



STAFF REPORT

TO: Council

FROM: Marcia d'Eon, Director of Operations & Protective Services

APPROVED BY: Warren Macleod, CAO

DATE: November 13, 2024

SUBJECT: **RFP Award-Design, Supply & Installation of Solar PV Array**

BACKGROUND

The Municipality sought proposals for the design, supply and installation of a solar PV array at the Municipal building located at 414 Woodlawn Drive, Shelburne.

An RFP was advertised on the Municipality's website, Facebook page and the NS Procurement website, posted on September 20, 2024.

The RFP deadline was October 17, 2024, at 10:30 a.m. Four (4) submissions were received.

An evaluation team consisting of project manager, Andrew Amos, Warren Macleod, CAO and Marcia d'Eon, DOPS met to review and score the RFP submissions. The evaluation team has made a recommendation based on operational requirements together with feedback from Clean Foundation.

Of the four submissions received Solar Ascent scored the highest overall, with the evaluation team rating them high marks for their references, experience and qualifications of the vendor.

The proposed solar PV array consists of 158 panels with a predicted output of 110704 kWh. For reference the municipal administration building utilized 197911 kWh in 2023. The installation of these panels will result in over 56%+/- of our buildings power usage being offset by solar.

Net zero installations were explored; however, the cost of these options was outside of the budgeted amount for this project and was not recommended by the proponents due to the complexity of tying this type of system into our existing electrical infrastructure and Nova Scotia Power Grid.

RECOMMENDATION

THAT Council of the Municipality of the District of Shelburne award the **Design, Supply & Installation of Solar PV Array** Request for Proposal to Solar Ascent for technical solution A at a cost of \$228,959.25 with a 15% allowance for contingency. Funds to come from Capital Reserve.

BUDGET CONSIDERATIONS

Council made a motion to approve up to \$92064.05.
Funding expected from the Province and outside organization.

ATTACHMENTS

- Design, Supply & Installation of Solar PV Array RFP

Municipality of the District of Shelburne



Request for Proposal

Design, Supply & Installation of Solar PV Array

MDS2024-10

Release Date:

September 20th, 2024

Proposals will be received no later than:

10:30 am on Thursday October 17th, 2024

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Project Overview:

Rapid increase of carbon and other greenhouse gas (GHG) emissions into the atmosphere in the past few decades has intensified the threat of climate change. The Municipality is working towards reducing GHG emissions from its operations by investing in cleaner energy technologies and decarbonization of its electricity system operations.

The intent of this RFP is for the Municipality to engage a firm for the design and construction of a system to convert solar energy to electricity using photovoltaic cells with a capacity of up to 100 kW. The Municipality intends to participate in the “Net Metering Program” available through Nova Scotia Power Inc. (NSP).

Project Objectives:

The Municipality is seeking the services of a qualified solar PV firm to provide a detailed design and the construction of an approved design of (up to) a 100kW system to convert solar energy to electricity using photovoltaic cells referred to as Solar Energy Project (SEP). **The Proponent will advise of the recommended maximum size of the array based on key limiting criteria (ie max connected load, space available, cost effectiveness, etc...)**

The design and construction of this system will provide a fully functioning solar generating system that will produce up to 100 kilowatts of electricity and be able to participate in the NSP Net Metering Program

The project will comply with all relevant safety standards and regulations.

Scope of Work:

The Proponent shall:

- A. Prepare a Feasibility Study Report comprised of assessment of solar panel system design options mentioned above and recommendation on which design option is the best, both technically and financially.

Feasibility Report Submission

The Final Feasibility Report shall cover but not limited to the following:

- 1) Assessment of all solar energy project options considered.
- 2) Feasibility analysis shall be conducted to determine the financial feasibility of connecting the solar energy project to the Nova Scotia Power Inc. network.
- 3) Electrical generation capacity for the selected SEP option.

- 4) Any required electrical upgrades to the Municipal Building to supply power to the building or NSP.
 - 5) Listing of all required site improvements, adaptations or alterations of existing electrical systems, transmission and distribution systems and other related work for each option.
 - 6) Analysis of potential financing mechanisms, available provincial and federal rebate/incentive programs for solar energy projects. Analysis shall consider potential changes to the rebate/incentive structures (to the extent this can be predicted) that may occur during the useful life of the SEP.
- B. Present a preliminary design of each design option including tendered all-inclusive price for same.
 - C. Prepare a complete and detailed design of the approved solar energy system (SEP) to be constructed at the Municipal Building. This design will be subject to technical reviews by the Municipality and/or their agents prior to procurement of materials and construction.
 - D. Prior to construction of SEP submit final shop drawings, design details and construction schedule for review and approval by the Municipality. This will include proposed means to affix the SEP to the existing asphalt shingle roof ensuring the roof will not be negatively impacted by the installation. The existing roof structure has been designed and constructed for the eventuality of a SEP and the Proponent is not required to further analyze the structure. In the event there is any question in this regard, the Municipality will be responsible for engaging the original structural engineer to provide confirmation of the proposed SEP relative to the structure's ability to support same. However, all proposed roof penetrations will be detailed and are subject to Municipality approval.
 - E. Complete construction of SEP, commission system and provide all necessary documentation including, but not limited to As-built drawings, Record Drawings, Operation and Maintenance Manuals. In addition, provide a comprehensive 1-year warranty of all aspects of the installation and extended warranties as available for specific parts / components / systems / equipment.
 - F. As part of the construction process the proponent shall construct and install all necessary hardware needed for the NSP Net Metering Program. The Proponent will also interface with NSP to make all arrangements to have this SEP participate in NSP's Net Metering Program.
 - G. All works as detailed in Appendix C herein.

