boxes complete with pneumatic actuators, controllers and integral fan section, electric or water coils;
15. Dampers;
16. Motorized dampers - when specified as integral part of packaged equipment, see Included;
17. Motorized dampers - dampers provided by the ventilation contractor. Actuators are provided by the Building Management systems contractor, see Mechanical C. Ventilation and Sheet Metal Ductwork, Included;
18. Motorized smoke dampers - dampers provided by the ventilation contractor. Actuators are provided by the Building Management Systems, see D. Building Management Systems, Included;
19. Fire/Smoke Dampers and associated electric, electronic or pneumatic actuators and end switches for these dampers, see Mechanical C. Ventilation and Sheet Metal Ductwork, Included;
20. Electrical wiring from generator fuel fill panel to generator day tank, float wiring and any wiring required from the day tank to generator to be completed by the Electrical contractor, see Electrical, Included.
21. Liquid level controls for sumps, condensate pumps, cooling towers, and fuel storage tanks;
22. Cash allowances and/or contingency funds when a specific dollar amount is listed in the General Conditions or this trade's specification section, carried by the Prime Mechanical Contractor;
23. Safety high and low limit controls;
24. Self-Contained control valves:
 - a. Differential pressure;
 - b. Domestic hot water;
 - c. Pressure;
 - d. Temperature (including radiator valves);
25. Self-contained filter gauges;
26. Thermometers and pressure gauges for the heating and cooling system;
27. Thermostats not directly involving the Building Management System;
28. Fire stopping;
29. Coring;
30. Instrumentation & Process Controls and wiring, see Electrical included;

D. Building Management Systems - continued

31. Network cabling between Facility management System and other lower level building systems:
 - a. Lighting;
 - b. Fire alarm;
 - c. Power Metering;
 - d. Access Control;
 - e. Building Management;
32. Networking components required by other building systems for own standalone operation.

E. Refrigeration

SCOPE NARRATIVE

This scope shall include the supply and installation of the refrigeration/air conditioning systems and all components and accessories necessary for a complete installation relative to cooling the buildings environment, not including commercial kitchen equipment components and chiller plants for ice rinks.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Work/materials/equipment listed in Mechanical A. Common Mechanical Items, Included;
2. Air-cooled condensers complete with field installed inter-connecting refrigeration piping;
3. Drip pans under refrigeration piping;
4. Evaporative condensers complete with field installed inter-connecting refrigeration piping;
5. Isolation of equipment;
6. Packaged refrigeration self-contained air-cooled cooling only units, including dehumidifiers, without ductwork;
7. Packaged self-contained integral direct expansion (DX) fan coil compressor section for use with remote condensing section with or without ductwork;
8. Packaged refrigeration self-contained water-cooled cooling only units without ductwork;
9. Prefabricated coolers and freezers and/or associated refrigeration equipment (when not part of Foodservices tender document);
10. Refrigerated dew-point controlled units (environment chambers);
11. Refrigerated room (window or wall type) air conditioners without ductwork;
12. Refrigeration chillers, liquid and air condensers complete with interconnecting refrigeration piping;
13. Refrigeration compressors, liquid receivers, thermal expansion valves, refrigeration piping, related refrigeration controls, direct expansion (DX) refrigeration coils in built-up or add-on systems, direct expansion (DX) fan coil units without ductwork;
14. Refrigeration controls, cooling only (excluding wiring) (when not specified under Building Management System tender document);
15. Supply and installation of evaporate cooling towers, condenser water pumps, tanks and piping when part of an ammonia brine refrigeration system for an ice arena or ice making plant;
16. Water-cooled condensers complete with field-installed inter-connecting refrigeration piping;
17. Refrigeration piping insulation, see Mechanical F. Insulation, Excluded;

E. Refrigeration - continued

EXCLUDED

1. Work/materials/equipment listed in Mechanical A. Common Mechanical Items, Excluded;
2. Absorption and centrifugal chiller units;
3. Chilled condensing, water piping, pumps, cooling towers, and installation of same except in the supply and installation of condenser water pumps, tanks and piping when part of an ammonia brine refrigeration system for an ice arena or ice making plant;
4. Metal base flashings (counter flashing) and cap flashings for all mechanical roof penetrations, see also Roofing and Related Sheet Metal, Included and Mechanical, C. Ventilation and Sheet Metal Ductwork, Included;
5. Gas, water, drainage, condensate drains and connection of the same;
6. Insulation of refrigeration piping and equipment;
7. Matching distribution circuit to direct expansion (DX) coils not supplied by this subcontractor;
8. Cash allowances and/or contingency funds when a specific dollar amount is listed in the General Conditions or this trades specification section, carried by the Prime Mechanical Contractor;
9. Prefabricated coolers and freezers and associated refrigeration equipment when there is a Foodservice Equipment scope of work on the project;
10. Refrigerated cooling coils when integral part of a steam or hot water "fan coil" packaged unit;
11. Spray coil humidifier and dehumidifier section;
12. Vapor barrier, insulation, heat grid for recessed floor slabs under refrigerated fixtures and area;
13. Firestopping.

F. Insulation

SCOPE NARRATIVE

This scope includes the supply and installation of insulation and all components necessary for insulating mechanical systems and equipment as specified in the tender documents including thermal insulation of plumbing piping and equipment, heating ventilation, and air conditioning ducting and piping and equipment but excluding insulation on refrigeration piping.

This contractor shall include and exclude the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Work/materials/equipment listed in Mechanical A. Common Mechanical Items, Included;
2. Insulation for:
 - a. Breeching, stacks and furnace flues;
 - b. Cooling piping, vessels and equipment;
 - c. Emergency generator exhausts;
 - d. External duct insulation and equipment insulation (sound and thermal) complete with cladding and covering;
 - e. External insulation for incinerator breeching or stacks;
 - f. Heating piping, vessels and equipment;
 - g. Plumbing piping, vessels and equipment;
2. Insulation finishes and weatherproofing;
3. Ductwork or piping fire wrap, see Applied Fireproofing, Excluded;
4. High temperature insulation for kitchen exhaust duct, see Mechanical C. Ventilation and Sheet Metal Ductwork, Excluded;
5. Underground insulation conduits;

EXCLUDED

1. Work/materials/equipment listed in Mechanical A. Common Mechanical Items, Excluded;
2. Asbestos removal;
3. Factory insulated equipment;
4. Refrigeration piping insulation, see Mechanical E. Refrigeration;
5. Insulation of concrete, masonry and gypsum board construction shafts, tunnels or plenums (see Mechanical C. Ventilation and Sheet Metal Ductwork, Included);
6. Cash allowances and/or contingency funds when a specific dollar amount is listed in the General Conditions or this trades specification section, carried by the Prime Mechanical Contractor;
7. Pipe covering protection saddles, shields and supports;
8. Refractory linings;
9. Sleeves and packing for same;
10. Vibration and sound absorption pads and isolators;
11. Internal acoustic insulation in ductwork.

G. Sprinklers and Fire Protection

SCOPE NARRATIVE

This scope includes the supply and installation of sprinklers and fire protection and all components necessary for a complete operational sprinkler and fire protection system but does not include foodservice fire suppression systems.

This is a delegated design and the contractor must provide engineered drawings and hydraulic calculations.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

Work under this sub-subcontract starts at either a flanged connection upstream of the potable water connection or point of entry of water service into the building.

INCLUDED

1. Work/materials/equipment listed in Mechanical A. Common Mechanical Items, Included;
2. Automatic wet sprinkler systems with associated piping, fittings, hangers, tamper switches and fire alarm flow switches, excluding wiring and connection, see Electrical Included;
3. Dry Pipe Sprinkler system with associated pipe, fittings, hangers, valves, tamper switches, pressure switches, and air compressor, excluding wiring and connection, see Electrical Included.
4. Pre-action Sprinkler system with all associated pipe, fittings, hangers, valves, tamper switches, and fire alarm flow switches. Excluding electrical detection devices in protected space, wiring and connections, see Electrical Included;
5. Fire pump, control panel, motors, engines and fuel systems when pumps supply sprinkler system only, excluding wiring and connections;
6. Foam system, including tanks, pumps, piping, outlets and associated detectors and control panels excluding wiring and connection;
7. Fire standpipe system when connected to a combination sprinkler/standpipe system with or without fire pump and including:
 - a. Fire pump, controller, hose cabinets and extinguisher located in fire hose cabinets, excluding wiring and connection, see Electrical, Included;
8. Fire Standpipe System: Stand-alone type when not connected to a combination sprinkler/standpipe system fire pump, and including:
 - a. Fire pumps, control panels, motors, engine and fuel system, fire hose cabinets, fire extinguishers and fire extinguisher cabinets, excluding wiring and connections, see Electrical, Included, see Mechanical B. Prime Mechanical, Excluded;
 - b. Carbon dioxide, dry chemical and halon systems including piping, outlets, associated detectors and control panels, including integrated kitchen equipment fire protection systems, excluding wiring and connections, see Electrical, Included, see Mechanical B. Prime Mechanical, Excluded;
9. Fire pump, control panels, motors, engine and fuel systems when pumps supply sprinkler system or combination sprinkler/standpipe system excluding wiring and connection, see Electrical, Included;
10. Fire suppression clean agent/gas system excluding control panel, detection and alarm device and wiring, see Electrical, Included;
11. Room integrity testing for clean agent/gas systems;
12. Industrial dry electrical systems;
13. Fire extinguishers;
14. Air sampling systems;
15. Pipe and system identification and tagging;
16. Fire sprinkler drawings and hydraulic calculations, as required, approved by an Engineer practicing in the province where construction is to take place;
17. Sleeving as specified for this trade.

