

MECHANICAL TRADE SCOPE OF WORK GUIDELINES

OTTAWA REGION 2009

Comprised of Piping Trade, Ventilation (HVAC) Trade, Fire Protection Trade

Endorsed by the following organizations

Ottawa Construction Association
General Contractors Association of Ottawa
Mechanical Contractors Association of Ottawa

Supported by the following organization

Consulting Engineers of Ontario – Ottawa Chapter



MECHANICAL CONTRACTORS
ASSOCIATION OF OTTAWA

Mechanical Trade Scope of Work

The following mechanical trade scope guidelines are comprised of 3 individual trade scopes – piping, ventilation (HVAC) and fire protection which combined are defined as the mechanical scope. These trade guidelines are the product of a detailed review and consensus building process involving representatives from the Ottawa Construction Association, the General Contractors Association of Ottawa, the Mechanical Contractors Association of Ottawa and the Consulting Engineers Association – Ottawa Chapter.

The desired benefit of developing Ottawa region trade scope guidelines is to minimize dispute in the bidding and construction process as to what is included or excluded in a particular trade scope of work. Tabulating items to be included in a bid provides a common basis for which bidding becomes truly competitive, fair to all concerned and minimizes the potential for on-site dispute.

The associations that have come together to develop these trade scope guidelines support their use by their respective members as the recommended standard on all construction projects.

Pipe Trade Scope

Items included and excluded

Mechanical (piping) Contractor shall provide the following: (**provide means**; supply & install unless specifically noted otherwise).

Provided:

1. Mechanical (piping) coordination and interference drawing.
2. Supports for roof top piping.
3. All necessary sleeving for piping.
4. Mechanical (piping) commissioning, as built drawings and operation and maintenance drawings as specified.
5. Comply with codes as specified.
6. Hangers and supports for plumbing, piping.
7. The mechanical (piping) contractor shall include contingency funds and cash allowances specifically called for in the mechanical tender documents.
8. In renovated areas, cut, cap, disconnect and make safe ALL mechanical (piping) items as defined by the Scope.
9. Fuel piping, water piping, exhaust piping, for generator units and supply of fuel oil when clearly specified. Muffler and flex installation only.
10. Beyond the specified contract full warranty (CCA), the extended warranty (ies) are limited to the terms of the manufacturers' warranty (ies).
11. Trade clean up – see OCA Recommended Day to Day Clean up Standard of Practice.
12. Protection of other trades' work from damage by this trade.
13. Hoisting for mechanical (piping) materials and equipment.
14. Arrange inspection for plumbing work.

15. X-rays of welded joints when required by code or specified.
16. Scaffolding as required for mechanical (piping) work.
17. Design, supply and installation of vibration isolation and Seismic Restraint for mechanical systems.
18. Identification.
19. Testing, adjusting and balancing of hydronic systems.
20. All steel bases and steel supports for mechanical (piping) equipment when specified or detailed only on mechanical.
21. BAS (Building Automated Systems) and/or EMCS (Energy Management Control Systems) when specified in the Pipe Trade Scope.
22. Supply access door(s) when required by mechanical (piping).
23. Variable frequency drives are supplied by mechanical (piping) where specified.
24. Fire-stopping for mechanical (piping) systems.
25. Mechanical (piping) permits and inspection fees when and where required.
26. Mechanical (piping) connections to specialty equipment which is supplied and installed by others.
27. Fire extinguishers, only if there is no sprinkler system in the building.
28. Medical gas systems, piping and equipment as specified.
29. Piping and connections only to automotive hoists.
30. Water treatment and all associated piping, meters, tanks, pumps, filters, softeners.
31. Cast iron catch basin and manhole covers, trench gratings, sump frames and covers when specified or detailed on mechanical (piping) drawings within the building.
32. Soap dispensing systems when specified in mechanical (piping).
33. Laboratory sinks, faucets and gas outlets where specified in piping specifications.
34. Prefab shower cabinets or surrounds complete with manufactured bases.
35. Whirlpool and therapeutic baths when specified in mechanical (piping) specifications.
36. Manufactured sumps, pits and covers complete with pumps inside building walls.
37. All plumbing systems.
38. Chiller units.
39. Cooling towers.
40. Hydronic heating, chilled water, condenser water and steam piping systems.
41. Natural gas and propane piping systems within buildings.
42. All hot water heaters and storage tanks.
43. All hydronic baseboard radiation, ceiling radiant panels, force flow units, hot water unit heaters.
44. All water based solar heating panel systems.
45. All heat exchangers and converters.
46. All in-slab heating and snow melting piping systems.
47. All chemical water treatment for mechanical (piping) systems.
48. Air compressors and vacuum pumps systems.
49. Mechanical insulation for piping.
50. Fire Standpipe system including fire pump and fire extinguishers when not part of a sprinkler system.
51. All plastic-pipe venting for fossil fuel combustion.
52. Initial generator fuel-tank fill-up excluding pre-packaged units that do not have external tank.