Proposal Requirements:

Proponents are required to submit proposals containing the following information:

- 1) Overview of the proponent firm – number of employees, number of years in the business, services offered, and other corporate information deemed relevant.
- 2) Comparable projects – proponents are to list a minimum of 3 recently completed projects and provide project details and references for same.
- 3) Confirmation of current level of insurance being carried (note minimum required is \$5M CGL), WCB clearance form and safety certification from NSCA (or equivalent certification).
- 4) Other information the proponent feels differentiates them from their competitors in this industry.
- 5) Preliminary Feasibility Study as detailed in Appendix A
- 6) Cost submission
- 7) Schedule

Submission Instructions:

Proponents are required to submit one (1) digital copy via email at the address noted below, clearly marked “**MDS Request for Proposal – Design, Supply & Installation of Solar PV Array**” to the contact noted below prior to **10:30 am, Thursday October 17th, 2024 (Atlantic Standard Time)**

Proponents shall submit their proposals electronically to Andrew Amos, Project Manager at the address noted below.

Any questions regarding this RFP should also be directed to Andrew Amos andrewamos@eastlink.ca or 902-802-0306.

Important Dates:

RFP Issuance Date: September 20th, 2024

Submission Deadline: 10:30 am, October 17th, 2024

Project Commencement: Immediately upon award (dependent upon approval from Council)

Allow for a 30 day tender validity period

OPENING, EVALUATION AND SELECTION PROCESS

Opening

Since price is not the only criterion on which proposals will be evaluated, there will not be a public opening of proposals.

Evaluation Criteria:

Evaluation Criteria:	% Value
References, experience and qualifications of the vendor.	15
Preliminary Feasibility Report	20
Cost-effectiveness of the proposed solution.	50
Proposed timeline for installation and completion.	15
	Total = 100

Rejection of Proposal Submissions

A proposal submitted in response to this Request for Proposals may be rejected and the proposal not considered if the proposal:

- a) Does not contain any addendum(s) that have been issued by the Municipality.
- b) Is the second proposal submitted by the same proponent, in which case all proposals submitted by the submitter shall be rejected;
- c) Omits any information required by, or fails to comply with, any provisions of the Request for Proposals document.

Note: The Municipality reserves the right to reject any or all proposals and to negotiate separately with any source whatsoever in any manner necessary to serve the best interests of the organization.

RFP TERMS AND CONDITIONS

Agreement

By submitting a proposal in response to this RFP, the Proponent agrees to abide by the terms and conditions outlined in this RFP. All proposals shall remain irrevocable unless withdrawn in writing prior to the designated closing time. The ultimate form of contract will be the latest version of the CCDC Design Build contract.

Privilege

The Municipality reserves the right to:

- a) Modify the terms of this RFP at any time at its sole discretion.
- b) Suspend or cancel the RFP at any time for any reason without penalty.
- c) Reject any or all proposals, not necessarily accept the lowest proposal, or to accept any which it may consider being in the best interest of the Municipality.
- d) The Municipality also reserves the right to waive formality, informality or technicality in any proposal.
- e) In the event that a number of submissions are substantially the same amount or score, the Municipality may, at its discretion, call upon those Bidders to submit further bids or to make a presentation to the Municipality.
- f) Award a contract on the basis of the initial offers received, without discussions or requests for best or final offers.
- g) Disqualify bidder(s) if there is an existing or recent business or personal relationship which can be perceived as causing a conflict of interest. Proposals shall contain a declaration of conflict of interest.
- h) Reject any bidder if after an investigation of the evidence submitted by the bidder fails to satisfy the Municipality that the Proponent is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein.
- i) No term or condition shall be implied, based upon any industry or trade practice or custom, any practice or policy of the Municipality or otherwise, which are inconsistent with the provisions contained herein.

Confidentiality

- a) This RFP document (including all attachments and appendices) may not be used for any purpose other than the submission of an offer. Proponents shall not use information obtained through the RFP process without written permission of the Municipality.
- b) The successful Proponent will be permitted access to files and reports that relate to this RFP. Information pertaining to the Municipality obtained by the successful Proponent as a result of this project is confidential and must not be disclosed without written permission of Municipality.
- c) By submitting an Offer, the Proponent agrees to public disclosure of its contents subject to the provisions of the Municipal Government Act relating to Freedom of Information and Protection of Privacy. Anything submitted in the proposal that the proponent considers to be personal information or confidential information of a proprietary nature should be marked confidential and will be subject to appropriate consideration of the Municipal Government Act as noted above.
- d) The work described in this RFP is being conducted with public funds, and the total costs proposed in the Bidder's submission will be made public.

Law

- a) The law applicable to this RFP and any subsequent agreements shall be the law in force in the Province of Nova Scotia.
- b) In responding to this RFP, Proponents warrant their compliance with all appropriate Municipal, Provincial and Federal regulations, laws and orders. Respondents must agree to indemnify the Municipality and its employees if they fail to comply, and the Municipality reserves the right to cancel any agreement arising from this RFP if the proponent fails to comply with the above.
- c) The selected firm shall indemnify the Municipality, its officers and employees against any damage caused to the Municipality as a result of any negligence or unlawful acts of the successful proponent or its employees. Similarly, the successful proponents shall agree to indemnify the Municipality, its officers and employees against any claims or costs initiated by third parties as a result of any negligence or wrongful acts of the successful proponent or its employees.

Terms of Payment

- a) Payment will be as per the CCDC form of contract and shall be based on an invoice submitted by the successful Proponent and payable following the completion of the scope of work and the receipt of all deliverables.

b) The Municipality shall have the right to withhold, from any sum otherwise payable to the Proponent, such amount as may be sufficient to remedy any defect or deficiency in the work, pending correction of the same.

c) Invoices are to be forwarded to:

Marcia d'Eon, Director of Operations & Protective Services
Municipality of the District of Shelburne
414 Woodlawn Drive
P.O. Box 280
Shelburne, NS
BOT 1W0
Email: marcia.deon@municipalityofshelburne.ca

Subcontractors

Proponents are responsible for obtaining Municipality's permission prior to hiring a subcontractor. The Municipality may, for reasonable cause object to the use of a proposed subcontractor and require the Proponent to employ another subcontractor.

All subcontractors employed by the proponent will be subject to the same terms and conditions of the Contract, and will be under the supervision and control of the Proponent. Nothing contained in the Contract shall create a contractual relationship between the Municipality and subcontractor.

Contract

The successful Proponent shall enter into a CCDC Design Build form of contract within 30 days of award. Except as expressly and specifically permitted in these instructions to proponents, no proponent shall have any claim for any compensation of any kind whatsoever, as a result of participating in this RFP and by submitting a proposal, each proponent shall be deemed to have agreed that it has no claim.