G. Sprinklers and Fire Protection – continued

EXCLUDED

1. Work/materials/equipment listed in Mechanical A. Common Mechanical Items, Excluded;
2. Water service from source to meter location (mechanical contractor to supply flanged connection);
3. Wet and dry pipe standpipe c/w Siamese connection and all connected hand hose cabinets and equipment;
4. Master control valve at point of water entry of water service into building if required;
5. Control panel, detection and alarm device and wiring for fire suppression clean agent/gas systems provided by the sprinkler system contractor, see Electrical, Included;
6. Painting of pipe;
7. Protecting sprinkler heads from painting processes, see Painting, Included;
8. Commercial Kitchen Fire Suppression systems;
9. Drip pans under sprinkler piping, see C. Ventilation and Sheet Metal Ductwork, Included;
10. Cash allowances and/or contingency funds when a specific dollar amount is listed in the General Conditions or this trades specification section, carried by the Prime Mechanical Contractor.

Foodservice Fire Suppression Systems

SCOPE NARRATIVE

This scope includes the supply and installation of fire suppression systems for commercial kitchen equipment installations.

Work under this sub-section starts at the emergency shut-off solenoid gas valve (valve supplied by this Contractor and installed by the Prime Mechanical contractor).

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Fire Suppression System starts at the emergency shut-off solenoid gas valve supplied by this contractor and installed by the Prime Mechanical Contractor, see Mechanical B. Prime Mechanical, Included;
2. Fire Suppression System shall be designed, constructed and installed by this contractor in accordance with local codes;
3. Approved wet chemical system includes cylinder, piping network, hangers and supports, heads (nozzles) mechanical detection i.e. fusible links, control head c/w fuel shut-off device with manual re-set and micro-switch for fire alarm panel monitoring;
4. Supply of micro-switch, see Mechanical G. Sprinkler and Fire Protection, Excluded;
5. Dry contacts for kitchen fire suppression system;
6. Supply of the emergency shut-off solenoid gas valve, see Mechanical B. Prime Mechanical, Excluded);
7. Material handling, including unloading and hoisting;
8. Scaffolding/man lifts where required to perform work by this trade scope;
9. Trade specific lighting to perform tasks;
10. Trade cleanup - cleanup for work carried out by this trade;
11. Warranty or Guaranty;
12. Submittals and Operation and Maintenance documentation as specified in the tender documents;
13. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
14. Protection of other trades' work from damage when performing this trade's scope of work;
15. Building Information Modeling (BIM) as it applies to this trade scope;
16. Commissioning as it applies to this trade scope.

EXCLUDED

1. Accessible exhaust/ductwork, filters, fans and hood;
2. Installation of the emergency shut-off solenoid gas valve, see Mechanical B. Prime Mechanical, Included;
3. All electrical connections for the micro-switch, dry contacts to be provided by this sub-trade. Electrical contractor to tie-in the kitchen suppression system into base building Fire Alarm System as per code requirements, see Electrical, Included;
4. Common scaffold or platform when required to perform work by multiple trades;
5. Temporary heat, general lighting, power, sanitation and water for general construction;
6. Hoarding;
7. Final Cleaning before turnover;
8. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
9. Firestopping;
10. Supply and maintenance of garbage and recycling bins for construction waste;
11. Removal of construction waste from job site;
12. General site security.

Integrated Automation (Facility Management Systems)

SCOPE NARRATIVE

This scope includes the supply and installation of a computer-based control system installed in buildings that controls and monitors the building's mechanical and electrical equipment including ventilation, lighting, power systems, fire systems, and security systems. Multiple building systems including Building Management Systems and electrically controlled systems are integrated into a single building system via open protocols. This includes lighting, video, sound, security and mechanical systems

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. All programming required to integrate all building systems being combined;
2. Installation and setup of any hardware or software required to allow connection to lower level building systems being integrated;
3. All networking components to successfully connect to the building systems;
4. Provide network addressing to other vendors prior to the 3rd party building system work being started;
5. A single interface with full color graphics for controlling and monitoring all connected building systems;
6. Any required energy or other dashboards;
7. Protection from damages of existing building systems while performing this scope;
8. Scaffolding/man lifts where required to perform work by this trade scope;
9. Trade specific lighting to perform tasks;
10. Trade cleanup - cleanup for work carried out by this trade;
11. Warranty or Guaranty;
12. Submittals and Operation and Maintenance documentation as specified in the tender documents;
13. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
14. Protection of other trades' work from damage when performing this trade's scope of work;
15. Building Information Modeling (BIM) as it applies to this trade scope;
16. Commissioning as it applies to this trade scope.

EXCLUDED

1. Network cabling between FMS and other lower level building systems such as, but not limited to:
 - a. Lighting;
 - b. Fire alarm;
 - c. Power Metering;
 - d. Access Control;
 - e. Building Management;
2. Networking components required by other building systems for own standalone operation;
3. Addressing of lower level building systems;
4. Trend logs and alarms of lower level building systems;
5. Commissioning of lower level building systems;
6. Common scaffold or platform when required to perform work by multiple trades;
7. Temporary heat, general lighting, power, sanitation and water for general construction;
8. Hoarding;
9. Final Cleaning before turnover;
10. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
11. Firestopping;
12. Supply and maintenance of garbage and recycling bins for construction waste;
13. Removal of construction waste from job site;
14. General site security.

Electrical

SCOPE NARRATIVE

This scope includes the supply, installation and connection of all electrical components and services to provide a complete and fully functioning integrated system which incorporates power, lighting, life safety, and all other electrical divisions.

The Electrical Division includes the following subdivisions for the supply and installation as listed below:

- A. Common Electrical - Items common to all sections of the Electrical Division;
- B. Prime Electrical:
 - i. Prime Electrical – Common items;
 - ii. Site Services;
 - iii. Building and Interior Power Infrastructure;
 - iv. Raceway Systems;
 - v. Lighting Systems and Control;
 - vi. Life Safety:
 - a. Emergency and Exit Lighting Systems;
 - b. Fire Alarm and Evacuation Systems;
 - vii. Mechanical Systems;
 - viii. Equipment and Other Systems;
- C. Alternate and Uninterruptable Power Sources;
- D. Photo-Voltaic (Solar) Systems;
- E. Wind Turbine Power Generation System;
- F. Lightning Protection Systems;
- G. Nurse Call and Patient Wandering Systems;
- H. Intercommunication Systems;
- I. Paging and Audio Systems;
- J. Centralized Sound Masking System;
- K. Video Surveillance and Television Systems;
- L. Building Security and Intrusion Systems;
- M. Structured Cabling System (Voice, Data, Cable);

And all items commonly associated with the above divisions which are normally laid out in the drawings and specifications.

The Electrical and Subdivisions (A) to (M) listed above, are to include the supply and installation of all equipment, power panels, transformers, control panels, termination cabinets, racks, devices, raceway systems, back boxes, pull boxes, cables, conductors, supports, programming, commissioning, training where they are required for exclusive use of the system being installed and shall provide a fully functioning system, unless items or trade definitions are otherwise excluded.

Packaged equipment, so specified under the mechanical scopes, shall mean pre-wired equipment supplied in a completely electrically operable state after one final connection of power wiring, and remote-control connections if specified.

Building Management System (BMS) and Heating Ventilation Air Conditioning (HVAC) controls refers to the controls for equipment that affects temperature and humidity within a building, and if the controls **do not** directly switch the power lines to the heating, cooling, ventilation, humidification and related motors, dampers and equipment to provide a complete operating system in which case the line voltage wiring of such controls shall be the responsibility of the electrical contractor.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

Electrical - continued

TRADE DEFINITION

A. Common Electrical Items

Items to be included and excluded by all Electrical trades

EACH ELECTRICAL SUBDIVISION SHALL INCLUDE AND EXCLUDE ALL COMMON ELECTRICAL ITEMS AS IT APPLIES TO THEIR INDIVIDUAL TRADE, AS WELL AS THE ITEMS IN THEIR INDIVIDUAL TRADE DEFINITION

The following items and requirements are common to all Electrical Divisions for each separate scope in this section and shall include or exclude these items in their submitted tender, unless specifically noted otherwise in that individual trade definition.

INCLUDED

1. Removal and storage of electrical and related equipment to each division scheduled to be salvaged for reuse, disconnection of line voltage by Prime Electrical contractor;
2. Access panels for walls, ceilings and floors, where required for items under electrical scope - to be supplied to respective trade for installation, such as the Gypsum Board and Metal Framing contractor;
3. Batteries - for systems under the electrical and subdivision scope;
4. Wiring devices and plates - for systems under the electrical scope;
5. Fastenings - (screws, bolts, hangers, straps, etc.) for electrical equipment and systems;
6. Holes to be cut into floor duct systems;
7. Identification and labeling, other than painted, including plastic decals for arrow flow, plastic and/or canvas, colored tape and/or secondary color banding, see Electrical Included and Excluded, Painting, Included;
8. Inspection as per the authority having jurisdiction;
9. Instrument panels - for systems under electrical scope;
10. Electronic systems - for items in the electrical scope;
11. Mark out backing in walls as required for all equipment provided by this scope;
12. Trade specific fire-stopping, see Prime Electrical, Included;
13. Protection of other trades' work from damage when performing this trade's scope of work;
14. Material handling, including unloading and hoisting;
15. Scaffolding/man lifts where required to perform work by this trade scope;
16. Trade specific lighting to perform tasks;
17. Trade cleanup - cleanup for work carried out by this trade;
18. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup;
19. Commissioning as it applies to this trade scope;
20. Permits, inspections and licensing as it applies to different jurisdictions;
21. Warranty or Guaranty;
22. Manufacturer's warranty only, other than the normal one-year maintenance warranty;
23. Submittals and Operation and Maintenance documentation as specified in the tender documents;
24. Building Information Modeling (BIM) as it applies to this trade scope.

