

## PART 1 - GENERAL

### 1.1 SECTION INCLUDES

- .1 Title and description of Work.
- .2 Contract Method.
- .3 Work by others.
- .4 Work sequence.
- .5 Contractor use of premises.
- .6 Owner occupancy.
- .7 Alterations to existing building - Scope of Work.

### 1.2 PRECEDENCE

- .1 For Federal Government projects, Division 01 Sections take precedence over technical specification sections in other Divisions of this Project Manual.

### 1.3 RELATED SECTIONS

- .1 Section 01 33 00 - Submittal Procedures.

### 1.4 WORK COVERED BY CONTRACT DOCUMENTS

- .1 Work of this Contract comprises roof replacement of Agriculture & Agri-Foods Canada, located at 2585 County Road 20, Harrow, Ontario; and further identified as Harrow Agriculture.
- .2 Roof Replacement Work to be divided up into two phases.
  - .1 Phase One Work to include Roof Areas 1.1, 1.2, 1.4, 1.8, 2.1, 2.2, 3.1, 4.1, and 4.2 and be performed in 2016.
  - .2 Phase Two Work to include Roof Areas 1.3, 1.5, 1.6, 1.7, 1.9, 1.10, and 2.3 and be performed in 2017.
  - .3 Roof Areas 1.11 and 2.4 are Not in Contract.

### 1.5 CONTRACT METHOD

- .1 Construct work under lump sum contract.
  - .1 Include in contract amount for remediation and repair to existing metal roof decking and wood blocking.
    - .1 Include for replacement of 5 m<sup>3</sup> (176.5 ft<sup>3</sup>) of damaged existing wood blocking to Section 06 10 00 with new treated wood blocking.

- .2 Include for remediation of steel decking by rust painting to Section 05 01 30, Level 2 remediation, on 30% of metal roof deck area.
- .3 Include for remediation of steel decking by new deck overlay to Section 05 01 30, Level 3 remediation, on 10% of metal roof deck area.
- .4 Include for replacement of steel decking with new to structure to Section 05 01 30, Level 4 remediation, on 5% metal roof deck.

- .2 Provide Unit Prices to add to or subtract from Contract Amount for remediation of existing metal roof decking and wood blocking requiring localized repair and replacement, where discovered during performance of work.
- .1 Co-ordinate remediation of existing with Unit Price Table.
  - .1 Replacement of damaged existing wood blocking per m<sup>3</sup> (35.3 ft<sup>3</sup>) to Section 06 10 00 with new treated wood blocking.
  - .2 Remediation of steel decking by rust painting per m<sup>2</sup> (10.8 ft<sup>2</sup>) to Section 05 01 30, Level 2 remediation.
  - .3 Remediation of steel decking by new deck overlay per m<sup>2</sup> (10.8 ft<sup>2</sup>) to Section 05 01 30, Level 3 remediation.
  - .4 Replacement of steel decking with new to structure per m<sup>2</sup> (10.8 ft<sup>2</sup>) to Section 05 01 30, Level 4 remediation.

#### 1.6 COST BREAKDOWN

- .1 Within 48 hours of notification of acceptance of bid furnish a cost breakdown by Section aggregating contract amount.
- .2 Show separately cost of equipment purchased exempt from Ontario Retail Sales Tax under your Ontario Sales Tax licence number.
- .3 Within 48 hours of acceptance of bid submit a list of subcontractors.

#### 1.7 WORK BY OTHERS

- .1 The Contractor shall for the purpose of the Ontario Occupational Health and Safety Act and Regulations for Construction Projects, and for the duration of the Work of the Contract:
  - .1 Assume the role of Constructor in accordance with the Authority Having Jurisdictions.
  - .2 Agree, in the event of two or more Contractors working at the same time and space at the work site, without limiting the General Conditions GC3.7, to the Departmental Representative's order to:
    - .1 Assume, as the Constructor, the responsibility for the Departmental Representative's other Contractors.

#### 1.8 WORK SEQUENCE

- .1 Construct Work in stages to accommodate Owner's continued use of premises during construction.
- .2 Coordinate Progress Schedule.
- .3 Maintain fire access/control.

### 1.9 CONTRACTOR USE OF PREMISES

- .1 Contractor shall limit use of premises for Work, for storage, and for access, to allow;
  - .1 Owner occupancy.
  - .2 Public usage.
- .2 Coordinate use of premises under direction of Departmental Representative.
- .3 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.

### 1.10 OWNER OCCUPANCY

- .1 Owner will occupy premises during entire construction period for execution of normal operations.
- .2 Cooperate with Owner in scheduling operations to minimize conflict and to facilitate Owner usage.

### 1.11 PROTECTION OF ROOFS

- .1 Protect all roof areas from damage within area of Work and where equipment or materials are stored.
- .2 Do not store equipment or materials directly on roof surface after work day has ended.
- .3 Protect existing roof systems to remain against damage from traffic generated by new Work. Protect newly installed roof areas.
- .4 Protect existing and newly installed roof membranes using sheets of 25mm (1") expanded polystyrene insulation, laid over top of 13mm (0.5") plywood, set over top of polyethylene slip sheet.

