



STRATEGIC ASSET MANAGEMENT
SHEQ MANAGEMENT SYSTEM

Form No:

Rev No: xx

Effective Date:

Description of the Project: Replacement and Augmentation of the L06 with L20 Pipeline

Project Number : P.05032

SCHEDULE A: PRELIMINARY AND GENERAL COSTS

Item No.	Payment Refers	Description	Unit	Qty	Rate	Amount
	SABS 1200A	PRELIMINARY & GENERAL FIXED CHARGES				
1	8.3.1	Contractual Requirements	Sum	1		
2	8.3.2	Establishment of Facilities on Site	Sum	1		
3	8.3.2.1	Facilities for Engineer (SABS 1200AB)	Sum	1		
4	8.3.2.1(a)	Provision of Office for the Engineer's Representative as per PSAB 3.2, including toilet facilities as per PSAB 5.2	Sum	1		
5		Provision of cellular phone as per PSAB 4.1	Sum	1		
6		Provision of survey equipment as per PSAB 4.2	Sum	1		
7	8.3.2.1(c)	Name Board (Refer to RW Typical Name Board R028537)	No.	1		
8	8.4.2.1(d)	Provision of survey assistants as per PSAB 5.5	Sum	1		
9	8.3.2.2	Facilities for Contractor				
10	8.3.2.2 (a)(b)(c)	Offices, storage sheds, fencing, workshops, laboratories.	Sum	1		
11	8.3.2.2(e)	Ablution and latrine facilities	Sum	1		
12	8.3.2.2(f)	Tools and equipment	Sum	1		
13	8.3.2.2(g)	Water supplies, electric power and communications	Sum	1		
14	PSA 8.8.7	Dealing with water	Sum	1		
15	8.3.3	Other fixed charge obligations, including setting out of works, security of contractor's plant & personnel	Sum	1		
16	8.3.4	Remove all site establishment on completion	Sum	1		
17	8.8	Temporary Works				
18	8.8.1	Access to works including all temporary roads, excavations and ramps.	Sum	1		
19	PSA 8.8.2	Accommodation of traffic The supply, maintaining and removal of traffic control devices, road signs, canalisation of traffic, barricades, including New Jersey type, warning signs, including signs for construction vehicles and road markings	Sum	1		

Schedule A Carried Forward						
Schedule A Brought Forward						
	SABS 1200A	PRELIMINARY & GENERAL TIME RELATED ITEMS Limited to the Project Duration. DATES FOR DELIVERY AND COMPLETION – FOR THE INDIVIDUAL PROJECT				
20	8.4.1	Contractual Requirements	Sum	1		
21	8.4.2	Operate and maintain facilities on Site	Sum	1		
22	8.4.2.1	Facilities for Engineer for duration of contract (SABS 1200AB)	Sum	1		
23	8.4.2.1(a)	Provision of office for the Engineer's representative, incl. toilet facilities as per PSAB 3.2 and PSAB 5.2	Sum	1		
24		Provision of cellular phone as per PSAB 4.1	Sum	1		
25		Provision of survey equipment as per PSAB 4.2	Sum	1		
26	8.4.2.1(c)	Name Board (Refer to RW Typical Name Board R028537)	Sum	1		
27	8.4.2.1(d)	Provision of survey assistants as per PSAB 5.5	Sum	1		
28	8.4.2.2	Facilities for Contractor				
29	8.4.2.2 (a)(b)(c)	Offices, storage sheds, fencing, workshops, laboratories, etc.	Sum	1		
30	8.4.2.2(e)	Ablution and latrine facilities	Sum	1		
31	8.4.2.2(f)	Tools and equipment	Sum	1		
32	8.4.2.2(g)	Water supplies, electric power and communications	Sum	1		
33	PSA 8.8.7	Dealing with water	Sum	1		
34	8.4.3	Supervision for duration of construction including Project Management & Contract Administration	Sum	1		
35	8.4.4	Company and head office overhead costs	Sum	1		
36	8.4.5	Other time related charges, including security of contractor's plant & personnel	Sum	1		
37		Operating and Maintenance Manuals	Sum	1		
38		Data Books	Sum	1		
39		Training of Rand Water Personnel (inclusive of training manuals)	Sum	1		
40		Accommodation of traffic				