A. Common Electrical Items - continued

EXCLUDED

1. All excavating and back filling to facilitate the installation of Subtrade work, see Prime Electrical, Included;
2. All underground, recessed or surface Conduits for all electrical systems;
3. All empty raceway system, including underfloor and overhead distribution system, fish wire, terminal cabinets, outlet boxes, floor boxes, pull boxes, sleeves and caps, cable trays, service poles, miscellaneous and positioning material for all electrical systems;
4. Line voltage power requirements to energize all systems including receptacles or hard-wired connections;
5. Alterations of services, as specified in the tender documents, required for specialty items, cabinets or equipment not supplied under this subcontract;
6. Sleeves, through poured-in-place concrete and masonry where required for electrical conduit, wire or equipment;
7. Core drilling - for electrical, except if provided for under pre-cast and post-tensioned slabs specifications;
8. Backing and backing materials, supply and installation;
9. Supports where detailed on architectural or structural drawings, see Included;
10. Cutting, including core drilling and patching - when pertaining to renovations, alterations or additions;
11. Waterproofing in wall, floor and ceiling penetrations;
12. Development and building permits;
13. Common scaffold or platform when required to perform work by multiple trades;
14. Temporary heat, general lighting, power, sanitation and water for general construction;
15. Hoarding;
16. Final Cleaning before turnover;
17. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
18. Cash allowances and/or contingency funds when a specific dollar amount is listed in the General Conditions or this trades specification section. Prime Electrical contractor to include Cash Allowance and/or contingency funds for electrical sub- trade contractors;
19. Supply and maintenance of garbage and recycling bins for construction waste;
20. Removal of construction waste from job site;
21. General site security.

B. Prime Electrical

SCOPE NARRATIVE

This scope includes the supply and installation of all line voltage electrical components, systems and their connection to electrical services to provide a complete fully functioning system including power, lighting, life safety and communication systems.

TRADE DEFINITION

INCLUDED

PRIME ELECTRICAL – COMMON ITEMS

1. Coordination of all electrical trade subdivisions;
2. Disconnection of power of existing electrical installations when the materials are to be demolished, abandoned, re-used or salvaged, as specified;
3. Removal and storage of electrical and related equipment scheduled to be salvaged for reuse;
4. All underground, recessed or surface Conduits for all electrical systems;

B. Prime Electrical Included – continued

5. All empty raceway system, including underfloor and overhead distribution system, fish wire, terminal cabinets, outlet boxes, floor boxes, pull boxes, sleeves and caps, cable trays, service poles, miscellaneous and positioning material for all electrical systems;
6. Line voltage power requirements to energize all systems including receptacles or hard-wired connections for all electrical subdivisions;
7. Hard wired electric connections to all equipment supplied by others, unless specified to be supplied and installed in the tender documents;
8. Grounding and bonding systems;
9. Poly vapor hats;
10. Relays for systems under the electrical scope;
11. Roughing-in and connecting, only as shown on the tender documents, specialty items, cabinets or equipment supplied and installed by others;
12. Supports where detailed on electrical drawings only;
13. Sleeves, through poured-in-place concrete and masonry where required for electrical conduit, wire or equipment, see Exclusions;
14. Core drilling - for electrical, except if provided for under pre-cast and post-tensioned slabs specifications;
15. Cash allowances and/or contingency funds when a specific dollar amount is listed in the General Conditions for all electrical subdivisions to be carried by the Prime Electrical contractor.

PRIME ELECTRICAL - SITE SERVICES

1. Precast Primary and Secondary transformer vaults, switching cubicles vaults, pull pits complete with extension rings to final elevation and covers for Main Site Utilities (primary power, telephone/cable, fiber optics) and installation as per the requirements of the local Utilities governing the installation, including: (see also Excluded):
 - a. Excavation, backfill and compaction of native (non-frozen) fill of the required excavation (see also Excluded)
 - b. The governing authority approved conduit types, treated planking, cables, conductors and compaction tests;
 - c. Complete grounding system including approved brass clamps, copper conductors and ground rods/plates;
 - d. Underground conduit, insulated conductors, cables and connections;
 - e. Drainage pits and conduit perforations;
 - f. Compaction testing as required;
 - g. Installation only of concrete, sand beds, gravel and non-frost fill, supplied by others.
2. Services, aerial (other than utility owned), including all required poles;
3. Electrical substations including equipment, conduits, high, medium and low voltage cables, wiring and connections;
4. Excavation, conduit, cables, insulated conductors and connections for secondary power from alternate power sources to the building main distribution for Generators, Wind Turbines, Photo-Voltaic systems and Central Heating Plants supplied by others. All concrete pads, concrete piles, screw piles, bases, fencing, by others;
5. Excavation, conduit, cables, insulated conductors and connections for vehicle power pedestals, vehicle charging stations, exterior mounted electrical power and control cabinets, site lighting (pole or pedestal) and landscape power outlets. All concrete pads, concrete piles, screw piles, bases, fencing, by others;
6. Excavation, conduit, cables, conductors, connections and power for gates and lot signage, (All equipment to be supplied and installed by others);
7. Rough backfill (non-frost native fill) of trenches for system where trench is excavated by reciprocal chain mount trenching operation and is less than 200 mm (8 inches) wide;

B. Prime Electrical Included – continued

8. Electrical Generators (diesel/gas) and Co-generation units complete with the means to interrupt or synchronization of the Utility power source and transfer by either manual and automatic transfer switches and the monitoring thereof– electrical, see Mechanical Plumbing, Excluded;
9. Power plant equipment, (excluding fuel tanks, vent ducting and piping for fuel, coolants and exhaust) complete with prime mover, flex connections, radiator and muffler when the major function is to drive electric generators, see Excluded, see Mechanical B. Prime Mechanical, Included;
10. Supply of fuel for the emergency generator system. Including fuel for generator testing and final fill for turnover to the Owner, see Mechanical A. Common Mechanical Items, Excluded;
11. Electrical wiring from fuel fill panel to generator day tank, float wiring and any wiring required from the day tank to generator to be completed by the Electrical contractor, see Excluded;

PRIME ELECTRICAL - BUILDING AND INTERIOR POWER INFRASTRUCTURE

12. Main distribution panels, service panels, central distribution panel, switchboards and service centers and related electrical equipment such as capacitor banks, voltage surge suppression, in board metering, coordination and short circuit studies (as specified);
13. Wiring and equipment for interior transformer and substation vaults including the supply and installation of related electrical equipment, conduits, cables, insulated conductors, wiring and connections of high, medium and low voltage cables;
14. Motor control centers, magnetic starters, and motor starters – see Excluded;
15. Secondary and sub-distribution centers, transformers, capacitor banks, and related electrical equipment;
16. Secondary Electrical distribution system including relays, panels, breakers, conduits, supports and conductors;
17. Generators complete with control wiring and monitoring for remote fuel monitor, transfer switches, fire alarm monitoring and wiring of float switches, see Excluded, see Mechanical Plumbing, Included and Excluded;
18. Floor boxes for all systems and fire rated poke through assemblies;
19. Cathodic protection;
20. Cabling and insulated conductors for branch circuits, feeders - for all systems under this electrical scope;
21. Protection devices, disconnects breakers and equipment;
22. Circuit breakers and manual disconnect switches both non-fused and fused complete with fuses except when part of packaged mechanical equipment, (see Excluded);
23. Meters - for systems under the electrical scope and power meters requiring connection to the Building Management Systems, including:
 - a. Conduit and cabling wire from power meter interface module to Facility Management Systems;
 - b. All network cabling, wiring and programming (including addressing & trend logs);
 - c. Qualified personnel for programming and networking;
 - d. Commissioning of systems;See Mechanical D. Building Management Systems, Excluded.