Excluded:

1. All x-rays and/or scanning of concrete floors and walls, including cutting and coring.
2. Excavation, bedding and backfilling.
3. Vapour barrier and insulation not applied to mechanical (piping) systems.
4. All electrical wiring above 50 volts.
5. Caulking and grouting of all types except fire-stopping for mechanical (piping) systems.
6. Temporary heat, ventilation, light, power and sanitation.
7. All civil work hoarding and protection barriers, unless specific to your trade.
8. Temporary water services or connections.
9. Catwalks, ladders, gratings unless specified as part of mechanical (piping).
10. Municipal Building Permit fees and utility hook-up fees.
11. Supply of flex connections and muffler for generator units.
12. Supply and installation of all appliances.
13. Supply and installation of wood backing.
14. Cutting of all holes for mechanical (piping) components into millwork items.
15. All cast-in-place concrete, including rebar and formwork.
16. Site services.
17. Roofing, flashing and counter flashing.
18. Roof-vent flashing.
19. Washroom accessories.
20. Shower curtains and doors unless specified.
21. Metallic venting of gas fired equipment, unless specified.

Ventilation (HVAC) Trade Scope

Items included and excluded

Ventilation (HVAC) Contractor shall provide the following: (**provide means**; supply & install unless specifically noted otherwise).

Provided:

1. Mechanical (HVAC) Coordination and Interference Drawing
2. Supports for rooftop ductwork, equipment and related refrigeration piping
3. All necessary sleeving for ductwork, equipment and related refrigeration piping. All necessary coordination, sizing and layout for large openings for ductwork, equipment and related refrigeration piping required to penetrate through new reinforced concrete walls and slabs.
4. Mechanical (HVAC) commissioning, as-built drawings and operation and maintenance drawings and manuals as specified.
5. Comply with codes as specified.
6. Hangers and supports for ductwork systems.
7. The mechanical (HVAC) contractor shall include mechanical (HVAC) contingency funds and cash allowances specifically called for in the mechanical tender documents.
8. In renovated areas, cut, cap, disconnect and make safe ALL mechanical (HVAC) items as defined by the Scope.
9. Beyond the specified contract full warranty (CCA), the extended warranty(ies) are limited to the terms of the manufacturers warranty(ies).
10. Trade clean-up – see OCA recommended day to day clean up Standard of Practice.
11. Hoisting for mechanical (HVAC) materials and equipment.
12. Scaffolding and access equipment as required for mechanical (HVAC) work.
13. Design, supply and installation of vibration isolation and Seismic Restraint for mechanical (HVAC) systems.
14. Mechanical (HVAC) identification.
15. Testing, adjusting and air balancing (TAB) of mechanical (HVAC) system.

