

BILL 8000: STREET LIGHTING AND TRAFFIC SIGNALS

ITEM	DESCRIPTION	UNIT	QTY	RATE (USD)			AMOUNT (USD)			TOTAL (USD)
				FOREIGN	THIRD COUNTRY	LOCAL	FOREIGN	THIRD COUNTRY	LOCAL	
	Supply and Install, Test and Commission the Street Light System as per the design and specifications and to the satisfaction of the Engineer									
	Section 8010: Basic Electrical Requirements									
SS80.10	Basic Electrical Requirements									
	(a) (i) HT and LV Power Supply: Liaise with TANESCO for power supply connection - Street Lights and Two Traffic Lights	PS								5,000
	(ii) Allow for contractor's overhead and profit as percentage of sub item 80.10(a)(i)	%								
	(b) 13 meters height Corrossive Resistant Mid Hinged Street Light Poles as specified	no	292							
	(c) Guard blocks	no	296							
	(d) 13 meters height Corrossive Resistant Mid Hinged Poles for CCTV at the Bridge to be installed at both ends and two in the middle as specified	no	4							
	Section 8110: Raceways and Empty Conduits									
SS81.10	Raceways and empty conduits									
	(a) Sleeve / conduit for power circuit (100 mm diameter)	m	12,000							
	(b) Sleeve / conduit for signalling circuit for road sections and at the bridge (40 mm diameter)	m	1,500							
	Section 8120: LV Wires and cables									
SS81.20	LV Wires and Cables									
	(a) 3cx16mmsq pvc xlpe armoured cable of 11kV HT Underground Cable from nearby 11kV Power Line to the Transformer	m	200							
	(b) 4cx50mmsq of xlpe armoured cable of 400/200V underground cable from Transformer to Main Distribution Board	m	100							
	(c) 4cx25mmsq of xlpe armoured cable of 400/200V underground cable from Main Distribution Board to Street Light Poles	m	30,000							
	(d) 2cx2.5mmsq heat resistant cable for street light final subcircuit	m	4,670							
	(e) 4cx25mmsq of xlpe armoured cable of 400/200V underground cable from nearby Power Line to Traffic Light DBs	m	500							
	(f) 4cx25mmsq of xlpe armoured cable of 400/200V underground cable from nearby Street Light Pole to BD3 (at the bridge)	m	25							
	(g) 3cx4mmsq xlpe armoured cable for bridge lightings	m	2,000							
	(h) 4cx25mmsq xlpe armoured cable for CCTV and Communication Equipment from DB6	m	1,100							
	(i) 4cx25mmsq xlpe armoured cable for CCTV and Communication Equipment from DB2	m	800							
	Section 8320: Distribution Transformers									
SS83.20	Distribution Transformer									
	(a) 50kV, 11/0.4kV ONAN Transformer	no	2							
	Section 8425: Main L.V. Distribution Boards									
SS84.25	Main L.V. Distribution Boards									
	(a) 150A 4P MCCB Incomer and 9 Outgoing specified MCCBs Outdoor type Main Distribution Board of IP 65 c/w contactor controlled by a photocell for street lighting, and traffic light and outdoor lights	no	2							
	Section 8452: Earthing									
SS84.52	Earthing									
	(a) Earthing the entire substation	no	2							
	(b) Earthing the entire DBs	no	6							
	Sub Total of Bill 8000 (Carried Forward)									

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Sub Total of Bill 8000 (Brought Forward)										
	Section 8470: Panel Boards									
SS84.70	Panel Boards									
	(a) Sub DB 3 for bridge lighting as specified	no	1							
	(b) Sub DB 4 for traffic lighting as specified	no	1							
	(c) Sub DB 5 traffic lighting as specified	no	1							
	(d) Sub DB 6 traffic lighting as specified	no	1							
	(e) Construction of Plinth for DBs	no	6							
	(f) Prefabricated LxWxH of 1x0.75x1.5 Panel for hosting CCTV active control equipment at the Bridge, c/w cooling dual fans and regulator with alternate control timer switchings	no	1							
	Section 8520: Exterior Lighting									
SS85.20	Exterior Lighting									
	(a) 165W LED Street Light	no	292							
	(b) 9W LED for the bridge	no	338							
	(c) 7W LED for the bridge	no	336							
	Supply and Install, Test and Commission the Traffic Signal System as per the design and specifications and to the satisfaction of the Engineer									
	Section 8620: Traffic Signal System									
SS86.21	Supply and Install, Test and Commission the Traffic Signal System									
	(a) Traffic Signal System Controller c/w Microprocessor based, fully electronic. Modular in design for easy maintenance. Upgradeable from 4 to 24 phases. LED phase indicators on the driver modules. Dual Green to Green Conflict Monitoring. Last Red out monitoring. Selectable Lamp Monitoring for LED, Incandescent. Front connecting cable looms for quick & easy replacement. SD card for configuration transfer and download. Fuse protected driver output PSU with LED indicators. 16 Detector inputs & 8 auxiliary inputs. External Flasher facility. Advanced Manual Panel facility. Communication: GPRS, Wi-Fi, LAN and Zigbee. GPS Real-time clock for wireless synchronisation. Hand Held Unit for easy diagnostics. Cabinet should have a 3-way locking mechanism	no	2							
	(b) Construction of the Plinth for the Traffic Light Panel	no	2							
	(c) 2 no of Fixed CCTV Camera for One Traffic Light and the Bridge. The D-Link as per DCS-7513 or equal make for the Full HD WDR Day & Night Outdoor Network Camera for a high-definition professional surveillance and security road solution suitable for the two carriage highway. The camera should use a high-sensitivity 2-megapixel progressive scan CMOS sensor with a motorised P-Iris lens and onboard WDR image enhancement to deliver superior quality video with up to 1080p resolution at 60 fps in all conditions. The all-in-one durable designed to make this camera ideal for reliable deployment in road and bridge surveillance applications without the need for accessories. 1 no of CCTV Active Controller linked and connected to Traffic Light Controller/Microprocesso, GPRS and LAN. and its Panel mounted and embedded inside/on top of the traffic light/electrical panel with all necessary outdoor100m roll of cabling Cantilver Mounted	no	4							
	(d) Liaise with TTCL for supply and installation of telecommunication network at the CCTV Panel at the Bridge	PS								10,000
	(e) Allow for contractor's overhead and profit as percentage of sub item 86.21(d)	%								
	Sub Total of Bill 8000 (Carried Forward)									

