#### Ministry of Public Works

### **Department of Works and Engineering**

March 1, 2017

**Dear Bidders** 

#### RE: Session's House Electrical Distribution Upgrade Phase 2

The Government of Bermuda, Ministry of Public Works (hereafter known as the "Government") invites you to submit a tender to provide an upgrade to the existing electrical distribution system and lighting system for the above captioned project in accordance with the accompanying documents:

- Tender Documents and Forms
- Invitation to Tender
- Instructions to Bidders
- Form of Tender
- Appendix to Form of Tender
- Certificate of Non-Collusion
- Tender Price Breakdown
- Labour, Material, and Equipment Rates
- Company Information
- Tender Evaluation Matrix
- Contract Documents
- Sample Form of Agreement
- Sample Appendix to Form of Agreement
- Sample Conditions of Contract
- Drawings and Specifications E1 to E12

This project involves (supplying and installing a new lighting system in the House of Assembly and replacing panelboards, feeders, and branch circuits throughout the Session's House Building located at 21 Parliament Street Hamilton HM12 Bermuda.

### **Pre-Bid Site Tour Meeting**

All interested parties and/or their official representative(s) on their own cost and responsibility <u>must</u> attend the Pre-Bid meeting and Site tour to examine the site of the proposed work, so as to be fully acquainted with existing conditions and limitations. Site visits for <u>all</u> proponents can be arranged by contacting Remi Subair at 501-3103 or rbsubair@gov.bm Proposals must be submitted no later than <u>3:00 p.m.</u> (AST), 4/16/17. Late submission will not be considered.

Proposals submitted in hard copies and delivered to the Ministry of Public Works, Department of Works and Engineering, located on the 3<sup>rd</sup> floor, Post Office Building, 56 Church Street, Hamilton. The outer envelope must be clearly marked with the title:

**Tender Submission** 

Do Not Open Before 3:00 p.m. (AST), 4/17/17.

Request for Proposal - Sessions House Electrical Distribution Upgrade, Phase 2

Attention: Remi Subair



# Ministry of Public Works

# **Department of Works and Engineering**

Full details and request for ITT documents may also be obtained from <a href="www.gov.bm">www.gov.bm</a> "procurement notice" site. Any queries must be in writing and directed to Remi Subair at rbsubair@gov.bm

Please indicate in the subject Line "Enquiry RFT <u>Session's House Electrical Distribution Upgrade</u> Phase 2

We look forward to receiving your proposals and thank you in advance for your interest in this Government of Bermuda procurement opportunity.

Yours Sincerely,

Mr. Yves Lortie Chief Engineer Ministry of Public Works



# Ministry of Public Works

# **Department of Works and Engineering**

# **Electrical Distribution Upgrades Phase 2**

# **Sessions House**

21 Parliament Street Hamilton HM12, Bermuda File Number: 34/11/78

# **Tender Package**

#### **Tender Documents and Forms**

- Invitation to Tender
- Instructions to Bidders
- Form of Tender
- Appendix to Form of Tender
- Certificate of Non-Collusion
- Tender Price Breakdown
- Labour, Material, and Equipment Rates
- Company Information
- Tender Evaluation Matrix

# **Contract Documents**

- Sample Form of Agreement
- Sample Appendix to Form of Agreement
- Sample Conditions of Contract

# **Drawings and Specifications**

• E1 to E12

Issued for Tender: 27 March 2017



# **Department of Works and Engineering**

# **Electrical Distribution Upgrades Phase 2**

# **Sessions House**

21 Parliament Street Hamilton HM12, Bermuda

File Number: 34/11/78

**Instructions to Bidders** 



# **Instructions to Bidders**

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# Electrical Distribution Upgrade Phase 2 Sessions House

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#### Part 1 GENERAL

#### 1.1 Public Access to Information

- .1 Any information collected or used by or on behalf of the Government of Bermuda ("Government") under this solicitation document is subject to the Public Access to Information Act 2010 ("Act").
- .2 The information belongs to a class of information that might be made available to the general public under the Act.
- .3 The person who gives information to the Government in response to this solicitation document consents to the collection and use of the information and waives any right to challenge any decision made by the Government to disclose the information.
- .4 Any questions regarding the collection, use, or disclosure of the information should be directed to the public authority that issued this solicitation document.

#### 1.2 Time

- .1 The tender submission must be delivered no later than insert 4/17/17 at 3:00 pm AST.
- .2 Late submission will not be considered.
- .3 The Key dates for the Procurement Process are as follows:

Activity	Date
Request for Proposals issued	March 27, 2017
Deadline for Written Clarifications and Questions from Bidders (Clause 2.2.2)	April 10, 2017
Government responding and issuing Q and A, Addenda, if applicable, (Clause 2.2.3)	April 13, 2017
Deadline for Proposals Submissions (Clause 1.2.1)	April 17, 2017, 3:00 PM AST
Evaluation of Proposals (Part 5)	April 17, 2017 to April 21, 2017
Contract Award (Part 6)	May 15, 2017 (estimated)
Completion of Work by successful bidder	October 15, 2018 (estimated)

.4 The Government may change the timeline for the procurement process without prior notice, and will notify bidders in writing promptly of any change by addenda, that will be posted on www.gov.bm procurement notices website.

# 1.3 Brief Description of the Scope of Works

- .1 The Government of Bermuda proposes to upgrade the electrical distribution system and lighting at the Sessions House Building, 21 Parliament Street, Hamilton, Bermuda.
- .2 The work included in this contract comprises channelling, painting, masonry, electrical demolition and installation, and construction management services as defined on the drawings and in the specifications.

Electrical Distribution Upgrades Phase 2 Sessions House Instructions to Bidders Page 2 of 11

#### 1.4 Eligibility and Qualification Requirements

- .1 This Invitation to tender is only open to Bidders who meet the criteria described herein.
- .2 The Bidder and the Bidder's sub-contractors must meet certain requirements, specified herein, in order to be considered as eligible Bidders for the project. Bidders, sub-contractors and contracting teams, who fail to meet with the requirements specified herein as to qualifications, will not qualify for this project, and their tenders will not be accepted.
- .3 The Bidder must have a minimum of 5 years of experience in the construction industry in Bermuda.
- .4 In addition to the experience of the firm or firms as noted above, the experience of the key individuals responsible for the project must meet the following criteria:
  - .1 Bidder's Project Manager: 5 years of experience in construction industry.
- .5 The Bidder shall submit with his completed tender all appropriate documentation in order to demonstrate the necessary experience and expertise as noted in Clause 1.2.3 and 1.2.4. This shall include descriptions of relevant and similar past projects, details of their Project Team with resumes of key personnel to be assigned to the project and the names and full details of experience of any sub-contractors.

In addition, the Bidder shall provide a reference from a bank or other financial institution confirming the Bidder's capacity to provide the necessary financial resources to complete the works in accordance with the contract and schedule.

- .6 Tenders submitted by a joint venture of two or more firms as partners shall comply with the following requirements:
  - .1 The Tender Documents, and in the case of a successful Bidder, the Form of Agreement shall be signed so as to be legally binding on all partners;
  - .2 One of the partners shall be nominated as being in charge; and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners;
  - .3 The partner in charge shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture, and the entire execution of the Contract including payment shall be done exclusively with the partner in charge;
  - .4 All partners of the joint venture shall be liable, jointly and severally, for the execution of the Contract in accordance with the Contract terms and a relevant statement to this effect shall be included in the authorization mentioned under .2 above as well as in the Form of Tender and the Form of Agreement (in the case of a successful Bidder); and
  - .5 A copy of the Agreement entered into by the joint venture partners shall be submitted with the Tender.
- .7 All corporate Bidders must include, with their tenders, a copy of the company's Certificate of Incorporation as evidence of the fact that the company is an existing registered company at the date of tender. Failure to provide the certificate of incorporation will

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render the tender void.

### 1.5 Cost of Tendering

.1 The Bidder shall bear all costs associated with the preparation and submission of his Tender and the **Government** will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the Tendering process.

#### 1.6 Mandatory Pre-Bid Site Tour Meeting

- All Bidders or their official representative(s) on their own cost and responsibility <u>must</u> attend the Pre-Bid meeting and Site tour to examine the site of the proposed work, so as to be fully acquainted with existing conditions and limitations. A site visit for <u>all</u> proponents has been arranged for 9:00AM ADT on 20<sup>th</sup> February 2017 (refer to advert/advert memo), meet at the East Exterior Main Entrance near the Elevator Lobby.
- .2 The Ministry reserves the right to refuse any request for individual conducted site tours, at any other time than that identified in this tender.
- .3 The Bidder may schedule additional site visits for further investigations by contacting the Project Manager.
- .4 The Bidders or their official representative must register their presence with the Project Manager at the start of the meeting stating the name of the company they represent their email address, and phone number.
- .5 Tenders shall not be accepted from a Bidder that fails to attend the mandatory site tour.
- The purpose of the meeting will be to visually review the site conditions, clarify issues and to answer questions on any matter that may be raised at that stage.
- .7 Minutes of the meeting, including copies of the questions raised and responses given, will be furnished expeditiously to Bidders. Any modification of the Tender documents that may become necessary as a result of the Mandatory site tour meeting will be made and furnished to all Bidders.
- .8 The Bidder shall be deemed to have satisfied themselves as to the form and nature of the site, the quantities and nature of the Work and materials necessary for the completion of the Works, and in general to have obtained all necessary information as to the risks, contingencies and other circumstances which may influence or affect his Tender.
- .9 Bidders shall make their own assessment of existing facilities, conditions and difficulties which will attend the execution of the Works called for by the proposed construction contract; including local conditions, constraints due to working in an occupied building with restricted hours, labour conditions, uncertainty of weather, difficulties with access, and all other reasonable contingencies. Tenderers shall satisfy themselves by personal examination of the site of the proposed Works and by such other means as they choose as to actual conditions and requirements, and as to the quantities required.
- .10 No after claim will be allowed or considered for any work that may be required for the proper execution and completion of the work, due to failure by the Contractor to examine the site and make proper allowances for the conditions to be encountered.

#### 1.7 Bidder's Schedule

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- .1 Bidders are advised that in order to comply with the tendering procedure for this Contract, Bidders shall include with their completed tenders a statement of the length of time required to complete the Works. The Employer may request a complete detailed schedule for completion of the works after the submission of tenders in order to fully evaluate the tenders. Failure to provide a schedule within 3 working days may result in the tender being rejected.
- .2 The schedule shall be in the form of a bar chart in electronic format (Microsoft Project) and will be fully detailed to include all construction activities from commencement to completion of the project. All critical path construction activities will be identified. The key milestones in the construction process will also be identified.
- .3 Tenders are to specify their most cost effective completion date.
- .4 The Bidder shall make every effort to complete the Works by the stipulated completion date, and shall adjust his schedule of activities accordingly.
- .5 The Bidder shall pay extra costs to complete the work on schedule, which may be incurred because of: increasing the labour force; increasing working hours either by overtime or by using shifts; using more equipment and machinery; or any other procedure which must be used.
- .6 Include in tender for any overtime or abnormal shift required to complete the project. Allow for extra care to minimize disruptions in an operational facility.

#### 1.8 Safety

- .1 All work must be carried out in strict accordance with the Health and Safety at Work Act 1982 and subsequent revision.
- .2 Please note: the Works and Engineering policy includes the provision that no alcohol or prohibited drugs shall be consumed on the site or in any vehicle related to the work or service provided. Also, no employee of the contractor or sub-contractor shall be under the influence of alcohol or drugs whilst at work.

#### Part 2 TENDER DOCUMENTS

#### 2.1 Content of the Tender Documents

.1 The set of Tender documents issued for the purpose of Tendering includes the documents stated below, together with any Addenda thereto issued in accordance with Clause 2.3 and any minutes of pre-Bid meetings.

### **Tender Documents and Forms**

- Invitation to Tender
- Instructions to Bidders
- Form of Tender
- Appendix to Form of Tender
- Certificate of Non-Collusion
- Tender Price Breakdown
- Labour, Material, and Equipment Rates
- Company Information Forms
- Tender Evaluation Matrix



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#### **Contract Documents**

- Sample Form of Agreement
- Sample Appendix to Form of Agreement
- Sample Conditions of Contract
  - 1.0 General Conditions
  - 2.0 Particular Conditions

## **Drawings and Specifications**

- E1 E12 Electrical Drawings and Specifications
- .2 The Bidder is expected to examine carefully all instructions, conditions, forms, terms, specifications and drawings in the Tender documents. Failure to comply with the requirements of the Tender submission will be at the Bidder's own risk.
- .3 The Tender Forms and Drawings and Specifications are available in PDF format from the Government of Bermuda, Office of Project Management and Procurement website: www.gov.bm/procurment-notices.

### 2.2 Clarification of Tender Documents

- .1 A prospective Bidder requiring any clarification of the Tender documents may notify the Government in writing at the Government's address/email indicated below. The Employer will respond in writing by email to any request for clarification which they receive earlier than **3 days** prior to the deadline for the submission of Tenders. Written copies of the Government's response, where necessary (including a description of the inquiry but without identifying its source), will be sent to all prospective Bidders who have provided contact details.
- .2 Submissions of written queries shall be sent to the Government at the following address by fax or email:

Ministry of Public Works 3<sup>rd</sup> Floor, 56 Church Street Hamilton, Bermuda

Attention: Remi Subair, P.Eng. Tel: (441) 297-7989

Email: rbsubair@gov.bm

#### 2.3 Amendment of Tender Documents

- .1 At any time prior to the deadline for submission of Tenders, the Government may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective Bidder, modify the Tender documents by the issuance of an Addendum.
- .2 The Addendum will be sent in writing by email to all prospective Bidders who have collected the Tender documents from the Ministry and signed the Tender Pick Up Sheet and will be binding upon them.
- .3 The Government will post the Addendum to the Government of Bermuda website on the same day issued. Bidders who have obtained their tender documents from the Government of Bermuda website are responsible for checking that website regularly and downloading all posted Addenda.
- .4 Prospective Bidders shall promptly acknowledge receipt thereof by email:



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Ministry of Public Works 3<sup>rd</sup> Floor, 56 Church Street Hamilton, Bermuda Attention: Remi Subair, P.Eng. Email: rbsubair@gov.bm

In order to afford prospective Bidders reasonable time in which to take an Addendum into account in preparing their Tenders, the Government may, at their discretion, extend the deadline for the submission of Tenders in accordance with Clause 4.2.

#### Part 3 PREPARATION OF TENDERS

## 3.1 Language of the Tender

.1 The Tender prepared by the Bidder and all correspondence and documents relating to the Tender exchanged by the Bidder and the Government, shall be written in the English language.

#### 3.2 Documents Comprising the Tender

- .1 The Tender to be prepared by the Bidder shall contain the following:
  - .1 Tender Forms Mandatory
    - .1 Form of Tender and Appendix to Form of Tender;
    - .2 Tender Price Breakdown;
    - .3 Labour, Material, and Equipment Rates:
    - .4 Certificate of Non-Collusion;
    - .5 Company Information Forms;
  - .2 Additional Required Documentation
    - .1 Letter from principal bank confirming credit status of Bidder;
    - .2 Eligibility and qualifications of firms and personnel;
    - .3 Bidder's and Sub-contractor's Certificates of Incorporation;
    - .4 Construction (Bidders) Schedule; (1.7)
    - .5 Method Statement about how the installation is to be completed;
    - .6 Health and Safety Plan for the Project;
  - .3 Any other materials required to be completed and submitted in accordance with the Instructions to Bidders embodied in the Tender documents.

The Tender Forms provided in the Tender documents shall be used without exception. One copy of the above is to be returned in accordance with Clause 3.8.

#### 3.3 Tender Prices

.1 Unless stated otherwise in the Tender documents, the Contract shall be for the whole Works as detailed in these documents and shown on the drawings and based on the completed Form of Tender lump sum, as submitted by the Bidder.

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- .2 The Bidder shall fill in separate prices for all items of Works described in the Tender Price Breakdown. Items against which no price is entered by the Bidder will not be paid for by the Government when executed and shall be deemed covered by the other lump sum prices in the Tender Price Breakdown.
- .3 All duties, taxes and other levies payable by the Bidder under the Contract, or for any other cause, as of the closing date for submission of Tender, shall be included in the rates and prices and total Tender.

# 3.4 Special Requirements

.1 Submit individual rates for labour, materials, and equipment as indicted in the Labour, Materials, and Equipment Rates Form.

#### 3.5 Currencies of Tender

.1 The lump sum prices and rates shall be quoted in Bermuda dollars.

### 3.6 Tender Validity

- .1 Tenders shall remain valid and open for a period of one hundred and twenty (120) calendar days after the date of Tender opening prescribed in Clause 4.2.
- .2 In exceptional circumstances prior to expiry of the original Tender Validity period, the Government may request the Bidder for a specified Extension in the period of Validity. The request and the responses thereto shall be made in writing by email or by facsimile. A Bidder may refuse the request and withdraw his Tender. A Bidder agreeing to the request will not be required nor permitted to modify his Tender.

### 3.7 Format and Signing of Tenders

- .1 The Bidder shall prepare one original set of the documents comprising the Tender as described in Sub-Clause 3.2.1 of these Instructions to Bidders.
- .2 The Tender shall be typed or written in indelible ink and shall be signed by a person or persons duly authorised to bind the Bidder to the Contract. All pages of the Tender where entries or amendments have been made shall be initialled by the person or persons signing the Tender.
- .3 The complete Tender shall be without alterations, interlineations or erasures, except those to accord with instructions issued by the Government, or as necessary to correct errors made by the Bidder, in which case such corrections shall be initialled by the person or persons signing the Tender.
- .4 Only one Tender may be submitted by each Bidder. No Bidder may participate in the Tender of another for the same Contract in any relation whatsoever.

## Part 4 SUBMISSION OF TENDERS

# 4.1 Sealing and Marking of Tenders

- .1 The Bidder shall seal the original of the Tender in an envelope or similar package.
- .2 The envelope shall:
  - .1 be addressed to:



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Ministry of Public Works General Post Office Building, 3rd Floor 56 Church Street Hamilton HM CX Bermuda

- .2 bear the following identification:
  - .1 Tender for "Electrical Distribution Upgrades Phase 2, Sessions House".
  - .2 The words "DO NOT OPEN BEFORE 3:00 PM ADT on 9<sup>th</sup> March, 2017."
- .3 The envelope shall indicate the name and address of the Bidder to enable the Tender to be returned unopened in the event that it is declared late or is otherwise unacceptable.
- .3 Each copy of the Tender shall be deposited in the Tender Box located at the office indicated in Sub-Clause 4.1.2 above.
- .4 If the envelope is not sealed and marked as instructed above, the Government will assume no responsibility for the misplacement or premature opening of the Tender submitted. A Tender opened prematurely for this cause will be rejected by the Government and returned to the Bidder.

#### 4.2 Deadline for Submission of Tenders

- .1 Tenders must be received by the Government at the address specified above no later than the date and time specified in the letter of invitation.
- .2 The Government may, at his discretion, extend the deadline for submission of Tender by issuing an amendment in accordance with Clause 2.3 in which case all rights and obligations of the Government and the Bidders previously subject to the original deadline shall thereafter be subject to the new deadline as extended.

### 4.3 Late Tenders

.1 Any Tender received by the Government after the deadline for submission of Tenders prescribed by the Government, in accordance with Clause 4.2 will be returned to the Bidder.

#### 4.4 Modifications and Withdrawal of Tenders

- .1 The Bidder may modify or withdraw his Tender after Tender submission, provided that the modification or notice of withdrawal is received in writing by the Government prior to the prescribed deadline for submission of Tenders.
- .2 The Bidder's modification or notice of withdrawal shall be prepared, sealed, marked and delivered in accordance with the provisions of Clauses 4.1 and 4.2 for the submission of Tenders with the envelope additionally marked "MODIFICATION" or "WITHDRAWAL" as appropriate.
- .3 Subject to Clause 5.3, no Tender shall be modified subsequent to the deadline for submission of Tenders.

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#### Part 5 TENDER OPENING AND EVALUATION

#### 5.1 Tender Opening

- .1 Tenders for which an acceptable notice of withdrawal has been submitted pursuant to Clause 4.4 shall not be opened.
- .2 The Government will examine Tenders to determine whether they are complete, whether the requisite Tender Securities have been furnished, whether the documents have been properly signed and whether the Tenders are generally in order.
- .3 Tenders shall be opened after 3:00 p.m. on the Tender Closing date identified in the Invitation to Tender. Bidders are invited to assemble no later than 3:00 p.m. at the Ministry of Public Works Engineering Boardroom located on the 3<sup>rd</sup> Floor of the General Post of Building, 56 Church Street, Hamilton.
- .4 At Tender opening, Government will announce the Bidders' names and the Tender Prices.
- .5 The tender opening will be recorded with the bidders' names and proposal prices.