16. All steel bases and steel supports for mechanical (HVAC) equipment when specified or detailed only on mechanical (HVAC) drawings and specifications.
17. BAS (Building Automated Systems) and/or EMCS (Energy Management Control Systems) will be completed by the Ventilation (HVAC) Trade contractor unless specified elsewhere.
18. Supply access door(s) when required by mechanical (HVAC).
19. Variable frequency drives are supplied by mechanical (HVAC) where specified.
20. Fire-stopping for mechanical (HVAC) systems.
21. Mechanical (HVAC) permits and inspection fees.
22. Mechanical (HVAC) connections to specialty equipment which is supplied and installed by others.
23. Vent ducting for generator units.
24. Sheet metal and non-metallic air handling ductwork, sheet metal plenums and casings including hangers and supports except concrete, masonry and drywall constructed shafts, tunnels or plenums.
25. Dust or material collector systems complete with all associated equipment and accessories.
26. Carbon monoxide exhaust systems complete with all associated equipment and accessories.
27. Pre-fabricated chimneys 16 gauge or lighter for all mechanical equipment.
28. Linear grilles for wall fin radiation, induction units and cabinet heaters, installed in architectural cabinets including extension collars excluding wood manufactured grilles.
29. All humidifiers which are part of the duct system or in ventilation equipment, or discharge into the duct systems or ventilation equipment.
30. All air moving equipment specified in mechanical drawings and specifications.
31. All dampers except where supplied by others.
32. Silencers and other special types of sound insulated air ducts.
33. Flexible type air ducts.
34. Acoustic ductwork lining.
35. Weather louvers complete with bird screen and blank-off panels, penthouses and vents where specified in mechanical drawings and specifications.
36. Gravity relief vents and intakes and roof hoods when specified or detailed on mechanical drawings and specifications.
37. Terminal boxes and air valves including coils.
38. All HVAC related filters.
39. Kitchen exhaust hood systems complete with fire suppression if kitchen hood specified in the mechanical specifications. Otherwise both kitchen exhaust hood and suppression systems are by the kitchen equipment supplier or others.
40. Range hood where specified.
41. Indirect fired self-contained heating and/or cooling units.
42. Registers, grilles, diffusers.
43. Supply and/or installation of door grilles where specified.
44. Electric and hydronic duct heaters.
45. Garbage and linen chutes of metal construction.
46. Counter flashing for HVAC equipment.
47. Unit heater gas fired.
48. Heat pumps of every type – water or air-cooled.
49. Packaged and self-contained heating and cooling air conditioning units.
50. Environment Chambers where specified in mechanical drawings and specifications.
51. Window or wall type air conditioners and/or incremental units.

52. Refrigeration piping, associated insulation and refrigeration controls for equipment under mechanical (HVAC) scope.
53. Propeller ceiling fans ducted or non-ducted c/w guards and controllers if specified HVAC.
54. Prefabricated walk-in coolers and freezers and/or associated refrigeration equipment when specified in mechanical drawings and specifications.
55. Mechanical (HVAC) insulation.
56. Induction units.

Excluded:

1. Underground concrete duct or concrete for encasing of underground ductwork.
2. Cutting for openings for door grilles.
3. Architectural louvers when no duct connected to them unless specified in mechanical drawings and specifications.
4. Humidifier piping.
5. Stand alone room humidifiers.
6. Cutting, coring or patching.
7. Sleeving of Structural openings. All formwork required form large openings for mechanical sleeving in new reinforced concrete walls and slabs”.
8. All x-rays and/or scanning of concrete floors and walls.
9. All electrical wiring above 50 volts.
10. Motor starters, disconnects and motor control centres.
11. Caulking of louvers and wall grilles.
12. Temporary heat, ventilation, light, power and sanitation.
13. All civil work hoarding and protection barriers.
14. Catwalks, ladders, gratings unless specified as part of mechanical (HVAC).
15. Municipal Building Permit fees and utility hook-up fees.
16. Supply of flex connections and muffler for generator units.
17. Supply and installation of all appliances.
18. Supply and installation of wood backing.
19. Cutting of all holes for mechanical (HVAC) components into millwork items.
20. All cast-in-place concrete, including rebar and formwork.
21. Roofing, flashing and counter flashing.
22. Roof-vent flashing.
23. Plastic venting of gas fired equipment.

Fire Protection Trade Scope

Items included and excluded

Sprinkler (piping) Contractor shall provide the following: (**provide means**; supply & install unless specifically noted otherwise).

Provided:

1. Mechanical (piping) coordination and interference drawing.
2. All necessary sleeving for piping.
3. Fire Protection. (piping) commissioning, as built drawings and operation and maintenance drawings as specified.
4. Comply with codes as specified.
5. Hangers and supports for sprinkler piping.
6. The Sprinkler (piping) contractor shall include contingency funds and cash allowances specifically called for in the tender documents.
7. In renovated areas, cut, cap, disconnect and make safe ALL Fire Protection (piping) items as defined by the Scope.
8. Sprinkler water piping, Fire hose Cabinets piping, Fire Pump piping when clearly specified.
9. Beyond the specified contract full warranty, the extended warranty (ies) is limited to the terms of the manufacturer's warranty (ies).
10. Trade clean up. (see OCA's rules)
11. Protection of other trades' work from damage by this trade.
12. Hoisting for mechanical (piping) materials and equipment.
13. Arrange inspection for Fire Protection work.
14. Scaffolding as required for Fire Protection (piping) work.
15. Design, supply and installation of Seismic Restraint for mechanical systems.
16. Identification.
17. Testing, all Fire Protection Piping flow switches and fire pumps.
18. All steel bases and steel supports for Fire Pumps (piping) equipment when specified or detailed only on mechanical.
19. Supply access door(s) when required by Fire Protection. (piping).
20. Coordinate with Fire Alarm contractor for testing of all fire equipment related to Fire alarm panel.

21. Fire-stopping for fire protection (piping) systems.
22. Fire Protection (piping) permits and inspection fees.
23. Fire Protection (piping) connections to specialty equipment which is supplied and installed by others.
24. Fire extinguishers. See Scope at bottom of page.
25. All items specified as general mechanical requirements which are applicable to material and equipment supplied by the sprinkler sub section listed.
26. Fire pump related to sprinkler and combined standpipe-sprinkler system (if system is not combined we do not include the fire pump).
27. Wet Pipe sprinkler system.
28. Dry Pipe sprinkler system.
29. Pre-Action sprinkler system.
30. Combination dry pipe and pre-action systems.
31. Deluge sprinkler systems.
32. Foam extinguishing systems.
33. Carbon Dioxide extinguishing piped systems “Excluding Kitchen hood & related exhaust ducting extinguishing systems.”
34. Halogen and other gas systems.
35. Dry Chemical extinguishing systems “excluding Kitchen hood and related exhaust duct extinguishing systems”
36. Combined sprinkler/standpipe hose systems including all fire extinguishers and associated cabinets. (All: meaning stand alone fire extinguishers, and associated Cabinets)
37. Fire extinguishers and associated cabinets as per the following with exceptions to Para.36 above.
 - a. Where buildings have separate standpipe systems, fire extinguishers and associated cabinets are to be excluded from sprinkler sub bid package, even if specified in sprinkler section.
 - b. Where buildings has a sprinkler system only, the fire extinguishers and associated cabinets are to be included in the sprinkler sub bid package, whether under a separate sub section or within the sprinkler sub section of the specifications.

Excluded:

1. All x-rays and/or scanning of concrete floors and walls.
2. Cutting, coring, excavation and bedding.
3. Vapour barrier and insulation not applied to mechanical (piping) systems.
4. All high voltage wiring as set out by the ECA’s union guidelines.
5. Motor starters, disconnects and motor control centres.
6. Caulking and grouting of all types except fire-stopping for mechanical (piping) systems.
7. Temporary heat, ventilation, light, power and sanitation.
8. All civil work hoarding and protection barriers.
9. Temporary water services or connections.
10. Catwalks, ladders, gratings unless specified as part of mechanical (piping).
11. Municipal Building Permit fees and utility hook-up fees.
12. Cutting of all holes for mechanical (piping) components into millwork items.
13. All cast-in-place concrete, including rebar and formwork.
14. Site services