

Revised on 20-06-2018

Part I - General

- 1. In the Bill of Quantities, the item descriptions identify the Work that has to be carried out, but in the exact nature and extent of the Work to be performed shall be ascertained by the Bidding Data, General Conditions of Contract, Particular Conditions of Contract, Contract Data, Specifications, Drawings, Schedules, Preamble notesand any otherrelavent documentsas specified and as included in the Bidding documentshallbe read in conjunction with the heading and item description as described in the Bill of Quantities.
- 2. The Works as executed shall be measured for payment in accordance with the method adopted in the "Civil Engineering Standard Method of Measurement 3rd Edition (CESMM3)" published by the Institution of Civil Engineers, UK under the item as therein set forth. The Contractor's rate shall include for the complete execution of the Works as depicted on Drawings and as specified in Technical Specifications and other relevant documents included in the contract document.
- 3. The measurement of works which are not coveredby the CESMM3shall be measured as specified is this preamble.
- 4. Replace the clause 1.2 of Section 1 with the "Conditions of Contract means the CIDA conditions of contractfor works" as defined in the contract document.
- 5. "SLS" means Sri Lanka Standards published by the "Sri Lanka StandardsInstitution". Standards specified by the other Institutions shall be as specified in the specification.
- 6. Measurement unit of Composite items shall be either "number" or "sum" as specified in the Bill of Quantities and it cover all costs incurred by the Contractor to complete the Works as shown in the drawings and as specified in the specification.
- 7. The Quantities stated in the Bill of Quantities are estimates only.
- 8. If state word "Provisional" within brackets in "Item description" of the Bill of Quantities means allocated provisional quantity based on assumptions and practices but not on the drawings or the investigations. These quantities are the best possible estimated quantities.
- 9. Prime Cost Items under clause 1.15 & 1.16 of CESMM3 shall be considered as Provisional sums.
- Add to the Clause 5.18 of CESMM3, measurement of reinforcement below 0.1 t shall be measured in complete units of kg.

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11. Measurement shall be taken off to actual and total quantity is round off to one decimal place.

Add followings to the Clause 5.19 of CESMM3.

Provisional Sum - p. sum

Day - day

Month - month

- 12. Add to the Clause 5.22 Format of the BOQ may be changed depending on the requirement.
- 13. General Contingency/ General Contingency Allowance specified in the Clause 5.25 of CESMM3 shall mean the contingency amount specified in the Grand Summary of Bill of Quantities.
- 14. Adjustment items described in the Clause 5.26 shall be the price fluctuation adjustment which is specified in the General Items in the Bill of Quantities.
- 15. Clause 60 (certificate of payment) and Clause 48 (certificate of substantial completion) of ICE Conditions of Contractshall be replaced with the relevant clauses of Conditions of Contract reffered in this Contract.
- 16. Conditions referred in the Section 7 of CESMM3 shall be the Conditions of Contract of this Contract.
- 17. If any discrepancy is found with the CESMM3 and this preamble, CESMM3 will be superseded by this Preamble.
- 18. for the supply and delivery to site of the surplus materials. Contractor shall remove all surplus materials after completion of Works. Part II

CLASS A - GENERAL ITEMS

- 1. This class of work classification includes all items related to general obligations, site service and facilities, temporary, testing and material and work, provisional sums, prime cost items and items to cover elements of the cost of the work which are not to be considered as proportional to the quantities of the permanent Works.
- 2. The Contractor shall be deemed have allowed in his rates for the above if separate items are not provided in the BOQ.
- 3. Payments for items which are measured on a monthly basis will not be made until the full facilities described in the items and the specifications have been provided to the satisfaction of the Engineer. Payment will continue until such time as the Engineer shall signify that facilities are no longer required.

CLASS B - GROUND INVESTIGATION

1. Rates and prices entered in the Bills of Quantities shall cover all site investigations including survey and chartering of underground utilities, above ground utilities and obstacles expressed or required otherwise. The trial pits and trenches shall be measured separately under BOQ items provided and rate to include for excavation of trial pits or trenches and backfilling of the same. The rate for backfilling of trial pits and trenches shall be deemed to include for reinstatement of top surfaces to match the existing surface. No payment will be made for the trial pits or trenches done without written instruction of the Engineer.

