



Millennium Development Authority (MiDA)

PRE-BID MEETING

**SUPPLY AND INSTALLATION OF POKUASE BSP SUB-
TRANSMISSION INTERCONNECTING CIRCUITS -
DESIGN-BUILD**

Presented By Patrick & Munesu

Date 2nd April 2019

Swiss Spirit Alisa Hotel, Accra

OUTLINE OF PRESENTATION

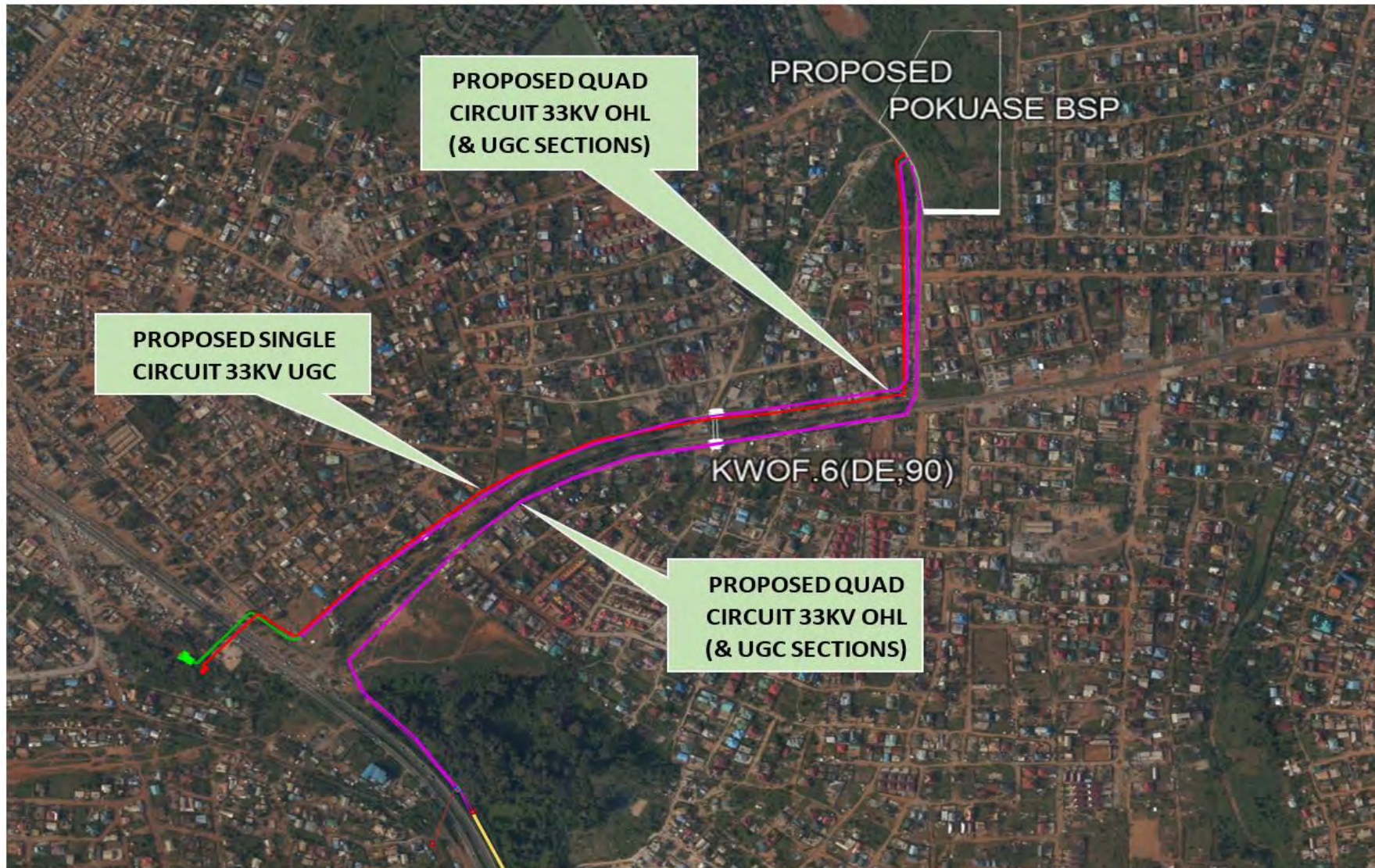
- OVERVIEW OF THE PROJECT
- OVERVIEW OF THE BID PACKAGE
- OVERVIEW OF THE SCOPE OF WORKS
- PROJECT CONSTRAINTS
- PROJECT MILESTONES
- INSTITUTIONAL ARRANGEMENT
- HIGHLIGHTS OF TECHNICAL EVALUATION AND CRITERIA

OVERVIEW OF THE PROJECT

THE PROJECT CONSISTS OF:

- Project components being implemented to reduce technical losses (distribution) and improve the quality and reliability power supplies;
- From Pokuase BSP Substation:
 - 2 x 33kV quadruple circuit OHL and UGC circuits (total 8 transmission feeders);
 - 1 x 33kV UGC distribution feeder;
 - 7 x 11kV Offloading distribution feeder circuits to interconnect to ECG distribution system;
 - OPGW and Underground optical fibre sections as detailed Employer's Requirements;
- From Kanda Primary Substation:
 - 1 x 33kV quadruple circuit OHL and UGC circuits (total 4 transmission feeders);
 - OPGW and Underground optical fibre sections as detailed Employer's Requirements;

OVERVIEW OF THE PROJECT FROM POKUASE BSP



OVERVIEW OF THE PROJECT FROM ACHIMOTA TO KANDA



OVERVIEW OF THE BID PACKAGE

THE BID PACKAGE CONSISTS OF:

- ▶ IFB for Construction of Interconnecting Circuits;
- ▶ Volume II Employers' Technical Requirements;
- ▶ Appendices to Volume II (as separate files / zipped folders)

OVERVIEW OF THE BID PACKAGE

THE VOLUME II – EMPLOYERS’ TECHNICAL REQUIREMENTS CONSISTS OF:

Section Description	Section Number
GENERAL DESCRIPTION OF THE PROJECT	1
PROJECT ADMINISTRATIVE INFORMATION	2
SCOPE OF SUPPLY AND INSTALLATION SERVICES	3
GENERAL ADMINISTRATIVE REQUIREMENTS	4
GENERAL DESIGN REQUIREMENTS	5
TECHNICAL SPECIFICATIONS	6
APPENDICES	

OVERVIEW OF THE BID PACKAGE

THE VOLUME II – APPENDICES CONSIST OF:

Appendix Description	Appendix Number
Drawings	1
Technical Data Schedules	2
Price Schedule	3
ESIA and ESMP	4

These are Attached as separate files or zipped folders

OVERVIEW OF THE SCOPE OF WORKS

THE SCOPE OF WORKS CONSISTS OF:

- Scope of Works (as per Section 3 of Volume II Employers' Technical Requirement are:
 - Engineering studies, design, overall construction management, training of ECG personnel,
 - Manufacturing, factory testing, transportation, delivery to site, unloading and storage,
 - Installation works, commissioning, acceptance testing and handover and warranties,
 - Dismantling and disposal of surplus materials, and all temporary works;
 - Supply of spare parts, instruction manuals, training and operational manuals,
 - Supply of as-built documentation and drawings,
 - Supply of special handling, testing and maintenance equipment;

OVERVIEW OF THE SCOPE OF WORKS

THE SCOPE OF WORKS CONSISTS OF:

➤ Pokuase BSP Substation Interconnection circuits

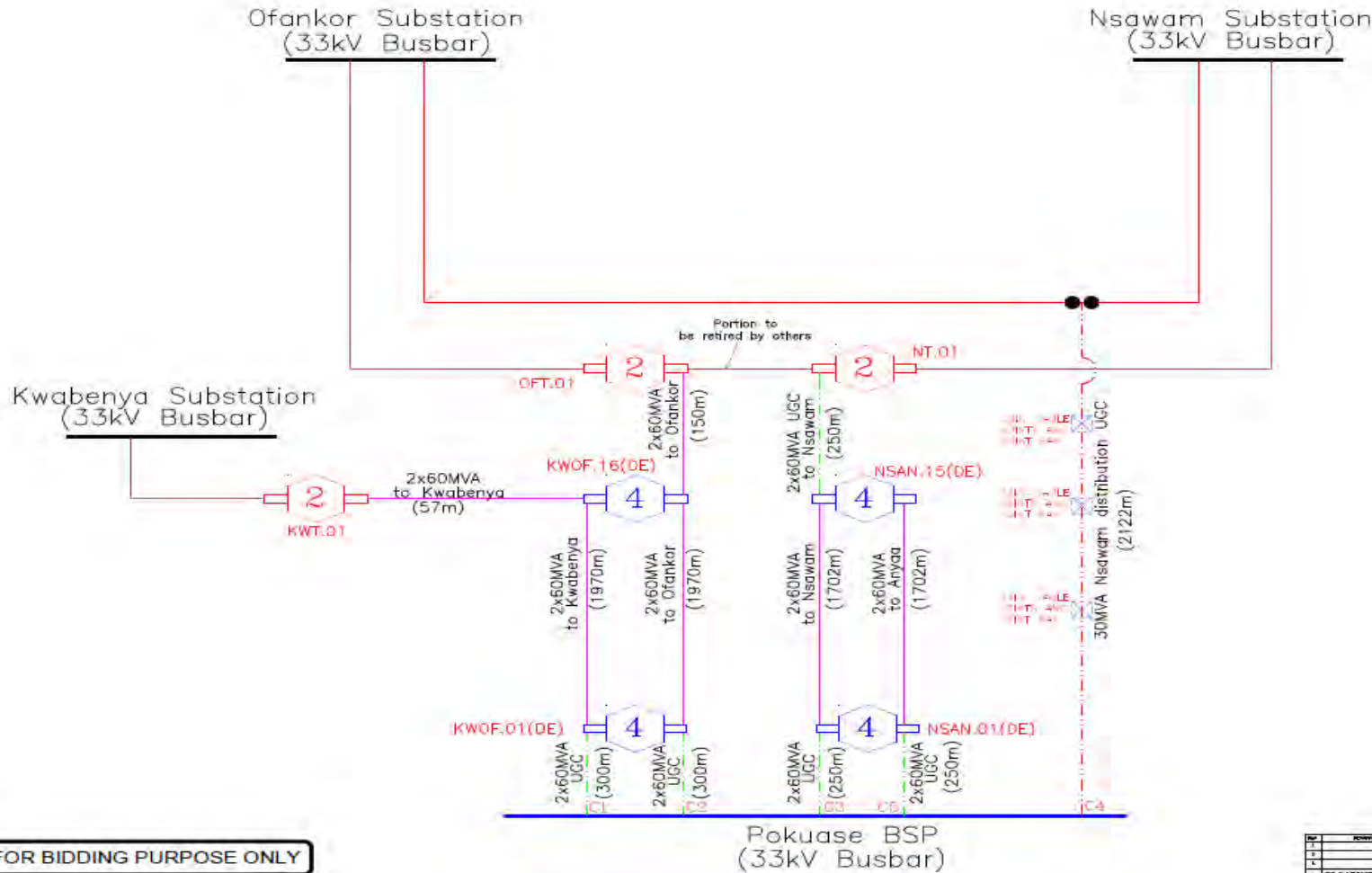
- 33kV overhead and underground cable interconnecting Circuits;
- 11kV underground cable Offloading Circuits;
- OPGW and Underground fibre sections to connect substation to ECG network;

➤ Kanda Primary Substation Interconnection circuits

- 33kV Overhead interconnecting Circuits;
- OPGW and Underground fibre sections to connect substation to ECG network;

OVERVIEW OF THE SCOPE OF WORKS FOR 33KV CIRCUITS FROM BSP POKUASE

SINGLE LINE DIAGRAM OF THE POKUASE 33kV INTERCONNECTING CIRCUITS



LEGEND

- PROPOSED 33KV UNDER GROUND CABLE (1x630sqmm Al per phase)
- EXISTING 33KV DOUBLE CIRCUIT TOWER LINE (DCTL)
- EXISTING 33KV SINGLE CIRCUIT TOWER LINE (SCTL)
- PROPOSED 33KV UNDERGROUND CABLE 2Nos.(1x630sqmm Al per phase per circuit)
- PROPOSED 33KV DOUBLE CIRCUIT LINE
- PROPOSED WOOD POLE
- PROPOSED QUADRUPLE CIRCUIT TOWER
- EXISTING DOUBLE CIRCUIT TOWER
- PROPOSED 33KV CABLE JOINTS AND JOINT BAY

NOTE:

- C1- Two 33kV Circuits on KWO from the Pokuase BSP to connect to the existing Tower line from Kwabenya Substation
- C2- Two 33kV Circuits on KWO from the Pokuase BSP to connect to the existing Tower line from Ofankor Substation
- C3- Two 33kV Circuits on NSAN from the Pokuase BSP to connect to the existing Tower line from Nsawam Substation
- C4- Single 33kV Underground cable circuit from the Pokuase BSP to connect to the existing 33kV Overhead Line Distribution Circuit at Pokuase
- C5- Two 33kV Circuits on NSAN from the Pokuase BSP to connect to the proposed NSAN.15 Tower (to Anyaa)

* C5 to Anyaa will originate from Pokuase BSP and terminate at NSAN.15 and shall be connected to Anyaa Substation

FOR BIDDING PURPOSE ONLY

NO	REVISION	DATE	BY	CHKD BY	DATE	APPROVED BY	DATE	REVISION
1								
2								
3								

DATE	APRIL 2018	DRAWING NO.	PKC - DESIGN - BSP - 004	REVISION	1
DESIGNED BY	W. Y. Y. Y.	DATE	APRIL 2018	DRAWING NO.	1050
CHECKED BY	W. Y. Y. Y.	DATE	APRIL 2018	DRAWING NO.	1050
APPROVED BY	W. Y. Y. Y.	DATE	APRIL 2018	DRAWING NO.	1050

Employer
MILLENNIUM DEVELOPMENT AUTHORITY (MDA) GHANA

Client
ELECTRICITY COMPANY OF GHANA (E.C.G)

Project
POKUASE BUS SUPPLY POINT SUBSTATION BSP S01 - TRANSMISSION BY INTERCONNECTING CIRCUIT

Sheet No
48

OVERVIEW OF THE SCOPE OF WORKS FOR 33KV

THE SCOPE OF WORKS FOR CIRCUITS FROM POKUASE BSP CONSISTS OF:

- ▶ Design, supply, installation, testing and commissioning of 33kV quadruple circuit OHL and Associated UGC circuits as follows:
 - ▶ Kwabinya-Ofankor overhead line and underground cable circuits to connect to the existing Kwabinya Double Circuit Terminal Tower (KWT 01) and existing Ofankor Double Circuit Terminal Tower (OFT 01).
 - ▶ BSP Pokuase to connect to the existing Nsawam Double Circuit Terminal Tower (NT01) and stringing of Anyaa overhead line from NSAN .01 to NSAN. 15;

OVERVIEW OF THE SCOPE OF WORKS FOR 33KV

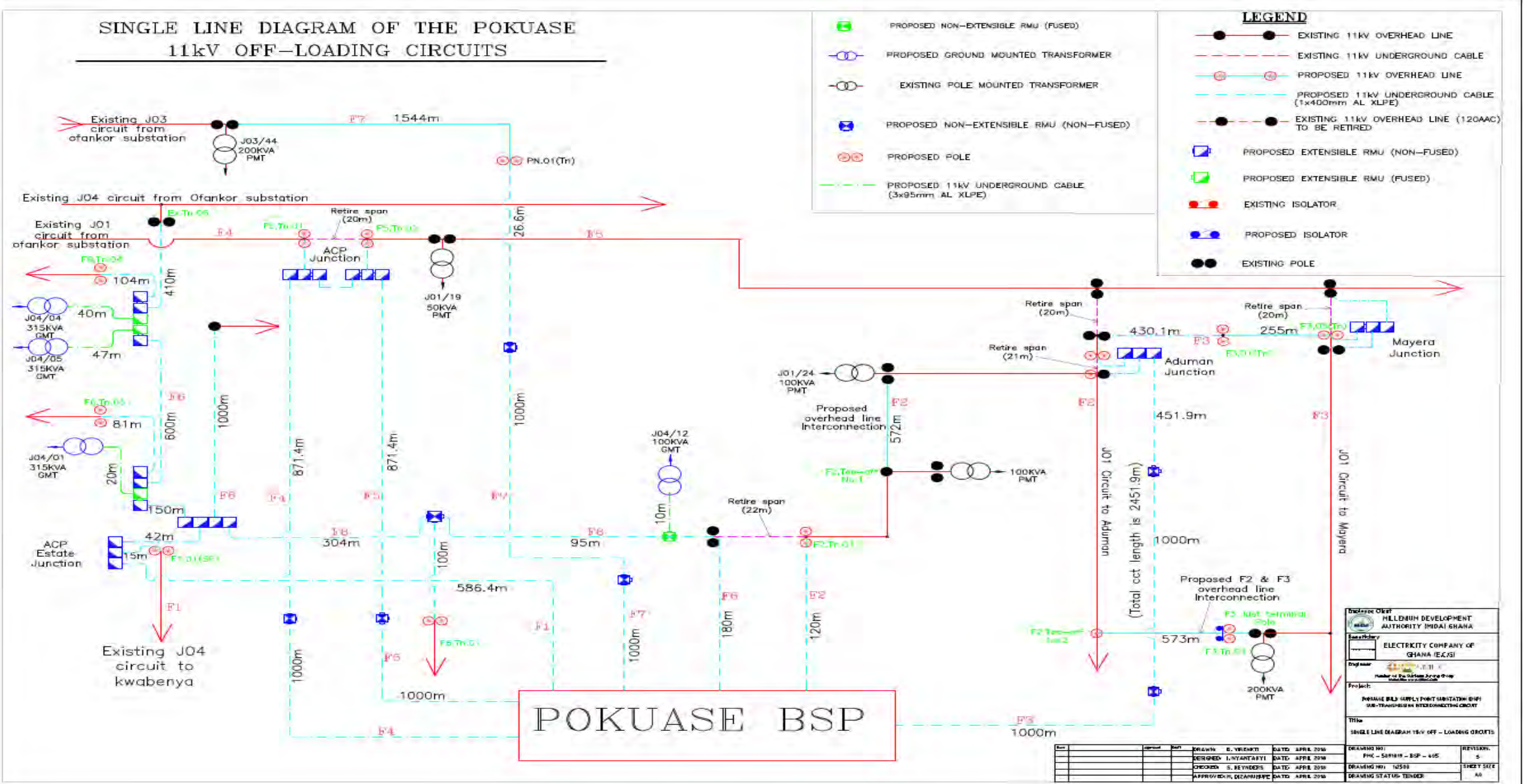
THE SCOPE OF WORKS FOR CIRCUITS FROM POKUASE BSP (CONTINUED):

- ▶ Design, supply, installation, testing and commissioning of 33kV Single Circuit UGC distribution line from the BSP Pokuase to connect to the existing Nsawam Distribution line Terminal Tower (NSD 01);
- ▶ Design, supply, installation, testing and commissioning of OPGW and Underground Cable fibre sections from the BSP Pokuase to connect to the substation to existing ECG communications network;
- ▶ The circuit lengths for above 33kV circuits are also given in Table 4 in section 3.2.3 of Volume II;

33KV INTERCONNECTING LINE LAYOUT DIAGRAM

- Pokuase 33kV Interconnection Lines
 - PMC-5091019-BSP-403-33kV Layout.pdf

OVERVIEW OF THE SCOPE OF WORKS FOR 11KV CIRCUITS FROM BSP POKUASE



OVERVIEW OF THE SCOPE OF WORKS FOR 11KV

THE SCOPE OF WORKS FOR CIRCUITS FROM POKUASE BSP CONSISTS OF:

- Design, supply, installation, testing and commissioning of seven (7) single circuit 11kV overhead and underground cable offloading feeders from 33/11kV Side of BSP Pokuase to connect to various sections of the 11kV Distribution network;
- Design, supply, installation, testing and commissioning of 11kV ring main units (RMU) along with fencing as per requirements of this Vol II;
- Design, supply, installation, testing and commissioning of 33kV and 11kV line accessories (Lighting arrestors, earthing systems, etc.) as per requirements of Vol II;
- Design, supply, construction, testing and commissioning of thrust boring, cable trenches, cable joint bays and cable trusses as per requirements of Vol II;

OVERVIEW OF THE SCOPE OF WORKS FOR 11KV CIRCUITS

THE SCOPE OF WORKS FOR CIRCUITS FROM POKUASE BSP (CONTINUED):

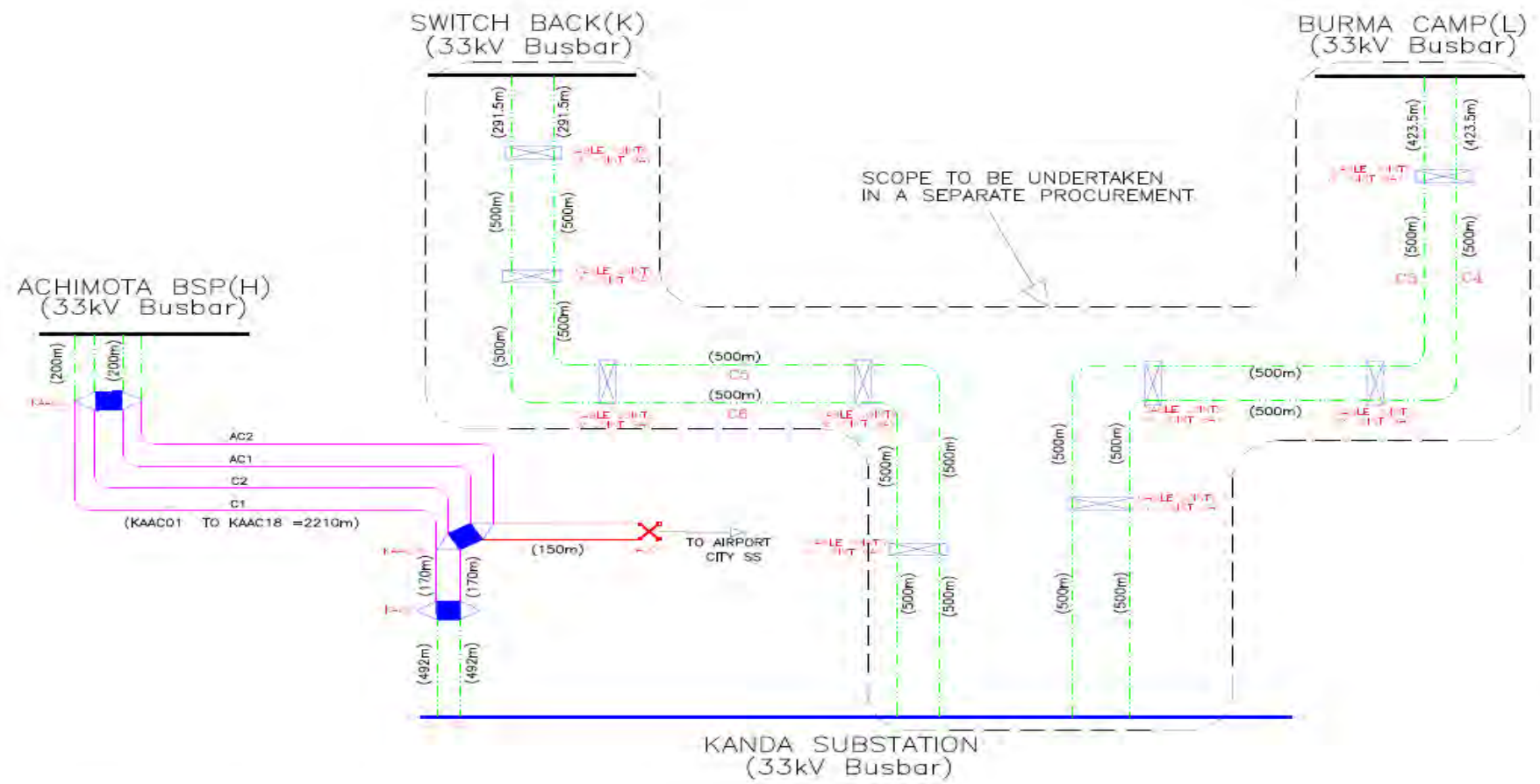
- ▶ Design, supply, construction, testing and commissioning of thrust boring, cable trenches, cable joint bays and cable trusses as per requirements of Vol II;
- ▶ The design, supply, construction, installation, testing and commissioning of all works required to interface and integrate all new plant, equipment and works into existing and new ECG networks and systems;
- ▶ Reinstatement, reinstallation and restoration of all the pavements, foot paths, concrete structures as well as all buildings, kiosks and other structures effected during construction;
- ▶ Carry out and provide all the type tests, factory acceptance tests (FAT) as per requirements given in Vol II;
- ▶ The training for the ECG personnel as per requirements of Vol II;

11KV LINE GENERAL LAYOUT DIAGRAM

- PMC-5091019-BSP-400-11kV General Layout.pdf

OVERVIEW OF THE SCOPE OF WORKS FOR ACHIMOTA TO KANDA SS 33KV CIRCUITS

SINGLE LINE DIAGRAM OF THE KANDA 33kV OFF-LOADING CIRCUITS DESIGN



LEGEND

- PROPOSED 33kV UNDERGROUND CABLE
- PROPOSED 33kV QUADRUPEL OVERHEAD CIRCUIT
- PROPOSED 33kV DOUBLE OVERHEAD CIRCUIT
- CABLE JOINTS AND JOINT BAY
- X EXISTING DOUBLE CIRCUIT TOWER
- PROPOSED QUADRUPEL CIRCUIT TOWER

- NOTE**
1. Existing double circuit tower line for Achimota BSP (BSP001) to OCEP (BSP002) shall be replaced with Quadruple Circuit Tower Line.
 2. All the proposed 33kV underground circuits are 240/120/30mm² XLPE, Al cables per phase per circuit.
 3. AC1 - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3A - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3B - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3C - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3D - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3E - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3F - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3G - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3H - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3I - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3J - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3K - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3L - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3M - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3N - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3O - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3P - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3Q - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3R - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3S - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3T - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3U - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3V - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3W - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3X - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3Y - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
 - 3Z - One Overhead line circuit on a ODL from Achimota BSP (Station ID) to Airport City Primary substation.
- CIRCUIT LENGTH FROM KANDA TO BURMA CAMP 'L' - 2423.5m
 CIRCUIT LENGTH FROM KANDA TO SWITCH BACK 'K' - 2781.5m
 CIRCUIT LENGTH FROM KANDA TO ACHIMOTA BSP 'H' - 3222m

EMPLOYER: MILLENNIUM DEVELOPMENT AUTHORITY (MIDA) GHANA

BENEFICIARY: ELECTRICITY COMPANY OF GHANA (E.C.G)

ENGINEER: MMLC

PROJECT: POKUASE BULK SUPPLY POINT SUBSTATION (BSP) SUB-TRANSMISSION INTERCONNECTING CIRCUIT

TITLE: SINGLE LINE DIAGRAM 33kV OFF-LOADING CIRCUITS (ACHIMOTA BSP TO KANDA PSS)

REV	REMARKS	APPROVED	DATE	DRAWN: B. Y. RENNYI	DATE: JUNE 2018	DRAWING No.: PMC-5091019-BSP-440	REVISION: 1
				DESIGNED: S. WURAH	DATE: JUNE 2018		
				CHECKED: S. REYNDERS	DATE: JUNE 2018		

DRAWING SCALE: NOT TO SCALE
 SHEET SIZE: A3

FOR BIDDING PURPOSE ONLY

OVERVIEW OF THE SCOPE OF WORKS FOR 33KV CIRCUITS

THE SCOPE OF WORKS FOR CIRCUITS FROM KANDA PSS CONSISTS OF:

- ▶ De-commissioning of a portion of the existing 33kV double circuit line from Achimota BSP to CSIR library (portion from tower KAAC01 to KAAC18);
- ▶ Design, supply, installation, testing and commissioning of 33kV quadruple circuit overhead Tower lines and underground cable circuits with total circuit lengths as given in above single line from Achimota Bulk Supply Substation “H” to the new Kanda Primary Substation;
- ▶ Design, supply, installation, testing and commissioning of the Connection of the existing 33kV double circuit line from CSIR library to one double circuit of 33kV quadruple circuit overhead line form Achimota (portion from tower AC01 to KAAC18);
- ▶ The circuit lengths for above 33kV circuits are also given in Table 4 in section 3.2.3 of Volume II;

33KV INTERCONNECTING LINE LAYOUT DIAGRAM

- Achimota-Kanda 33kV Interconnection Lines
 - PMC-5091019-BSP-437A-33kV Layout.pdf;
 - PMC-5091019-BSP-437B-33kV Layout.pdf
 - PMC-5091019-BSP-437C-33kV Layout.pdf

PROJECT CONSTRAINTS

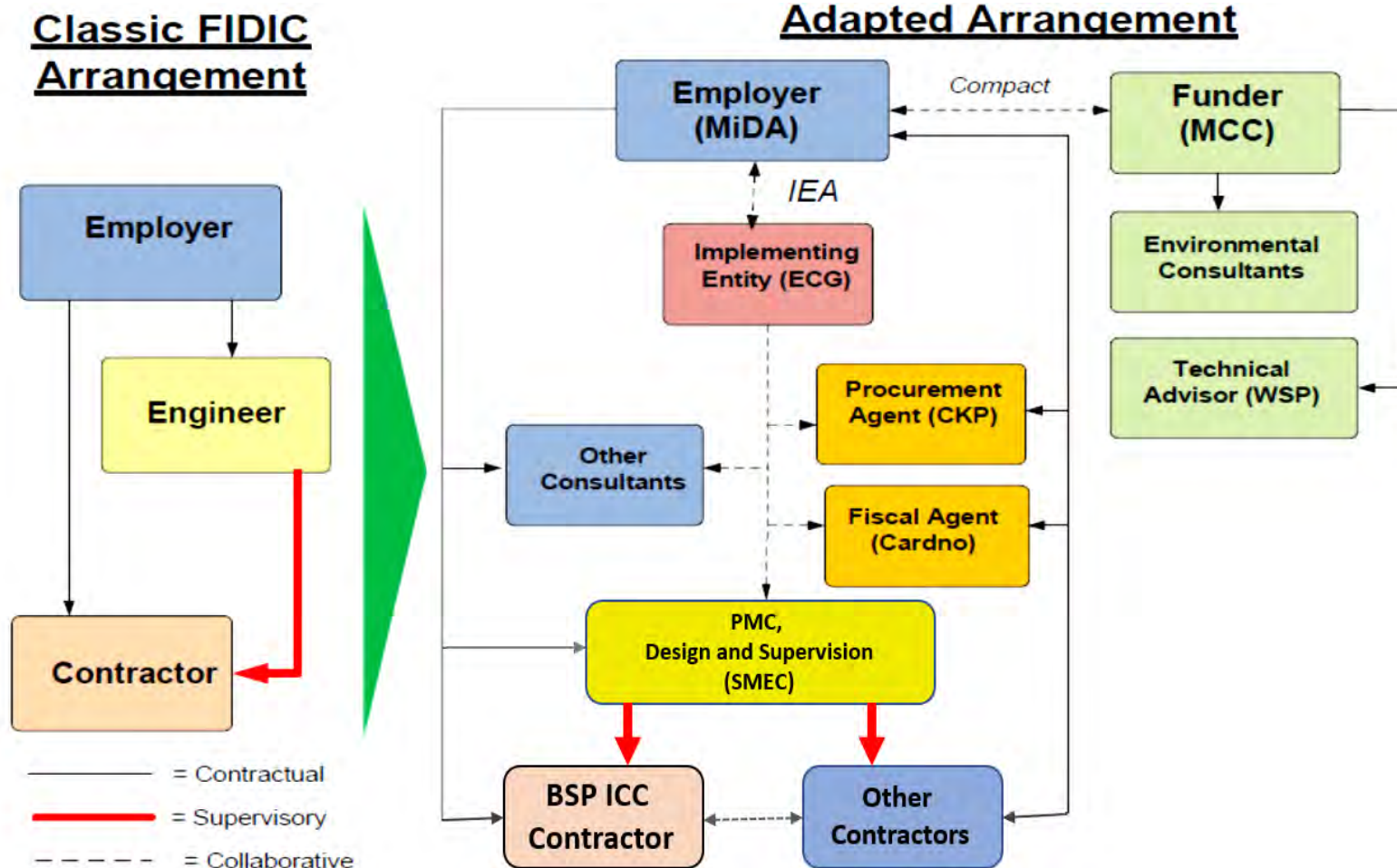
- ❖ **TIME** – Time not extendible; Only two and a half (2 .5) years left to Compact end Date (approximately. Compact ends in September 2021)
- ❖ **ROW**– The Interconnecting Lines are to be constructed in built-up area and need a well planned coordination with stakeholders, traffic management and all RAP and EHS handling.
- ❖ **Plant Outages** – Coordination in outage management is critical; early planning is required.
- ❖ **Interface with Substation contractors** : Making ready the cable and lines for termination at the panels by the Substation contractor.

PROJECT MILESTONES

Sr. No.	Milestone Description	Anticipated date or Calendar Days
1.	Issuance of Letter of Acceptance (LoA)	September 12, 2019
2.	Date for Commencement of works	28 days after LoA
3.	Project Execution Plan	28 days after commencement date
4.	Performance Security	28 days after LoA
5.	Accessibility of Site	30 days after commencement date
6.	Time for completion	450 days after commencement date

INSTITUTIONAL ARRANGEMENT

PROJECT KEY RELATIONSHIPS



HIGHLIGHTS OF TECHNICAL EVALUATION AND CRITERIA

- ❖ **Bidder's experience** – Must clearly be presented in relevant forms in a manner that is understandable.
- ❖ **Technical Requirements** – Demonstration of meeting the Employer's requirements must be presented; Technical Data Schedules must be filled. Failure to provide key information may be deemed to be non-compliance to technical requirements.
- ❖ **Bidder's Personnel** – Experience of personnel has been accorded maximum importance and failure to meet requirements may lead to loss of points.
- ❖ **Other Technical Submissions** – Methods Statements, Designs, Environmental and Social management Plans etc.
- ❖ **Project Schedule** – Present a clearly thought out schedule that demonstrates that the Bidder is able to deliver the project in the requested time.

HIGHLIGHTS OF TECHNICAL EVALUATION AND CRITERIA

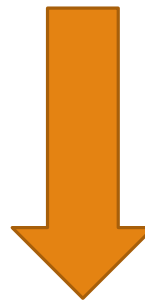
- ❖ Unlike other Procurements such as World Bank and others, **the MCC Procurement uses a point system.**
- ❖ Therefore **DO NOT** lose points unnecessarily; every point counts.
- ❖ If in doubt; seek clarifications within the time allowed.

THANK YOU

Q ? A



**NEXT
PRESENTATION**





Millennium Development Authority
Reducing Poverty through Economic Growth



Pre-Bid Meeting

Ghana Compact II ESP Requirements for the Installation of the Pokuase BSP Interconnecting and Offloading Circuits

Benjamin Opoku

Director ESP, MiDA

April 2 2019

PRESENTATION OUTLINE

- ▶ **ESP Requirements for effective Implementation of the Pokuase BSP Interconnecting and Offloading Circuits (IOC)**
- ▶ **Potential ESP Risks for Construction and Operation of the Pokuase BSP IOC**
- ▶ **Key Actors, Roles and Responsibilities**

Environmental and Social Performance (ESP) – the Need for Compliance

2

- 1. Safeguard Human Life and Property**
- 2. Protect the Natural Environment**
- 3. Ensure Sustainable Construction and Operation of the BSP IOC**
- 4. Ensure concerns of Stakeholders are adequately managed throughout the Life of the Project.**
- 5. Requirement of the Power Compact – IFC Performance Standards (1,2 &5)**
- 6. Legal Requirement –EA Laws of Ghana**

Environmental and Social Performance (ESP)

3

– Requirements for Pokuase BSP IOC

Assessments, Studies, Plans and Permits;

- 1. Environmental and Social Impact Assessment (ESIA) - Completed**
- 2. Environmental and Social Management Plan (ESMP) - Preliminary**
- 3. Health and Safety Management Plan (HSMP) - Preliminary**
- 4. Stakeholder Engagement Plan (SEP) - Preliminary**
- 5. Environmental Assessment (EA) Permit – Compliance with Ghana EPA Requirements.**

Potential ESP Risks for the Construction and Operation of the Pokuase BSP IOC

- **Community and Occupational Health and Safety during Construction and Operation.**
- **Traffic Control and Management**
- **Stakeholder Engagement, Community Relations and management of Grievance and Redress.**
 - **Re-instatement of affected structures and Properties**

Key Actors, Roles and Responsibilities for Effective ESP Implementation

► Key Actors

- The Employer (MiDA) – ESP Directorate
- Employers ESP Consultants
 - Resettlement and Community Engagement Consultants
 - Health, Safety, Environment and Social Consultants
- The Engineer – ESP Specialists
- MCC – ESP Directorate and Consultants
- **Contractor** – ESP Personnel

Contractors Responsibilities for Effective ESP Implementation

7

- **Contractors Health, Safety and Environmental Management Plan – to be developed and submitted 4 weeks before site mobilization or start of construction activities.**
- **Risk Register highlighting ‘additional’ potential risks/impacts associated with the construction of the BSP – to be developed and submitted 4 weeks before site mobilization or start of construction activities.**

Training

8

► Contractors' Staff

- Sufficient training to staff to create awareness of the relevant aspects of the HSESMP
- To enable staff fulfil their roles and functions
- Contractor's responsibility

► HSE Induction

- Sub-Contractors
- Supervisory Engineer
- Employer
- Consultants
- Etc.

Training

9

- **Areas of Concern;**
 - **General Safety and environmental protection awareness;**
 - **Site induction training**
 - **Daily Toolbox talks on variety of issues e.g. housekeeping, environmental aspects, health and safety aspects etc.**
 - **Emergency procedures; and**
 - **Risk & Hazard identification and mitigation**
 - **Near Hit, incident/accident reporting**
 - **PPE Procedure**

Contractors ESP Reporting

10

- **Monthly Progress Report on HSES Management.**
 - **Safety Statistics**
 - **Management measures/actions taken**
 - **Injuries and incident reporting**
 - **Stakeholder engagement activities including grievances received and measures to address them**
 - **Any positive actions on promoting safety and environmental awareness.**
 - **Training and capacity development activities**

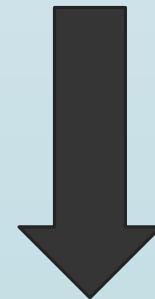


Millennium Development Authority

Reducing Poverty through Economic Growth



**NEXT
PRESENTATION**





Millennium Development Authority (MiDA)

Pre-Bid Conference

Supply and Installation of Pokuase BSP Sub- Transmission Interconnecting Circuits - Design-Build

CB No: 5140400-03/IFB/CB/03/19

Swiss Spirit Alisa Hotel

2nd April, 2019

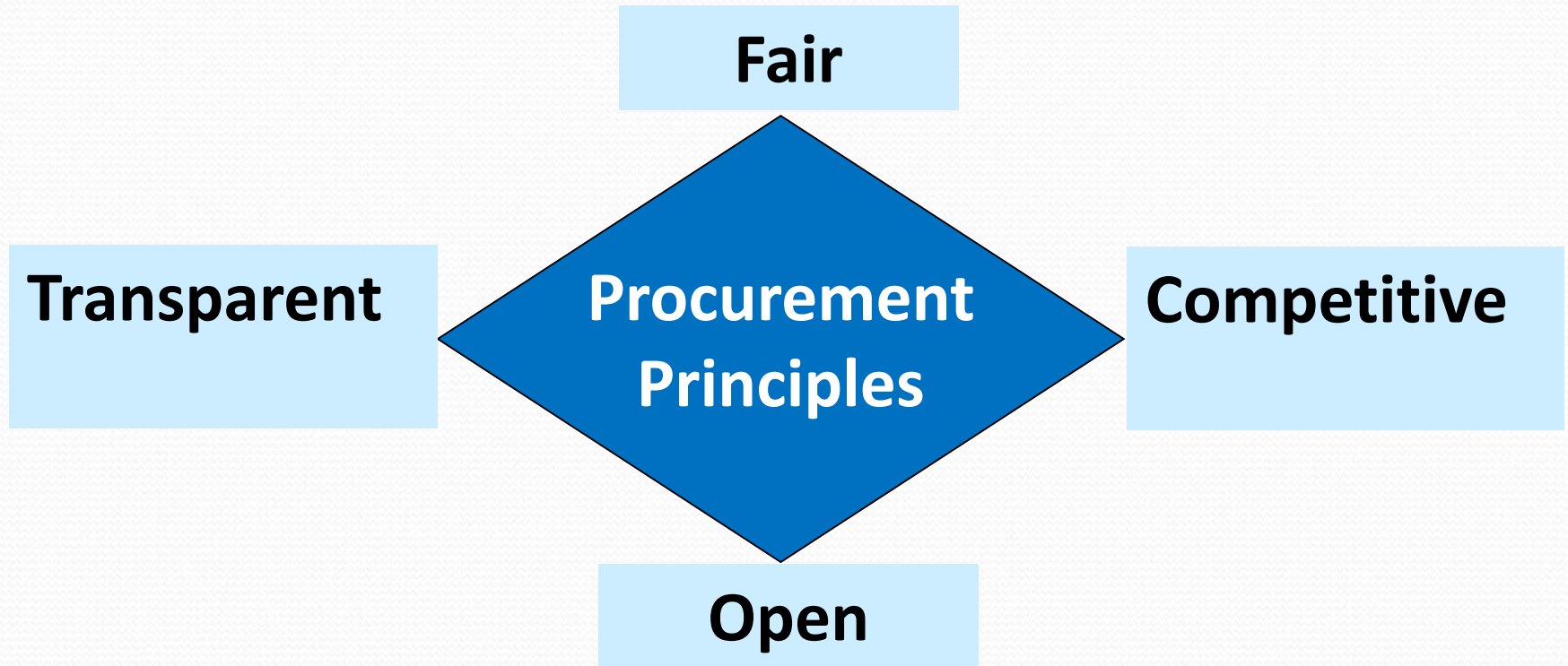
Invitation for Bids (IFB)

- IFB follows the GPN that appeared in:
 - dgMarket, UNDB Online and MiDA website www.mida.gov.gh on Tuesday, 8 January, 2019, and
 - Local newspapers, Business & Financial Times, on Tuesday 15th January, 2019, Ghanaian Times on Thursday 10th January, 2019 and Daily Graphic on Wednesday 9th January, 2019.
- Supply and Installation of the Pokuase BSP is under the ECG Financial and Operational Turnaround Project (EFOT).

Invitation for Bids (IFB)

- Contractor Selection will be based on Quality and Price Based Selection (QPBS) procedures governed by MCC Program Procurement Guidelines.
- Procedures are similar to World Bank SBDs for Procurement of Works, Plant Design, Supply and Installation and SRP for Selection of Consultants but with several significant differences and departures.
- Firms are advised to review the instructions carefully.
- Important for interested Bidders to read the IFB carefully and if in doubt on any issue(s) always seek clarification(s).

MiDA Procurement Principles



MiDA Procurement Principles

- PA to ensure integrity of the process,
- Open competition wherever possible,
- No geographic or national preferences,
- Independent and suitably qualified Bid Review and Evaluation Panels,
- MCC and MiDA Board of Directors approvals over certain thresholds,
- Price Reasonableness Analysis,
- Contractor Past Performance Reports,
- Reference Checks, and
- Bid Challenge System and Debriefings.

Bidding Documents

Bidding Documents are in three (3) Parts with Sections and should be read in conjunction with any Addenda that may be issued in accordance with ITB 9:

- **Part 1 - Bidding Procedures**

- Section I. Instructions to Bidders
- Section II. Bid Data Sheet
- Section III. Qualification and Evaluation Criteria
- Section IV. Technical and Financial Offer Bid Forms

Bidding Documents

- **PART 2 Employer's Requirements**
- Section V. Employer's Requirements

- **PART 3 Conditions of Contract and Contract Forms**
- Section VI. General Conditions of Contract
- Section VII. Particular Conditions of Contract
- Section VIII. Form of Notice of Intent to Award
- Section IX. Annex to the Particular Conditions of Contract – Contract Forms

Part 1 - Bidding Procedures

- **Section I. Instructions to Bidders (ITBs)**
 - Provides information to help potential bidders prepare their bids, bids submission, opening and evaluation and award of contracts.
- **Section II. Bid Data Sheet**
 - Consists of provisions that are specific to this procurement and supplements the information or requirements included in Section I.
- **Section III. Qualification and Evaluation Criteria**
 - Contains the criteria to determine the lowest evaluated responsive bid and to ascertain continued qualification of the bidder.

Part 1 - Bidding Procedures

Section IV. Technical and Financial Offer Bid Forms

Technical Offer

➤ Review

Administrative Completeness Review of Legal Status; Financial Criteria; Litigation Criteria; Qualifications Review; References and Past Performance Review.

➤ Technical Evaluation Criteria

Criteria, sub-criteria and point system for the evaluation of Technical Offers of Organizational Capability and Experience; Approach, Methodology and Work Plan and Key Professional Personnel Qualifications.

➤ Minimum Technical Score required to pass is 80 points.

Part 1 - Bidding Procedures

Section IV. Technical and Financial Offer Bid Forms

Financial Offer

- Administrative Completeness Review to ensure all required documents and forms are included and completed.
- Bidders may be requested to submit additional information or documentation ***within a reasonable period of time*** to correct nonmaterial nonconformities in the Bid as relates to Financial Offer documentation requirements.
- **Reviews to include the determination that:**
 - Letter of Financial Offer Bid Price is included and signed.

Part 1 - Bidding Procedures

Financial Offer Cont'd

- Bid Security in the correct **format, amount and validity** is enclosed, and all other required forms are included and completed.
- **Review of the Prices in the Financial Offer**
- **Determine the Evaluated Financial Offer Price of each Bid**
- **Evaluated Bid Price adjusted as follows:**
 - to exclude Provisional Sums;
 - not to include the price adjustment provisions and to rates; and
 - to include adjustment for correction of arithmetical errors, omissions, clarifications.

Part 1 - Bidding Procedures

Financial Offer Cont'd

- **Price of Recommended Spare Parts** in Price Schedule No. 6 shall not be considered for evaluation.
- **Costs of work, services, facilities** etc., to be provided by MiDA in excess of the provisions called for in the Bidding Documents shall be added to the Financial Offer Price for evaluation.
- **Price Reasonableness Determination**
- Negative determination of price reasonableness may be a reason for rejection of the Bid at the discretion of MiDA and Bidders shall not be permitted to revise their Bids after this determination.

Part 1 - Bidding Procedures

Financial Offer Cont'd

- Determination of Combined Technical and Financial Scores with the Lowest Evaluated Financial Offer (F_m) is given the Maximum Financial Score (S_f) of 100.
- Formula for determining the financial scores (S_f) of all other Offers is calculated as $S_f = 100 \times F_m / F$, in which “ S_f ” is the financial score, “ F_m ” is the lowest price and “ F ” the price of the Offer under consideration.
- Weights given to the Technical (T) = 80 and Financial (P) = 20 and Bids ranked by combined S_t & S_f with $S = S_t \times T\% + S_f \times P\%$.

Part 1 - Bidding Procedures

- Bidders' attention is drawn to the particular **Clauses** under Section I - Instructions to Bidders as amended and supplemented under Section II - Bid Data Sheet that explain details to be provided for Section III - Qualification and Evaluation Criteria and Section IV - Technical and Financial Offer Bid Forms as regards to:
 - Preparation of Bids – ITBs 10 – 21;
 - Submission and Opening of Bids - ITBs 22 – 26;
 - Evaluation and Comparison of Bids ITBs 27 – 34;
 - and
 - Negotiations and Award of Contract, ITBs 35-46.

Part 2 - Employer's Requirements

Section V. Employer's Requirements

- Documents under this Section are part of the Bidding Documents and Bidders are to provide detailed requirements, without having any impact on Contractor's incumbent obligations as per ***Clause 4.10 - Contractor's General Obligations of the General Conditions of Contract.***
- The Employer's Requirements are arranged in the documents and appendices attached separately to the bid document.
- Bidders must read and comply with all the provisions in all the documents and appendices

Part 2 - Employer's Requirements

Section V. Employer's Requirements

The Employer's Requirements cover the following:

- Scope of Works and Specifications
- Appendix 1: Drawings
- Appendix 2: Technical Data Schedules
- Appendix 4: Environmental, Social, Health and Safety Management Plan

- The documents can also be assessed in the google link below:

https://drive.google.com/open?id=1dKg_wGBwupptCG3ewFK1iql741OFZRHd

Part 3 - Conditions of Contract and Contract Forms

Section VI. General Conditions of Contract (GCC)

- GCC are those of the “Conditions of Contract for Plant and Design-Build,” First Edition, 1999, prepared by the Fédération Internationale des Ingénieurs-Conseils (FIDIC).
- This is normally referred to as the Yellow Book under the FIDIC Suite.
- The GCCs are subject to the variations and additions set out in the Particular Conditions of Contract (PCC) licensed for use by MCC.

Part 3 - Conditions of Contract and Contract Forms

Section VI. General Conditions of Contract (GCC)

- The General Conditions of Dispute Adjudication Agreement and Dispute Adjudication Agreement per Sub-Clauses 20.2 and 20.4 are the “General Conditions of Dispute Adjudication Agreement” appended to the GCC and the Dispute Adjudication Agreement annexed to the “Guidance for the Preparation of Particular Conditions of Contract,” both contained in the “Conditions of Contract for Construction,” First Edition, 1999, as prepared and published by FIDIC, which can be received from MiDA through the Engineer, SMEC.

Part 3 - Conditions of Contract and Contract Forms

Section VII. Particular Conditions of Contract (PCC)

- The Particular Conditions of Contract (PCC), including Annex A and Annex B, shall supplement the GCC and whenever there is a conflict, the provisions in the PCC shall prevail.
- Annex A (Additional Provisions) are applicable Compact Conditions, Bidders are advised to examine and consider carefully, as part of the PCC, being Government's and the MiDA's obligations under the Compact and related documents, required to be transferred onto any anyone with contracts in which MCC Funding is involved.

Part 3 - Conditions of Contract and Contract Forms

- Appendix to Financial Offer in Section IV (Technical and Financial Offer Bid Forms) are made a part of the Bidder's Bid and for the successful Bidder, it shall become Annex B to the PCC.

Section VIII. Form of Notice of Intent to Award

- Not a Notice of Award or Letter of Acceptance.
- Notice of Intent to Award shall include a note that a formal Letter of Acceptance and draft Contract Agreement after expiration and the resolution of Bid Challenge.
- Delivery of the Notice of Intent to Award shall not constitute the formation of a contract.

Part 3 - Conditions of Contract and Contract Forms

Section IX. Annex to the Particular Conditions of Contract – Contract Forms

- Form of Letter of Acceptance with an Attachment of the Contract Agreement.
- Form of Contract Agreement.
- Compliance with Sanctions Certification Form.
- Beneficial Ownership Disclosure Form.
- Forms of Performance Security, Advance Payment Guarantee and Retention Money Guarantee, subject to the Uniform Rules for Demand Guarantees, 2010 Revision, ICC Publication No. 758.

Clarification Questions and Responses

One (1) round of Clarification as follows:

Not later than **Tuesday, 9th April, 2019** with responses not later than **17:00 hours** local time in Ghana on **Friday 26th April, 2019**.

Clarification responses to all Questions will be issued along with the Minutes of the Pre-Bid Conference

Clarification Questions must be sent **by e-mail** to:

paghana@charleskendall.com and
procurement@mida.gov.gh

You must use these addresses to solicit a written response to your questions including those raised at this Conference.

Submissions

MiDA Procurement, 4th Floor Heritage Tower, 6th Avenue Ridge West, Accra

- Technical Offer - 1 original, 4 hard copies and scanned copy in PDF format on USB Drive
- Financial Offer - 1 original, 4 hard copies and scanned copy in PDF format on USB Drive
- Submission Form to be completed on Tender Box
- Submissions due by **10:00 am local time on Friday, 31st May, 2019.**
- Public opening follows immediately after
- Late Submissions will not be accepted.

COMMON CHALLENGES

- ❖ Clarification questions not asked by due date and time.
- ❖ Courier packages or Bids not clearly marked – clearly label courier packages with activity title and IFB/RFP reference number.
- ❖ Bid submission form/letter (TECH-1) not signed.
- ❖ Power of Attorney not provided.
- ❖ JV or Association documents not provided.
- ❖ Government Owned Entity form not completed and/or signed.
- ❖ Financial Statements not provided.
- ❖ Firms fail to analyze the evaluation criteria and align the marks available to the content of their Bid.
- ❖ References and/or contact email addresses not provided for Bidder and/or Key Personnel.
- ❖ Technical/Financial forms not responded to, or completed, in full.
- ❖ CV not signed, or years of experience for Key Personnel not clear.



The End

Thank you –

Any questions?

**NEXT
PRESENTATION**





MiDA Pre-Bid Conference for the Pokuase BSP Interconnecting Lines April 2, 2019

Payment Process Taxes & Audits



Presentation Outline

- Payment Process
- Tax Exemptions
- Process for Claiming Exemptions
- Audits
- Other Issues (including Insurance)



Payment Process

- Contractor submits progress payment invoices to the Engineer. Note, MiDA must make payment, 56 days after the Contractor submits the invoice to the Engineer.
- The Engineer receives the Contractor's invoice and is responsible for calculating and approving the Payment Certificate. This process must be completed in 28 days or less.
- The Engineer submits the Payment Certificate to MiDA's Chief Financial Officer (very important if the process is to be completed on time) with an information copy to the Project Director.



Payment Process

- MiDA's Fiscal Agent records the Payment Certificate in MiDA's official accounts (28 days count from when FA records it !!!).
- The Fiscal Agent sends the Payment Certificate to MiDA for official approval and MiDA returns it to the Fiscal Agent.

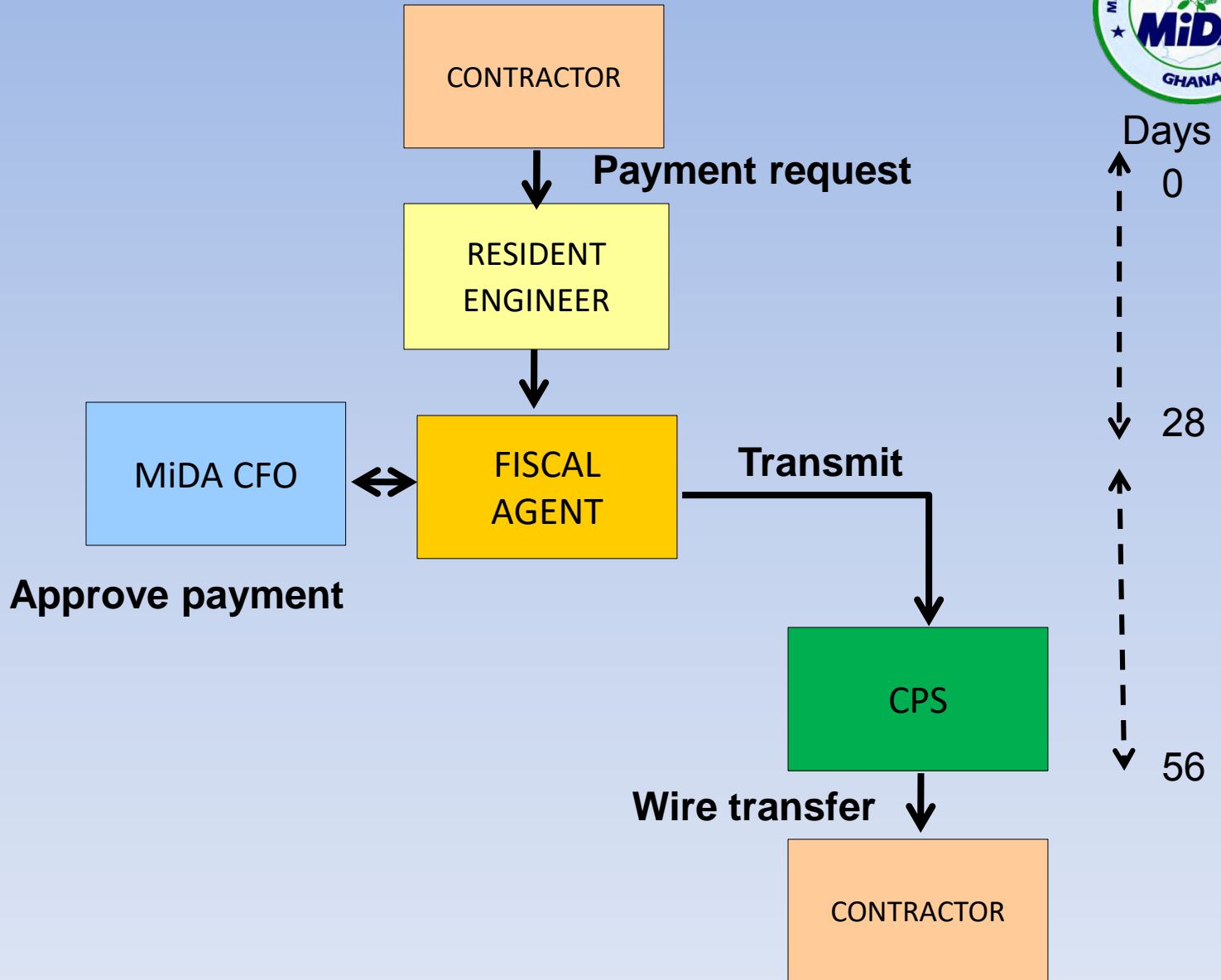


Payment Process

- Upon receipt of the approved Payment Certificate from MiDA, the Fiscal Agent carries out the final checks of the Payment Certificate such as making sure all approvals are in order, the contractor is not on the international excluded party list and the Payment Certificate is in accordance with the contract.
- After the final checks the Payment Certificate is processed for payment
- As part of the payment process, the Fiscal Agent authorizes MCC's payment center in the US to wire funds to the contractors bank account on record.



Payment Cycle





Taxes

- VAT/NHIL
 - Contractors/Consultants executing MiDA Projects.
 - Contractors/Consultants who are Registered Traders.
- Custom Duties, Tariffs, Import and Export Taxes for Direct imports and Purchases from Bonded Warehouses
- Petroleum Taxes. Contractor to work with oil companies to establish pumps at construction sites. MiDA to provide proper exemption documents.
- Sub-Contractors and Other Taxes



Process for VAT/NHIL(Local Purchases) Exemption

- Contractor submits Original Invoice to MiDA showing product price and VAT/NHIL/GETFUND
- Invoice should be a VAT Receipt and if not, it should be accompanied by a letter from GRA authorizing Contractor to issue computer generated VAT Invoice.
- MiDA submits request to GRA for refund in MiDA's name and will only submit check to Contractor after receipt of Refund from GRA.

(Invoice should bear contractor/MiDA's name)



Process for Duties & VAT/NHIL at Importation



- Contractor submits Bill of Lading with itemized List to Engineer for Certification/Approval.
- Engineer approves List as required for the Project
- Contractor submits Bill of Lading to MiDA for Exemption letters.
- MiDA issues 2 Exemption letters to be submitted to;
 - Ministry of Finance & Economic Planning.
 - GRA



Process for Petroleum Taxes



Exemption

- Contractor submits Fuel Consumption Plan for 6 months to the Engineer for Certification/Approval.
- Contractor requests Proforma Invoice from Oil Marketing Company detailing Fuel Costs and Taxes/Levies.
- Contractor submits Proforma Invoice and Approved Fuel Consumption Plan to MiDA for Exemption letters.
- MiDA issues 2 Exemption letters to be submitted to;
 - Ministry of Finance & Economic Planning.
 - GRA



Audits and Reviews



Service providers shall permit such access, audits, reviews and evaluations as provided in the Compact.

From MiDA

- Internal Auditor
- Financial Audits
- Technical Auditor
- GoG Auditors

From MCC

- MCC and IE Oversight
- MCC Interim Activity Reviews
- General Accountability Office (GAO)
- Office of Inspector General (OIG)



USG Audits - GAO



What it is

- Independent nonpartisan agency that works for both houses of US Congress
- Congress requests GAO work by writing to Comptroller General or by including a mandate in a law. Comptroller General can also initiate work.
- Supports congressional oversight by auditing and evaluating the performance of government agencies and programs.

What it does

Work has focused on:

- MCC's operations
- MCC's budget requests
- MCC compact due diligence, such as economic analyses
- Roll-out of implementation in Compact countries
- Implementation, including:
 - ✓ Management structures
 - ✓ Fiscal and procurement accountability
 - ✓ Infrastructure project performance
 - ✓ Monitoring and evaluation

Reports become public documents



USG Audits - OIG



What it is

- Inspector General of USAID serves as Inspector General of MCC: conduct reviews, investigations, and inspections of all aspects of MCC operations
- Contribute and support integrity, efficiency, and effectiveness in all MCC activities through detection and prevention of fraud, waste and abuse
- Assist in complying with applicable laws and regulations
- Provide information to Congress, management, and the public

What it does

Reports:

- Audit and Investigative Reports
- Annual Plans
- Semiannual Reports

- Activities:
- Performance Audits
- Financial Audits
 - ✓ MCC's financial statements
 - ✓ MCAs and covered providers handling of MCC funds

Reports become public documents



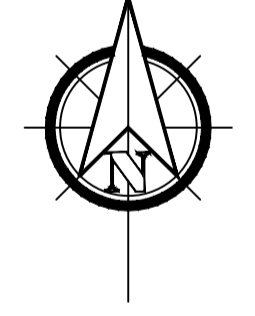
Issues Of Note

- Only Authorized Representatives on Record can request Bank Account Change.
- Insurance Policies Must be on file before payments.
- Questions ????

A
400401

B
400402

- NOTE:**
- LP = LIGHT ANGLE POLE
 - Tn = TERMINAL POLE
 - IM = INTERMEDIATE POLE
 - HP = HEAVY ANGLE POLE
 - SP = SECTION POLE
 - TO = TEE-OFF
 - F1 - Towards Kwabena
 - F2 - Towards Aduman
 - F3 - Towards Mayera
 - F4 - Towards Pokuase Township
 - F5 - Towards Olankor
 - F6 - Towards Amasaman
 - F7 - Towards Awashie
- * Proposed Ring Main Units(RMU) will be installed at 1km intervals along the underground cables to aid in troubleshooting when a fault occurs on the cable.



LEGEND

- PROPOSED POKUASE BSP
- EXISTING 11kV TRANSFORMER
- EXISTING 11kV OVERHEAD LINE (120AAC)
- PROPOSED 11kV OVERHEAD LINE (120AAC) (1x400sqmm 11kV XLPE, AL PER PHASE)
- EXISTING 11kV OVERHEAD LINE (120AAC) TO BE RETIRED
- PROPOSED 11kV UNDERGROUND CABLE (3x95mm AL XLPE)
- PROPOSED NON-EXTENSIBLE RMU (FUSED)
- PROPOSED NON-EXTENSIBLE RMU (NON-FUSED)
- PROPOSED EXTENSIBLE RMU (NON-FUSED)
- PROPOSED EXTENSIBLE RMU (FUSED)

Employee Client
MILLENNIUM DEVELOPMENT AUTHORITY (MIDA) GHANA

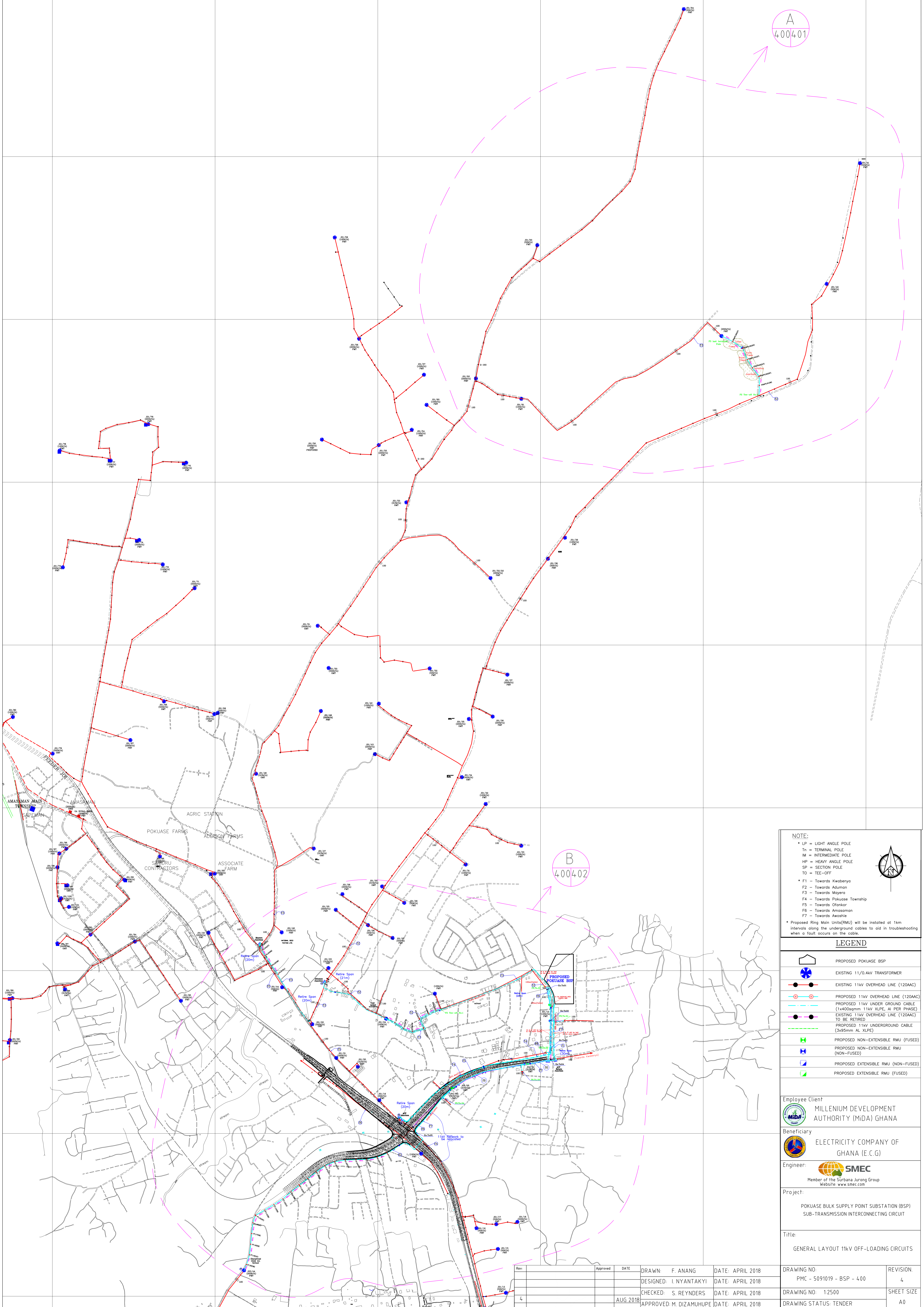
Beneficiary
ELECTRICITY COMPANY OF GHANA (E.C.G)

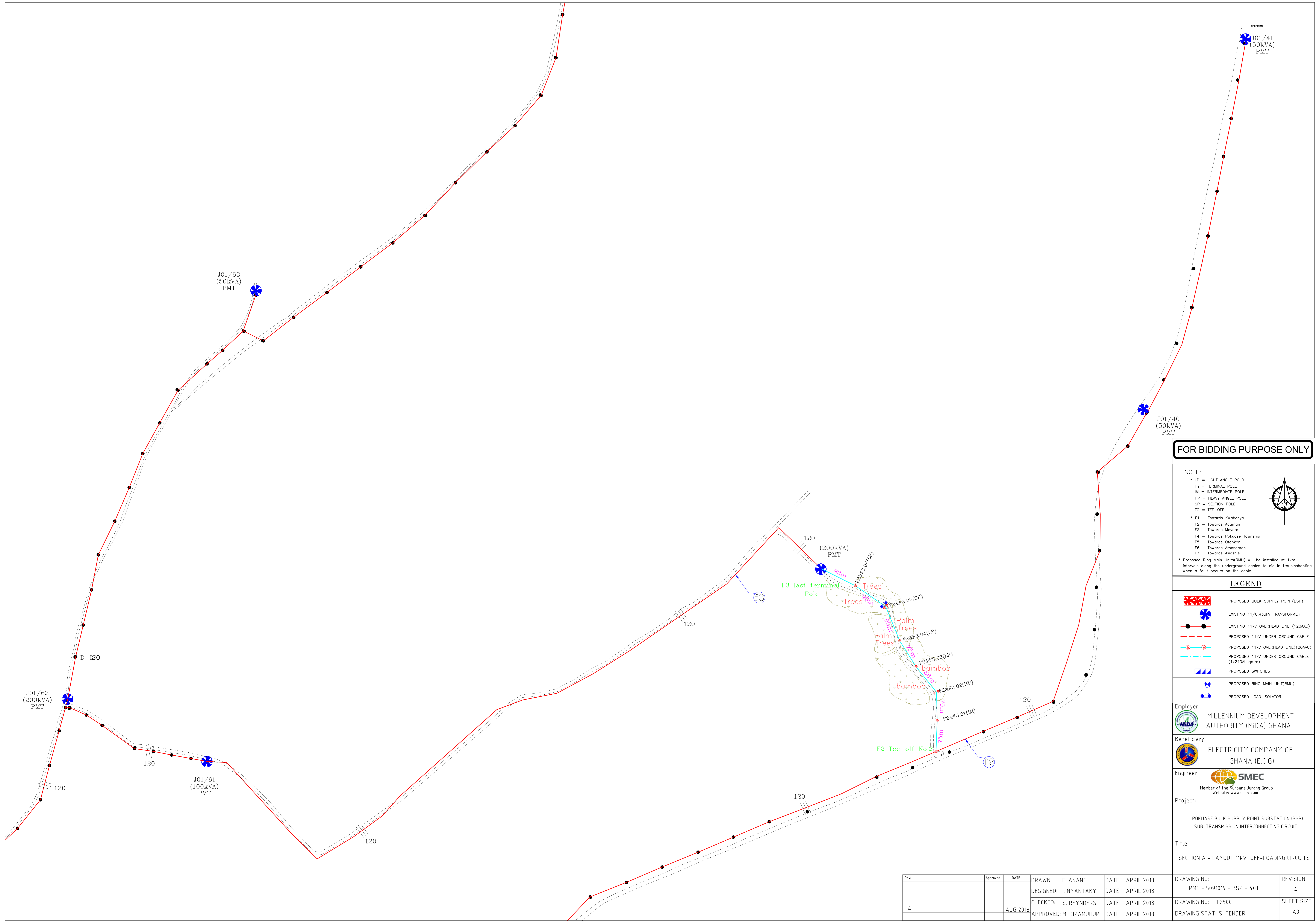
Engineer:
SMC
 Member of the Surbana Jurong Group
 Website: www.smc.com

Project:
**POKUASE BULK SUPPLY POINT SUBSTATION (BSP)
 SUB-TRANSMISSION INTERCONNECTING CIRCUIT**

Title:
GENERAL LAYOUT 11kV OFF-LOADING CIRCUITS

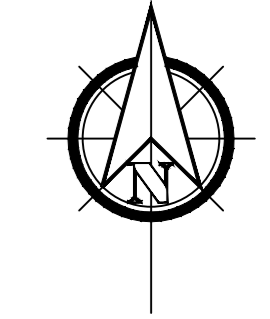
Rev.	Approved	DATE	DRAWN:	DATE:	DRAWING NO:	REVISION:
			F. ANANG	APRIL 2018	PMC - 5091019 - BSP - 400	4
			I. NYANTAKYI	APRIL 2018		
			S. REYNDERS	APRIL 2018	1:2500	SHEET SIZE
4		AUG 2018	M. DIZAMUHUPE	APRIL 2018	DRAWING STATUS: TENDER	A0





FOR BIDDING PURPOSE ONLY

- NOTE:**
- LP = LIGHT ANGLE POLR
 - Tn = TERMINAL POLE
 - M = INTERMEDIATE POLE
 - HP = HEAVY ANGLE POLE
 - SP = SECTION POLE
 - TO = TEE-OFF
 - F1 = Towards Kwabenya
 - F2 = Towards Aduman
 - F3 = Towards Mayera
 - F4 = Towards Pokuase Township
 - F5 = Towards Ofankor
 - F6 = Towards Amasaman
 - F7 = Towards Awoshie
- * Proposed Ring Main Units(RMU) will be installed at 1km intervals along the underground cables to aid in troubleshooting when a fault occurs on the cable.



LEGEND

- PROPOSED BULK SUPPLY POINT(BSP)
- EXISTING 11/0.433kv TRANSFORMER
- EXISTING 11kv OVERHEAD LINE (120AAC)
- PROPOSED 11kv UNDER GROUND CABLE
- PROPOSED 11kv OVERHEAD LINE(120AAC)
- PROPOSED 11kv UNDER GROUND CABLE (1x240Al.sqmm)
- PROPOSED SWITCHES
- PROPOSED RING MAIN UNIT(RMU)
- PROPOSED LOAD ISOLATOR

Employer
 MILLENNIUM DEVELOPMENT AUTHORITY (MIDA) GHANA

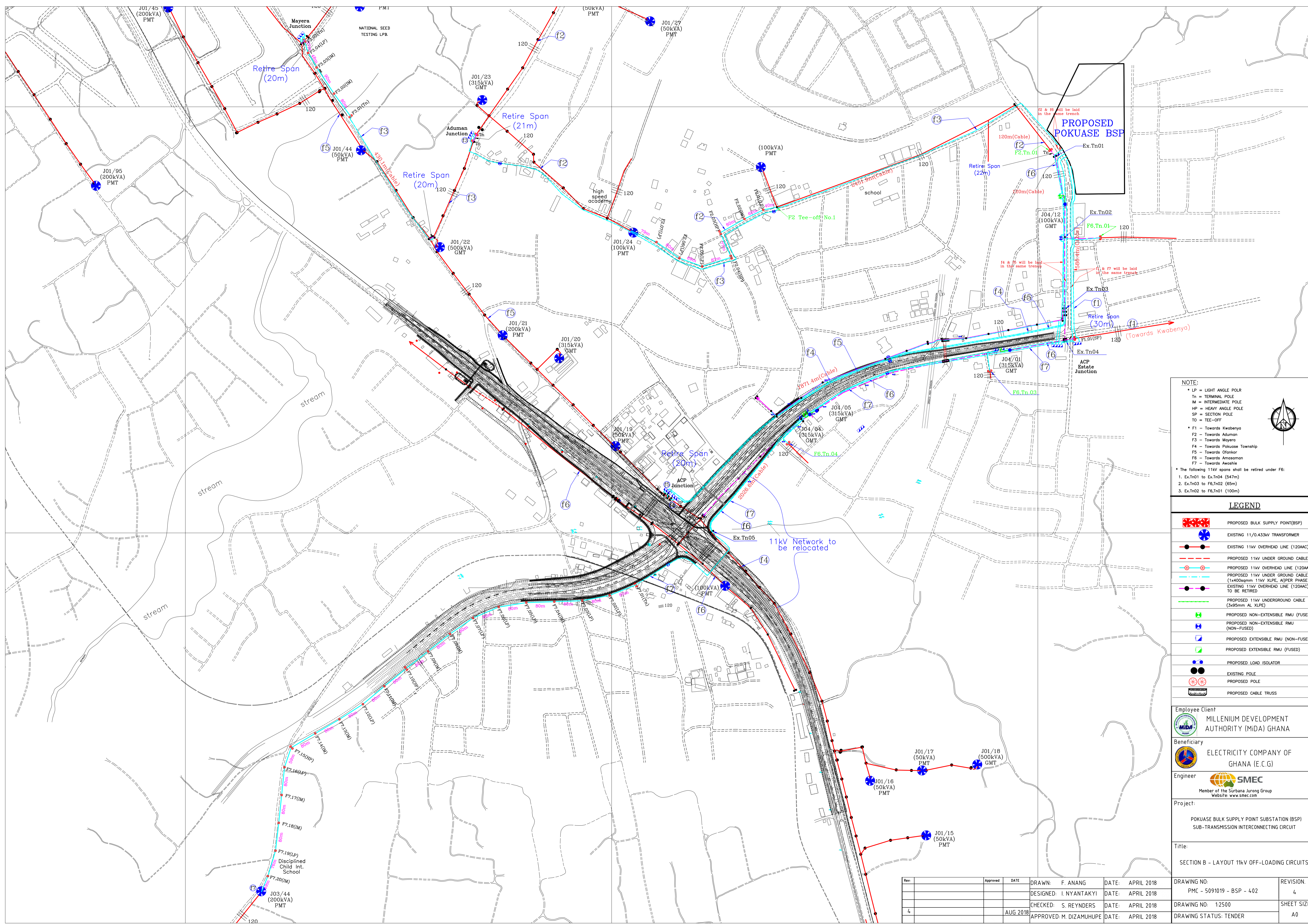
Beneficiary
 ELECTRICITY COMPANY OF GHANA (E.C.G)

Engineer
 SMC
 Member of the Sirbana Jurong Group
 Website: www.smec.com

Project:
 POKUASE BULK SUPPLY POINT SUBSTATION (BSP)
 SUB-TRANSMISSION INTERCONNECTING CIRCUIT

Title:
 SECTION A - LAYOUT 11KV OFF-LOADING CIRCUITS

Rev.	Approved	DATE	DRAWN: F. ANANG	DATE: APRIL 2018	DRAWING NO:	REVISION:
			DESIGNED: I. NYANTAKYI	DATE: APRIL 2018	PMC - 5091019 - BSP - 401	4
4		AUG 2018	CHECKED: S. REYNDERS	DATE: APRIL 2018	DRAWING NO: 1:2500	SHEET SIZE
			APPROVED: M. DIZAMUHUPE	DATE: APRIL 2018	DRAWING STATUS: TENDER	A0

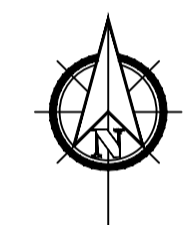


NOTE:

- LP = LIGHT ANGLE POLE
- Tn = TERMINAL POLE
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- F1 - Towards Kwabenya
- F2 - Towards Aduman
- F3 - Towards Mayera
- F4 - Towards Pokuase Township
- F5 - Towards Okoror
- F6 - Towards Amosman
- F7 - Towards Awoshie

* The following 11kV spans shall be retired under F6:

- Ex.Tn01 to Ex.Tn04 (547m)
- Ex.Tn03 to F6.Tn02 (65m)
- Ex.Tn02 to F6.Tn01 (100m)



LEGEND

	PROPOSED BULK SUPPLY POINT(BSP)
	EXISTING 11kV.433kV TRANSFORMER
	EXISTING 11kV OVERHEAD LINE (120AAC)
	PROPOSED 11kV UNDER GROUND CABLE (120AAC)
	PROPOSED 11kV UNDER GROUND CABLE (1x400sqmm 11kV XLPE, ADJPER PHASE)
	EXISTING 11kV OVERHEAD LINE (120AAC) TO BE RETIRED
	PROPOSED 11kV UNDERGROUND CABLE (3x95mm AL XLPE)
	PROPOSED NON-EXTENSIBLE RMU (FUSED)
	PROPOSED NON-EXTENSIBLE RMU (NON-FUSED)
	PROPOSED EXTENSIBLE RMU (NON-FUSED)
	PROPOSED EXTENSIBLE RMU (FUSED)
	PROPOSED LOAD ISOLATOR
	EXISTING POLE
	PROPOSED POLE
	PROPOSED CABLE TRUSS

Employee Client
 MILLENNIUM DEVELOPMENT AUTHORITY (MIDA) GHANA

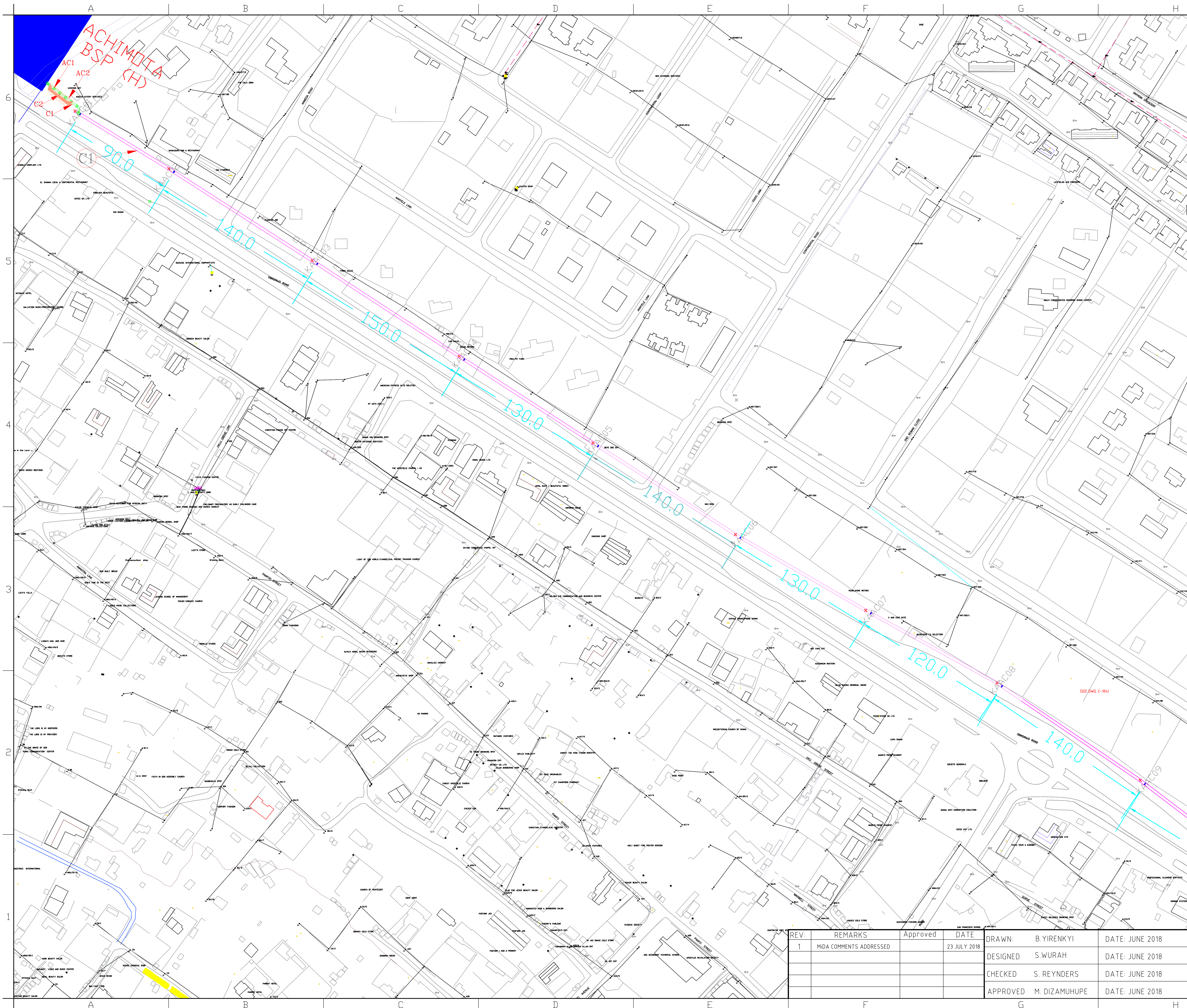
Beneficiary
 ELECTRICITY COMPANY OF GHANA (E.C.G)

Engineer
 SMEC
 Member of the Surbana Jurong Group
 Website: www.smeccom

Project:
 POKUASE BULK SUPPLY POINT SUBSTATION (BSP)
 SUB-TRANSMISSION INTERCONNECTING CIRCUIT

Title:
 SECTION B - LAYOUT 11kV OFF-LOADING CIRCUITS

Rev	Approved	DATE	DRAWN: F. ANANG	DATE: APRIL 2018	DRAWING NO:	REVISION:
			DESIGNED: I. NYANTAKYI	DATE: APRIL 2018	PMC - 5091019 - BSP - 402	4
4		AUG 2018	CHECKED: S. REYNDERS	DATE: APRIL 2018	DRAWING NO: 1:2500	SHEET SIZE
			APPROVED: M. DIZAMUHUPE	DATE: APRIL 2018	DRAWING STATUS: TENDER	A0



NOTE:

- Existing Double circuit tower line from Achimota BSP (KAAC01) to CSIR (KAAC18) shall be replaced with Quadruple Circuit Tower Line
- All the proposed 33kV underground circuits are 2Nos. (1x630sqmm 33kV XLPE, Al Cable per phase per circuit)

AC1 – One Overhead line Circuit on a QCTL from Achimota BSP (station H) to Airport city Primary substation

AC2 – One Overhead line Circuit on a QCTL from Achimota BSP (station H) to Airport city Primary substation

C1 – One Overhead line Circuit on a QCTL from Achimota BSP (station H) to KA02 and underground circuit from KA02 to proposed Kanda Primary substation

C2 – One Overhead line Circuit on a QCTL from Achimota BSP (station H) to KA02 and underground circuit from KA02 to proposed Kanda Primary substation

CIRCUIT LENGTH FROM KANDA TO ACHIMOTA BSP 'H' – 3222m

LEGEND

	EXISTING BULK SUPPLY POINT(BSP)
	PROPOSED 33kV QUADRUPLE CIRCUIT TOWER LINE
	PROPOSED QUADRUPLE CIRCUIT TOWER
	EXISTING DOUBLE CIRCUIT TOWER
	EXISTING CABLE TRUSS