#### 5.2 Process to be Confidential

- .1 After the public opening of Tenders, information relating to the examination, clarification, evaluation and comparison of Tenders and recommendations concerning the award of contract shall not be disclosed to Bidders or other persons not officially concerned with such process until the award of the Contract to the successful Bidder has been announced.
- .2 Any effort by a Bidder to influence the Government in the process of examination, clarification, evaluation and comparison of Tenders, and in decisions concerning award of Contract, shall result in the rejection of the Bidder's Tender.

#### 5.3 Clarification of Tenders

.1 To assist in the examination, evaluation and comparison of Tenders, the Government may ask Bidders individually for clarification of their Tenders. The request for clarification and the response shall be in writing. No change in the price or substance of the Tender shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Government during the evaluation of the Tenders in accordance with Clause 5.5.

#### 5.4 Determination of Responsiveness

- .1 Prior to the detailed evaluation of Tenders, the Government will determine whether each Tender is substantially responsive to the requirements of the Tender documents.
- .2 For the purpose of this Clause, a substantially responsive Tender is one which conforms to all the terms, conditions and specifications of the Tender documents without material deviation or reservation. A material deviation or reservation is one which affects in any substantial way the scope, quality, or performance of the Works, or which limits in any substantial way, inconsistent with the Tendering documents, the Government's rights or the Bidder's obligations under the Contract, and the rectification of which deviation or

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reservation would affect unfairly the competitive position of other Bidders presenting substantially responsive Tenders.

.3 If the Tender is not substantially responsive to the requirements of the Tender documents, the Government reserves the right to request further information to make the Tender fully responsive as noted in Clause 5.3.

#### 5.5 Correction of Errors

- .1 Tenders determined to be substantially responsive will be checked by the Government for any arithmetic errors in computation and summations. Errors will be corrected by the Government as follows:
  - .1 Where there is a discrepancy between amounts in figures and in words, the amount in words will govern; and
  - .2 Where there is a discrepancy between the individual lump sums and the total amount derived from the sum of the individual lump sums, the individual lump sums as quoted will govern, and the total amount will be corrected.
- .2 The amount stated in the Form of Tender will be adjusted by the Government in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount of the Tender, his Tender will be rejected.

### 5.6 Evaluation and Comparison of Tenders

- .1 The Government will evaluate and compare only Tenders determined to be substantially responsive to the requirements of the Tendering documents in accordance with Clause 5.4.
- .2 The tender assessment will take into consideration the submitted proposal documentation inclusive of the tendered prices; schedule of rates; the proposed methodology, work plan, schedule; how each of the scope of work items will be addressed; how compliance with applicable Codes, practices, and procedures will be demonstrated; the firm's qualifications and overall relevant experience in relation to this type of work; and the applicable qualifications and the experience of the team and each team member proposed to be used to undertake the work.
- .3 The tender will be evaluated under the following high level criteria headings and weighting: Technical Experience and Capacity 50%; Financial Analysis 30%; Social, Environmental, and Economic Criteria 20%. Refer to the Tender Evaluation Matrix in the Tender Documents.
- .4 The Government reserves the right to accept or reject any variation, deviation or alternative offer. Variations, deviations, alternative offers and other factors which are in excess of the requirements of the Tendering documents or otherwise result in the accrual of unsolicited benefits to the Government shall not be taken into account in Tender Evaluation.

#### Part 6 AWARD OF CONTRACT

### 6.1 Award Criteria

.1 Subject to Clause 5.5, the Government will award the Contract to the Bidder whose

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Tender has been determined to be substantially responsive to the Tendering documents and who, in the opinion of the Government, has offered the best proposal taking into consideration the Tender price, the Bidder's capability and available resources to carry out the Contract effectively and the Bidder's construction schedule, pursuant to Clause 5.6. This may not be the lowest priced tender received.

## 6.2 Government's Right to Accept any Tender and to Reject any or all Tenders

- .1 The Government does not bind himself to accept the lowest priced or any Tender and reserves the right to reject any Tender and, and to annul the Tendering process and reject all Tenders, at any time prior to Award of Contract, without thereby incurring any liability to the affected Bidder, or Bidders or any obligations to inform the affected Bidder or Bidders of the grounds for the Government's action.
- .2 The Government may declare the Tendering void when it is evident that there is a lack of competition or there has been collusion. All Tenders may be rejected if substantially higher than the budget.

#### 6.3 Notification of Award

- .1 Prior to the expiration of the period of Tender Validity prescribed by the Government, the Government will notify the successful Bidder by email that his Tender has been accepted. This letter is hereinafter and in the Conditions of Contract called "Letter of Acceptance".
- .2 The Government will promptly notify the unsuccessful Bidders that their Tenders have been unsuccessful.

# 6.4 Signing of Contract Agreement

- .1 At the same time that he notifies the successful Bidder that his Tender has been accepted, the Government will send the Bidder the Form of Agreement provided in the Tendering documents, incorporating all agreements between the parties.
- .2 Within 7 days of receipt of the Form of Agreement, the successful Bidder shall sign the Form and return it to the Government.

END OF INSTRUCTIONS TO BIDDERS



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Sessions House
Tender Forms
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# Form of Tender

# **TENDER TO: The Government of Bermuda, Ministry of Public Works**

1.	we declare	that this	s proposal i	is made	without	any	connection,	comparison	Of	figures	or
	arrangemen	ts with or	knowledge o	of any oth	ner corpo	ratior	n, firm or pers	son making a	ten	der for t	the
	same work a	and is in a	Il respects fa	ir and wi	hout coll	usion	or fraud.				

2.	We confirm that we have submitted a bona fide Tender, intended to be competitive and we have not fixed or adjusted our Price by or under or in accordance with any agreement or arrangement with any other bidder.		
3.	Having examined the Instructions to Bidde Specifications, and Addenda Nos we, the undersigned, offer to execute and defects therein in conformity with the C Addenda for the sum of	inclusive for the execution of the ab- complete the whole of the said work	ove named Works, as and remedy any
			(words)
			(figures)
	or such other sum as may be ascertained i	n accordance with the said Condition	ns.
	Contract Period:	calendar weeks	
	Proposed Start Date:	2017	
	Proposed Completion Date:	2018	
4.	Tender will only be accepted in respect elements.  We acknowledge that both the Form of Te Tender.	·	
5.	We undertake, if our Tender is accepted possible after the receipt of t notice to comprised in the Contract within the time s	commence, and to complete the w	
6.	We confirm that our Tender shall remain open for acceptance by the Government of Bermuda for a period of one hundred twenty (120) calendar days from the date of this undertaking and we shall not withdraw this Tender during this period.		
7.	Unless and until a formal Agreement is prepared and executed this Tender, together with your written acceptance thereof, shall constitute a binding contract between us.		
8.	We understand that you are not bound to a	accept the lowest or any tender that y	ou may receive.
9.	We confirm having received and complied any).	with addenda numberto	o (if
10.	We confirm that we, the undersigned, are	conducting business as a proper le	egal entity and are

not delinquent in making payments for outstanding debts to the Government for Social Insurance



Electrical Distribution Upgrades Phase 2
Sessions House
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contributions, Payroll Tax or other debt recorded by the Accountant General Debt Collection section.

- 11. Unless and until a formal agreement is prepared and executed, this Proposal, together with your written acceptance thereof, shall constitute a binding contract between us.
- 12. We undertake to commence the work within **Seven (7) calendar days** of the date of the acceptance of this tender.
- 13. We consent to the collection and use of any information we give to the Government in response to this solicitation document and waive any right to challenge any decision made by the Government to disclose the information.

Dated this	day of		017.
SIGNED:			
(signature) _		in the capacity	of
(block letters)			
Duly authorized to	o sign tenders for ar	nd on behalf of:	
(firm) _			
(address) _			
_			
WITNESS:			
(signature) _			
(block letters) _			
Occupation _			

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Sessions House
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# Part 7 Appendices

# Acknowledgement Letter for Standard Form of Agreement between Government & Contractor

This is to certify that I, (name), in the position of hereby acknowledge that I am aware of the terms and					
conditions of the attached "Client/Consultant MODEL SERVICES AGREEMENT" and "Client/Consultant Model Services Agreement PARTICULAR CONDITIONS".					
I acknowledge that the following documents have been provided in the Request for Proposal Package and at the date of this submission I have no issue with the terms and conditions of this agreement.					
FIDIC Client/Consultant MODEL SERVICES AGREEMENT					
2. FIDIC Client/Consultant Model Services Agreement PARTICULAR CONDITIONS					
Dated this day of, 2017.					
SIGNED:					
(Signature) in the capacity of					
(Block letters)					
Duly authorized to sign tenders for and on behalf of:					
(Firm)					
(Address)					



# Form of Tender

These Appendix forms part of the Tender. The Bidder shall ensure the following information is completed before submitting the bid and include this Appendix with the Tender Submission. See the Short Form of Contract for referenced Sub-Clauses.

Out Olama	Mana.	D-1-
Sub-Clause	Item	Data
1	General Provisions	
1.1.1	Documents forming the Contract listed in order of priority (delete if not applicable)	Document Identification
	(a) The Agreement	Sample included in Tender Documents
	(b) Letter of Acceptance	Issued after Tender
	(c) Addenda	Refer to Form of Tender
	(d) Particular Conditions	Included in Tender Documents
	(e) General Conditions	Included in Tender Documents
	(f) Drawings and Specifications	E1 – E12 included in Tender Documents
1.1.9	Time for Completion	180 days
1.4	Law of the Contract	Laws of Bermuda
1.5	Language	English
2	The Employer	Government of Bermuda Ministry of Public Works
2.1	Provision of Site	During normal facility operating hours, starting on the Commencement Date. Extended hours allowed; must be arranged with Employer.
3	Employer's Representatives	
3.1	Authorised Person	Chief Engineer
3.2	Name and address of Employer's representative (if known)	Not applicable
4	The Contractor	
4.4	Performance Security (if any):	
4.4	Amount	Not applicable
4.4	Form	Not applicable



Sub-Clause	Item	Data	
5	Design by Contractor		
5.1	Requirements for Contractor's design (if any)	Not applicable	
7	Time for Completion		
7.2	Time for submission	Within 14 days of the Comme	encement Date
7.2	Form of programme	Microsoft Project – Electronic	format
7.4	Amount payable due to failure to complete	\$ 150 per day	
	Complete	up to a maximum of 10% of sthe Agreement	sum stated in
9	Remedying Defects		
9.1	Period for notifying defects	365 days calculated from the the notice under Sub-Clause	
10	Variations and Claims		
10.2(e)	Day work rates	Attach hourly rates for labour equipment with Tender. See	
11	Contract Price and Payment		
11.1	Lump sum price	Refer to Form of Tender	(details)
11.1	Lump sum price with schedules of rates	Not applicable	(details)
11.1	Lump sum price with bill of quantities	Not applicable	(details)
11.1	Remeasurement with tender bill of quantities	Not applicable	(details)
11.1	Cost reimbursable	Not applicable	(details)
11.2	Percentage of value of Materials and Plant	Materials	80%
		Plant	90%
11.3	Percentage of retention	10%	
11.5	Period for notifying defects	365 days calculated from the the notice under Sub-Clause	
11.7	Currency of payment	Bermuda Dollars	
11.8	Rate of interest	0.5 % per annum	
14	Insurance		
14.1(a)	The Works, Materials, Plant and fees	The sum stated in the Agreement plus 15%	
14.1(a)	Contractor's Equipment	Full replacement cost	
14.1(b)	Third party injury to persons and damage to property	\$ 1,000,000.00	



Sub-Clause	Item	Data
14.1(c)	Workers	\$ 1,000,000.00
	Other Cover	
	Exclusions	
15	Resolution of Disputes	
15.3	Rules	Bermuda Arbitration Act 1986
15.3	Appointing authority	In accordance with the Bermuda Arbitration Act 1986
15.3	Place of Arbitration	Bermuda



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#### **CERTIFICATE OF CONFIRMATION OF NON-COLLUSION**

#### Notes for the tenderer/bidder

The essence of Open Tendering is that the Government of Bermuda shall receive bona fide competitive Tenders from all persons Tendering. In recognition of this principle, all companies submitting a tender will be required, by way of the signature of the Company Principle, state their agreement to the statements below, which indicates that the tender has been submitted without any form of collusion.

The Certificate of Confirmation of Non-Collusion is a mandatory requirement from all bidders. Any bids submitted which do not include a signed copy of the Certificate will be wholly rejected and will not be included in the evaluation process.

If it is later found that the undertakings made below have been breached at any stage of the process, the bidder will be expelled from the process immediately. In the event that this is discovered after a contract award, legal action may be taken against the bidder and/or any party involved in the matter.

False submissions may also exclude the bidder, and any other person or company involved in collusion, from bidding for future contracts tendered by the Government of Bermuda.

### **Confirmation of non-collusion**

I/We certify that this is a bona fide Tender, intended to be competitive and that I/We have not fixed or adjusted the amount of the Tender or the rates and prices quoted by or under or in accordance with any agreement or arrangement with any other person.

I/We confirm that we have not received any additional information, other than that contained within the tender pack, or supplementary information provided to all bidders.

I/We also certify that I/We have not done and undertake that I/We will not do at any time any of the following acts:

- (a) communicating to a person other than the tender administrator the amount or approximate amount of my/our proposed Tender (other than in confidence in order to obtain quotations necessary for the preparation of the Tender for insurance) or
- (b) entering into any agreement or arrangement with any other person that he shall refrain from tendering or as to the amount of any Tender to be submitted; or
- (c) offering or agreeing to pay or give or paying any sum of money, inducement, gift /hospitality or valuable consideration directly or indirectly to any person in relation to this tender.

Signea			
(1)	Status	Date	
(2)	Status	Date	
for and on behalf of			



# **TENDER PRICE BREAKDOWN**

	TENDER PRICE BREAKDOWN		
ITEM	DESCRIPTION	QUANTITY	SUM
1.	Channeling, Coring, Hoarding, Painting and other General Construction Works	Lump Sum	
2.	Electrical Works – Labour and Materials:		
	Fire Stopping (existing and new penetrations)	Lump Sum	
	b. Sargent of Arms Panel upgrade	Lump Sum	
	c. House of Assembly Lighting Upgrade	Lump Sum	
	d. Upper and Lower floor rewiring of branch circuits and replacement of old light switches and receptacles.	Lump Sum	
	e. Other electrical works not included in the above breakdowns (code violations etc.). Please itemize in detail.	Lump Sum	
3.	Final Testing of Systems	Lump Sum	
4.	As Built Drawings, Maintenance Manuals and Panelboard Schedules	Lump Sum	
5.	General Construction Management and Administration	Lump Sum	
6.	Contractor specified items: Any elements of work or expenditure not covered elsewhere in the Tender Price Analysis and are necessary in the execution of this work. Please itemize in detail.  Bidder to itemise:	Lump Sum	
	TOTAL TENDER SUM	Lump Sum	



# **LABOUR RATES**

ITEM	DESCRIPTION	QUANTITY	RATE
1.	Painter	Hourly Rate	
2.	Masonry Trade (filling, channeling, etc.)	Hourly Rate	
3.	Electrical Tradesman	Hourly Rate	
4.	Electrical Supervisor	Hourly Rate	
5.	Construction Management	Hourly Rate	
6.	Contractor specified items: Additional Day Work Rates for Labour, Materials or Equipment necessary for the execution of this work. See FIDIC Clause 10.2(e).	Hourly Rate	

# **UNIT PRICES**

ITEM	DESCRIPTION (LABOUR AND MATERIALS)	Unit Price
1.	Provide new duplex receptacle with outlet box, conduit and wiring to a maximum of 100' from the panelboard and connect to existing spare breaker. Include masonry work.	

# **MARK UP RATES**

ITEM	DESCRIPTION	RATE (%)
1.	Overhead and Mark Up (own work)	
2.	Mark Up (Sub-Contracted labour and materials)	



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# **COMPANY INFORMATION/QUALIFICATIONS AND REFERENCES**

# **Prime Contractor**

Legal Name of Company:	
THE COMPANY SHALL COMPLETE THE FOLLO	WING STATEMENTS:
Principal(s) and Director(s) of the Company	y:
Physical Address:	
Email:	
Website:	
2. Company Insurance Details:	
Workers Compensation Insurance carried:	BD\$
Professional Indemnity Insurance carried:	BD\$
Commercial Grade Liability Insurance carried: Bl	D\$
3. Company Payroll Tax No.:	
4 Company Social Insurance No :	

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5. Company Banking Details:							
	Name and						
6. plea	Do you ha ase provide det		with other	entities that may	y be seen as	s a conflict of interest? If so,	
7.	The Company years.	has been engaged i	n busines	ss, under the pre	sent busines	ss name for	
8.		work of a nature sim years.	ilar to tha	t covered in the p	oroposal dod	cuments extends over a	
9.		contracts have been authorities indicated:		orily completed in	the last thre	ee (3) years for the persons,	
	Year	Type of Work	Contra	act Amount	Location a	and for Whom Performed	
(a)							
(b)							
(c)							
10.		each contract named		nformation conce	erning the wo	ork listed above (list a	
	Name	Title		Address		Telephone	
(a)							
(b)							
(c)							



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11. The following contracts are <u>no longer current</u> but have been satisfactorily completed in the last five (5) years for the persons, companies or authorities indicated:

	Year	Type of Work	Contract Amount	Location and for Whom Performed
(a)				
(b)				
(c)				

12	Total	number	of staff
14	i Otai	HUHHDEL	ui siaii

Total Number of Staff	
Number of Bermudians	
Number of Non-Bermudians	
Percentage of Bermudians	

- All of the above statements as to experience, financial qualifications are submitted in conjunction with the proposal, as a part thereof and the truthfulness and accuracy of the information is guaranteed by the Company.
- 14 Attach a copy of the Company's Certificate of Incorporation.

Signed:		 	
Print Name:	 	 	
Title:	 	 	
Company:		 	
Date:			

Provide additional Company Information Form for each Sub-Contractor.

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# **COMPANY INFORMATION - SUB CONTRACTOR #1**

Company Name Address	
Contact Name Phone	
Email Address	
Payroll Tax Number	
Social Insurance Number	
Name of Workmen's Compensation Insurance Company	
Workmen's Compensation Insurance Policy Number	
Name of Contractor's Third Party Insurance Company	
Third Party Insurance Policy Number	
Name of Primary Bank	
Total Number of Persons Currently Employed	
Total Number of Bermudians Currently Employed	
Do you have an Environmental Policy?  If so, please attach.	
Do you have a Safety and Health Policy? If so, please attach.	
Do you provide apprenticeships/training positions?	
Have you participated in appropriate business skills training, e.g. The BEDC Construction incubator, or have verifiable business skills (experience or training)?	

A copy of the Certificate of Incorporation of the Company must accompany this form.

Provide additional Company Information Form for each Sub-Contractor.



# **Company Information – Sub Contractor #2**

Company Name	
Address	
Contact Name	
Phone	
Email Address	
Payroll Tax Number	
Social Insurance Number	
Name of Workmen's Compensation Insurance Company	
Workmen's Compensation Insurance Policy Number	
Name of Contractor's Third Party Insurance Company	
Third Party Insurance Policy Number	
Name of Primary Bank	
Total Number of Persons Currently Employed	
Total Number of Bermudians Currently Employed	
Do you have an Environmental Policy?  If so, please attach.	
Do you have a Safety and Health Policy? If so, please attach.	
Do you provide apprenticeships/training positions?	
Have you participated in appropriate business skills training, e.g. The BEDC Construction incubator, or have verifiable business skills (experience or training)?	

A copy of the Certificate of Incorporation of the Company must accompany this form.

Provide additional Company Information Form for each Sub-Contractor.