### 1.11 SCOPE OF WORK: LOW SLOPE ROOF REPLACEMENT

- .1 On All Roof Replacement Areas, except 1.11 and 2.4: Remove existing roof gravel, projection and perimeter flashings, and old appurtenances down to expose existing roof deck in preparation for installation of a roof system in accordance with Section 07 52 00.
- .2 Remove and store all existing self ballasted guard rails and accessories for re-installation into finished roof system.
- .3 Remove existing roof system down to existing roof deck surface. Recycle and dispose of debris to an appropriate site to Section 01 74 20.
  - .1 On Metal Deck Areas: Clean dust and debris from flutes of existing roof deck with broom or vacuum.

- .1 Examine and review surface of exposed metal deck for corrosion and deterioration that may impact roof system installation.
- .2 Remediate corroded and damaged metal decking to Section 05 01 30.
- .2 On Concrete Deck Areas: Where existing concrete deck is exposed, review surface of deck for damage and deterioration that may impact new roof system installation.
  - .1 Repair divots in concrete decking with quick dry mortar mix.
- .4 On Metal Roof Decks: Mechanically fasten new layer of 13mm (0.5") thick deck overlayment board over existing metal roof deck.
- .5 Prime substrate and all exposed wood, concrete, gypsum board, and metal surfaces to receive new vapour retarder membrane and flashings.
  - .1 Allow to dry and flash-off before proceeding.
- .6 Install self adhered modified bitumen vapour retarder membrane across field of each roof area.
- .7 Install self adhered modified bitumen flashings along all perimeters, curbs, projections, and where indicated on detail drawings.
- .8 Install a flat base insulation layer of 51mm (2.0") polyisocyanurate insulation in ribbons of polyurethane roofing adhesive.
- .9 On Sloped Metal Decks: Install a flat overlay insulation layer of 51 mm (2.0") polyisocyanurate insulation in ribbons of polyurethane roofing adhesive.
- .10 On Flat Metal Decks: Install a tapered overlay insulation layer of polyisocyanurate insulation in ribbons of polyurethane roofing adhesive. Slope at 1 or 2 % where indicated on roof plan drawings, starting from a minimum 25 mm (1.0").
- .11 Install a flat layer of 13mm (0.5") siliconized gypsum roof board in ribbons of polyurethane roofing adhesive.
  - .1 Prime cover board with even coat and allow to flash-off.
- .12 Install one ply of modified bitumen base sheet membrane across field of roof, self-adhered.
- .13 Install one ply of self-adhered modified bitumen base sheet flashings.
- .14 Install one ply of modified bitumen granular cap sheet membrane, torch applied.
- .15 Install one ply of modified bitumen granular cap sheet flashings, torch applied.
- .16 Install new prefinished sheet metal flashings and trim with required hook strips.

## 1.12 SCOPE OF WORK: ROOF ACCESSORIES

- .1 Include in Contract Amount for supply and installation of roofing accessories required for complete roof system installation:
  - .1 Guard Rails:
    - .1 Supply and install roof top guard rails where indicated on roof plan drawings to meet designated guard rail requirements.
    - .2 Remove existing self-ballasted guard rails, store, and re-install with membrane protection where required to meet guard rail requirements.
    - .3 Supply and install additional new self-ballasted guard rail systems to supplement and meet guard rail requirements.
      - .1 At Roof Areas 2.2, 2.3, 4.1 and 4.2, fixed custom made guard rails, similar to those existing at Roof Area 3.1, may be secured to through existing sloped metal roof areas to substitute for self-ballasted guard rails to meet guard rail requirements.
  - .2 Roof access ladders:
    - .1 Remove, disassemble, and recycle existing non-compliant roof access ladders at Roof Areas 2.2, 2.3, and 3.1. Supply and install new engineered roof access ladders as indicated in drawings to suit existing configurations.
  - .3 Cross-over stairs:
    - .1 Supply and install 2 new engineered, modular self-ballasted roof cross-over staircases from west end of Roof Area 3.1 to 4.1 and east end of Roof Area 3.1 to 4.2 as indicated in drawings. Provide walkway pads or concrete pavers to detail 26/A9 at base of staircases, both sides.
  - .4 Cross-over platform:
    - .1 Supply and install 1 engineered, modular self-ballasted roof cross-over platform to suit "Z" shaped transition between access ladders on Roof Area 1.10. Design platform similar to staircases and as indicated in drawings.
  - .5 Walkway pads:
    - .1 Supply and install new membrane walkway pads where indicated on roof plan drawings. Membrane manufacturer approved walkway pads or squares of additional cap sheet membrane to be fully bonded to finished roof membrane.
  - .6 Cross-over ramps:
    - .1 Supply and install new engineered, modular self-ballasted roof cross-over ramps where indicated on roof plan drawings and as indicated in drawings. Provide cross-over ramps along designated travel path over multi-conduit runs greater than 610 mm (2'-0") in width.
  - .7 Trim overhanging trees:
    - .1 Provide arborist services to trim back tree branches around courtyard area overhanging roof surface. Ensure 610 mm (2'-0") clear space above finished roof membrane.

PART 2 - PRODUCTS

2.1 NOT USED

.1 Not used.

PART 3 - EXECUTION

3.1 NOT USED

.1 Not used.