Unless otherwise noted in previous sections, the contract can be terminated for convenience by the Municipality at their sole and unfettered discretion.

Notice to Perspective Proponents

a) The information contained in this RFP is supplied solely as a guideline for proponents. While every reasonable attempt has been made to ensure its accuracy, the Municipality does not guarantee or warrant its accuracy, nor is it necessarily comprehensive.

b) By submitting a response to the RFP, the Proponent represents and warrants that such bid is genuine and not false and collusive or made in the interest or in behalf of any person therein named, and that the bidder has not, directly or indirectly, induced or solicited any other bidder

put in a false bid, or any other person, firm or corporation to refrain from bidding, and that the bidder has not in any manner sought by collusion to secure to the bidder an advantage over any other bidder.

- c) If at any time it shall be found that the person, firm or corporation to whom a contract has been awarded has in presenting any bid or bids, colluded with any other party or parties, then the contract so awarded shall be liable to the Municipality for all loss or damage which the Municipality may suffer thereby; and the Municipality may advertise or a new contract and for said labour, supplies, materials, equipment or service. Unauthorized conditions, limitations or provisions attached to a proposal may cause its rejection.
- d) The Proponent, by submitting a bid, shall represent and warrant that he / she has sufficiently informed themselves in all matters affecting the performance of the work or the furnishing of the labour, supplies, materials, equipment, or service called for in the quotation documents; that he/she has checked their bid for errors and omissions; that the amounts stated in his/her bid are correct.
- e) If a written agreement cannot be negotiated within 30 days of notification to the proponent(s) initially selected, the Municipality may, at its discretion, terminate negotiations with the proponent(s) and either negotiate a contract with the next highest qualified proponent or cancel the RFP process and not enter into a contract with anyone regarding the RFP.

Procurement of Additional Services

The Municipality may procure services from additional Proponents / service providers at their sole and unfettered discretion.

Proponent Responsibilities

- a) The offer must be signed by the person(s) authorized to sign on behalf of the company and binds the company to the statements made in the proposal.
- b) The Proponent shall confirm in their submission that the Proponent agrees to abide by the terms and conditions outlined in the RFP. Submissions which do not have this confirmation will not be considered.
- c) Proposed subcontractors and or consultants must be listed with attached resumes. A joint proposal submission must indicate which Proponent has overall responsibility for the offer. If a Proponent wishes to submit alternative options, each option is to be submitted as a separate proposal.
- d) The Proponent is entitled to amend its proposal at any time before the closing time. After the closing time, the consultant will not change the wording or content of its proposal and no words will be added to or deleted from the proposal, including changing the intent or content of the presentation of the proposal, unless requested by the Municipality.

- e) The Proponent shall not transfer responsibility to meet the obligations of the contract to a third party without the written consent of the Municipality.
- f) Proponents are solely responsible for their own expenses in preparing the proposal, presentation of the proposal, and any travel costs incurred in presentation and/or interviews and negotiating a contract.
- g) It is the Proponent's responsibility to ensure that their submission is complete and is delivered to the Municipality by the date and time indicated. Proposals submitted after the above noted time shall be returned unopened.
- h) Except as expressly and specifically permitted in these instructions to proponents, no proponent shall have any claim for any compensation of any kind whatsoever, as a result of participating in this RFP and by submitting a proposal, each proponent shall be deemed to have agreed that it has no claim.

Data

- a) All data materials, and information collected and work products created either directly for, or in support of the work outlined in the RFP is the property of the Municipality.
- b) The successful Proponent is expected to submit digital copies of all work completed to the Chief Administrative Officer or their designate.
- c) The consultant shall not be permitted to publish or in any way use said information without the expression or final approval of the Municipality of the District of Shelburne.

Quotations & Payment

Prices must be in Canadian funds, and shall include all handling, freight, duty, and any other charges, which are applicable at time quotation is awarded. It is the responsibility of the Proponent to find out from the appropriate authorities what rates and charges are applicable to this quotation.

HST

The quoted prices must clearly show the Harmonized Sales Tax as a separate item from the total price submission.

Insurance and WCB

The Proponent acknowledges that he/she is an independent Contractor and shall, indemnify, protect and save harmless The Municipality of Shelburne, its agents and employees from all damages, liabilities and claims of whatsoever nature arising out of the furnishing by the Proponent, its agents or employees of the materials and/or performing of the services covered by this RFP. The Vendor

remains responsible for maintaining the required insurance even if the certificates are never exchanged and/or requested.

It is also expected that bidders shall be in good standing with the Workers' Compensation Board of Nova Scotia at all times when providing the service outlined herein or, if exempt, provide written proof thereof.

[Inquiries / Contact / Addenda](#)

All inquiries about the RFP must be directed to MDS at least five (5) business days prior to the submission date, (through e-mail, which receipt shall be confirmed) to:

Andrew Amos, Project Manager
andrewamos@eastlink.ca

and cc'ed to:

Marcia d'Eon, Director of Operations & Protective Services:
marcia.deon@municipalityofshelburne.ca

Copies of all questions and answers and any addenda will be uploaded to the Provincial Procurement Website no later than three (3) business days prior to the Final Submission date.

Only formal written responses to properly submitted questions will be binding on the Municipality.

All responses by the Municipality (addenda) will form part of the Request for Proposal process.

Vendors may be advised by addenda, via the website at <https://novascotia.ca/tenders/tenders/ns-tenders.aspx>, of required additions, deletions or alterations in the requirements of the Request for Proposal documents. It is the responsibility of the vendor to check the website to ensure all information has been obtained. All such changes shall become an integral part of the Request for Proposal documents and shall be allowed for in arriving at the total submission price.

[Notification](#)

Submissions will be assessed and proponents may be contacted to answer questions or to present their proposal. The unsuccessful respondents will be informed in writing.

[Contract Award](#)

The award of this RFP is conditional upon the successful respondent entering into an agreement to perform the services and other obligations as required by this RFP.