41	PSA 8.8.2	The supply, maintaining and removal of traffic control devices, road signs, canalisation of traffic, barricades, including New Jersey type, warning signs, including signs for construction vehicles and road markings	Sum	1		
Schedule A Carried Forward						
Schedule A Brought Forward						
42		As Builts				
42,1		The sum shall cover all items for providing detailed As Builts of the works completed	Sum	1		
43		Access to Spoil Sites				
43,1		Sum associated with identification, negotiations and access to designated spoil sites for disposal of surplus spoil material	Sum	1		
44		Temporary Works				
44,1	8.8.1	Access to works including all temporary roads, excavations and ramps, etc.	Sum	1		
44,2	PSA 8.8.9	Protection of road surfaces	Sum	1		
45		Relocation of existing services (water mains, electricity cables/poles, etc.) by Service Utility	Sum	1		
Total amount excluding Value-Added Tax (VAT) to be carried to Summary of Price Schedules						



SHEQ MANAGEMENT SYSTEM

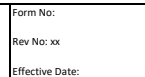
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SCHEDULE B: LAND AND RIGHTS

Total amount excluding Value-Added Tax (VAT) to be carried to Summary of Price Schedules



SCHEDULE C: ENVIRONMENTAL

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SCHEDULE D: OCCUPATIONAL HEALTH AND SAFETY

Item No.	Description	Qty (A)	U O M	Rate (B)		Total A*B	
D	OCCUPATIONAL HEALTH AND SAFETY						
D.1.1	Preparation of the Contractor's site specific Health and Safety Plan	1	Sum				
D.1.2	Principal Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	1	Sum				
D.1.3	Principal Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	1	month				
D.1.4	Provision of Personal Protective Equipment (PPE)	1					
D.1.5	Provision of a full-time Construction Health and Safety Officer	1	month				
D.1.6	Cost of medical certificates and medical surveillance	1					
	(a) Initial (baseline) medical examinations	1	Sum				
	(b) Periodic examinations	1	Sum				
	(c) Medical consultation as when required with OHP and OMP	1	Sum				
	(d) Exit examinations	1	Sum				
D.1.7	Induction training	1	Sum				
D.1.8	Provision of First Aid Boxes to OHP requirements and	1	Sum				
D.1.9	Transportation of Workers	1	Sum				
D.1.10	Welfare Facilities	1	Sum				
D.1.11	Occupational Hygiene Surveys	1	Sum				
D.1.12	Training	1	Sum				
D.1.13	Security requirements including the security risk assessment (before site establishment)	1	Sum				
D.1.14	Employee wellness programs	1	Sum				
D.1.15	Drug and Alcohol Testing, Policies and Procedures	1	Sum				
D.1.16	Barricading	1	Sum				
D.1.17	Safety notices and signs	1	Sum				
D.1.18	SHE Incentives	1	Sum				
D.1.19	Construction work permit application fee	1	Sum				
D.1.20	Adequate ventilation and lighting during construction	1	Sum				
D.1.21	Submission of the Health and Safety File (hard and soft copies)	1	Sum				
Total amount excluding Value-Added Tax (VAT) to be carried to - Summary of Price Schedules							



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SCHEDULE E: QUALITY ASSURANCE AND CONTROL

Item No.	Description	Qty (A)	U O M	Rate (B)		Total A*B	
	Quality Plans and Control	1	Sum				
	Preparation and submission of Contractors Quality Management Plan (CQMP), for review and approval prior to commencement of works	1	Sum				
	Implementing of the Quality Control Plan or Inspection Test Plan activities not specified in the scope of work	1	Each				
	Provision of Qualified Quality Officer (The contractor shall provide RW with relevant to the scope of work qualified Quality Officer)	1	Sum				
	Maintenance of documents and final documentation for submission	1	Sum				
	Provision of Compliance Audits (The contractor to audit the project once a year for the duration of the project)	1	Sum				
	Provision of Quality Officers relevant training (The contractor to provide related training for the quality officer)	1	Each				
	Testing Equipment calibration (The testing Equipments should be calibrated as per the manual)	1	Sum				
	Provision of any other testing and inspections requested by the Engineer	1	Each				
Total amount excluding Value-Added Tax (VAT) to be carried to Summary of Price Schedules							



