

**NATIONAL ELECTRIFICATION BOQ for  
Distribution - Asset Creation**  
2022/2023

**Contracts Management Services**

Prepared by: Angelique Hester



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**CONTRACTS MANAGEMENT DEPT**

**Angelique Hester**  
**2-Dec-2021**



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**SENIOR MANAGER ASSET  
CREATION CAPE COASTAL  
CLUSTER**

**Nosipho Manyonga**  
**2-Dec-2021**

TRADE SECTIONS

Current Date: 02-December-21

SECTION	DESCRIPTION	GRAND TOTAL
A	PRELIMINARY AND GENERAL ITEMS	
B	BUSH CLEARING & TREE FELLING	
C	EXCAVATIONS	
D	PLANTING OF POLES	
E	Single Phase MV Structure BONDING INCL (BIL DOWNWIRE, SPARK GAP DEVICE INCLUDED OR EXCLUDED AS PER DESIGN)	
F	ASSEMBLE MV STAYS	
G	ASSEMBLE SINGLE PHASE LV STRUCTURES	
H	ASSEMBLE LV STAYS	
I	POLE TOP BOX INSTALLATION	
J	CONDUCTOR STRINGING (TENSION, REGULATE & BIND IN)	
K	EQUIPMENT INSTALLATION	
L	EARTHING INSTALLATION	
M	SERVICE CONNECTION INSTALLATION	
N	SERVICE CONDUCTOR INSTALLATION	
O	UNDERGROUND CABLE INSTALLATION	
P	MV/LV CABLE TERMINATION	
Q	CABLE JOINT	
R	EQUIPMENT DISMANTLING	
S	LABELLING	
T	EQUIPMENT TESTING	
U	AS - BUILTS	
V	MISCELLANEOUS	
W	TRANSPORT	
X	LABOUR ONLY	
Y	INFILLS	
Z	ADHOC MATERIAL	



Bill No:1		PRELIMINARY AND GENERAL ITEMS		RATE 2021
No		DESCRIPTION	UNIT	
<b>A</b>	<b>FIXED CHARGE ITEMS</b>			
<b>A.1</b>	<b>Site Establishment:</b>	The Contractor shall establish the site camp and maintain throughout the construction period and allow for removal of such upon completion of Works. <b>The Eskom Representative reserves the right to negotiate the rates for rental arrangements based on the project scope and magnitude.</b>		
<b>A.1.1.</b>		Office and Meeting Room complete as per P&G's Guideline	Sum	R 17 550.44
<b>A.1.2.</b>		Stores	Sum	R 15 242.89
<b>A.1.3.</b>		Sanitation	Sum	R 2 219.39
<b>A.1.4.</b>		Electricity	Sum	R 2 465.99
<b>A.1.5.</b>		Supply and Install Diamond mesh fencing at 1.8 meters high	m	R 186.74
<b>A.1.6.</b>		Supply and Install Diamond mesh Lockable Gate 1.8m high x 3.6m wide	each	R 2 142.05
<b>A.1.7.</b>		Project Preparation	Sum	R 24 465.24
<b>A.2.</b>	<b>Sign Board Labour</b>			
<b>A.2.1</b>		Contractor shall erect on site, maintain throughout the construction duration(Safety)	each	R 412.68
		Project sign board	each	R 3 500.00
<b>A.3.</b>	<b>Health and Safety measures (In terms of 34-333)</b>	Safety & Health, Environmental		
<b>A.3.1</b>	<b>3.1.1</b>	Compliance with OH&S Act & Construction Regulations. (for projects where task order value exceed R100,000-00)	Sum	R 15 000.00
	<b>3.1.2</b>	H&S compliance for projects where task orders are below R100k. Excl P&G's	Sum	R 6 500.00
	<b>3.1.3</b>	Maintenance of H&S file (only applicable for projects exceeding 2 months in duration)	Monthly	R 1 500.00
<b>A.4.</b>	<b>Materials Management</b>			
<b>A4.1</b>		The Contractor shall make allowance to receive at Eskom stores, offload and stack the free-issue materials supplied to the contractor.	Sum	R 11 209.04
<b>A.5.</b>	<b>Contractual requirements</b>	Comply ,maintain all insurance and statutory contributions, etc.		
<b>A.5.1</b>		Allowance to Comply ,maintain all insurance and statutory contributions, etc. <b>(Actual cost will be paid at the end of the project and proof of policy must be provided and must be compliant to contractual requirements)</b>	Sum	cost + 5% fee
		<b>Sub-Total A</b>		

Bill No:1		PRELIMINARY AND GENERAL ITEMS		RATE 2021
No		DESCRIPTION	UNIT	
<b>B.</b>	<b>TIME RELATED ITEMS</b>			
<b>B.1</b>	<b>Site Establishment</b>			
<b>B.1.2.</b>		Site office 6m x 3m with aircon	Weeks	R 1 700.00
<b>B.1.3.</b>		Site Storage 6m x 3m	Weeks	R 1 100.00
<b>B.1.4.</b>		Water	Weeks	R 420.34
<b>B.1.5.</b>		Sanitation (service)	Weeks	R 1 417.94
<b>B.1.6.</b>		Electricity (Eskom/Munic supply)	Weeks	R 313.85
<b>B.1.7.</b>		Electricity (Generator 6.5kVA)	Weeks	R 184.95
<b>B.2</b>	<b>Accommodation</b>	Accommodation Allowance is for the Contractors Staff excluding the casual labourers which are assumed to be residing in the area where the works are executed.		
<b>B.2.1.</b>		Staff Accommodation Allowance	Weeks	R 1 232.99
<b>B.3</b>	<b>Security</b>			
<b>B.3.1.</b>		Security on site - 24 Hour Unarmed Security (Must be registered with the appropriate body)	Weeks	cost plus 5%
<b>B.4.</b>	<b>Labour</b>	The Contractor need to submit Weekly Time Sheets for all hourly compensation claims and a Daily attendance register		
<b>B.4.1.</b>		<i>Supervisor per team</i>	hourly	R 106.76
<b>B.4.2.</b>		<i>Construction Manager (SACPMP Registered)</i>	hourly	R 73.56
<b>B.4.3.</b>		<i>Storeman (Storeman is required to reconcile and quantify All material on site including Eskom supplied material using the correct material return to stores forms. The Storeman shall adhere to the implementation and maintenance plan for Materials Management System for the duration of the contract).</i>	hourly	R 34.13
<b>B.4.4.</b>		Community Liaison Officer	Daily (Max)	R 212.62
<b>B.4.5.</b>		Safety Officer (SACPMP Registered)	hourly	R 59.55
		<b>Sub-Total B</b>		
		<b>Total P &amp; G's Carried To Summary</b>		

BILL OF ACTIVITIES				RATE 2021
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
<b>A</b>		<b>PRELIMINARY AND GENERAL ITEMS</b>		
<b>SUB-TOTAL A</b>				
<b>B</b>		<b>BUSH CLEARING &amp; TREE FELLING</b>		
In the event where the contractor is required to cut, remove and clear trees on site. This activity shall be used to execute such work provided that the quotation submitted is from a contractor who meets all the necessary requirements for Bush Clearing plus fee.				
1		Bush Clearing and Tree Felling (Scattered Formation)	Sum	Cost plus 5%
2		Bush Clearing and Tree Felling (Dense Formation)	Sum	Cost plus 5%
<b>SUB-TOTAL B</b>				
<b>C</b>		<b>EXCAVATIONS</b>		
Excavate only as per Eskom Standard for Holes and Trenches for Poles, Stays and Struts. All material will be elsewhere measured.				
1		Excavations of holes where method is not specified below (cost to include all associated costs i.e. labour, fuel, equipment - rock drilling, TLB, compressor etc) - Contractor to submit a quotation to the Project Manager prior to commencement of this item. Once the quotation is accepted, then the contractor can commence. Proof of invoice for all hiring equipment etc are to be submitted as supporting documentation. The 5% handling fee will only be applied to costs associated with 3rd party payments i.e. hiring of equipment, fuel etc. 5% will not be added to the labour component)		cost plus 5%
<b>2</b>		<b>STAYS &amp; STRUTS</b>		
2.1	D-DT-0350	LV Stay Back-Actor or Hand pickable	Each R	80.00
2.2	D-DT-0350	LV Stay auger (bobcat or similar auger)	Each R	495.00
2.3	D-DT-0350	LV Stay Back-Actor or TLB	Each R	360.00
2.4	D-DT-0350	LV Strut Back-Actor or Hand pickable excavation 9m strut	Each R	150.00
2.5	D-DT-0350	LV/MV Strut Back-Actor or Hand Excavations 11m strut	Each R	125.00
2.6	D-DT-0350	LV Strut Back-Actor or TLB	Each R	360.00
2.7	D-DT-0337	LV/MV Strut Back-Actor or Hand Excavations 12m strut	Each R	55.00
2.8	D-DT-0337	LV/MV Strut Back-Actor or Hand Excavations 15 & 15m strut	Each R	115.00
2.9	D-DT-0350	LV Short Strut Back-Actor or Hand Excavations	Each R	177.00
2.10	D-DT-0350	LV Short Strut Bobcat or similar Auger (Two Auger Holes)	Each R	945.00
2.11	D-DT-0350	MV Stay Back-Actor or TLB	Each R	390.00
2.12	D-DT-0350	MV Stay Back-Actor or Hand Excavations	Each R	105.00
2.13	D-DT-0350	MV Stay Bobcat or similarly Auger	Each R	685.00
2.14	D-DT-0350	MV/LV Strut Bobcat or similar Auger 9m strut (Two Auger Holes)	Each R	895.00
2.15	D-DT-0350	MV/LV Strut Bobcat or similar Auger 11m strut (Two Auger Holes)	Each R	790.00
2.16	D-DT-0350	MV/LV Strut Bobcat or similar Auger 12m strut (Two Auger Holes)	Each R	360.00
2.17	D-DT-0350	MV/LV Strut Bobcat or similar Auger 14m strut (Two Auger Holes)	Each R	725.00
2.18	D-DT-0350	MV/LV Strut Bobcat or similar Auger 15m strut (Two Auger Holes)	Each R	720.00
<b>3</b>		<b>WOOD POLES</b>		
3.1	D-DT-0338	2.5m Pole Wood Back-Actor or Hand (0.5m Deep)	Each R	40.00
3.2	D-DT-0338	2.5m Pole Wood Bobcat or similar Auger (0.5m Deep)	Each R	160.00
3.3	D-DT-0330	5m Pole Wood Back-Actor or Hand (1.0m Deep)	Each R	75.00
3.4	D-DT-0330	5m Pole Wood Bobcat or similar Auger (1.0m Deep)	Each R	315.00
3.5	D-DT-0330	5m Pole Wood Hard Rock Drilling (1.0m Deep)	Each R	905.00
3.6	D-DT-0330	5m Pole Wood Back-Actor or Hand (1.5m Deep)	Each R	180.26
3.7	D-DT-0330	5m Pole Wood auger (1.5m Deep)	Each R	1 306.34
3.8	D-DT-0330	7m Pole Wood Back-Actor or Hand (1.3m Deep)	Each R	221.87
3.9	D-DT-0330	7m Pole Wood Bobcat or similar Auger (1.3m Deep)	Each R	1 492.96
3.10	D-DT-1866	8m Wooden Pole/X-Arm 160-179 Top Diameter Back-Actor or Hand (1.3m Deep)	Each R	208.01
3.11	D-DT-1866	8m Wooden Pole/X-Arm 160-179 Top Diameter auger (1.3m Deep)	Each R	410.00
3.12	D-DT-0330	9m Pole Wood Back-Actor or Hand (1.5m Deep)	Each R	110.00
3.13	D-DT-0330	9m Pole Wood auger (1.5m Deep)	Each R	475.00
3.14	D-DT-0330	9m Pole Wood Bobcat or similar Auger (1.5m Deep)	Each R	1 355.00
3.15	D-DT-0330	10m Pole Wood Back-Actor or Hand (1.7m Deep)	Each R	125.00
3.16	D-DT-0330	10m Pole Wood Bobcat or similar auger (1.7m Deep)	Each R	535.00
3.17	D-DT-0330	11m Pole Wood Back-Actor or Hand (1.8m Deep)	Each R	130.00
3.18	D-DT-0330	11m Pole Wood Bobcat or similar auger (1.8m Deep)	Each R	570.00
3.19	D-DT-0330	12m Pole Wood Back-Actor or Hand (2.0m Deep)	Each R	145.00
3.20	D-DT-0330	12m Pole Wood Bobcat or similar auger (2.0m Deep)	Each R	630.00
3.21	D-DT-0330	13m - 16m Pole Wood Back-Actor or Hand (2.2m Deep)	Each R	160.00
3.22	D-DT-0330	13m - 16m Pole Wood Bobcat or similar auger (2.2m Deep)	Each R	695.00
3.23	D-DT-0330	18m Pole Wood Back-Actor or Hand (2.4m Deep)	Each R	175.00
3.24	D-DT-0330	18m Pole Wood Bobcat or similar auger (2.4m Deep)	Each R	755.00
<b>4</b>		<b>CONCRETE POLES</b>		
4.1	D-DT-0330	11m Pole Concrete Back-Actor or Hand (1.8m Deep)	Each R	249.60
4.2	D-DT-0330	11m Pole Concrete Bobcat or similar auger (1.8m Deep)	Each R	570.00
4.3	D-DT-0330	11m Pole Concrete Hard Rock Drilling (1.8m Deep)	Each R	1 946.77
4.4	D-DT-0330	12m Pole Concrete Pole Back-Actor or Hand (2m Deep)	Each R	277.35
4.5	D-DT-0330	12m Pole Concrete Pole Bobcat or similar auger (2m Deep)	Each R	630.00
4.6	D-DT-0330	12m Pole Concrete Hard Rock Drilling (1.0m Deep)	Each R	2 123.75
4.7	D-DT-0330	13m Pole Concrete Back-Actor or Hand (2.2m Deep)	Each R	305.08
4.8	D-DT-0330	13m Pole Concrete Bobcat or similar auger (2.2m Deep)	Each R	695.00
4.9	D-DT-0330	13m Pole Concrete Hard Rock Drilling (1.0m Deep)	Each R	2 300.72
4.10	D-DT-0330	14m Pole Concrete Back-Actor or Hand (2.3m Deep)	Each R	318.94
4.11	D-DT-0330	14m Pole Concrete Bobcat or similar auger (2.3m Deep)	Each R	725.00
4.12	D-DT-0330	14m Pole Concrete Hard Rock Drilling (2.3m Deep)	Each R	2 477.70
<b>5</b>		<b>Heavy Conductor Wood Poles</b>		
5.1	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 700mm Diameter	Each R	249.60
5.2	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 800mm Diameter	Each R	249.60
5.3	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 1000mm Diameter	Each R	249.60
5.4	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 1000mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil cement is excluded	Each R	771.60
5.5	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 1000mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each R	945.60
5.6	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 1200mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil. cement is excluded	Each R	771.60
5.7	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 1200mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each R	771.60

BILL OF ACTIVITIES					RATE 2021	
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT			
5.8	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 1800mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil. cement is excluded	Each	R		771.60
5.9	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 1800mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		945.60
5.10	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 1800mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 321.35
5.11	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 2000mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 321.35
5.12	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 2200mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 321.35
5.13	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 2500mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 321.35
5.14	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 700mm Diameter	Each	R		308.16
5.15	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 800mm Diameter	Each	R		308.16
5.16	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1000mm Diameter	Each	R		308.16
5.17	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1000mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R		830.16
5.18	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1000mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		1 004.16
5.19	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1200mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil. cement is excluded	Each	R		830.16
5.20	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1200mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		1 004.16
5.21	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1800mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil. cement is excluded	Each	R		830.16
5.22	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1800mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		1 004.16
5.23	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1800mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 352.16
5.24	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 2000mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 352.16
5.25	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 2200mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 352.16
5.26	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 2500mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 352.16
5.27	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 700mm Diameter	Each	R		318.94
5.28	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 800mm Diameter	Each	R		318.94
5.29	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1000mm Diameter	Each	R		318.94
5.30	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1000mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil. cement is excluded	Each	R		840.94
5.31	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1000mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		1 014.94
5.32	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1200mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil. cement is excluded	Each	R		840.94
5.33	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1200mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		1 014.94
5.34	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1800mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil. cement is excluded	Each	R		840.94
5.35	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1800mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		1 014.94
5.36	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1800mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 362.94
5.37	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 2000mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 362.94
5.38	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 2200mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 362.94
5.39	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 2500mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 362.94
<b>6</b>		<b>Heavy Conductor Concrete Poles</b>				
6.1	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 700mm Diameter	Each	R		249.60
6.2	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 900mm Diameter	Each	R		249.60
6.3	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 1000mm Diameter	Each	R		249.60
6.4	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 1200mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R		771.60
6.5	D-DT-0330 & 240-758831148	11m Pole Back-Actor or Hand - 1800mm Deep x 1200mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R		945.60
6.6	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 1250mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil. cement is excluded	Each	R		771.60
6.7	D-DT-0330 & 240-758831148	11m Pole Back-Actor or Hand - 1800mm Deep x 1250mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		771.60
6.8	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 1500mm Diameter	Each	R		771.60
6.9	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 1500mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil. cement is excluded	Each	R		945.60

