

**MEASUREMENT AND PAYMENT**

**1 General**

**1.1 TENDER FORM**

.1 Insurance and Bonding

.1 All insurance and bonding documentation per Contract requirements.

.2 Mobilization, Demobilization and Miscellaneous

1. Mobilization: all other documentation and installation of all temporary facilities and offices before commencement of construction.

2. Demobilization: removal of all temporary facilities and offices, and final clean up of the place of Work.

3. Miscellaneous: all other items associated with project construction that are not included for in the other technical divisions such as:

.1 Required Work permits, fees and licensing, submittals, schedules,

.2 Temporary construction controls and facilities,

.3 Utility locates, survey control, and coordination,

.4 Public safety and access, occupational health and safety, and

.5 Project documents.

**1.2 GENERAL**

.1 The Lump Sum and Unit prices submitted are for supply of all labour and equipment and materials as specified or required to complete the Work of this Contract as intended.

1. The prices submitted to be full compensation for supplying (if applicable), hauling, installing, cleaning and placing in service the Work as specified and detailed, together with all incidental Work to complete the Contract.

2. Measurement for Payments to be calculated on the basis of a percentage of completion of the Lump Sum and Unit prices for the applicable item of Work, or at Unit rates of Force Account Rates as entered on the Tender Form.

**1.3 ITEMS OF WORK**

.1 Tender Form

.1 Insurance and Bonding (lump sum) will be paid in full upon supply of all appropriate insurance and bonding documentation or certificates.

.2 Mobilization/Demobilization and Miscellaneous (lump sum) will be paid as follows:

1. 50% upon satisfactory mobilization and commencement of construction

MEASUREMENT AND PAYMENT

- provided all insurance, bonds and contract documentation have been submitted.
- .2 50% to be paid after the Construction Completion Certificate (CCC) is issued.
  - .3 Public safety and access control measures installation/removal (lump sum / lin.m) will be paid as follows:
    1. 50% upon installation of control measures.
    2. 50% upon takedown and removal of control measures.
  - .4 Rental of temporary fencing for public safety and access control measures:
    - .1 Submit "original" temporary fencing invoices without mark-up for reimbursement.
    - .2 Costs for any overhead or profit is considered incidental to the Contract requirements and will not be measured for payment.
  - .5 Costs for routine inspection, repair and maintenance of public safety and access control measures is considered incidental to the Contract requirements and will not be measured for payment.
- .2 Section 01410 Laboratory Testing Services
- .1 Engage, coordinate and pay for services of laboratory testing as approved and/or required under various sections.
    - .1 Submit "original" laboratory testing invoice without mark-up for reimbursement, as payment for any overhead or profit is deemed to be included in the applicable specification section.
  - .2 Requests for reimbursement of laboratory testing services will not be accepted, or paid, if:
    - .1 **Consultant** did not specify, select or approve locations of testing.
    - .2 Inspection and testing is required by laws, ordinances, rules, regulations or orders of public authorities.
    - .3 Inspection and testing is performed exclusively for Contractor's convenience.
    - .4 Test fails to achieve Contract requirements.
  - .3 Costs for uncovering and making good work that is covered before required inspection or testing is completed and approved is considered incidental to the Contract requirements and will not be measured for payment.

**MEASUREMENT AND PAYMENT**

- .3 Section 01560 Environmental Protection
  - .1 Costs for environmental protection are considered incidental to the Contract requirements and will not be measured for payment.
- .4 Section 02065 Existing Plant Material
  - .1 Removal (lump sum) of existing plant material includes all associated costs for excavation, clearing, grinding out of stumps, and disposal of debris off site.
  - .2 Protection (lump sum) of existing plant material includes all associated costs in erecting, maintaining and removing hoardings, pruning and maintenance.
  - .3 Relocation (lump sum / each) of existing plant material includes all associated costs for staking, guying, site repair and restoration as required and maintenance.
- .5 Section 02070 Demolition, Removal and Salvage
  - .1 Demolition and Removal (lump sum) includes all associated costs for demolition, excavation, backfilling and disposal of items off site.
  - .2 Salvage of Items (lump sum / each) includes all associated costs for salvage, backfilling, stockpiling, dismantling and clean-up of item.
  - .3 Strip and Stockpile of Topsoil (lump sum / cu. m) includes all associated costs for strip and stockpile operations.
- .6 Section 02210 Rough Grading
  - .1 Rough Grading (lump sum / cu. m.) includes all associated costs for excavation, grading to design sub grade elevations, disposal of material, aeration, adding water and compaction for all applicable surface treatments.
    - .1 Quantities refer to material after compaction.
  - .2 Imported Fill (cu. m.) includes all associated costs for sub grade preparation of areas to be rough graded.
  - .3 Rough Grading of subgrade boulders or other obstructions in excess of one cubic metre will be an addition to the Contract, as agreed.
- .7 Section 02212 Topsoil
  - .1 Topsoil (sq. m.) for turf areas and shrub planting beds (not including sportsfields) includes all associated costs for placement and spreading.
  - .2 Organic Matter (sq. m.) for turf areas and shrub planting beds (not including sportsfields) includes all associated costs for placement and cultivation.
  - .3 Sportsfield Soil Mix (sq. m.) includes all associated costs for supply and mixing of imported topsoil, manure/compost, sand – type A, placement and spreading.