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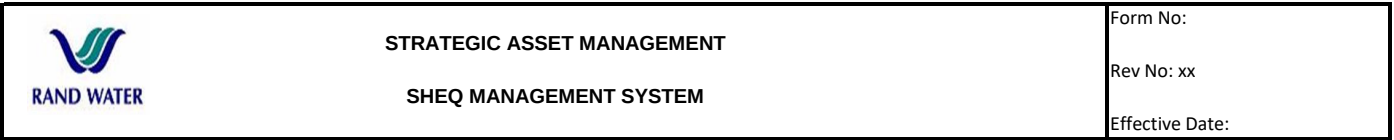
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Project Number : P.05032

SCHEDULE F: DESIGN WORK

Item No.	Description	Qty (A)	U O M	Rate (B)		Total A*B	
1	Design the Asset in accordance with the functional requirements, design criteria and design procedure set out in the Contract documentation and in the "Guideline scope of services" (as published by the Engineering Council of South Africa). To include all analyses, calculations, drawings and documents, as-built including HAZOP Studies and 3D Model and Report Submission(record) drawings, close-out reports						
1,1	Architecture - N/A						
1,2	CIVIL & STRUCTURAL						
1.2.1	SITE INVESTIGATION AND INSPECTIONS, BUT NOT LIMITED TO:						
1.2.1.1	Topographical survey as per : SAM LR 00015 T						
1.2.1.1.1	All areas	1	Sum				
1.2.1.2	Service detection						
1.2.1.2.1	All areas	1	Sum				
1.2.1.3	Geotechnical Investigation study (including but not limited to, conducting the geotechnical investigation, sampling, site and laboratory tests, producing complete geotechnical investigation report):						
1.2.1.3.1	All areas	1	Sum				
1.2.2	Conceptual Designs but not limited to						
1.2.2.1	Conceptual Design Report						
1.2.2.2	Drawings, 3D Models						
1.2.3	PRELIMINARY DESIGN, BUT NOT LIMITED TO:						
1.2.3.1	Analysis, Design and Design Report	1	Sum				
1.2.3.2	Drawings	1	Sum				
1.2.3.3	Specifications	1	Sum				
1.2.4	DETAILED DESIGN, BUT NOT LIMITED TO:						
1.2.4.1	Detail Design report	1	Sum				
1.2.4.2	Drawings including As-Built	1	Sum				
1.2.4.3	Specifications	1	Sum				
1.3	PROCESS AND MECHANICAL						
1.3.1	SITE INVESTIGATION AND INSPECTIONS, BUT NOT LIMITED TO						
1.3.1.1	Hydraulics System Analysis (including Surge, Networks, Studies)	1	Sum				
1.3.1.2	Plant / Construction site	1	Sum				
1.3.1.3	Condition Assessment (valves)	1	Sum				
1.3.2	PRELIMINARY DESIGN, BUT NOT LIMITED TO:						
	i) Conceptual Design	1	Sum				
	ii) Analysis and Design	1	Sum				
	iii) Design report	1	Sum				
	iv) Drawings	1	Sum				
1.3.3	DETAILED DESIGN, BUT NOT LIMITED TO:						
1.3.3.1	Calculations complete with Reports	1	Sum				
1.3.3.2	Design Report complete with Equipment details, method statement, Sequence of Activities & interfaces documents	1	Sum				
1.3.3.3	Drawings	1	Sum				
1.3.3.4	Analysis & simulation Reports						