BILL OF ACTIVITIES					RATE 2021	
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT			
6.10	D-DT-0330 & 240-758831148	11m Pole Back-Actor or Hand - 1800mm Deep x 1500mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		1 321.35
6.11	D-DT-0330	11m Pole Back-Actor or Hand - 1800mm Deep x 2000mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R		1 321.35
6.12	D-DT-0330 & 240-758831148	11m Pole Back-Actor or Hand - 1800mm Deep x 2000mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		1 321.35
6.13	D-DT-0330 & 240-758831148	11m Pole Back-Actor or Hand - 1800mm Deep x 2000mm Diameter Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 321.35
6.14	D-DT-0330 & 240-758831148	11m Pole Back-Actor or Hand - 1800mm Deep x 2500mm Diameter Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		308.16
6.15	D-DT-0330 & 240-758831148	11m Pole Back-Actor or Hand - 1800mm Deep x 3000mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		308.16
6.16	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 700mm Diameter	Each	R		308.16
6.17	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 900mm Diameter	Each	R		830.16
6.18	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1000mm Diameter	Each	R		1 004.16
6.19	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1200mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R		830.16
6.20	D-DT-0330 & 240-758831148	12m Pole Back-Actor or Hand - 2000mm Deep x 1200mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		1 004.16
6.21	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1250mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil. cement is excluded	Each	R		830.16
6.22	D-DT-0330 & 240-758831148	12m Pole Back-Actor or Hand - 2000mm Deep x 1250mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		1 004.16
6.23	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1500mm Diameter	Each	R		1 352.16
6.24	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 1500mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R		1 352.16
6.25	D-DT-0330 & 240-758831148	12m Pole Back-Actor or Hand - 2000mm Deep x 1500mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		1 352.16
6.26	D-DT-0330	12m Pole Back-Actor or Hand - 2000mm Deep x 2000mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil	Each	R		1 352.16
6.27	D-DT-0330 & 240-758831148	12m Pole Back-Actor or Hand - 2000mm Deep x 2000mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		318.94
6.28	D-DT-0330 & 240-758831148	12m Pole Back-Actor or Hand - 2000mm Deep x 2000mm Diameter Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		318.94
6.29	D-DT-0330 & 240-758831148	12m Pole Back-Actor or Hand - 2000mm Deep x 2500mm Diameter Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		318.94
6.30	D-DT-0330 & 240-758831148	12m Pole Back-Actor or Hand - 2000mm Deep x 3000mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		840.94
6.31	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 700mm Diameter	Each	R		1 014.94
6.32	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 900mm Diameter	Each	R		840.94
6.33	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1000mm Diameter	Each	R		1 014.94
6.34	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1200mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil. cement is excluded	Each	R		840.94
6.35	D-DT-0330 & 240-758831148	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1200mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		1 014.94
6.36	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1250mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil. cement is excluded	Each	R		1 362.94
6.37	D-DT-0330 & 240-758831148	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1250mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		1 362.94
6.38	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1500mm Diameter	Each	R		1 362.94
6.39	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1500mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil. cement is excluded	Each	R		1 362.94
6.40	D-DT-0330 & 240-758831148	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 1500mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil. cement is excluded	Each	R		1 362.94
6.41	D-DT-0330	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 2000mm Diameter - Add 6 Pockets of Cement to Moistened Excavated Soil. cement is excluded	Each	R		1 362.94
6.42	D-DT-0330 & 240-758831148	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 2000mm Diameter - Clay and Turf - Add 8 Pockets of Cement to Moistened Imported Soil	Each	R		1 362.94
6.43	D-DT-0330 & 240-758831148	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 2000mm Diameter Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 362.94

BILL OF ACTIVITIES					RATE 2021	
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT			
6.44	D-DT-0330 & 240-758831148	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 2500mm Diameter Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 362.94
6.45	D-DT-0330 & 240-758831148	13m - 14m Pole Back-Actor or Hand - 2200mm Deep x 3000mm Diameter - Add 12 Pockets of Cement to Moistened/Imported Excavated Soil. cement is excluded	Each	R		1 362.94
<b>7</b>		<b>Free Standing Poles</b>				
7.1	2-WT/0000	9m Pole Free Standing 18kN Back-Actor or Hand (1.5m Deep) - Soil Type 1 & 2	Each	R		311.75
7.2	D-DT-1650	12m Pole Free Standing 8kN Back-Actor or Hand (2.5m Deep) - Soil Type 1 & 2	Each	R		311.75
7.3	D-DT-1650	12m Pole Free Standing 8kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		467.62
7.4	D-DT-1650	12m Pole Free Standing 8kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R		623.49
7.5	D-DT-1651	12m Pole Free Standing 15kN Back-Actor or Hand (2.5m Deep) - Soil Type 1 & 2	Each	R		584.52
7.6	D-DT-1651	12m Pole Free Standing 15kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		876.79
7.7	D-DT-1651	12m Pole Free Standing 15kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R		1 169.05
7.8	D-DT-1652	12m Pole Free Standing 27kN Back-Actor or Hand (2.5m Deep) - Soil Type 1 & 2	Each	R		1 052.14
7.9	D-DT-1652	12m Pole Free Standing 27kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		1 578.21
7.10	D-DT-1652	12m Pole Free Standing 27kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R		2 104.29
7.11	D-DT-1653	12m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R		1 636.67
7.12	D-DT-1653	12m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R		1 636.67
7.13	D-DT-1653	12m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		2 455.00
7.14	D-DT-1653	12m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R		3 273.33
7.15	D-DT-1654	12m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R		2 260.16
7.16	D-DT-1654	12m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R		2 260.16
7.17	D-DT-1654	12m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		3 390.24
7.18	D-DT-1654	12m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R		3 390.24
7.19	D-DT-1655	12m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R		311.75
7.20	D-DT-1655	12m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R		311.75
7.21	D-DT-1655	12m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		467.62
7.22	D-DT-1655	12m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R		623.49
7.23	D-DT-1656	12m Pole Free Standing 73kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R		2 844.68
7.24	D-DT-1656	12m Pole Free Standing 73kN Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R		2 844.68
7.25	D-DT-1656	12m Pole Free Standing 73kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		4 267.02
7.26	D-DT-1656	12m Pole Free Standing 73kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R		4 267.02
7.27	D-DT-1657	12m Pole Free Standing 106kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R		4 130.64
7.28	D-DT-1657	12m Pole Free Standing 106kN Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R		4 130.64
7.29	D-DT-1657	12m Pole Free Standing 106kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		6 195.95
7.30	D-DT-1650	13m Pole Free Standing 8kN Back-Actor or Hand (2.5m Deep) - Soil Type 1 & 2	Each	R		311.75
7.31	D-DT-1650	13m Pole Free Standing 8kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		467.62
7.32	D-DT-1650	13m Pole Free Standing 8kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R		623.49
7.33	D-DT-1651	13m Pole Free Standing 15kN Back-Actor or Hand (2.5m Deep) - Soil Type 1 & 2	Each	R		584.52
7.34	D-DT-1651	13m Pole Free Standing 15kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		876.79
7.35	D-DT-1651	13m Pole Free Standing 15kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R		1 169.05
7.36	D-DT-1652	13m Pole Free Standing 27kN Back-Actor or Hand (2.5m Deep) - Soil Type 1 & 2	Each	R		1 052.14
7.37	D-DT-1652	13m Pole Free Standing 27kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		1 578.21
7.38	D-DT-1652	13m Pole Free Standing 27kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R		2 104.29
7.39	D-DT-1653	13m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R		1 636.67
7.40	D-DT-1653	13m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R		1 636.67
7.41	D-DT-1653	13m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		2 455.00
7.42	D-DT-1653	13m Pole Free Standing 42kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R		3 273.33

BILL OF ACTIVITIES					RATE 2021		
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT				
7.43	D-DT-1654	13m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R		2 260.16	
7.44	D-DT-1654	13m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R		2 260.16	
7.45	D-DT-1654	13m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		3 390.24	
7.46	D-DT-1654	13m Pole Free Standing 58kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R		3 390.24	
7.47	D-DT-1655	13m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R		311.75	
7.48	D-DT-1655	13m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R		311.75	
7.49	D-DT-1655	13m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		467.62	
7.50	D-DT-1655	13m Pole Free Standing Terminal Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R		623.49	
7.51	D-DT-1656	13m Pole Free Standing 73kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R		2 844.68	
7.52	D-DT-1656	13m Pole Free Standing 73kN Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R		2 844.68	
7.53	D-DT-1656	13m Pole Free Standing 73kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		4 267.02	
7.54	D-DT-1656	13m Pole Free Standing 73kN Back-Actor or Hand (2.5m Deep) - Soil Type 4	Each	R		4 267.02	
7.55	D-DT-1657	13m Pole Free Standing 106kN Back-Actor or Hand (2.5m Deep) - Soil Type 1	Each	R		4 130.64	
7.56	D-DT-1657	13m Pole Free Standing 106kN Back-Actor or Hand (2.5m Deep) - Soil Type 2	Each	R		4 130.64	
7.57	D-DT-1657	13m Pole Free Standing 106kN Back-Actor or Hand (2.5m Deep) - Soil Type 3	Each	R		6 195.95	
<b>SUB-TOTAL C</b>							
<b>D</b>	<b>PLANTING OF POLES</b>						
Planting including backfilling and compaction are measured here. The costs are also inclusive of plant and equipment required to plant the Structures. Stay, Struts and Flying Stay are elsewhere measured. All backfill material included in price. Any other soil type claimed than specified by designer to be supported by DCP soil classification test completed by the contractor and reviewed by the designer according to 240-75883148 annex A. (At least 60% of tested hole must be the soil type claimed to be approved)							
<b>CLASSIFICATION OF SOIL TYPE 1, 2, 3 AND 4</b>							
<p><b>Soil Type 1</b> - Competent soil with equal or better consistency (strength or toughness) than would be encountered in stiff cohesive soils or medium dense cohesion less soils above the water table. Firm of stiff cohesive soils: moulding of soil with fingers is difficult to impossible. Excavation with a spade is difficult and picking is required. Medium dense non-cohesive soils: Considerable resistance to shovelling or penetration by hand bar. Texture: Cohesive soils: Very stiff clay, sandy clay, silty clay, sandy silts and silty sands. Cohesionless soils: compact, well graded gravels, sand and gravel sand mixtures, permanently above all water tables. The DCP will have a low penetration rate with DCP value of 7-8. The maximum bearing at foundation depth shall be 300kPa.</p>							
<p><b>Soil Type 2</b> - A less competent soil than type 1 soil with equal or better consistency than would be encountered in firm to stiff swelling cohesive soils or dry, poor graded loose to medium dense soils above the water table. Firm of stiff swelling cohesive soils: Soil can be moulding with fingers with strong to very strong pressure. Freshly exposed surface shows faint heel mark when stood upon. Excavation with shovel is difficult. Medium dense to loose soils: Having little to considerable resistance to shovelling or penetration with hand bar. Texture: Cohesive soils: Firm to stiff cla, sandy clay, sandy silt and silty sands. Clayey soil will have a smooth texture and will tend to stick to the DCP rod when removed. Cohesionless soils: Poor to well graded sands, gravels and gravel-sand mix, permanently above all water tables. Dry sand will have a coarse texture. The DCP will have visible penetration rate with DCP value of 5-6. The maximum bearing at foundation depth shall be 150kPa.</p>							
<p><b>Soil Type 3</b> - Dry to loose cohesionless soil or very soft to soft cohesive soil. Soft to very soft cohesive soils: Mouldable with ease to manageable with fingers. Forms faint to distinct heel marks on freshly exposed surface when stood upon. Very loose to loose cohesionless soils: Easily excavated with spade and penetrable with hand bar. Texture: Cohesive soils: Soft to very soft clay, sandy clay, sandy silt and silty sands. Clay will stick to the DCP rod whilst sand will provide a clean rod when removed after the test. Cohesionless soils: Poorly graded sands, gravels and gravel-sand mixtures, permanently above all water tables. The DCP will have a high penetration rate with a DCP value of 3-4. The maximum bearing at foundation depth shall be 100kPa.</p>							
<p><b>Soil Type 4</b> - Type 4 soils are for submerged cohesion less and cohesive soils. This also includes all soils below the permanent water table, including soils below a re-occurring perched water table, or permeable soils in low-laying areas subjected to seanal flooding. The DCP will have a very high penetration rate with a DCP value of 1-2. The maximum bearing at foundation depth to be used shall be 50kPa. Note: the DCP value might be high at the time of testing as the water table might be low at the time.</p>							
1	Extra over for Importation of soil where deemed to exceed the normal requirement as per activities below					m3	R 687.90
2	Extra over for hiring of equipment not catered for within the activities below					Sum	cost plus 5%
3	<b>PLANTING BY HAND (VEHICLE IN-ACCESSIBLE)</b>						
3.1	D-DT-0058	POLE,WOOD 5.0 X 80-100 TOP DIA	Each	R		63.89	
3.2	D-DT-0050	POLE,WOOD 7.0X100-120 TOP DIA	Each	R		118.67	
3.3	D-DT-0050	POLE,WOOD 7.0X120-139 TOP DIA	Each	R		118.67	
3.4	D-DT-0055	POLE:140-159MM TOP DIA X LG 9 M;WOOD	Each	R		143.06	
3.5	D-DT-0055	POLE:160-179MM TOP DIA X LG 9 M;WOOD	Each	R		143.06	
3.6	D-DT-0055	POLE:180-199MM TOP DIA X LG 9 M;WOOD	Each	R		143.06	
3.7	D-DT-0052	POLE,WOOD 10.0m x 160-179	Each	R		286.12	
3.8	D-DT-0052	POLE,WOOD 10.0m x 180-199	Each	R		286.12	
3.9	D-DT-0052	POLE,WOOD 10.0m x 200-219	Each	R		286.12	
3.10	D-DT-0051	POLE:140-159MM TOP DIA X LG 11M ;WOOD	Each	R		428.72	
3.11	D-DT-0051	POLE:160-179MM TOP DIA X LG 11M ;WOOD	Each	R		428.72	
3.12	D-DT-0051	POLE:180-199MM TOP DIA X LG 11M ;WOOD	Each	R		428.72	
3.13	D-DT-0051	POLE:200-219MM TOP DIA X LG 11M ;WOOD	Each	R		428.72	
3.14	D-DT-0053	POLE:160-179MM TOP DIA LG 12 M;WOOD	Each	R		477.50	
3.15	D-DT-0053	POLE:180-199MM TOP DIA X LG 12 M;WOOD	Each	R		477.50	
3.16	D-DT-0053	POLE:200-219MM TOP DIA X LG 12 M;WOOD	Each	R		477.50	
3.17	D-DT-0053	POLE:PINE:160MM TOP DIA X LG 12 M;WOOD	Each	R		477.50	
3.18	D-DT-0056	POLE,WOOD 13.0 x 160-179	Each	R		477.50	
3.19	D-DT-0056	POLE,WOOD 13.0 x 180-199	Each	R		477.50	
3.20	D-DT-0056	POLE,WOOD 13.0 x 200-219	Each	R		477.50	
3.21	D-DT-0054	POLE,WOOD 14.0 x 160-179	Each	R		477.50	
3.22	D-DT-0054	POLE,WOOD 14.0 x 180-199	Each	R		477.50	
3.23	D-DT-0054	POLE,WOOD 14.0 x 200-219	Each	R		477.50	
3.24	D-DT-0057	POLE,WOOD 15.0 x 160-179	Each	R		477.50	
3.25	D-DT-0057	POLE,WOOD 15.0 x 180-199	Each	R		477.50	
3.26	D-DT-0057	POLE,WOOD 15.0 x 200-219	Each	R		477.50	
4	<b>PLANTING BY CRANE (VEHICLE ACCESSIBLE)</b>						
4.1	D-DT-0055	POLE:140-159MM TOP DIA X LG 9 M;WOOD	Each	R		215.67	
4.2	D-DT-0055	POLE:160-179MM TOP DIA X LG 9 M;WOOD	Each	R		215.67	
4.3	D-DT-0055	POLE:180-199MM TOP DIA X LG 9 M;WOOD	Each	R		215.67	
4.4	D-DT-0052	POLE,WOOD 10.0m x 160-179	Each	R		215.67	
4.5	D-DT-0052	POLE,WOOD 10.0m x 180-199	Each	R		215.67	

