

**ESTIMATED BILL OF QUANTITIES FOR THE BRIDGE OVER THE LOPATNICA RIVER AT
UNCATEGORIZED ROAD**

Item no.	DESCRIPTION OF WORKS	UoM	Quantity	Unit Price	TOTAL RSD
1	PRELIMINARY WORKS				
1.1.	<p>The construction site must be established and equipped so as to allow the smooth and safe execution of all works. All roads leading to the place of work shall be developed by the Contractor.</p> <p>The construction site shall be environmentally protected and marked with warning signs of construction works underway. Restrict the passage and stopping in the zone of the work, and, when necessary, regulate traffic during the works.</p> <p>The price covers providing electricity and water supply during the construction.</p> <p>Once the works are executed, the adjacent terrain shall be developed so that surfaces are at designed levels after soil settlement. Carry out fine planning of the terrain.</p>				
	Lump sum calculation		1		
1.2.	Surveying works - establishment of permanent leveling points		1		
1.3.	Removal of the existing bridge structure.		1		
TOTAL :					
2	EARTHWORKS				
2.1.	Excavation, transport and disposal of soil at 10 km of distance for the abutments. Bulk excavation in the area of concrete abutments placement.	m ³	350		
2.2.	Supply, delivery and installation of stone aggregate 0-30 mm for covering slopes and stabilization of belts according to the study of the hydrological and hydro-engineering analysis.	m ³	52.7		
2.3.	Supply, delivery and backfilling of gravel and crushed stone after foundation footings is placed, as well as the execution of abutment	m ³	300		
2.3.	Supply, delivery and installation of stone for covering the riverbed according to the study of the hydrological and hydro-engineering analysis.	m ³	120		
TOTAL :					
3	SCAFFOLDING AND FORMWORKS				
	Scaffolding shall not be paid separately. The values of scaffolding and formwork are covered by the relevant items of concrete works and include their transport, assembly and disassembly. Additional charges will not be allowed.				
TOTAL :					

4	CONCRETE WORKS - PLAIN CONCRETE				
4.1.	Grouting (epoxy-based grouts) - formwork, preparation, transport and pouring of epoxy grouting, according to drawing, dim.0.02*0.5*0.6, and provided technical requirements for grouting.	kg	180		
TOTAL :					
5	CONCRETE WORKS - REINFORCED CONCRETE				
5.1.	Execution of reinforced concrete base for installation of stone in the riverbed and stabilization of belts, brand C15/20, according to the study of the hydrologic and hydro-engineering analysis. Concrete shall be poured according to regulations. The price includes mixing, transport, pouring of concrete, formwork and scaffolding erection. 162.1	m ³	162.1		
	Execution of reinforced concrete footing for abutments and construction of abutments, concrete C25/30 For construction only use concrete, which based on previous testing meets the necessary quality requirements. Concrete is only mechanically poured. The Contractor may start with concreting when the Supervision confirms the condition of the base, formwork (borehole bars) in writing. Concrete shall be poured according to regulations. The price includes preparation, transport, pouring of concrete, formwork and scaffolding erection. (3,0*3,5*1+0,7*3*4,05)*3				
5.2.	Construction of reinforced-concrete head and ties beam with column, concrete C25/30 head beams POS NG: (0,1*0,15+0,1*0,7+1*0,5+0,15*1)*2+ (0,1*0,15+0,1*0,7+1*0,5)	m ³	59.07		
5.4.	Construction of reinforced concrete slabs, bridge deck, the average thickness 12 cm, concrete C30/37 and interim thickness 20 cm, concrete C25/30. Fabrication of formwork and reinforcement of slabs according to the design, details, structural analysis, and Technical standards for this type of works. For construction only use concrete, which based on previous testing meets the necessary quality requirements. Concrete is only mechanically poured. The Contractor may start with concreting when the Supervision confirms the condition of formwork and reinforcement in writing. Concrete shall be poured and cured in line with regulations. The price includes preparation, transport, pouring				

of concrete, as well as all necessary formwork and scaffolding. bridge deck POS P d=12cm $3.5 \times 28 \times 0.12 = 11,76$ crossing slab POS Pp d=20 cm $2 \times 3,5 \times 3,5 \times 0,2 = 4,9$	m ³	16.66		
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7	REINFORCING WORKS				
7.1.	<p>Supply, transport, straightening, cutting, bending and placing of reinforcement.</p> <p>The type and sections of reinforcement in accordance with structural analysis and reinforcement details of the Design.</p> <p>Reinforcement must be installed correctly, rebars must be connected with wire at each joint, so they maintain the position shown in the drawings during concrete pouring. All rebars must be provided in their full length, as indicated in the drawings.</p> <p>Reinforcement shall be cleaned, cut, bent and installed as per Design and structural details, and before concreting it must be inspected and approved by a Structural Engineer in writing.</p> <p>The price includes supply, fabrication, transport and installation of reinforcement.</p> <p>deformed bar B500B. 10000,00 mesh reinforcement B500B 8000,00</p>	kg	18,000.00		
TOTAL :					
8	TENSIONING WORKS				
8.1.	<p>Supply, transport, storage and installation of prestressing tendons, including all anchors, sub-plates and protective pipes for tendons.</p> <p>Delivery, storage and installation according to the technical norms for this kind of work.</p> <p>- Supply and delivery of prestressing tendons Ø15.7 mm, of appropriate quality, mark Y1860S7, in accordance with pr EN10138-3, protective pipes for tendons 3Ø15.7mm, in an amount of 60 m (Ø50/55 mm), 8 sets of anchors type S3/16, (set includes: base plate, a conical funnel, spiral, anchor line and a corresponding number of pins depending on the type of anchor).</p> <p>- Assembly of base plates with funnels and spirals, casings, anchors and tendons during the construction of prefabricated girders.</p> <p>-Tensioning and grouting 4 k 3 Ø 15.7 mm, by own manpower and equipment, including development of documentation of work carried out.</p> <p>The price includes supply, transport and installation, as well as all control testing of tendons, samples of grouting emulsion both for preliminary trial and after grouting.</p>	kg	1,000.00		
TOTAL :					

No.	DESCRIPTION OF WORKS				Total
1	PRELIMINARY WORKS				
3	EARTHWORKS				
3	SCAFFOLDING AND FORMWORKS				
4	CONCRETE WORKS - PLAIN CONCRETE				
5	CONCRETE WORKS - REINFORCED CONCRETE				
6	CONCRETE WORKS - PRE-STRESSED CONCRETE				
7	REINFORCING WORKS				
8	TENSIONING WORKS				
9	METAL WORKS				
10	ASPHALT WORKS				
11	WATERPROOFING WORKS				
12	OTHER WORKS				

TOTAL BRIDGE:

DINARS