CLASS C - GEOTECHNICAL AND OTHER SPECIALIST PROCESSES

Items for work related to Specialist Processes such as Soil Nailing Process shall be considered the following items.

- 1. Rate for Temporary Working Platform shall include for mobilization and demobilization and all necessary associated works to carryout and complete the Works according to the specification and contract conditions. The Temporary Working Platform shall comply with the safety, health and environmental and all other statutory requirements.
- 2. Drilling for soil nails shall include for supporting the soil during drilling. Rates for drilling for soil nails shall include for mobilization and demobilization of plant, equipment and personnel, accesses, surveying, setting outand any other services or works to be performed in this regard. Drill holes shall be cleared of all deleterious material and cleansed thoroughly,by flushing by water jet or air lift lowered to the bottom of the drill holes. Opening shall be sealed to prevent the entry of foreign matter.
- 3. All Steel Soil Nail tendons shall be hot dipped galvanized. It shall be included for inserting the nail tendon with centralizers and grout filling the hole in one continuous operation and should be without voids.

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4. All Steel Nail Heads shall 12mm thick 150x150mm size hot dipped galvanized plate including hemispherical hot dipped galvanized washer fitted to hot dip galvanized nut.

5. Reinforced concrete beam connecting nail heads shall include excavation and removal of surplus excavated material where necessary, reinforcements and formwork.

6. Short length drain shall include Type 1000 (PNt 11) perforated PVC pipe (perforations on upper half), geotextile filter, inner end endcapped and outer edge to be protected using geotextile.

Shotcreting work shall comprise the followings.

7. Shotcrete shall include cleaning and damping the surface, fixing 50x50mm hot dipped galvanized steel mesh and hot dipped galvanized steel dowels fixed on to the rock. All cost associated for shotcreting and associated works shall be included in the cost of shotcreting.

CLASS D – DEMOLITION AND SITE CLEARANCE

1. Demolition and site clearance shall be included for demolition and removal of natural and artificial articles, objects and obstructions which are above the original surface and removal of tree roots.

2. Rates for demolition shall include for, demolition, breaking out, and making good the area of existing structure, foundations, pipelines(where nominal bore not exceeding 300mm) and cabling and obstruction met with, during construction of the works, the removal all debris from the area and disposal of debris off site.

3. Rates for general clearance shall be included for removal and grubbing out of all trees which is less than 500mm in girth(girth of trees shall be measured 1.0m above ground level.), stumps which is less than 150mm in diameter, shrubs, hedges, boulders and all other articles, objects and obstructions which are expressly required to be cleared except those for which separate items are given under this class, and removal of all debris off site as directed.

4. Clearance of trees shall be deemed to be included for removal of tree stump and backfilling the holes leftand removal of all debris off site as directed.

5. Removal of stumps shall be included for backfilling the holes leftand removal of all debris off site as directed.

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CLASS E – EARTHWORKS

1. Excavation shall be deemed to be included for upholding sides of excavation, additional

excavation to provide working space, removal of dead services and dewatering where

necessary.

2. Where excavation that may endanger any existing structure, are being executed, the

contractor should take necessary precautions, subject to the approval of the Engineer, to

protect the existing structure either from damage or from being rendered unserviceable.

There shall not be any extra payment for protection works carried out for the above

mentioned purpose.

3. Where the ground surface is to be covered with embankment or fill of any description, the

depth of excavation shall be measured from ground surface before being so covered, and

after removal of top soil.

4. In excavation works if material has not defined in the BOQ, it is deemed to be any

material (inclusive of soft disintegrated rock/Kabbok etc.) other than top soil, hard rock

or artificial hard material. An isolated volume of artificial hard material or rock occurring

within other materials to be excavated shall not be measured separately unless its volume

exceeds 1 m³, except that the minimum volume shall be 0.25m³ where the net width of the

excavation is less than 2.0m.

5. The quantities of material excavated and used as filling are measured net using dimensions

from the drawings, with no allowance for bulking, shrinkage or waste. No allowance shall

be made for any extra transport required due to bulking.

6. The volume of disposal of excavated material measured shall be the difference between

the total net volume of excavation and the net volume used for filling. Disposal of

excavated material shall be deemed to be disposal off the site unless otherwise stated in

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item description, and where disposal on site is required, the location shall be stated in the item description.