BILL OF ACTIVITIES				RATE 2021	
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT		
4.6	D-DT-0052	POLE,WOOD 10.0m x 200-219	Each	R	215.67
4.7	D-DT-0051	POLE:140-159MM TOP DIA X LG 11M ;WOOD	Each	R	215.67
4.8	D-DT-0051	POLE:160-179MM TOP DIA X LG 11M ;WOOD	Each	R	215.67
4.9	D-DT-0051	POLE:180-199MM TOP DIA X LG 11M ;WOOD	Each	R	215.67
4.10	D-DT-0051	POLE:200-219MM TOP DIA X LG 11M ;WOOD	Each	R	215.67
4.11	D-DT-0053	POLE:160-179MM TOP DIA LG 12 M;WOOD	Each	R	215.67
4.12	D-DT-0053	POLE:180-199MM TOP DIA X LG 12 M;WOOD	Each	R	215.67
4.13	D-DT-0053	POLE:200-219MM TOP DIA X LG 12 M;WOOD	Each	R	215.67
4.14	D-DT-0053	POLE:PINE;160MM TOP DIA X LG 12 M;WOOD	Each	R	215.67
4.15	D-DT-0056	POLE,WOOD 13.0 x 160-179	Each	R	287.56
4.16	D-DT-0056	POLE,WOOD 13.0 x 180-199	Each	R	287.56
4.17	D-DT-0056	POLE,WOOD 13.0 x 200-219	Each	R	287.56
4.18	D-DT-0054	POLE,WOOD 14.0 x 160-179	Each	R	287.56
4.19	D-DT-0054	POLE,WOOD 14.0 x 180-199	Each	R	287.56
4.20	D-DT-0054	POLE,WOOD 14.0 x 200-219	Each	R	287.56
4.21	D-DT-0057	POLE,WOOD 15.0 x 160-179	Each	R	287.56
4.22	D-DT-0057	POLE,WOOD 15.0 x 180-199	Each	R	287.56
4.23	D-DT-0057	POLE,WOOD 15.0 x 200-219	Each	R	287.56
5		<b>PLANTING OF POLES IN VARIOUS SOIL TYPES</b>			
5.1	D-DT-0058	5m Wooden Pole 80-100mm Top Diameter Soil Type 1	Each	R	126.52
5.2	D-DT-0058	5m Wooden Pole 80-100mm Top Diameter Soil Type 2	Each	R	190.40
5.3	D-DT-0058	5m Wooden Pole 80-100mm Top Diameter Soil Type 3	Each	R	879.61
5.4	D-DT-0058	5m Wooden Pole 80-100mm Top Diameter Soil Type 4	Each	R	879.61
5.5	D-DT-0066	6m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 1	Each	R	151.82
5.6	D-DT-0066	6m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 2	Each	R	204.96
5.7	D-DT-0066	6m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 3	Each	R	879.61
5.8	D-DT-0066	6m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 4	Each	R	879.61
5.9	D-DT-0050	7m Wooden Pole 100-120mm Top Diameter Soil Type 1	Each	R	151.81
5.11	D-DT-0050	7m Wooden Pole 100-120mm Top Diameter Soil Type 2	Each	R	204.95
5.12	D-DT-0050	7m Wooden Pole 100-120mm Top Diameter Soil Type 3	Each	R	879.61
5.13	D-DT-0050	7m Wooden Pole 100-120mm Top Diameter Soil Type 4	Each	R	879.61
5.14	D-DT-0050	7m Wooden Pole 120-139mm Top Diameter Soil Type 1	Each	R	177.12
5.15	D-DT-0050	7m Wooden Pole 120-139mm Top Diameter Soil Type 2	Each	R	239.11
5.16	D-DT-0050	7m Wooden Pole 120-139mm Top Diameter Soil Type 3	Each	R	879.61
5.17	D-DT-0050	7m Wooden Pole 120-139mm Top Diameter Soil Type 4	Each	R	879.61
5.18	D-DT-1866	8m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 1	Each	R	202.43
5.19	D-DT-0050	8m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 2	Each	R	273.28
5.20	D-DT-0050	8m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 3	Each	R	879.61
5.21	D-DT-0050	8m Wooden Pole/X-Arm 160-179 Top Diameter Soil Type 4	Each	R	879.61
5.22	D-DT-0055	9m Wooden Pole 140-159mm Top Diameter Soil Type 1	Each	R	217.82
5.23	D-DT-0055	9m Wooden Pole 140-159mm Top Diameter Soil Type 2	Each	R	294.06
5.24	D-DT-0055	9m Wooden Pole 140-159mm Top Diameter Soil Type 3	Each	R	879.61
5.25	D-DT-0055	9m Wooden Pole 140-159mm Top Diameter Soil Type 4	Each	R	879.61
5.26	D-DT-0055	9m Wooden Pole 160-179 mm Top Diameter Soil Type 1	Each	R	245.05
5.27	D-DT-0055	9m Wooden Pole 160-179 mm Top Diameter Soil Type 2	Each	R	330.82
5.28	D-DT-0055	9m Wooden Pole 160-179 mm Top Diameter Soil Type 3	Each	R	879.61
5.29	D-DT-0055	9m Wooden Pole 160-179 mm Top Diameter Soil Type 4	Each	R	879.61
5.30	D-DT-0055	9m Wooden Pole 180-199mm Top Diameter Soil Type 1	Each	R	272.28
5.31	D-DT-0055	9m Wooden Pole 180-199mm Top Diameter Soil Type 2	Each	R	367.58
5.32	D-DT-0055	9m Wooden Pole 180-199mm Top Diameter Soil Type 3	Each	R	879.61
5.33	D-DT-0055	9m Wooden Pole 180-199mm Top Diameter Soil Type 4	Each	R	879.61
5.34	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H4 Soil Type 1	Each	R	255.05
5.35	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H4 Soil Type 2	Each	R	344.32
5.36	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H4 Soil Type 3	Each	R	879.61
5.37	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H4 Soil Type 4	Each	R	879.61
5.38	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H5 Soil Type 1	Each	R	255.05
5.39	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H5 Soil Type 2	Each	R	344.32
5.40	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H5 Soil Type 3	Each	R	879.61
5.41	D-DT-0052	10m Wooden Pole 160-179mm Top Diameter H5 Soil Type 4	Each	R	879.61
5.42	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H4 Soil Type 1	Each	R	283.39
5.43	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H4 Soil Type 2	Each	R	382.57
5.44	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H4 Soil Type 3	Each	R	879.61
5.45	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H4 Soil Type 4	Each	R	879.61
5.46	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H5 Soil Type 1	Each	R	283.39
5.47	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H5 Soil Type 2	Each	R	238.57
5.48	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H5 Soil Type 3	Each	R	879.61
5.49	D-DT-0052	10m Wooden Pole 180-199mm Top Diameter H5 Soil Type 4	Each	R	879.61
5.50	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H4 Soil Type 1	Each	R	311.74
5.51	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H4 Soil Type 2	Each	R	420.84
5.52	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H4 Soil Type 3	Each	R	879.61
5.53	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H4 Soil Type 4	Each	R	879.61
5.54	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H5 Soil Type 1	Each	R	311.74
5.55	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H5 Soil Type 2	Each	R	420.84
5.56	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H5 Soil Type 3	Each	R	879.61
5.57	D-DT-0052	10m Wooden Pole 200-219mm Top Diameter H5 Soil Type 4	Each	R	879.61
5.58	D-DT-0051	11m Wooden Pole 140-159mm Top Diameter H4 Soil Type 1	Each	R	274.23
5.59	D-DT-0051	11m Wooden Pole 140-159mm Top Diameter H4 Soil Type 2	Each	R	370.21
5.60	D-DT-0051	11m Wooden Pole 140-159mm Top Diameter H4 Soil Type 3	Each	R	879.61
5.61	D-DT-0051	11m Wooden Pole 140-159mm Top Diameter H4 Soil Type 4	Each	R	879.61
5.62	D-DT-0051	11m Wooden Pole 140-159mm Top Diameter 75MPA H4 Soil Type 1	Each	R	274.23
5.63	D-DT-0051	11m Wooden Pole 140-159mm Top Diameter 75MPA H4 Soil Type 2	Each	R	370.21
5.64	D-DT-0051	11m Wooden Pole 140-159mm Top Diameter 75MPA H4 Soil Type 3	Each	R	879.61
5.65	D-DT-0051	11m Wooden Pole 140-159mm Top Diameter 75MPA H4 Soil Type 4	Each	R	879.61
5.66	D-DT-0051	11m Wooden Pole 140-159mm Top Diameter H5 Soil Type 1	Each	R	274.23



BILL OF ACTIVITIES					RATE 2021	
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT			
5.152	D-DT-0057	15m Wooden Pole 190-199mm Top Diameter Soil Type 3	Each	R		879.61
5.153	D-DT-0057	15m Wooden Pole 190-199mm Top Diameter Soil Type 4	Each	R		879.61
5.154	D-DT-0057	15m Wooden Pole 200-219mm Top Diameter Soil Type 1	Each	R		407.86
5.155	D-DT-0057	15m Wooden Pole 200-219mm Top Diameter Soil Type 2	Each	R		550.61
5.156	D-DT-0057	15m Wooden Pole 200-219mm Top Diameter Soil Type 3	Each	R		879.61
5.157	D-DT-0057	15m Wooden Pole 200-219mm Top Diameter Soil Type 4	Each	R		879.61
5.158	D-DT-0049	16m Wooden Pole 180-199mm Top Diameter Soil Type 1	Each	R		448.48
5.159	D-DT-0049	16m Wooden Pole 180-199mm Top Diameter Soil Type 2	Each	R		605.45
5.160	D-DT-0049	16m Wooden Pole 180-199mm Top Diameter Soil Type 3	Each	R		879.61
5.161	D-DT-0049	16m Wooden Pole 180-199mm Top Diameter Soil Type 4	Each	R		879.61
5.162	D-DT-0049	16m Wooden Pole 200-219mm Top Diameter Soil Type 1	Each	R		493.34
5.163	D-DT-0049	16m Wooden Pole 200-219mm Top Diameter Soil Type 2	Each	R		666.01
5.164	D-DT-0049	16m Wooden Pole 200-219mm Top Diameter Soil Type 3	Each	R		879.61
5.165	D-DT-0049	16m Wooden Pole 200-219mm Top Diameter Soil Type 4	Each	R		879.61
5.166	D-DT-0048	18m Wooden Pole 180-199mm Top Diameter Soil Type 1	Each	R		493.16
5.167	D-DT-0048	18m Wooden Pole 180-199mm Top Diameter Soil Type 2	Each	R		665.77
5.168	D-DT-0048	18m Wooden Pole 180-199mm Top Diameter Soil Type 3	Each	R		879.61
5.169	D-DT-0048	18m Wooden Pole 180-199mm Top Diameter Soil Type 4	Each	R		879.61
5.170	D-DT-0048	18m Wooden Pole 200-219mm Top Diameter Soil Type 1	Each	R		542.47
5.171	D-DT-0048	18m Wooden Pole 200-219mm Top Diameter Soil Type 2	Each	R		732.34
5.172	D-DT-0048	18m Wooden Pole 200-219mm Top Diameter Soil Type 3	Each	R		879.61
5.173	D-DT-0048	18m Wooden Pole 200-219mm Top Diameter Soil Type 4	Each	R		879.61
<b>6</b>		<b>Concrete Poles</b>				
6.1	D-DT-0017	11m Concrete Pole 10kN Ultimate Load	Each	R		311.75
6.2	D-DT-0015	12m Concrete Pole 10kN Ultimate Load	Each	R		340.08
6.3	D-DT-0016	13m Concrete Pole 10kN Ultimate Load	Each	R		368.42
6.4	D-DT-0018	14m Concrete Pole 10kN Ultimate Load	Each	R		396.76
<b>7</b>		<b>Free Standing(Unsupported)</b>				
7.1	PA09599B01	9m Concrete Pole 18kN	Each	R		311.75
7.2	D-DT-1650	12m Concrete Pole 8kN	Each	R		311.75
7.3	D-DT-1651	12m Concrete Pole 15kN	Each	R		584.52
7.4	D-DT-1652	12m Concrete Pole 27kN	Each	R		1 052.14
7.5	D-DT-1653	12m Concrete Pole 42kN	Each	R		1 636.67
7.6	D-DT-1654	12m Concrete Pole 58kN	Each	R		2 260.16
7.7	D-DT-1655	12m Concrete Pole 65kN - Terminal Structure	Each	R		2 532.94
7.8	D-DT-1656	12m Concrete Pole 73kN	Each	R		2 844.68
7.9	D-DT-1657	12m Concrete Pole 106kN	Each	R		4 130.64
7.10	D-DT-1650	13m Concrete Pole 8kN	Each	R		337.72
7.11	D-DT-1651	13m Concrete Pole 15kN	Each	R		633.23
7.12	D-DT-1652	13m Concrete Pole 27kN	Each	R		1 139.82
7.13	D-DT-1653	13m Concrete Pole 42kN	Each	R		1 773.06
7.14	D-DT-1654	13m Concrete Pole 58kN	Each	R		2 448.51
7.15	D-DT-1655	13m Concrete Pole 65kN - Terminal Structure	Each	R		2 744.01
7.16	D-DT-1656	13m Concrete Pole 73kN	Each	R		3 081.74
7.17	D-DT-1657	13m Concrete Pole 106kN	Each	R		4 474.86
<b>SUB-TOTAL D</b>						
<b>E</b>	<b>Single Phase MV Structure BONDING INCL (BIL DOWNWIRE, SPARK GAP DEVICE INCLUDED OR EXCLUDED AS PER DESIGN)</b>					
	<b>Supply and erect MV support structures as per Eskom DDT 0400, 1300, 1700, 1800 drawings and OU specific SI Engineering instructions. Auxiliary equipment such as bonding, jumpers, jumper terminations, pole and x-arm mounting and mounting hardware, conductor attachment hardware and insulators to be included. Poles are measured elsewhere, crossarms are included. Stay, strut material measured elsewhere. Pole, stay and strut excavations are measured elsewhere. Where road crossing structures are to be used the line hardware needs to be changed to include : For intermediate a suitable fullwrap road crossing tie and for a strain structure a 3bolt suitable pistol grip. Other relevant road crossing hardware to be included where required. Road crossings to be inserted in BOQ where required and marked with "RX" as part of the description. All line hardware purchased will be paid elsewhere as cost plus fee.</b>					
		<b>Intermediate - 0 deg</b>				
1.1	D-EC2063	Phase / Phase - Delta intermediate 0 degrees D2063 - A-Frame with 4kN Posts + Bird Perch	Each	R		250.34
1.2	D-EC2063	Phase / Phase - Delta intermediate 0 degrees D2063 - A-Frame 10kN Posts + Bird Perch & road-xing ties	Each	R		250.34
1.3	D-EC2063	Phase / Phase - Delta intermediate 0 degrees D2063 - A-Frame with 4kN Posts + Bird Perch with spark gap	Each	R		269.12
1.4	D-EC2063	Phase / Phase - Delta intermediate 0 degrees D2063 - A-Frame 10kN Posts + Bird Perch & road-xing ties with spark gap	Each	R		269.12
1.5	1300	PHASE / PHASE - STAGGEREDVERTICAL (450mm SPACING) - INTERMEDIATE - 0° DEVIATION	Each	R		250.34
1.6	1300	Phase / phase – Staggered Vertical (450mm spacing) – Intermediate - 0° Deviation Rx	Each	R		251.34
1.7	1310	PHASE / PHASE - STAGGEREDVERTICAL (600mm SPACING) - INTERMEDIATE - 0° DEVIATION	Each	R		250.34
1.8	1310	Phase / phase – Staggered Vertical (600mm spacing) – Intermediate - 0° Deviation Rx	Each	R		251.34
1.9	1320	Phase / phase – Delta (450mm Stud) – Intermediate - 0° Deviation	Each	R		219.05
1.10	1320	Phase / phase – Delta (450mm Stud) – Intermediate - 0° Deviation Rx	Each	R		219.05
1.11	1330	PHASE / PHASE - DELTA (600mmSTUD) - INTERMEDIATE - 0° DEVIATION	Each	R		219.05
1.12	1330	Phase / phase – Delta (600mm Stud) – Intermediate - 0° Deviation Rx	Each	R		219.05
1.13	1330	Phase / phase – Delta (600mm Stud) – Intermediate - 0° Deviation With Spark Gap Device	Each	R		250.34
1.14	1330	Phase / phase – Delta (600mm Stud) – Intermediate - 0° Deviation With Spark Gap Device -Rx	Each	R		250.34
1.15	1340	PHASE / PHASE - DELTA / 2,5mWOOD X-ARM - INTERMEDIATE - 0° DEVIATION	Each	R		250.34
1.16	1340	PHASE / PHASE - DELTA / 2,5mWOOD X-ARM - INTERMEDIATE - 0° DEVIATION RX	Each	R		250.34
1.17	1340B	Phase / phase – Delta/2.5M Wooden X-arm – Intermediate - 0° Deviation	Each	R		250.34
1.18	1340B	Phase / phase – Delta/2.5M Wooden X-arm – Intermediate - 0° Deviation Rx	Each	R		250.34
1.19	1340B	Phase / phase – Delta/2.5M Wooden X-arm – Intermediate - 0° Deviation With Spark Gap Device	Each	R		269.12

BILL OF ACTIVITIES					RATE 2021
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT		
1.20	1340B	Phase / phase – Delta/2.5M Wooden X-arm – Intermediate - 0° Deviation With Spark Gap Device-Rx	Each	R	269.12
1.21	1390	Phase / phase - T-frame / 2m Steel X-arm – Intermediate - 0° Deviation	Each	R	246.59
1.22	1390	Phase / phase - T-frame / 2m Steel X-arm – Intermediate - 0° Deviation -RX	Each	R	246.59
1.23	1390	Phase / phase - T-frame / 2m Steel X-arm – Intermediate - 0° Deviation -With Spark Gap device	Each	R	246.59
1.24	1390	Phase / phase - T-frame / 2m Steel X-arm – Intermediate - 0° Deviation -With Spark Gap device - RX	Each	R	246.59
1.25	1370	Phase / phase - H-Pole / 4,5m Wood X-arm – Intermediate - 0° Deviation	Each	R	393.19
1.26	1370	Phase / phase - H-Pole / 4,5m Wood X-arm – Intermediate - 0° Deviation -RX	Each	R	393.19
1.27	1370	Phase / phase - H-Pole / 4,5m Wood X-arm – Intermediate - 0° Deviation -With Spark Gap device	Each	R	420.76
1.28	1370	Phase / phase - H-Pole / 4,5m Wood X-arm – Intermediate - 0° Deviation -With Spark Gap device-RX	Each	R	420.76
<b>2</b>		<b>Strainer - Small (1 - 30) deg</b>			
2.1	1301	PHASE / PHASE - VERTICAL (450mmSPACING) - INTERMEDIATE - SMALL(1°±10°) DEVIATION	Each	R	187.76
2.2	1301	PHASE / PHASE - VERTICAL (450mmSPACING) - INTERMEDIATE - SMALL(1°±10°) DEVIATION Rx	Each	R	187.76
2.3	1302	PHASE / PHASE - VERTICAL (450mmSPACING) - INTERMEDIATE - MEDIUM(±10°-30°) DEVIATION	Each	R	187.76
2.4	1302	PHASE / PHASE - VERTICAL (450mmSPACING) - INTERMEDIATE - MEDIUM(±10°-30°) DEVIATION Rx	Each	R	187.76
2.5	1311	PHASE / PHASE - VERTICAL (600mmSPACING) - INTERMEDIATE - SMALL (1°±10°) DEVIATION	Each	R	219.05
2.6	1311	PHASE / PHASE - VERTICAL (600mmSPACING) - INTERMEDIATE - SMALL (1°±10°) DEVIATION Rx	Each	R	219.05
2.7	1312	Phase / phase – Vertical (600mm spacing) – Intermediate - Medium (10-30°) Deviation	Each	R	219.05
2.8	1312	Phase / phase – Vertical (600mm spacing) – Intermediate - Medium (10-30°) Deviation Rx	Each	R	219.05
2.9	1371	Phase / phase – H-Pole / 4.5m Wood x-arm – Intermediate – Small (1 –10°) deviation	Each	R	391.41
2.10	1371	Phase / phase – H-Pole / 4.5m Wood x-arm – Intermediate – Small (1 –10°) deviation-RX	Each	R	391.41
2.11	1391	Phase / phase - T-frame/ 2m Steel X-arm – Intermediate - Small (1- +/-10°) Deviation	Each	R	246.59
2.12	1391	Phase / phase - T-frame/ 2m Steel X-arm – Intermediate - Small (1- +/-10°) Deviation -RX	Each	R	215.76
<b>3</b>		<b>Strainer - 0 deg</b>			
3.1	1303	PHASE / PHASE - VERTICAL (450mmSPACING) - STRAIN - 0° DEVIATION	Each	R	250.34
3.2	1303	PHASE / PHASE - VERTICAL (450mmSPACING) - STRAIN - 0° DEVIATION Rx	Each	R	250.34
3.3	1313	PHASE / PHASE - VERTICAL (600mmSPACING) - STRAIN - 0° DEVIATION	Each	R	250.34
3.4	1313	PHASE / PHASE - VERTICAL (600mmSPACING) - STRAIN - 0° DEVIATION Rx	Each	R	250.34
3.5	1340	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation	Each	R	247.71
3.6	1340	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation Rx	Each	R	247.71
3.7	1340B	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation	Each	R	247.71
3.8	1340B	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation Rx	Each	R	247.71
3.9	1340B	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation With Spark Gap Device	Each	R	266.29
3.10	1340B	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation With Spark Gap Device-Rx	Each	R	266.29
3.11	1343	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation	Each	R	247.71
3.12	1343	Phase / phase – Delta/2.5M Wooden X-arm –Strain - 0° Deviation - Rx	Each	R	247.71
3.13	1373	Phase / phase - H-Pole / 4,5m Wood X-arm – Strain – 0° Deviation	Each	R	391.41
3.14	1373	Phase / phase - H-Pole / 4,5m Wood X-arm – Strain – 0° Deviation -RX	Each	R	391.41
<b>4</b>		<b>Strainer - Medium (1 - 60) deg</b>			
4.1	1304	PHASE / PHASE - VERTICAL (450mmSPACING) - STRAIN - SMALL(1°-30°) DEVIATION	Each	R	146.78
4.2	1304	PHASE / PHASE - VERTICAL (450mmSPACING) - STRAIN - SMALL(1°-30°) DEVIATION - Rx	Each	R	146.78
4.3	1314	PHASE / PHASE - VERTICAL (600mmSPACING) - STRAIN - SMALL(1°-30°) DEVIATION	Each	R	146.78
4.4	1314	PHASE / PHASE - VERTICAL (600mmSPACING) - STRAIN - SMALL(1°-30°) DEVIATION - Rx	Each	R	146.78
4.5	1334	PHASE / PHASE - DELTA / 1,3mSTEEL X-ARM - STRAIN - MEDIUM (1°-60°) DEVIATION	Each	R	247.71
4.6	1334	PHASE / PHASE - DELTA / 1,3mSTEEL X-ARM - STRAIN - MEDIUM (1°-60°) DEVIATION Rx	Each	R	247.71
4.7	1344	Phase / phase – Delta/2.5M Wooden X-arm –Strain - Medium (1-60°) Deviation	Each	R	247.71
4.8	1344	Phase / phase – Delta/2.5M Wooden X-arm –Strain - Medium (1-60°) Deviation -Rx	Each	R	247.71
4.9	1374	Phase / phase - H-Pole / 4,5m Wood X-arm – Strain - Medium(1°- 60°) Deviation	Each	R	391.41
4.10	1374	Phase / phase - H-Pole / 4,5m Wood X-arm – Strain - Medium(1°- 60°) Deviation -RX	Each	R	391.41
<b>5</b>		<b>Strainer - Terminal</b>			
5.1	1346	Phase / phase – Delta/2.5M Wood X-arm – Strain - Terminal	Each	R	247.71
5.2	1346	Phase / phase – Delta/2.5M Wood X-arm – Strain - Terminal -Rx	Each	R	247.71
5.3	1376	Phase / phase - H-Pole / 4,5m Wood X-arm – Strain – Terminal	Each	R	391.41
5.4	1376	Phase / phase - H-Pole / 4,5m Wood X-arm – Strain – Terminal -RX	Each	R	391.41
<b>6</b>		<b>Take-Off</b>			
6.1	1811	Phase / phase Take-off – Vertical (600mm spacing)	Each	R	146.78
6.2	1811	Phase / phase Take-off – Vertical (600mm spacing)-RX	Each	R	146.78
6.3	National Electrical 2021/12/07	Phase / phase Take-off - 2,5m Wooden X-arm	Each	R	184.94