**MEASUREMENT AND PAYMENT**

- .1 Rebar property pins for soccer pitches is considered incidental to the soccer pitch construction and will not be measured for payment.
- .4 Planting soil mix for all individual trees and trees/shrubs in shrub planting beds is considered incidental to cost of all plant material and will not be measured for payment.
- .8 Section 02233 Granular Base
  - .1 Granular Base including associated costs of excavation and compaction for heavy duty crusher dust, unit paving, concrete, asphalt, and pipe culvert end grates is considered incidental to cost of applicable surface treatment or item of Work and will not be measured for payment.
  - .2 Granular Parking Lots (sq. m.) include all associated costs for excavation, compaction for granular parking lot area.
- .9 Section 02511 Crusher Dust
  - .1 Crusher Dust (sq. m.) for each type of construction includes all associated costs for excavation, compaction of sub grade, and granular base (heavy duty).
- .10 Section 02515 Unit Paving
  - .1 Unit Paving (sq. m.) for each type of construction includes all associated costs for excavation, compaction, granular base, levelling course, fill sand, tamping, edging material and cutting of unit pavers.
- .11 Section 02523 Miscellaneous Concrete
  - .1 Concrete pads (sq. m.) for each type of construction includes all associated costs for excavation, compaction of sub grade, granular base, form work, reinforcement, hoarding if required, protection and finishing.
  - .2 Concrete footings for fences, steel bollards, site furnishings, play equipment and other items of Work where concrete is specified, such as pipe culverts or irrigation, includes associated costs of excavation and finishing required and is considered incidental to cost of that item of Work and will not be measured for payment.
- .12 Section 02552 Asphalt Pavement
  - .1 Asphalt Surfacing (sq. m.) for specified type of construction includes all associated costs for excavation, compaction, granular base, and slurry seal for each type of asphalt construction.
  - .2 Payment adjustment formula: Thickness (X) =  $\frac{\text{actual thickness}}{\text{design thickness}}$

Variation from design thickness	Payment
10mm thick - 5mm thin	100%
6mm thin - 15mm thin	X <sup>2</sup> (100)%
more than 15mm thin	No payment

MEASUREMENT AND PAYMENT

- .3 Failure to provide a satisfactory tamped and tapered asphalt edge on one or both edges as detailed will result in a payment reduction of 50% of the unit cost for the complete asphalt surface in the affected areas.
- .4 Asphalt Overlay (sq. m.) includes all associated costs for cleaning, prepping, applying asphalt overlay and slurry seal.
- .13 Section 02712 Landscape Drainage
  - .1 French Drain and Panel Drain (lin. m.) includes all associated costs for excavation, filter cloth, weeping tile and aggregate.
  - .2 Play Area Drainage (lump sum) includes all associated costs for excavation, filter cloth, aggregate, weeping tile, pipe, outlet structure and connection to storm sewer. Other drainage materials or structures that may be required for a playground surfacing system are also included.
- .14 Section 02723 Pipe Culverts
  - .1 Pipe Culverts (each / lin. m.) includes all associated costs for excavation, installation, backfill, compaction and associated grading.
  - .2 End Grates / Drain Inlets (each) includes all associated costs for excavation, backfill, concrete splash pads, end grates, and lock installation.
- .15 Section 02810 Irrigation
  - .1 Specified items of irrigation Work (lump sum / each / lin. m.) includes all associated costs for that item.
  - .2 Excavation or trenching of materials which cannot be excavated by normal mechanical excavation means will be an addition to the Contract, as agreed.
- .16 Section 02811 Light Bases and Conduit
  - .1 Light Bases (each) includes all associated costs for excavation, compaction, grounding, backfill and protection measures.
  - .2 Conduit (lin.m.) complete with pull string or tracer wire includes all associated costs for trenching, compaction, backfill and protection.
  - .3 Excavation or trenching of materials which cannot be excavated by normal mechanical excavation means will be an addition to the Contract, as agreed.
- .17 Section 02831 Chain Link
  - .1 Backstops (each) for specified type of backstop includes all associated costs for excavation and concrete, paid as follows:
    - .1 25% upon installation of support posts.