EMPLOYER: MILLENNIUM DEVELOPMENT AUTHORITY (MiDA) GHANA

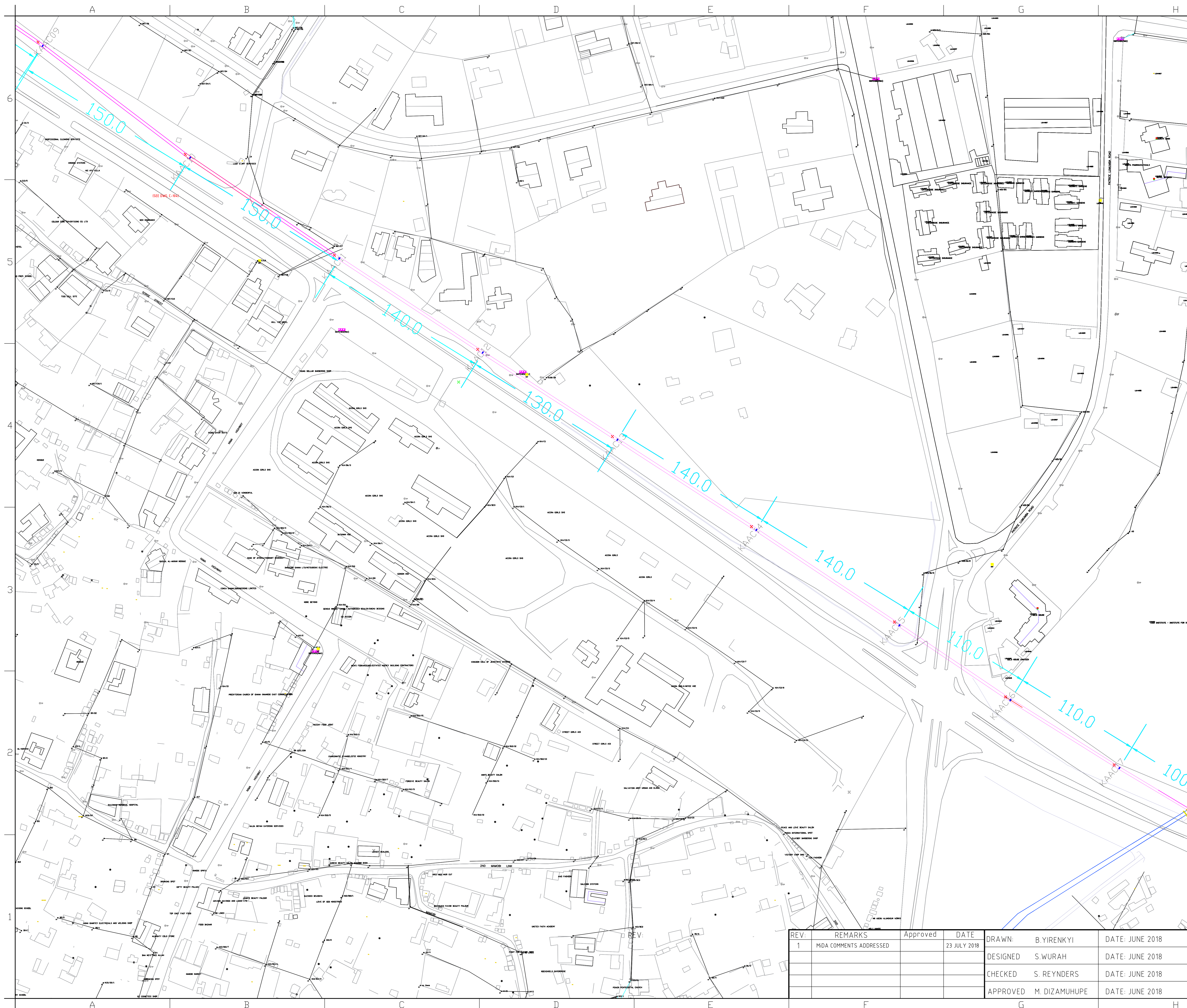
BENEFICIARY: ELECTRICITY COMPANY OF GHANA (E.C.G)

ENGINEER: **SMC**
Member of the Surbana Jurong Group
Website: www.smc.com

PROJECT: POKUASE BULK SUPPLY POINT SUBSTATION (BSP) SUB-TRANSMISSION INTERCONNECTING CIRCUIT

TITLE: 33kV OFF-LOADING CIRCUITS LAYOUT ACHIMOTA BSP TO KANDA PSS QUADRUPLE CIRCUIT TOWER LINE (QCTL)

REV	REMARKS	DATE	APPROVED	DRAWN:	DATE:	DRAWING No.:	REVISION:
1	MIDA COMMENTS ADDRESSED	23 JULY 2018		B.YIRENKYI	JUNE 2018	PMC - 5091019 - BSP - 437A	1
				S.WURAH	JUNE 2018	DRAWING SCALE: 1:3000	SHEET SIZE: A1
				S.REYNDERS	JUNE 2018	DRAWING STATUS: FOR TENDERING	
				M.DIZAMUHUPE	JUNE 2018		



NOTE:

- * Existing Double circuit tower line from Achimota BSP (KAAC01) to CSIR (KAAC18) shall be replaced with Quadruple Circuit Tower Line
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AC2 – One Overhead line Circuit on a QCTL from Achimota BSP (station H) to Airport city Primary substation

C1 – One Overhead line Circuit on a QCTL from Achimota BSP (station H) to KA02 and underground circuit from KA02 to proposed Kanda Primary substation

C2 – One Overhead line Circuit on a QCTL from Achimota BSP (station H) to KA02 and underground circuit from KA02 to proposed Kanda Primary substation

CIRCUIT LENGTH FROM KANDA TO ACHIMOTA BSP 'H' – 3222m

LEGEND

	PROPOSED 33kV QUADRUPLE CIRCUIT TOWER LINE
	PROPOSED QUADRUPLE CIRCUIT TOWER
	EXISTING DOUBLE CIRCUIT TOWER

EMPLOYER: MILLENNIUM DEVELOPMENT AUTHORITY (MIDA) GHANA

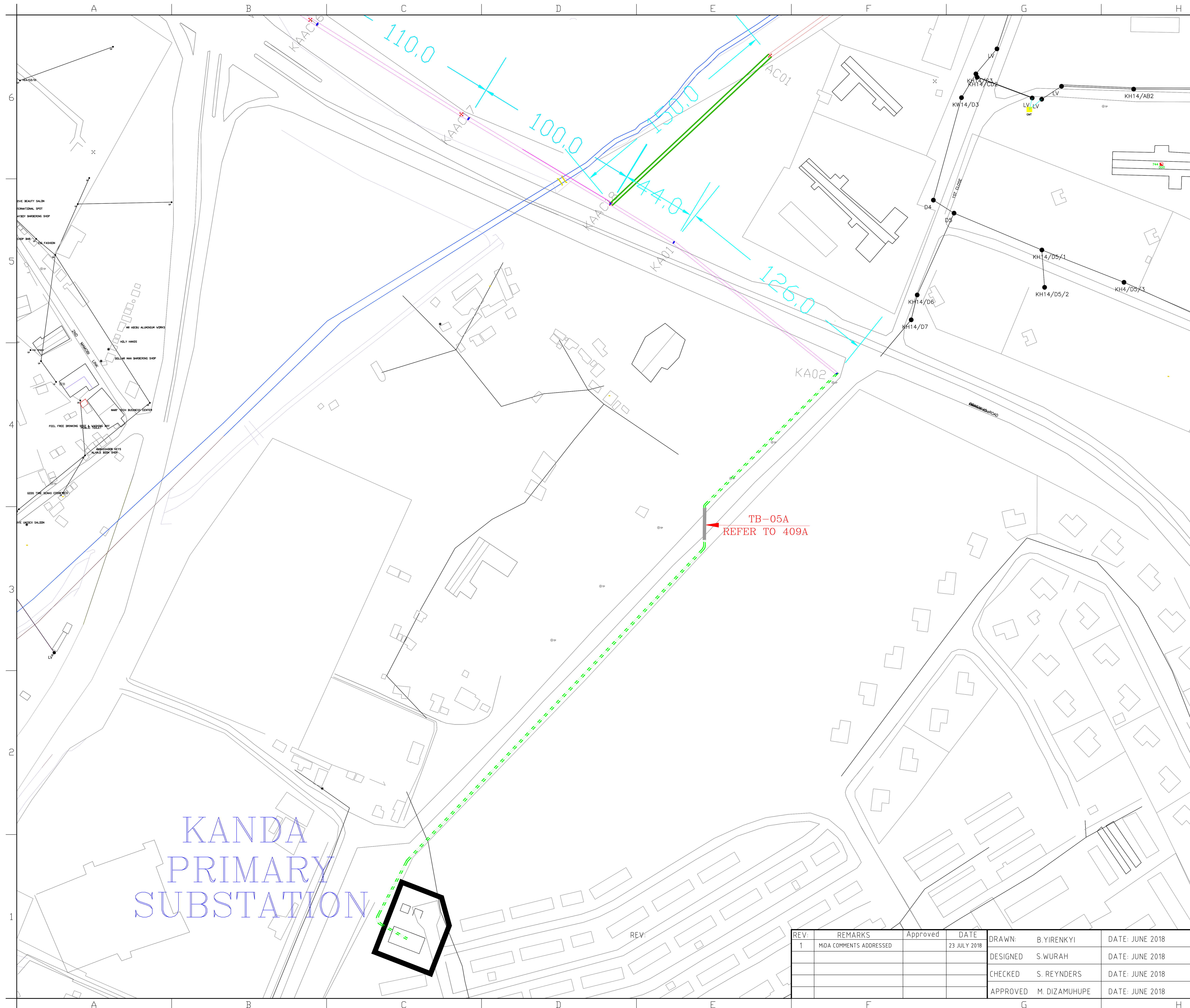
BENEFICIARY: ELECTRICITY COMPANY OF GHANA (E.C.G)

ENGINEER: **SMEC**
Member of the Surbana Jurong Group
Website: www.smecc.com

PROJECT: POKUASE BULK SUPPLY POINT SUBSTATION (BSP) SUB-TRANSMISSION INTERCONNECTING CIRCUIT

TITLE: 33kV OFF-LOADING CIRCUITS LAYOUT ACHIMOTA BSP TO KANDA PSS QUADRUPLE CIRCUIT TOWER LINE (QCTL)

REV.	REMARKS	Approved	DATE	DRAWN:	DATE:	DRAWING No.	REVISION:
1	MIDA COMMENTS ADDRESSED		23 JULY 2018	B.YIRENKYI	JUNE 2018	PMC - 5091019 - BSP - 437B	1
				S.WURAH	JUNE 2018	DRAWING SCALE: 1:3000	SHEET SIZE A1
				S.REYNDERS	JUNE 2018	DRAWING STATUS: FOR TENDERING	
				M.DIZAMUHUPE	JUNE 2018		



NOTE:

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C1 – One Overhead line Circuit on a QCTL from Achimota BSP (station H) to KA02 and underground circuit from KA02 to proposed Kanda Primary substation

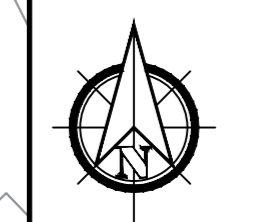
C2 – One Overhead line Circuit on a QCTL from Achimota BSP (station H) to KA02 and underground circuit from KA02 to proposed Kanda Primary substation

CIRCUIT LENGTH FROM KANDA TO ACHIMOTA BSP 'H' – 3222m

LEGEND

- PROPOSED 33kV QUADRUPLE CIRCUIT TOWER LINE
- PROPOSED 33kV UNDER GROUND CABLE (1x630sqmm AL)
- EXISTING 33kV DOUBLE CIRCUIT TOWER LINE TO BE RESTRUNG
- PROPOSED KANDA PRIMARY SUBSTATION
- PROPOSED QUADRUPLE CIRCUIT TOWER
- EXISTING DOUBLE CIRCUIT TOWER
- THRUST BORING

**KANDA
PRIMARY
SUBSTATION**



EMPLOYER: MILLENNIUM DEVELOPMENT AUTHORITY (MIDA) GHANA

BENEFICIARY: ELECTRICITY COMPANY OF GHANA (E.C.G)

ENGINEER: **SMC**
Member of the Surbana Jurong Group
Website: www.smc.com

PROJECT: POKUASE BULK SUPPLY POINT SUBSTATION (BSP) SUB-TRANSMISSION INTERCONNECTING CIRCUIT

TITLE: 33kV OFF-LOADING CIRCUITS LAYOUT ACHIMOTA BSP TO KANDA PSS QUADRUPLE CIRCUIT TOWER LINE (QCTL)

REV.	REMARKS	Approved	DATE	DRAWN:	DATE:	DRAWING No.	REVISION:
1	MIDA COMMENTS ADDRESSED		23 JULY 2018	B. YIRENKYI	JUNE 2018	PMC - 5091019 - BSP - 437C	1
				S. WURAH	JUNE 2018	DRAWING SCALE: 1:3000	SHEET SIZE A1
				S. REYNDERS	JUNE 2018	DRAWING STATUS: FOR TENDERING	
				M. DIZAMUHUPE	JUNE 2018		