BILL OF ACTIVITIES					RATE 2021	
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT			
6.4	1814	Phase / phase Take-off - 2,5m Wooden X-arm-RX	Each	R		184.94
6.5	1815	Phase / phase Take-off - 2 x 2,5m Wooden X-arm	Each	R		293.55
6.6	1815	Phase / phase Take-off - 2 x 2,5m Wooden X-arm-RX	Each	R		293.55
6.7	1816	Phase / phase Take-off - H-Pole (3,5m Wooden X-arm)	Each	R		342.48
6.8	1816	Phase / phase Take-off - H-Pole (3,5m Wooden X-arm)-RX	Each	R		342.48
6.9	1817	Phase / phase Take-off - H-Pole (2 x 3,5m Wooden X-arm)	Each	R		391.41
6.10	1817	Phase / phase Take-off - H-Pole (2 x 3,5m Wooden X-arm) -RX	Each	R		391.41
<b>Assemble Three Phase MV Structures BONDING INCL (BIL DOWNWIRE, SPARK GAP DEVICE INCLUDED OR EXCLUDED AS PER DESIGN)</b>						
<b>7</b>	<b>Intermediate - 0 deg</b>					
7.1	D-EC2063	3 Phase Delta intermediate 0 degrees D2063 - A-Frame with 4kN Posts + Bird Perch	Each	R		250.34
7.2	D-EC2063	3 Phase Delta intermediate 0 degrees D2063 - A-Frame 10kN Posts + Bird Perch & road-xing ties	Each	R		250.34
7.3	D-EC2063	3 Phase Delta intermediate 0 degrees D2063 - A-Frame with 4kN Posts + Bird Perch with spark gap	Each	R		269.12
7.4	D-EC2063	3 Phase Delta intermediate 0 degrees D2063 - A-Frame 10kN Posts + Bird Perch & road-xing ties with spark gap	Each	R		269.12
7.5	D-DT-1700	3 Phase - Staggered Vertical (450mm Spacing)	Each	R		207.61
7.6	D-DT-1710	3 Phase - Staggered Vertical (600mm Spacing)	Each	R		207.61
7.7	D-DT-1720	3 Phase - Delta (450mm Stud)	Each	R		207.61
7.8	D-DT-1730	3 Phase - Delta (Intermediate T Crossarm)	Each	R		207.61
7.9	D-DT-1740	3 Phase - Delta / 2,5m Wood Crossarm	Each	R		237.27
7.10	D-DT-1750	3 Phase - Delta / 4,5m Wood Crossarm	Each	R		470.78
7.11	D-DT-1760	3 Phase - H-Pole / 3,5m Wood Crossarm	Each	R		376.62
7.12	D-DT-1770	3 Phase - H-Pole / 4,5m Wood Crossarm	Each	R		376.62
7.13	D-DT-1785	MV Heavy Conductor - 3 Phase Staggered Vertical 800mm Spacing	Each	R		470.78
7.14	D-DT-1790	MV Heavy Conductor - 3 Phase - Delta - 3500mm Wooden Crossarm	Each	R		470.78
7.15	D-DT-1793	MV Heavy Conductor - 22kV H-Pole Suspension Structure General Arrangement	Each	R		470.78
7.16	D-DT-1870	Three Phase T-Frame / 2m Steel Crossarm	Each	R		237.27
7.17	1740	3 Phase - Delta/2.5M Wooden X-arm -Strain - 0° Deviation	Each	R		246.59
7.18	1740	3 Phase - Delta/2.5M Wooden X-arm -Strain - 0° Deviation Rx	Each	R		246.59
7.19	D-DT-1870B	Three Phase T-Frame / 2m Steel Cross arm, Horizontal Configuration	Each	R		246.59
7.20	1740B	3 Phase - Delta / 2,5m Wood X-arm - Intermediate - 0° Deviation	Each	R		246.59
7.21	1740B	3 Phase - Delta / 2,5m Wood X-arm - Intermediate - 0° Deviation -RX	Each	R		246.59
7.22	1740B	3 Phase - Delta / 2,5m Wood X-arm - Intermediate - 0° Deviation -With Spark Gap Device	Each	R		265.08
7.23	1740B	3 Phase - Delta / 2,5m Wood X-arm - Intermediate - 0° Deviation -With Spark Gap Device-RX	Each	R		265.08
7.24	1750	3 Phase - Delta / 4,5m Wood X-arm - Intermediate - 0° Deviation -RX	Each	R		470.78
7.25	1750	3 Phase - Delta / 4,5m Wood X-arm - Intermediate - 0° Deviation -With Spark Gap Device	Each	R		470.78
7.26	1750	3 Phase - Delta / 4,5m Wood X-arm - Intermediate - 0° Deviation -With Spark Gap Device-RX	Each	R		470.78
7.27	1710	3 Phase - Staggered Vertical (600mm Spacing) Intermediate 0° Deviation Rx	Each	R		207.61
7.28	1770	3 Phase - H-Pole / 4,5m Wood X-arm - Intermediate - 0° Deviation -RX	Each	R		391.41
7.29	1770	3 Phase - H-Pole / 4,5m Wood X-arm - Intermediate - 0° Deviation - With Spark Gap Device	Each	R		376.62
7.30	1770	3 Phase - H-Pole / 4,5m Wood X-arm - Intermediate - 0° Deviation - With Spark Gap Device -RX	Each	R		376.62
7.31	1790	Heavy Conductor - 3 Phase Delta-3500mm Wooden X-arm Intermediate 0° Deviation Rx	Each	R		470.78
7.32	1710	3 Phase - Staggered Vertical (600mm Spacing) Intermediate 0° Deviation Rx	Each	R		207.61
<b>8</b>	<b>Intermediate - (0 - 10) deg</b>					
8.1	D-DT-1701	3 Phase - Vertical (450mm Spacing)	Each	R		207.61
8.2	D-DT-1711	3 Phase - Vertical (600mm Spacing)	Each	R		207.61
8.3	D-DT-1771	3 Phase - H-Pole / 4,5m Wood Crossarm	Each	R		376.62
8.4	D-DT-1871	Three Phase T-Frame / 2m Steel Crossarm	Each	R		237.27
8.5	1771	3 Phase - H-Pole / 4,5m Wood X-arm - Intermediate - Small(1°-±10°) Deviation -RX	Each	R		376.62
8.6	1711	3 Phase - Vertical (600mm Spacing) Intermediate-Small (1- ±10°) Deviation Rx	Each	R		207.61
<b>9</b>	<b>Intermediate - (15 - 30) deg</b>					
9.1	D-DT-1702	3 Phase - Vertical (450mm Spacing)	Each	R		207.61
9.2	D-DT-1712	3 Phase - Vertical (600mm Spacing)	Each	R		207.61
9.3	1712	3 Phase - Vertical (600mm Spacing) Intermediate-Medium (±15-30°) Deviation Rx	Each	R		207.61
<b>10</b>	<b>Strainer - 0 deg</b>					
10.1	D-DT-1703	3 Phase - Vertical (450mm Spacing)	Each	R		237.27
10.2	D-DT-1713	3 Phase - Vertical (600mm Spacing)	Each	R		237.27
10.3	D-DT-1733	3 Phase - Delta / 1,3m Steel Crossarm	Each	R		237.27
10.4	D-DT-1743	3 Phase - 600mm Phase Spacing Delta / 2,5m Wood Crossarm	Each	R		266.93
10.5	D-DT-1747	3 Phase - 600mm Phase Spacing Delta / 2 x 2,5m Wood Crossarm	Each	R		470.78
10.6	D-DT-1747	3 Phase - 800mm Phase Spacing Delta / 2 x 2,5m Wood Crossarm	Each	R		470.78
10.7	D-DT-1753	3 Phase - Delta / 4,5m Wood Crossarm	Each	R		470.78
10.8	D-DT-1763	3 Phase - Delta / 3,5m Wood Crossarm	Each	R		470.78
10.9	D-DT-1767	3 Phase - H-Pole / 2 x 3,5m Wood Crossarm	Each	R		819.16
10.10	D-DT-1773	3 Phase - H-Pole / 4,5m Wood Crossarm	Each	R		376.62
10.11	D-DT-1777	3 Phase - H-Pole / 2 x 4,5m Wood Crossarm	Each	R		819.16
10.12	D-DT-1783	3 Phase - Trips	Each	R		847.40
10.13	D-DT-1786	MV Heavy Conductor - 22kV 3 Phase - Vertical 800mm Spacing	Each	R		470.78
10.14	D-DT-1794	MV Heavy Conductor - 22kV H-Pole Braced	Each	R		470.78
10.15	1767	3 Phase - H-Pole / 2 x 3,5m Wood X-arm - Strain - 0° Deviation -RX	Each	R		819.16
10.16	National Electrification Board Rev. 0 2021/12/02	3 Phase - H-Pole / 4,5m Wood X-arm - Strain - 0° Deviation-RX	Each	R	BOQ	376.62

BILL OF ACTIVITIES					RATE 2021	
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT			
10.17	1777	3 Phase – H-Pole / 2 x 4,5m Wood X-arm – Strain - 0° Deviation -RX	Each	R		819.16
10.18	1713	3 Phase - Vertical (600mm Spacing) Strain 0° Deviation Rx	Each	R		237.27
10.19	1743	3 Phase - Delta / 2,5m Wood X-arm - Strain – 0° Deviation -RX	Each	R		266.93
10.20	1747	3 Phase - Delta / 2 x 2,5m Wood X-arm - Strain - 0° Deviation -RX	Each	R		470.78
10.21	1753	3 Phase - Delta / 4,5m Wood X-arm - Strain – 0° Deviation -RX	Each	R		470.78
10.22	1763	3 Phase - H-Pole / 3,5m Wood X-arm - Strain - 0° Deviation -RX	Each	R		470.78
10.23	1785	3 Phase - Staggered Vertical (800mm spacing) 0° Deviation Rx Wood Poles Rx	Each	R		470.78
10.24	1786	3 Phase - Vertical (800mm spacing) Strain 0° Deviation 10kN Wood Poles Rx	Each	R		470.78
10.25	1783	3 Phase – Trips – Strain - 0° Deviation (Front view) -RX	Each	R		847.40
10.26	1794	Heavy Conductor H-Pole Braced In-Line strain-RX	Each	R		470.78
11		<b>Strainer - Small (1 - 30) deg</b>				
11.1	D-DT-1704	3 Phase - Vertical (450mm Spacing)	Each	R		237.27
11.2	D-DT-1714	3 Phase - Vertical (600mm Spacing)	Each	R		237.27
11.3	D-DT-1734	3 Phase - Delta / 1,3m Steel Crossarm	Each	R		266.93
11.4	D-DT-1787	MV Heavy Conductor - 22kV 3 Phase - Vertical 800mm Spacing	Each	R		470.78
11.5	1714	3 Phase - Vertical (600mm Spacing) Strain - Small(1-30°) Deviation Rx	Each	R		237.27
11.6	1787	3 Phase - Vertical (800mm spacing) Strain 0-30° Deviation 10kN Wood Poles Rx	Each	R		470.78
12		<b>Strainer - Medium (1 - 60) deg</b>				
12.1	D-DT-1744	3 Phase - Delta / 2,5m Wood Crossarm	Each	R		266.93
12.2	D-DT-1748	3 Phase - Delta / 2 x 2,5m Wood Crossarm	Each	R		470.78
12.3	D-DT-1754	3 Phase - Delta / 4,5m Wood Crossarm	Each	R		470.78
12.4	D-DT-1754	3 Phase - Delta / 2 x 4,5m Wood Crossarm	Each	R		470.78
12.5	D-DT-1764	3 Phase - H-Pole / 3,5m Wood Crossarm	Each	R		470.78
12.6	D-DT-1768	3 Phase - Pole / 2 x 3,5m Wood Crossarm	Each	R		819.16
12.7	D-DT-1774	3 Phase - H-Pole / 4,5m Wood Crossarm	Each	R		376.62
12.8	D-DT-1778	3 Phase - Pole / 2 x 4,5m Wood Crossarm	Each	R		819.16
12.9	D-DT-1795	MV Heavy Conductor - 22kV H-Pole Braced	Each	R		470.78
12.10	1744	3 Phase - Delta / 2,5m Wood X-arm - Strain – Medium(1°-60°) Deviation -RX	Each	R		266.93
12.11	1748	3 Phase - Delta / 2 x 2,5m Wood X-arm - Strain - Medium(1°-60°) Deviation -RX	Each	R		470.78
12.12	1754	3 Phase - Delta / 4,5m Wood X-arm - Strain – Medium(1°-60°) Deviation -RX	Each	R		470.78
12.13	1754	3 Phase - Delta / 2x4,5m Wood X-arm - Strain – Medium(1°-60°) Deviation -RX	Each	R		470.78
12.14	1764	3 Phase - H-Pole / 3,5m Wood X-arm - Strain - Medium(1°-60°) Deviation -RX	Each	R		470.78
12.15	1768	3 Phase - H-Pole / 2 x 3,5m Wood X-arm – Strain - Medium(1°-60°) Deviation -RX	Each	R		819.16
12.16	1774	3 Phase – H-Pole / 4,5m Wood X-arm - Strain - Medium(1°-60°) Deviation -RX	Each	R		376.62
12.17	1778	3 Phase – H-Pole / 2 x 4,5m Wood X-arm – Strain – Medium(1°-60°) Deviation -RX	Each	R		819.16
12.18	1795	Heavy Conductor H-Pole Braced Angle strain (1-60°)-RX	Each	R		470.78
13		<b>Strainer - Large (61- 90) deg</b>				
13.1	D-DT-1705	3 Phase - Vertical (450mm Spacing)	Each	R		266.93
13.2	D-DT-1715	3 Phase - Vertical (600mm Spacing)	Each	R		237.27
13.3	D-DT-1735	3 Phase - Delta / 1,3m Steel Crossarm	Each	R		237.27
13.4	D-DT-1742	3 Phase - Delta 2,5m Wood Crossarm / 1700 Steel Crossarm	Each	R		431.25
13.5	D-DT-1742	3 Phase - Delta 2,5m Wood Crossarm / 2,5m Wood Crossarm	Each	R		431.25
13.6	D-DT-1745	3 Phase - Delta 2 x 2,5m Wood Crossarm / 1700 Steel Crossarm	Each	R		470.78
13.7	D-DT-1745	3 Phase - Delta 2 x 2,5m Wood Crossarm / 2 x 2,5m Wood Crossarm	Each	R		470.78
13.8	D-DT-1745	3 Phase - Delta 1 x 2,5m Wood Crossarm / 1700 Steel Crossarm	Each	R		470.78
13.9	D-DT-1745	3 Phase - Delta 2,5m Wood Crossarm 2,5m Wood Crossarm	Each	R		470.78
13.10	D-DT-1784	3 Phase - Trips	Each	R		847.40
13.11	D-DT-1788	MV Heavy Conductor - 22kV 3 Phase - Vertical 800mm Spacing	Each	R		470.78
13.12	D-DT-1791	MV Heavy Conductor - 22kV 3 Phase - Vertical 800mm Spacing (Double Wood Poles)	Each	R		862.50
13.13	D-DT-1792	MV Heavy Conductor - 22kV 3 Phase - Vertical 800mm Spacing (Double Wood Poles)	Each	R		862.50
13.14	D-DT-1873	3 Phase - H-Pole / 2 x 4.5m Wooden Crossarm	Each	R		819.16
13.15	1715	3 Phase - Vertical (600mm Spacing) Strain - Large(30-90°) Deviation Rx	Each	R		237.27
13.16	1745	3 Phase - Delta / 2 x 2,5m wood x-arms/1700 WOOD x-arm - strain - (60° - 90°) deviation-RX	Each	R		470.78
13.17	1745	3 Phase - Delta / 2 x 2,5m wood x-arms/ 3x2.5 wood x-arms - strain - (60° - 90°) deviation	Each	R		470.78
13.18	1745	3 Phase - Delta / 2 x 2,5m wood x-arms/ 3x2.5 wood x-arms - strain - (60° - 90°) deviation-RX	Each	R		470.78
13.19	1784	3 Phase – Trips – Strain - Large(1°-90°) Deviation (Front view) -RX	Each	R		847.40
13.20	1873	3 Phase H-pole /2X4.5m Wooden X-arm Strain Large (60-90°) Deviation Rx	Each	R		819.16
14		<b>Strainer - Terminal</b>				
14.1	D-DT-1706	3 Phase - Vertical (450mm Spacing)	Each	R		237.27
14.2	D-DT-1716	3 Phase - Vertical (600mm Spacing)	Each	R		207.61
14.3	D-DT-1736	3 Phase - Delta / 1,3m Steel Crossarm	Each	R		237.27
14.4	D-DT-1746	3 Phase - Delta / 2,5m Wood Crossarm	Each	R		266.93
14.5	D-DT-1749	3 Phase - Delta / 2 x 2,5m Wood Crossarm	Each	R		470.78
14.6	D-DT-1756	3 Phase - Delta / 4,5m Wood Crossarm	Each	R		470.78
14.7	D-DT-1766	3 Phase - H-pole / 3,5m Wood Crossarm	Each	R		470.78
14.8	D-DT-1769	3 Phase - H-pole / 2 x 3,5m Wood Crossarm	Each	R		819.16
14.9	D-DT-1776	3 Phase - H-pole / 4,5m Wood Crossarm	Each	R		376.62
14.10	D-DT-1779	3 Phase - H-pole / 2 x 4,5m Wood Crossarm	Each	R		819.16
14.11	D-DT-1789	MV Heavy Conductor - 22kV 3 Phase - Vertical 800mm Spacing	Each	R		470.78
14.12	D-DT-1796	MV Heavy Conductor - 22kV H-Pole Braced	Each	R		470.78
14.13	1746	3 Phase - Delta / 2,5m Wood X-arm - Strain – Terminal -RX	Each	R		277.41
14.14	1749	3 Phase - Delta / 2 x 2,5m Wood X-arm - Strain - Terminal -RX	Each	R		489.26
14.15	National Electrical Contractors Association 2021/12/02	3 Phase - Delta / 4,5m Wood X-arm - Strain – Terminal -RX	Each	R		489.26