PRIME ELECTRICAL - RACEWAY SYSTEMS

24. Electrical flexible and surface raceways system;
25. Racking suspension and supports to support all raceway types;
26. Buss duct systems including all busways, splitters, gutters, supports, hangers, transitions and disconnecting means for main and sub feeders;
27. Floor duct and wireway systems including all supports, hangers and transitions;
28. Cable trays, including all supports, hangers and transitions;
29. In floor electrical and communications duct systems including all supports, hangers and transitions;

B. Prime Electrical Included - continued

PRIME ELECTRICAL - LIGHTING SYSTEMS AND CONTROL

30. All interior and exterior luminaires for the illumination within the building and the surrounding areas;
31. Connection only of operating room lights, hangers and supports to be provided by others;
32. Luminous ceilings: including electrical lighting fixtures and raceways only but excluding leaf- type reflectors, egg-crate reflectors, plastic or glass lenses and diffusers and all supports for same. For lighting fixtures, see Included;
33. Luminaires and fixtures including those which are surface, recessed, pendant and/or remote to drivers and ballasts;
34. Luminaires for site poles, exterior accent, security, walkway and landscape lighting complete with controls;
35. Obstruction lighting for tall buildings and structures near the operation of aircraft;
36. Luminaires for systems which require indications or warning signals;
37. Marine lighting - to mechanical systems other than packaged equipment;
38. Valance and cove lighting: including electrical lighting luminaires, fixtures and raceways only but excluding leaf-type reflectors, egg crate reflectors, plastic or glass lenses and diffusers and all supports for same. For lighting luminaires and fixtures, see Included;
39. Lighting control and dimmer systems, including line and low voltage switching, control cabinets, programmable dimming systems and equipment, integration with the building maintenance system and wireless lighting control systems;
40. Wireless switching and wireless lighting control systems;
41. Digital Addressable Lighting Interface (DALI) for building lighting control systems and integration with structured cabling;
42. Occupancy and daylight harvesting sensors including local control and integration into a low voltage lighting system controller;
43. Electrified glazing light curtain and control complete with building system integration;
44. Electrified window blinds and control complete with building system integration;
45. Lighting luminaires and fixtures (complete manufactured units): All luminous elements consisting of a light source (and ballasts if required) mounted separately or as components of an overall ceiling system including fixtures for coffered ceilings, air troffers and indoor or outdoor flood lighting, to include lamps ballasts, drivers for same, lenses, globes, guards and all types of diffusers (also supports if detailed on electrical drawings only, except for fluorescent fixtures larger than 610 mm x 1220 mm);

PRIME ELECTRICAL - LIFE SAFETY: EMERGENCY AND EXIT LIGHTING SYSTEMS

46. Emergency life safety, lighting power and exit lighting systems including:
 - a. Emergency battery packs complete with remote direct current heads;
 - b. Remote direct current emergency lighting heads;
 - c. Exit lighting both powered and self-luminated;
 - d. Light fixtures with integral emergency power ballasts;
 - e. Conduit, cabling and wiring from lighting interface module to Facility Management Systems;
 - f. All network cabling, wiring and programming (including addressing & trend logs);
 - g. Personnel for programming and networking;
 - h. Commissioning, testing and training of installed systems;
47. Fire alarm systems - including fire phone systems, and fire alarm fan-shut-down and start-up relays and wiring. Also including wiring and connections only for fire protection systems and smoke or smoke/fire damper activation and monitoring including:
 - a. Conduit and wire from Fire Alarm interface module to Facility Management Systems;
 - b. All network wiring and programming (including addressing & trend logs);
 - c. Qualified personnel for programming and networking;
 - d. Commissioning of system.

See Mechanical B. Prime Mechanical, included; Mechanical D. Building Management Systems, Included, Mechanical G. Sprinklers and Fire Protection, Included;

B. Prime Electrical Included - continued

PRIME ELECTRICAL - LIFE SAFETY: FIRE ALARM AND EVACUATION SYSTEMS

48. Control panels, detection, alarm devices including the connection wiring required to control the fire suppression clean agent/gas piping systems provided by the sprinkler system contractor, see Mechanical G. Sprinklers and Fire Protection, Included and Excluded;
49. Wiring and connection of automatic sprinkler systems with associated detection, control panel and alarm devices, see Mechanical G. Sprinklers and Fire Protection, Included;
50. Fire alarm fan shut-down and start-up relays and wiring, see Building Management system excluded;
51. Wiring of pool system controls, see Building Management system excluded;
52. All electrical connections for the Foodservice Fire Suppression Systems. Dry contacts to be provided by the Foodservice Fire Suppression contractor. Electrical contractor to tie-in the kitchen suppression system into base building Fire Alarm System as per code requirements, see Foodservice Fire Suppression Systems, Excluded;
53. Wiring and connections to disconnect electrical the power outlets during an emergency event;
54. Addressing of lower level building system;
55. Battery chargers - for systems under the electrical scope;
56. Medical gas alarm and special fire protection systems - supply and install conduit, wire and connections only;
57. Fire and smoke detectors and interconnecting devices;
58. Signaling systems – for items under the electrical scope;
59. Alarm and detection systems, Soil gases detection systems - for systems under the electrical scope;
60. **Stand alone** line voltage smoke detectors and carbon dioxide detectors(CO2);
61. Audible devices for systems under the electrical scope;
62. Detectors - for systems under the electrical scope;
63. Sprinkler enunciator systems, electrical;
64. Network cabling between Facility Management Systems and other lower level building systems such as:
 - a. Lighting;
 - b. Fire alarm;
 - c. Power Metering;
 - d. Access Control;
 - e. Building Management.
63. Networking components required by other building systems for own standalone operation;

PRIME ELECTRICAL - MECHANICAL SYSTEMS

64. Switches - all types of electrical switches including manual and automatic disconnects, for systems under the electrical scope except where part of packaged equipment supplied by others;
65. Line voltage connections to all packaged equipment including roof top units, chillers, air handling units, unit heaters, infrared heaters, boiler units, low voltage control wiring is by mechanical, See Electrical excluded, see Mechanical included;
66. Line voltage wiring of control devices supplied by the mechanical, see Building Management Systems excluded;
67. Line voltage connections, splitters, fusible disconnects and variable speed rated cables for packaged units where they are not integral to the packaged unit;
68. Motor starters - all motor starters and protection switches without exception other than that equipment which forms an integral part of packaged equipment requiring a power connection only;
69. Multi-speed controller switches including variable speed drives which are electrically initiated and operated, see Excluded;

B. Prime Electrical Included - continued

70. Electric Heating:
 - a. Electrical base board, in-floor and in-slab heating;
 - b. Electric heat not fan powered or ducted;
 - c. Heating cables, heating tape except when supplied by the mechanical scope, see Mechanical A. Common Mechanical Items, Included;
 - d. Radiant electrical heating panels;
 - e. Controls for above items unless forming part of Building Management Systems, controls under mechanical scope, see Mechanical D. Building Management Systems, Included;
 - f. Line voltage electrical wiring and connection for heat tracing, supplied by others, see Mechanical Included.
71. Transformers, voltage regulators, controls and any wire connections associated with heat tracing, see Mechanical B. Prime Mechanical, Excluded;
72. Line voltage electrical wiring and connections to electric in floor heating mats and cables installed by tile contractor, see Tile Terrazzo, Marble, Granite and Stone, Included;
73. All line and low voltage wiring for fire pumps, booster pumps, condensate pumps, sump pumps and associated floats and controls panels. Sump pump floats and panels are supplied by the mechanical contractor, see Mechanical A. Common Mechanical Items, Excluded;
74. Line voltage electrical wiring and connection for Control consoles - except for Building Management Systems and pre-wired factory-packaged equipment;
75. Line voltage electrical wiring and connection for Control devices - for equipment under mechanical scope which constitute protective control or disconnecting as required by the Canadian Electrical Code;
76. Line voltage electrical wiring and connection for Control panels - except for Building Management Systems and pre-wired factory-packaged equipment;
77. Line voltage electrical wiring and connection for Control power supply outlets - provided at locations shown on the electrical drawings and terminated in terminal cabinets or outlet boxes. Alternatively, if no control power supply outlets are shown on the electrical drawings, the electrical contractor shall provide such outlets adjacent to the source where the power circuit originates. The wiring beyond control power supply shall fall under the scope of control wiring, see Mechanical D. Building Management Systems, Excluded;
78. Control wiring - for motors, solenoids, relays and duct heaters under the mechanical scope, except pre-wired packaged equipment and controls that do not directly switch the power lines to the motors and duct heaters. Control wiring shall include all necessary wiring materials and connections, and the installations of controls that do not require mechanical connections;
79. Temperature control system and devices for electric heating supplied by the electrical trade;
80. Thermocouple wiring and thermocouple sensor wiring except for Building Management Systems controls;
81. Line voltage and low voltage electrical wiring and connection of electrically operated plumbing fixtures, placement and installation by others, See Excluded;
82. Solar powered heating systems (electrical), see Mechanical B. Prime Mechanical, Included and Excluded;
83. Electrical load Balancing - for systems under the electrical scope;
84. Cables, electrical and heating;
85. Contactors including those required for Building Management System control and monitoring;
86. Installation only, of line voltage wiring and control devices. Control devices are supplied by the Mechanical trades for heating, cooling and ventilation systems (not controlled by a building management system), see Mechanical - D. Building Management System, Included and Excluded;
87. Line voltage electrical wiring and connection only for automatic underground sprinkler and/or irrigation systems, control wiring is by others, see Exterior Landscaping, Included;
88. Line voltage electrical wiring and connection for gas detection systems, Radon exhaust systems, Methane extraction systems, Soil gases extraction systems, supply installation and low voltage wiring by Mechanical, see Mechanical Included;

B. Prime Electrical Included – continued

89. Line voltage electrical wiring and connection for fire pumps, jockey pumps, circulation pumps, heat pumps and other related mechanical pumps and equipment required for a complete mechanical operated system, see Mechanical, Included;
90. Line voltage electrical wiring and connection for circulation fans, exhaust fans, intake fans and other related mechanical ventilation and equipment required for a complete mechanical operated system, see Mechanical, Included;