**END OF TENDER FORMS** 



Electrical Distribution Upgrades Phase 2 Sessions House **Tender Evaluation Matrix** Page 1 of 2

Tender [Insert project name here]

Government of Bermuda Tender Evaluation Matrix

			SCORES - please see notes & scoring tab			Weighted scores									
ITEM	CRITERIA	WEIGHTING	Tender 1	Tender 2	Tender 3	Tender 4	Tender 5	Tender 6	Tender 1	Tender 2	Tender 3	Tender 4	Tender 5	Tender 6	Comments
1	Experience & Capability:		Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	
1.1	Does the bidder clearly demonstrate the ability to deliver the requirements of the tender?		0.00	0.00	0.00	0.00	0.00	0.00							
1.2	Did the bidder offer evidence of experience with projects of a similar technical level?		0.00	0.00	0.00	0.00	0.00	0.00							
1.3	Did the bidder offer sufficient evidence of experience with completing projects within timescales and budgets?		0.00	0.00	0.00	0.00	0.00	0.00							
1.4	Is the bidder able to complete the work within the required timescales?		0.00	0.00	0.00	0.00	0.00	0.00							
1.5	Does the bidder state that they have sufficient, suitably experienced resources available?		0.00	0.00	0.00	0.00	0.00	0.00							
1.6	Does the bidder have a good track record in Health & Safety?		0.00	0.00	0.00	0.00	0.00	0.00							
1.7	Were the bidders referees positive about their experience of working with the contractor/supplier, and would they use them again?		0.00	0.00	0.00	0.00	0.00	0.00							
1T	Total Score - Section 1	50%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	Financial Analysis		Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	
2.1	Tender price (include all costs)		0.00	0.00	0.00	0.00	0.00	0.00							
2.2	The bidder is in a stable financial position.		0.00	0.00	0.00	0.00	0.00	0.00							
2.3	The bidder has no outstanding Government debt		0.00	0.00	0.00	0.00	0.00	0.00							
2T	Total Score - Section 2	30%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3	Social, Environmental & Economic criteria		Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	Supplier Name	
3.1	Percentage of workforce that are Bermudian		0.00	0.00	0.00	0.00	0.00	0.00							
3.2	Does the bidder offer evidence of providing apprenticeships/training positions or being willing to offer them?		0.00	0.00	0.00	0.00	0.00	0.00							
3.3	Does the bidder have an environmental policy in place?		0.00	0.00	0.00	0.00	0.00	0.00							
3.4	Has the bidder given evidence that they have participated in appropriate business skills training e.g. The BSBDC Construction Incubator?		0.00	0.00	0.00	0.00	0.00	0.00							
3T	Total Score - Section 3	20%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

100%

0.00 0.00 0.00 0.00 0.00 0.00

Electrical Distribution Upgrades Phase 2 Sessions House **Tender Evaluation Matrix** Page 2 of 2

#### **General Notes**

Issuance of tenders	All tenders issued must contain a summary of the evaluation criteria and weighting to be used. The Accountable Officer for the tender must ensure that all mandatory evaluation criteria are covered in the tender specification/information requirements.					
Yellow Cells	Yellow cells are <i>not to be changed</i> as they contain calculation formulae and/or mandatory information					
Blue cells	Blue cells are for the evaluation team to fill in. Supplier names should be inserted prior to circulation to the full team to ensure continuity.					
Weighting	The weighting of sections 1&2 can be amended, however; Section 3 weighting of 20% is mandatory					
Amendments	Amendments to the criteria (except yellow areas) are permissible according to the tender requirements, but must be authorised in advance by the OPMP.					

### Section / Scoring

### n.b. In some cases multiple bidders can achieve the same score where they have submitted the same level of evidence.

a maximum of 5 points to each bid based on their technical knowledge and understanding of the tender requirements one than one project at a similar level, 3 = one project at a similar level, 0 = no projects at a similar level. NB this should not be based solely on Govt. experience.
ore than one project at a similar level, 3 = one project at a similar level, 0 = no projects at a similar level, NB this should not be based solely on Govt experience
and an entropy of the project at a command to the project
as 1.2
n complete in less time than expected, 4 = yes, with no caveats, 3 = yes, with acceptable caveats, 2 = yes, but with unacceptable caveats, 1 = no, but within a reasonable rale, 0 = no
s, 0= no
history of any accidents (major or minor) 3 = no history of major accidents, 1 = no history of major accidents in over 2 years, 0 = no evidence of a track record in H&S
ore than one positive referee submitted and checked, 3 = one positive referee submitted and checked, 0= no referees in submission / negative responses from referees.
ual to or within 15% of estimate, 4 = between 16% to 30% (over or under) of estimate, 3 = between 30% to 40% (over or under) of estimate, 2 = between 40% and 50% (over or) of estimate, 0 = over 50% more or less than estimate.
ing financial checks, i.e. checking a bank reference, the following scores should be awarded - 5 = all financial checks sound, 3 = minor financial concerns, 1 = major financial rns, 0 = no evidence provided / evidence of severe financial instability.
ing checks with Social Insurance and Tax Commissioner check, the following scores should be awarded - 5 = all financial checks sound, 3 = minor financial concerns, 1 = financial concerns, 0 = no evidence provided / evidence of severe financial instability.
ald be awarded to the bidder with the highest percentage of the workforce being Bermudian, down to 0 for the least percentage of Bermudians.
bstantive evidence that apprenticeships/training positions in place, 3 = some evidence of apprenticeships/training in place, 0 = no evidence of apprenticeships/training in place.
s, 0= no
aduated from Incubator, 3 = other business skills training evident, 0 = no business skills training evident.
r s s l l l e ii rr ii fi l l b



# Department of Works and Engineering

# **Electrical Distribution Upgrades Phase 2**

# **Sessions House**

21 Parliament Street Hamilton HM12, Bermuda

File Number: 34/11/78

# **Contract Documents**

(Sample For information only)



#### CONTRACT DOCUMENTS

#### **Table of Contents**

FORM OF AGREEMENT	
APPENDIX TO FORM OF AGREEMENT	
CONDITIONS OF CONTRACT	
Short Form of Contract - GENERAL CONDITIONS      Short Form of Contract - PARTICULAR CONDITIONS	
A. References from Clauses in the GENERAL CONDITIONS	
B. Additional Clauses to be added to the GENERAL CONDITIONS	
ATTACHMENTS: FIDIC SHORT FORM of Contract General Conditions, 1999.	
SAMPILL	



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Δ	G	R	F	F	M	IF	٨	IΤ

The Employer is	Government of Bermuda, Ministry of Public Works PO Box HM 525, Hamilton, HM CX, Bermuda					
The Contractor i	s					
	sires the execution of certain Works knowness at the Sessions House Building, 2					
OFFER		, 4				
	s examined the documents listed in the the Works in conformity with the Conformity wit	e Appendix which forms part of this Agreement ntract for the sum of				
(in words)						
(in figures)						
Or such other sum	as may be ascertained under the Cont	ract.				
	the Contractor has submitted two sign rning one original of this document to t	ned originals, may be accepted by the Employer he Contractor before				
The Contractor und the Works.	derstands that the Employer is not bou	nd to accept the lowest or any offer received for				
Signature:		Authorised to sign on behalf of the Contractor				
Name:		Date:				
Capacity:	2					
ACCEPTANCE	COX					
the execution of the the Contract. This	e Works by the Contractor, the Emplo	actor's offer and agrees that in consideration for yer shall pay the Contractor in accordance with ate when the Contractor receives one original of				
Signature:		Authorised to sign on behalf of the Ministry of Public Works				
Name:	Yves Lortie	Date:				
Capacity:	Ministry of Public Works, Dept. of Work	s and Engineering. Chief Engineer				



### **APPENDIX**

This Appendix forms part of the Agreement.

Out Olavas	Mann	Data
Sub-Clause	Item	Data
1	General Provisions	
1.1.1	Documents forming the Contract listed in order of priority (delete if not applicable)	Document Identification
	(a) The Agreement	4
	(b) Letter of Acceptance	
	(c) Addenda	
	(d) Particular Conditions	
	(e) General Conditions	
	(f) Drawings and Specifications	
1.1.9	Time for Completion	days
1.4	Law of the Contract	Laws of Bermuda
1.5	Language	English
2	The Employer	
2.1	Provision of Site	During normal facility operating hours, starting on the Commencement Date of the Contract. Extended hours allowed; must be arranged with Employer.
3	Employer's Representatives	
3.1	Authorised Person	Chief Engineer
3.2	Name and address of Employer's representative (if known)	Not applicable
4	The Contractor	
4.4	Performance Security (if any):	
4.4	Amount	Not applicable
4.4	Form	Not applicable
5	Design by Contractor	
5.1	Requirements for Contractor's design (if any)	Not applicable



Sub-Clause	Item	Data	
7	Time for Completion		
7.2	Time for submission	Within 14 days of the Comr	mencement
7.2	Form of programme	Microsoft Project – Electron	nic format
7.4	Amount payable due to failure to complete	\$ 150 per day	
	Complete	up to a maximum of 10% o the Agreement	f sum stated in
9	Remedying Defects	the Agreement	
9.1	Period for notifying defects	365 days calculated from the in the notice under Sub-Cla	
10	Variations and Claims		
10.2(e)	Day work rates	Attach hourly rates for labo and equipment.	ur, materials,
11	Contract Price and Payment		
11.1	Lump sum price		(details)
11.1	Lump sum price with schedules of rates	Not applicable	(details)
11.1	Lump sum price with bill of quantities	Not applicable	(details)
11.1	Remeasurement with tender bill of quantities	Not applicable	(details)
11.1	Cost reimbursable	Not applicable	(details)
11.2	Percentage of value of Materials and Plant	Materials	80%
	2	Plant	90%
11.3	Percentage of retention	10%	
11.5	Period for notifying defects	365 days calculated from the in the notice under Sub-Cla	
11.7	Currency of payment	Bermuda Dollars	
11.8	Rate of interest	0.5 % per annum	
14	Insurance		
14.1(a)	The Works, Materials, Plant and fees	The sum stated in the Agre 15%	ement plus
14.1(a)	Contractor's Equipment	Full replacement cost	
14.1(b)	Third party injury to persons and damage to property	\$ 1,000,000.00	
14.1(c)	Workers	\$ 1,000,000.00	
	Other Cover		



Sub-Clause	Item	Data
	Exclusions	
15	Resolution of Disputes	
15.3	Rules	Bermuda Arbitration Act 1986
15.3	Appointing authority	In accordance with the Bermuda Arbitration Act 1986
15.3	Place of Arbitration	Bermuda
	RIFORN	



#### **CONDITIONS OF CONTRACT**

#### 1.0 Short Form of Contract - GENERAL CONDITIONS

The conditions of contract are the **Conditions of Contract for the Short Form of Contract, First Edition 1999**, published by the Federation Internationale des Ingenieurs-Conseils (FIDIC). This document is attached.

The General Conditions of Contract are amended by the Particular Conditions of Contract.



#### 2.0 Short Form of Contract - PARTICULAR CONDITIONS

#### **Preamble**

These Particular Conditions supplement the General Conditions, and shall modify, delete and/or add to the General Conditions. Where any clause, paragraph, or sub-paragraph in the General Conditions is supplemented by one of the following paragraphs, the provisions of such clause, paragraph, or sub-paragraph shall remain in effect and the supplemental provisions shall be considered as added thereto. Where any clause, paragraph, or sub-paragraph in the General Conditions is amended, deleted or superseded by any of the following paragraphs, the provisions of such clause, paragraph, or sub-paragraph, not so amended, deleted or superseded shall remain in effect.

Clause numbers herein refer to the same clause numbers as in the General Conditions.

#### A. References from Clauses in the GENERAL CONDITIONS

4 The Contractor	Add the following Sub-Clauses:
Facilities	The Contractor shall make his own arrangements for all local accommodation he may require for offices, yards, stores, labour, etc., all buildings and all services in connection therewith which are required for the efficient execution of the Works. The Contractor shall pay proper regard to the prevention of obstruction of public roads and walkways and the avoidance of nuisance to the public and to residents.
4.6 Electricity, Water and Gas	Not applicable.
Protection of Utilities	The Contractor shall carry out the Works so that there is the minimum of interruption to the supply of water, data/communications, electricity and other services through existing mains and services. Work involving interference with existing works of any kind shall only be carried out with the permission of and during such times and in such a manner as are agreed in writing by the Employer.
4.8	<u> </u>
Reporting of Errors	The Contractor shall examine and compare the Contract Documents and shall report any errors, inconsistencies, or omissions he may find to the Employer immediately.
4.9	
Damage to Persons and Property	The Contractor shall, immediately on occurrence of any incident involving loss or injury at or about the Site, or in connection with the execution of the Works, report such incident to the Employer. The Contractor shall also report such incident to the appropriate Authority whenever such report is required by Law.
4.10	
Rates, Wages, Hours and Conditions of Labour	The Contractor shall pay to all Foremen, Craftsmen, and Labourers not less than the rates of wages for the various Foremen, Craftsmen, and Labourers that prevail in Bermuda, and comply with such requirements relating to hours of

Electrical Distribution Upgrades Phase 2 Sessions House Contract Documents Page 7 of 10

4.11	work and conditions of labour as are or may be laid down from time to time by the Laws of Bermuda.
Facilities for Staff and Labour	The Contractor shall provide such accommodation and amenities as he may consider necessary for all his expatriate staff and labour, employed for the purposes of or in connection with the Contract.
	The Contractor shall comply with all local statutes and regulations and any amendments thereto with regard to the health and safety of his employees and others, and shall provide adequate latrines for his workers on the Site to conform with the requirements of the Department of Health.
4.12	
Display of Notices	The Contractor shall post notices to inform the workers of their conditions of work in conspicuous places at the establishments and work places concerned.
4.13	
Alcoholic Liquor and Drugs	The Contractor shall not, otherwise than in accordance with the Statutes, Ordinance and Government Regulations or Orders for the time being in force, import, sell, give, barter, or otherwise dispose of any alcoholic liquor, or drugs, or permit, or suffer any such importation, sale, gift, barter, or disposal by his sub-contractors, agents, or employees.
4.14	
Arms and Ammunition 4.15	The Contractor shall not give, barter, or otherwise dispose of to any person or persons, any arms or ammunition of any kind or permit or suffer the same aforesaid.
	TI O
Festivals and Religious Festivals	The Contractor shall in all dealings with labour in his employment have due regard to all recognized festivals, public holidays, days of rest, and religious or other customs.
4.16	
Epidemics	In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders, and requirements as may be made by the Government, or the local medical or sanitary authorities for the purpose of dealing with and overcoming the same.
4.17	
Supply of Drinking Water	The Contractor shall so far as is reasonably practicable having regard to local conditions provide on the site, to the satisfaction of the Employer, an adequate supply of drinking water and other water for the use of the Contractor's staff and work people.
15 Resolution of Disputes	Modify the following Sub-Clauses:
Adjudication	Delete Clause 15.1 in its entirety.
Notice of Dissatisfaction	This clause is deleted in its entirety and replaced by:
	If a dispute (of any kind whatsoever) arises between the Parties in connection with, or arising out of, the Contract or the execution of the Works, including any

Electrical Distribution Upgrades Phase 2 Sessions House Contract Documents Page 8 of 10

dispute as to any certificate, determination, instruction, opinion or valuation of the Employer, a notice of dissatisfaction shall be issued by either Party to the other Party. Where such notice is given both Parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, arbitration may be commenced on or after the fifty-sixth day after the day on which notice of dissatisfaction was given, even if no attempt at an amicable settlement has been made.

#### 15.3

#### Arbitration

This clause is deleted in its entirety and replaced by:

Unless settled amicably, any dispute shall be finally settled by arbitration, unless otherwise agreed by both Parties:

- (a) the dispute shall be finally settled in accordance with the Bermuda Arbitration Act 1986
- (b) the dispute shall be settled by arbitrators appointed in accordance with the said Act, and
- (c) the arbitration shall be conducted in the English language.

The arbitrator(s) shall have full power to open up, review and revise any certificate, determination, instruction, opinion or valuation of the Engineer, relevant to the dispute. Nothing shall disqualify the Engineer from being called as a witness and giving evidence before the arbitrator(s) on any matter whatsoever relevant to the dispute.

Neither Party shall be limited in the proceedings before the arbitrator(s) to the evidence nor did arguments previously put before the Engineer to obtain his decision, or to the reasons for dissatisfaction given in its notice of dissatisfaction. Any decision of the Engineer shall be admissible in evidence in the arbitration.

Arbitration may be commenced prior to or after completion of the Works, by mutual agreement. The obligations of the Parties and the Engineer shall not be altered by reason of any arbitration being conducted during the progress of the Works.



#### B. Additional Clauses to be added to the GENERAL CONDITIONS

16.0	4
Taxation	The Contractor shall be required to pay Bermudian Taxes on all Contractor's Equipment (except as described in the Fifth Schedule, Section 2 of the Customs Tariff Act 1970) materials and other things of whatsoever nature brought into Bermuda for the purpose of Contract.
17.0	
Bribery	Any commission, advantage, gift, gratuity, reward, or bribe given, promised, or offered by or on behalf of the Contractor or his agent or servant or any person on his or their behalf to any officer, servant, representative, or agent of the Employer or Engineer or to any person on their behalf or on behalf of any of them in relation to the obtaining or to the execution of this or of any other Contract with the Employer shall in addition to any criminal liability which may be thereby incurred subject the Contractor to the cancellation of this and of all other contracts which he may have entered into with the Employer and also to the payment of any loss or damage resulting from such cancellation.
18.0	
Debt Recovery	The Employer shall be entitled upon a certificate in writing of the Engineer to deduct the amounts so certified from any monies or otherwise due to the Contractor under this or any other contract or to recover the said amounts as a debt due or partly the one and partly the other as the Employer shall deem advisable.
19.0	
Strikes and Lock-Outs	The Contractor shall forthwith notify the Employer of the commencing of any strike or lock-out and the Employer, on account of any delay caused thereby, may grant such extension of time as he considers reasonable, without prejudice to the right of the Employer to exercise after the expiration of such reasonable extension of time the rights and powers under these Conditions in case of default by the Contractor.
20.0	
Laws, Regulations and Orders	The Contractor shall make himself fully acquainted with the Laws, Regulations and Orders of Bermuda and of any competent/statutory Authority and shall conform in all respects therewith during the continuance of the Contract. He shall conform similarly with any such Laws, Regulations and Orders which may come in to force after the date of this Agreement.
21.0	
Construction of Contract	The Contract shall in all respects be constructed and operated in conformity with the Laws of Bermuda and the respective rights and liabilities of the Parties shall be in accordance with the Laws for the time being in force.
22.0	
Members and Staff of Employer and Engineer not Personally Liable	Neither the members nor the staff of the Employer shall be in any way personally bound or liable for the acts or obligations of the Contractor under the Contract or answerable for any default or omission in the observance or performance of any of the acts, matters or things which are herein contained.
23.0	

Electrical Distribution Upgrades Phase 2 Sessions House Contract Documents Page 10 of 10

#### Details to be Confidential

The Contractor shall treat the details of the Contract as private and confidential, save in so far as may be necessary for the purposes thereof, and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere without the previous consent in writing of the Employer. If any dispute arises as to the necessity or disclosure for the purpose of the Contract the same shall be referred to the decision of the Employer whose award shall be final.

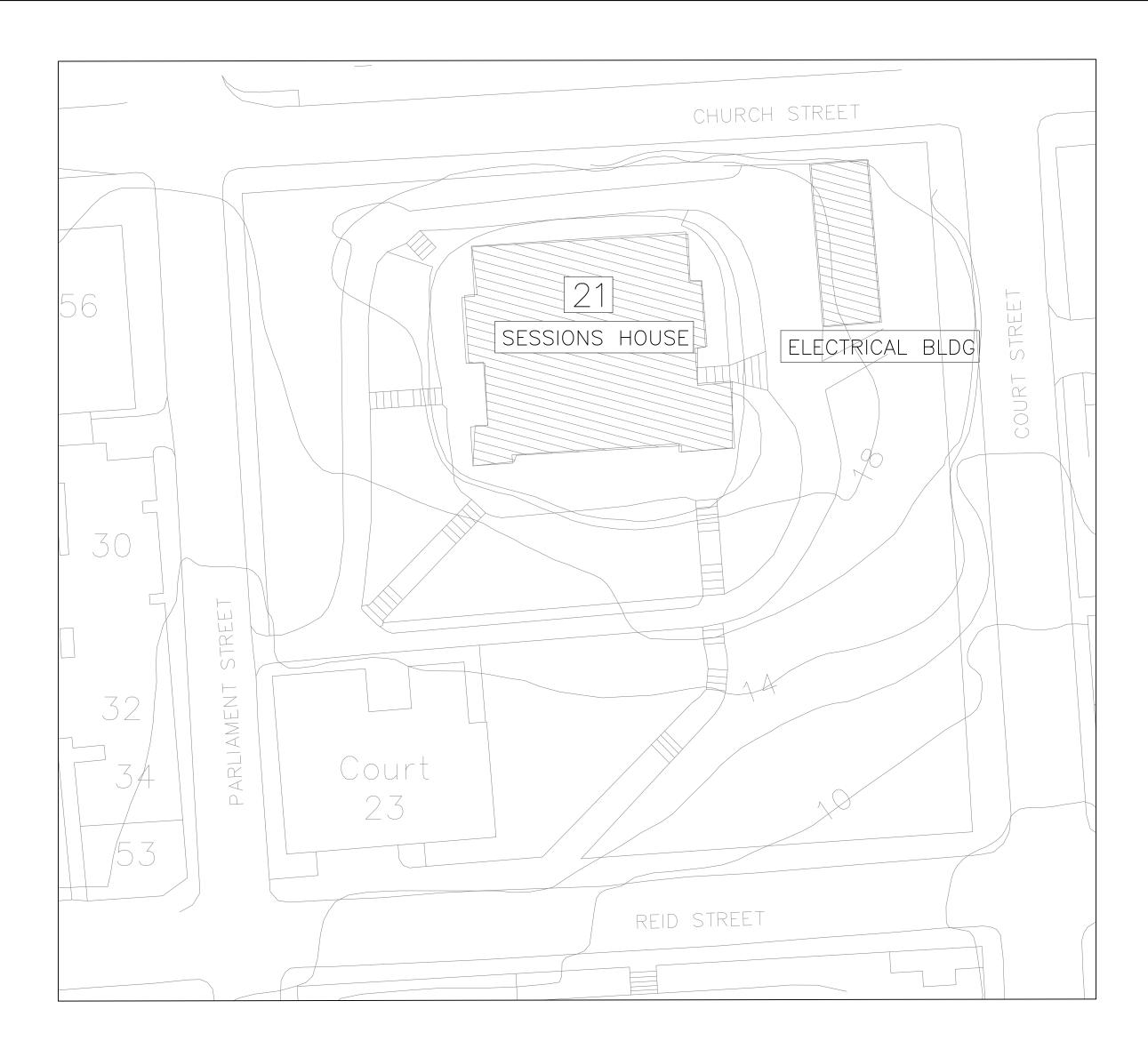
24.0

# Rights and Remedies Not Waived

In no event shall the making by the Employer of any payment to the Contractor constitute or be construed as a waiver by the Employer of any breach of Contract, or any default which may then exist, on the part of the Contractor, and the making of any such payment by the Employer while any such breach or default exists shall in no way impair or prejudice any right or remedy available to the Employer in respect of such breach or default.