BILL OF ACTIVITIES					RATE 2021	
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT			
14.16	1766	3 Phase - H-Pole / 3,5m Wood X-arm - Strain - Terminal -RX	Each	R		489.26
14.17	1769	3 Phase - H-Pole / 2 x 3,5m Wood X-arm - Strain - Terminal -RX	Each	R		851.31
14.18	1776	3 Phase - H-Pole / 4,5m Wood X-arm - Strain - Terminal -RX	Each	R		391.41
14.19	1779	3 Phase - H-Pole / 2 x 4,5m Wood X-arm - Strain - Terminal -RX	Each	R		851.31
14.20	1789	3 Phase - Vertical (800mm spacing) Strain - Terminal (10kN Wood Poles) Rx	Each	R		489.26
14.21	1716	3 Phase - Vertical (600mm Spacing) Strain - Terminal Rx	Each	R		215.76
14.22	1796	Heavy Conductor H-Pole Braced Terminal structure-RX	Each	R		489.26
14.23	1793	Heavy Conductor H-Pole Suspension Structure-RX	Each	R		489.26
14.24	1793	Heavy Conductor H-Pole Suspension Structure- With Spark Gap Device	Each	R		518.61
14.25	1793	Heavy Conductor H-Pole Suspension Structure- With Spark Gap Device-RX	Each	R		518.61
<b>15</b>		<b>Take-Off</b>				
15.1	D-DT-1800	3 Phase Take-Off - Vertical (450mm Spacing)	Each	R		207.61
15.2	D-DT-1801	3 Phase Take-Off - Vertical (600mm Spacing)	Each	R		207.61
15.3	D-DT-1803	3 Phase Take-Off - Delta / 1,3m Steel Crossarm	Each	R		207.61
15.4	D-DT-1804	3 Phase Take-Of - 2,5M Wooden Crossarm	Each	R		207.61
15.5	D-DT-1805	3 Phase Take-Of - 2 x 2,5M Wooden Crossarm	Each	R		376.62
15.6	D-DT-1806	3 Phase Take-Of - H-Pole 3,5M Wooden Crossarm	Each	R		329.55
15.7	D-DT-1807	3 Phase Take-Of - H-Pole 2 x 3,5M Wooden Crossarm	Each	R		376.62
15.8	D-DT-1808	3 Phase Take-Off - 1.7m Steel Crossarm (Fox)	Each	R		164.77
15.9	D-DT-1809	3 Phase Take-Off - 1.7m Steel Crossarm (Hare)	Each	R		164.77
15.10	1801	3 Phase Take-off - Vertical 600mm Spacing Rx	Each	R		207.61
15.11	1804	3 Phase Take-off - 2,5m Wooden X-arm-RX	Each	R		207.61
15.12	1805	3 Phase Take-off - 2 x 2,5m Wooden X-arm-RX	Each	R		376.62
15.13	1806	3 Phase Take-off - H-Pole (3,5m Wooden X-arm)-RX	Each	R		329.55
15.14	1807	3 Phase Take-off - H-Pole (2 x 3,5m Wooden X-arm) -RX	Each	R		376.62
15.15	(OU Specific Drawing No)	Erect goal posts, supply and erect temporary structures and traffic signs and regulate traffic during construction for all <b>road crossings/railways crossings</b> . (This includes any loss of production during road crossings and ensuring that access is maintained to roads and properties as well as any fees by Prov. Traffic Dept)	Each	R		2 965.84
<b>SUB-TOTAL E</b>						
<b>F</b>		<b>ASSEMBLE MV STAYS</b>				
Supply and install stays, flying stays, struts Hip Stay including backfilling & compaction (cement measured elsewhere). Accessories include staywire, stayrods, stay plates, soil anchors, stay insulators, guy grips stay mounting brackets, mounting hardware, anti climbing devices, stayguards and danger labels. Poles and excavations are measured elsewhere. The installation and erection of strut poles are measured here. All hardware purchased will be paid elsewhere as cost plus fee.						
1.1	D-DT-0341	Make-Off Conventional Stay	Each	R		348.61
1.2	D-DT-0343	Make-Off Flying Stay	Each	R		416.12
1.3	D-DT-0342/0351	Make-Off Strut Pole	Each	R		308.96
1.4	D-DT-0344	Hip Stay	Each	R		545.47
1.5	0357 (Sh 1 of 3)	LV/MV-ROCK ANCHOR INSTALLATION (EXPANDABLE SHELL & RESIN TYPE)	Each	R		245.75
1.6	0357 (Sh 2 of 3)	LV/MV-ROCK ANCHOR INSTALLATION (2 EYED ROD AND PIN TYPE)	Each	R		196.60
1.7	0357 (Sh 3 of 3)	MV- SOFT ROCK ANCHOR INSTALLATION	Each	R		196.60
<b>SUB-TOTAL F</b>						
<b>G</b>		<b>ASSEMBLE SINGLE PHASE LV STRUCTURES</b>				
Supply and erect LV support structures as per Eskom DDT 1100 (use insulated/bare neutral ABC). Auxiliary equipment such as strain clamps, suspension clamps, cable ties, IPC's , end caps, LV shackle insulators, binding wires, D brackets, dead end preforms, threaded rods, pigtail bolts, eye nuts, terminations to be included. Pole, stay and strut material and excavations are measured elsewhere. All hardware purchased will be paid elsewhere as cost plus fee.A436						
<b>1</b>		<b>A. List of single-phase ABC wood pole</b>				
1.1	1153	LV 1 phase insulated/bare neutral ABC Suspension Assembly (0°- 30°)	Each	R		73.39
1.2	1154	LV 1 phase insulated/bare neutral ABC Terminal Assembly	Each	R		97.85
1.3	1155	LV 1 phase insulated/bare neutral ABC Strain Assembly (0°- 60°)	Each	R		97.85
1.4	1156	LV 1 phase insulated/bare neutral LV 2 phase bare neutral (60°- 90°)	Each	R		97.85
1.5	1157	LV 1 phase insulated/bare neutral ABC T from Intermediate	Each	R		97.85
1.6	1158	LV 1 phase insulated/bare neutral ABC Cross Intermediate Suspension Assembly	Each	R		122.31
1.7	1159	LV 1 phase insulated/bare neutral ABC T from Strain	Each	R		146.78
1.8	1160	LV 1 phase insulated/bare neutral ABC X Intermediate-Strain Assembly	Each	R		171.24
1.9	1161	LV - 1 PHASE BARE NEUTRAL ABC INLINE FUSE UNIT ASSEMBLY WOOD POLE	Each	R		171.24
<b>ASSEMBLE DUAL PHASE LV STRUCTURES</b>						
Supply and erect LV support structures as per Eskom DDT 1100(only use insulated neutral ABC). Auxiliary equipment such as strain clamps, suspension clamps, cable ties, IPC's , end caps, LV shackle insulators, binding wires, D brackets, dead end preforms, threaded rods, pigtail bolts, eye nuts, terminations to be included. Pole, stay and strut material and excavations are measured elsewhere. All hardware purchased will be paid elsewhere as cost plus fee.A436						
<b>2</b>		<b>B. List of Dual - phase ABC wood pole</b>				
2.1	1145	LV 2 phase insulated/bare neutral ABC Suspension Assembly (0°- 30°)	Each	R		73.39
2.2	1146	LV 2 phase insulated/bare neutral LABC Terminal Assembly	Each	R		97.85
2.3	1147	LV 2 phase insulated/bare neutral ABC Strain Assembly (0° - 60°)	Each	R		97.85
2.4	1148	LV 2 phase insulated/bare neutral ABC Strain Assembly (60° - 90°)	Each	R		97.85
2.5	1149	LV 2 phase insulated/bare neutral ABC T from Intermediate	Each	R		97.85
2.6	1150	LV 2 phase insulated/bare neutral ABC Intermediate Suspension Assembly	Each	R		122.31
2.7	1151	LV 2 phase insulated/bare neutral ABC T from Strain	Each	R		146.78
2.8	1152	LV 2 phase insulated/bare neutral ABC X Intermediate-Strain Assembly	Each	R		171.24
<b>ASSEMBLE 3 PHASE LV STRUCTURES</b>						
Supply and erect LV support structures as per Eskom DDT 1100 ( use insulated/bare neutral ABC). Auxiliary equipment such as strain clamps, suspension clamps, cable ties, IPC's , end caps, LV shackle insulators, binding wires, D brackets, dead end preforms, threaded rods, pigtail bolts, eye nuts, terminations to be included. Pole, stay and strut material and excavations are measured elsewhere. All hardware purchased will be paid elsewhere as cost plus fee.A436						

BILL OF ACTIVITIES					RATE 2021	
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT			
<b>3</b>		<b>A. List of 3-phase ABC wood pole</b>				
3.1	D-DT-1100	LV - 3 Phase insulated/bare neutral ABC Suspension Assembly 0-30 Deg.	Each	R		91.80
3.2	D-DT-1121	LV - 3 Phase insulated/bare neutral ABC Strain Assembly 0-60 Deg.	Each	R		122.40
3.3	D-DT-1122	LV - 3 Phase insulated/bare neutral ABC Strain Assembly 60-90 Deg.	Each	R		122.40
3.4	D-DT-1120	LV - 3 Phase insulated/bare neutral ABC Terminal Assembly	Each	R		122.40
3.5	D-DT-1140	LV - 3 Phase insulated/bare neutral ABC T-Off Assembly from Intermediate	Each	R		122.40
3.6	D-DT-1141	LV - 3 Phase insulated/bare neutral ABC Cross Intermediate - Intermediate Assembly	Each	R		153.00
3.7	D-DT-1142	LV - 3 Phase insulated/bare neutral ABC T-Off Assembly From Strain	Each	R		183.60
3.8	D-DT-1143	LV - 3 Phase insulated/bare neutral ABC Cross Intermediate - Strain Assembly	Each	R		214.20
<p>Supply and erect LV support structures as per Eskom DDT 1100. Auxiliary equipment such as strain clamps, suspension clamps, cable ties, IPC's , end caps, LV shackle insulators, binding wires, D brackets, dead end preforms, threaded rods, pigtail bolts, eye nuts, terminations to be included. Pole, stay and strut material and excavations are measured elsewhere. All hardware purchased will be paid elsewhere as cost plus fee.A436</p>						
<b>4</b>		<b>D. List of three-phase Bare Wire wood pole</b>				
4.1	0920	LV 3phase Bare Wire Suspension Assembly 0 Deg	Each	R		124.18
4.2	0921	LV 3phase Bare Wire in-line Strain Assembly	Each	R		124.18
4.3	0922	LV 3 phase Bare Wire 1-100 Deg Angle Assembly	Each	R		124.18
4.4	0924	LV 3 phase Bare Wire Terminal Assembly	Each	R		124.18
4.5	0925	LV 3 phase Bare Wire T-Off Assembly from Intermediate	Each	R		124.18
4.6	0926	LV 3 phase Bare Wire Intermediate Right Angle Crossing	Each	R		198.68
4.7	0927	LV 3 phase Bare Wire T-Off Assembly from Strain	Each	R		124.18
4.8	0928	LV 3 phase Bare Wire Cable Connection	Each	R		124.18
4.9	0929	LV 3 phase Bare Wire Service Distribution Box Connection	Each	R		99.34
4.10	0932	LV 3 phase Bare Wire Open Wire/ABC Connection	Each	R		124.18
4.11	0934	LV 3 phase Bare Wire Intermediate Strain Crossing	Each	R		173.85
4.12	0935	LV 3 phase Bare Wire Strain-Strain Crossing	Each	R		198.68
<b>ASSEMBLE DUAL - PHASE LV STRUCTURES</b>						
<p>Supply and erect LV support structures as per Eskom DDT 1100. Auxiliary equipment such as strain clamps, suspension clamps, cable ties, IPC's , end caps, LV shackle insulators, binding wires, D brackets, dead end preforms, threaded rods, pigtail bolts, eye nuts, terminations to be included. Pole, stay and strut material and excavations are measured elsewhere. All hardware purchased will be paid elsewhere as cost plus fee.A436</p>						
<b>5</b>		<b>E. List of Dual - phase Bare Wire Wood pole</b>				
5.1	0940	LV 2phase Bare Wire Suspension Assembly 0 Deg	Each	R		99.34
5.2	0941	LV 2phase Bare Wire in-line Strain Assembly	Each	R		99.34
5.3	0942	LV 2 phase Bare Wire 1-100 Deg Angle Assembly	Each	R		99.34
5.4	0944	LV 2 phase Bare Wire Terminal Assembly	Each	R		99.34
5.5	0945	LV 2phase Bare Wire T-Off Assembly from Intermediate	Each	R		99.34
5.6	0946	LV 2phase Bare Wire Intermediate Right Angle Crossing	Each	R		198.68
5.7	0947	LV 2 phase Bare Wire T-Off Assembly from Strain	Each	R		99.34
5.8	0948	LV 2 phase Bare Wire Cable Connection	Each	R		99.34
5.9	0949	LV 2 phase Bare Wire Service Distribution Box Connection	Each	R		74.51
5.10	0950	LV 2 phase Bare Wire Open Wire/ABC Connection	Each	R		99.34
5.11	0951	LV 2 phase Bare Wire Intermediate Strain Crossing	Each	R		149.01
5.12	0952	LV 2 phase Bare Wire Strain-Strain Crossing	Each	R		173.85
<b>ASSEMBLE SINGLE - PHASE LV STRUCTURES</b>						
<p>Supply and erect LV support structures as per Eskom DDT 1100. Auxiliary equipment such as strain clamps, suspension clamps, cable ties, IPC's , end caps, LV shackle insulators, binding wires, D brackets, dead end preforms, threaded rods, pigtail bolts, eye nuts, terminations to be included. Pole, stay and strut material and excavations are measured elsewhere. All hardware purchased will be paid elsewhere as cost plus fee.A436</p>						
<b>6</b>		<b>F. List of Single-phase Bare Wire wood pole</b>				
6.1	0960	LV 1phase Bare Wire Suspension Assembly 0 Deg	Each	R		49.67
6.2	0961	LV 1phase Bare Wire in-line Strain Assembly	Each	R		74.51
6.3	0962	LV 1 phase Bare Wire 1-100 Deg Angle Assembly	Each	R		74.51
6.4	0964	LV 1 phase Bare Wire Terminal Assembly	Each	R		74.51
6.5	0965	LV 1phase Bare Wire T-Off Assembly from Intermediate	Each	R		74.51
6.6	0966	LV 1phase Bare Wire Intermediate Right Angle Crossing	Each	R		173.85
6.7	0967	LV 1 phase Bare Wire T-Off Assembly from Strain	Each	R		74.51
6.8	0968	LV 1 phase Bare Wire Cable Connection	Each	R		74.51
6.9	0969	LV 1 phase Bare Wire Service Distribution Box Connection	Each	R		49.67
6.10	0970	LV 1phase Bare Wire Open Wire/ABC Connection	Each	R		74.51
6.11	0971	LV 1 phase Bare Wire Intermediate Strain Crossing	Each	R		149.01
6.12	0972	LV 1 phase Bare Wire Strain-Strain Crossing	Each	R		149.01
6.13	0980	LV Bare Wire - MV/LV Bare Wire Staying Technology	Each	R		49.67
6.14	0981	LV Bare Wire - LV Metering 3Phase, 2Phase and 1Phase Connections	Each	R		49.67
6.15	0982	LV Bare Wire - Eye Nut Assembly	Each	R		24.84
6.16	0983	LV Bare Wire - Binding Techniques	Each	R		24.84
<b>SUB-TOTAL G</b>						
<b>H</b>		<b>ASSEMBLE LV STAYS</b>				
<p>Supply and install stays, flying stays, struts Short Stay including backfilling &amp; compaction. Accessories include staywire, stayrods, stay plates, soil anchors, stay insulators, guy grips stay mounting brackets, mounting hardware, anti climbing devices, stayguards and danger labels. Poles and excavations are measured elsewhere. The installation and erection of strut poles are measured here. All hardware purchased will be paid elsewhere as cost plus fee.</p>						
1.1	D-DT-0341	Make-Off Conventional Stay	Each	R		331.17
1.2	D-DT-0343	Make-Off Flying Stay	Each	R		395.33
1.3	D-DT-0342/0351	Make-Off Strut Pole	Each	R		293.52
1.4	D-DT-0344	Make-Off Short Strut Pole	Each	R		293.52
<b>SUB-TOTAL H</b>						
<b>I</b>		<b>POLE TOP BOX INSTALLATION</b>				
<p>Install on a wooden and/or concrete pole a pole mounted distribution box as specified complete with pole mounting brackets (including sealing), cable ties, PG clamps, miniature circuit breaker(s), neutral, phase and earth bars, insulated copper tails for connecting to LV ABC, insulation piercing connectors and factory installed cable openings. Included shall be the stainless steel strapping, buckles and terminations of the tails onto the LV ABC. Eskom D-DT standards as amended will apply.</p>						
1.1	D-DT-3236	2 Way Steel Box for Split/Smart Metering	Each	R		260.00
1.2	D-DT-3236	4 Way Steel Box for Split/Smart Metering	Each	R		260.00
1.3	D-DT-3236	6 Way Steel Box for Split/Smart Metering	Each	R		260.00
1.3	D-DT-3236	8 Way Steel Box for Split/Smart Metering	Each	R		260.00
1.4	National Electrification Board Reg 10221/19/92	BOX,POLE TOP Split/Smart METER 2-WAY 50A D3055	Each	R	BOQ	260.00