PRIME ELECTRICAL - EQUIPMENT AND OTHER SYSTEMS

91. Line and low voltage electrical wiring, disconnects, control and connections for overhead doors and automatic doors including interconnecting wiring, conduit and boxes. Supply, placement and installation at location for control, safety devices and electrically activated holding devices by others; see Overhead Doors, Included and Excluded;
92. Line voltage electrical wiring and connection for door wiring for electric locking mechanisms including interconnecting wiring;
93. Line voltage electrical wiring and connection, disconnects and connections for automatic and handicap doors, including empty conduit and boxes for control devices and electrically activated holding devices by others, supply and installation of automatic and handicap doors by others;
94. Line voltage electrical wiring and connection for all washroom accessories as supplied by others unless listed in the electrical specifications to supply and install;
95. Line voltage electrical wiring and connection only of medical, dental, and digital imaging equipment and other healthcare related equipment, Hangers and supports to be provided by others;
96. Line and low voltage electrical wiring, control and connection for Clocks and clock systems;
97. Line and low voltage electrical wiring, control and connection for time recording system;
98. Line and low voltage electrical wiring, control and connection for timers and time clocks - for systems under the electrical scope;
99. Line voltage electrical wiring and connection for watchman's clocking equipment - for systems under the electrical scope
100. Line voltage electrical wiring and connection for send/receiving devices - for systems under the electrical scope;
101. Line voltage electrical wiring and connection for telautograph devices;
102. Line voltage electrical wiring and connection for telephone systems, private automatic, supplied by others;
103. Line voltage electrical wiring and connection for appliances and furniture requiring a permanent electrical connection only;
104. Line voltage electrical wiring and connection for laboratory equipment-except those items included in a factory assembled casework product;
105. Wall panels connections for systems under the electrical scope;
106. Elevator and Escalator power and related life safety work including:
 - a. Line voltage electrical wiring and connection;
 - b. Mainline disconnects for each elevator as required;
 - c. Disconnecting device to elevator equipment prior to activation of sprinkler system;
 - d. Installation of dedicated ground fault Ground Fault Circuit Interrupter receptacles in the elevator pit and overhead;
 - e. Lighting in controller area, elevator machine area and pit;
 - f. Wiring for elevator telephone service to controller;
 - g. Emergency generator for elevator operation;
 - h. Fire alarm detectors, relays and signal lines to contacts in the elevator machine area including requirements for elevator homing.
107. Line voltage electrical wiring and connection to movable dividers/work stations either base fed and/or with service and Pak-pole connections. Power whips and Service and Pak-poles as provided by others - for systems under the electrical scope, see Excluded;
108. Transformers - for systems under the electrical scope;
109. Electric meters (revenue meters) as indicated on the drawings and specifications, other than main Utility metering;

B. Prime Electrical Included – continued

110. Line voltage electrical wiring and connection for equipment under the General Mechanical and Foodservice Equipment scopes, shall include, all necessary wiring materials and connections for motors requiring protective control by the Canadian Electrical Code, heaters, lamps, electro static filters, and controls that directly switch the power lines to such equipment. Wiring to solenoids shall fall in the category of control wiring, see Electrical Included; Mechanical D. Building Management Systems, Excluded;
111. Line voltage electrical wiring and connection for direct wired equipment and machinery including supply of loose magnetic starters;
112. Line voltage electrical wiring and connection only for direct wired Food Service Equipment;
113. Supply and installation of an electrical panel for Food Service Equipment if there is more than five (5) pieces of equipment requiring an electrical junction box or panel;
114. Power wiring for vacuum systems installed by the mechanical contractor, see Mechanical B. Prime Mechanical, Included;
115. Line voltage electrical wiring and connection only for food services refrigerated rooms, freezers and coolers including compressors, condensers, chillers, evaporators, lighting, controls, time clocks, thermostats, solenoids, door heat tracing and all other associated refrigerated equipment that requires line voltage connections;
116. Resistors and capacitor banks - for systems under the electrical scope;
117. Line voltage electrical wiring and connection only for wet and dry sauna;
118. Line voltage electrical wiring and connection only for signs;
119. Snow melting cables, including related control devices;
120. Vehicle charging stations.

EXCLUDED

1. Supply and placement of control and protection devices for refrigerated rooms and coolers;
2. Supply and placement of control and protection devices for overhead and automatic doors, wiring for overhead doors;
3. Control wiring for equipment under mechanical scope intended for Building Management Systems or Heating, Ventilating and Air Conditioning (BMS/HVAC) controls, including solenoids, valves and dampers;
4. Supply of low voltage transformer for variable air volume devices and electrically operated plumbing fixtures;
5. Door access card readers and electrified exit hardware, hinges, hold open devices or other controller's and devices which are part of the hardware specified scope to include, or part of the door and/or door frame mounted except when part of systems furnished by one supplier, see Included; wiring for same regardless of supplier is by electrical contractor;
6. Door holding devices forming part of door hardware system;
7. Food service and laundry equipment unless specified in the electrical specifications;
8. Fuel tanks, vent ducting, piping for fuel, coolants and exhaust for power plant equipment;
9. For remote radiators only, piping and associated equipment including valves, pumps, expansion tanks and coolant will be provided under the mechanical scope, see Mechanical B. Prime Mechanical, Included;
10. Installation of plaster trims (frames) for lighting fixtures;
11. Instrumentation;
12. Supply and installation of utility transformers, power poles and metering;
13. Supply and installation of movable screens/work stations including the integral power outlets, service and Pak-poles power whips/junction box and base feed whips;
14. Laboratory equipment which is part of factory assembled casework product; Supply of operating room light fixtures and installation of track assembly support system;
15. Luminous light lenses and/or decorative lenses and/or louvres, including metal and/or plastic support moldings when installed in architectural valences, see Component Ceiling Systems, Included, Architectural Woodwork, Included, Lath, Plaster & Stucco, Included, Gypsum Board and Metal Framing, Included;
16. Portable appliances and portable furniture, and electrical fixtures, devices and cords affixed thereto;
17. Thermostats and guards for equipment under mechanical scope;

B. Prime Electrical Excluded – continued

18. Trims or moldings for lighting fixtures other than manufactured plaster trims and those supplied with the fixture;
19. Valances and covers for lighting fixtures, see Component Ceiling Systems, Included;
20. Multi-speed controller switches including variable speed controllers that are mechanically or hydraulically initiated and operated or part of packaged equipment so specified under the mechanical scopes;
21. Electric forced air unit heaters, except for electrical connections;
22. Electric duct heaters, except for electrical connections;
23. Electric duct mounted coils and heating that is fan powered, see Prime Electrical, Included, Mechanical - C. Ventilation and Sheet Metal Ductwork, Excluded;
24. Air curtains, except for electrical connections;
25. Supply and installation of low voltage wiring and control devices for heating, cooling and ventilation systems not controlled by a building management system, see Mechanical D. Building Management System, Included and Excluded;
26. Electrical disconnects or switches as part of packaged equipment and specified under the mechanical equipment;
27. Electrical wiring and conduit from all controllers to signals and operating circuits for electric elevators, hydraulic elevators, parking garage hoists, escalators, dumbwaiters, conveyors, moving walkways, speed ramps;
28. Supply and installation of heat trace to mechanical piping either internally or externally, see Mechanical B. Prime Mechanical, Included;
29. Sump pump floats and panels, see Mechanical A. Common Mechanical Items, Included;
30. Services and service charges for electrical, telephone and television as levied by the municipality or utility company;
31. Telephone systems, private automatic;
32. Backfill and compaction of electrical excavations completed by this trade except in definitions where the backfill and compaction is indicated as included, and where the rough back fill (but not compaction) is indicated as included;
33. Supply of fill (if native soil is frozen), gravel, concrete, sand and required materials to obtain complete compaction or protect electrical installations as indicated on the drawings, specifications and Utility requirements;
34. Removal of surplus excavation materials;
35. Poured-in-place concrete for concrete curbs, housekeeping, inertia bases and equipment;
36. Supply and installation of support bases and/or piles (of concrete, precast or screw pile type) for pole lighting, landscape lighting, landscape power, Car plug pedestals and other similar auxiliary electrical supports;
37. Painting (on site), see Painting Included;
38. Soundproofing in wall, floor and ceiling penetrations;
39. Connections and control cables for the Building Management System to integrate and monitor all Mechanical and Electrical building systems.

C. Alternate and Uninterruptable Power Systems

SCOPE NARRATIVE

This scope includes the supply and installation of Alternate and Uninterruptable Power Supply (UPS) system that provides temporary and/or emergency power in the event of a power outage. This system allows power to be supplied to portions of a building infrastructure or equipment which maintains power for a period of time when the primary power source is lost. The uninterruptable power supply maintains a constant voltage and also provides protection from power surges.

INCLUDED

1. Uninterruptable Power Supply complete with internal static bypass circuit for power diversion;
2. Rectifier for the conversion of power for battery charging capabilities and convert incoming power;
3. Manual or automatic power interruption switches for this scope;
4. Battery back-up assemblies and interconnecting cables and connectors;
5. Inverter complete with voltage regulation, frequency control, harmonic distortion control and overload controls;
6. Transient volt surge suppression, external maintenance by-pass controls and remote monitoring.

D. Photo-Voltaic (Solar) Systems

SCOPE NARRATIVE

This scope includes the supply and installation of all equipment for Photo-Voltaic Solar system including solar modules, string inverters, micro inverters, central inverters, optimizers, arc fault protection, rodent protection, bonding systems, support systems, cabling, connections and other Solar and electrical accessories to provide a complete functioning system.