Appendix A

Feasibility Study Report Requirements

Appendix A - Feasibility Study Report Submission

The Initial Feasibility Study Report shall be submitted with the Proposal and shall cover but not limited to the following:

- A. Assessment of the specific option for solar panel system design.
- B. Assessment of the latest solar PV technologies including the different types and materials of solar panels with its lifespans, to design a cost efficient, energy efficient and environmentally friendly solar panel system.
- C. Site visit shall be carried out by the Proponent for assessment of the actual site conditions and other related information.
- D. The study of rooftop and surrounding area required for each design option, impacts of orientation of the building, shape and type of the roof, on-going construction in nearby areas, neighbouring trees and other factors including any geological and environmental challenges, affecting the energy output of each design option.
- E. Electrical analysis shall be conducted to determine the feasibility of connecting the solar panel system to the Nova Scotia Power Inc. grid network.
- F. Minimum and maximum solar electricity generation capacity from each design option.
- G. Assessment of the advantages and disadvantages of each option, any issues or areas of concern associated with each option, Risk and Opportunity Assessment, and recommendation of the preferred option.
- H. Analysis of potential financing mechanisms, available provincial and federal rebate/incentive programs for solar panel installation. Analysis shall consider potential changes to the rebate/incentive structures (to the extent this can be predicted) that may occur within the following one year.

-- END --

Appendix B

**Select IFC drawings from original
building construction**



SHELBURNE MUNICIPAL BUILDING

MUNICIPALITY OF THE DISTRICT OF SHELBURNE
SHELBURNE, NOVA SCOTIA

REVISION: **2021-09-16** ISSUE FOR CONSTRUCTION

SHEET LIST

CIVIL SHEET LIST

- C-SP1 SITE PLAN
- C-PP1 WATER SERVICE PLAN & PROFILE
- C-PP2 SANITARY SERVICE PLAN & PROFILE
- C-G1 GRADING PLAN
- C-D1 CONSTRUCTION NOTES & DETAILS

LANDSCAPE SHEET LIST

- L-101 LANDSCAPE PLAN

STRUCTURAL SHEET LIST

- F1 FOUNDATION PLAN
- F2 SECTIONS
- F3 SECTIONS & DETAILS
- S1 ROOF FRAMING PLAN, MEZZANINE FLOOR FRAMING PLAN
- S2 ELEVATIONS
- S2A SECTIONS
- S3 SECTIONS AND DETAILS
- S4 SECTION

ARCHITECTURAL SHEET LIST

- A-001 LEGENDS
- A-100 SITE LAYOUT & FIRE PLAN
- A-101 FLOOR PLANS
- A-102 ROOF PLAN
- A-111 REFLECTED CEILING PLAN
- A-121 FINISHES PLAN
- A-201 BUILDING ELEVATIONS
- A-202 BUILDING ELEVATIONS
- A-301 BUILDING SECTIONS
- A-302 BUILDING SECTIONS
- A-401 WASHROOM ENLARGEMENTS
- A-402 COUNCIL CHAMBER
- A-403 STAIR ENLARGEMENT
- A-404 TIMBER FRAMES
- A-410 MILLWORK
- A-411 MILLWORK
- A-501 DETAILS
- A-502 DETAILS
- A-601 DOOR SCHEDULE
- A-602 GLAZING SCHEDULE

MECHANICAL SHEET LIST

- P-000 PLUMBING LEGEND SHEET
- P-101 PLUMBING MAIN LEVEL OVERALL PLAN
- P-102 PLUMBING PENTHOUSE PLAN
- P-201 SANITARY ENLARGED PLAN - 1
- P-202 SANITARY ENLARGED PLAN - 2
- P-211 DOMESTIC WATER ENLARGED PLAN - 1
- P-212 DOMESTIC WATER ENLARGED PLAN - 2
- P-301 PLUMBING SECTIONS
- P-501 PLUMBING DETAILS 1 OF 2
- P-502 PLUMBING DETAILS 2 OF 2
- P-601 PLUMBING SCHEDULES
- P-602 ES/DC & CFIA PLUMBING SCHEDULES
- M-000 MECHANICAL LEGEND SHEET
- M-101 HVAC MAIN LEVEL OVERALL PLAN
- M-102 MECHANICAL PENTHOUSE PLAN
- M-201 HVAC MAIN LEVEL ENLARGED PLAN - 1
- M-202 HVAC MAIN LEVEL ENLARGED PLAN - 2
- M-203 HVAC MAIN LEVEL ENLARGED PLAN - 3
- M-301 MECHANICAL SECTIONS
- M-302 MECHANICAL SECTIONS
- M-501 MECHANICAL DETAILS 1 OF 3
- M-502 MECHANICAL DETAILS 2 OF 3
- M-503 MECHANICAL DETAILS 3 OF 3
- M-601 MECHANICAL SCHEDULES 1 OF 2
- M-602 MECHANICAL SCHEDULES 2 OF 2
- M-603 FITUP MECHANICAL SCHEDULES 1 OF 2
- M-604 FITUP MECHANICAL SCHEDULES 2 OF 2
- M-801 HVAC ISOMETRIC DETAIL 1
- M-802 HVAC ISOMETRIC DETAIL 2
- M-803 HVAC ISOMETRIC DETAIL 3

ELECTRICAL SHEET LIST

- E-001 SITE PLAN AND DETAILS
- E-002 SITE DETAILS
- E-003 LEGEND AND SCHEDULES
- E-101 LIGHTING PLANS
- E-102 POWER & SYSTEMS PLANS
- E-103 ENLARGED PLANS
- E-104 ELEVATIONS
- E-105 ELEVATIONS
- E-201 RISERS & SCHEMATICS
- E-202 RISERS & SCHEMATICS
- E-203 RISERS & SCHEMATICS
- E-301 PANELS

NO.	DESCRIPTION	DATE
5	ISSUE FOR CONSTRUCTION	2021-09-16
4	ISSUE FOR PRICING	2021-07-30
3	99% REVIEW	2021-06-30
2	66% REVIEW	2021-05-31
1	33% REVIEW	2021-04-30