BILL OF ACTIVITIES					RATE 2021	
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT			
1.5	3055	BOX,POLE TOP Split/Smart METER 4-WAY 50A D3055	Each	R		260.00
1.6		BOX,POLE TOP Split/Smart METER 6-WAY 50A D3055	Each	R		260.00
1.7	3055	BOX,POLE TOP Split/Smart METER 2-WAY 40A D3055	Each	R		260.00
1.8	3055	BOX,POLE TOP Split/Smart METER 8-WAY 50A D3055	Each	R		260.00
1.9	D-DT-0338	LV Services Ground (Cross arm) Mounted Small Power User Outdoor Supply	Each	R		260.00
1.10	D-DT-0338	LV Services Pole (H-Pole F Bracket) mounted Large Power User Outdoor Supply	Each	R		260.00
1.11	D-DT-0338	LV Services Pole Mounted Small Power User Outdoor Supply	Each	R		260.00
1.12	D-DT-0338	LV Services Ground Mounted LPU Outdoor Supply	Each	R		260.00
1.13	D-DT-0338	LV Services Ground (Cross Arm) Mounted SPU outdoor Supply (Away From Transformer)	Each	R		260.00
1.14	D-DT-0338	LV Services Ground Mounted Large Power User < 200kVA Outdoor Supply (away from Transformer)	Each	R		260.00
1.15	D-DT-1042 & D-DT-3055	Box, pole top smart split meter 2-way 20A	Each	R		260.00
1.16	D-DT-1042 & D-DT-3056	Box, pole top smart split meter 2-way 60A	Each	R		260.00
1.17	D-DT-1043 & D-DT-3055	Box, pole top smart split meter 4-way 20A	Each	R		260.00
1.18	D-DT-1043 & D-DT-3056	Box, pole smart top split meter 4-way 60A	Each	R		260.00
1.19	D-DT-1043 & D-DT-3057	Box, pole top split meter 6-way 20A	Each	R		260.00
1.20	D-DT-1043 & D-DT-3058	Box, pole top split meter 6-way 60A	Each	R		260.00
1.21	D-DT-1045 & D-DT-3055	Box, pole top smart split meter 8-way 20A	Each	R		260.00
1.22	D-DT-1030	Kiosk meter: 1ph; 4.6 kVA; 2 way; secure; pole mount (20A)	Each	R		260.00
1.23	D-DT-1031	Kiosk meter: 1ph; 4.6 kVA; 4 way; secure; pole mount (20A)	Each	R		260.00
1.24	D-DT-1032	Kiosk meter: 1ph; 4.6 kVA; 6 way; secure; pole mount (20A)	Each	R		260.00
1.25	D-DT-1033	Kiosk meter: 1ph; 4.6 kVA; 8 way; secure; pole mount (20A)	Each	R		260.00
1.26	D-DT-1030	Kiosk meter: 1ph; 14 kVA; 2 way; secure; pole mount (60A)	Each	R		260.00
1.27	D-DT-1031	Kiosk meter: 1ph; 14 kVA; 4 way; secure; pole mount (60A)	Each	R		260.00
1.28	D-DT-1032	Kiosk meter: 1ph; 14 kVA; 6 way; secure; pole mount (60A)	Each	R		260.00
1.29	D-DT-1033	Kiosk meter: 1ph; 14 kVA; 8 way; secure; pole mount (60A)	Each	R		260.00
1.30	D-DT-6050	PADLOCK, ST LV MASTER KZN OU D6050 (ORANGE)	Each	R		325.00
<b>SUB-TOTAL I</b>						
<b>J</b>		<b>CONDUCTOR STRINGING (TENSION, REGULATE &amp; BIND IN)</b>				
Install Eskom issued marked conductor. Material quantity to allow for 5% sag in addition to actual conductor length quantity. Installation includes handling, stringing and final sagging. This will be for greased ungreased conductor						
1.1		Fox Conductor 1-Phase	m	R		3.76
1.2		Fox Full Tension Joint*	Each	R		92.20
1.3		Mink Conductor 1-Phase	m	R		3.76
1.4		Mink Full Tension Joint*	Each	R		92.20
1.5		Hare Conductor 1-Phase	m	R		3.76
1.6		Hare Full Tension Joint*	Each	R		92.20
1.7		Chickadee Conductor 1-Phase	m	R		15.80
1.8		Chickadee Full Tension Joint*	Each	R		173.82
1.9		Kingbird Conductor 1-Phase	m	R		15.80
1.10		Kingbird Full Tension Joint*	Each	R		173.82
1.11	3136	MV Bare AAAC Pine Greased	m	R		3.76
1.12		Pine Conductor Full Tension Joint	Each	R		92.20
1.13	3136	MV Bare AAAC Oak Greased	m	R		3.76
1.14		Oak Conductor Full Tension Joint	Each	R		92.20
1.15	3136	MV Bare AAAC 35mmsq Greased	m	R		3.76
1.16	0831	35mm sq. Full Tension Joint* 2 Core	Each	R		92.20
1.17	0831	35mm sq. Full Tension Joint* 3 Core	Each	R		138.80
1.18	0831	35mm sq. Full Tension Joint* 4 Core	Each	R		368.79
1.19	0800 series	70mm sq. Full Tension Joint* 4 Core	Each	R		92.20
1.20	3141	COND,ABC 2C XLPE 35SQ INS/Bare NEUT	m	R		2.30
1.21	3141	COND,ABC 3C XLPE 35SQ INS/Bare NEUT	m	R		2.45
1.22	3141	COND,ABC 4C XLPE 35SQ INS/Bare NEUT	m	R		3.26
1.23	3141	COND,ABC 3C XLPE 70SQ INS/Bare NEUT	m	R		2.45
1.24	3141	COND,ABC 4C XLPE 70SQ INS/Bare NEUT	m	R		3.26
1.25	3141	COND,ABC 4C XLPE 95SQ INS/Bare NEUT	m	R		4.43
<b>SUB-TOTAL J</b>						
<b>K</b>		<b>EQUIPMENT INSTALLATION</b>				

BILL OF ACTIVITIES					RATE 2021
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT		
Install Transformer/Recloser/Voltage Regulator/MV Metering Units as per relevant Eskom DDT 1800 Series Assembly Drawing and OU Specific SI Engineering Instructions. All Auxiliary Equipment to include Station and Distribution MV, LV Surge Arrestors, Control Boxes, Metering Kiosks, Jumper Terminations, Anti Climbing Devices, LDPE Pipe Covered Jumpers as per 02TB-023 and Danger Labels, Channel Irons, Cradles, Standoff Insulators, Conductor Busbars and suitable Equipment Labels & X Arms. Pole Planting, Stays, Struts, Isolators Earthing Material and Excavations are elsewhere measured. Transformers/Reclosers/Voltage Regulators and MV Metering Units will be Eskom Free Issue Material. Main Line Structures and Auxiliary Equipment are elsewhere measured. All material purchased will be paid elsewhere as cost plus fee.					
<b>1</b>		<b>Transformers</b>			
1.1	D-DT-1862	Install 5-Pole Double Platform Mounted Transformer Structure	Each	R	2 695.31
1.2	D-DT-1863	Install 2-Pole Platform Mounted Transformer Structure	Each	R	2 432.29
1.3	D-DT-1864	Install 5-Pole Double Platform Mounted Transformer Structure (Out of Line)	Each	R	3 678.75
1.4	D-DT-1865	Install 2-Pole Platform Mounted Transformer Structure (Out of Line)	Each	R	2 432.29
1.5	D-DT-1865B	Transformer - Out- of- Line 100kVA to 200kVA	Each	R	2 432.29
1.6	D-DT-1866	Install Single Pole Mounted Out of Line Transformer Structure (Out of Line)	Each	R	2 138.86
1.7	D-DT-1866B	Transformer - Out- of- Line 16kVA to 100kVA/64kVA	Each	R	2 138.86
1.8	D-DT-3021	Relocate - 300-500kVA x 3-Phase	Each	R	8 208.93
1.9	D-DT-3021	Install Transformer - 300-500kVA x 3-Phase	Each	R	6 616.12
1.10	D-DT-3021	Relocate - 200kVA x 3-Phase	Each	R	3 987.89
1.11	D-DT-3021	Install Transformer - 200kVA x 3-Phase	Each	R	2 432.29
1.12	D-DT-3021	Relocate - 100kVA x 3-Phase	Each	R	3 987.89
1.13	D-DT-3021	Install Transformer - 100kVA x 3-Phase	Each	R	2 432.29
1.16	D-DT-3021	Relocate - 50kVA x 3-Phase	Each	R	2 463.41
1.17	D-DT-3021	Install Transformer - 50kVA x 3-Phase	Each	R	2 138.86
1.18	D-DT-3021	Relocate - 25kVA x 3-Phase	Each	R	2 463.41
1.19	D-DT-3021	Install Transformer - 25kVA x 3-Phase	Each	R	2 138.86
1.20	D-DT-3021	Relocate Transformer - 16kVA x 1-Phase	Each	R	2 463.41
1.22	D-DT-3021	Install Transformer - 16kVA x 1-Phase	Each	R	2 138.86
1.23		Install Labels (Chromadek)	Each	R	462.33
1.24	1860	Transformer - 5-100kVA Single Pole Mounted	Each	R	1 647.22
1.25	1861	TRANSFORMER - 100-200kVA / 2-POLE PLATFORM MOUNTED (H-POLE) GENERAL ARRANGEMENT	Each	R	1 709.61
1.26	D-FS 14414	TRANSFORMER - 100-200kVA / 2-POLE PLATFORM MOUNTED (H-POLE) GENERAL ARRANGEMENT	Each	R	1 709.61
1.27		Install 2.5/3.5cross arm on H-Pole with 3x Post insulators. For very long jumpers.	Each	R	256.84
<b>2</b>		<b>Transformer MV Protection</b>			
2.1	D-DT-1849	Equipment Links Cut-Outs Or Disconnectors 2.5m Wood Crossarm / Single Pole	Each	R	425.63
2.2	D-DT-1850	Section / Equipment Links Or Disconnectors 1.3m Steel Crossarm / Single Pole	Each	R	425.63
2.3	D-DT-1869	Section / Equipment Links Cut/Out Or Disconnectors 1.7m Steel Crossarm/Single Pole	Each	R	255.38
2.4	D-DT-0261	Install Surge Arresters (3-phase)	Each	R	344.71
2.5		Supply and Install all Labels per structure, excludes pole aluminium label (Chromadek)	Each	R	462.33
<b>3</b>		<b>Transformer LV Protection</b>			
3.1	D-DT-0309	80A Morsdorf Type Fuses - 3-Phase	Set	R	188.52
3.2	D-DT-0309	125A Morsdorf Type Fuses - 3-Phase	Set	R	377.07
3.3	D-DT-0309	160A Morsdorf Type Fuses - 3-Phase	Set	R	377.07
3.4	D-DT-3034	150A MCCB - 3-Phase(Circuit breaker)	Each	R	377.07
3.5	D-DT-3034	300A MCCB - 3-Phase(Circuit breaker)	Each	R	412.95
3.6	0309	Three phase trf and LV fuse holder connection - ABC conductor- 40A NH00	Set	R	111.06
3.7	0309	Three phase trf and LV fuse holder connection - ABC conductor- 63A NH00	Set	R	111.06
3.8	0309	Dual phase trf and LV fuse holder connection - ABC conductor- 40A NH00	Set	R	111.06
3.9	0309	Dual phase trf and LV fuse holder connection - ABC conductor- 63A NH00	Set	R	111.06
3.10	0309	Dual phase trf and LV fuse holder connection - ABC conductor- 80A NH00	Set	R	188.52
3.11	0309	Dual phase trf and LV fuse holder connection - ABC conductor- 125A NH00	Set	R	377.07
3.12	0309	Dual phase trf and LV fuse holder connection - ABC conductor- 160A NH00	Set	R	377.07
3.13	0309	Single phase trf and LV fuse holder connection - ABC conductor- 40A NH00	Set	R	111.06
3.14	0309	Single phase trf and LV fuse holder connection - ABC conductor- 63A NH00	Set	R	111.06
3.15	0309	Single phase trf and LV fuse holder connection - ABC conductor- 80A NH00	Set	R	188.52
3.16	0309	Single phase trf and LV fuse holder connection - ABC conductor- 125A NH00	Set	R	377.07
3.17	0309	Single phase trf and LV fuse holder connection - ABC conductor- 160A NH00	Set	R	377.07
3.18		Install Data Concentrator (Complete)	Each	R	120.00
3.19		Supply and Install all Labels per structure, excludes pole aluminium label (Chromadek) To maximum of 3 LV feeders	Each	R	462.33
3.18		Gateway/Data Concentrators (DCU) + Internal/Plug-in GSM Modem	Each	R	120.00
3.19		Gateway/Data Concentrators (DCU) + External GSM Modem	Each	R	120.00
3.20	D-DT-1034	Kiosk meter: 1ph; RAT/DC; secure; pole mount	Each	R	120.00
<b>4</b>		<b>Pole Mounted Sectionalizer</b>			
4.1	D-DT-1821	Install Sectionalizer Structure	Each	R	955.69
4.2	D-DT-1828	Install Sectionalizer - Out-Of-Line Structure	Each	R	1 433.53
4.3	D-DT-1821	Install Sectionalizer	Each	R	1 433.53
4.4	D-DT-1848	Section Links Cut/Outs Or Disconnectors 2.5m Wood Crossarm / Single Pole	Each	R	255.38
4.5	D-DT-1852	Equipment Links - Cut-Outs Or Disconnectors - 3.5/4.5m Wood Crossarm / H-Pole	Each	R	425.63

BILL OF ACTIVITIES					RATE 2021
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT		
4.6	D-DT-1853	Equipment Isolating (In-Out) Links - Cut-Outs Or Disconnectors - 2 x 2.5m Wood Crossarm / H-Pole	Each	R	766.13
4.7	D-DT-1854	Equipment Isolating (In-Out) Links - Cut-Outs Or Disconnectors - 4.5m Wood Crossarm / Out-Of-Line	Each	R	766.13
4.8	D-DT-1857	3 Phase Switch Disconnecter Ganged, Link Stick Operated Horizontal Assembly H-Pole 1800 And 2200 Centres	Each	R	510.75
4.9	D-DT-1858	3 Phase Switch Disconnecter Ganged, Link Stick Operated Assembly Single Pole Mounted	Each	R	510.75
4.10	D-DT-1875	Equipment Isolating (In-Out) Links Cut/Outs Or Disconnectors 2x2.4m Steel Crossarm / H-Pole	Each	R	766.13
4.11	D-DT-0261	Install Surge Arresters	Each	R	344.71
4.12		Supply and Install all Labels per structure, excludes pole aluminium label (Chromadek)	Each	R	462.33
<b>5</b>		<b>Pole Mounted Recloser</b>			
5.1	D-DT-1825	Install Recloser Structure	Each	R	1 464.76
5.2	D-DT-1829	Install Recloser - Out-Of-Line Structure	Each	R	1 674.00
5.3	D-FS-15735	Install Recloser Structure	Each	R	1 464.76
5.4	D-FS-15688	Install Recloser Structure	Each	R	1 464.76
5.5	3249	Install Recloser Aux Supply Box	Each	R	260.00
5.6	D-DT-0272	Install Recloser On Existing Structure	Each	R	1 674.00
5.7	D-DT-1848	Section Links Cut/Oots Or Disconnectors 2.5m Wood Crossarm / Single Pole	Each	R	255.38
5.8	D-DT-1852	Equipment Links - Cut-Outs Or Disconnectors - 3.5/4.5m Wood Crossarm / H-Pole	Each	R	425.63
5.9	D-DT-1853	Equipment Isolating (In-Out) Links - Cut-Outs Or Disconnectors - 2 x 2.5m Wood Crossarm / H-Pole	Each	R	766.13
5.10	D-DT-1854	Equipment Isolating (In-Out) Links - Cut-Outs Or Disconnectors - 4.5m Wood Crossarm / Out-Of-Line	Each	R	766.13
5.11	D-DT-1857	3 Phase Switch Disconnecter Ganged, Link Stick Operated Horizontal Assembly H-Pole 1800 And 2200 Centres	Each	R	510.75
5.12	D-DT-1858	3 Phase Switch Disconnecter Ganged, Link Stick Operated Assembly Single Pole Mounted	Each	R	510.75
5.13	D-DT-1875	Equipment Isolating (In-Out) Links Cut/Outs Or Disconnectors 2x2.4m Steel Crossarm / H-Pole	Each	R	766.13
5.14	D-DT-0270	Install Auxiliary Transformer	Each	R	2 138.86
5.15	D-DT-0261	Install Surge Arresters	Each	R	344.71
5.16		Supply and Install all Labels per structure, excludes pole aluminium label (Chromadek)	Each	R	462.33
5.17	D-DT-1829B	Recloser structure – General arrangement (INCLUDING PMRTV) (sheet 1 of 2) (Bypass structure not included)	Each	R	1 950.04
<b>6</b>		<b>Voltage Regulator</b>			
6.1	D-DT-1830	Install Voltage Regulator - 11/22kV 100/200A Open Delta Structure	Each	R	1 989.75
6.2	D-DT-1831	Install Voltage Regulator - 11/22kV 100/200A Closed Delta Structure	Each	R	1 989.75
6.3	D-DT-1833	Install Voltage Regulator - 11/22kV 100/200A Open Delta - Out-Of-Line Structure	Each	R	2 274.00
6.4	1833B	Regulator - 100 / 200A Open Delta – General Arrangement (sheet 1 of 3)	Each	R	2 648.98
6.5	D-DT-1834	Install Voltage Regulator - 11/22kV 100/200A Closed Delta - Out-Of-Line Structure	Each	R	2 274.00
6.6	1834B	Regulator - 100 / 200A Closed Delta - General Arrangement (Sheet 1 of 2)	Each	R	2 648.98
6.7	D-DT-3119	Install Voltage Regulator On Existing Structure	Each	R	2 648.98
6.8	D-DT-1848	Section Links Cut/Oots Or Disconnectors 2.5m Wood Crossarm / Single Pole	Each	R	255.38
6.9	D-DT-1851	Equipment Links - Cut-Outs Or Disconnectors - 2.5m Wood Crossarm / H-Pole	Each	R	255.38
6.10	D-DT-1852	Equipment Links - Cut-Outs Or Disconnectors - 3.5/4.5m Wood Crossarm / H-Pole	Each	R	425.63
6.11	D-DT-1854	Equipment Isolating (In-Out) Links - Cut-Outs Or Disconnectors - 4.5m Wood Crossarm / Out-Of-Line	Each	R	425.63
6.12	D-DT-1857	3 Phase Switch Disconnecter Ganged, Link Stick Operated Horizontal Assembly H-Pole 1800 And 2200 Centres	Each	R	510.75
6.13	D-DT-1858	3 Phase Switch Disconnecter Ganged, Link Stick Operated Assembly Single Pole Mounted	Each	R	510.75
6.14	D-DT-1874	Equipment Links Or Disconnectors 2.4m Steel Crossarm / H-Pole	Each	R	766.13
6.15	D-DT-0261	Install Surge Arresters	Each	R	344.71
6.16		Supply and Install all Labels per structure, excludes pole aluminium label (Chromadek)	Each	R	462.33
<b>7</b>		<b>Pole Mounted CT-VT Unit</b>			
7.1	D-DT-1839	Install MV CT / VT Metering Bulk Tariff Out-Of-Line Structure	Each	R	1 674.00
7.2	D-DT-1840	Install MV CT / VT Metering Bulk Tariff In Line Structure	Each	R	1 674.00
7.3	D-DT-1841	Install CT/VT Metering Statistical Structure	Each	R	1 989.75
7.4	D-DT-1846	Install CT/VT Metering Statistical Out-Of-Line Structure	Each	R	1 989.75
7.5	D-DT-3118	Install CT/VT unit	Each	R	2 274.00
7.6	D-DT-1848	Section Links Cut/Oots Or Disconnectors 2.5m Wood Crossarm / Single Pole	Each	R	255.38
7.7	D-DT-1850	Section / Equipment Links Or Disconnectors 1.3m Steel Crossarm / Single Pole	Each	R	194.04
7.8	D-DT-1852	Equipment Links - Cut-Outs Or Disconnectors - 3.5/4.5m Wood Crossarm / H-Pole	Each	R	425.63
7.9	D-DT-1853	Equipment Isolating (In-Out) Links - Cut-Outs Or Disconnectors - 2 x 2.5m Wood Crossarm / H-Pole	Each	R	766.13
7.10	D-DT-1854	Equipment Isolating (In-Out) Links - Cut-Outs Or Disconnectors - 4.5m Wood Crossarm / Out-Of-Line	Each	R	425.63
7.11	D-DT-1857	3 Phase Switch Disconnecter Ganged, Link Stick Operated Horizontal Assembly H-Pole 1800 And 2200 Centres	Each	R	510.75
7.12	D-DT-1858	3 Phase Switch Disconnecter Ganged, Link Stick Operated Assembly Single Pole Mounted	Each	R	510.75
7.13	D-DT-1875	Equipment Isolating (In-Out) Links Cut/Outs Or Disconnectors 2x2.4m Steel Crossarm / H-Pole	Each	R	766.13
7.14	D-DT-3236	Install CT/VT Metering Kiosk	Each	R	144.82
7.15	D-DT-0261	Install Surge Arresters	Each	R	344.71
7.16		Supply and Install all Labels per structure, excludes pole aluminium label (Chromadek)	Each	R	462.33
<b>8</b>		<b>Pole Mounted Shunt Capacitor Banks</b>			

BILL OF ACTIVITIES					RATE 2021
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT		
8.1	D-DT-1832	Install Capacitor Structure	Each	R	2 274.00
8.2	D-DT-3218	Install Capacitor Bank	Each	R	2 274.00
8.3	D-DT-1849	Equipment Links Cut-Outs Or Disconnectors 2.5m Wood Crossarm / Single Pole	Each	R	425.63
8.4	D-DT-1850	Section / Equipment Links Or Disconnectors 1.3m Steel Crossarm / Single Pole	Each	R	425.63
8.5	D-DT-0261	Install Surge Arresters	Each	R	344.71
8.6		Supply and Install all Labels per structure, excludes pole aluminium label (Chromadek)	Each	R	462.33
<b>9</b>		<b>Line Arrester</b>			
9.1		Install Equipment Links	Each	R	572.50
9.2	D-DT-1842	Line Arresters 1.3m Long Steel Crossarm Staggered Vertical Configuration	Each	R	344.71
9.3	D-DT-1843	Line Arresters 2.5m Long Wooden Crossarm Vertical Configuration	Each	R	344.71
9.4	D-DT-1844	Line Arresters H-Pole Configuration	Each	R	398.72
9.5	D-DT-1845	Line Arresters Delta Configuration	Each	R	344.71
9.6		Supply and Install all Labels per structure, excludes pole aluminium label (Chromadek)	Each	R	462.33
<b>10</b>		<b>3 Phase Sectional Links</b>			
10.1	D-DT-1847	Section Links Cut/Outs Or Disconnectors 3.5/4.5m Wood Crossarm / H-Pole	Each	R	425.63
10.2	D-DT-1848	Section Links Cut/Outs Or Disconnectors 2.5m Wood Crossarm / Single Pole	Each	R	255.38
10.3	D-DT-1850	Section / Equipment Links Or Disconnectors 1.3m Steel Crossarm / Single Pole		R	255.38
10.4	D-DT-1857	3 Phase Switch Disconnecter Ganged, Link Stick Operated Horizontal Assembly H-Pole 1800 And 2200 Centres	Each	R	510.75
10.5	D-DT-1858	3 Phase Switch Disconnecter Ganged, Link Stick Operated Assembly Single Pole Mounted	Each	R	510.75
10.6	D-DT-1869	Section / Equipment Links Cut/Out Or Disconnectors 1.7m Steel Crossarm/Single Pole	Each	R	255.38
10.7	D DT 3086	CUT - OUT (Single Phase)	Each	R	125.00
10.8		Supply and Install all Labels per structure, excludes pole aluminium label (Chromadek)	Each	R	462.33
<b>11</b>		<b>Bird Flight Diverter</b>			
11.1	D-DT-3029	Install Bird Flight Diverter	Each	R	7.00
<b>12</b>		<b>Miniature Substation</b>			
12.1		Prepare Site Including Excavation and Compaction for Pre-Cast Plinth	m <sup>2</sup>	R	347.56
12.2	D-DT-0859	Install Pre-Cast Plinth	Each	R	4 672.47
12.3	D-DT-0859	Install Miniature Substation	Each	R	2 005.76
12.4	D-DT-3034	MCCB - 3-Phase	Each	R	412.95
12.5		Vermin Proofing	Each	R	463.67
12.6		Stencilling (paint)	Each	R	17.70
12.7		Install Labels (Chromadek and Aluminium)	SET	R	462.33
12.8	D-DT-3409	Install Vertical Fuse Pillar	Each	R	225.00
12.9	D-DT-3181	Install NH02 Fuse	Each	R	225.00
<b>13</b>		<b>Ring Main Unit</b>			
13.1		Prepare Site Including Excavation and Compaction for Pre-Cast Plinth	m <sup>2</sup>	R	347.56
13.2	D-DT-0863	Install Pre-Cast Plinth	Each	R	2 359.72
13.3	D-DT-8060	Install Ring Main Unit	Each	R	1 415.83
13.4		Vermin Proofing	Each	R	463.67
13.5		Stencilling (paint)	p/letter	R	17.70
13.6		Install Labels (Chromadek)	Each	R	462.33
<b>14</b>		<b>Ground Mounted CT-VT Unit</b>			
14.1		Prepare Site Including Excavation and Compaction for Pre-Cast Plinth	m <sup>2</sup>	R	347.56
14.2	D-DT-0865	Install Pre-Cast Plinth	Each	R	2 359.72
14.3	D-DT-0865	Install CT-VT Unit	Each	R	1 002.88
14.4		Vermin Proofing	Each	R	463.67
14.5		Stencilling (paint)	p/letter	R	17.70
14.6		Install Labels (Chromadek)	Each	R	462.33
<b>15</b>		<b>Meter Kiosk</b>			
15.1		Prepare Site Including Excavation and Compaction for Pre-Cast Plinth	m <sup>2</sup>	R	347.56
15.2	D-DT-0865	Install Pre-Cast Plinth	Each	R	2 772.67
15.3	D-DT-0865	Install LPU Meter Kiosk	Each	R	144.82
15.4	D-DT-3236	4 Way High Risk Steel Kiosk	Each	R	711.33
15.5	D-DT-3236	6 Way High Risk Steel Kiosk	Each	R	711.33
15.6	D-DT-3236	8 Way High Risk Steel Kiosk	Each	R	711.33
15.7	D-DT-3236	12 Way High Risk Steel Kiosk	Each	R	711.33
15.8	D-DT-3236 / 1034	Data concentrator/RAT kiosk	Each	R	260.00
15.9		Energy Management Units (Meter)	Each	R	405.16
15.10		Vermin Proofing	Each	R	463.67
15.11		Stencilling (paint)	p/letter	R	17.70
15.12		Supply and Install all Labels per kiosk, excludes cable aluminium label (Chromadek)	Each	R	462.33
15.13	D-DT-1035	Kiosk meter: 1ph; 16 kVA; 2 way prepay; ground mount	Each	R	175.07
15.14	D-DT-1036	Kiosk meter: 1ph; 16 kVA; 4 way prepay; ground mount	Each	R	175.07
15.15	D-DT-1037	Kiosk meter: 1ph; 16 kVA; 6 way prepay; ground mount	Each	R	175.07
15.16	D-DT-1038	Kiosk meter: 1ph; 16 kVA; 8 way prepay; ground mount	Each	R	175.07
15.17	D-DT-1039	Kiosk meter: 1ph; 16 kVA; 12 way prepay; ground mount	Each	R	175.07
15.18	D-DT-1039	KSK MTR:1PH;16 KVA;12 WAY PREPAY NO BASE	Each	R	175.07
<b>SUB-TOTAL K</b>					
<b>L</b>		<b>EARTHING INSTALLATION</b>			
<b>MV &amp; LV Earthing Trenching shall include Excavation, Backfilling, Compaction and Installation of electrode and conductor as per the Eskom Standard for Earthing</b>					

BILL OF ACTIVITIES				RATE 2021
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT	
1		<b>Transformer - MV Earthing</b>		
1.1		Excavation - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R 147.48
1.2	D-DT-3139	16mm sq. Bare Stranded Cu Conductor	m	R 11.80
1.3	D-DT-3137	16mm sq. Insulated Stranded Cu Conductor	m	R 11.80
1.4	D-DT-3091	Earth Electrode (Type as per the design)	Each	R 247.77
1.5		Backfill - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R 120.35
2		<b>Transformer - LV Earthing</b>		
2.1		Excavation - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R 147.48
2.2	D-DT-3139	16mm sq. Bare Stranded Cu Conductor	m	R 11.80
2.3	D-DT-3137	16mm sq. Insulated Stranded Cu Conductor	m	R 11.80
2.4	D-DT-3091	Earth Electrode (Type as per the design)	Each	R 247.77
2.5		Backfill - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R 120.35
3		<b>Other Overhead System Equipment Earthing - Capacitor Bank / CT-VT Unit / Line Arrester / Recloser / Sectionalizer / Voltage Regulator</b>		
3.1		Excavation - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R 147.48
3.2	D-DT-3139	16mm sq. Bare Stranded Cu Conductor	m	R 11.80
3.3	D-DT-3137	16mm sq. Insulated Stranded Cu Conductor	m	R 11.80
3.4	D-DT-3091	Earth Electrode (Type as per the design)	Each	R 247.77
3.5		Backfill - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R 120.35
4		<b>Other Underground System Equipment Earthing - Miniature Substation / Ring Main Unit / CT-VT Unit</b>		
4.1		Excavation - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R 147.48
4.2	D-DT-3139	16mm sq. Bare Stranded Cu Conductor	m	R 11.80
4.3	D-DT-3091	Earth Electrode (Type as per the design)	Each	R 247.77
4.4		Backfill - length long, 0.5m deep and 0.6m wide	m <sup>3</sup>	R 120.35
<b>SUB-TOTAL - L</b>				
<b>M</b>		<b>SERVICE CONNECTION INSTALLATION</b>		
House Connections include installation of ready board, mounting hardware, wooden backboards, customer interface units, conduit pipe, excavations and backfilling of underground connection, capturing of customer data including GPS coordinates. Digging and bulleting for road crossing including installation of sleeves and warning tape are measured here				
1.1	D-DT-0360/361	Overhead service connection direct to dwelling or kicker pole(from the pole top box to the pre-paid meter)	Each	R 72.03
1.2	D-DT-0367	<b>Underground Service Connection</b>	Each	R 490.80
1.3		25mm Conduit LDPE Pipe	m	R 147.48
1.4	D-DT-0854	Excavation - 0.75m Deep and 0.45 Wide	m <sup>3</sup>	R 147.48
1.5		Road Crossing - Digging	m	R 926.19
1.6		Road Crossing - Bulleting	Each	R 421.59
1.7	D-DT-8018	Install Sleeves	m	R 4.72
1.8	D-DT-0854	Laying of Warning Tape	m	R 2.75
1.9	D-DT-0854	Backfill - 0.75m Deep and 0.45 Wide (includes laying of warning tape)	m <sup>3</sup>	R 120.35
2		<b>Split / Smart Metering</b>		
2.1	D-DT-3145	Customer Interface Unit	Each	R 35.00
2.2	D-DT-3176	Split Meter Ready-Board	Each	R 176.98
2.3	D-ST-2351	Wooden Backboard for Ready board mounting (for Tin and Mud houses)	Each	R 147.48
2.4		Split Meter Installation	Each	R 325.00
2.5		Smart meter installation (incl of all components)	each	R 325.00
2.6		Capture and Upload of Customer Data New & Existing Including GPS Coordinates	Each	R 9.72
2.7	D-DT-9421	DIN Rail Single Phase PLC Smart Split Meter with CIU 60A	Each	R 73.84
2.8	D-DT-9421	DIN Rail Single Phase PLC Smart Split Meter with CIU 20A	each	R 73.84
2.9		L&G smart split meter + CIU, single phase, din rail, 20A, PLC	each	R 325.00
2.10		L&G smart split meter + CIU, single phase, din rail, 60A, PLC	each	R 325.00
2.11		L&G data concentrator + internal GSM modem	each	R 120.00
2.12		3CR12 kiosk to secure the data concentrator, kiosk for mounting on pole	each	R 204.82
<b>SUB-TOTAL M</b>				
<b>N</b>		<b>Service Conductor Installation:</b> Accessories for Service Conductor installation shall include installation of pigtails, bolts, strain clamps, threaded rod, cable saddles, stringing of all types of service cable. Installation of poles and its accessories are measured elsewhere		
1	D-DT-3140	6mm sq Tinned Copper Airdac with Communication Core	m	R 2.14
2	D-DT-3128	16mm sq Underground	m	R 6.44
3	0366	Service suspension assembly	Each	R 24.46
4	0384	Service strain assembly/arrangement	Each	R 48.93
<b>SUB-TOTAL N</b>				
<b>O</b>		<b>Underground Cable Installation:</b> installation of underground cable include trenching for excavation in general trench, rail/road crossing or along the road, directional drilling & excavation for end pits, backfilling of trench, supply of accessories includes appropriate sleeves, supply & compaction of imported bedding and blanket soil, laying of warning tape and installation of cable route markers. Laying of cable shall be in accordance with Eskom standard of laying cables. After the execution of the works, reinstatement on gardens, pavements, driveways and tarred surfaces shall be measured here		
1		<b>Trenching</b>		
1.1	D-DT-0854	Excavation - General Trench - 1.0m Deep and 0.45m Wide	m <sup>3</sup>	R 147.48
1.2	D-DT-0854	Excavation - Rail/Road Crossing Trench - 1.6m Deep and 0.45m Wide	m <sup>3</sup>	R 147.48
1.3	D-DT-0854	Excavation - Along The Road Trench - 1.3m Deep and 0.45m Wide	m <sup>3</sup>	R 147.48
1.4		Install Barricading	m	R 41.30
1.5		Install Shoring	m	R 225.00
1.6	D-DT-0854	Compact Blanket Soil	m <sup>2</sup>	R 120.35
1.7	D-DT-0854	Sifted Soil - 0.25m High and 0.45m Wide	m <sup>3</sup>	R 120.35
1.8		Dispose of unused Excavated Material at approved disposal site	m <sup>3</sup>	R 245.00
1.9	D-DT-0854	Imported Soil - 0.25m High and 0.45m Wide	m <sup>3</sup>	R 383.45
2		<b>Road &amp; Rail Crossing</b>		
2.1		Directional Drilling ( <b>Supply Invoice + 5%</b> )	m	cost plus 5%
2.2		Excavate Start and End Pits	m <sup>3</sup>	R 147.48
2.3	National Electrification 2021/12/02	Supply and Install appropriate sleeve	Each	R 321.59

