

AMENDMENT No. 3
to the Tender Documents

ref: Tendering No. RSP/2013/OT/W6/05

ROAD SECTOR PROGRAM

Road Rehabilitation Works under the Contract

RSPSP/W6/05:

Rehabilitation of R6 M1-Ialoveni Road, km 0+000-km 6+550”

Issued on 31 January, 2015

General

The following amendment articles are applicable to Contract: “Rehabilitation of R6 Balti – M1 – Ialoveni Road:

- **Contract RSPSP/W6/05:**
Rehabilitation of R6 M1-Ialoveni Road, km 0+000-km 6+550”

These articles include the following attached Annex which contains document not included to original set of Tender Documents.

The Annex contains:

Revised Drawing No. :

- CLS – 01 Typical Cross Section; “TYPE – 1”
- CLS – 02 Typical Cross Section; “TYPE – 2”
- CLS – 03 Typical Cross Section; “TYPE – 3”
- CLS – 04 Typical Cross Section; “TYPE – 4”
- GD – 004 Geotechnical Cross Section
- GD – 005 Geotechnical Cross Section
- SD – 32 – 1 Shoulder Spillways
- IL – 001 General Date
- IL – 002 Interchange Lighting
- IL – 003 Interchange Lighting
- IL – 004 Interchange Lighting
- IL – 005 ITS CTII 116/10/04 – Y/ With overhead connection
- IL – 006 List of Quantities for Lighting

New Drawings No. :

- UD – 001 Utilities Plan
- UD – 002 Utilities Plan
- UD – 003 Utilities Plan
- UD – 004 Utilities Plan
- UD – 005 Utilities Plan
- UD – 006 Utilities Plan
- SD – 48 Extension of pipe culvert 1000
- SD – 49 Extension of pipe culvert 1000

Deleted Drawings No. :

- SD – 01,
- SD-04-1.
- SD-07
- SD-31-1
- SD-31-2
- SD-33-3
- SD-36

- SD-37
- SD-38
- SD-40
- SD-45
- SD-46

Article 1

Tender Documents, Part 1 – Tendering Procedures, Section III: Evaluation and Qualification Criteria, Table 2.4 Experience, 2.4.4 Experience, the following:

“Cold in-place recycling of asphalt pavement on a single contract executed within the last three (3) years at a rate not less than: 12.000 tonnes/year;”

shall be substituted by:

“Cold recycling of asphalt pavement on a single contract executed within the last three (3) years at a rate not less than: 12.000 m³/year;”

Article 2

Tender Documents, Part 1 – Tendering Procedures, Section III: Evaluation and Qualification Criteria, Table 2.6 Equipment, the following:

2	<i>Cold in-place recycling machine, up to 250 mm depth, minimum output 400 tonnes/hour</i>	1
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shall be substituted by:

2	<i>Cold recycling machine, up to 250 mm depth, minimum output 400 tonnes/hour</i>	1
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Article 3

Tender Documents, Part 1 – Tendering Procedures, Section III: Evaluation and Qualification Criteria, 2. Qualification, Tables, 2.4 Experience, 2.4.2 Specific Experience, the following:

C. *“Cold in place recycling of asphalt pavement on a single contract executed within the last three (3) years at a rate not less than 12.000 tonnes/year”*

shall be substituted by:

C. *“Cold recycling of asphalt pavement on a single contract executed within the last three (3) years at a rate not less than 12.000 m³/year”*

Article 4

Tender Documents, Part 1 – Tendering Procedures, Section VI Requirements

Scope of works :

Cold in-place recycling of the asphalt concrete pavement at a depth of 100-200 mm mixing in of new aggregates and stabilization with cement is to be carried out.

shall be substituted by:

Cold recycling of the asphalt concrete pavement at a depth of 100-200 mm milling, mixing in of new aggregates and stabilization with cement is to be carried out.

Article 5

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 006.03
[PROTECTION AND DIVERSION OF SERVICES]

Wherever an existing overhead or underground installation carrying live services (gas, water, electric power, telephone, etc.) is to be diverted in order to perform the Works, the Contractor shall arrange for this work to be carried out by the owner of the installation. The Employer will have obtained prior approvals from the owners regarding diversion/removal of services shown on the Drawings but the Contractor shall be responsible for agreeing the programme for the work and for paying any necessary costs and fees through the Contract as instructed by the Engineer. The Contractor shall provide attendance as necessary and shall have general responsibilities for protecting the installation before, during and after diversion/removal.

Whenever during the execution of the Works the Contractor locates service installations which require diversion/removal and which are not shown on the drawings, he shall immediately notify the Engineer. The Engineer will liaise with the Employer and owner of the service to obtain the necessary actions.

Shall be substituted by:

Wherever an existing overhead or underground installation carrying live services (gas, water, electric power, telephone, etc.) is to be diverted in order to perform the Works, the Contractor shall carry out this work in accordance with the prior approvals obtained by the Employer from the owners regarding diversion/removal of services shown on the Drawings..

Whenever during the execution of the Works the Contractor locates service installations which require diversion/removal and which are not shown on the drawings, he shall immediately notify the Engineer. The Engineer will liaise with the Employer and owner of the service to obtain the necessary approvals.

Article 6

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 014 [OTHER MATERIALS], Paragraph No. 014.03 “GEOTEXTILES”, Reference to “AASHTO M288” is replaced by “EN 13249”:

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 201 [THE EXECUTION OF THE EARTHWORKS], Reference to “AASHTO M288” is replaced by “EN 13249”.

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 303 [WIDENING AND RECONSTRUCTION OF THE EXISTING CARRIAGEWAY AND PROVISION OF NEW PAVEMENT] Reference to “AASHTO M288” is replaced by “EN 13249”.

Article 7

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter No. 101.03. [WORKS DESCRIPTION], Construction Drawings New Paragraph has been added as follows:

“The time period for Engineer’s review and submission to the Employer is 14 days”.

Article 8

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 101.03 [WORKS DESCRIPTION], new Paragraph has been added as follows:

“Road Safety Audit for Draft and Final Construction Drawings

Road Safety Audit for Draft and Final Construction Drawings shall be carried out in accordance with the requirement of EU Directive 2008/96/EC of the 19th November 2009.

The Road Safety Audit may only be undertaken by Auditors meeting the requirements of Article 9 of Directive 2008/96/EC”.

Chapter 101.04 [WORKS ACCEPTANCE] following two new payment items have been added:

10102	Provision for the implementation of traffic calming measures which may be identified during the safety audit for the preparation of the construction drawings	Provisional Sum
10103	Road Safety Audit for Draft and Final Construction Drawings	Lump-sum

Article 9

Tender Documents, Part 2 – Requirements, Technical Specification, Chapter 301[COLD RECYCLING THE ASPHALT CONCRETE PAVEMENTS], 301.10 [ACCEPTANCE] the wording *“or the stiffness by Marshall”* is deleted.