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Sub Total of Bill 8000 (Brought Forward)										
SS86.22	Supply and erection of poles									
	(a) The Automotor steel baseplate and frame for high and cantilever poles and placing thereof as per Type D	no	8							
	(b) Standard height traffic signal pole, 4.5m long, 110mm outside diameter including cable entry hole as per Pedestrian Type F, painted with 2 coats of anti corrosive paint	no	8							
	(c) Supply and erection of totem (high) traffic signal pole, including cable entry hole, Automotor Type, as shown on drawing, painted with 2 coats of anti corrosive paint	no	8							
	(d) Cantilever traffic signal pole, including cable entry hole, Automotor Type, as per Type F, painted with 2 coats of anti corrosive paint	no	8							
SS86.23	Painting of poles with golden yellow paint									
	(a) Standard height poles as Type F	no	8							
	(b) Totem (High) poles	no	8							
	(c) Cantilever poles as Type D	no	8							
SS86.24	Cables and Wiring									
	(a) 305m 27x1.5mmsq cable	Roll	2							
	(b) 305m 12x1.5mmsq cable	Roll	1							
	(c) 305m 1x1.5mmsq earth wire	Roll	1							
	(d) Earth Rods	no	8							
	(e) Cable Glands	Pair	8							
	(f) Wiring of traffic light points wired using 1.5mmsq pvc/swa/pvc 2 core cable drawn in underground and duct of 100mm dia surrounded by concrete and including all necessary accessories	no	8							
SS86.25	Traffic signal head on poles, including labour and back board:									
	(a) Type F LED	no	8							
	(b) Type D LED	no	8							
	(c) Type D PEDESTRIAN LED	no	8							
SS86.26	Draw boxes for traffic signals as per signal set:									
	(a) Supply and install complete Draw boxes for traffic signals	no	8							
Total for Bill 8000 (Carried forward to Grand Summary)										

SUMMARY OF SPECIFIED PROVISIONAL SUMS

ITEM	DESCRIPTION	TOTAL (USD)
	BILL 1000: GENERAL	
	Section 1200: General Requirements And Provisions	
12.01	Land acquisition	
	(a) Arrange and pay compensation for acquisition of land for the works	223,100.00
12.02	Relocation of Services	
12.02	(a) Arrange and pay for removal and/or alteration to services provided by agencies for electricity, water or telecommunication services	446,100.00
SS12.02	(c) Arrange and pay for removal of existing fences (provisional sums)	31,200.00
SS12.06	Dispute Board (DB)	
	(a) Provisional sum to cover the Employer's obligation to pay the Dispute Board (DB)	267,700.00
	Section 1400: Engineer's Accommodation and attendance upon Engineer's Site Personnel	
14.02	Office for Engineer:	
	<i>Ownership of offices, furnitures, services and equipment to revert to the Contractor</i>	
SS14.02	(c) Operation (12No) mobile telephones for engineer's office, limited to TZS 5,000.00 recharge time per telephone day per staff member mobilized on site that day.	28,900.00
SS14.08	Laboratory for the Engineer.	
	(c) Testing by commercial laboratory	66,900.00
	Section 1800: HIV/AIDS, gender issues, social issues and local participation	
SS18.02	HIV/AIDS Training	
	(a) During the construction period	24,100.00
	(c) During the Defects Liability period	2,200.00
	BILL 2000: DRAINAGE	
	Section 2500: Pitching, Stonework and Protection Against Erosion	
25.06	Provision of herbicide and ant poison:	
	(a) Provision of materials	44,610.00
	BILL 6000: STRUCTURES	
	Section 6100: Foundations For Structures	
SS61.01	Additional foundation investigations	
	(a) Arrange and pay for additional foundation investigations	44,610.00
61.21	(a) Forming augered and bored pile holes through unidentified obstructions	1,000,000.00
	Specified Provisional Amount Sum Carried Forward	2,179,420.00

GRAND SUMMARY

ITEM	DESCRIPTION	AMOUNT (USD)			TOTAL (USD)
		FOREIGN	THIRD COUNTRY	LOCAL	
1000	GENERAL				
2000	DRAINAGE				
3000	EARTHWORKS AND PAVEMENT				
4000	BITUMINOUS LAYERS AND SEALS				
5000	ANCILLARY ROADWORKS				
6000	STRUCTURES				
7000	TESTING AND QUALITY CONTROL (INCLUDED IN OTHER ITEMS)				0.00
8000	STREET LIGHTING AND TRAFFIC SIGNALS				
9000	DAYWORKS				
A	TOTAL OF BILLS				
B	ADD: VAT {18% of (A) PAYABLE BY THE EMPLOYER}				
C	BID PRICE {(A) + (B)} CARRIED TO FORM OF TENDER				