BILL OF ACTIVITIES					RATE 2021
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT		
2.4		Rail, river and Road -pipe jacking method including access holes, shoring as well as handling of equipment-(outsourced) <b>Supply Invoice + 5%</b>	m		cost plus 5%
<b>3</b>		<b>Road crossing trench import of backfill material and compaction</b>			
3.1	D-DT0854	Application of tar according to municipal standard - <b>Supply Invoice + 5%</b>	sum		cost plus 5%
3.2		Bedding soil for cable	m	R	13.21
3.3		Blanket soil for cable	m <sup>3</sup>	R	13.21
3.4		G5 filling for cable	m <sup>3</sup>	R	17.62
<b>4</b>		<b>Compacting Bedding Soil</b>			
4.1	D-DT-0854	Sifted Soil - 0.15m High and 0.45m Wide	m <sup>2</sup>	R	120.35
4.2	D-DT-0854	Imported Soil - 0.15m High and 0.45m Wide	m <sup>2</sup>	R	348.06
<b>5</b>		<b>Laying of Cable</b>			
5.1	D-DT-0854	Laying of 3-Core 50mm sq. MV Cable	m	R	17.70
5.2	D-DT-0854	Laying of 3-Core 95mm sq. MV Cable	m	R	40.00
5.3	D-DT-0854	Laying of 3-Core 185mm sq. MV Cable	m	R	65.00
5.4	D-DT-0854	Laying of 3-Core 300mm sq. MV Cable	m	R	120.00
5.5	D-DT-0854	Laying of 4-Core 16mm sq. LV Cable	m	R	17.70
5.6	D-DT-0854	8 way High Risk Steel Kiosk	m	R	17.70
5.7	D-DT-0854	Laying of 4-Core 35mm sq. LV Cable	m	R	17.70
5.8	D-DT-0854	Laying of 4-Core 50mm sq. LV Cable	m	R	17.70
5.9	D-DT-0854	Laying of 4-Core 70mm sq. LV Cable	m	R	35.00
5.10	D-DT-0854	Laying of 4-Core 120mm sq. LV Cable	m	R	58.00
5.11	D-DT-0854	Laying of 4-Core 185mm sq. LV Cable	m	R	65.00
5.12	D-DT-0854	Laying of 4-Core 240mm sq. LV Cable	m	R	120.00
<b>6</b>		<b>Compacting Blanket Soil</b>			
6.1	D-DT-0854	Sifted Soil - 0.25m High and 0.45m Wide	m <sup>2</sup>	R	120.35
6.2	D-DT-0854	Imported Soil - 0.25m High and 0.45m Wide	m <sup>2</sup>	R	348.06
<b>7</b>		<b>Backfilling of the Cable Trench</b>			
7.1	D-DT-0854	General Trench - 0.6m High and 0.45m Wide	m <sup>3</sup>	R	120.35
7.2	D-DT-0854	Rail/Road Crossing Trench - 1.2m High and 0.45m Wide	m <sup>3</sup>	R	120.35
7.3	D-DT-0854	Along The Road Trench - 0.9m High and 0.45m Wide	m <sup>3</sup>	R	120.35
7.4	D-DT-0854	Laying of Warning Tape	m	R	2.75
7.5	D-DT-8012	Installation of Cable Route Markers	Each	R	141.58
7.6		Re-instatement of Gardens	m <sup>2</sup>	R	225.49
7.7		Re-instatement of Pavements	m <sup>2</sup>	R	271.43
7.8		Re-instatement of Driveways	m <sup>2</sup>	R	1 728.49
7.9		Re-instatement of Tarred surfaces	m <sup>2</sup>	R	772.81
<b>SUB-TOTAL O</b>					
<b>P</b>		<b>MV/LV CABLE TERMINATION</b>			
Termination of cable shall be done in accordance with Eskom standard of terminating cables for the termination onto air-filled cable, termination onto overhead line cable in their deferent classifications. Termination material are free issue, unless otherwise ordered and/or specified by the Project Manger to supply all accessories on an as and when required basis as cost plus fee.					
<b>1</b>		<b>LV Cable Termination onto Air-Filled Cable Termination Enclosure</b>			
1.1		Install 2-Core 16mm sq. LV Bare Termination	Each	R	1 250.65
1.2		Install 4-Core 16mm sq. LV Bare Termination	Each	R	1 250.65
1.3		Install 4-Core 25mm sq. LV Bare Termination	Each	R	1 250.65
1.4		Install 4-Core 35mm sq. LV Bare Termination	Each	R	1 250.65
1.5		Install 4-Core 50mm sq. LV Bare Termination	Each	R	1 250.65
1.6		Install 4-Core 70mm sq. LV Bare Termination	Each	R	1 250.65
1.7		Install 4-Core 120mm sq. LV Bare Termination	Each	R	1 250.65
1.8		Install 4-Core 185mm sq. LV Bare Termination	Each	R	1 250.65
1.9		Install 4-Core 240mm sq. LV Bare Termination	Each	R	1 250.65
1.10		Install 3-Core 50mm sq. Shrouded Termination	Each	R	1 250.65
<b>2</b>		<b>MV Cable Termination onto Air-Filled Cable Termination Enclosure</b>			
2.1	D-DT-8011	Install 3-Core 50mm sq. Shrouded Termination	Each	R	1 250.65
2.2	D-DT-8006	Install 3-Core 50mm sq. Unscreened Separable Connector Termination	Each	R	1 592.81
2.3	D-DT-8006	Install 3-Core 50mm sq. Unscreened Separable Connector Extended Screen Termination	Each	R	1 592.81
2.4	D-DT-8006	Install 3-Core 50mm sq. Screened Separable Connector Termination	Each	R	1 592.81
2.5	D-DT-8011	Install 3-Core 95mm sq. Shrouded Termination	Each	R	1 250.65
2.6	D-DT-8006	Install 3-Core 95mm sq. Unscreened Separable Connector Termination	Each	R	1 592.81
2.7	D-DT-8006	Install 3-Core 95mm sq. Unscreened Separable Connector Extended Screen Termination	Each	R	1 592.81
2.8	D-DT-8006	Install 3-Core 95mm sq. Screened Separable Connector Termination	Each	R	1 592.81
2.9	D-DT-8011	Install 3-Core 185mm sq. Shrouded Termination	Each	R	1 250.65
2.10	D-DT-8006	Install 3-Core 185mm sq. Unscreened Separable Connector Termination	Each	R	1 592.81
2.11	D-DT-8006	Install 3-Core 185mm sq. Unscreened Separable Connector Extended Screen Termination	Each	R	1 592.81
2.12	D-DT-8006	Install 3-Core 185mm sq. Screened Separable Connector Termination	Each	R	1 740.29
2.13	D-DT-8011	Install 3-Core 300mm sq. Shrouded Termination	Each	R	1 250.65
2.14	D-DT-8006	Install 3-Core 300mm sq. Unscreened Separable Connector Termination	Each	R	1 592.81
2.15	D-DT-8006	Install 3-Core 300mm sq. Unscreened Separable Connector Extended Screen Termination	Each	R	1 592.81
2.16	D-DT-8006	Install 3-Core 300mm sq. Screened Separable Connector Termination	Each	R	1 740.29
<b>3</b>		<b>MV Cable Termination onto Overhead Line from Substation</b>			
3.1	D-DT-0850	Install 50mm sq O/D Termination	Each	R	892.92
3.2	D-DT-0851	Install 50mm sq O/D Termination	Each	R	892.92
3.3	D-DT-0850	Install 95mm sq O/D Termination	Each	R	892.92
3.4	D-DT-0851	Install 95mm sq O/D Termination	Each	R	892.92

BILL OF ACTIVITIES					RATE 2021
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT		
3.5	D-DT-0850	Install 185mm sq O/D Termination	Each	R	892.92
3.6	D-DT-0851	Install 185mm sq O/D Termination	Each	R	892.92
3.7	D-DT-0850	Install 300mm sq O/D Termination	Each	R	892.92
3.8	D-DT-0851	Install 300mm sq O/D Termination	Each	R	892.92
3.9	D-DT-1850	Install Equipment Links - 3-Phase	Each	R	892.92
3.10	D-DT-0261	Install Surge Arresters - 3-Phase	Each	R	344.71
3.11	D-DT-8023	Install a Steel Pipe	Each	R	294.96
<b>SUB-TOTAL P</b>					
<b>Q</b>		<b>CABLE JOINT</b>			
Cable joint bay shall be executed in accordance with Eskom standard of jointing cables in their different classifications. Joint bay materials including kits are free issue, unless otherwise ordered and/or specified by the Project Manger to supply all accessories on an as and when required basis and paid as cost plus fee. Excavations, compaction and backfilling of cable joints bay shall be measured here including supply of imported soil in bedding and blankets or sifted soil where specified.					
1.1	D-DT-0854	Excavate a Joint Bay	m <sup>3</sup>	R	147.48
1.2	D-DT-0854	Compact Bedding Soil	m <sup>2</sup>	R	120.35
1.3	D-DT-0854	Sifted Soil - 0.15m High and 0.45m Wide	m <sup>3</sup>	R	120.35
1.4		Dispose of Excavated Material at approved disposal site	m <sup>3</sup>	R	245.00
1.5	D-DT-0854	Imported Soil -0.15m High and 0.45m Wide	m <sup>3</sup>	R	348.06
1.6	D-DT-8008	Make-Off a Cable Joint - 3-Core 16mm sq MV Cable	Each	R	92.20
1.7	D-DT-8008	Make-Off a Cable Joint - 3-Core 50mm sq MV Cable	Each	R	92.20
1.8	D-DT-8008	Make-Off a Cable Joint - 3-Core 95mm sq MV Cable	Each	R	92.20
1.9	D-DT-8008	Make-Off a Cable Joint - 3-Core 185mm sq MV Cable	Each	R	92.20
1.10	D-DT-8008	Make-Off a Cable Joint - 3-Core 300mm sq MV Cable	Each	R	92.20
1.10	D-DT-8014	Make-Off a Cable Joint - 4-Core 16mm sq LV Cable	Each	R	92.20
1.10	D-DT-8014	Make-Off a Cable Joint - 4-Core 25mm sq LV Cable	Each	R	92.20
1.11	D-DT-8014	Make-Off a Cable Joint - 4-Core 35mm sq LV Cable	Each	R	92.20
1.12	D-DT-8014	Make-Off a Cable Joint - 4-Core 50mm sq LV Cable	Each	R	92.20
1.13	D-DT-8014	Make-Off a Cable Joint - 4-Core 70mm sq LV Cable	Each	R	92.20
1.13	D-DT-8014	Make-Off a Cable Joint - 4-Core 120mm sq LV Cable	Each	R	92.20
1.18	D-DT-8014	Make-Off a Cable Joint - 4-Core 185mm sq LV Cable	Each	R	92.20
1.19	D-DT-8014	Make-Off a Cable Joint - 4-Core 240mm sq LV Cable	Each	R	92.20
1.20	D-DT-0854	Backfill a Joint Bay	m <sup>3</sup>	R	120.35
1.21	D-DT-8012	Install a Route Marker	Each	R	141.58
<b>SUB-TOTAL Q</b>					
<b>R</b>		<b>EQUIPMENT DISMANTLING</b>			
Includes Cut Up, Coiling And Loading But Excludes Transport To The Nearest Eskom Stores					
1.1		Dismantle LV Conductor	m	R	4.72
1.2		Dismantle MV Conductor	m	R	4.72
1.3		Dismantle Service Cable	m	R	3.15
1.4		Dismantle MV Overhead Transformers	Each	R	412.95
1.5		Dismantle MV Overhead Sectionalizer	Each	R	412.95
1.6		Dismantle MV Overhead Reclosers	Each	R	412.95
1.7		Dismantle MV Pole Mounted CT-VT Unit	Each	R	412.95
1.8		Dismantle MV Pole Mounted Shunt Capacitor Banks	Each	R	412.95
1.9		Dismantle MV Line Arrestor	Each	R	397.67
1.10		Dismantle MV Overhead Section / Equipment Links	Each	R	397.67
1.11		Remove LV Pole Top Boxes	Each	R	355.64
1.12		Dismantle Stays - including removal and backfill	Each	R	261.12
1.13		Dismantle Poles - including removal and backfill	Each	R	240.33
1.14		Remove MV Cable, includes excavation and backfill	m	R	177.00
1.15		Remove LV Cable, includes excavation and backfill	m	R	177.00
1.16		Remove MV Cable I/D Terminations	Each	R	365.76
1.17		Remove MV Cable O/D Terminations	Each	R	365.76
1.18		Remove RMU	Each	R	2 949.65
1.19		Remove Minisub	Each	R	2 949.65
1.20		Remove Ground Mounted CT-VT Unit	Each	R	1 749.65
1.21		Remove LV Kiosks	Each	R	123.09
1.22		Remove Plinths	Each	R	1 849.65
1.23		Transport Of Dismantled/Decommissioned To Eskom Stores	KM	R	22.06
1.28		Removal of a post / pin insulator	Each	R	24.46
1.30		Removal of SPU unit with rails	Each	R	24.46
1.31		Removal of LPU unit ( indoor and outdoor)	No	R	24.46
1.33		Moving of pre-Paid Meter (Meter Shifting)	Each	R	73.39
1.39		Removal of ED / ECU	Each	R	74.86
1.41		AP4 Meter Box + Pipe	Each	R	112.28
1.42		Removal - complete of one Regulator can/voltage regulator	Each	R	131.37
1.43		Remove Label (Chromadec)	Each	R	65.87
<b>2</b>		<b>BIL &amp; BONDING</b>		R	-
2.1		Re-instate broken/damage bonding & BIL on existing structure	No	R	48.93
<b>SUB-TOTAL R</b>					
<b>S</b>		<b>LABELLING</b>			
Allow for the following end items to be applied as per relevant Eskom Instructions/Bulletins/Procedures and Standards where not already allowed for in Structure Package					
1.1		MV Pole Number	Each	R	17.70
1.2		LV Pole Number	Each	R	17.70
1.3		Meter Number	Each	R	17.70
1.4		House Number • 100 x 240mm x 0.6mm Yellow Chromadec plate with two pre-drilled 6mm holes (rust-free metal). • Fixed with two 6mm x 75mm nylon anchor or 6mm Zink bolt and 2x nuts. • All corners rounded. Clear powder coat finish. • Cast vinyl with 75mm Helvetica Compact script.	Each	R	17.70
<b>SUB-TOTAL S</b>					
<b>T</b>		<b>EQUIPMENT TESTING</b>			
Allowance shall be made for the complete testing and commissioning of Medium Voltage equipment. Tests to include earth electrode resistance measurement. Transformer to include a LV earth electrode resistance measurement. Soil Resistivity Tests for Equipment to be performed as appropriate and to be verified by Eskom's Clerk of Works, and must be according to Eskom Standard					
1.1		Perform Phasing Test (not required if COC option is selected)	Each	R	95.42
1.2		Continuity Tests (not required if COC option is selected)	Each	R	95.42
1.3		Earth Resistance Test (MV or LV Earth electrode test)	Each	R	95.42
1.4	National Electrical Code Rev. 0 2021/12/02	A.C. Over-Voltage Test	Each	R BOO	95.42

BILL OF ACTIVITIES				RATE 2021	
ITEM	REFERENCE DRAWING	DESCRIPTION	UNIT		
1.5		D.C. Insulation Test	Each	R	95.42
1.6		Outer Sheath Test (Serving Test)	Each	R	95.42
1.7		Compaction Test	Each	R	95.42
1.8		C.O.C Test for Certificate (20A and 60A prepaid connections)	No	R	250.00
1.9		Voltage Regulator commissioning test	No	R	95.42
1.10		Recloser commissioning test	No	R	95.42
<b>SUB-TOTAL T</b>					
<b>U</b>	<b>AS - BUILTS</b>				
Allow for the following end items to be applied as per relevant Eskom Instructions/Bulletins/Procedures and Standards where not already allowed for in Structure Package					
1		As-built Drawings	Each	R	3 500.00
<b>SUB-TOTAL U</b>					
<b>V</b>	<b>MISCELLANEOUS</b>				
Allow for the following end items to be applied as per relevant Eskom instructions/bulletins/procedures and standards where not already allowed for in structure package. Note the cross arms below are applicable for existing structures only.					
1.1	3175	Damper,vibrat spiral 8.29-11.71 D3175	Each	R	24.46
1.2	3175	Damper,vibrat spiral 11.72-14.30 D3175	Each	R	24.46
1.3	7028	Set: Device warning-Aircraft warning 8.87-13.55;2	SET	R	54.31
1.4	7028	Set: Device warning -Aircraft warning 7.35-14.16;2	SET	R	54.31
1.5	7028	Set: Device warning-Aircraft warning 18.13-23.88;2	SET	R	54.31
	3029/3053	BIRD FLIGHT DIVERTERS	Each	R	34.84
	3303	Raptor protector	Each	R	34.84
<b>SUB-TOTAL V</b>					

TRANSPORT ITEMS

Current Date: 02-December-21

BILL OF ACTIVITIES			
ITEM	DESCRIPTION	UNIT	RATE 2021
<b>W</b>	<b>TRANSPORT</b>		
<p>Unless otherwise specified, transport is to be used under specific instruction from the Project Manager only. This excludes staff transport. Staff transport is to be paid to transport workers from base location to site only. LDV/4x4 will only be paid for justifiable use and will be to the sole discretion of the Project Manager</p>			
1.1	LDV 4x2	km	R 5.72
1.2	LDV/4x4	km	R 5.72
1.3	Personnel Transport for Staff	km	R 7.83
1.4	10 m <sup>3</sup> Tipper Truck	km	R 30.11
1.5	6 m <sup>3</sup> Tipper Truck	km	R 26.76
1.6	Transport Truck 2-4 ton	km	R 8.63
1.7	Transport Truck 5-8 ton	km	R 11.96
1.8	Transport Truck 5-8 ton with crane	km	R 16.93
1.9	Transport Truck 9-14 ton	km	R 22.00
1.10	Transport Truck 9-14 ton with crane	km	R 32.80
<b>SUB-TOTAL W</b>			



LABOUR ITEMS

Current Date: 02-December-21

ITEM: X	LABOUR		
	DESCRIPTION	UNIT	RATE 2021
<b>This schedule is used to assist with the valuation of Compensation Events/overtime work - these rates are flat hourly rates as labour is already catered for in the activity rate hence no additional time i.e. half or double time rates will be applied.</b>			
1.1	Electrician (qualified trade test)-skilled	hour	R 119.58
1.2	Linesman (Proof of qualification required)-semi skilled	hour	R 69.68
1.3	Cable Jinter-skilled	hour	R 119.58
1.4	Storeman	hour	R 40.10
1.5	Semi-skilled Labour (Proof of qualification required)	hour	R 69.67
1.6	Unskilled Labour-no formal NQFqualification	hour	R 24.48
<b>TOTAL - X</b>			