INCLUDED

1. Photo-Voltaic (solar) racking systems complete with integrated roof supports, wall supports and ballasting/anchoring systems;
2. Power optimizers, string inverters, central inverters, micro inverters and communication connections;
3. Underground and above ground electrical conduit, flex and conductors for all AC and DC cabling and connections;
4. Modification to main power distribution and breakers if adding to an existing power distribution;
5. Photo-Voltaic modules and all related hardware;
6. Battery and electrical energy storage systems and charging controllers;
7. Ballast weights for roof and ground mount systems;
8. Ground mount racking systems fixed and multi-axis trackers mounted to structural framing members as provided by others, see Structural Steel, Included, see Piles, Included;
9. Arc fault protection;
10. Photo-Voltaic (PV) communication connection to client server;
11. Photo-Voltaic rodent protection for insulated conductors and cabling;
12. All work related to Photo-Voltaic racking system grounding and bonding individually or as part of the assembly;
13. Electrical engineering fees;
14. Submission of micro-generation application to the local Utility and metering;
15. Safety Control zones and rooftop safety devices as required by authorities having jurisdiction;
16. Rapid shutdown control and initiating devices including those tied to life safety systems;
17. Controls and systems relating to utility requirements for inverter output control and safety.

EXCLUDED

1. Supply or removal of fill for earthworks or vegetation prevention, adequate site drainage, final landscaping;
2. Modification to existing communications beyond single point connection to client server;
3. Modification to existing structural members if required by Structural Engineer.

E. Wind Turbine Power Generation

SCOPE NARRATIVE

This scope includes the supply and installation of all equipment for wind turbine systems that converts the wind's kinetic energy into electrical energy and is the process by which the wind is used to generate electricity to provide a fully functioning system.

INCLUDED

1. Horizontal-axis and the vertical-axis turbines;
2. Drive train including a gearbox and generator;
3. Tower and structure which supports the rotor and drive train;
4. Controls, cable twist counter, electrical cables, connections, ground support equipment, and interconnection equipment;
5. Rotor blades, hub, low and speed shafts and gearbox mechanical brake;
6. Electrical generator, yaw mechanism, electronic controller, hydraulics system, cooling unit, tower, anemometer and wind vane;
7. Transformers, inverters and battery storage units;

EXCLUDED

1. Piling -Bored and Caisson for the support of the wind turbine; see Piles-Bored and Caisson, Included;
2. Piling and screw piles for the support of the wind turbine; see Piles-Steel Screw Piles, Included;
3. Structural supports required for supporting the wind turbine to a structure; see Structural Steel, Included.

F. Lightning Protection Systems

SCOPE NARRATIVE

This scope includes the supply and installation of all equipment for a Lightning Protection System (LPS) designed to protect a structure or building and contents from damage caused by the intensely high voltage currents of a lightning strike. A lightning protection system offers a lightning strike a low resistance path to ground where the enormous energy is then safely dispersed to protect buildings, property and persons to provide a fully functioning system.

INCLUDED

1. Air termination system includes lightning rods, metal conductors and ground electrodes;
2. Horizontal or vertical conductors providing protection for the mesh method;
3. Interconnecting all isolated conducting parts of the installation including cables, conductors and surge protective devices;
4. Earth-termination system and lightning equipotential bonding system including ground rods, buried wires, foundation earthing, cables and conductors;
5. Lightning current arrestor and related components;
6. Device for protecting electrical/electronic equipment from transient voltage, power surges and over voltage damage.

G. Nurse Call and Patient Wandering Systems

SCOPE NARRATIVE

This scope includes the supply and installation of all equipment for a Nurse Call Systems that act as a means of communication between the nursing staff and patients within a healthcare type facilities either through wired or wireless call buttons or devices which can be activated in case of emergency or requests by patients who wish to receive attention from nurses which provides a fully functioning system and also includes the supply and installation of all equipment for a Patient Wandering Systems which tracks patients within set borders to guarantee their protection within hospitals, nursing homes and senior living homes to provide a fully functioning system.

INCLUDED

1. Nurse main and desktop control console and controller complete with power supply;
2. Interface with paging, telephone systems, fire alarms and smoke detection systems;
3. Monitoring and computer software;
4. Networked nurse stations for centralized paging, alarm logging and event reporting;
5. Room controllers, Console receivers, staff room displays and door modules;
6. Wall mount call point, pull cords, washroom call units, plates and devices;
7. Bed indicators and bed/pillow speaker and call cords;
8. Wall mount nurse calling point and secondary stations;
9. Wander management system and control panels;
10. Roam alert door controllers, bracelets, and guard system;
11. Global positioning systems and radio frequency receivers and devices;
12. Roam alert controller and exciter complete with pendants and tags;
13. Provide wiring diagrams and schematics complete zone drawings to integrate design requirements;
14. Installation of all system plenum or non-plenum rated cables and interconnections of all system components.

H. Intercommunication Systems

SCOPE NARRATIVE

This scope includes the supply and installation of all equipment for an Intercom and Voice Communication and Intercom system used in one or more buildings to allow for communication across physical spaces by audio and video transmission which has the capability to make announcements to the entire system and also has the capability to integrate with other systems to provide a fully functioning system.

INCLUDED

1. Intercoms system complete with a self-contained phone system;
2. Master or base station of an intercom system;
3. Sub-station intercom panels and components;
4. Exterior door station intercom panels and components;
5. Exterior door station intercom panels and components;
6. Push-and-talk functioning microphone or a hand-held phone set;
7. Portable closed-circuit intercom system, complete with headsets, handsets and intercom station belt mount with an earpiece;
8. Closed-circuit intercom messaging system that controls incoming intercom correspondence;
9. System interface with intercom panel with or without connection to an outside phone system;
10. Interface with closed circuit television, telephone paging equipment and video equipment;
11. Provide wiring diagrams and schematics complete zone drawings to integrate design requirements;
12. Installation of all system plenum or non-plenum rated cables and interconnections of all system components.

I. Paging and Audio Systems

SCOPE NARRATIVE

This scope includes the supply and installation of all equipment for a Public-Address System (PA system) comprising of microphones, amplifiers, loudspeakers, and related equipment complete with speakers and stations throughout a building. The system allows administrators to provide announcements, music and signaling to occupants to provide a fully functioning system.

INCLUDED

1. Public address loudspeaker system to incorporate ability for voice paging;
2. Provisions to broadcast programs from AM/FM tuner;
3. Voice paging from telephone set complete with overrides over broadcast or recorded music reproductions;
4. Provide selective area page to areas, emergency page to all areas;
5. Integrate Music from external or internal sources;
6. Ability to perform speaker selection through a multiplexed assembly;
7. Rack, to accommodate system components with mounting rails, wire and cable entrances;
8. Components such as, monitor panel, Tuner, compact disc (CD) player, relay assembly's, page/music selection panel;
9. Programmable timer system with battery backup;
10. Components such as Patch panels, pre-amplifier mixer, power amplifiers, power boosters and power supplies;
11. Tone signal generator for time and alarm signals;
12. Interface with closed circuit television, telephone paging equipment and video equipment;
13. Interface to use speaker system as listening devices to actuate relays to sound alarms and notifications;
14. Provide wiring diagrams and schematics complete zone drawings to integrate design requirements;
15. Installation of all system plenum or non-plenum rated cables and interconnections of all system components.

J. Centralized Sound Masking System

SCOPE NARRATIVE

This scope includes the supply and installation of all equipment for a Sound Masking System which provides digitally generated sound to reduce distractions or provide confidentiality within a space to provide a fully functioning system.

INCLUDED

1. Network control panels, primary hubs, accessory/secondary hubs, and required racking;
2. Digital Signal Processing and programming;
3. Sound masking generation, equalizers, paging and integration;
4. Speaker assemblies, loud speakers and complete cabling;
5. Programmable keypads and infrared remote-control receivers;
6. Paging infrastructure, microphones;
7. Cable assemblies and couplers;
8. Power supplies and battery backup for fail safe;
9. Cabling, clips, chains, suspension and supports;
10. Provide wiring diagrams and schematics complete zone drawings to integrate design requirements;
11. Installation of all system plenum or non-plenum rated cables and interconnections of all system components.

K. Video Surveillance and Television Systems

SCOPE NARRATIVE

This scope includes the supply and installation of all equipment for a Video Surveillance System which provides monitoring with cameras of the building exterior and key locations throughout the building such as stairwells, entrance and exit points to allow for remote surveillance to a monitoring station and also the supply and installation of all equipment for a Television System which incorporates and accepts radio television broadcasting bandwidths and satellite signals with in local area and distribute the signal to locations though out the building to televisions and monitor screens.

INCLUDED

1. Closed Circuit Camera Hardware and terminations of equipment connections;
2. Termination Blocks and Patch Panels;
3. Communication Horizontal Cabling;
4. Servers for Surveillance systems and Monitor screens for the system;
5. Radio Equipment for television radio frequency;
6. Radio Frequency Termination Blocks and Patch Panels;
7. Faceplates, cabling connectors;
8. Remote monitoring station or software;
9. Interface with Card access and Intrusion system;
10. Interface with Structured cabling;
11. Provide wiring diagrams and schematics complete zone drawings to integrate design requirements;
12. Installation of all system plenum or non-plenum rated cables and interconnections of all system components.