Item No.	Description	Qty (A)	U O M	Rate (B)		Total A*B	
1.3.4	Construction Monitoring as per the OSH Act Clause 6 by the Designer at Level 3 for the duration of the construction period	1	Sum				
1,4	PIPELINE (SAM DOP 00001 Ge & RW ELS 00001 TS)						
1.4.1	SITE INVESTIGATION AND INSPECTIONS, BUT NOT LIMITED TO:						
1.4.1.1.1	Geotechnical Investigation and Dolomitic stability studies	1	Sum				
1.4.1.1.2	Traffic Impact Assessments	1	Sum				
1.4.1.1.3	Surge Studies	1	Sum				
1.4.1.1.4	Condition Assessment of existing Cathodic Protection	1	Sum				
1.4.1.1.5	AC Mitigation Studies	1	Sum				
1.4.2	PRELIMINARY DESIGN, BUT NOT LIMITED TO:						
1.4.2.1	a) Preliminary design to include:	1	Sum				
1.4.2.1.1	i) Conceptual Design	1	Sum				
1.4.2.1.2	ii) Analysis and Design	1	Sum				
1.4.2.1.3	iii) Design report	1	Sum				
1.4.2.1.4	iv) Drawings	1	Sum				
1.4.3	DETAILED DESIGN, BUT NOT LIMITED TO:						
1.4.3.1	a) Detailed design to include:(Calculations, simulations, Longitudnal Section Drawings, Pipe Special Drawings, Section Drawings, Drawing & Document Register, Method statement, Sequence of Activities, Equipment details etc.)	1	Sum				
1.4.3.1.1	i) Analysis and Design	1	Sum				
1.4.3.1.2	ii) Design report	1	Sum				
1.4.3.1.3	iii) Drawings	1	Sum				
1.4.3.2	Detailed design report to include :(Design calculations, number of anodes to be installed, location of anode installation for both the ICCP system and SACP system)						
1.4.3.2.1	CP analysis and CP design	1	Sum				
1.4.3.3	CP design report	1	Sum				
1.4.3.3	AC mitigation design report to include :(Earth mats locations ,Zinc ribbon length and chainages, Number of DC de-couplers and locations ,Number of voltage limiting device and locations)	1	Sum				
1.4.3.3.1	AC mitigation report	1	Sum				
1.4.4	Level 3 Construction Monitoring (as per OSH Act Clause 6) for the duration of the construction period	1	Sum				
1,5	ELECTRICAL Refer to the RW Specification RW/01200/S/022 & RW/EES/002						
1.5.1	SITE INVESTIGATION AND INSPECTIONS	1	Sum				
1.5.2	EARTHING SYSTEM ASSESSMENT	1	Sum				
1.5.3	PRELIMINARY DESIGN, BUT NOT LIMITED TO:						
1.5.3.1	Conceptual Design	1	Sum				
1.5.3.3	Analysis and Calculations	1	Sum				
1.5.3.5	Design Reports	1	Sum				
1.5.3.7	Drawings	1	Sum				
1.5.4	DETAILED DESIGN:						
1.5.4.1	Design Calculations	1	Sum				
1.5.4.2	System Modeling, analysis & simulation on ETAP	1	Sum				
1.5.4.3	Lux Levels Lighting Simulation Designs	1	Sum				
1.5.4.4	Design Report Complete with Equipment Details, Method Statement, Sequence of Activities & Interfaces Documents.	1	Sum				
1.5.4.5	AutoCAD Drawings (SLD, GAs, Schemati Diagrams, Equipment Layout, etc.) including As-Buits	1	Sum				
1.5.5	Level 2 Construction Monitoring (as per OSH Act Clause 6) for the duration of the construction period	1	Sum				
1,6	AUTOMATION (including PLC, HMI & SCADA)						
1.6.1	SITE INVESTIGATION AND INSPECTIONS, BUT NOT LIMITED TO:						

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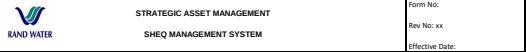
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SCHEDULE J: MANUFACTURING, TESTING, SUPPLY, DELIVERY, TRANSPORTATION TO SITE OF EQUIPMENT (ELECTRICAL)

1. Provide **more details and Price** under each heading in line with the applicable Scope of Work

Total amount excluding Value-Added Tax (VAT) to be carried to Summary of Price Schedules:

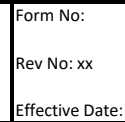
	STRATEGIC ASSET MANAGEMENT	Form No:
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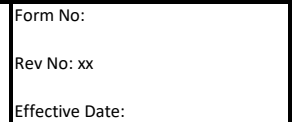
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SCHEDULE K: MANUFACTURING, TESTING, SUPPLY, DELIVERY, TRANSPORTATION TO SITE OF EQUIPMENT (AUTOMATION AND CONTROL)