MEASUREMENT AND PAYMENT

- .2 75% upon completion of installations.
- .2 Chain Link Fences (lin. m.) for specified height of fence complete with gates (if required) includes all associated costs for excavation and concrete.
- .18 Section 02840 Timber Edging
  - .1 Timber Edging (lin. m.) for specified timber edging detail includes all associated costs for excavation, backfill, rebar stakes, nails, levelling sand, wood finishing and wood preservative for cut ends.
- .19 Section 02841 Timber / Composite Bollards
  - .1 Timber / Composite Bollards (each) for new, salvaged and used timber or composite bollards includes all associated costs for excavation, backfill and wood preservative for cut wood ends.
- .20 Section 02842 Steel Bollards
  - .1 Steel Bollards (each) for specified type of bollard includes all associated costs for excavation, concrete, backfill, painting, reflective tape and other finish work as required.
- .21 Section 02870 Site Furnishings
  - .1 Site furnishing (each) for new and salvaged for re-use furnishings includes all associated costs for excavation and concrete.
    - .1 Galvanized can and security cable or chain is incidental to cost of trash receptacle and will not be measured for payment.
- .22 Section 02871 Play Equipment
  - .1 Play Equipment (each / lump) for specified type of play equipment includes all associated costs for excavation, concrete and prevention of use.
    - .1 Approved equivalents include all other associated costs for additional surfacing, asphalt or timber edging.
- .23 Section 02872 Play Surfacing
  - .1 Play Surfacing (sq. m.) for specified type of construction includes all associated costs for excavation, sub grade preparation and compaction for play surface.
- .24 Section 02875 Infields
  - .1 Infields (each) include all associated costs for excavation, sub grade preparation and compaction for the ball diamond, paid as follows:
    - .1 75% upon installation of infield mix including grading and compaction.
    - .2 25% upon installation of sand including completion of final shaping.

MEASUREMENT AND PAYMENT

- .25 Section 02933 Seeding
  - .1 Seeding (sq. m.) of turf areas for each type of seed mix includes all associated costs for seed mix, fertilizer, and fine grading of topsoil areas.
    - .1 Failure to obtain inspection of seeding operations will result in Contractor providing all landscape maintenance required until satisfactory germination of seed for turf areas or a 50% deficiency holdback in the amount paid as determined by Consultant.
  - .2 Aeration, topdressing and seeding (sq. m.) includes all associated costs for topsoil, seed mix and water.
  - .3 Hydro mulching (sq. m.) of seeded areas includes all associated costs for mulch, tackifier or binder and water.
  - .4 Pneumatic seeding with soil (sq.m) includes all associated costs for soil, compost, seed, fertilizer and other mix amendments.
- .26 Section 02938 Sodding
  - .1 Sodding (sq. m.) of all turf areas includes all associated costs for nursery sod, fertilizer, fine grading of topsoil areas and slope reinforcement (if required).
- .27 Section 02950 Plant Material
  - .1 Plant materials (each) for specified species of tree or shrub and includes all associated costs for excavation, planting soil, staking, wood mulch (for individually planted trees); paid upon completion of planting and associated Work.
  - .2 Removal of rejected plant material:
    - .1 If directed, remove rejected plant material that has not been replaced. Remove the plant and root basket/ball and restore the planting hole to match adjacent surfaces.
    - .2 Costs associated with removal of the tree/root basket and restoration of the planting hole are considered incidental to the Contract requirements and will not be measured for payment.
  - .3 Undersized plant material will have their payment reduced as follows:
    - .1 Calliper specified trees - Unit rate is reduced by 2% for every one mm under specified calliper.
    - .2 Height specified trees - Unit rate is reduced by 2.5% for every 5cm increment below specified height.
    - .3 Container specified shrubs - Unit rate will be reduced by 25% for every incremental pot size reduction from specified standard pot size (#5, #3, #2, #1 pot sizes).

**MEASUREMENT AND PAYMENT**

- .4 Wood mulch (sq. m.) for planting beds includes all associated costs for placement in planting beds, and edging as specified.
  - .1 Wood mulch for individual trees is incidental to cost of individual trees and will not be measured for payment.
- .28 Section 02998 Landscape Maintenance
  - .1 Landscape Maintenance prior to Construction Completion Certificate (CCC) (lump sum) (after Mobilization) is for the period between April 01 and October 31 of any given year and will be paid at the time of Construction Completion.
  - .2 Landscape Maintenance after Construction Completion (month) is for the seasonal maintenance between April 01 and October 31 of any given year, from the date of Construction Completion Certificate (CCC) to the date of Final Acceptance.
  - .3 Failure to provide the specified landscape maintenance, including replacement of rejected plant material, will result in a reduced payment.
    - .1 The adjusted amount will be determined by the Project Manager.
    - .2 Payment reductions for rejected plant material will be applied at the unit rate paid for installation.
- 2 Products (not applicable)**
- 3 Execution (not applicable)**

**END OF SECTION**