FIDIC SHORT FORM of Contract General Conditions, 1999 is attached.

**END OF CONTRACT DOCUMENTS** 





		ELECTRICAL LEGI	END	OF SYMBOLS		
LIGHTING SYMBOLS		LIGHTING SYMBOLS	POWE	R & SYSTEMS SYMBOLS	POWE	ER & SYSTEMS SYMBOLS
SURFACE MOUNTED 2X4 FLUORESCENT	EB	EMERGENCY DC BATTERY PACK & REMOTE HEADS	ф	15A DUPLEX RECEPTACLE (5-15R)	$\boxtimes$	PANELBOARD
RECESSED 2x4 FLUORESCENT	404	EMERGENCY LIGHTING REMOTE HEADS	Ф	SINGLE RECEPTACLE	ф <del>г</del>	MECHANICAL EQUIPMENT CONNECTION
RECESSED 2x2 FLUORESCENT UNSWITCHED AS NIGHTLIGHT	×	EXIT SIGN C/W DIRECTIONAL ARROWS WHERE INDICATED	ф	SINGLE 120V, 20A T-SLOT RECEPTACLE	∇	DATA OUTLET
RECESSED 2x2 FLUORESCENT	⊗	DUAL FACE DIRECTIONAL EXIT SIGN	#	QUAD RECEPTACLE	<b>▼</b>	TELEPHONE OUTLET
RECESSED 2x2 FLUORESCENT UNSWITCHED AS NIGHTLIGHT	\$ \$	SINGLE POLE SWITCH GANGED AS SHOWN	Ф	FLOOR MOUNTED DUPLEX RECEPTACLE	<b>A</b>	COMBINATION DATA/TEL. OUTLET
SURFACE MOUNTED 1X4 FLUORESCENT	D \$	3 WAY LIGHT OR DIMMER SWITCH	#	FLOOR MOUNTED QUAD RECEPTACLE		
SURFACE TRACK LIGHT	\$	4 WAY LIGHT SWITCH	7	DISCONNECT SWITCH		
WALL MOUNTED LUMINAIRE	D	DIMMER SWITCH	<b>b</b>	20A T-SLOT DUPLEX RECEPTACLE (5-20R)		
RECESSED DOWNLIGHT			•	20A T-SLOT GFI DUPLEX RECEPTACLE (5-20R)		
SURFACE MOUNTED FLUORESCENT STRIP			Ф.г.	TWIST LOCK RECEPTACLE		
SURFACE MOUNTED FLOURESCENT STRIP LIGHT						
PENDANT MOUNTED OR CABLE SUSPENDED LUMINAIRE						
		•				•

### <u>Drawing list</u>

E1 - SITE PLAN AND LEGEND

E2 - GROUND FLOOR EXISTING LIGHTING AND POWER

E3 - UPPER FLOOR EXISTING LIGHTING AND POWER

E4 - GROUND FLOOR PROPOSED LIGHTING AND POWER

E5 - UPPER FLOOR PROPOSED LIGHTING AND POWER E6 - EXISTING AND PROPOSED SINGLE LINE DIAGRAMS

E7 - EXISTING AND PROPOSED RISER DIAGRAMS

E8 - GROUND FLOOR EXISTING PANELBOARD SCHEDULES E9 - UPPER FLOOR EXISTING PANELBOARD SCHEDULES

E10 - GROUND FLOOR PROPOSED PANELBOARD SCHEDULES

E11 - PROPOSED PANELBOARD SCHEDULES

E12 - ELECTRICAL SPECIFICATIONS

NOTES (APPLICABLE TO ALL DRAWINGS):

AND LIGHTING.

THE ENTIRE ELECTRICAL INSTALLATION SHALL CONFORM TO THE BERMUDA BUILDING CODE, NATIONAL ELECTRICAL CODE (NEC 2008), NFPA 72 (2010), AND NFPA 101 (2012). REFER TO ELECTRICAL SPECIFICATIONS.

2 ALL DEVICES SHOWN DASHED ARE EXISTING.

3 'R' - DEVICES DENOTED WITH THE SUBSCRIPT 'R' ARE EXISTING TO BE REMOVED. REMOVE REDUNDANT WIRING.

'RP' — DEVICES DENOTED WITH THE SUBSCRIPT 'RP' ARE EXISTING DEVICES TO BE REPLACED WITH NEW DEVICE.

REPLACE EXISTING WIRING AND CONNECT NEW DEVICE.

'RR' - DEVICES DENOTED WITH THE SUBSCRIPT 'RR' ARE DEVICES TO BE REMOVED AND RELOCATED. REPLACE EXISTING WIRING AND RECONNECT EXISTING DEVICE.

6 'RE' - DEVICES DENOTED WITH THE SUBSCRIPT 'RE' ARE RELOCATED, REWIRED, AND RECONNECTED EXISTING DEVICES.

'RW' - DEVICES DENOTED WITH THE SUBSCRIPT 'RW' ARE DEVICES TO BE REWIRED. REMOVE EXISTING WIRE FROM EXISTING DEVICE/EQUIPMENT BACK TO SOURCE AND REWIRE TO NEW PANEL. EXISTING RACEWAYS MAY BE USED IF PRACTICABLE, OTHERWISE ALLOW FOR NEW CONDUIT AND JUNCTION BOXES CONCEALED ABOVE CEILING AND IN WALLS.

WHERE EMPTY OUTLET BOX REMAINS WHERE DEVICES REMOVED, PROVIDE BLANK WHITE OR IVORY NYLON COVER PLATE (COLOUR TO MATCH EXISTING).

9 ALL DEVICES SHOWN SOLID ARE NEW DEVICES AND EQUIPMENT TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

10 REMOVE ALL REDUNDANT CABLING RIGHT BACK TO THE SOURCE.

EQUIPMENT SHOWN IS FOR GENERAL CLARIFICATION OF EXISTING CONDITIONS ONLY AND DOES NOT SHOW ALL EXISTING FEEDERS, WIRING, EQUIPMENT, AND DEVICES. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR VISITING SITE AND CONFIRMING SCOPE OF DEMOLITION AND RENOVATION WORK INVOLVED TO ACCOMMODATE PANELBOARD AND FEEDER UPGRADES, AND UPGRADES OF ALL WIRING AND DEVICES IN THE AREAS INDICATED.

THE INTENT WITH REGARD TO BRANCH CIRCUIT UPGRADES IS TO REMOVE EXISTING OBSOLETE PANELBOARDS AND REPLACE NON-COMPLIANT BRANCH WIRING ASSOCIATED WITH THOSE PANELBOARDS, AS WELL AS DEVICES ON THOSE BRANCH CIRCUITS (RECEPTACLES AND SWITCHES).

THE INTENT WITH REGARD TO EXISTING SIEMENS PANELBOARDS IS TO REPLACE WITH SQUARE D OR CUTLER HAMMER PANELBOARDS.

THE INTENT WITH THE EXISTING JUNCTION BOX ROOM (FORMER ELECTRICAL ROOM) IS TO STRIP DOWN, CLEAN UP, AND PROVIDE FIRE STOPPING FOR ALL PENETRATIONS.

THE INTENT WITH REGARD TO DISTRIBUTION MODIFICATIONS IS ALSO TO CONNECT BRANCH CIRCUITS FEEDING MECHANICAL EQUIPMENT TO SEPARATE PANELBOARDS/DISTRIBUTION FROM BRANCH CIRCUITS FEEDING RECEPTACLES

THE INTENT WITH THE HOUSE OF ASSEMBLY CHAMBERS IS TO UPGRADE THE EXISTING LIGHTING FROM A COMBINATION OF HID AND COMPACT FLUORESCENT 12" DIAMETER DOWNLIGHTS TO EITHER DIMMABLE LED OR MULTI-LEVEL SWITCHED COMPACT FLUORESCENT (PROVIDE SEPARATE QUOTATIONS). LUMINAIRE FINISHES SHALL BE LOW GLARE. REPLACE EXISTING WIRING TO LUMINAIRES WITH ARMORED CABLE. REPAIR CEILING FINISHING AROUND NEW DOWNLIGHT HOUSINGS AND PAINT PAINT PARTIAL CEILING (WITHIN DECORATIVE MOLDINGS) TO MATCH EXISTING. REPLACE EXISTING SWITCHES AND WIRING IN BOTH LOCATIONS OR PROVIDE NEW WIRELESS TYPE CONTROLS.

THE INTENT WITH REGARD TO THE SERGEANT AT ARMS OFFICE IS TO REPLACE THE PANELBOARD, EXISTING BREAKERS AND WIRING SUPPLYING THE OFFICE.

# **MINISTRY OF PUBLIC WORKS**

**DEPARTMENT OF** WORKS AND ENGINEERING

ELECTRICAL AND MECHANICAL **ENGINEERING SECTION** 

P.O. Box HM 1365 Hamilton HMFX Bermuda Tel: (441) 295-5151 Fax: (441) 295-4675





No.		Date:
2	ISSUED FOR TENDER	20 MARCH 2017
<u>)</u>	ISSUED FOR PLANNING	1 SEPT. 2010
$\frac{2}{1}$	ISSUED FOR PLANNING ISSUED FOR REVIEW	1 SEP1. 201 1 MAY 201

SCALE: AS NOTED	
SURVEY Prepared By: RS/VB	<b>Date:</b> 1 MAY 2016
DESIGN Prepared By: RS	<b>Date:</b> 1 MAY 2016
Checked By: RS	<b>Date:</b> 1 MAY 2016
DRAWING Prepared By: RS/VB	<b>Date:</b> 1 MAY 2016

1 MAY 2016

Approved By:

Checked By:

**Project Number:** 

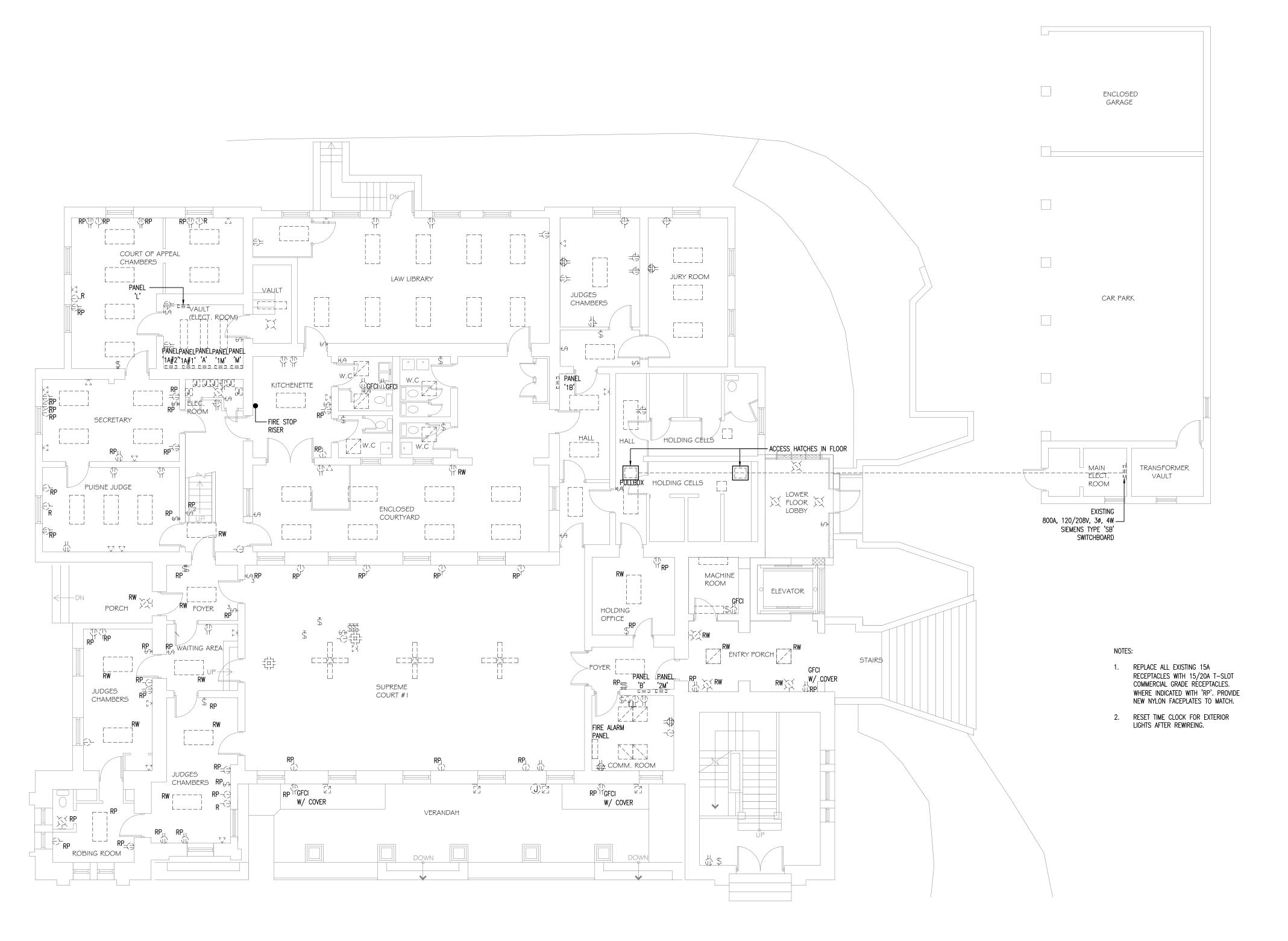
34/11/78 Project Title:

**SESSIONS HOUSE** ELECTRICAL DISTRIBUTION **UPGRADES PHASE 2** 

23 Parliament Street Hamilton, Bermuda

**Sheet Title:** 

SITE PLAN AND **LEGEND** 



1 GROUND FLOOR - EXISTING LIGHTING AND POWER E2 1/8"=1'0"

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**DEPARTMENT OF** WORKS AND ENGINEERING

### ELECTRICAL AND MECHANICAL **ENGINEERING SECTION**

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<u>2</u>	ISSUED FOR PLANNING ISSUED FOR REVIEW	1 SEPT. 2010 1 MAY 2010

SURVEY	
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DRAWING	
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Checked By: RS	<b>Date:</b> 1 MAY 20

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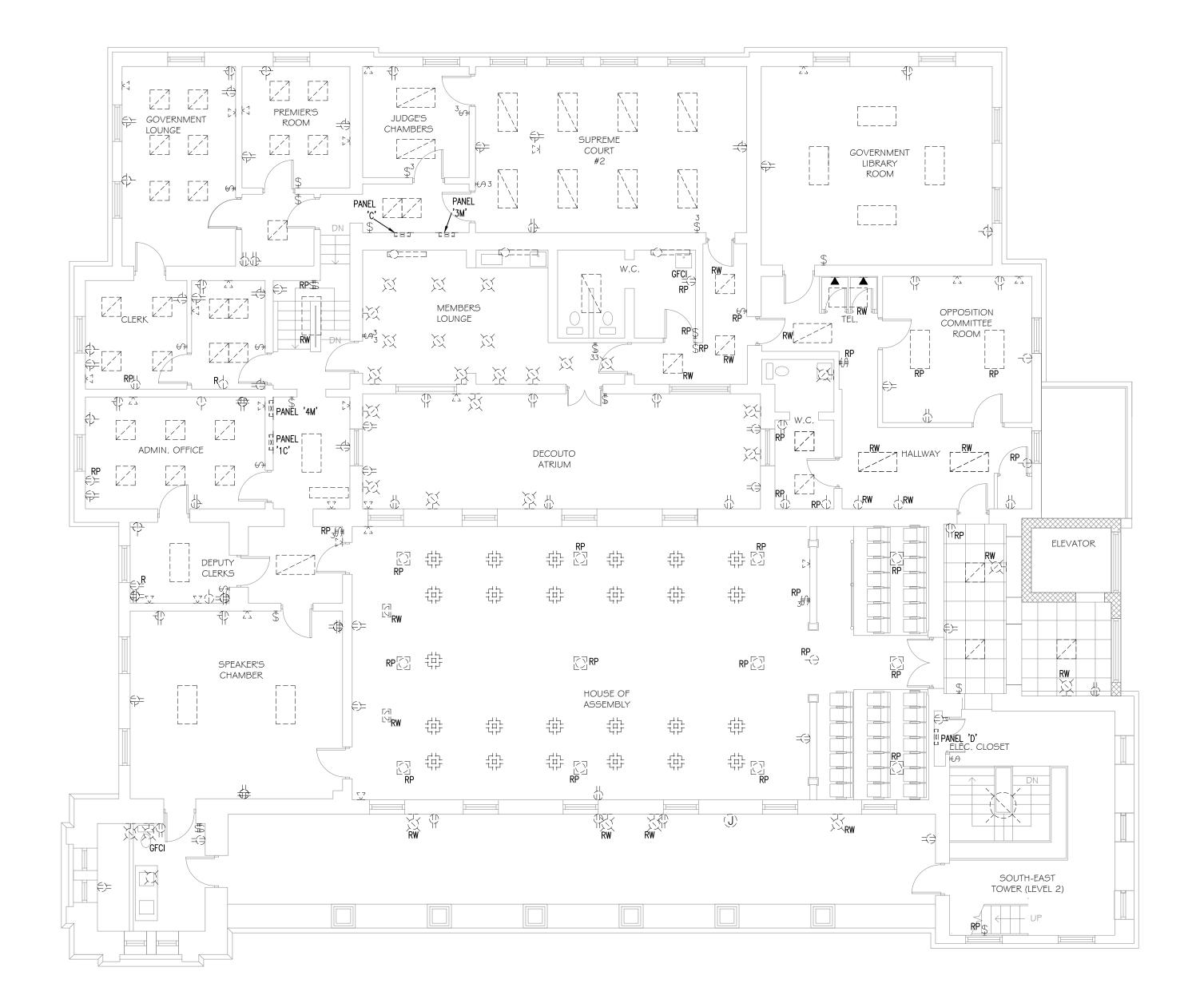
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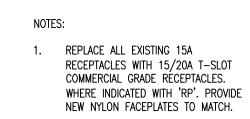
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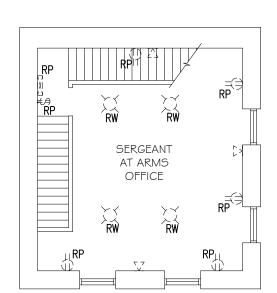
23 Parliament Street Hamilton, Bermuda

**Sheet Title:** 

**GROUND FLOOR EXISTING LIGHTING** AND POWER







1 UPPER FLOOR — EXISTING LIGHTING AND POWER
E3 1/8"=1'0"



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SURVEY	
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Checked By: RS	<b>Date:</b> 1 MAY 201
DRAWING	
Prepared By: RS/VB	<b>Date:</b> 1 MAY 201
Checked By: RS	<b>Date:</b> 1 MAY 201

-
Project Number

**Project Title:** 

**SESSIONS HOUSE** ELECTRICAL DISTRIBUTION UPGRADES PHASE 2

23 Parliament Street Hamilton, Bermuda

Sheet Title:

**UPPER FLOOR EXISTING LIGHTING** AND POWER

Revision: Sheet Number:

**E3** 

# ENCLOSED GARAGE COURT OF APPEAL CHAMBERS JURY ROOM LAW LIBRARY JUDGES CAR PARK CHAMBERS PANELPANELPANELPANELPANEL '1A#2''1A#1' 'A' '1M' 'M' CROCKED CROCKED HOLDING CELLS - ACCESS HATCHES IN FLOOR TRANSFORMER EXISTING UNDERGROUND CONDUITS FOR POWER DISTRIBUTION TERMINATES IN PULLBOX UNDER HOLDING CELL HALL ROOM LOWER FLOOR ENCLOSED COURTYARD L\_\_\_\_j MACHINE ROOM ELEVATOR PORCH SUPREME COURT # I JUDGES CHAMBERS COMM. ROOM JUDGES CHAMBERS 6 ₩/ COVER W/ COVER VERANDAH ROBING ROOM