Item No.	Description	Qty (A)	U O M	Rate (B)		Total A*B	Notes
1	Panels (Refer to List of Automation standards and Procedures item 3)	1	Sum				
2	Instruments (Refer to List of Automation standards and Procedures item 4)	1	Sum				
3	SCADA and Alarms (Refer to List of Automation standards and Procedures item 6)	1	Sum				
4	Telemetry (Refer to List of Automation standards and Procedures item 7)	1	Sum				
5	Communication Network (Refer to List of Automation standards and Procedures item 8)	1	Sum				
6	Training and Documentation	1	Sum				
7	All other Automation & Control Equipment not stated above which may be required to complete the installation (including risk mitigation and safety) (detail below)						

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SCHEDULE N: SOCIO-ECONOMIC DEVELOPMENT

Item No.	Payment Ref.	Description	U O M	Qty (A)	Rate (B)	Total (A*B)
		SCHEDULE L : SOCIO ECONOMIC DEVELOPMENT				
1		SKILLS DEVELOPMENT PROGRAM				
1,1		Accredited training programmes are targeted which will provide the beneficiaries with significant and recognized credit value in accordance with the National Qualification Framework (NQF) (2,5% of Project Value - Sub Total A)	Sum		2,5%	
1,2		Contractors mark-up on Item 1.1 above	%			
2		SOCIAL FACILITATION PROGRAM				
2,1		Social facilitation programs aimed at community development (2,5% of Project Value - Sub Total A)	Sum		2,5%	
2,2		Contractors mark-up on Item 2.1 above	%			
3		COMMUNITY LIASON OFFICER				
3,1		Community Liason Officer. A key component in aiding the realisation of the SED objectives is effective community liaison with all the relevant role-players, structures, civic organisations and the community at large.	Sum	1		
3,2		Contractors mark-up on Item 3.1 above	%			
4		PARTICIPATION OF LOCAL ENTERPRICES				
4,1		Work Allocated to Local Enterprises (Inclusive of P&G's and SHEQ) (Minimum 5% of Project Value) (Sub-Total A)	Sum	5,0%	R -	Rate Only
4,2		Contractors mark-up on Item 4.1 above	%			
Total amount excluding Value-Added Tax (VAT) to be carried to Summary of Price Schedules						

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SCHEDULE O: SUMMARY OF PRICE SCHEDULES

PRICE SCHEDULES	TOTAL AMOUNT	
	R	c
ALL PLANT BUILDINGS AND ASSOCIATED STRUCTURES		
Total brought forward from SCHEDULE A: PRELIMINARY AND GENERAL COSTS		
Total brought forward from SCHEDULE B: LAND & RIGHTS		
Total brought forward from SCHEDULE C: ENVIRONMENTAL		
Total brought forward from SCHEDULE D: OCCUPATIONAL HEALTH AND SAFETY		
Total brought forward from SCHEDULE E: QUALITY ASSURANCE AND CONTROL		
Total brought forward from SCHEDULE F: DESIGN WORK		
Total brought forward from SCHEDULE G: CIVIL - CONSTRUCTION OF PLANT BUILDINGS AND ASSOCIATED STRUCTURES		
Total brought forward from SCHEDULE H: SUPPLY AND DELIVERY OF EQUIPMENT (PROCESS AND MECHANICAL)		
Total brought forward from SCHEDULE I: SUPPLY,MANUFACTURE, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF PIPELINES		
Total brought forward from SCHEDULE J: MANUFACTURING, TESTING, SUPPLY, DELIVERY, TRANSPORTATION TO SITE OF EQUIPMENT (ELECTRICAL)		
Total brought forward from SCHEDULE K: DESIGN, SUPPLY AND DELIVERY OF EQUIPMENT (AUTOMATION AND CONTROL)		
Total brought forward from SCHEDULE L: CONSTRUCTION AND INSTALLATION OF PLANT EQUIPMENT		
Total brought forward from SCHEDULE M: TESTING, COMMISSIONING AND PROVING PERIOD		
SUBTOTAL A		
Total brought forward from SCHEDULE N: SOCIO-ECONOMIC DEVELOPMENT		
SUBTOTAL B		
CONTRACT PRICE ADJUSTMENT (Provisional Allowance).....		
SUBTOTAL C		
VALUE ADDED TAX		
Add 15% of Subtotal C		
<i>(Provisional sum based on current rate of VAT)</i>		
TOTAL CARRIED TO SUB-PACKAGE SUMMARY		

SIGNED ON BEHALF OF TENDERER: