BILL OF QUANTITIES CONSTRUCTION OF THE BRIDGE OVER THE RIVER ROGACICA on the state road IIA class no 174 at km 61+096

поз.	Item description	Unit of Measure	Quantity of works	j Unit price (USD)	Total
	CONSTRUCTION WORKS				
	PREPARATORY WORKS				
1.	Dislocating existing installations prior to commencement of any of the bridge demolition works. Identifying and staking out the alignment of both registered and unregistered existing installations, in presence of the appointed representatives of the installations' owners' authorized departments, and dislocating, protecting and securing the installations during the bridge construction works.				
	Calculation per lump sum for the entire scope of works, materials, tools, equipment or mechanization.	lump sum	1		
2.	Preparing and organizing construction site: site registration, connecting to electrical power grid, transporting containers and equipment, organising guard service (60 days)				
	Calculation per lump sum for the entire scope of works, materials, tools, equipment or mechanization.	lump sum	1		
3.	Careful demolition of the existing bridge including sidewalls. Exercising due diligence and conducting preventative measures concerning the health and safety (H&S) of the labourers, temporary structures, mechanization and equipment on site. Cleaning and disposing all usable construction materials at site landfill or disposing it at landfill chosen by the Employer. Cleaning the area by loading and transporting the waste to a landfill within 10 km radius. The Contractor to adjust the bridge demolition technology to the available mechanization.				
	Calculation per lump sum for the entire scope of works, materials, tools, equipment or mechanization.	lump sum	1		
	TOTAL PREPARATORY WORKS				

	CONSTRUCTION OF THE NEW BRIDGE				
	CIVIL WORKS				
	PREPARATORY WORKS				
1. I-2	Assembling and disassembling pipe scaffolding, 12 meters wide and of the average height of 5 m. The scaffolding floor to be made of wood planks and installed 1.5 meters away from the lower edge of the structure. The floor under the bridge to be relocated as needed. The same scaffolding structure to be used, and costed only once, for all kind of works throughout the entire construction period. The Contractors obligation is to prepare the scaffolding design and submit to the supervisor for approval				
	Calculation per m3, including the entire labour, tools, materials and transport.				
	16*12*5	m^3	960.00		
	Total I:				
	EARTH WORKS				
1. II-1	Wide-trench mechanical excavation for the bridge abutments, in the III and IV class material, fully in line with the Technical Conditions' provisions.				
	Calculation per m3, including the entire labour, tools, materials and transport.				
	500.00*2	m^3	1,000.00		
2. II-1	Backfilling by material picked from the excavation with compressing, until the natural terrain elevation is reached and the regulated riverbed's cross-section discharge is formed, fully in line with the Technical Conditions.				
	Calculation per m3, including the entire labour, tools, materials and transport.				
	1000.0-320.0	m^3	680.00		
3. II-3	Backfilling and compressing in 30 cm thick layers the space behind the bridge abutments up to the access road elevation, using the gravelish material from a borrow pit. Geonet to be installed between the layers at 90 cm distance. The works to be executed fully in line with Technical Conditions provisions.				
	Calculation per m3, including the entire labour, tools, materials and transport.				
	65.0*2	m^3	130.00		
4.	Taking away the excess excavated material to a landfill within 10 km distance, selected by the Contractor. The price to include loading, transport and unloading of the material.				
	Calculation per m3, including the entire labour, tools, materials and transport.				
	1000.0-680.0	m^3	320.00		

	CONCRETING WORKS				
	Concreting to be executed following the Contractor's technology, fulling in compliance with the Construction Supervisor (the Engineer) and valid regulatory framework for this industry. Unit price, in addition to the aforementioned, to include all preparatory works, erecting the formwork with necessary labour and material for its assembly and disassembly, transportation and any other labour, tools and materials as needed. The works to be executed fully in line with the Technical Conditions' provisions.				
1. III-1	Concreting the finishing levelling layer 10 cm thick underneath the feet of the shore abutments and transient beams, using concrete Class C 16/20 (МБ 20).				
	Calculation per m2, including the entire labour, materials and transport.				
	8.89*3.7*2+0.92*6.28*2	m^2	77.35		
2. III-2	Concreting the foundation footings of the shore abutments using concrete class C 25/30.(МБ30)				
	Calculation per m3, including the entire labour, materials and transport.				
	8.66*3.46*1.0*2	m^3	59.93		
3. III-2	Conreting the shore abutments in twofold formwork, using concrete class C35/45 (МБ 40), B6, M100.				
	Calculation per m3, including the entire labour, materials and transport.				
	((5.45+5.57)/2+(5.59+5.71)/2)*0.9*7.51	m^3	75.43		
4. III-3	Concreting the roadway slab with consoles using reinforced concrete class C35/45 (МБ40), B6, M150				
	Calculation per m3, including the entire labour, materials and transport.				
	6.84*18.24	m^3	124.76		
5. III-2	Concreting side walls with console in twofold casework, using concrete class C35/45 (МБ 40), B6, M100, B6, M150				
	Calculation per m3, including the entire labour, materials and transport.				
	(4.62*3.08/2*0.5+4.62*1.4*0.5)*4+0.4923*4.62*4	m^3	36.27		
6. III-4	Concreting crown of the pedestrian walkway at both sides of the bridge, using reinforced concrete class C35/45 (МБ 40), B6, M150, MC0.				
	Calculation per m3, including the entire labour, materials and transport.				
	0.48*27.48*2	m^3	26.38		

7. III-5	Concreting transient beams using concrete class C25/30 (МБ 30), B4, M100.				
	Calculation per m3, including the entire labour, materials and transport.				
	0.765*6.28*2	m^3	9.61		
	Total III:				
	IV METAL WORKS				
1. IV-1	Supplying and assembling the reinforcement B 500B for all the bridge elements. Work to be done fully in accordance with the Concrete and Reinforced Concrete Rulebook, standards and norms for such work.				
	Calculation per kg, including the entire labour, materials and transport.				
	foundation footing	kg	1,867.00		
	shore abutments	kg	8,030.00		
	roadway slab with consoles	kg	16,924.00		
	pedestrian walkway consoles	kg	1,261.00		
	transient beams	kg	462.00		
	side walls	kg	3,470.00		
2. IV-2	Manufacturing and installing the pedestrian fence made of steel profiles. The fence is 1.1m high, made of 2 horizontal batten plates (girders), columns at distance of 150 cm and fillings. Columns to be made of Ø60.3/5mm profiles, horizontal girders of Ø60.3/4mm, while filling is of full Ø16mm profiles installed horizontally at 13cm distance. The fence to be painted twice in both basic and finishing paints, in colour chosen by the Employer. The fence to be installed in pre-built openings by installing the columns and topping them by fine-grained concrete. Price to include entire scope of works on manufacturing and installing the fence.				
	Calculation per m1, including the entire labour, materials and transport.				
	27.5*2	m^1	55.00		
	Total IV:				
	V) FINISHING AND MISCELLANEOUS WORKS				
1. V-1	Procuring and installing waterproofing over the motorway slab, made of SBS-elastomer single-layered bituminous strips, laid down and glued to the base, with overlaps following the slope of the motorway slab. Price to include necessary strips' overlaps of 20 cm as minimum.				
	Calculation per m2, including the entire labour, materials and transport.				
	(7.65+2.15)*27.48	m^2	269.30		

2. V-2	Procuring and installing prefabricated concrete curbs over the layer of cement mortar, made of concrete class 40, with minimum frost resistance of M150. Price to include the joints filling by cement mortar made with mix ratio of 1:3.				
	Calculation per m1, including the entire labour, materials and transport.				
	27.5*2	m^1	55.00		
4. V-4	Paving the asphalt surface over the bridge structure using the asphalt-concrete AB 11C in thickness of 2x4=8 cm				
	Calculation per m2, including the entire labour, materials and transport.				
	6.0*18.24	m^2	109.44		
5. V-5	Constructing asphalt expansion joints AD-30, 30 cm wide, (expansion of ±15mm), manufactured by "Produkt BG inzenjering" or similar, at the edges of the motorway slab at the bridge-road transitions. Price to include mechanical asphalt-cutting and asphalt extraction by excavation hammer, cleaning the 31 cm wide joint, all necessary prime coats and materials, fully according to the manufacturer's manual, as well as installing and removing the protective boards over the expansion joints and over the waterproofing layer during the asphalt-paving. Following the pit cleaning, the board to be replaced by adequate galvanized thin sheets. The depth of the pit is 8 cm.				
	Calculation per m1, including the entire labour, materials and transport.				
	6.0*2	m^1	12.00		
6. V-6	Test loading the bridge. Price to include preparations, work on the site, data and results processing and report drafting.				
	Calculation per lump sum.				
		lump sum	1		
7. V-7	Taking photos during the construction. Price to include preparation, work on the site, results processing and report drafting.				
	Calculation per lump sum.				
		lump sum	1		
8. V-8	Manufacturing and installing the plaque containing the year of constuction. Plaque to be made of brass of dimensions 210x300x4mm				
	Calculation per lump sum.				
		lump sum	1		

9. V-9	Procuring and laying down the bituminous filling strips alongside the curbs before concreting the pedestrian walkways and asphalt paving the roadway.				
	Calculation per m1, including the entire labour, materials and transport.				
	ТЕБМ 10/10: 27.5*2	m^1	55.00		
	ТЕБМ 10/30: 27.5*2	m^1	55.00		
10.	Installing the PVC pipes of 110 cm in diameter into the bridge pedestrian walkways and side walls for running the installations.				
	Calculation per m1, including the entire labour, materials and transport.				
	27.5*4*2	m^1	220.00		
11.	Manifacturing and installing barbicans made of galvanized pipes of Ø75mm diamterer, 110cm in length, welded to the steel plate of 100x100x6mm in dimension.				
	Calculation per m1, including the entire labour, materials and transport.				
		pcs.	12.00		
12.	Protective waterproofing coating over the concrete surfaces in contact with grounds - columns, foundations, side walls, using protective elastic waterproof homogenous membrane, type Sika WP 1100-15 HL or similar.				
	Calculation per m2, including the entire labour, materials and transport.				
		m^2	253.24		
13.	Protective coating of all visible concrete surfaces, columns, side walls, and lower slab, type Sikagard 680-S or similar.				
	Calculation per m2, including the entire labour, materials and transport.				
		m^2	450.00		
14. V-10	Drafting As-built Design.				
	Calculation per lump sum.				
		lump sum	1		
	Total V:				
	TOTAL CONSTRUCTION OF THE NEW BRIDGE				

	BILL OF QUANTITIES FOR CONSTRUCTING THE TEMPORARY RIVER CROSSING				
	CIVIL WORKS				
	I) TEMPORARY BRIDGE				
1.	Partial closing of the riverbed at the place where the works are to be executed on construction of the temporary bridge by installing the barrier at a suitable spot of an upstream and a downstream section, in order to execute the works in dry environment. Closing to be executed in line with the Contractor's technology by manufacturing the barrier - cofferdam of affordable and locally available river material. Following completion of construction works, the cofferdams to be removed and the riverbed at section not encompassed by the Riverbed regulation design to be brought back into its original condition. All in line with the design for temporaty river crossing				
	Calculation per lump sum, including the entire labour, materials and transport.				
		пауш./ lump-sum	1		
2.	Levelling the riverbed bottom in the place of the temporary bridge up to the designed elevation, of longitudinal downstream slope of 1%, with eventual backfilling and compressing the river gravel until the necessary compactness of Ms=20MN/m3 is reached.				
	Calculation per m2, including the entire labour, materials and transport.				
		m^2	60.00		
3.	Casting lean concree base for installing precast reinforced concrete rectangle culverts of longitudinal downstream slope of 1%.				
	Calculation per m2, including the entire labour, materials and transport.				
		m^2	56.00		
4.	Procuring, transporting and assembling reinforced concrete culverts of rectangle cross-section of net opening 2.0/3.0 m, 1m long for construction of the temporary bridge. Elements made by "Betonjerka" Cacak or similar, to be laid into the prepared base in the riverbed in three rows of six segments, fittings and connection joints fully made according to the manufacturer's instructions. Rows are moved towards the detour road alignment in line with the riverbed.				

	Detour road is foreseen for alternate one-way traffic and passage of vehicles of total weight limited up to 1 t and maximal width of 2.2. m. The roadway surfacing and embankment of crushed aggregate are 50 - 60 cm thick, in total and weighing around 1.5 t.				
	Calculation per unit of installed segment including entire labour, material, tools, equipment and mechanization (mobile crane). Procurement price of the segments should not be calculated in full as they will remain in the Contractor's ownership.				
		пауш./ lump-sum	18.00		
	TOTAL CONSTRUCTION OF THE TEMPORARY RIVER CROSSING				
	BILL OF QUANTITIES FOR INTEGRATING THE ROAD AND TRANSIENT BRIDGE SLAB ON THE ROAD AT DP Iia A no. 174				
	I) WORK ON THE ROAD INTEGRATING				
1	Marking out the alignment with keeping the markers during the construction works. Marking must be visible with cleaner marks and kept until the structure is handed over. The Contractor is responsible for detailed terrain surveillance prior to the works' commencement, and in case of deviations from the design documentation, to rectify it with the Employer; otherwise the Employer shall not be held responsible to reimburse the costs which may arose from eventual discrepancies between the designed and actual on-site state.	m1	70.00		
2	Ripping off the asphalt 4-6 cm thick for fitting into the existing roadway surface over the entire intervention area.	м3	15.60		
3	Preparing working joints for continuation of the asphlt-paving	м	12.00		
4	Constructing the buffer layer made of stone material 0/31, according to the elevations from the Design, in layers up to 50 cm thick at the bridge integration spot. Calculating per m3 of layer.	м3	115.20		
5	Asphalt-paving the roadway surface BNS 22cA, 8 cm thick. Calculation per m2 of the paved layer.	м2	260.00		
6	Asphalt-paving the roadway using asphalt concrete AB 11c, 5 cm thick.	м2	260.00		

7	Constructing the earth embankment made of earth procured at the nearest borrow pit within 8 km in distance. Calculation per m3.	м3	21.50		
	TOTAL WORKS:				
	BILL OF QUANTITIES FOR CONSTRUCTION OF TEMPORARY ROAD AND ITS INTEGRATION WITH TEMPORARY RIVER CROSSING				
	II) WORKS ON THE ROAD INTERGRATION				
1	Marking out the alignment with keeping the markers during the construction works. Marking must be visible with cleaner marks and kept until the structure is handed over. The Contractor is responsible for detailed terrain surveillance prior to the works' commencement, and in case of deviations from the design documentation, to rectify it with the Employer; otherwise the Employer shall not be held responsible to reimburse the costs which may arose from eventual discrepancies between the designed and actual on-site state.	m1	65.00		
2	Clearing out the terrain on place of the temporary detour road including bush and tree cutting and waste removal and transporting to a landfill.	м2	250.00		
3	Constructing the buffer layer of stone material 0/31 mm according to the Design elevations, in layers 20 cm thick. Calculation per m3.	м3	49.30		
4	Constructing the buffer layer of stone material 0/63 mm according to the Design elevations. Calculation per m3.	м3	820.50		
5	Constructing the gabion wall of 0.5x0.5x1.0 m in dimensions, 31 pieces in total, fully in accordance with technical conditions.	м3	15.50		
6	Maintaining the road during the construction works.	lump sum	1		
7	Removing temporary detour road following the completion of construction works and bringing the terrain to its initial state.	lump sum	1		
	TOTAL WORKS ON TEMPORARY DETOUR ROAD				

	BILL OF QUANTITIES FOR WORKS ON HYDRO-TECHNICAL STRUCTURES				
1	**PREPARATORY WORKS**				
1.1.	Cleaning bushes and trees off the terrain surface down to 10 cm thick for excavating the riverbed, disposal of waste material to a landfill designated by the Employer or the Engineer. Price to include load, transport up to 5 km distance, unload and levelling at the landfill. Prior to the works' commencement, the Contractor shall, together with the Engineer, determine and record the quantities by surveying. Payment per m2 of the cleaned surface.	м^2	870.00		
1.2.	Geodetical surveillance. Renewing the vertex and polygonal chain prior to the works' commencement alongside the river regulation.	м'	50.00		
	TOTAL PREPARATORY WORKS				
2	**EARTH WORKS**				
2.1.	Removing humus layer 30 cm in depth with removing weed and other vegetation. Humus to be disposed of at distance of 5 km. Payments per m3 of transported material.	м^3	60.00		
2.2.	Mechanical excavation of the I and II earth category in dry and moist grounds for construction of the new riverbed. Excavation to be executed by excavators and other suitable machinery with direct truck loading. Calculation to include excavation, loading, transport, unloading and levelling at the landfill following the works completion. Price to include also eventual removal of water during the construction. Excavation precision within 10 cm from the designed elevation. Calculation to base upon cross-sections surveyed before and after the excavation, including transportation (excavation table).				
	a) work in naturally moist grounds (70%)	м^3	613.25		
	b) work in wet grounds (30%)	м^3	262.82		

2.3.	Mechanical excavation of the II and III earth category in dry and moist grounds for construction of the stabilization sleepers. Excavation to be executed by excavators and other suitable machinery with direct truck loading. Calculation to include excavation, loading, transport, unloading and levelling at the landfill following the works completion. Price to include also eventual removal of water during the construction. Excavation precision within 10 cm from the designed elevation. Calculation to base upon cross-sections surveyed before and after the excavation, including transportation (excavation table).				
	a) work in naturally moist grounds (70%)	$м^3$	105.16		
	b) work in wet grounds (30%)	$м^3$	45.07		
2.4.	Manual excavation of the II and III earth category for construction of the stabilization sleepers. Material to be transported to a landfill designated by the Engineer. Calculation to include removal of excess water during the construction. Payments per m3 of excavated earth.	$м^3$	16.69		
2.5.	Manual unearthing with coarse and fine levelling of the riverbed. Following completed mechanical excavation, manual unearthing of the bottom of the riverbed slopes. Excavated material to be transported to a landfill or used for constructing the embankments. Levelling to be done with precision of 2 cm within the designed elevation. Price to include manual removal of excess water during the construction. Calculation per m3.				
	a) work in naturally moist grounds (70%)	$м^3$	68.14		
	b) work in wet grounds (30%)	$м^3$	29.20		
2.6.	Backfilling the shore slopes prior to constructing stone coating following the cross-sections from the Design. Slopes backfilling to be done using excavated material with levelling and planning in layers of 30 cm and compressing by mechanical devices until the necessary compactness is reached. Payment per m3 of backfill material.	$м^3$	132.30		
	NOTE: Earth from excavation to be us for terrain backfilling and covering the old riverbed.				

2.7.	Procuring and levelling the fine gravel underneath the regulated riverbed inlayers 15 cm thick. Payment per m3 of levelled gravel.	м³	106.50		
2.8.	All excess material from the excavation not used for backfilling to be transported to a landfill designated by the Engineer. Price to include loading, transporting, unloading and coarse levelling. Payment per m3 of transported material.	м³	1,008.00		
	TOTAL EARTH WORK:				
3	**STONE WORKS**				
3.1.	Coating the riverbed bottom by semi-hewn stone 40 cm thick in cement mortar in mix ratio of 1:3. Coats to be made of healthy quality limestone. Instalment to be done without nailing and by adjusting the stone edges in order to get exact joints, 2 cm wide. Pouring cement mortar to be done in a way the mortar encompassing stone. Payment per m3 of installed stone.	м³	98.00		
3.2.	Constructing footing of the regulated riverbed slopes of treated, semi-hewn stone 40 cm thickin cement mortar in mix of 1:3 ratio. Footings (1,00x1,00м) to be made of quality limestone tiles of parallel face edges, joints filled in cement mortar in mix ratio of 1:2. Payment per m3 of installed stone.	м³	97.99		
3.3.	Constructing slopes of the regulated riverbed of treated semi-hewn stone 40 cm thick in cement mortar in mix ratio of 1:3. Slopes to be made of quality limestone of parallel face edges, joints filled in cement mortar in mix ratio of 1:2. Payment per m3 of installed stone.	м³	138.82		
3.4.	Constructing stabilising sleepers of 40 cm thick stone in cement mortar, in dimensions of 1.5x1.5 m according to the attached design drawings. Payment per m3 of installed stone.	м³	159.72		
3.5.	Stone backfilling over the riverbed bottom 30 cm thick as protection of the upstream and downstream sleeper. Payment per m3 of stone.	м³	15.07		
	TOTAL STONE WORKS				
	TOTAL WORKS ON RIVERBED REGULATION				

	BILL OF QUANTITIES FOR TRAFFIC SIGNALIZATION AND EQUIPMENT ON THE BRIDGE OVER RIVER ROGACICA ON THE STATE ROAD NO. 174 AT KM 61+096 CHAINAGE				
1					
1.1.	**Procuring non-standard traffic signalization**				
	III-61 (Rogacica) (rectangle стр.1100x800 мм) (class 2)	pcs.	2.00		
	Procuring non-standard traffic signalization				
	Assembling the traffic signalization on the installed bearers.	pcs.	4.00		
		Свега 1.1./ Total 1.1			
	Price for the non-standard traffic signage to include manufacturing and delivery at place of instalment, as well as quality control in accordance with the SRPS 3.S2.300 standard.				
1.2.	**Procuring traffic signage bearers.**				
	Single-column tube bearers, 3200 mm long	pcs.	4.00		
	Installing the traffic signage bearers				
	Procuring concrete class 15 for installing the sign columns.	pcs.	4.00		
	Assembling the traffic signalization bearers.	pcs.	4.00		
		Свега 1.2./ Total 1.2			
	Price of the single-column bearers to include procurement, delivery at installation spot, preparing terrain and constructing foundation, installing and levelling, price of the equipment for joints between the bearing elements, foundation levers, holes backfilling, compacting and levelling of the road shoulder, as well as price of the rain sealant and quality control of the used material.				
		УКУПНО 1./ TOTAL 1			
2					
2.1.	**Marking the longitudinal lanes - SRPS U.S 4.222,223,224,231**				
	Dividing lanes	м2	9.60		
	Materials for road surface marks				
	Procuring paint (0,65 кг/м2), dilluter (0,065 кг/м2) и glass pearl (0,195 кг/м2)	м2	9.60		
	Pricing the works on setting horizontal signalization to be calculated per painted element or per m2 of painted surface. Price to include road surface surveillance and measurements, clearing and degreasing the road surface, procuring the paint, painting and quality control of the used material according to SRPS EN 1423 standard.				
			УКУПНО 2.		

3	**TRAFFIC EQUIPMENT**				
	Protective fence				
	Continuous fencing JDO/2.00, H1-W5	м	16.00		
	Continuous fencing SUPER RAIL/1.33, H2-W4	м	144.00		
3. V-3	Procuring and installing protection fence on the bridge, type SUPER-RAIL H2-W4-B (Containment level, H2. Class of working width, W4. Class of vehicle intrusion, B), made by "Unipromet" Cacak or similar. The fence must be aligned with the bridge axis and height-wise to follow the shape of bridge road grade line.	m^1	56.00		
	Transient structure from N1 to N2, 12 m long.	pcs.	4		
	Sloped fence endings, 12 m long.	pcs.	4		
	Red and white catadioptres in the fence cloak.	pcs.	12		
	Price of the protective fence to include procurement, supply and delivery at instalment site, terrain preparation, penetrating the columns into the road shoulders and anchoring into the concrete base, connecting the fence elements, installing the finishing parts, installing catadioptres and quality control of the installed materials. The fence must be aligned with the bridge axis and height-wise to follow the shape of bridge road grade line.				
			УКУПНО 3./ TOTAL 3		
САОБРАЋАЈНА СИГНАЛИЗАЦИЈА И ОПРЕМА/ TOTAL TRAFFIC SIGNALIZATION AND EQUIPMENT					

TEMPORARY SIGNALIZATION AND EQUIPMENT

1	Temporary traffic signalizaton	lump sum	1		

Scetch of signboard and method statement for montage attached

No	DESCRIPTION	UoM	Quantity	Unit Price	TOTAL RSD
I	**PREPARATORY WORKS**				
1	Mounting and dismounting of the metal pipe scaffold, fully according to standing regulations and PP measures. The scaffold shall be structurally stable, and properly grounded. Working platforms made of 5cm boards shall be placed at 2.00m of height. From the exterior, 5cm boards shall be placed vertically as guards. The scaffold shall be used throughout the montage of the signboard and untill concrete foundation reaches70% of its load bearing capacity.Same scaffold is to be used for mantage of all signboards. Calculated per m2 of vertical projection of the assembled scaffold.	m2	10.00		
	TOTAL				
II	**EARTH WORKS**				
	Manual excavation of 3rd category soil for signboard foundations. The excavation shall be executed and levelled according to the design and provided elevation points. The sides shall be clean and verticaly cut and the bottom levelled. Excavated soil shall be wheelbarrowed, poured and the terrain levelled or loaded onto a lorry and transported to the town landfill. Calculated per m3 of soil, measured in autochthonous state.	m3	0.30		
	TOTAL				
III	**CONCRETE WORKS**				
	Manufacture of the unreinforced concrete foundation mark MB20;Hight of fuondation is 60cm and other two dimensions 90x40cm. Concrete should be poured over the gravel layer thickness 10cm The top surface shall be floated and the concrete shall be cured according the regulations. Unit price shall consider gravel layr and all neccessary formwork Calculated per m3 of foundation.	m3	0.22		
	TOTAL				

IV	**MONTAGE WORKS**				
	Installation of steel plates for marking of donor.Table is rectangular in shape, dimensions and materialization according to the sketch , mounted on a steel substructure consisting of steel profiles 80x80x4mm , and metal sheet d = 1mm . The total height of the table is 3m, of which 60cm is anchored into the concrete, and the lower angle of table is at a height of 1.4m above ground level. Calculated per peace of installed signboard	pcs	1.00		
	TOTAL				

	TOTAL MONTAGE OF SIGNBOARDS WORK				

SPECIFICATIONS OF THE TEMPORARY TRAFFIC SIGNAGE AND EQUIPMENT during the works on construction of the bridge over the River Rogacica

no	TYPE OF WORKS	UoM	КОЛ.
1. E	**1. VERTICAL SIGNAGE ELEMENTS**		
1.1.	**Standard traffic signage**		
	Warning signs class 2		
	I-5 Triangular side 900mm	pcs	2
	I-5.1 Triangular side 900mm	pcs	1
	I-5.2 Triangular side 900mm	pcs	1
	I-19 Triangular side 900mm	pcs	4
	I-20 Triangular side 900mm class 2	pcs	2
	I-38 Triangular side 900mm		2
	Direction signs class 2		
	II-3 Rectangle, sides 600x800mm	pcs	2
	II-22(3,5т) Round, diameter 600mm - fluorescent base with signage sides 900x900mm	pcs	2
	II-22(3,5т) Round, diameter 600mm		4
	II-28 Round, diameter 600mm		2
	II-30(40) Round, diameter 600mm		2
	II-30(20) Round, diameter 600mm		2
	II-45 Round, diameter 400mm		1
	II-45.1 Round, diameter 400mm		1
	Informative signs class 2		
	Round, diameter 600mm	pcs	2
	Informative signs for works on the road class 2		
	III-305)/(L) Rectangle - yellow with signage sides 600x1000mm		1
	III-305)/(D) Rectangle - yellow with signage sides 600x1000mm		1
	III-305.1)/(L) Rectangle - yellow with signage sides 600x800mm		1
	III-305.1)/(D) Rectangle - yellow with signage sides 600x800mm		1
	Additioal boards class 2		
	IV-1(400 m) Rectangle, sides 900x250mm		2
	IV-1(500 m) Rectangle, sides 600x150mm		2
	IV-1(1000 m) Rectangle, sides 600x150mm		1
	IV-1(7 km) Rectangle, sides 600x150mm		1

1.2.	**Traffic signage beams**		
	Singlecollumn tube support long 2800mm	pcs	8.00
	Singlecollumn tube support long 3000mm	pcs	4.00
	Singlecollumn tube support long 3200mm	pcs	6.00
	Singlecollumn tube support long 3400mm		8.00
	Singlecollumn tube support long 3800mm	pcs	4.00
1.3.	**Non-standard traffic signage**		
	Info boards with bearers IT (2100x1100 мм) 2 pcs	м2	4.62
2	Horisontal signaling on the road		
2.1	stop track line - yellow colour		
	Yellow coloured line width 0.5m, length 2x2.5m	м2	5
3	**2. ELEMENTS OF TRAFFIC EQUIPMENT**		
3.1	**Vertical barriers with collumn and stand (250x1000mm)**		
	VII-3.1+VII-3.2 Twosided vertical barrier - left/right	pcs	33.00
3.2	**Light signalisation**		
	Blinker with its own power source		
	TS-2	pcs	9.00
	TS-3 -set of 5 lights with control device (yellow light, diameter 180mm, order of lights' turning on in direction of the vehicles course)	lump sum	2.00
	TS-7	pcs	2.00
	Mobile traffic light	lump sum	1.00
3.3	Surveyor's assistants' equipment (as requested)		
	Flags - red and green side 0.4 m	lump sum	2.00

Construction

BRIDGE OVER THE RIVER ROGACICA on the state road IIA class no 174 at km 61+096

RECAPITULATION OF WORKS		USD
	PREPARATORY WORKS	
	CONSTRUCTION OF THE NEW BRIDGE	
	CONSTRUCTION OF TEMPORARY RIVER CROSSING ON TEMPORARY ROAD	
	ROAD AND BRIDGE FIT-IN ON PERMANENT ROAD	
	CONSTRUCTION OF TEMPORARY ROAD AND ITS INTEGRATION WITH TEMPRORARY RIVER CROSSING	
	HYDRO-TECHNICAL STRUCTURES	
	TRAFFIC SIGNALISATION	
	TEMPORARY TRAFFIC SIGNALISATION	
	VISIBILITY SIGNBOARDS	
	TOTAL WORKS (USD)	