7. Rates for filling shall be deemed to be included for compaction.

8. Rates for landscaping shall be deemed to be included for fertilizing, trimming and

preparation of surfaces and protecting and maintaining ground/plant for a period of six

months from the date of turfing/planting.

CLASS F - INSITU CONCRETE

1. Rates for provision of concrete shall be included for;

- the supply of all necessary materials, storing, gauging, mixing and transporting

upto the required locations,

all costs incurred in determining the mixes and testing of materials, making and

testing of all test cubes to satisfy the specification,

any admixtures required,

all remedial work ordered by the Engineer consequent to the result of test failing

below the minimum specified,

2. Rates for placing of concrete shall be included for;

placing and compacting,

- curing the concrete and all measures to protect freshly poured concrete,

- all remedial work ordered by the Engineer consequent to the result of test failing

below the minimum specified,

leakage testing of water retaining structures including provision and disposal of

water required for testing

cleaning and disinfections of structures including provision and disposal of water

and chemicals required for operation

- testing and commissioning of structures

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CLASS G - CONCRETE ANCILLARIES

1. The rates for formwork shall include for the supply, erection, use and waste of forms,

whether straight or curved, fillets and chamfers upto 150 mm wide on the splay, for coating

to prevent adherence of concrete, for the provision of temporary openings to facilitate

inspection and cleaning, for dismantling and every other expense, in strict conformity with

the Specifications.

2. Deductions will be made for openings more than 0.50 square metre in area.

3. Rates for reinforcements shall be included for cutting, bending, fabricating, placing in

position, holding and supporting including temporary fixing supports, hangers and binding

wire, ties, spaces, chairs etc. to complete the work.

4. Fabric reinforcement is deemed to be included laps, tying wire, all cuttings and bending and

spacers and chairs.

CLASS H – PRECAST CONCRETE

1. Rates of items for precast concrete shall be deemed to be included for reinforcement,

formwork, joints and finishes.

CLASS I - PIPEWORK

1. Pipework shall cover all things necessary to provide pipeline materials (whether for clay,

concrete, Iron, Steel, PVC, HDPE, MDPE, or other pipe material and all fittings and

jointing materials) to install, lay, cleanse, disinfect and test the complete pipeline

including storing, transporting and handling.

2. Rates for pipes in trenches shall be included for laying and jointing and site clearance,

excavations (other than rock excavations), preparation of surfaces, backfilling using

selected excavated materials, compacting, upholding sides of excavations, dewatering

where necessary and removal and proper disposal of surplus excavated material and all

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other things necessary for pipeline installation and commissioning not measured

separately under Class J, K and L.

3. Rates for pipes not in trenches shall be included for laying and jointing of pipes and all

other things necessary for pipeline installation and commissioning not measured

separately under Class J, K and L.

4. And rates shall also be included for cleaning, disinfections and testing activities of

pipelines. The laying of pipe items shall be paid in stage as such final 30% of the

payment for the item shall be paid on satisfactory completion of cleaning, testing and

disinfections of pipeline including passing the pressure test.

5. Depth for trench excavation will be the depth from ground level to invert level of pipe.

6. The quantities of laying of pipe shall be measured by length of pipe along centre line.

7. No separate valuation shall be made in respect of cutting and forming short length of

pipes jointing and welding when approved, concrete barriers, interconnecting pipework,

detectable marker tape, installation of polyethylene sleeve for DI pipe lines where

specified, protection of ferrules, saddle straps, nuts bolts and washers, survey of all under

ground utilities and trial holes. The contractor's costs for meeting his obligations under

the contract with respect to these items shall be deemed to be included in the rates for

pipe laying.

8. Rates shall be included for applying black colour enamel paint for all exposed DI

pipework and fittings.

CLASS J – PIPEWORK – FITTINGS AND VALVES

1. Rates for valves and fittings for pipes in trenches shall be deemed to include laying and

jointing and excavation, preparation of surfaces, disposal of surplus excavated materials,

upholding sides of excavation, backfilling, removal of dead services and dewatering

where necessary.

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2. Rates for valves and fittings for pipes not in trenches to be included for laying and

jointing including supports and protection of flanged joints by mastic material and tape

only.

3. In the case of valves and penstocks the rates to be included for necessary extension

spindles, brackets, keys and all other materials for proper functioning of the valves and

penstocks.

CLASS K - PIPEWORK - MANHOLES AND PIPEWORK ANCILLARIES

1. The depth of manholes and other chambers shall be measured from tops of covers to

channel inverts or tops of base slabs, whichever is the lower.

2. Rates of items for work in this class shall be deemed to be included excavation,

preparation of surfaces, disposal of excavated material, upholding sides of excavation,

backfilling and removal of dead services, except to the extent that such work is included

in Classes I, J and L.

3. Rates of items for work in this class shall be deemed to be included concrete,

reinforcement, formwork, joints and finishes.

4. Rates for culvert crossings shall be deemed to be included for laying and jointing or

fixing in position PVC/Steel/Iron pipes, specials, fittings, valves and other materials as

shown in the drawings which are not measured under Class I or J. And rates to be

included for excavation, upholding sides of excavation, dewatering, compacting,

backfilling, disposal of surplus material, diversion of water ways, and all other necessary

materials to complete the crossing not measured under other item in this Class K and

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Class L.. Rates shall also be included for supplying and laying of hume pipe encasing,

rubble and sand packing etc. where necessary.

5. Rates for bridge crossings shall be deemed to be included for laying and jointing or fixing

in position PVC/Steel/Iron pipes, specials, fittings, valves and other materials as shown in

the drawings which are not measured under Class I or J. And rates to be included for any

excavation, upholding sides of excavation, dewatering, compacting, backfilling ,disposal

of surplus material, diversion of water ways and providing all other necessary materials

to complete the crossing not measured under other item in this Class and Class L.. Rates

shall also be included for supplying and laying of hume pipe encasing, rubble and sand

packing etc. where necessary.

6. Temporary and Permanent reinstatement of roads to be done accordance with

specification, drawingsand guidance of RDA/ Provincial Road Authorities or road

owners. Rate to be included for maintaining road surface until handling over to

RDA/Provincial Road Authorities or road owners.

CLASS L – PIPEWORK – SUPPORTS AND PROTECTION, ANCILLARIES TO

LAYING AND EXCAVATION

1. Rates of items for work in this class shall be deemed to be included excavation,

preparation of surfaces, disposal of excavated material, upholding sides of excavation,

backfilling and removal of dead services, except to the extent that such work is included

in Classes I, J and L or in the items for extras to excavation and backfilling in this class.

2. Rates of items for work in this class shall be deemed to be included concrete,

reinforcement, formwork, joints and finishes.

CLASS M: STRUCTURAL METAL WORK

1. Rates of items for structural metal work shall be deemed to include for supply, fabrication and erection of base plates, shoe plates, haunches, cleats and sloping cleats to match to roof

and erection of base plates, shoe plates, haunches, cleats and sloping cleats to match to roof slopes, "Hilti" anchors where specified, bolts, nuts, washers etc. which required for

erection complete.

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CLASS N – MISCELLANEOUS METAL WORK

- 1. Rates of items for miscellaneous metal work shall be deemed to be included for fixing to other work, supply of fixing components and drilling or cutting of other work.
- 2. Rates of items for plate flooring, open grid flooring, welded mesh panelling and duct covers shall be deemed to be included for supporting metal work unless otherwise stated.
- 3. Rates of items for tie rods shall be deemed to be included for concrete, reinforcement and joints.

CLASS P - PILES

- 1. The commencing surface to be the undisturbed original surface for the measurements of piles.
- 2. Each bored cast in place concrete piles shall be comprised;
 - > an item for the number of piles
 - > an item for the total concreted length of pile
 - > an item for the total depth bored

Therefore the rates for above three items shall not be overlapped. The measurement of number of pile is the number of pile completed, concreted length is the net length concreted except cut-off surplus length and bored length is the length bored from commencing surface to the toe level including rock socket.

- 3. Rates for above measured items shall include for mobilisation and demobilisation of plant, equipment and personal, accesses, surveying, setting out, boring, concreting, any material required for the strengthening of bore wall, preparation of working platforms, concreting, compacting, disposal of surplus material off site etc. which requires for the work completion.
- 4. Rates for bored cast in situ concrete piles shall include for testing of rock samples collected from bed rock at a reputed lab to prove safe bearing capacity. Report of this investigation should be submitted to the Engineer prior to commencement of piling works for approval.

CLASS Q - PILING ANCILLARIES

1. Rates and prices for cutting of surplus length shall include for manual breaking of concrete above the cut-off level i.e. bottom level of pile cap and disposal of surplus material off site

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etc. In addition to this any additional breaking below the designated cut-off level shall be rectified by the contractor by his own cost to the approval of the Engineer.

2. Rates and prices for preparing heads shall include for the preparation of pile top after

cutting of surplus length to receive the pile cap concrete to the approval of the Engineer.

3. Rates and prices for testing of piles (pile integrity test and high strain dynamic pile test) shall include for full compensation of testing pile complete under provided BOQ items for

the testing piles.

Rates shall exclude for the cost related to casting of pile caps as measured separately under 4.

Class F and G.

CLASS R – ROADS AND PAVINGS

1. Rates for aggregate base course (ABC) shall be included for preparation of sub grade for

roads including shoulders and compacted with 2 ton vibrator roller as specified and as

shown in the drawings.

2. Rates for precast concrete slab paving shall be included for necessary compaction,

bedding if required etc. to complete the work.

3. Rates of items for work in this class involving insitu concrete shall be deemed to be

included for formwork and finishes of concrete.

4. Rates of items for kerbs, channels and edgings shall be deemed to be included for beds,

backing, reinforcement, joints and cutting.

5. Rates for fabric reinforcement and geotextile shall be included for necessary laps.

CLASS V – PAINTING

1. Rates of items for painting of smooth concrete surfaces, plastered concrete/ brick work,

metal work or pipe work shall be deemed to be included for preparation of surfaces

before painting.

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2. Rates for painting of metal sections shall be deemed to be included for painting the

surfaces of connecting plates, brackets rivets, bolts nuts and similar projections.

3. Rates for painting of pipe shall be deemed to be included for painting the surfaces of

flanges, valves other projecting fittings and hangers.

CLASS X – MISCELLANEOUS WORK

1. The rates for fences shall be deemed to be included for excavation, preparation of

surfaces, disposal of excavated material, upholding sides of excavation, backfilling,

removal of existing dead services, dewatering if found necessary, concrete,

reinforcements, formwork, rubble work, GI pipes, fixing bolts, nuts and washers and all

other accessories to complete the work.

2. The rates for fences shall be included for end posts, angle posts, straining posts and gate

posts.

3. The all metal parts of fences to be applied with two coats of green colour anti-rust paint

and all masonry parts with two coats green colour weather shield paint.

4. Rates for metal gates shall be included for applying two coats of green colour anti-rust

paint.

5. Rates for drainage to structures above ground shall be deemed to be included for

supports.

CLASS Z – SIMPLE BUILDING WORKS INCIDENTAL TO CIVIL ENGINEERING

WORKS

1. Rates for carpentry and joinery shall be deemed to be included for fixing, boring, cutting,

jointing, supply of fixing components and drilling or cutting associated work.

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2. Rates for windows, doors and glazing, and surface finishes, lining and partitions shall be

deemed to be included for fixing, supply of fixing components and drilling or cutting of

associated work.

3. Rates for surface finishes, lining and partitions shall be deemed to be included for

preparing surfaces, forming joints, mitres, angles, fillets, built-up edges and laying to

cambers or falls.

4. Rates for surface finishes, lining and partitions shall be deemed to be included for

forming holes, cutting and making good for services.

5. Rates for suspended ceilings shall be deemed to be included for associated primary

support system and edge trims.

6. Rates for pipes building services and ducted building services shall be deemed to be

included for fixing, supply of fixing components and commissioning.

7. Rates for electrical fitting points shall be deemed to be included for supplying, laying and

installation of all conduits, conduit fittings, junction boxes, draw wire, cables, earth cable,

switches, screws, nails, insulation materials, ceiling roses, wooden plugs, wooden boxes

etc. and cutting holes and chases in brick work, concrete works etc. and making good.

8. Rates for electrical distribution board shall be deemed to be included for supplying,

laying and installation of all conduits, conduit fittings, draw wire, cable, bus bar, earth

cable, screws, nails, insulation materials etc. and cutting holes and holes in brick work,

concrete works etc. and making good.

9. Rates for electrical works shall be included for testing and commissioning of the system.

10. All materials, equipments, wiring and workmanship shall confirm to IEE regulations.

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