1 GROUND FLOOR - PROPOSED LIGHTING AND POWER E4 1/8"=1'0"

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No.		Date:
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1	ISSUED FOR REVIEW	1 MAY 2

SURVEY	
<b>Prepared By:</b> RS/VB	<b>Date:</b> 1 MAY
DESIGN Prepared By: RS	Date: 1 MAY
Checked By: RS	<b>Date:</b> 1 MAY
DRAWING	
Prepared By: RS/VB	<b>Date:</b> 1 MAY
Checked By: RS	<b>Date:</b> 1 MAY

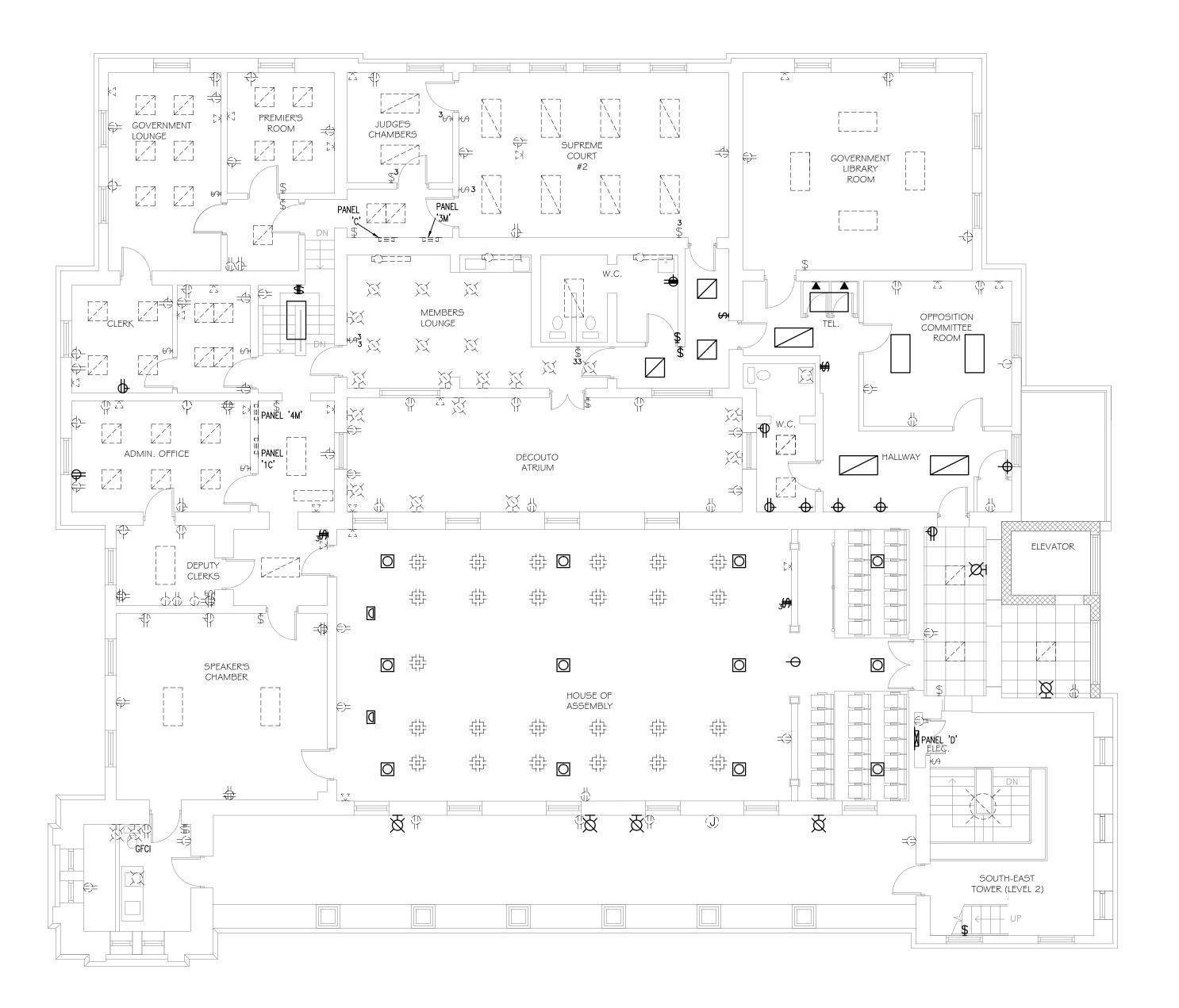
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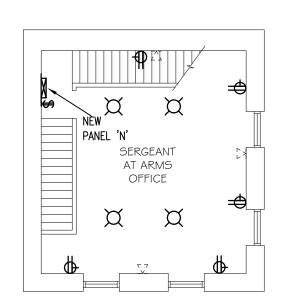
**SESSIONS HOUSE** ELECTRICAL DISTRIBUTION **UPGRADES PHASE 2** 

23 Parliament Street Hamilton, Bermuda

Sheet Title:

**GROUND FLOOR** PROPOSED LIGHTING AND POWER





1 UPPER FLOOR - PROPOSED LIGHTING AND POWER E5 1/8"=1'0"

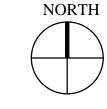


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# **SCALE:** AS NOTED

SURVEY	<b>T</b>
Prepared By: RS/VB	<b>Date:</b> 1 MAY 20
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Prepared By: RS	<b>Date:</b> 1 MAY 20
Checked By: RS	<b>Date:</b> 1 MAY 2
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Checked By: RS	Date: 1 MAY 2

# Approved By:

**Project Number:** 

34/11/78 Project Title:

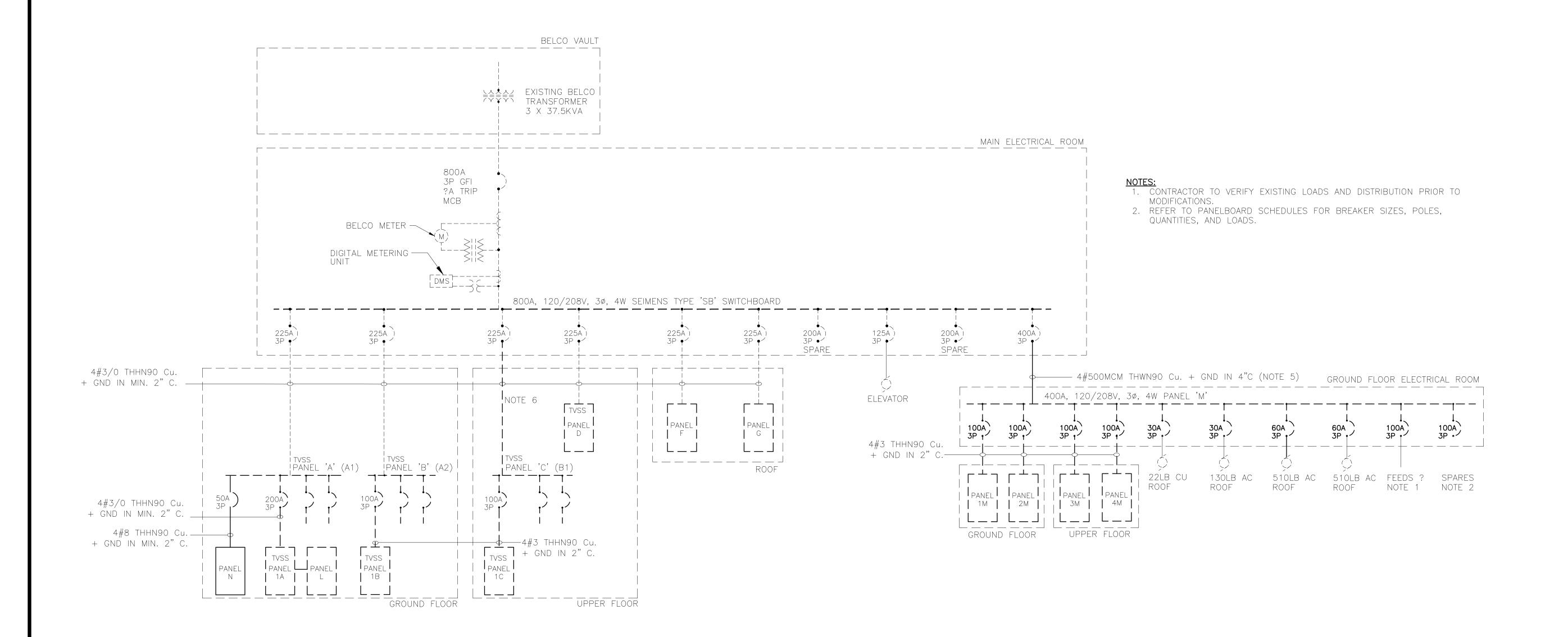
**SESSIONS HOUSE** ELECTRICAL DISTRIBUTION UPGRADES PHASE 2

23 Parliament Street Hamilton, Bermuda

Sheet Title:

**UPPER FLOOR** PROPOSED LIGHTING AND POWER

Revision:	Sheet Nur
$\sqrt{3}$	E5



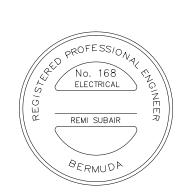
1 EXISTING SINGLE LINE DIAGRAM

# MINISTRY OF **PUBLIC WORKS**

DEPARTMENT OF WORKS AND ENGINEERING

### ELECTRICAL AND MECHANICAL **ENGINEERING SECTION**

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# SCALE: AS NOTED

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Checked By: RS	Date: 1 MAY 2

34/11/78

**Project Title:** 

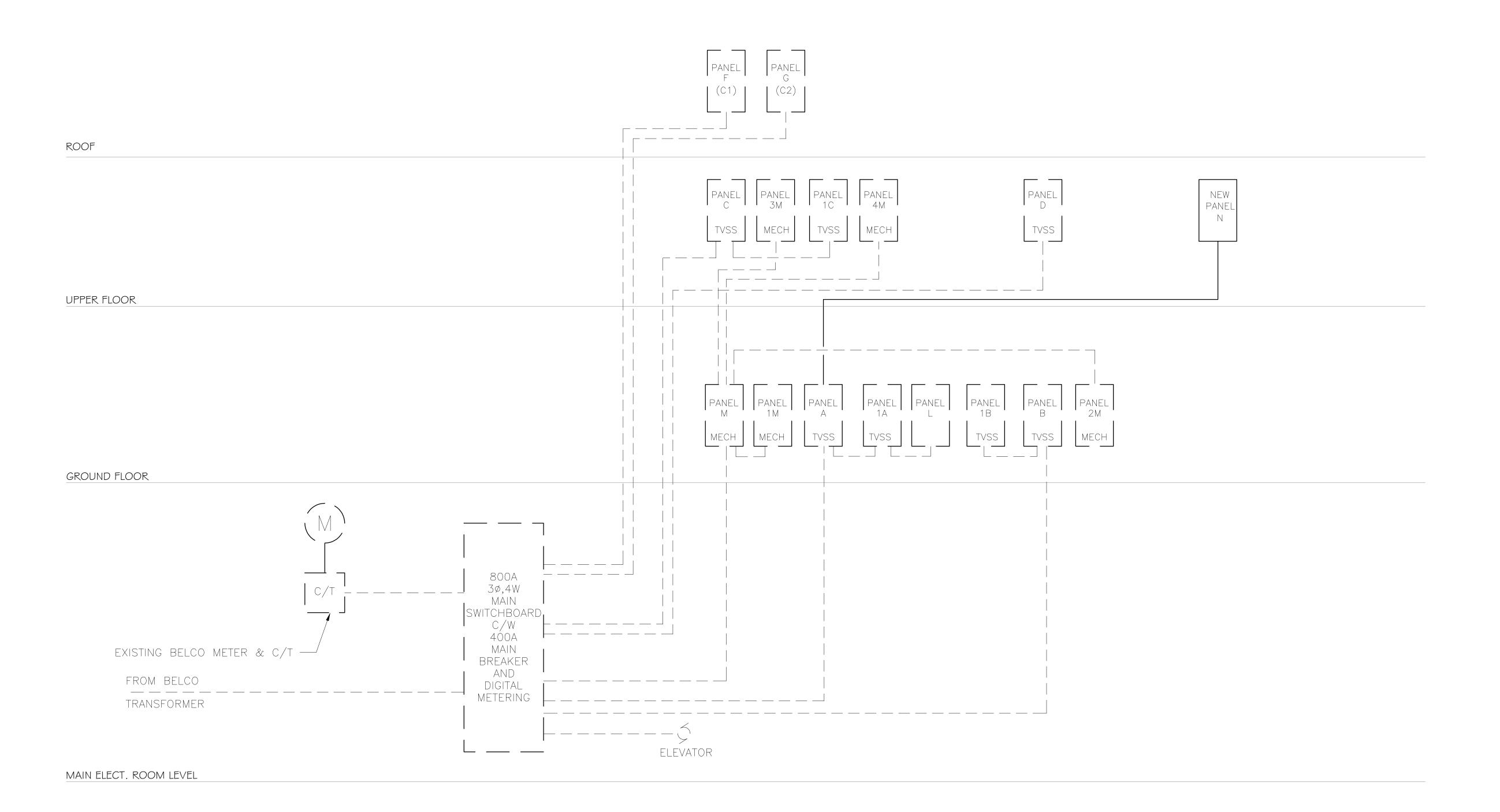
**SESSIONS HOUSE** ELECTRICAL DISTRIBUTION **UPGRADES PHASE 2** 

23 Parliament Street Hamilton, Bermuda

Sheet Title:

**EXISTING AND** PROPOSED SINGLE LINE DIAGRAMS







# **MINISTRY OF PUBLIC WORKS**

DEPARTMENT OF WORKS AND ENGINEERING

ELECTRICAL AND MECHANICAL ENGINEERING SECTION

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DRAWING	
Prepared By: RS/VB	<b>Date:</b> 1 MAY 20
Checked By: RS	<b>Date:</b> 1 MAY 20

Approved By:

**Project Number:** 

**Project Title:** 

**SESSIONS HOUSE** ELECTRICAL DISTRIBUTION UPGRADES PHASE 2

23 Parliament Street Hamilton, Bermuda

Sheet Title: RISER DIAGRAM

Revision: Sheet Number:

**E7** 

PA	PANELBOARD SCHEDULE									
PROJECT NAME : PANEL : SYSTEM : TYPE : LOCATION : MOUNTING : NO. CIRCUITS : BUS SIZE : SYM. FAULT RATING :	M (ME 120/2 LOAD GROUI	400A								
DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION			
SPACE	_	_	1	2	_	_	SPACE			
SPACE	_	_	3	4	_	_	SPACE			
SPACE	_	_	5	6	_	_	SPACE			
	30	3	7	8	3	30				
UNKNOWN CIRCUIT	_	_	9	10	_	_	UNKNOWN CIRCUIT			
	_	_	11	12	_	_				
	60	3	13	14	3	60				
HOUSE OF ASSEMBLY A/C UNIT	_	_	15	16	_	_	UNKNOWN CIRCUIT			
	_	_	17	18	_	_				
	60	3	19	20	3	60				
UNKNOWN CIRCUIT	_	_	21	22	_	-	SPARE			
	_	_	23	24	_	_				
	100	3	25	26	3	100				
PANEL 4M	_	_	27	28	_	_	SPARE			
	_	_	29	30	_	_				
	100	3	31	32	3	100				
PANEL 3M	_	_	33	34	_	_	SPARE			
	_	_	35	36	_	_				
	100	3	37	38	3	100				
PANEL 2M	_	_	39	40	_	_	PANEL 1M			
	_	-	41	42	_	-				

PANELBOARD SCHEDULE								
PROJECT NAME : SESSIONS HOUSE — ELECTRICAL DISTRIBUTION UPGRADES PANEL : L — CONTROLLED BY EXTERIOR LIGHTING TIME CLOCK SYSTEM : 120/240V, 1ø, 3W TYPE : LOADCENTRE LOCATION : ELECTRICAL ROOM MOUNTING : SURFACE NO. CIRCUITS : 30 BUS SIZE : 100A SYM. FAULT RATING : 10KAI								
DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION	
EXTERIOR LIGHTING	20	1	1	2	1	20	SPARE	
EXTERIOR LIGHTING	20	1	3	4	1	20	SPARE	
EXTERIOR LIGHTING	20	1	5	6	1	20	SPARE	
SPARE	20	1	7	8	1	20	SPARE	
SPARE	20	1	9	10	1	20	SPARE	
SPACE	_	_	11	12	_	_	SPACE	
SPACE	_	_	13	14	_	_	SPACE	
SPACE	_	_	15	16	_	_	SPACE	
SPACE	_	_	17	18	_	_	SPACE	
SPACE	_	-	19	20	_	_	SPACE	
SPACE	_	-	21	22	_	-	SPACE	
SPACE	_	_	23	24	_	_	SPACE	
SPACE	_	-	25	26	_	-	SPACE	
SPACE	_	_	27	28	_	_	SPACE	
SPACE	_	_	29	30	_	_	SPACE	

PANELBOARD SCHEDULE									
PROJECT NAME : PANEL : SYSTEM : TYPE : LOCATION : MOUNTING : NO. CIRCUITS : BUS SIZE : SYM. FAULT RATING :	SESSIONS HOUSE — ELECTRICAL DISTRIBUTION UPGRADES  1M (MECHANICAL)  120/208V, 3ø, 4W  LOAD CENTRE C/W 225-3P MAIN BREAKER  GROUND FLOOR ELECTRICAL ROOM  SURFACE  72  225A  10KAI								
DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION		
208V A/C UNIT #5 -LOWER	30	2	1	2	2	30	208V A/C UNIT #3 -LOWER		
FLOOR (NORTH)	_	_	3	4	_	_	FLOOR (NORTH)		
208V A/C UNIT #4 -LOWER	30	2	5	6	2	20	COURT SECRETARY A/C		
FLOOR (NORTH)	_	_	7	8	_	_			
SPARE	30	1	9	10	2	20	COURT OF APPEAL JUDGES		
SPARE	20	1	11	12	_	_	CHAMBER A/C		
SPARE	20	1	13	14	2	20	208V RECEPTACLE — UPPER FLOOR, EAST WALL (ADJ. TO		
SPARE	20	1	15	16	_	_	SERVER ROOM)		
SPARE	20	1	17	18	2	20	COURT OF APPEAL WALL A/C		
SPARE	20	1	19	20	_	_	SSST. S. A. B.E. W.EE Ay S		
SPARE	20	2	21	22	2	30	CHIEF JUSTICE CHAMBER A/C		
JI ARE	_	_	23	24	_	_	OTHER COSTICE OF WINDER TO CO		
SPARE	20	2	25	26	2	20	- SPARE		
SPARE	_	_	27	28	_	_			
CDADE	20	2	29	30	2	20	CDADE		
SPARE	_	_	31	32	_	_	SPARE		
CDADE	20	2	33	34	2	20	00105		
SPARE	_	_	35	36	_	_	SPARE		
CDADE	20	2	37	38	2	40	CDADE		
SPARE	_	_	39	40	_	_	SPARE		
SPARE	20	1	41	42	1	20	SPARE		
SPARE	20	1	43	44	1	20	SPARE		
SPARE	20	1	45	46	1	20	SPARE		
SPARE	20	1	47	48	1	20	SPARE		
SPARE	20	1	49	50	1	20	SPARE		
SPARE	20	1	51	52	1	20	SPARE		
SPARE	20	1	53	54	1	20	SPARE		
SPARE	20	1	55	56	2	20			
SPARE	20	1	57	58	_	_	SPARE		
SPARE	20	1	59	60	_	_	SPACE		
SPARE	20	1	61	62	_	_	SPACE		
SPARE	20	1	63	64	_	_	SPACE		
SPARE	20	1	65	66	1	20	SPARE		
SPACE	_	_	67	68	_	_	SPACE		
	50	2	69	70	_	_	SPACE		
SPARE		_	71	72	_		SPACE		