Article 10

Tender Documents, Part 2 – Requirements, Technical Specification, Chapter 301[COLD RECYCLING THE ASPHALT CONCRETE PAVEMENTS] 301.11 [ADJUSTMENTS FOR DENSITY]

Payment

The approved volumes, measured as described above, are payable according to unit rates, specified in the Contract.

The payment is performed for the following items:

No.	Item	Unit of Measure
30103	Cold recycling of the asphalt concrete pavement at a depth of 100 - 200 mm. Mixing in of new aggregates and stabilization with 3 % cement. Regulation to required transverse and longitudinal profile. Compaction. Total layer thickness 50 - 300 mm	Cubic Metre

shall be substituted by:

Payment

The approved volumes, measured as described above, are payable according to unit rates, specified in the Contract. Payment for milling of the asphalt concrete pavement on the sections where cold recycling is foreseen is included in Item No. 30103.

The payment is performed for the following items:

No.	Item	Unit of Measure
30103	Cold recycling of the asphalt concrete pavement at a depth of 100 - 200 mm. Milling, mixing in of new aggregates and stabilization with 3 % cement. Regulation to required transverse and longitudinal profile. Compaction. Total layer thickness 50 - 300 mm	Cubic Metre

Article 11

Tender Documents, Part 2 – Requirements, Technical Specification, Chapter 302.01

302.01 INTRODUCTION

This work consists of the milling of the existing asphalt pavement. The milled asphalt shall only be used for the works on instruction from the Engineer.

shall be substituted by:

This work consists of the milling of the existing asphalt pavement where other works than cold recycling are foreseen. The milled asphalt shall only be used for the works on instruction from the Engineer.

Article 12

Tender Documents, Part 2 – Requirements, Tendering Procedures, Chapter 302.03 [MILLING]

302.03 MILLING

The existing bituminous pavement is made from different asphalt and gravel shall be milled and processed by at least sieving (if necessary) to meet the requirements for re-use in the regulating layer. The existing bituminous pavement material does not conform to any given grading, but consists locally of larger gravel and finer material.

shall be substituted by:

The existing bituminous pavement is made from different asphalt and gravel shall be milled and processed by at least sieving (if necessary) to meet the requirements for re-use in the regulating layer. If the existing bituminous pavement material does not conform to any given grading, but consists locally of larger gravel and finer material, then it shall be re-used or disposed as instructed by the Engineer.

Article 13

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 302.04 [ACCEPTANCE], Item No. 30201 has been revised as follows:

30201	Asphalt Concrete Pavement Milling to any depth and re-use or disposal as instructed by the Engineer.	Cubic Metre
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Article 14

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 303 [WIDENING AND RECONSTRUCTION OF THE EXISTING CARRIAGEWAY AND PROVISION OF NEW PAVEMENT]

303.04 [Construction Procedure]

Asphaltic binder and wearing courses shall be laid to the levels indicated in the drawings. Asphalt mixtures will be designed, produced and laid in accordance with the requirements of chapter 305 and SNiP 3.06.03-85.

Wherever new asphalt is laid abutting existing asphalt pavement, the edges of the old pavement shall be carefully cut to expose clean fresh vertical joint faces which will be tack coated with bituminous material meeting the requirements of chapter 304 and in compliance with the requirements of chapter 305 immediately before the fresh adjoining asphalt is laid. Minimum compaction requirements for the Binder and Wearing course shall be 98% of Marshall Density (AASHTO T230).

Shall be substituted by:

Asphaltic binder and wearing courses shall be laid to the levels indicated in the drawings. Asphalt mixtures will be designed, produced and laid in accordance with the requirements of chapter 305.

Wherever new asphalt is laid abutting existing asphalt pavement, the edges of the old pavement shall be carefully cut to expose clean fresh vertical joint faces which will be tack coated with bituminous material meeting the requirements of chapter 304 and in compliance with the requirements of chapter 305 immediately before the fresh adjoining asphalt is laid. Minimum compaction requirements for the Binder and Wearing course shall be in accordance with chapter 305.14.

Article 15

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 303.05 [WORK ACCEPTANCE]

New Item 30302A has been added as follows:

30302A	Subbase courses of ballast h= 200mm	Square Metre
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Article 16

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 304.06 [APPLICATION OF PRIME AND TACK COATS]

Prime coat application is to be at the rate directed by the Engineer and will normally be in the range of 0.8 to 1.0 kgm/m². The Engineer will approve the exact application rate, temperature, and area to be treated before application and may make adjustments for variations in field conditions.

Tack coat application is to be at the rate directed by the Engineer and will normally be in the range of 0.25 to 0.4 kgm/m², The Engineer will approve the exact application rate, temperature, and area to be treated before application and may make adjustments for variations in field conditions.

Shall be substituted by:

Prime coat application is to be at the rate directed by the Engineer and will normally be in the range of 0.8 to 1.0 l/m². The Engineer will approve the exact application rate, temperature, and area to be treated before application and may make adjustments for variations in field conditions.

Tack coat application is to be at the rate directed by the Engineer and will normally be in the range of 0.25 to 0.4 l/m², The Engineer will approve the exact application rate, temperature, and area to be treated before application and may make adjustments for variations in field conditions.

Article 17

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 305.08 [ASPHALT MIX DESIGN AND TESTING]

With an absolute minimum of 3 cores being taken for any day's work. Cores will be checked for thickness of layer as the average of three uniformly spaced thickness measurements by caliper round the circumference of the core. The compacted asphalt in the field shall achieve a density of at least 98% of the Marshall Density.

Shall be substituted by:

With an absolute minimum of 3 cores being taken for any day's work. Cores will be checked for thickness of layer as the average of three uniformly spaced thickness measurements by caliper round the circumference of the core. The compacted asphalt in the field shall achieve a density in accordance with chapter 305.14.

Article 18

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 305.08 [ASPHALT MIX DESIGN AND TESTING], new sentence shall be added as follows:

“In case of discrepancy, SM STB 1033-2008 shall apply.”

Article 19

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 305.14 [COMPACTION]

The compaction of the mixture will be done according to SNiP 306.06-85.

Shall be substituted by:

The compaction of the mixture will be done according to SNiP 3.06.03-85.

And:

The compacted asphalt in the field shall achieve a density of at least 98% of the Marshall Density.

Shall be substituted by:

The compacted asphalt in the field shall achieve a density of at least 0.99 compaction SM STB 1115-2008.