L. Building Security and Intrusion Systems

SCOPE NARRATIVE

This scope includes the supply and installation of all equipment for a Building Security and Intrusion Systems which allows controlled access for entry and exit for a building including keypads, scanners and related detection devices which allow for remote monitoring of the building including arming and disarming of the system for a fully functioning system.

INCLUDED

1. Key pads and scanners;
2. Integration with door hardware to monitors the exit of the building;
3. Termination blocks and patch panels;
4. Intrusion and security control panels, main and auxiliary;
5. Recessed and surface door position switches and related magnets;
6. Glass break detection, infrared motion detection and beam detection devices and interconnection;
7. Audio, sonic, smoke, water and heat detection devices and interconnection;
8. Integration with Card Access Systems with network interface, see Access Control Systems, Included and Excluded;
9. Interface with Video Surveillance system;
10. Provide wiring diagrams and schematics complete zone drawings to integrate design requirements;
11. Installation of all system plenum or non-plenum rated cables and interconnections of all system components.

M. Structured Cabling Systems (Voice, Data and Cable)

SCOPE NARRATIVE

This scope includes the supply and installation of all equipment for a Structured Cabling System of cabling and associated hardware which provides a comprehensive telecommunications infrastructure. This infrastructure contains the cabling integration with the voice, data, video, and various management and network systems of a building for a fully functioning system.

INCLUDED

1. Cabinets, racks, frames and enclosures;
2. Termination blocks and patch panels;
3. Cable management, cable terminations, labelling and cross connects;
4. Power strips, Uninterruptable Power Supply for this equipment and rack mounted power distribution units;
5. Communication copper backbone for interconnection between buildings, telecommunication closets, equipment rooms, point of demarcations and the cabling system structure;
6. Fibre backbone consisting of single mode, multimode and optical fiber cables;
7. Anti-static electricity devices and cable connections;
8. Faceplates, cabling connectors and patch cords;
9. Communication horizontal cabling;
10. Interface with Video surveillance;
11. Interface with lighting controls;
12. Cables for data and voice communications including optical fiber, twisted-pair copper, coaxial cable;
13. Installation of all system plenum or non-plenum rated cables and interconnections of all system components.

EXCLUDED

1. Telephone systems and equipment, private or automatic, unless specified to be included by the Electrical trade.

Access Control Systems

SCOPE NARRATIVE

This scope includes the supply and installation of all required software and hardware for electronic access and egress systems, including management devices, integrated control credentials, card readers, control and monitoring equipment and systems for controlling access to a facility. A complete system includes operating systems, mobile applications and software interfaces, access control hardware devices and system integration and interconnection.

Control systems shall be included as they relate to:

1. Wood Doors and Frames;
2. Hollow Doors and Frames;
3. Aluminum Doors and Frames;
4. Demountable Partitions.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

INCLUDED

1. Keypads;
2. Card Readers;
3. Biometric Readers;
4. Request to exit devices (motion sensor, push button, or other device) unless directed otherwise in the tender documents;
5. Door Position Switches;
6. Door Controllers;
7. Main Controllers;
8. Wireless Controllers;
9. Credentials (including ID cards, fobs);
10. Programmers and Update Devices;
11. Setup of System;
12. Training of End User;
13. Door security and/or monitoring systems including remote devices, card access readers, enunciators, central processing unit, etc., as required by the system including wiring. Components of a trade name door security and/or monitoring system which is specified to be supplied by one supplier and which must be door and/or door frame mounted shall be supplied by the electrical contractor for installation by the door and/or frame supplier, otherwise, all door and/or door frame mounted components shall be supplied and installed by others; wiring for these components shall be by the electrical contractor in either case;
14. Material handling, including unloading and hoisting;
15. Scaffolding/man lifts where required to perform work by this trade scope;
16. Trade specific lighting to perform tasks;
17. Trade cleanup - cleanup for work carried out by this trade;
18. General Cleanup – provide 1 in 10 workers for 4 hours weekly to assist in general jobsite cleanup.
19. Warranty or Guaranty;
20. Submittals and Operation and Maintenance documentation as specified in the tender documents;
21. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
22. Protection of other trades' work from damage when performing this trade's scope of work;
23. Building Information Modeling (BIM) as it applies to this trade scope;
24. Commissioning as it applies to this trade scope.

Access Control Systems - continued

EXCLUDED

1. Cameras, unless directed otherwise in the tender documents;
2. Modifications needed to mount equipment and pedestals, rails and other surfaces;
3. Security, unless directed otherwise in the tender documents;
4. Network Patch Panels, Networking Wiring and Network or Computer Setup;
5. Installation of wiring and/or conduit;
6. Architectural Hardware (unless directed otherwise in the tender documents);
7. Mounting of Power Supplies and other devices requiring 120 VAC.
8. Common scaffold or platform when required to perform work by multiple trades;
9. Temporary heat, general lighting, power, sanitation and water for general construction;
10. Door wiring for overhead and automatic doors - electrical supply hook up, interconnecting wiring, conduit and boxes. Control devices by others (see Electrical, Included);
11. Hoarding;
12. Final Cleaning before turnover;
13. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
14. Firestopping;
15. Supply and maintenance of garbage and recycling bins for construction waste;
16. Removal of construction waste from job site;
17. General site security.

Piles - Driven Piles (Timber, Pipe, Steel, Sheet and Precast Concrete)

SCOPE NARRATIVE

This scope includes the supply and installation of driven deep pile foundations of various materials for support of structures including timber, pipe, steel, precast concrete and all components necessary for a complete installation.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. Concrete within pipe piles;
2. Equipment necessary to install the piles;
3. Load testing of piles, when specified in the tender documents;
4. Protection of concrete in piles from freezing;
5. Engineered drawings;
6. Where a pile foundation is designed by a piling contractor, he shall be responsible for the adequacy of the surrounding services and/or structures to withstand the vibrations or other effects of the piling installation proposed by the piling contractor;
7. Provision and maintenance of all lines and levels as required;
8. Provision and maintenance of stakes indicating pile locations;
9. Pile casing if specified;
10. Provide an estimated quantity of tailings to be removed.
11. Trade specific lighting to perform tasks;
12. Trade cleanup - cleanup for work carried out by this trade;
13. Warranty or Guaranty;
14. Submittals and Operation and Maintenance documentation as specified in the tender documents;
15. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
16. Protection of other trades' work from damage when performing this trades scope of work;
17. Building Information Modeling (BIM) as it applies to this trade scope.

Piles - Driven - continued

EXCLUDED

1. Building permits;
2. Concrete testing;
3. Hand trimming or cutting of tops and top treatment of piles or caissons. Straightening, and cutting rebar to specified elevations and removal of all concrete residue (laitance) from rebar;
4. Inspection services;
5. Installation of dowels;
6. Pile caps;
7. Piles for site work not detailed on structural drawings such as light standards, fence posts, planters and sign bases;
8. Placing of pile dowels and anchor bolts;
9. Removal of natural or man-made obstructions either below ground or overhead which interfere with the piling contractor's work;
10. Removal of tailings and pre-bore material;
11. Responsibility for damage to subsurface structures, services and utilities whose exact location has not been established and identified on the site by the tender documents prior to commencement of the piling work;
12. Shoring and protection of any banks, structures, services and utilities as well as continued maintenance and protection of same;
13. Supply and maintain complete access, egress and working surface suitable for the free movement of piling rigs and ancillary equipment;
14. Pile casings are excluded unless specifically identified in the specifications;
15. Removal of excess tailings – by General Contractor;
16. Temporary heat, general lighting, power, sanitation and water for general construction;
17. Hoarding;
18. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
19. Supply and maintenance of garbage and recycling bins for construction waste;
20. Removal of construction waste from job site;
21. General site security.

Piles - Steel Screw Piles

SCOPE NARRATIVE

This scope includes the supply and installation of steel screw pile foundations and all components necessary for a complete installation.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope.

TRADE DEFINITION

INCLUDED

1. Steel screw piles or helical piles as specified;
2. Final trimming and/or cutting of pile tops and top treatment of piles, when specified as part of this work;
3. Field connections as detailed on drawings and specified to be provided by this trade;
4. Equipment necessary to install the piles;
5. Load testing of piles, when specified in the tender documents;
6. Engineered drawings;
7. Where a pile foundation is designed by a piling contractor, he shall be responsible for the adequacy of the surrounding services and/or structures to withstand the vibrations or other effects of the piling installation proposed by the piling contractor;
8. Provision and maintenance of all lines and levels as required;
9. Provision and maintenance of stakes indicating pile locations;
10. Concrete infill to pile bores when specified as part of this work;
11. Trade specific lighting to perform tasks;
12. Trade cleanup - cleanup for work carried out by this trade;
13. Warranty or Guaranty;
14. Submittals and Operation and Maintenance documentation as specified in the tender documents;
15. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
16. Protection of other trades' work from damage when performing this trades scope of work;
17. Building Information Modeling (BIM) as it applies to this trade scope.

EXCLUDED

1. Building permits;
2. Hand trimming or cutting of tops and top treatment of piles when specified to be done by Others;
3. Inspection services;
4. Pile caps;
5. Piles for site work not detailed on structural drawings such as light standards, fence posts, planters and sign bases;
6. Removal of natural or man-made obstructions either below ground or overhead which interfere with the piling contractor's work;
7. Removal of tailings and pre-bore material;
8. Responsibility for damage to subsurface structures, services and utilities whose exact location has not been established and identified on the site by the tender documents prior to commencement of the piling work;
9. Shoring and protection of any banks, structures, services and utilities as well as continued maintenance and protection of same;
10. Supply and maintain complete access, egress and working surface suitable for the free movement of piling rigs and ancillary equipment;
11. Removal of excess tailings – by General Contractor;
12. Concrete to locations other than the pile bore;
13. Temporary heat, general lighting, power, sanitation and water for general construction;
14. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
15. Supply and maintenance of garbage and recycling bins for construction waste;
16. Removal of construction waste from job site;
17. General site security.

Piles - Bored and Caisson (Drilled Cast-In-Place, and Expanded Base Piles)

SCOPE NARRATIVE

This scope includes the supply and installation of the following including reinforcing, concrete and all components necessary for a complete installation:

1. Bored piles (drilled cast-in-place) – bored, deep augured pile and drilled shaft construction for support of structures.
2. Caisson piles (expanded base) - drilled load-bearing shafts for foundations and substructure construction, and part of permanent structure including casing and reinforcement.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Concrete;
2. Equipment necessary to install the piles;
3. Facilities and equipment for inspections;
4. Load testing of piles when specified in the tender documents;
5. Protection of concrete in piles from freezing;
6. Supply only of dowels; Set by the General Contractor;
7. Where a pile foundation is designed by a piling contractor, he shall be responsible for the adequacy of surrounding services and/or structures to withstand the vibrations or other effects of the piling installation proposed by the piling contractor;
8. Straightening, and cutting rebar to specified elevations and removal of all concrete residue (laitance) from rebar;
9. Provision and maintenance of all lines and levels as required;
10. Provision and maintenance of stakes indicating pile locations;
11. Temporary heat for protection of work in this scope;
12. Provide an estimated quantity of tailings to be removed;
13. Trade specific lighting to perform tasks;
14. Trade cleanup - cleanup for work carried out by this trade;
15. Warranty or Guaranty;
16. Submittals and Operation and Maintenance documentation as specified in the tender documents;
17. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
18. Protection of other trades' work from damage when performing this trade's scope of work;
19. Building Information Modeling (BIM) as it applies to this trade scope.

Piles - Bored and Caisson - continued

EXCLUDED

1. Building permits;
2. Concrete testing;
3. Extension of any piles above grade level;
4. Hand trimming or cutting of tops of piles or caissons.
5. Inspection services;
6. Installation of dowels;
7. Pile caps;
8. Piles for site work not detailed on structural drawings such as light standards, fence posts, planters and sign bases;
9. Placing of pile dowels and anchor bolts;
10. Removal of natural or man-made obstructions either below ground or overhead which interfere with the work in this scope;
11. Removal of tailings and pre-bore material;
12. Responsibility for damage to sub-surface structures, services and utilities whose exact location has not been established and identified by the purchaser prior to commencement of the piling work;
13. Shoring and protection of any banks, structures, services and utilities as well as continued maintenance and protection of same;
14. Supply and maintain complete access, egress and working surface suitable for the free movement of piling rigs and ancillary equipment;
15. Pile casings are excluded unless specifically identified in the specifications;
16. Temporary heat, general lighting, power, sanitation and water for general construction;
17. Hoarding;
18. Supply and maintenance of garbage and recycling bins for construction waste;
19. Removal of construction waste from job site.

Modular Block and Mechanically Stabilized Earth (Retaining) Walls

SCOPE NARRATIVE

This scope includes the supply and installation of Mechanically Stabilized Earth and Modular block retaining walls and all components necessary for a complete installation. Mechanically Stabilized Earth is a structural system used for earth retention and load support and are utilized to meet a variety of infrastructure needs, including highway retaining walls, bridge abutments, ramps, and overpasses as well as structures for railroads, mass transit, airports, and commercial and industrial facilities.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Mechanically Stabilize Earth panels, mattresses or modular blocks as shown on engineered drawings;
2. Precast coping and/or capping units for modular block walls only;
3. Compaction of granular base;
4. Geometric grid reinforcing membranes, woven wire mesh, wire fabric boxes and mattresses and/or woven geotextile materials;
5. Metal straps related to Mechanically Stabilized Earth walls reinforcement;
6. Weeping tile;
7. Drainage ports;
8. Drainage material directly behind wall;
9. Fence post anchoring systems, if required and detailed for modular block walls only;
10. Temporary guardrails, fall protection system, stairs, ladders, walkways and barricades to facilitate the work of this trade;
11. Coordination with other trades for openings required to accommodate work of others;
12. Assist and cooperate with the engineer performing testing and inspections on site;
13. Layout included from control points as provided by the General Contractor;
14. Geotechnical engineered drawings, if modular block walls exceed 1.0 metres in height;
15. Scaffolding/man lifts where required to perform work by this trade scope;
16. Material handling, including unloading and hoisting;
17. Rigging equipment, hoisting and reinforcing methods necessary to complete the work of this trade;
18. Trade specific lighting to perform tasks;
19. Trade cleanup - cleanup for work carried out by this trade;
20. Warranty or Guaranty;
21. Submittals and Operation and Maintenance documentation as specified in the tender documents;
22. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
23. Protection of other trades' work from damage when performing this trade's scope of work.

EXCLUDED

1. Excavation;
2. Material behind the reinforcing zone;
3. Final grading;
4. Sealer or anti-graffiti treatment;
5. Concrete levelling pads;
6. Concrete coping units for Mechanically Stabilized Earth walls;
7. Drainage swales;
8. Backfilling in front of Mechanically Stabilized Earth wall;
9. Landscaping (topsoil, seed/sod, plant material and bark mulch);
10. Fencing (chain link, wood, post and/or cable);
11. Testing of materials;
12. Surveying, except as required to ensure alignment during construction;
13. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor.

Exterior Landscaping

SCOPE NARRATIVE

The scope includes the supply and installation of all interior and exterior landscaping including walkways, paving and surfacing for walks and athletic and recreational playing surfaces, fences and gates and retaining walls, site furnishings, fabricated bridges for foot traffic, wetlands, retainage ponds, irrigation systems, planting and transplanting of trees, shrubs, vines, and other herbaceous plants and exterior planting support structures.

This scope for supply and installation includes and excludes the following items regardless of where they may appear in the tender documents unless specifically noted otherwise in this scope:

TRADE DEFINITION

INCLUDED

1. Excavation of shrub beds and tree pits;
2. External irrigation systems, including sleeves, trenching and backfill: the mechanical contractor shall provide suitably sized and accessible water service to a landscaped area, including such back-flow prevention devices, meters or other equipment as necessary to comply with all government codes and regulations (see Mechanical Included and Electrical, Included);
3. Fine grading and preparation of topsoil for seed and sod bed;
4. Maintenance of new landscape construction as specified in the tender documents;
5. Pedestrian aggregate paths and trails;
6. Placing and spreading of topsoil obtained onsite or off-site as specified; providing soil mixes and soil screening, as specified;
7. Seeding and/or sodding as specified;
8. Landscape materials as specified on the landscape drawings/plans;
9. Plant material;
10. Fertilizer and soil amendments as specified;
11. Tree grates and tree guards, precast concrete tree boxes, wooden and precast concrete planters;
12. Wood edger's, wood retaining walls, screening, wood free-standing or attached pagodas, pergolas and gazebos;
13. Trees and shrubs specified to be moved and stored, or moved to another location;
14. Use and application of specified horticultural materials, i.e. pesticides, sterilants, lime, etc.;
15. Soil structuring systems for tree planting in hard surface applications;
16. Material handling, including unloading and hoisting;
17. Scaffolding/man lifts where required to perform work by this trade scope;
18. Trade specific lighting to perform tasks;
19. Trade cleanup - cleanup for work carried out by this trade;
20. Warranty or Guaranty;
21. Submittals and Operation and Maintenance documentation as specified in the tender documents;
22. Cash allowances that apply to this trade scope when a specific dollar amount is listed in this trade's specification section;
23. Protection of other trades' work from damage when performing this trade's scope of work;
24. Building Information Modeling (BIM) as it applies to this trade scope.

Exterior Landscaping - continued

EXCLUDED

1. Asphalt paving and integral edging;
2. Concrete, except for precast concrete items specifically noted under Included;
3. Gabion structures;
4. Indoor landscaping;
5. Interlocking pavers, paving stones, turf-stones/grass-paver systems, sidewalk blocks and modular block retaining walls, including the excavation and compaction of sub grade, and supply and compaction of base;
6. Metal tree grate frames;
7. Painting;
8. Precast concrete accessories required to match the building precast features;
9. Removal or disposal of excess top soil or sub soil from on-site stockpiles;
10. Repair of landscape areas not specifically identified;
11. Tree demolition or removal;
12. Water proofing or insulation of planters, parking structures or roof top landscaping;
13. Common scaffold or platform when required to perform work by multiple trades;
14. Temporary heat, general lighting, power, sanitation and water for general construction;
15. Hoarding;
16. Final Cleaning before turnover;
17. Security costs. Where Security is required for trades to complete their work these services and costs for same will be provided by the General Contractor;
18. Supply and maintenance of garbage and recycling bins for construction waste;
19. Removal of construction waste from job site;
20. General site security.