PANELBOARD SCHEDULE									
PROJECT NAME : SESSIONS HOUSE - ELECTRICAL DISTRIBUTION UPGRADES PANEL : B SYSTEM : 120/208V, 3ø, 4W TYPE : LOADCENTER C/W 200A-3P MAIN BREAKER AND TVSS LOCATION : SUPREME COURT ENTRANCE MOUNTING : RECESSED NO. CIRCUITS : 42 BUS SIZE : 225A SYM. FAULT RATING : 10KAI									
DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION		
	100	3	1	2	2	20	SPARE		
PANEL 1B, 3ø, 3P, 208V			3	4	_	_			
			5	6	2	20	SPARE		
SPARE	20	2	7	8	_	-			
		_	9	10	2	20	SPARE		
EXIT LIGHTS	20	1	11	12	-	-			
UNKNOWN CIRCUIT	20	1	13	14	1	20	SPARE		
UKNOWN CIRCUIT	20	1	15	16	1	20	SPARE		
EXTERIOR GFI RECEPT.—SOUTH WALL	20	1	17	18	1	20	SPARE		
UNKNOWN CIRCUIT	20	1	19	20	1	20	SPARE		
SECURITY PANEL	20	1	21	22	1	20	SPARE		
UNKNOWN CIRCUIT	20	1	23	24	1	20	SPARE		
RECEPTACLE — GROUND FLOOR SERVER ROOM	20	1	25	26	1	20	SPARE		
TWIST LOCK RECEPTACLE — GROUND FLOOR SERVER ROOM	20	1	27	28	1	20	SPARE		
GROUND FLOOR SERVER ROOM RECEPTACLES	20	1	29	30	1	20	SPARE		
LIGHTS — GROUND FLOOR SERVER ROOM	20	1	31	32	1	20	SPARE		
UNKNOWN CIRCUIT	20	1	33	34	1	20	SPARE		
RECCOURT #1 COMPUTER/MONITOR	20	1	35	36	1	20	SPARE		
REC COURT #1 JUDGE'S BENCH	20	1	37	38	1	20	SPARE		
FIRE ALARM PANEL	20	1	39	40	1	20	SPARE		
SPARE	20	1	41	42	1	20	SPARE		

PA	PANELBOARD SCHEDULE								
PROJECT NAME : PANEL : SYSTEM : TYPE : LOCATION : MOUNTING : NO. CIRCUITS : BUS SIZE : SYM. FAULT RATING :	2M (N 120/2 LOAD(	MECHANIO 208V, 39 CENTRE EME COU SSED	CAL) ø, 4W				ON UPGRADES		
DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION		
CURRENT COURT #4 A /O #O	30	2	1	2	2	30	A /O LINIT LIQUDING OF L. OFF		
SUPREME COURT #1 - A/C #2	_	_	3	4	_	_	A/C UNIT — HOLDING CELL OFF		
CURRENE COURT #4 A /O #4	30	2	5	6	2	30	CUPPENS COURT #4 A /O #7		
SUPREME COURT#1 - A/C #1	_	_	7	8	_	_	SUPREME COURT #1 — A/C #3		
HIDOEC CHAMPERC A /O DECERT	20	2	9	10	2	20	1101 BN10 05110 4 /0		
JUDGES CHAMBERS A/C RECEPT.	_	_	11	12	_	-	HOLDING CELLS A/C		
COURT LIBRARY A/C RECEPTACLE	20	2	13	14	2	20	- JURY ROOM A/C RECEPTACLE		
	_	_	15	16	_	_			
OPPOSITION LOUNGE 208V A/C	20	2	17	18	2	20	GROUND FLOOR SERVER ROOM A		
RECEPTACLE	-	_	19	20	_	_	RECEPTACLE		
SPARE	20	1	21	22	1	20	A/C RECEPTACLE EAST WALL		
SPARE	20	1	23	24	1	20	SPARE		
SPARE	20	1	25	26	2	20	CDADE		
CDARE	20	2	27	28	_	-	SPARE		
SPARE	_	_	29	30	1	20	SPARE		
CDARE	20	2	31	32	1	20	SPARE		
SPARE	_	_	33	34	-	_	SPACE		
SPACE	_	_	35	36	_	_	SPACE		
SPACE	_	_	37	38	_	_	SPACE		
SPACE	_	_	39	40	_	_	SPACE		
SPACE	-	_	41	42	_	_	SPACE		

PAN	PANELBOARD SCHEDULE									
PROJECT NAME : SESSIONS HOUSE — ELECTRICAL DISTRIBUTION UPGRADES PANEL : 1B SYSTEM : 120/208V, 3ø, 4W TYPE : LOAD CENTRE C/W TVSS LOCATION : GROUND FLOOR JURY CORRIDOR MOUNTING : RECESSED NO. CIRCUITS : 72 BUS SIZE : 225A SYM. FAULT RATING : 10KAI										
DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION			
JUDGE'S CHAMBERS REC. SOUTH WALL	20	1	1	2	1	20	RECEPTACLE - EAST WALL JUDGE'S CHAMBERS			
SUPREME COURT#1 SOUTH WALL RECEPTACLES	20	1	3	4	1	20	UNKNOWN CIRCUIT			
LIGHTS- JUDGE'S CHAMBERS, JURY ROOM & HALLWAY	20	1	5	6	1	20	RECEPTACLES - JURY ROOM			
UNKNOWN CIRCUIT	20	1	7	8	1	20	UNKNOWN CIRCUIT			
UNKNOWN CIRUIT	20	1	9	10	2	30				
UNKNOWN CIRCUIT	20	1	11	12	_	_	UNKNOWN CIRCUIT			
REC GROUND FL. SERVER ROOM	20	1	13	14	1	20	RECEPTACLES - SUPREME COUR'			
UNKNOWN CIRCUIT	20	1	15	16	1	20	UNKNOWN CIRCUIT			
OPPOSITION MEMBERS LOUNGE RECEPTACLES	20	1	17	18	1	20	UNKNOWN CIRCUIT			
RECEPTACLE - LADIES PAMPERING ROOM (UPPER FLOOR)	20	1	19	20	1	20	UNKNOWN CIRCUIT			
GOVT. LIBRARY RECEPTACLES	20	1	21	22	1	20	GFCI RECEPTACLE - SOUTH WAL MEMBERS LOUNGE			
HOLDING CELL COUNTER RECEPTACLES	20	1	23	24	1	20	LIGHTS - HOLDING CELL			
SPARE	20	1	25	26	1	20	SPARE			
SPARE	20	1	27	28	1	20	SPARE			
SPARE	20	1	29	30	1	20	SPARE			
SPARE	20	1	31	32	1	20	SPARE			
SPARE	20	1	33	34	1	20	SPARE			
SPARE	20	1	35	36	1	20	SPARE			
SPARE	20	1	37	38	1	20	SPARE			
SPARE	20	1	39	40	1	20	SPARE			
SPARE	20	1	41	42	1	20	SPARE			
SPARE	20	1	43	44	1	20	SPARE			
SPARE	20	1	45	46	1	20	SPARE			
SPARE	20	1	47	48	1	20	SPARE			
SPARE	20	1	49	50	1	20	SPARE			
SPARE	20	1	51	52	1	20	SPARE			
SPARE	20	1	53	54	1	20	SPARE			
SPARE	30	1	55	56	1	20	SPARE			
SPARE	30	1	57	58	2	20				
SPARE	30	2	59	60	_	_	SPARE			
SPARE	30	_	61	62	2	20				
SPARE	20	1	63	64	_	_	SPARE			
	30	2	65	66	1	30	SPARE			
SPARE	_	_	67	68	1	20	SPARE			
SPACE	_	_	69	70	_	_	SPACE			
SPACE		_	71	72	_	_	SPACE			

# **MINISTRY OF PUBLIC WORKS**

DEPARTMENT OF WORKS AND ENGINEERING

ELECTRICAL AND MECHANICAL ENGINEERING SECTION P.O. Box HM 1365 Hamilton HMFX Bermuda Tel: (441) 295-5151

Fax: (441) 295-4675



ISSUE / REVISION

3	ISSUED FOR TENDER	20 MARCH 20
2	ISSUED FOR PLANNING	1 SEPT. 20
1	ISSUED FOR REVIEW	1 MAY 20
SCA	LE: AS NOTED	
	VEY	
Prep RS/V	pared By: /B	<b>Date:</b> 1 MAY 2
Prep	IGN pared By:	Date:
RS		1 MAY 2
Che RS	cked By:	<b>Date:</b> 1 MAY 2
	AWING	
Prep RS/V	pared By: /B	<b>Date:</b> 1 MAY 2
Che RS	cked By:	<b>Date:</b> 1 MAY 2
App	roved By:	
Proj	ect Number:	
34/11/	/78	
Proj	ect Title:	
	SSIONS HOUSE ECTRICAL DISTRIB	RITION

23 Parliament Street Hamilton, Bermuda

**GROUND FLOOR PROPOSED** PANELBOARD SCHED.

PAI	NEI	$^{1}BO$	ARI	) S	CH	EDU	J <b>LE</b>	
PROJECT NAME : SESSIONS HOUSE — ELECTRICAL DISTRIBUTION UPGRADES PANEL : A SYSTEM : 120/208V, 3ø, 4W TYPE : LOADCENTRE C/W 225A—3P MAIN BREAKER AND TVSS LOCATION : GROUND FLOOR WEST MOUNTING : RECESSED NO. CIRCUITS : 42 BUS SIZE : 225A SYM. FAULT RATING : 10KAI								
DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION	
H.O.A. ADMIN. OFFICE BASEBOARD RECEPTACLES	20	1	1	2	1	20	MEMBERS LOUNGE - WEST WALL RECEPTACLE	
UNKNOWN CIRCUIT	20	1	3	4	1	20	UNKNOWN CIRCUIT	
PREMIER'S OFFICE BASEBOARD RECEPTACLES	20	1	5	6	1	20	COUNTER OUTLET (LEFT) — GROUND FLOOR	
SUPREME COURT #1 HALLWAY BASEBOARD RECEPTACLES & LIGHTS	20	1	7	8	1	20	COUNTER OUTLET (RIGHT) - GROUND FLOOR	
UNKNOWN CIRCUIT	20	1	9	10	1	20	UNKNOWN CIRCUIT	
UNKNOWN CIRCUIT	20	1	11	12	1	20	UNKNOWN CIRCUIT	
UNKNOWN CIRCUIT	20	1	13	14	1	20	UNKNOWN CIRCUIT	
UNKNOWN CIRCUIT	20	1	15	16	1	20	FIBRE OPTIC-SECURITY MONITOR	
UNKNOWN CIRCUIT	20	1	17	18	1	20	SPARE	
ASSISTANT TO THE CLERK BASEBOARD RECEPTACLE	20	1	19	20	1	20	SPARE	
UNKNOWN CIRCUIT	20	1	21	22	1	20	SPARE	
RECEPTACLE - JUDGE'S CHAMBERS WAITING ROOM (GROUND FLOOR)	20	1	23	24	1	20	SPARE	
UNKNOWN CIRCUIT	20	1	25	26	1	20	SPARE	
APPEALS STUDY CHAMBER LIGHTS — UPPER FLOOR	20	1	27	28	1	20	SPARE	
UNKNOWN CIRCUIT	20	1	29	30	1	20	SPARE	
UNKNOWN CIRCUIT	20	1	31	32	_	_	SPACE	
UNKNOWN CIRCUIT	20	1	33	34	_	_	SPACE	
SPACE	_	_	35	36	_	_	SPACE	
SPACE	_	_	37	38	_	_	SPACE	
SPACE	_	_	39	40	2	50	SERGEANT AT ARMS PANEL	
SPACE	_	_	41	42	_	_	100A, 1ø, 3W, 208V	

PANELBOARD SCHEDULE									
PROJECT NAME : SESSIONS HOUSE — ELECTRICAL DISTRIBUTION UPGRADES PANEL : 1A (TUB 1) SYSTEM : 120/208V, 3ø, 4W TYPE : LOAD CENTRE C/W TVSS LOCATION : GROUND FLOOR ELECTRICAL ROOM MOUNTING : SURFACE NO. CIRCUITS : 72 (CIRCUIT DOUBLE LUGGED) BUS SIZE : 225A SYM. FAULT RATING : 10KAI									
DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION		
COURT SECRETARY BASEBOARD RECEPTACLES—SOUTH WALL	20	1	1	2	1	20	UNKNOWN CIRCUIT		
UNKNOWN CIRCUIT	20	1	3	4	1	20	UNKNOWN CIRCUIT		
C.O.A JUDGES CHAMBER-BASEBOARD RECEPTACLES-WEST WALL	20	1	5	6	1	20	UNKNOWN CIRCUIT		
C.O.A JUDGES CHAMBER-BASEBOARD RECEPTACLES-EAST WALL	20	1	7	8	1	20	UNKNOWN CIRCUIT		
COURT SECRETARY OFF. WEST REC	20	1	9	10	1	20	HALLWAY RECEPTACLE-GND FLOOR		
COURT SECRETARY SECURITY MONITOR	20	1	11	12	1	20	SPARE CIRCUIT (BLUE)—GND FL. JB CLOSET(IN 12X12 CEILING MOUNT JE		
N&S WALL RECEPT.—CHIEF JUSTICE CHAMBER	20	1	13	14	1	20	UNKNOWN CIRCUIT		
CHIEF JUSTICE CHAMBER-WEST BASEBOARD RECEPTACLES	20	1	15	16	1	20	UNKNOWN CIRCUIT		
CHIEF JUSTICE CHAMBER-CLOSET RECEPTACLE	20	1	17	18	1	20	RECEPTACLE—ABOVE WEST DOOR ENCLOSED COURTYARD ENTRANCE		
CHIEF JUSTICE REC.—NORTH WALL	20	1	19	20	1	20	UNKNOWN CIRCUIT		
UNKNOWN CIRCUIT	20	1	21	22	1	20	UNKNOWN CIRCUIT		
COURT OF APPEALS JUDGES CHAMBER — WEST RECEPTACLE	20	1	23	24	1	20	UNKNOWN CIRCUIT		
JUSTICE CHAMBER RECEPT.—EAST & SOUTH	20	1	25	26	1	20	BASEBOARD RECEPTS. UPPER FLOOR WAITING ROOM		
UNKNOWN CIRCUIT	20	1	27	28	1	20	BASEBOARD RECEPTS. UPPER FLOOF WAITING ROOM		
UNKNOWN CIRCUIT	20	1	29	30	1	20	ASSISTANT TO THE CLERK BASEBOAR AND SOUTH WALL RECEPTACLE		
UNKNOWN CIRCUIT	20	1	31	32	1	20	UNKNOWN CIRCUIT		
COURT LIBRARY STUDY ROOM RECEPTACLE	20	1	33	34	1	20	JUDGE'S CHAMBERS-BASEBOARD AN SOUTH WALL RECEPTACLE		
UNKNOWN CIRCUIT	20	1	35	36	2	20			
UNKNOWN CIRCUIT	20	1	37	38	_	_	- UNKNOWN CIRCUIT		
HOUSE OF ASSEMBLY ADMIN. OFFICE-BASEBOARD RECEPTACLES	_	_	39	40	1	20	UNKNOWN CIRCUIT		
JUDGE'S CHAMBER RECEPTACLES & LIGHTS	20	1	41	42	1	20	UNKNOWN CIRCUIT		
PAPER SHREDDER & KITCHENETTE LIGHTS (GROUND FLOOR)	20	1	43	44	1	20	UNKNOWN CIRCUIT		
GROUND FL. KITCHENETTE RECEPT.	20	1	45	46	1	20	SPARE		
ENCLOSED COURTYARD—NORTH WALL RECEPTACLE	20	1	47	48	1	20	SPARE		
GFI COUNTER RECEPT. — GND. FL. LADIES BATHROOM	20	1	49	50	1	20	UNKNOWN CIRCUIT		
GFI COUNTER RECEPT. — GND. FL LADIES BATHROOM	20	1	51	52	1	20	JUDGE'S CHAMBER T-RECEPTACLES		
SPARE	20	1	53	54	1	20	SPARE		
SPARE	20	1	55	56	1	20	SPARE		
	70	3	57	58	1	20	SPARE		
SPARE	_	_	59	60	1	20	SPACE		
	_	_	61	62	1	20	SPACE		
SPARE	20	1	63	64	1	20	SPARE		
SPARE	20	1	65	66	1	20	SPARE		
SPARE	20	1	67	68	_		SPARE		
SPACE	_	_	69	70	_	_	SPACE		
SPACE		_	71	72	_	_	SPACE		

PROJECT NAME : SESSIONS HOUSE — ELECTRICAL DISTRIBUTION UPGRADES PANEL : 1A (TUB 2) SYSTEM : 120/208V, 3ø, 4W TYPE : LOAD CENTRE C/W TVSS LOCATION : GROUND FLOOR ELECTRICAL ROOM MOUNTING : SURFACE NO. CIRCUITS : 84 (CIRCUIT DOUBLE LUGGED) BUS SIZE : 225A SYM. FAULT RATING : 10KAI									
DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION		
208V CONTACT FOR EXTERIOR	60	2	1	2	1	20	TIME CLOCK FOR EXTERIOR LIGHTS		
LIGHTS	_	_	3	4	1	20	ELECTRICAL VAULT LIGHTS		
GROUND FLOOR JB CLOSET — UPPER RECEPTACLE	20	1	5	6	1	20	SPARE		
GROUND FLOOR JB CLOSET — LOWER RECEPTACLE	20	1	7	8	1	30	SPARE		
JUNCTION BOX CLOSET LIGHT	20	1	9	10	1	30	SPARE		
SPARE	20	1	11	12	1	20	SPARE		
SPARE	20	1	13	14	1	20	SPARE		
SPARE	20	1	15	16	1	20	SPARE		
SPARE	20	1	17	18	_	_	SPACE		
SPACE	_	_	19	20	_	_	SPACE		
SPACE	_	_	21	22	_	_	SPACE		
SPACE	_	_	23	24	_	_	SPACE		
SPACE	_	_	25	26	-	_	SPACE		
SPACE	_	_	27	28	_	_	SPACE		
SPACE	_	_	29	30	-	-	SPACE		
SPACE	_	_	31	32	_	_	SPACE		
SPACE	_	_	33	34	_	_	SPACE		
SPACE	_	_	35	36	_	_	SPACE		
SPACE	_	_	37	38	_	_	SPACE		
SPACE	_	_	39	40	_	-	SPACE		
SPACE	_	_	41	42	_	_	SPACE		
SPACE	_	_	43	44	_	-	SPACE		
SPACE	_	_	45	46	_	_	SPACE		
SPACE	_	_	47	48	_	_	SPACE		
SPACE	_	_	49	50	_	-	SPACE		
SPACE	_	_	51	52	_	_	SPACE		
SPACE	_	_	53	54	_	_	SPACE		
SPACE	_	_	55	56	_	_	SPACE		
SPACE	_	_	57	58	_	_	SPACE		
SPACE	_	_	59	60	_	_	SPACE		
SPACE	_	_	61	62	_	_	SPACE		
SPACE	_	_	63	64	_	_	SPACE		
SPACE	_	_	65	66	_	_	SPACE		
SPACE	_	_	67	68	_	_	SPACE		
SPACE	_	_	69	70	_	_	SPACE		
SPACE	_	_	71	72	_	_	SPACE		
SPACE	_	_	73	74	_	_	SPACE		
SPACE	-	-	75	76	_	_	SPACE		
SPACE	_	_	77	78	_	_	SPACE		
SPACE	_	_	79	80	_	_	SPACE		
SPACE	_	_	81	82	_	_	SPACE		

# **MINISTRY OF PUBLIC WORKS**

DEPARTMENT OF WORKS AND ENGINEERING

### ELECTRICAL AND MECHANICAL ENGINEERING SECTION

P.O. Box HM 1365 Hamilton HMFX Bermuda Tel: (441) 295-5151 Fax: (441) 295-4675



No.		Date:
3	ISSUED FOR TENDER	20 MARCH 201
2	ISSUED FOR PLANNING	1 SEPT. 201
1	ISSUED FOR REVIEW	1 MAY 201

**Date:** 1 MAY 2016

SCALE: AS NOTED	
SURVEY	
Prepared By:	

DESIGN
Prepared By:
RS Checked By: RS

> **DRAWING Prepared By:** RS/VB Checked By: RS

Approved By:

Project Number:

Project Title:

SESSIONS HOUSE ELECTRICAL DISTRIBUTION UPGRADES PHASE 2

23 Parliament Street Hamilton, Bermuda

Sheet Title:

**GROUND FLOOR PROPOSED** PANELBOARD SCHED.

PANELBOARD SCHEDULE									
PROJECT NAME : PANEL : SYSTEM : TYPE : LOCATION :	C 120/2 LOAD	208V, 39 CENTRE R FLOOR	ø, 4W C/W 2	25-3P	MAIN BF	REAKER	ON UPGRADES  AND TVSS DURT #2		
MOUNTING : NO. CIRCUITS : BUS SIZE : SYM. FAULT RATING :	72 225A 10KAI	ı							
DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION		
	100	3	1	2	1	20	DECOUTO ATRUM LIGHTS		
PANEL 1C, 3ø, 4W, 208V	_	_	3	4	1	20	DECOUTO ATRIUM REC WEST		
	_	_	5	6	1	20	PREMIER OFFICE REC EAST WALL		
PREMIER'S LIGHT & RECEPTACLE	20	1	7	8	1	20	GOV. LOUNGE RECEPT. & LIGHTS		
ASST. TO CLERK RECEPT WEST	20	1	9	10	1	20	UNKNOWN CIRCUIT		
GOVERNMENT LOUNGE RECEPTACLES	20	1	11	12	1	20	MEMBER LOUNGE MICROWAVE		
CLERK'S OFFICE LIGHTS	20	1	13	14	1	20	WATER FILTER & WATER HEATER MEMBERS LOUNGE		
SPEAKER'S BATHROOM EX-LIGHTS	20	1	15	16	1	20	COURT #2 HALLWAY LIGHTS		
UNKNOWN CIRCUIT	20	1	17	18	1	20	COURT #2 JUDGE'S CHAMBER REC.		
LIGHT — TOP OF WESTERN STAIRS	20	1	19	20	1	20	COURT #2 JUDGE'S CHAMBER REC.		
UNKNOWN CIRCUIT	20	1	21	22	1	20	RECEPTACLE - COURT #2		
SPARE	20	1	23	24	1	20	TOP OF NW STAIRS RECEPTACLE		
UNKNOWN CIRCUIT	20	1	25	26	1	20	RECEPTACLE - COURT #2		
UNKNOWN CIRCUIT	20	1	27	28	1	20	CLERK'S ASSISTANT RECEPTACLE		
SPEAKER'S BATHROOM RECEPTACLE	20	1	29	30	1	20	TELEPHONE SYSTEM		
UNKNOWN CIRCUIT	20	1	31	32	1	20	(RED) FRIDGE RECEPTACLE		
CLERK'S EAST WALL RECEPTACLE	20	1	33	34	1	20	(BLK) MEM. LOUNGE NW WALL C. GFCI + C. LGHTS/MALE WC		
MEMBERS LOUNGE DISHWASHER/ WATER FILTER	20	1	35	36	1	20	(BLUE) MEMBERS LOUNGE COUNTER NW WALL GFCI		
(RED) MEMBERS LOUNGE COUNTER GFCI	20	1	37	38	1	20	CLERK'S RECEPTACLE — WEST WALL		
DECOUTO ATRIUM RECEPTACLE - EAST	20	1	39	40	1	20	SPARE		
SPARE	20	1	41	42	1	20	SPARE		
SPARE	20	1	43	44	1	20	SPARE		
SPARE	20	1	45	46	1	20	SPARE		
SPARE	20	1	47	48	1	20	SPARE		
SPARE	20	1	49	50	1	20	SPARE		
SPARE	20	1	51	52	1	20	SPARE		
SPARE	20	1	53	54	1	20	SPARE		
SPACE	_	_	55	56	1	20	SPARE		
SPACE		_	57	58	1	20	SPARE		
SPACE	_	_	59	60	1	20	SPARE		
SPACE		_	61	62	1	20	SPARE		
SPACE	_	_	63	64	1	20	SPARE		
SPACE	_	_	65	66	1	20	UNKNOWN CIRCUIT - GFCI		
SPACE	_	_	67	68	1	20	UNKNOWN CIRCUIT - GFCI		
SPACE	_	_	69	70	1	20	MEMBERS LOUNGE — EAST WALL		
				7.0			RECEPTACLE  MEMBERS LOUNGE - FAST WALL		

NOTES:

1. "\*" DENOTES EXISTING CIRCUIT AND WIRING RECONNECTED FROM EXISTING PANEL INDICATED. EXTEND/REPLACE EXISTING WIRING AS REQUIRED TO REACH NEW PANEL '1C'.