Article 20

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 305.17 [ACCEPTANCE PROCEDURES]

Bitumen supplied to the site shall be routinely tested for conformity with these Specifications. For bitumen delivered in bulk, tests shall be conducted at a minimum rate of one set of tests per tanker load. For bitumen delivered in drums tests shall be conducted at a minimum rate of one set of tests per 10 tonnes received. These test rates are intended to be used for routine testing when deliveries are confirmed as uniform and of acceptable quality. Initially, the Engineer will order tests at a substantially greater intensity. In addition to the site tests all shipments of bitumen must have a manufacturer's test certificate indicating compliance with all the requirements of the Specification. This test certificate must be presented to and approved by the Engineer BEFORE the relevant shipment of bitumen is permitted to enter the site.

Shall be substituted by:

Bitumen supplied to the site shall be routinely tested for conformity with these Specifications. For bitumen delivered in bulk, tests shall be conducted at a minimum rate of one set of tests per tanker/truck load. For bitumen delivered in drums tests shall be conducted at a minimum rate of one set of tests per 10 tonnes received. These test rates are intended to be used for routine testing when deliveries are confirmed as uniform and of acceptable quality. Initially, the Engineer may order tests at a greater intensity. In addition to the site tests all shipments of bitumen must have a manufacturer's test certificate indicating compliance with all the requirements of the Specification. This test certificate must be presented to and approved by the Engineer BEFORE the relevant shipment of bitumen is permitted to enter the site.

Article 21

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 305.17 [ACCEPTANCE PROCEDURES] , description for Item 30504 has been revised as follows:

30504	Wearing course of stone mastic asphalt concrete, §MSc-1/2,2 SM STB 1033:2008, bitumen BND 60/90 Thickness 50 mm	Square Metre
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and Item 30505 has been deleted and two new Items 30505.1 and 30505.2 have been added as follows:

30505.1	Binder course of asphalt concrete, SKBg-I/2.5 SM STB 1033:2008, bitumen BND 60/90 Thickness 60 mm	Square Metre
30505.2	Binder course of asphalt concrete, SKBg-I/2.5 SM STB 1033:2008, bitumen BND 60/90 Thickness 80 mm	Square Metre

Article 22

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 306.03 [THE REMOVAL AND RECONSTRUCTION OF SHOULDERS],

Shoulders will be completed with a 150mm layer of shoulder surfacing material or crushed limestone (M400).

Shall be substituted by:

Shoulders will be completed with a 150mm layer of shoulder surfacing material or crushed limestone (M300).

Article 23

Tender Documents, Part 2 – Requirements, Technical Specifications, 306.05 [ACCEPTANCE OF WORKS], Item 30602 has been revised as follows:

30602	M300 shoulder surfacing material 150 mm thickness	Square Metre
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Article 24

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 308.08 [MAINTENANCE], Item No. 30801 has been revised as follows:

30801	Cement-stabilized base, Thickness 250 mm	Square Metre
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Article 25

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 503.02 [MATERIALS]

Material shall conform to the requirements of this specification and to the materials stipulated in the Drawings. Paved waterways of all types shall be constructed using concrete having a maximum aggregate size of 20mm and a minimum compressive strength of 25 N/mm² at 28 days. Where mesh reinforcement is required it shall comply with the relevant GOST standard.

shall be substituted by:

Material shall conform to the requirements of this specification and to the materials stipulated in the Drawings. Paved waterways of all types shall be constructed using B20 concrete having a maximum aggregate size of 20mm. Where mesh reinforcement is required it shall comply with the relevant GOST standard.

Article 26

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 503.06 [WORKS ACCEPTANCE], Items Nos. 50301, 50306 and 50307 have been revised as follows:

50301	Construction of chute or spillway on embankment slope made of precast concrete units or cast in situ	Linear Metre
50306	Dissipation on the bottom of the embankment	Number
50307	Discharging in lined ditch	Number

Article 27

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 509.03 [WORKING CONDITIONS] and new Chapter has been added as follows:

509.03.1 [TRANSVERSAL DRAINS WITHOUT PIPES]

Transversal Drains without pipe shall be constructed in the shoulder perpendicular to the carriageway to the edge of the embankment to widths, depths and construction layers shown on the drawings.

Article 28

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 509.04 [WORKS ACCEPTANCE]

MEASUREMENT

Unit of measure: linear meter.

Shall be substituted by:

Unit of measure: linear meter. The length of the drain shall be measured at the level of the invert of the trench to the nominal edge of the embankment.

Article 29

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 509.04 [WORKS ACCEPTANCE]

Payment

New Item 50901.01 has been added as follows:

50901.1	Construction of transversal drains without pipes	Linear Metre
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Article 30

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 602 [CRASH BARRIERS]

Measurement and Payment

New Items Nos. 60203 and 60204 have been added as follows:

60203	Provision and complete installation of reinforced crash barrier (New Jersey), including all ancillary works (earth and concrete works, etc.)	Linear Metre
60204	Provision and complete installation of reinforced crash barrier (New Jersey), including all ancillary works (earth and concrete works, etc.) dismountable.	Linear Metre

Article 31

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 702.02 [MATERIALS]

d) Glass Beads

Beads shall meet the requirements of BS 6088 for beads to be used for increasing the reflectivity of traffic paints. The quantity of beads to be used shall be as directed by the Employer's Representative on the basis of demonstration tests to be done by the Contractor but shall not be less than 0.8 kgm/litre of paint.

Shall be substituted by:

d) Glass Beads

Fine or coarse beads, anti-skidding beads must be compliant with SR-EN-1423/A1:2004. The quantity of beads to be used shall be as directed by the Employer's Representative on the basis of demonstration tests to be done by the Contractor but shall not be less than 0.8 kgm/litre of paint.

And the following two new paragraphs were added:

e) Anti-skid surface treatments

Anti-skid surface treatments shall consist of high-friction calcined bauxite aggregate applied to surfaces in a hot thermoplastic resin screed.

Anti-skid aggregates will comply with the requirements of EN 1423.

f) Transverse Rumble Strips

Transverse rumble strips shall consist of thermoplastic markings immediately adjacent to village name plates

The rumble strips shall comply with the requirements of SM SR 1848-7, 2013 and be formed in white colour

And lettering of point e) **Test Certificates** shall be substituted by **g) Test Certificates**

Article 32

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 702.08 [WORKS ACCEPTANCE, Payment], new items 70207 and 70208 are added as follows:

No.	Item	Unit of Measure
70207	Anti – skid surface treatments	Square Metre
70208	Transverse Rumble Strip	Square Metre

Article 33

Tender Documents, Part 2 Requirements, Technical Specifications, Chapter 801.03 [WORKING CONDITIONS]

Measurements

The rearrangement of aerial power lines of 10kV and 0,4kV is measured in number of foots and in linear meters. The arrangement of external lightning is measured in number of lights.

Shall be substituted by:

The rearrangement of aerial power lines of 10kV and 0,4kV is measured in number of poles and in linear meters. The arrangement of external lightning is measured in number of lights.

Article 34

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 801.03 [WORKING CONDITIONS]

Payment

No.	Item	Unit of Measure
80101	Diversion of poles for 0.4kV overhead lines with light	Number

80102	Diversion of poles for 10kV overhead lines (h=10.5m) (included)	Number
80103	The rearrangement of aerial power lines of 110kV	Number of Poles /Linear Metre
80104	Arrangement of external lightning	Number of Poles /Linear Metre
80105	Installation of new Substation	Number

Shall be substituted by:

No.	Item	Unit of Measure
80101	Diversion of poles and 0.4kV overhead lines with light	Number
80102	Diversion of poles and 10kV overhead lines (h=10.5m) (included)	Number
80103	The rearrangement of poles and aerial power lines of 110kV	Number
80104	Arrangement of external lightning	
80104.1	Installation of poles L=15m for lighting at interchanges	Number
80104.2	Arrangement of external lightning (subterranean)	Linear Metre
80105	Installation of new Substation	Number

Article 35

Tender Documents, Part 2 – Requirements, Technical Specifications, Chapter 802.03 [WORKING CONDITIONS]

Payment

80202	Diversion of aerial communication lines	Number
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Shall be substituted by:

80202	Diversion of aerial communication lines including the poles	Number
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Article 36

Tender Documents, Part I – Section IV, Tender Forms, Bill of Quantities Bill No.200 [EARTHWORKS] Bill Item No. 20403, has been changed as follows:

Item No.	Item Description	Unit	Quantity
20403	Provide grassing to embankment and road sides, incl. maintenance up to end of defects liability period	Square Metre	34,147

Article 37

Tender Documents, Part I – Section IV, Tender Forms, Bill of Quantities, Bill No.300 [PAVEMENT], Items Nos. 30103, 30201, 30401, 30402, 30504, 30602 and 30801 have been revised, Item No. 30302A have been added and Item 30505 has been replaced by Items Nos. 30505.1 and 30505.2 as follows:

30103	Cold recycling of the asphalt concrete pavement at a depth of 100 - 200 mm. Milling, mixing in of new aggregates and stabilization with 3 % cement. Regulation to required transverse and longitudinal profile. Compaction. Total layer thickness 50 300 mm	Cubic Metre	20 226
30201	Asphalt Concrete Pavement Milling to any depth and re-use or disposal as instructed by the Engineer	Cubic Metre	3939

30302A	Subbase courses of ballast h= 200mm	Square Metre	23220
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30401	Prime-coat using cutback bitumen, 0.8 to 1.0 L/m ²	Litre	128 093
30402	Tack coat using cutback bitumen or bitumen emulsion, 0.25 to 0.4 L/m ²	Litre	51 237
30505.1	Binder course of asphalt concrete, SKBg-I/2.5 SM STB 1033:2008, bitumen BND 60/90 Thickness 60 mm	Square Metre	21 563
30505.2	Binder course of asphalt concrete, SKBg-I/2.5 SM STB 1033:2008, bitumen BND 60/90, Thickness 80 mm	Square Metre	106 530
30602	M300 shoulder surfacing material 150 mm thickness	Square Metre	18 800
30801	Cement-stabilized base, Thickness 250 mm	Square Metre	22 883

Article 38

Tender Documents, Part I – Section IV, Tender Forms, Bill of Quantities, Bill No.500 [DRAINAGE STRUCTURES] Items No. 50103.2, 50103.3, 50105.2, 50301, 50305, 50306, 30507, 50802 have been revised, Item No. 50901.1 has been added and Item No. 50503 has been deleted as follows:

50103.2	to Pipe culverts Ø 600	Number	8
50103.3	to Pipe culverts Ø 1000	Number	6
50105.2	to Pipe culverts Ø 600	Linear Metre	55
50301	Construction of chute or spillway on embankment slope made of precast concrete units or cast in situ.	Linear Metre	360
50305	Construct chute entry gulley, single sided	Number	14
50306	Disipation on the bottom of the embankment	Number	12
50307	Discharging in lined ditch	Number	2
50802	Precast concrete kerbing – type 2	Linear Metre	1 740

50901.1	Construction of transversal drains without pipes	Linear Metre	1 146
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Article 39

Tender Documents, Part I – Section IV, Tender Forms, Bill of Quantities, Bill No.600 [INCIDENTAL CONSTRUCTION] Item No. 60202 has been deleted and substituted by Item 60203 and 60204 as follows:

60203	Provision and complete installation of reinforced crash barrier (New Jersey) , incl all ancillary works (earth and concrete works, etc.) .	Linear Metre	5 965
60204	Provision and complete installation of reinforced crash barrier (New Jersey) , incl all ancillary works (earth and concrete works, etc.) dismountable.	Linear Metre	90

Article 40

Tender Documents, Part I – Section IV, Tender Forms, Bill of Quantities, Bill No.800, Items No. 80101, 80102, 80104.1, 80104.2, 80105 and 80202 have been revised as follows:

80101	Diversion of poles and 0,4 kV overhead lines with light	Number	50
80102	Diversion of poles and 10kV overhead lines (h=10,5m) (included)	Number	3
80104.1	Installation of poles L=15m for lighting at interchanges	Number	3

80104.2	Arrangement of external lightning (subterranean)	Linear Metre	1900
80105	Installation of new Substation	Number	1
80202	Diversion of aerial communication lines including the poles	Number	10

Article 41

Tender Documents, Part I – Section IV, Tender Forms, Bill of Quantities,

The following Items have been deleted from Bill of Quantities:

- 10306 Removal of the old road pavement under pavement
- 20102A Excavate after removal of bituminous surface all type of material in road area and access roads adjustments to any depth as directed by the Engineer (**cut to spoil**) and dispose in contractors dump site.
- 20402 Provide top soil, spread on embankment slopes and road sides of min 150 mm thickness, light compaction
- 30105 Cement
- 30107 Additives
- 30202 Asphalt Concrete Pavement Milling at a depth of 2 cm
- 30203 Asphalt Concrete Pavement Milling at a depth of 2-4 cm
- 30204 Asphalt Concrete Pavement Milling at a depth of 4-6 cm
- 30205 Asphalt Concrete Pavement Milling at a depth of 6-8 cm
- 30206 Asphalt Concrete Pavement Milling at a depth of 8-10 cm
- 30207 Asphalt Concrete Pavement Milling at a depth of 10-12 cm
- 30208 Asphalt Concrete Pavement Milling at a depth of 12-14 cm
- 30301 Sand drainage layer
- 30302 Subbase courses of crushed limestone h=200 mm
- 30303 Subbase courses of crushed limestone h=150 mm
- 30303A Subbase courses of crushed limestone h=100 mm
- 30304 Excavation and disposal or reuse of existing pavement material
- 30305 Base course crushed limestone
- 30501 Wearing course of stone mastic asphalt concrete Thickness 40

mm

- 30502 Binder course of asphalt concrete M1 - Thickness 40 mm
- 30503 Binder course of asphalt concrete M1 - Thickness 60 mm
- 30504A Wearing course of asphalt concrete from asphalt concrete Type V M III Thickness 40 mm
- 30506 Wearing course of asphalt concrete Type B M III Thickness 40 mm
- 30507 Bituminous coated MacCadarn
- 30701 Asphalt Pavement, type V N III, Thickness 30 mm
- 30901 Coated Macadam, Thickness 60 mm

All of Bill No. 400 [Bridges] including the following items was deleted:

- 40001 Site set-up for the bridge construction, maintenance and removal after the bridge construction has been finished.
- 40002 Traffic safety measures. Temporary carrying regulation during construction works. Installation, service and remove.
- 40003 Provide, assemble, maintain and remove all falsework and scaffolds, to be used during construction period, incl. temporary inspection equipment for the inspection and approval of the superstructure and piers by the engineer.
- 40004 Temporary by-pass, accommodation of traffic (ravine/channel crossing), set-up, maintenance and removal after the bridge construction has been finished, incl. traffic safety measures. According sketch on the drawing.
- 40005 Construction of temporary bypass (furnished with a proof surface), level crossing of railroad, barriers, appropriate railroad crossing, traffic signs for traffic diversion; incl maintenance of the road diversion and its access ramps (kept dust-, snow- and
- 40006 Reserve on railroad crossing works for employers disposal.
- 40007 Structural analyses for new construction parts of bridges, selected pre-stressed -system for pre-cast beams (pre-stress forces and pre-stress-assignment), construction-stages, temporary constructions and stability analyses. Corrections /amendments in 3 co
- 40008 Prepare one complete set of marked-up prints of all drawings concerning the road, including larger scale original drawings where necessary to clearly show adequate detail, and including

- all utility drawings for which modifications have been performed for
- 40009 Provide working drawings showing the chosen construction system of bridge (e.g. but not limited to: topographic setting-out, geotechnical investigations, reinforcement inc. steel-bar lists, pre-stress system, construction details, etc.) elaborated with CA
- 40010 Provide Digital photo documentation of all the existing situation along the road before construction and submission on CD.
- 40011 Construction Photographs of all construction phases of road works, culverts and utilities, recorded on CD.
- 40012 Provide Digital photo documentation of all construction phases of bridge and submission on CDs.
- 40013 Provide and prepare As-Built Drawings of the road (as but not limited to): topographic data, drainage components, utilities, details, etc. elaborated with CAD-system and submitted as DXF-file to the Engineer on CD-Rom and 4 hard-copies in Romanian and Eng
- 40014 Provide and fix a year matrix 25 x 45 cm, marking the construction year on the bridge wing wall, according to the drawing or instruction.
- 40015 Provide and install measuring bolts related to the geodetic survey, diameter 10 to 20 mm, length more than 120 up to 160 mm, made of brass, place according supervision engineer, including sureveying (to national grid) and all ancillary works and materials
- 40016 Provide and install of lining pipes, inflexible PVC, diameter 75 (100) mm including connections, adapters, accessories, hook wires, and closing caps according supervision engineer, including all ancillary works and materials.
- 40017 Construct cable duct, min 80x80x80 cm or size according to the prevailing regulations.
- 40018 Provide, install and remove testing equipment and all construction materials needed to execute pile load tests to one bridge with piles.
- 40019 Static and dynamic pile load tests (abutment, each one) according to EN/DIN 1054 or equal (according specifications item 400, "Bridges", piling), one on each abutment or pier.
- 40020 Temporary piles necessary to pile tests, including all ancillary works and materials.

- 40021 Provide 4 tipper trucks loaded with any material with a total weight of min. 25 to per truck, incl. transport and waiting time, off-loading and depositing of the material. The rate remains if the appointed test engineer needs less or more vehicles. Rate a
- 40022 Provision, installation, maintenance and removal of testing equipment provided by the independant test engineer, all equipment for the respective bridge.
- 40023 Analysis of test results and provision of test report of the respective bridge in 4 copies to the Engineer.
- 40101 Removal of concrete parapets/guard rails of the bridge or embankment. Disposal of all demolished materials.
- 40102 Dismantling and disposal of the steel handrails.
- 40103 Dismantling and disposal of the steel guard rails.
- 40104 Dismantling and disposal of reinforced concrete handrails.
- 40105 Dismantling of reinforced concrete sidewalks. Disposal of all demolished materials.
- 40106 Removal and disposal of the asphalt pavement on the bridge deck.
- 40107 Removal and disposal of the pavement on bridge approaches.
- 40108 Removal of superstructure waterproofing including protective and leveling layers. Disposal of all demolished materials.
- 40109 Dismantling of PC reinforced concrete deck slabs. Disposal of all demolished materials.
- 40110 Miscellaneous demolition of reinforced concrete to bridge substructure and deck elements. Disposal of all demolished materials.
- 40111 Removal of deteriorated elements of the reinforced concrete slope and channel protection. Disposal of all demolished materials.
- 40112 Demolition and disposal of reinforced concrete to deck beam joints.
- 40113 Demolition of deteriorated reinforced concrete stairs on abutment slopes. Disposal of all demolished materials.
- 40114 Cleaning of piers and abutments caps of waste. Disposal of all materials.
- 40115 Removal and disposal of metal expansion joint elements.

- 40116 Dismantling of precast approach slabs. Disposal of all demolished materials.
- 40117 Cleaning of concrete used for joints between deck slabs from the sides. Disposal of all materials.
- 40201 Excavation of embankment on the abutment area for new back-, wing-, retaining walls. Haulage and disposal of excess and/or unsuitable material.
- 40202 Provide, place and compact selected fill for pits of abutments area, incl. levelling, compaction and preparation of surface.
- 40203 Renewal of embankment at the abutments area. Provide, place and compact of suitable material to widening of existing embankment and reconstruct the slopes of the abutments.
- 40204 Excavation/cavity of ravine/river bed in the bridge area. Haulage and disposal of excess and/or unsuitable material.
- 40205 Excavate foundation strips (e.g. 0.60 x 0.80).
- 40206 Provide, maintain and remove dewatering system (pumps, etc.) for ground water of entire construction work.
- 40207 Crushed stone layer on the foundation bed, H= according to requirements.
- 40208 Sheet Piling for abutments, free sheet wall as protection of building pits (e.g. steel elements). Sheet length according stability analyses, interlocked, driven and removed; as required with anchoring; spayment: horizontal length x driven depth.
- 40301 Lean Concrete, class C 8/10, min. 10 cm thickness incl.formwork (install and remove) as blinding/soling under pile slabs, foundations, approach slabs, etc.
- 40302 Fill of cavity on existing abutments with concrete, class C 8/10.
- 40303 Piles foundation - Cast-in-situ Bored Piles for Abutments, diameter 1.20 m, length up to 35 m, , including drilling of borehole and piping, structural steel as spacer rings and pile point bracing, concrete class C25/30, reinforcement steel, disposal of dr
- 40304 Piles foundation - Customize pile heads for connection to the pile head slab, including truncation of pile heads to a level of 5 cm above bottom edge of slab, protection of connecting reinforcement during removal of concrete and disposal of debris.
- 40305 Drive against reinforced concrete piles. Delivery and assembly of precast concrete piles, according SNIP for the bridge construction including all devices necessary for installation.

- Piles 35/35 cm, total length of one pile approximate 12-18 m.
Concrete c
- 40306 for the construction of pile cap on abutments.
 - 40307 for the construction of flat foundation - widening of piers and abutments
 - 40308 for the construction of flat foundation - new wing-/retaining walls
 - 40309 for the construction of flat foundation - new back- with wing walls
 - 40310 for the piles foundation of precast elements for widening of piers or abutments
 - 40311 for the strip foundation of slopes foundation
 - 40312 for the construction of new back-, wing-/retaining walls
 - 40313 for the construction of new abutments incl. backwall and wingwalls.
 - 40314 for the widening of existing piers, incl. cross beam
 - 40315 for the widening of existing abutments, wing-/retaining walls
 - 40316 for bearing / seismic plinth
 - 40401 Delivery and assembly of precast pre-stressed concrete T-beams, according SNIP for the bridge construction including all devices necessary for installation. Length: 21 m, height: 1.25 m.
 - 40402 Precast reinforced concrete beams for widening of superstructure incl. connection to existing edge beam. T-beams according SNIP, H=1,25 m, L=16,3-19,0 m. Production accordig to site.
 - 40403 Precast reinforced concrete beams for widening of superstructure incl. connection to existing edge beam. T-beams according SNIP, H=0,93 m, L=11,2-11,6 m. Production accordig to site.
 - 40404 for the construction of reinforced concrete in situ spans to widening of existing bridge superstructure, incl. connection to existing edge beam.
 - 40405 for the construction of the deck slab on the precast T-beams of superstructure
 - 40406 for the construction of support beam (cross beam) for pre-stressed beams on abutments, forehead-wall and connection

- underneath, incl. formwork, as shown in the drawings.
- 40407 for the construction of the cantilever to superstructure widening of existing bridges
 - 40501 Concrete class C25/30; including formwork (install and remove), cast, com-pact, cure, protect, provide and install reinforcing steel, all ancillary works and materials for the construction of approach slabs.
 - 40701 Provide and install expansion joints in the carriageway and sidewalks, watertight, e.g. (MAURER & SÖHNE, type D 80, hot - zinc galvanized) or similar, corrosion prevention, with strip and a course as shown in the drawings and all ancillary works and mater
 - 40702 Provide and install simple expansion joints elements as overlap of existing deck and back wall. According dawings, material hot-dip galvanized.
 - 40703 Cleaning of joints between existing deck slabs and back wall. Disposal of all materials.
 - 40801 Preparation of the concrete surface for sealing. Removal of laitance from concrete surface, sand blasting or equivalent, surface cleaning of superstructure.
 - 40802 Provide and apply epoxy prime and seal coat on the concrete surface prior to bituminous sealing.
 - 40803 Provide and apply 2x bituminous felt, reinforced with fiberglass mesh, as waterproof sealing of the superstructure, thickness 5 mm, properly welded first and second layer.
 - 40804 Provide and apply bituminous protection layer made from mastic asphalt, thickness 40 mm, over the entire carriageway between the sidewalks. Mastic asphalt 0/11, (gravel or crushed stone material, crushed and natural sand, filling mater.
 - 40805 Provide and apply synthetic resin (for prime coat) and bituminous sealing compound to seal joints along wearing course and caps, expansion-joints, gully-frames, incl all ancillary works
 - 40806 Provide and apply water and damp proof bituminous coat (prime coat + final coat) on all concrete surfaces with earth and water contact.
 - 40807 Provide and apply 1mm (1.6 kg / m²) epoxy resin primer as seal coat according to the instructions of the manufacturer on surface of sidewalk.
 - 40808 Provide and apply 2mm (3.2 kg / m²) epoxy resin primer as second coat with spread quartzite sand 1-2mm, to obtain a

- corporate appearance of walkway and a homogeneous non-slippery surface on walkways.
- 40807 Provide and apply 1mm (1.6 kg / m²) epoxy resin primer as seal coat according to the instructions of the manufacturer on surface of sidewalk.
- 40808 Provide and apply 2mm (3.2 kg / m²) epoxy resin primer as second coat with spread quartzite sand 1-2mm, to obtain a corporate appearance of walkway and a homogeneous non-slippery surface on walkways.
- 40901 Provide and install of bridge type steel guardrail H=0,75 m including anchoring, guardrail supports and all ancillary works and materials. Hot-dip galvanized material.
- 40902 Provide and instal of bridge type steel guardrail H=1,10 m with one steel tube. Including anchoring, guardrail supports and all ancillary works and materials. Hot-dip galvanized material.
- 40903 Delivery and installment of a single guard-rail on the shoulder of the bridge area including approaches according to standard No. 503-0-17. Connection to the guard rail on the sidewalk. Anchorage of the poles into the earth. Pole length 1.80 m, distance 2
- 41001 Provide and install bridge drainage system, gully ~30 x 50 cm, grate ~30 x 40 cm with inlet chamber and swan neck down-pipe pipe made of cast iron (pipe Ø 150 mm) incl fittings and galvanized supports/fixations, ancilliary works and materials..
- 41002 Core drilling through pre-stressed beams for drainage pipes, Ø ca 20 cm, L= 15cm, incl all ancilliary works, use of machines and materials.
- 41003 Provide and install dewatering pipes of galvanized steel, incl. anchoring. D=150 mm.
- 41004 Provide and place curb stones, 15/30 cm, for slope protection, for connection shoulder to end of sidewalk, including lean concrete support 10 to 14 cm and lean concrete bracing at the back of the curb.
- 41005 Construct 60cm wide dewatering channel on slopes, in abutment area, made of concave riprap in concrete, incl. steel mats and curb stones 10/30 cm.
- 41101 Construct concrete stairway on slopes.10 cm thick lean concrete C8/10, and curb stones 10/30 cm. Concrete class C20/25, withh 80 cm, riser / height of steps= 20cm, tread of step= 30cm on embankment, incl. Formwork and reinforcing steel.
- 41102 Repair works of existing slope access stairs of concrete, class