WHERE CIRCUIT IDENTIFIED AS "EXISTING CIRCUIT" CONTRACTOR TO TRACE OUT AND CONFIRM ON SITE AND TO ADVISE THE ENGINEER IMMEDIATELY.
 EXISTING CIRCUITS THAT HAVE MORE THAN ONE BRANCH CIRCUIT CONNECTED TO THE EXISTING FUSE TO BE SEPARATED TO SEPARATE NEW BREAKERS INDICATED AS SPARES.

- - 71 72 1 20 MEMBERS LOUNGE - EAST WALL RECEPTACLE

PANELBOARD SCHEDULE								
PROJECT NAME : PANEL : SYSTEM : TYPE : LOCATION : MOUNTING : NO. CIRCUITS : BUS SIZE : SYM. FAULT RATING :	1C 120/2 LOAD	208V, 39 CENTRE R FLOOR SSED	6, 4W C/W T	VSS			ON UPGRADES F ASSEMBLY ADMIN. OFFICES	
DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION	
H.O.A. ADMIN OFFICE RECEPTACLE — NORTH WALL	20	1	1	2	1	20	SPEAKER'S CHAMBER RECEPTACLE — NORTH WALL	
H.O.A. ADMIN OFFICE RECEPTACLE — WEST WALL	20	1	3	4	1	20	SPEAKER'S CHAMBER RECEPTACLE — NORTH WALL	
DEPUTY CLERK OFFICE RECEPTACLE — WEST WALL	20	1	5	6	1	20	DEPUTY CLERK OFFICE RECEPTALCE — NORTH WALL	
H.O.A. ADMIN OFFICE RECEPTACLE — NORTH WALL	20	1	7	8	1	20	SPEAKER'S CHAMBER RECEPTACLE — EAST WALL	
SPEAKER'S CHAMBER RECEPTACLE — SOUTH WALL	20	1	9	10	1	20	DEPUTY CLERK OFFICE RECEPTALCE — EAST WALL	
LIGHTS — HOUSE OF ASSEMBLY ADMINSTRATION OFFICE	20	1	11	12	1	30	SPEAKER'S CHAMBER RECEPTS - NORTH & WEST WALLS	
PHOTOCOPIER RECEPTACLE	20	1	13	14	1	20	RECEPTS & LIGHTS (CENTER) H.O.A. ADMINSTRATION OFFICE	
SPARE	20	1	15	16	1	20	LIGHTS — HOUSE OF ASSEMB (EAST)	
SPARE	20	1	17	18	1	20	RECEPTACLE - H.O.A. CHAMBER	
SPARE	20	1	19	20	1	20	LIGHTS— HOUSE OF ASSEMBL' (NORTH)	
SPARE	20	1	21	22	1	20	LIGHTS - HOUSE OF ASSEMB (SOUTH)	
SPARE	20	1	23	24	1	20	HOUSE OF ASSEMBLY BUZZER	
SPARE	20	1	25	26	1	20	SPARE CIRCUIT — CEILING MOU JB ABOVE H.O.A ADMIN. DOOR	
SPARE	20	1	27	28	1	20	SPARE CIRCUIT — CEILING MOU JB ABOVE H.O.A ADMIN. DOOR	
SPARE	20	1	29	30	1	20	SPARE	
SPARE	30	1	31	32	1	30	SPARE	
SPACE	_	_	33	34	_	_	SPACE	
SPACE	_	_	35	36	_	_	SPACE	
SPACE	_	_	37	38	_	_	SPACE	
SPACE	_	_	39	40	_	_	SPACE	
SPACE	_	_	41	42	_	_	SPACE	
SPACE	_	_	43	44	_	_	SPACE	
SPACE	_	_	45	46	_	-	SPACE	
SPACE	_	_	47	48	_	_	SPACE	
SPACE	_	-	49	50	_	-	SPACE	
SPACE	-	-	51	52	_	-	SPACE	
SPACE	_	_	53	54	_	_	SPACE	
SPACE	-	_	55	56	_	-	SPACE	
SPACE	_	_	57	58	_	_	SPACE	
SPACE	_	_	59	60	_	_	SPACE	
		t						

				_							
PANELBOARD SCHEDULE											
PROJECT NAME : PANEL : SYSTEM : TYPE : LOCATION : MOUNTING : NO. CIRCUITS : BUS SIZE : SYM. FAULT RATING :	SESSIONS HOUSE — ELECTRICAL DISTRIBUTION UPGRADES 3M (MECHANICAL) 120/208V, 3ø, 4W LOADCENTRE UPPER FLOOR — NORTH HALLWAY ADJACENT TO PREMIER'S OFFICE RECESSED 42 225A 10KAI										
DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION				
UNKNOWN CIRCUIT	40	2	1	2	2	20	PREMIER'S OFFICE A/C 208V				
CINCIPOWN CINCOTT	_	_	3	4	_	_	THEMIEN 3 OTTIGE A/C 200V				
SPARE	20	2	5	6	2	20	- UNKNOWN CIRCUIT				
31 AIL	_	_	7	8	_	_	- GINKINOWIN CIRCOIT				
SPARE	30	2	9	10	2	20	- SPARE				
STARL	_	_	11	12	_	_	SPANE				
COVEDNMENT LOUNCE A /C 209V	20	2	13	14	1	20	SPARE				
GOVERNMENT LOUNGE A/C 208V	_	_	15	16	1	20	SPARE				
CDARE	20	2	17	18	2	30	CDADE				
SPARE	_	_	19	20	_	_	SPARE				
CDADE	20	2	21	22	_	_	SPACE				
SPARE	_	_	23	24	_	_	SPACE				
CDADE	20	2	25	26	-	-	SPACE				
SPARE	_	_	27	28	_	_	SPACE				
CDADE	20	2	29	30	2	15	CDADE				
SPARE	_	_	31	32	_	_	SPARE				
SPARE	30	1	33	34	1	30	SPARE				
SPARE	20	1	35	36	1	20	SPARE				
SPACE	_	_	37	38	_	_	SPACE				
SPACE	_	_	39	40	_	_	SPACE				
SPACE	_	_	41	42	_	_	SPACE				

- - 61 62 - - SPACE \_ \_ 63 64 \_ \_ SPACE

- - 65 66 - - SPACE

SPACE

PANELBOARD SCHEDULE								
PROJECT NAME : PANEL : SYSTEM : TYPE : LOCATION : MOUNTING : NO. CIRCUITS : BUS SIZE : SYM. FAULT RATING :	D 120/2 LOADO	208V, 30 CENTRE R FLOOR	ø, 4W C/W 22	5A-3P	MAIN BF	REAKER	ON UPGRADES  AND TVSS I EAST STAIR LANDING	
DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION	
HOUSE OF ASSEMBLY RECEPTACLE — #5, SOUTH	20	1	1	2	1	20	HOUSE OF ASSEMBLY RECEPTACLE — #4, NORTH	
HOUSE OF ASSEMBLY RECEPTACLE — #3, SOUTH	20	1	3	4	1	20	HOUSE OF ASSEMBLY RECEPTACLE — #2, SOUTH	
HOUSE OF ASSEMBLY RECEPTACLE — #1, SOUTH	20	1	5	6	1	20	HOUSE OF ASSEMBLY RECEPTACLE — #5, NORTH	
HOUSE OF ASSEMBLY RECEPTACLE — #4, NORTH	20	1	7	8	1	20	HOUSE OF ASSEMBLY RECEPTACLE — #3, NORTH	
HOUSE OF ASSEMBLY RECEPTACLE — #2, NORTH	20	1	9	10	1	20	HOUSE OF ASSEMBLY RECEPTACLE — #1, NORTH	
LIGHTS - SOUTH EAST STAIRWELL	20	1	11	12	1	20	UNKNOWN CIRCUIT	
AUDIO RECEPTACLE (LEFT)	20	1	13	14	1	20	WOMEN'S WASHROOM RECEPTACLE	
AUDIO RECEPTACLE (RIGHT)	20	1	15	16	1	20	PORCH LIGHTS & RECEPTACLES	
SPARE	20	1	17	18	1	20	PANEL CLOSET RECEPTACLE (RIGHT)	
SPARE	20	1	19	20	1	20	PANEL CLOSET RECEPTACLE (LEFT)	
UPPER FL. – AUDIO CLOSET 208V	30	2	21	22	1	20	UPPER FL. — EAST HALLWAY LIGHTS	
OPPER FL AUDIO CLUSEI 200V	_	_	23	24			SPACE	
SPACE			25	26			SPACE	
SPACE			27	28			SPACE	
SPACE			29	30			SPACE	
SPACE			31	32			SPACE	
SPACE			33	34			SPACE	
SPACE			35	36			SPACE	
SPACE			37	38			SPACE	
SPACE			39	40			SPACE	
SPACE			41	42			SPACE	

- NOTES:

  1. "\*" DENOTES EXISTING CIRCUIT AND WIRING RECONNECTED FROM EXISTING PANEL 'B2'.
  EXTEND/REPLACE EXISTING WIRING AS REQUIRED TO REACH NEW PANEL 'D.

  2. WHERE CIRCUIT IDENTIFIED AS "EXISTING CIRCUIT" CONTRACTOR TO CONFIRM AND IDENTIFY EXISTING LOAD.

PANELBOARD SCHEDULE									
PROJECT NAME : PANEL : SYSTEM : TYPE : LOCATION : MOUNTING : NO. CIRCUITS : BUS SIZE : SYM. FAULT RATING :	4M (N 120/2 LOADO	MECHANIO 208V, 39 CENTRE R FLOOR	CAL) ø, 4W				ON UPGRADES F ASSEMBLY ADMIN. OFFICES		
DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION		
LLO A ADMINISTRATION OFFICE A /C	20	2	1	2	2	20	LINUXNOWNL CIDCUIT		
H.O.A ADMINISTRATION OFFICE A/C	_	_	3	4	_	-	UNKNOWN CIRCUIT		
DEDUTY OFFICE A /O	20	2	5	6	2	20	- UNKNOWN CIRCUIT		
DEPUTY CLERK OFFICE A/C	_	_	7	8	_	_			
HIDOE OLIVIDEDO LOWED LEVEL	30	2	9	10	2	20	LIAMANONAL OIDOUT		
JUDGE CHAMBERS - LOWER LEVEL -	_	_	11	12	_	_	UNKNOWN CIRCUIT		
LINI/ALOWAL OUROLUT	30	2	13	14	2	20	LINUALOUNI, OIDOLUT		
UNKNOWN CIRCUIT	_	_	15	16	_	_	UNKNOWN CIRCUIT		
LINUALOWAL OUROLUT	20	2	17	18	2	20	- UNKNOWN CIRCUIT		
UNKNOWN CIRCUIT	_	-	19	20	_	-			
SPARE	20	1	21	22	2	20	LIAU/ALOWAL OIDOLUT		
SPARE	20	1	23	24	_	_	UNKNOWN CIRCUIT		
CDADE	40	2	25	26	2	20	LINUXNOWN, CIDCLUT		
SPARE	_	_	27	28	_		- UNKNOWN CIRCUIT		
SPACE	_	_	29	30	_	ı	SPACE		
SPACE		_	31	32	_	_	SPACE		
SPACE	_	_	33	34	_		SPACE		
SPACE	-	_	35	36	_	_	SPACE		
SPACE	_	_	37	38	_	_	SPACE		
SPACE	_	_	39	40	_	_	SPACE		
SPACE	_	_	41	42	_	_	SPACE		

# **MINISTRY OF PUBLIC WORKS**

DEPARTMENT OF WORKS AND ENGINEERING

ELECTRICAL AND MECHANICAL **ENGINEERING SECTION** P.O. Box HM 1365 Hamilton HMFX Bermuda Tel: (441) 295-5151

Fax: (441) 295-4675



No.		Date:
2	ISSUED FOR TENDER	20 MARCH 2017
J	ISSUED FOR PLANNING	1 SEPT. 2010

SURVEY Prepared By: RS/VB	<b>Date:</b> 1 MAY 2010
DESIGN Prepared By: RS	<b>Date:</b> 1 MAY 201
Checked By: RS	<b>Date:</b> 1 MAY 201
DRAWING	
Prepared By: RS/VB	<b>Date:</b> 1 MAY 201
Checked By: RS	<b>Date:</b> 1 MAY 201
Approved By:	

34/11/78

**Project Title:** 

**SESSIONS HOUSE ELECTRICAL DISTRIBUTION UPGRADES PHASE 2** 

23 Parliament Street Hamilton, Bermuda

**UPPER FLOOR PROPOSED** PANELBOARD SCHED.

# PANELBOARD SCHEDULE

PROJECT NAME SESSIONS HOUSE - ELECTRICAL DISTRIBUTION UPGRADES PANEL 120/208V, 3ø, 4W LOADCENTRE C/W 225A-3P MAIN BREAKER AND TVSS GROUND FLOOR WEST SYSTEM TYPE LOCATION RECESSED 42 225A 10KAI MOUNTING NO. CIRCUITS BUS SIZE SYM. FAULT RATING

DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION
H.O.A. ADMIN. OFFICE BASEBOARD RECEPTACLES	20	1	1	2	1	20	MEMBERS LOUNGE — WEST WALL RECEPTACLE
UNKNOWN CIRCUIT	20	1	3	4	1	20	UNKNOWN CIRCUIT
PREMIER'S OFFICE BASEBOARD RECEPTACLES	20	1	5	6	1	20	COUNTER OUTLET (LEFT) — GROUND FLOOR
SUPREME COURT #1 HALLWAY BASEBOARD RECEPTACLES & LIGHTS	20	1	7	8	1	20	COUNTER OUTLET (RIGHT) - GROUND FLOOR
UNKNOWN CIRCUIT	20	1	9	10	1	20	UNKNOWN CIRCUIT
UNKNOWN CIRCUIT	20	1	11	12	1	20	UNKNOWN CIRCUIT
UNKNOWN CIRCUIT	20	1	13	14	1	20	UNKNOWN CIRCUIT
UNKNOWN CIRCUIT	20	1	15	16	1	20	FIBRE OPTIC-SECURITY MONITOR
UNKNOWN CIRCUIT	20	1	17	18	1	20	SPARE
ASSISTANT TO THE CLERK BASEBOARD RECEPTACLE	20	1	19	20	1	20	SPARE
UNKNOWN CIRCUIT	20	1	21	22	1	20	SPARE
RECEPTACLE — JUDGE'S CHAMBERS WAITING ROOM (GROUND FLOOR)	20	1	23	24	1	20	SPARE
UNKNOWN CIRCUIT	20	1	25	26	1	20	SPARE
APPEALS STUDY CHAMBER LIGHTS — UPPER FLOOR	20	1	27	28	1	20	SPARE
UNKNOWN CIRCUIT	20	1	29	30	1	20	SPARE
UNKNOWN CIRCUIT	20	1	31	32	_	_	SPACE
UNKNOWN CIRCUIT	20	1	33	34	_	_	SPACE
SPACE	_	_	35	36	_	_	SPACE
SPACE	_	_	37	38	_		
SPACE	_	_	39	40	2	50	SERGEANT AT ARMS PANEL 'N'
SPACE	_	_	41	42	_		

# PANELBOARD SCHEDULE

PROJECT NAME SESSIONS HOUSE - ELECTRICAL DISTRIBUTION UPGRADES

PANEL SYSTEM

TYPE

120/208V, 3ø, 4W LOADCENTRE C/W 225A-3P MAIN BREAKER AND TVSS

LOCATION SERJEANT AT ÁRMS OFFICE

MOUNTING RECESSED NO. CIRCUITS 20

BUS SIZE 100A SYM FALLET RATING

SYM. FAULI RATING :	10KAI						
DESCRIPTION	BRK	POLE	CIRC	CIRC	POLE	BRK	DESCRIPTION
UNKNOWN CIRCUIT	20	1	1	2	1	20	UNKNOWN CIRCUIT
UNKNOWN CIRCUIT	20	1	3	4	1	20	UNKNOWN CIRCUIT
UNKNOWN CIRCUIT	20	1	5	6	1	20	UNKNOWN CIRCUIT
SPARE	20	1	7	8	1	20	SPARE
SPACE		1	9	10	1		SPACE
SPACE		1	11	12	1		SPACE
SPACE		1	13	14	1		SPACE
SPACE		1	15	16	1		SPACE
SPACE		1	17	18	1		SPACE
SPACE		1	19	20	1		SPACE



DEPARTMENT OF WORKS AND ENGINEERING

ELECTRICAL AND MECHANICAL **ENGINEERING SECTION** 

P.O. Box HM 1365 Hamilton HMFX Bermuda Tel: (441) 295-5151 Fax: (441) 295-4675



No.		Date:
3	ISSUED FOR TENDER	20 MARCH 2017
2	ISSUED FOR PLANNING	1 SEPT. 2016
1	ISSUED FOR REVIEW	1 MAY 2010

SURVEY	
<b>Prepared By:</b> <i>RS/VB</i>	<b>Date:</b> 1 MAY 2016
DESIGN Prepared By: RS	<b>Date:</b> 1 MAY 2010
Checked By: RS	<b>Date:</b> 1 MAY 2010
DRAWING	
Prepared By: RS/VB	<b>Date:</b> 1 MAY 2016
Checked By: RS	<b>Date:</b> 1 MAY 2016

**Project Number:** 

**Project Title:** 

SESSIONS HOUSE ELECTRICAL DISTRIBUTION **UPGRADES PHASE 2** 

23 Parliament Street Hamilton, Bermuda

Sheet Title:
GROUND AND UPPER FLOOR PROPOSED

PANELBOARD SCHED.

### ELECTRICAL SPECIFICATIONS

.1 "Provide" or "supply and Install" means "provide and install, inclusive of all labour, materials, installation, testing, and connections, for the item referenced."