- C20/25 incl. formwork and reinforcing steel (e.g. steel mats).
- 41103 Provide and place of crushed stone for the bed underneath the stairs, layer of 10 cm.
 - 41201 Slope protection on the abutments area; reinforced concrete, class C20/25, thickness of 15 cm; cast, com-compact, cure, protect; provide and install reinforcing steel (steel mats), incl. a layer 10 cm of crushed stones, formwork of expansion joints and nece
 - 41202 Repair works to existing slope protection on the abutments area. reinforced concrete, class C20/25, thickness about 15 cm; incl. a layer 10 cm of crushed stones and necessary earthworks.
 - 41203 Protection of ravine/channel bed beneath bridge. Reinforced concrete, class C20/25, thickness of 15 cm; cast, com-compact, cure, protect; provide and install reinforcing steel (steel mats), incl. a layer 10 cm of crushed stones, and formwork of expansion jo
 - 41301 Provide and apply 50 mm bituminous cover layer (stone mastic asphalt) on the superstructure over the entire carriageway. Works to be executed together with wearing course of the adjacent road surface.
 - 41401 Provide and install steel handrails, H=1,10 m including anchoring, handrail supports, primer and final coat and all ancillary works and materials as shown on drawings. Hot-dip galvanized material.
 - 41402 Repair of damages existing steel handrails, incl. Anchoring. Provide and install of missing parts. Painting (primer and final coat).
 - 41501 Provide and install rectangular elastomeric laminated/reinforced bearings fixed/free to move, maximum load (transverse direction of the structure) = 1.4 MN (e.g. Gumba), on prepared areas on the top of the abutments and piers, including preparation of the
 - 41502 Provide and install galvanized steel plates for jack points as shown in the drawings bottom and superstructure incl all ancillary works and materials.
 - 41503 Cleaning of existing bearings and Top of cross beams of concrete used (rests). Disposal of all materials.
 - 41601 for the construction of caps (sidewalks), including anchoring to existing spans; workmanship according drawings.
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- 41602 for the construction of the concrete leveling layer on the existing deck beams.
- 41701 Cleaning of visible concrete surface of exist. Sub- and superstructure (removal of dust, loose concrete and mortar particles). Method according to contractor.
- 41702 Cleaning of visible reinforcement (removal of rust) approval by the engineer. Method according to contractor.
- 41703 Coating of visible reinforcement using anti-rust emulsion.
- 41704 Cleaning and filling of cracks using liquid suspension of cement with polymers, approval by the engineer.
- 41705 Priming of the visible surfaces of the substructure and superstructure concrete elements using epoxy suspension.
- 41706 Patching of the sub- and superstructure surfaces using concrete with polymers. As required with steel mats.
- 41707 Visible concrete surfaces of existing sub- and superstructure plaster using epoxy mortar. As required with steel mats.
- 41708 Coating of the visible surfaces of the sub- and superstructure elements using liquid suspension of cement with polymers.
- 41709 Repair of stone brickwork, vertical wall, approval by the engineer. Defective condition of the grooves between stones improve using zement mortar. If necessary, replacement of stones. Including all ancillary works and materials.
- 41710 Repair of stone brickwork, arched-wall of arch bridge, approval by the engineer. Defective condition of the grooves between stones improve using zement mortar. If necessary, replacement of stones. Including all ancillary works and materials.
- 50102.1 Removal of existing structure (diameter to be stated) - Demolition of 1-span existing Bridge, directed by supervision engineer, up to 50 cm under terrain, load and disposal of all demolished materials.
Estimated bituminous material: 6 m³ - Estimated earthwork: 200m³ - Estimated of Reinforced concrete bridge parts: 65 m³ - Estimated of the steel handrails/guardrail: 20 m
- 50103.1 to Pipe culverts Ø 400
- 50103.4 to Pipe culverts Ø 1200
- 50103.5 to Pipe culverts Ø 1250
- 50103.6 to Pipe culverts Ø 1600
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- 50103.7 to Double pipe culverts Ø 1000
- 50103.8 to Double pipe culverts Ø 1200
- 50103.9 to Double pipe culverts Ø 1600
-
- 50103.10 to Triple pipe culverts Ø 1200
- 50103.11 to Triple pipe culverts Ø 1600
- 50104.1 Box Culverts, 2,50m x 2,00m, (span x rise)
- 50104.2 Box Culverts, 2 x (2,50m x 2,00m), (span x rise)
- 50104.3 Box Culverts, 3 x (2,50m x 2,00m), (span x rise)
- 50104.4 Box Culverts, 4 x (2,50m x 2,00m), (span x rise)
- 50104.6 Box Culverts, 2,00m x 2,00m, (span x rise)
- 50104.7 Box Culverts, 3 x (2,00m x 1,00m), (span x rise)
- 50104.8 Box Culverts, 4,00 m x 2,50m, (span x rise)
- 50105.3 to Pipe culverts Ø 1000
- 50105.4 to Pipe culverts Ø 1200
- 50105.5 to Pipe culverts Ø 1250
- 50105.6 to Pipe culverts Ø 1600
- 50105.7 to Double pipe culverts Ø 1000
- 50105.8 to Double pipe culverts Ø 1200
- 50105.9 to Double pipe culverts Ø 1600
- 50105.10 to Triple pipe culverts Ø 1200
- 50105.11 to Triple pipe culverts Ø 1600
- 50106.1 Box Culverts, 2,50m x 2,00m, (span x rise)
- 50106.2 Box Culverts, 2 x (2,50m x 2,00m), (span x rise)
- 50106.3 Box Culverts, 3 x (2,50m x 2,00m), (span x rise)
- 50106.4 Box Culverts, 4 x (2,50m x 2,00m), (span x rise)
- 50106.6 Box Culverts, 2,00m x 2,00m, (span x rise)

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- 50106.7 Box Culverts, 3 x (2,00m x 1,00m), (span x rise)

- 50106.8 Box Culverts, 4,00 m x 2,50m, (span x rise)
- 50107.1 to Pipe culverts Ø 400
- 50107.2 to Pipe culverts Ø 600
- 50107.4 to Pipe culverts Ø 1200
- 50107.5 to Pipe culverts Ø 1250
- 50107.6 to Pipe culverts Ø 1600

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- 50107.7 to Double pipe culverts Ø 1000
- 50107.8 to Double pipe culverts Ø 1200
- 50107.9 to Double pipe culverts Ø 1600

-
- 50107.10 to Triple pipe culverts Ø 1200
- 50107.11 to Triple pipe culverts Ø 1600
- 50108.1 Box Culverts, 2,50m x 2,00m, (span x rise)
- 50108.2 Box Culverts, 2 x (2,50m x 2,00m), (span x rise)
- 50108.3 Box Culverts, 3 x (2,50m x 2,00m), (span x rise)
- 50108.4 Box Culverts, 4 x (2,50m x 2,00m), (span x rise)
- 50108.5 Box Culverts, 1,00m x 0,50m, (span x rise)

-
- 50108.6 Box Culverts, 2,00m x 2,00m, (span x rise)

-
- 50108.7 Box Culverts, 3 x (2,00m x 1,00m), (span x rise)

- 50108.8 Box Culverts, 4,00 m x 2,50m, (span x rise)

- 50110 Provide and place concrete pipe culverts (600 mm dia) at side roads
- 50110A Provide and place cast iron pipe culverts (Pipe culverts 400 mm dia)
- 50110B Provide and place cast iron pipe culverts (Double pipe culverts 400 mm dia)
- 50110C Construction of complete Outlet Structures to Concrete Drainage Channels under Sidewalks 400 mm dia or beside Curbs (outlet pipe, apron) incl. all necessary works like earthworks, concrete works etc., all ancillary materials and works and disposal of waste
- 50111 Construction of drop inlet or Outlet to pipe culverts of any diameter
- 50204 Repair of Chutes and spillways on embankment slopes
- 50205 Repair of lined side drain
- 50207 Cleaning lined side drain
- 50302 Lined side drain or waterway Type 1 with precast concrete units or cast in situ
- 50303 Lined side drain or waterway Type 2 with precast concrete units or cast in situ
- 50303A Lined side drain or waterway Type 3 with precast concrete units or cast in situ
- 50304 Construct chute entry gulley, double sided
- 50308 New construction of Lined side drain Type 4 with precast concrete units and/or concrete cast in situ rectangular 0.60 x 0.45.
- 50309 Crushed stone stabilization of ditches
- 50401 Miscellaneous minor concrete structures
- 50402 Outlet dissipator, Concrete B 20, box culvert
- 50403 Pedestrian bridges
- 50404 Precast RC slab 300x100x20cm
- 50405 Cast-in-place RC bearing beam
- 50406 Cast-in-place B 20 concrete base of thickness 20cm
- 50407 Precast RC slab 300 x100x10cm

- 50502 Closed concrete channel as per drawing
- 50503 Open concrete channel as per drawing
- 50505 Granular subsurface drainage
- 50601 Provide and place stones in mortar, fill spaces/voids with grout
- 50602 Rip-rap on culvert in- and outlets with stones $D50 \leq 350\text{mm}$
- 50602A Rip-rap on culvert in- and outlets with stones $350\text{mm} < D50 < 1000\text{mm}$
- 50602B Rip-rap on culvert in- and outlets with stones $1000\text{mm} < D50 < 1500\text{mm}$
- 50702 Location and Quantity to be determined by the Engineer.
Excavation for gabions
- 50702A Provision and placing of Gabions, double twist hexagonal 3.0mm wire mesh, all sizes, including unfolding, lacing, bracing
- 50702B Provision of Rock fill material, filling and packing, faces with selected material
- **Matresses**
- Location and Quantity to be determined by the Engineer.
- 50703 Excavation and surface preparation for bedding of mattresses
- 50703A Delivery and placing of mattresses (incl unfolding and lacing)
- 50703B Provision of Rockfill material, filling and packing with selected material
- 50704 Provide and install Geotextile (continuous polyester filament double needle-punched, min 500gr/m²), incl cutting, placing and fixing.
- 50801 Precast concrete kerbing and backing – type 1
- 50901 Construction of transversal drains
- 60101 Install new galvanised steel guardrail, type 11 DOMJ
- 60102 Re-install existing steel W beam guardrail without refurbishment
- 60103 Refurbish and re-install existing steel W beam guardrail
- 60104 Provide new post for re-set guardrail

- 60202 Provision and complete installation of doubled metallic guard rails, hot galvanized , incl all ancillary works (earth and concrete works, metal works, etc.) over selected culverts.
- 60401 Construct retaining wall in reinforced concrete.
- 60402 Gravel drain behind structures
- 60403 Pipe drain behind structures
- 70102 Install new signs on existing supports
- 70301 Repair of existing sidewalk with asphalt concrete
- 70302 Construction of new sidewalk with asphalt concrete surface
- 70303 Construction of new sidewalk with cement concrete surface
- 80301 Construction of complete shelter for bus stop as shown on drawings, including all ancillary work

Article 42

Tender Documents, Part 2 – Requirements, Drawings:

a) The following Drawings have been revised:

- CLS – 01 Typical Cross Section; “TYPE – 1”
- CLS – 02 Typical Cross Section; “TYPE – 2”
- CLS – 03 Typical Cross Section; “TYPE – 3”
- CLS – 04 Typical Cross Section; “TYPE – 4”
- GD – 004 Geotechnical Cross Section
- GD – 005 Geotechnical Cross Section
- SD – 32 – 1 Shoulder Spillways
- IL – 001 General Date
- IL – 002 Interchange Lighting
- IL – 003 Interchange Lighting
- IL – 004 Interchange Lighting
- IL – 005 ITS CTII 116/10/04 – Y/ With overhead connection
- IL – 006 List of Quantities for Lighting

b) The following Drawings have been added:

- UD – 001 Utilities Plan
- UD – 002 Utilities Plan
- UD – 003 Utilities Plan
- UD – 004 Utilities Plan
- UD – 005 Utilities Plan
- UD – 006 Utilities Plan
- SD – 48 Extension of pipe culvert 1000

- SD – 49 Extension of pipe culvert 1000

Deleted Drawings No. :

- SD – 01,
- SD-04-1.
- SD-07
- SD-31-1
- SD-31-2
- SD-33-3
- SD-36
- SD-37
- SD-38
- SD-40
- SD-45
- SD-46