#### 2.GENERAL .1 This specification and any addenda hereto form part of the contract documents and shall be read in conjunction with them. Work shall include the furnishing of

all labour and materials, unless specified otherwise, to complete and put into operating condition all electrical systems as indicated on the drawings and specified

.2 It is the intent of the work to provide complete, neatly finished, and operational systems and any labour, material, permits, licenses, approvals and inspections

required for completion of the work, whether specifically mentioned in the drawings or specifications or not, shall be included in the tendered price. .3 Responsibility as to which trade provides required articles or materials rests solely with the Electrical Contract trade. Extras will not be considered based on grounds of difference of interpretation of specifications as to which trade involved shall provide certain specialties or mat

.4 The drawings and specifications for the complete works, including all of those related to other trades shall be examined before submitting tenders. All masonry, painting, carpentry, general construction, and electrical requirements indicated shall be included in this scope of the work.

.5 All power interruptions shall be coordinated with tenants (House of Assembly and Supreme Courts) to occur outside of normal operating hours. Normal operating

hours are typically 8:00am to 6:00pm. Provide 48 hours notice. .6 All disruptive and noisy work shall be performed outside of normal operating hours on weekdays or on weekends. Coordinate work with building tenants.

Building representative shall be on site to escort contractor into areas of work when the building is unoccupied. Allow for night shifts and weekend work as required to execute all work. The Contractor may work 4:00pm to 12:00am on weekdays.

.7 Sensitive recording equipment and cabling exists for Supreme Court Areas. Be cautious of these systems and use extra care when working in these areas not to disrupt existing wiring and systems. Coordinate work in these areas with Supreme Court representatives.

#### 3.DRAWINGS AND SPECIFICATIONS .1 Drawings and specifications are complementary to each other and what is called for by one shall be binding as if called for by both.

.2 Should any discrepancy appear between drawings and specifications that leaves the contractor in doubt as to true intent and meaning, obtain ruling from the Engineer before submitting tender, or allow for the most expensive alternative.

#### 4.UNIFORMITY OF EQUIPMENT .1 Unless otherwise specified, uniformity of manufacturer shall be maintained for any particular item throughout.

#### 5.CODES AND STANDARDS

.1 The entire installation, inclusive of material and labour, shall comply with the requirements of the latest edition of applicable Building Codes and Authorities Having Jurisdiction, the National Electrical Code (NEC), NFPA, regulations of the Government of Bermuda "Occupational Health and Safety Act 1982", and Bermuda Fire Service.

### 6.PERMITS AND INSPECTIONS

.1 Obtain and pay fees for permits and inspections required for each stage of work, and upon completion of the entire installation.

#### 7.STANDARDS OF MATERIAL AND WORKMANSHIP

.1 All materials shall be new and of the quality specified, and shall be UL listed or listed by equivalent agency recognized by the Authority Having Jurisdiction.

.2 All work shall be executed in a neat and workmanlike manner by qualified tradesmen. The Electrical Contractor shall keep a competent foreman and necessary assistants on the site during the progress of the work.

### .3 All material and installation shall match existing building standard unless noted otherwise on the drawings.

#### 8.ALTERNATE MANUFACTURERS

.1 All requests for alternates shall be submitted to the Engineer not less than 5 days prior to the close of Tender.

.2 Furnish to the Engineer a Certificate of Final Inspection and Approval from the Authority's Inspection Department.

.2 The contractor shall assume full responsibility for ensuring that alternate products meet all space, weight, connection, power, wiring, and performance

### 9.SHOP DRAWINGS

.1 The Electrical Contractor shall submit to the Engineer, for review, shop drawings of specified electrical equipment. Such equipment shall include, but not be

limited to switchgear, panelboards, circuit breakers, distribution and protection equipment, switches and receptacles. .2 All drawings shall be submitted in either pdf format by email or hardcopy (hardcopy in triplicate and two copies will be returned to the Electrical Contractor).

Submit additional hardcopies for approval as may be required for maintenance manuals. .3 The Engineer's review of shop drawings is for general design only and will not relieve the Electrical Contractor or suppliers from responsibility for errors, proper

fitting, construction of work, and furnishing of materials. Review will not be construed as approving departures from contract document requirements if such departures are not specifically noted. The Electrical Contractor is responsible for verifying all dimensions.

#### 10. GUARANTEE

.1 The Electrical Contractor shall furnish a written guarantee, signed by authorized personnel, stating:

.1That all work executed under this contract will be free from defects of material and workmanship for a period of 1 year from date of final acceptance.

.2The above parties further agree to, at their own expense, repair and replace all such defective work, and other work damaged thereby, which fails or becomes defective during the term of the guarantee warranty provided that such failure is not due to improper usage. .3The period of the guarantee specified will in no way supplant any other guarantee of a longer period but be binding on work not otherwise covered.

#### 11. OPERATION AND MAINTENANCE MANUALS

.1 Provide 2 sets of operation and maintenance manuals in 3 ring binders and one digital pdf copy. Include the following information:

- Names, phone numbers, emails, and addresses of suppliers.

- Technical data, operating manuals, product data, parts lists. - Shop drawings reviewed and stamped by Engineer.

—Certificate of Acceptance from Authority's Inspection Department

-Load balance and meggering reports. Written Guarantee and manufacturers' warranties.

### 12. AS-BUILT DRAWINGS

.1 The Engineer will furnish to the Electrical Contractor one set of drawings to be used for record purposes. The Electrical Contractor shall accurately record on these prints all revisions to the original plans that are made on site during constructio

.2 The Electrical Contractor shall produce at his own expense a set of AutoCAD 2004 (or later) drawings, including all changes to the original tender drawings covered by addenda, change orders, field changes, and job conditions, and turn these over to the Engineer in electronic (pdf and dwg format) and hard copy form. Completed record drawings shall be clearly marked "As-Built Drawings"

## 1.3. VALUATION OF CHANGES

.1 Provide complete breakdown of material, labour, overhead, profit, etc. when submitting quotations for change or variation notices.

.2 The hourly rate shall be inclusive of all charaes for supervision, variable labour factors, hand tools, payroll burdens, height factors, warranties, storage, rentals, additional bonding, parking, clean—up, as—built drawings, hoisting, freight, and delivery, but exclusive of overhead and profit.

#### .3 The labour hours shall be based on the latest issue of the National Electrical Contractors Association (NECA). 14. COMPLETION OF CONTRACT

.1 All equipment must be cleaned and tested before acceptance by Engineer. Notify the Engineer when ready for final completion inspection.

.2 One set of As-built drawings and 0&M Manuals shall be turned over to the Engineer for review prior to substantial completion.

## .3 Substantial completion shall not be granted until all systems are deemed completed to the satisfaction of the Engineer.

.1 Prior to submitting tender, the Electrical Contractor shall carefully examine the site and ascertain all conditions which may affect his trade. No extras will be allowed for work resulting from conditions that should have been noticed and accounted for during a thorough examination of the site.

# SETTING OUT OF THE WORK

.1 The Electrical Contractor is responsible for correcting all work completed contrary to the intent of drawings and specifications and shall bear all costs involved in making the corrections. Where intent of drawings and specifications is not clear, obtain clarification from the Engineer before proceeding with work. .2 The Electrical Contractor shall give work his personal supervision, lay out his own work, do all necessary leveling and measuring or employ a competent Engineer

to do so. Figures, full size and detail drawings to take precedence over scale measurements. .3 The Electrical Contractor shall be responsible for any damage caused to the Owner or any other trade by improper location or carrying out of his work. .4 The Electrical Contractor, in the setting out of his work, shall make reference to architectural, structural, and mechanical drawings. Consult with all relevant

trades in setting out locations for conduit runs, lighting fixtures, panel assemblies, and all other electrical equipment, so that conflicts are avoided and symmetrical spacing is maintained. .5 Allow for work after hours as required to meet project schedule and coordinate with Owner if applicable.

## 17. INTERRUPTIONS

.1 Arrange execution of work to maintain present building operations and to minimize the effect of this work on existing operations. .2 Contractor to coordinate with Owner to avoid interruptions of services during normal building occupied hours. Contractor shall schedule all disruptions and

### include for premium to perform work associated during unoccupied hours. Unoccupied hours include weekdays from 6:00PM to 8:00AM, weekends, and statutory 18. FIRE STOPPING

.1 Fire stop all penetrations (existing and new) through fire separations after installation to comply with codes and to provide equal fire separation ratings. Fire stopping systems to be UL listed for the application. Submit shop drawings for approval. 19. CUTTING AND PATCHING

.1 The Electrical Contractor will be responsible for all channelling, cutting, masonry, filling and patching required for electrical installation.

.2 Paint and finish the surfaces to match existing. .3 Structural members must not be cut without consent of the Engineer.

.4 Where work done by the Electrical Contractor damages the existing conditions, the Electrical Contractor shall repair and make good such damage to the

.5 Cutting, channelling, and all dusty work shall be performed after hours (4:00pm to 8:00am weekdays or weekends) in dust tight envelope to protect adjacent areas from dust/dirt. Areas of work shall be cleaned up before tenant's regular operating hours.

## 20. CLEAN UP

.1 Keep the site free during construction of debris, boxes, packing, and other materials associated with the work of this trade. .2 All waste material shall be disposed of in a safe and environmentally responsible manner and in accordance with Government Regulations.

.3 Upon completion of work, the electrical installation shall be left in a clean and finished condition to the satisfaction of the Engineer.

## 21. IDENTIFICATION

.1 Identify all major pieces of equipment, including but not limited to panelboards, electrical cabinets, and breakers in CDP type panelboards with engraved lamacoid labels, white lettering on black background. Existing panelboard numbering system is being changed, label all existing main distribution panel breakers and existing panelboards that are to remain with their new identification numbers

.2 Provide typewritten directories in all new and existing panels. Trace out existing circuits to confirm existing identification and correct where necessary. .3 Fire alarm breaker shall be red or painted red and clearly identified.

.4 Label all receptacles, new and existing, with panelboard and circuit number (ie. A19, for Panel A, Circuit 19) using P-Touch type labels. Black on white background. For all receptacles other than standard 20A duplex receptacles, labels shall include amp rating, phase and voltage.

## 22. DEMOLITION AND RENOVATION

.1 Disconnect and remove existing equipment, devices, switches, receptacles, etc. which are not to be reused.

.2 Test all branch circuits and feeder circuits to confirm if still and use and device/location served. Provide updated panel schedules and marked up floor plans indicating existing circuit numbers on devices to the Engineer prior to ordering of new panelboards.

.3 Remove unused accessible conduits and cabling back to the associated panelboard. Cut back unused mineral insulated cables as much as practicable. Label unused breakers as spares.

.4 All material removed from existing building and not being reused in this contract shall be the property of the Ministry. Material as it becomes surplus shall be reviewed by the Ministry's representative and if considered of value to the Ministry, shall be packaged and delivered as directed; all other materials become scrap and shall be disposed of by the contractor.

.5 Remove and reinstall existing devices to facilitate construction as required.

### 23. TESTS

.1 All portions of electrical work shall be tested for satisfactory operation.

.2 Before energizing any portion of the electrical system, the Electrical Contractor shall perform megaer tests on all feeders and branch circuits. Any problems discovered by such testing shall be corrected by the Electrical Contractor and the circuits in question retested. The results of all final testing shall be provided to the Engineer in report form

.3 Upon project completion, and immediately prior to final inspection and takeover, the Electrical Contractor shall check the load balance on all feeders and at distribution centres, load centres, and panels. These checks shall be carried out by turning on all loads and checking load current balance. If load unbalance exceeds 15%, the circuits shall be reconfigured as necessary to balance the loads.

### 24. PAINTING AND FINISHES

.1 All metal electrical fittings, supports, hanger rods, channel frames, conduit racks, outlet boxes, brackets, and clamps are to have a galvanized finish or a paint finish over corrosion-resistant primer

.2 All panels shall be factory—finished with spray—on air dry enamel. All enamel shall be applied over corrosion—resistant primer. Matte or flat type finish paint will not be accepted. All panels or similar factory—finished units that are scratched or marked during installation shall be touched up with matching spray—on air dry lacquer and, if required to provide a satisfactory job, shall be completely refinished.

.3 All panelboards, pullboxes, and other electrical cabinets and boxes shall be finished in grey enamel.

#### 25. CONDUIT AND FITTINGS

.1 All conduit shall be EMT thinwall type or PVC FT4 rated conduit. Rigid metal conduit shall be used in exterior locations only. ENT is not acceptable.

.2 Unless otherwise noted, conduit shall be concealed in all finished areas. In service areas, conduit shall be run on surface unless indicated otherwise.

.3 Surface mounted conduit shall be installed parallel to structural lines, and, where bends occur in parallel runs, they shall be concentric. .4 Raceways shall be installed free from dents and bruises and shall have their ends capped, plugged, or sealed as necessary to prevent entrance of dirt or

#### .5 Fittings and couplings shall be steel type.

.6 In all areas subject to moisture, watertight fittings must be used.

.7 All raceways, except where otherwise indicated, shall be sized in accordance with the NEC.

#### .8 Flexible metal conduit or TECK90 cable is be utilized for connections to motors, transformers, and motor controllers. 26. WIRE AND CABLE

#### .1 All wire and cable shall be installed in conduit. Remove existing mineral insulated cables as much as practicable in the areas of work and replace with conduit and wire.

.2 Lighting and receptacle drops from ceiling mounted distribution box may be AC90 in non—masonry walls. AC90 runs in ceiling space shall not exceed 20' in

.3 All building wiring shall be copper, minimum conductor size #12AWG and insulation type THHN or THWN rated for 90 degC, except where noted otherwise. Solid conductor #12 and #10, stranded conductors #8 and larger.

.4 All conductors shall be colour coded throughout the installation as follows:

- Equipment grounding conductor - green - Neutral conductor - white

-120/208V phase wires - red, black, and blue

.5 All cables installed underground shall be wet location rated.

.6 Size all conductors for maximum 2% voltage drop. .7 Rewire existing branch circuits as indicated to bring up to current electrical codes. Where existing non-conforming wiring is found in locations that are not indicated to be replaced/rewired, advise the Engineer immediately to determine course of action.

#### 27. OUTLET BOXES

.1 Outlet boxes shall be PVC or electro-galvanized steel, sized as required by code.

.2 All outlet boxes shall be flush mounted except where specified otherwise. Align all devices and plates plumb and level with building structural lines. .3 Confirm outlet locations and mounting heights with the project coordinator on site prior to installation.

## 28. LOCATION OF OUTLETS

.1 The Engineer reserves the right to change the location of new outlets to within 10' of points indicated on plans without extra charge, provided the Electrical

#### Contractor is advised before installation is made. 29. PULL BOXES AND JUNCTION BOXES

.1 Supply and install pullboxes and junction boxes as required to suit job conditions and shall conform to National Electrical Code requirements.

.2 A minimum of one pull box shall be installed for every 100' of conduit.

.2 Duplex receptacles, NEMA type 5-20R (T-Slot), 125V, U ground, with following features:

.3 No more than two 90 deg bends shall be allowed between pulling locations.

.4 Pullboxes and junction boxes shall be finished in grey enamel over corrosion-resistant primer with screw-on or hinged cover. .5 Pullboxes and junction boxes in public areas shall be painted to match existing wall finish if directed by the project coordinator.

#### 30. ACCESS DOORS

.1 The Electrical Contractor shall supply and install access doors as required for proper servicing of all electrical work. Access doors shall be complete with necessary frames and hinged doors held closed with captive studs. Access panel to be of not less than 14 gauge steel, prime coat finished and painted on the job to match the wall or ceiling finish.

.2 The number of access doors shall be kept to a minimum.

#### 31. SWITCHES AND RECEPTACLES

.1 All switches and receptacles shall be specification commercial grade in ivory or white to match existing unless otherwise directed.

.1 White urea moulded housing (except as noted). .2 Suitable for #10 AWG for back and side wiring.

Break—off links for use as split receptacle: Eight back wired entrances, four side wiring screws or pigtail connections. .5 Double wipe contacts and riveted grounding contacts.

.3 Switches shall be 20A, 125V, non-Decora style, single pole, double pole, or three-way switches as indicated and as follows: 1 Terminal holes approved for #10 AWG wire.

Silver alloy contacts. Urea or melamine moulding for parts subject to carbon tracking.

Suitable for back and side wiring. .5 Toggle operated fully rated for tungsten filament and fluorescent amps, and up to 80% of rated capacity of motor loads.

plex GFCI receptacles shall be 20A. 125V. complete with LED indicator light. All outdoor, rooftop, washroom, and kitchen receptacles and receptacles mounted within 6' of a sink shall be GFCI type.

.5 Cover plates shall be ivory or white to match existing, high impact nylon.

.6 Where existing devices are not shown on drawings in areas where existing adjacent devices and wiring are to be replaced, contractor to upgrade all devices and wiring in that area to same standard. Include all required work in tender sum. 32. SUPPORTS

#### .1 All conduit, raceways, and other electrical equipment shall be securely and adequately supported, in accordance with the National Electrical Code. .2 Where inserts are required in concrete, expansion inserts, lead shield inserts or plastic inserts shall be used in drilled holes. Shot driven pins may be used in structural concrete only with the permission of the Engineer.

33. GROUNDING AND BONDING .1 The grounding and bonding system shall be supplied and installed in accordance with the National Electrical Code and the Electrical Inspection Department. .2 All metal parts not carrying current, including but not limited to, secondary feeder circuits, electrical and mechanical equipment, panelboard enclosures, metal

raceways, pull and junction boxes, shall be properly grounded. Metal raceways shall utilize double locknuts and other fittings where necessary to provide ground .3 A separate green insulated ground conductor shall be installed in all raceway feeder runs, flexible conduit, and in conduit installed in slab or underground. .4 Ground buses shall be bare copper bar wall mounted on insulators on at 1' aff. 3" x 1/4" copper bus in Main Electrical Room, 2" x 1/4" in all other

#### Electrical Rooms and Closets. 34. DISCONNECT SWITCHES

.1 Provide local isolating disconnect switches as required by NEC.

.2 Disconnect switches shall be rated 240V, with poles to suit

.3 Disconnect switches mounted outdoors shall be housed in NEMA4X enclosures. 35. PANELBOARDS AND BREAKERS

.1 Provide complete panelboards as indicated on panelboard schedules. Unless otherwise indicated panelboards shall be 120/208V, 3ø, 4W solid neutral design with sequence style copper bussing and full capacity neutral with bolt—on circuit breakers. .2 Panelboards shall be complete with manufacturer's factory installed TVSS system as indicated on drawings.

.3 Provide all circuit breakers as indicated in panelboard schedules. Circuit breakers to be rated minimum 10kAlC unless otherwise indicated. .4 Panels shall be flush mounted in public areas and surface mounted in service rooms, all complete with all trim, lockable doors and installation hardware. .5 Updated typewritten panel directories shall be provided for all panels.

.6 Balance panel load for each phase A, B, & C. Allow for relocating circuits within panelboard to balance the load. See "Tests". .7 Provide  $\frac{3}{4}$ " G1S, fire rated plywood or plywood painted with fire rated paint for all walls of Ground Floor Electrical Room from ground floor level to structure

.8 Provide minimum 4 spare 1" conduits from each new flush mounted panelboard to accessible ceiling space above. If ceiling space above is not accessible, route 2 spare 1" conduits to the nearest accessible ceiling spaces in opposite directions. Spare conduits to be terminated to min. 18"x18" junction boxes in

ceiling space. .9 Provde lock-off devices for each new panelboard as follows: one 1 pole, one 2 pole, and one 3 pole lock off device.

#### .10 Acceptable Manufacturer: Square D or Cutler—Hammer. 36. LIGHTING SYSTEMS

.1 Rewire branch circuits to existing lighting systems where existing wiring is either mineral insulated or non—conforming (no ground) as indicated. .2 Rewire existing wall switches and replace existing switches as indicated in specified areas.

#### .1 Existing battery operated exit signs and emergency lighting circuits shall be extended and connected to new panelboards as required. Existing circuits to be confirmed on site by contractor. Test entire emergency lighting system operation upon project completion with Engineer present.

37. EXIT SIGNS AND EMERGENCY LIGHTING

.1 Existing fire alarm system was installed in January 2013. Fire alarm system is not in contract and existing devices are not shown on the drawings..

# MINISTRY OF **PUBLIC WORKS**

**DEPARTMENT OF WORKS AND ENGINEERING** 

ELECTRICAL AND MECHANICAL

ENGINEERING SECTION

P.O. Box HM 1365 Hamilton HMFX Bermuda

Tel: (441) 295-5151

Fax: (441) 295-4675

REMI SUBAIR

No.		Date:
3	ISSUED FOR TENDER	20 MARCH 201
2	ISSUED FOR PLANNING	1 SEPT. 201

1 | ISSUED FOR REVIEW

ISSUE / REVISION

1 MA <b>Date</b> 1 MA
1 IV17
<b>Date</b> 1 MA
<b>Date</b> 1 MA
<b>Date</b> 1 MA

23 Parliament Street Hamilton, Bermuda

34/11/78

**Project Title:** 

**SESSIONS HOUSE** 

**UPGRADES PHASE 2** 

**ELECTRICAL SPECIFICATIONS** 

**ELECTRICAL DISTRIBUTION** 