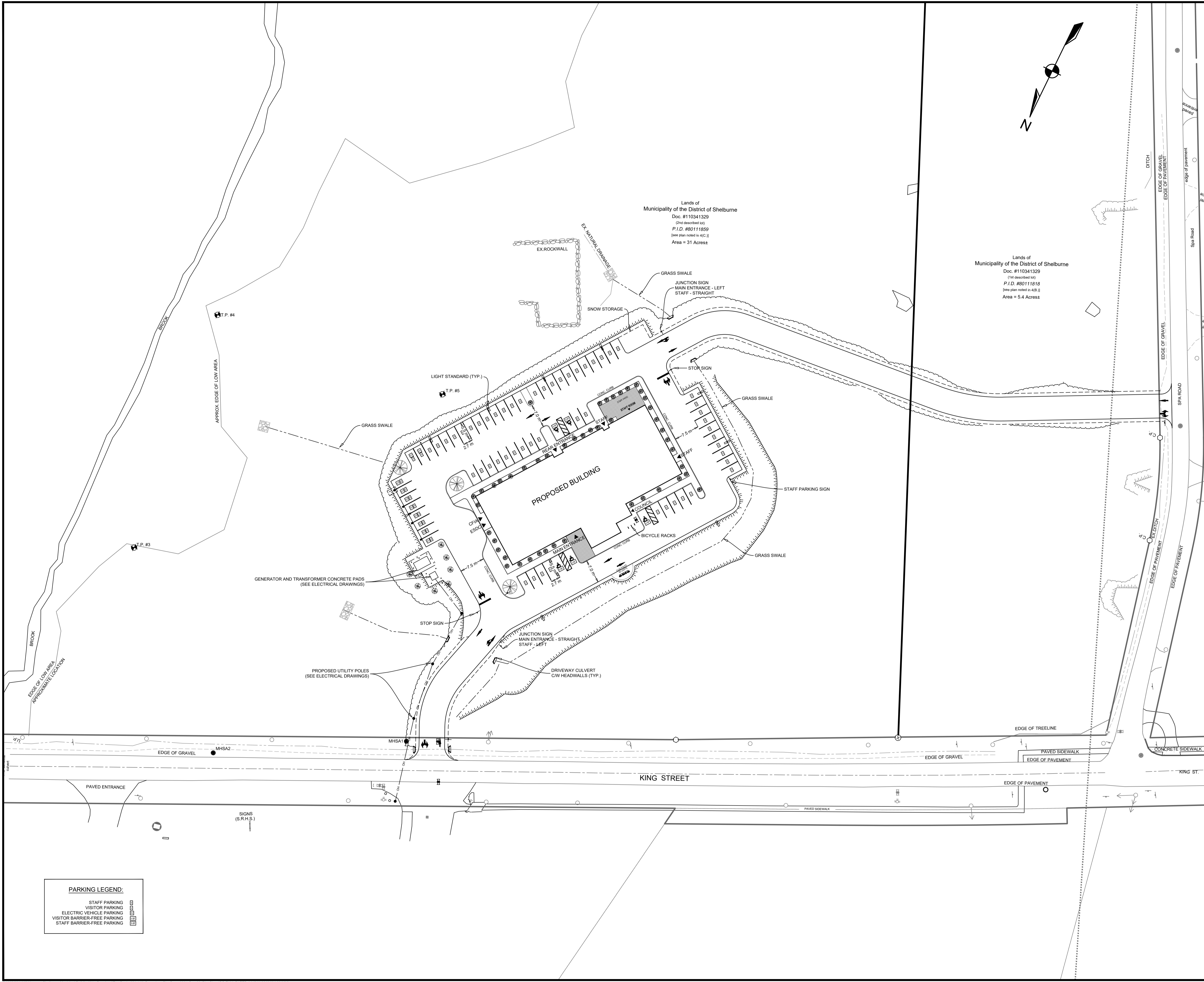
ISSUED FOR CONSTRUCTION

Municipality of the District of Shelburne
SHELBURNE MUNICIPAL BUILDING

SHELBURNE, NOVA SCOTIA

Project Number 21010





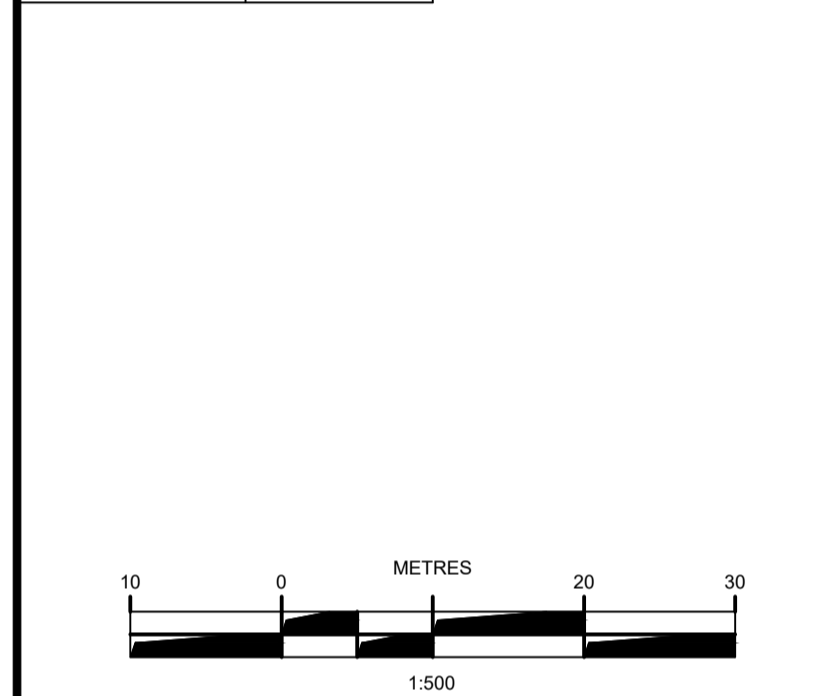
PARKING LEGEND:

	STAFF PARKING
	VISITOR PARKING
	ELECTRIC VEHICLE PARKING
	VISITOR BARRIER-FREE PARKING
	STAFF BARRIER-FREE PARKING

KEYPLAN 1:20 000

LEGEND

EXISTING	PROPOSED



ISSUE	DATE	DESCRIPTION
5	SEP. 16, 2021	ISSUED FOR CONSTRUCTION
4	AUG. 3, 2021	ISSUED FOR PRICING
3	JUN. 31, 2021	ISSUED FOR 99% REVIEW
2	MAY 28, 2021	ISSUED FOR 66% REVIEW
1	APR 30, 2021	ISSUED FOR 33% REVIEW

CONSULTANT

PHONE: 902.832.5597 www.designpoint.ca

CLIENT

PROJECT DESCRIPTION

SHELburne MUNICIPAL BUILDING

SHELburne, NOVA SCOTIA

SHEET DESCRIPTION

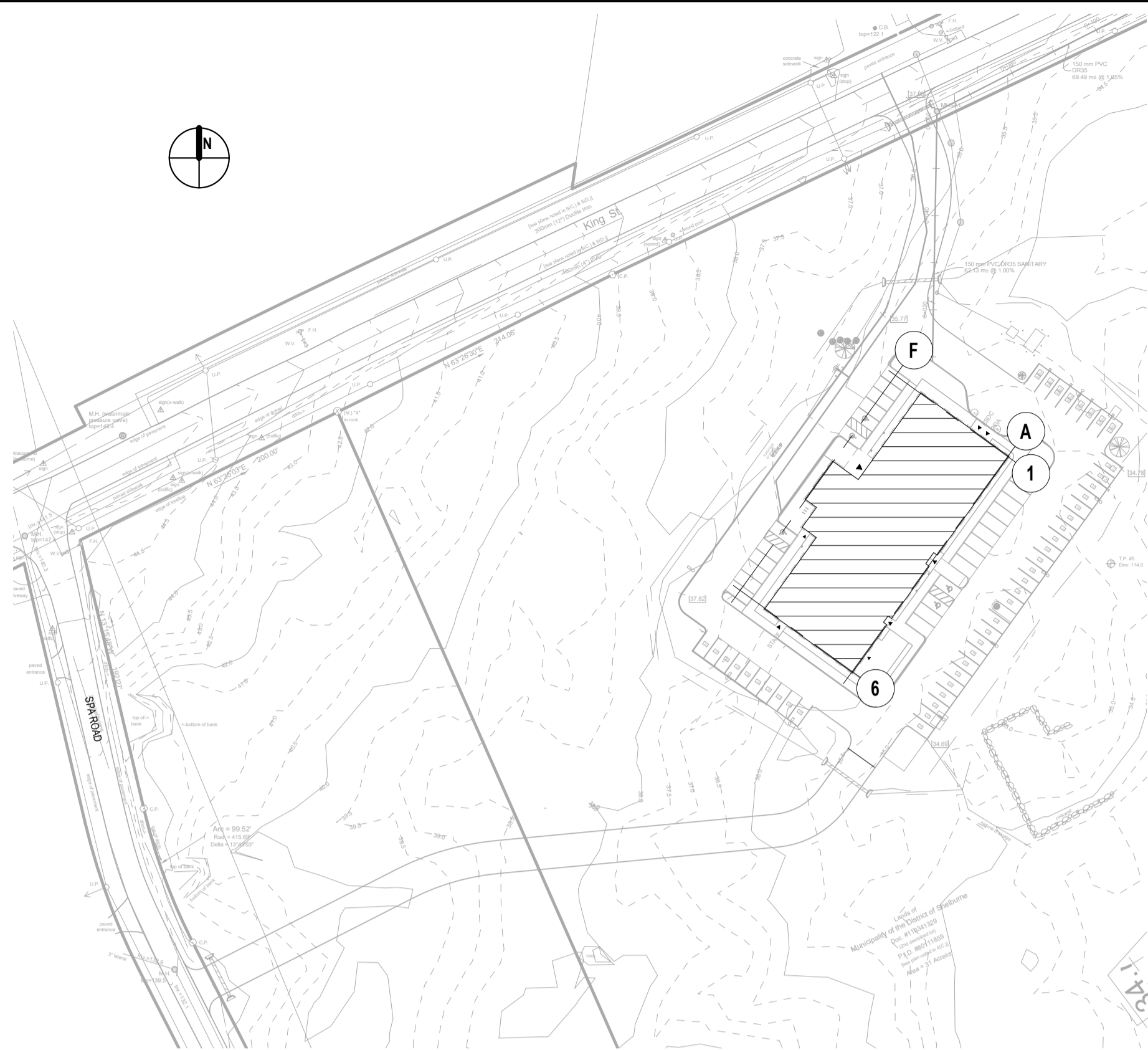
SITE PLAN

Drawn J.KEEPING	Engineer N.FOUGERE	Project No. 21-147	Drawing No. C-SP1
Scale 1:500	Filename 21-147_Base.dwg	1 of 5	

General Notes:
 All levels and dimensions are to be checked on site by the contractor prior to fabrication, and any discrepancies must be reported immediately to the Architect.
 All dimensions are to be read off this drawing and NOT scaled.
 All work to be executed in strict accordance with the by-laws and regulations of the local authorities and in accordance with Building Construction Standards.
 All work to conform to applicable standards as referenced within the master specifications or as indicated in the drawing.
 Where indicated/required, all drawings are to be read in conjunction with all other documents issued.
 This drawing is only to be used for obtaining Local Authority Consents and should not be used for any other purpose unless otherwise stated on drawing.



Gordon Ratcliffe
LANDscape ARCHITECTS
 2055 Route 325, RR #1
 HUBBARDVILLE, NOVA SCOTIA
 CANADA, B0J 1T0
 TEL: (902) 478-3663
 FAX: (902) 857-1106
 grt@eastlink.ca

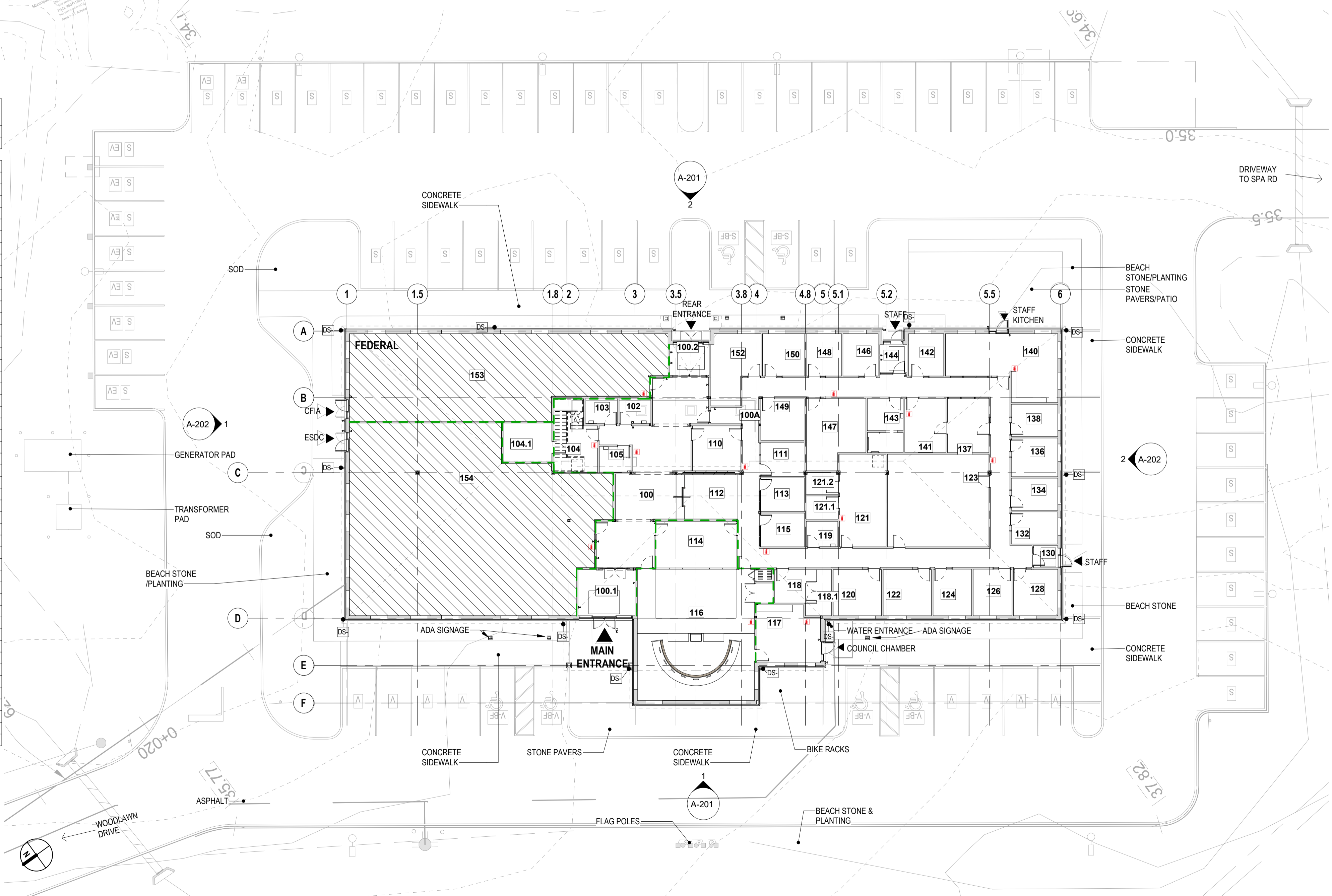


1 SITE PLAN
 1 : 1000

PARKING SCHEDULE		
TYPE	DESCRIPTION	COUNT
S	STAFF	54
S-BF	STAFF BARRIER FREE	2
V	VISITOR	9
V-BF	VISITOR BARRIER FREE	3
TOTAL:		68

ROOM SCHEDULE			
#	NAME	AREA (NET) M2	SF
100	LOBBY	74 m ²	795 SF
100.1	FRONT VEST.	17 m ²	178 SF
100.2	REAR VEST.	8 m ²	83 SF
100A	CORRIDOR	108 m ²	1165 SF
102	WR	5 m ²	52 SF
103	WR	5 m ²	52 SF
104	BUILDING SERVICES	18 m ²	189 SF
104.1	ELECTRICAL	12 m ²	127 SF
105	WR	5 m ²	54 SF
110	MEETING ROOM	14 m ²	146 SF
111	EXECUTIVE STAFF ASSISTANT	9 m ²	100 SF
112	TRANSACTION COUNTER	16 m ²	169 SF
113	TAX CLERK	9 m ²	101 SF
114	MEETING ROOM	23 m ²	251 SF
115	FINANCE CLERK	9 m ²	101 SF
116	COUNCIL CHAMBER	95 m ²	1024 SF
116.3	AV	2 m ²	23 SF
117	COUNCIL ANTICHAMBER	22 m ²	232 SF
118	STORAGE	9 m ²	94 SF
118.1	WATER	5 m ²	55 SF
119	WR	5 m ²	53 SF
120	WARDEN	14 m ²	149 SF
121	STORAGE	27 m ²	289 SF
121.1	IT	5 m ²	51 SF
121.2	VAULT	4 m ²	46 SF
122	CAO	14 m ²	149 SF
123	FUTURE GROWTH	58 m ²	628 SF
124	EXECUTIVE ASSISTANT	11 m ²	120 SF
126	ECONOMIC DEV DIRECTOR	11 m ²	120 SF
128	DIRECTOR OF FINANCE	13 m ²	138 SF
130	VEST.	3 m ²	36 SF
132	COMMUNITY DEV	9 m ²	100 SF
134	FUTURE GROWTH	9 m ²	100 SF
136	DIRECTOR RECREATION	11 m ²	120 SF
137	RECREATION SUMMER STAFF	14 m ²	150 SF
138	RECREATION COORDINATOR	9 m ²	100 SF
140	STAFF ROOM	37 m ²	401 SF
141	RECREATION STORAGE	14 m ²	149 SF
142	PUBLIC WORKS	9 m ²	100 SF
143	WR/SHOWER	7 m ²	76 SF
144	VEST.	5 m ²	52 SF
146	BYLAW OFFICE	9 m ²	100 SF
147	MAIL, PRINTING, BINDING	24 m ²	254 SF
148	WASTE DIVERSION	9 m ²	100 SF
149	CUSTODIAL	11 m ²	121 SF
150	DIRECTOR CORP SERVICES	11 m ²	120 SF
152	BUILDING INSPECTOR	19 m ²	200 SF
153	FEDERAL CFIA	153 m ²	1652 SF
154	FEDERAL ESDC	267 m ²	2879 SF
201	MECHANICAL PENTHOUSE	99 m ²	1068 SF

- FIRE RATINGS**
- 1 HR MIN. RATING
 - 1.5 HR MIN. RATING
 - 2 HR MIN. RATING
- FIRE EXTINGUISHER (A, B, C)**



2 SITE LAYOUT
 1 : 200

NO.	DESCRIPTION	DATE
5	ISSUE FOR CONSTRUCTION	2021-09-16
4	ISSUE FOR PRICING	2021-07-30
3	99% REVIEW	2021-06-30
2	66% REVIEW	2021-05-31
1	33% REVIEW	2021-04-30



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Municipality of the District of Shelburne
 SHELburne MUNICIPAL BUILDING

SHELburne, NOVA SCOTIA

Project Number	21010
Date	Issue Date
Drawn By	Author
Checked By	Checker

SITE LAYOUT & FIRE PLAN

A-100

Scale As indicated

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NO.	DESCRIPTION	DATE
5	ISSUE FOR CONSTRUCTION	2021-09-16
4	ISSUE FOR PRICING	2021-07-30
3	99% REVIEW	2021-06-30
2	66% REVIEW	2021-05-31
1	33% REVIEW	2021-04-30



Municipality of the District of Shelburne
 SHELburne MUNICIPAL BUILDING

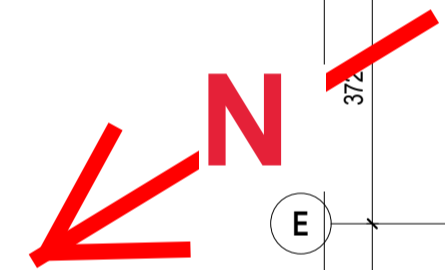
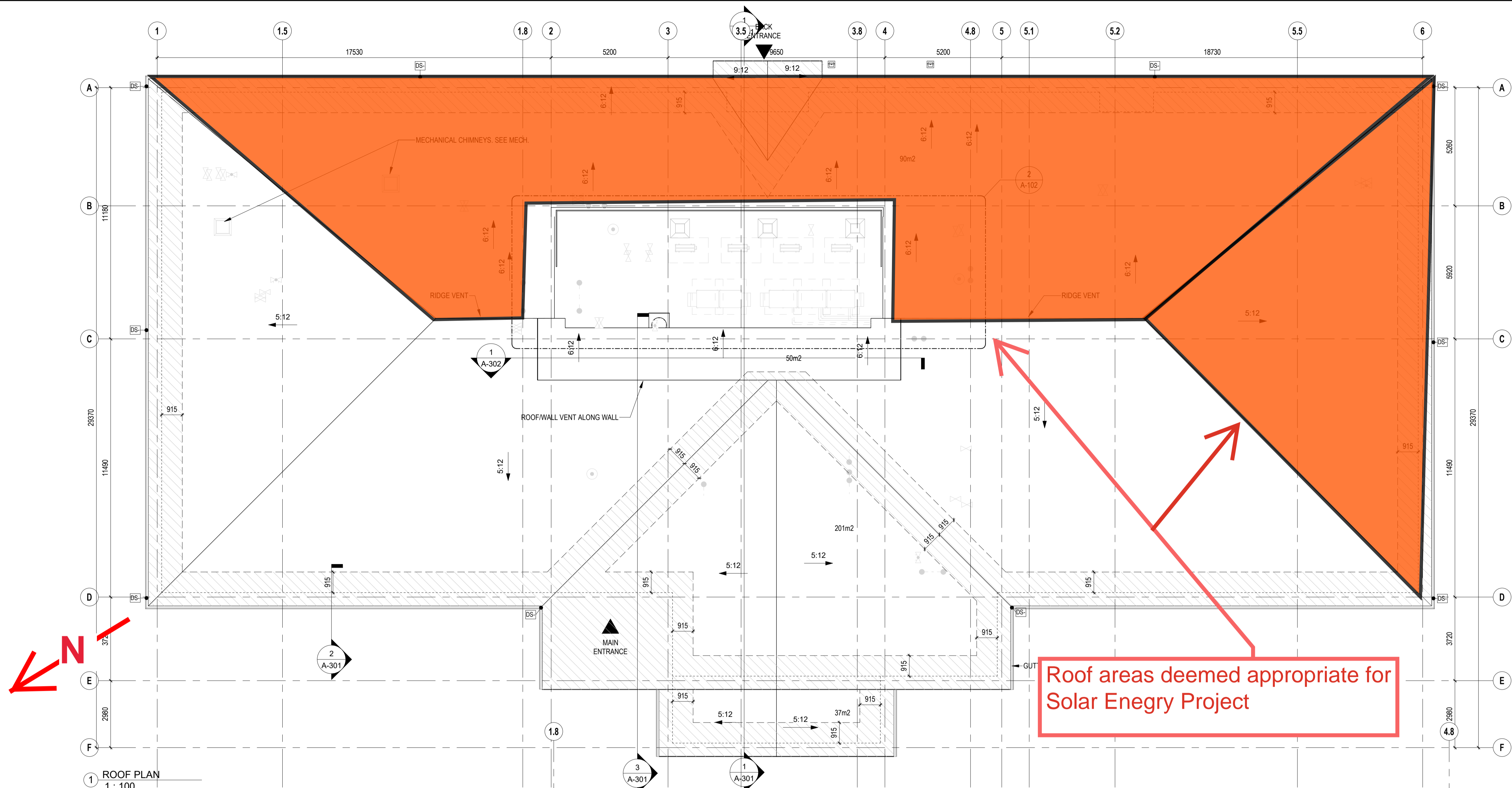
SHELburne, NOVA SCOTIA

Project Number	21010
Date	Issue Date
Drawn By	Author
Checked By	Checker

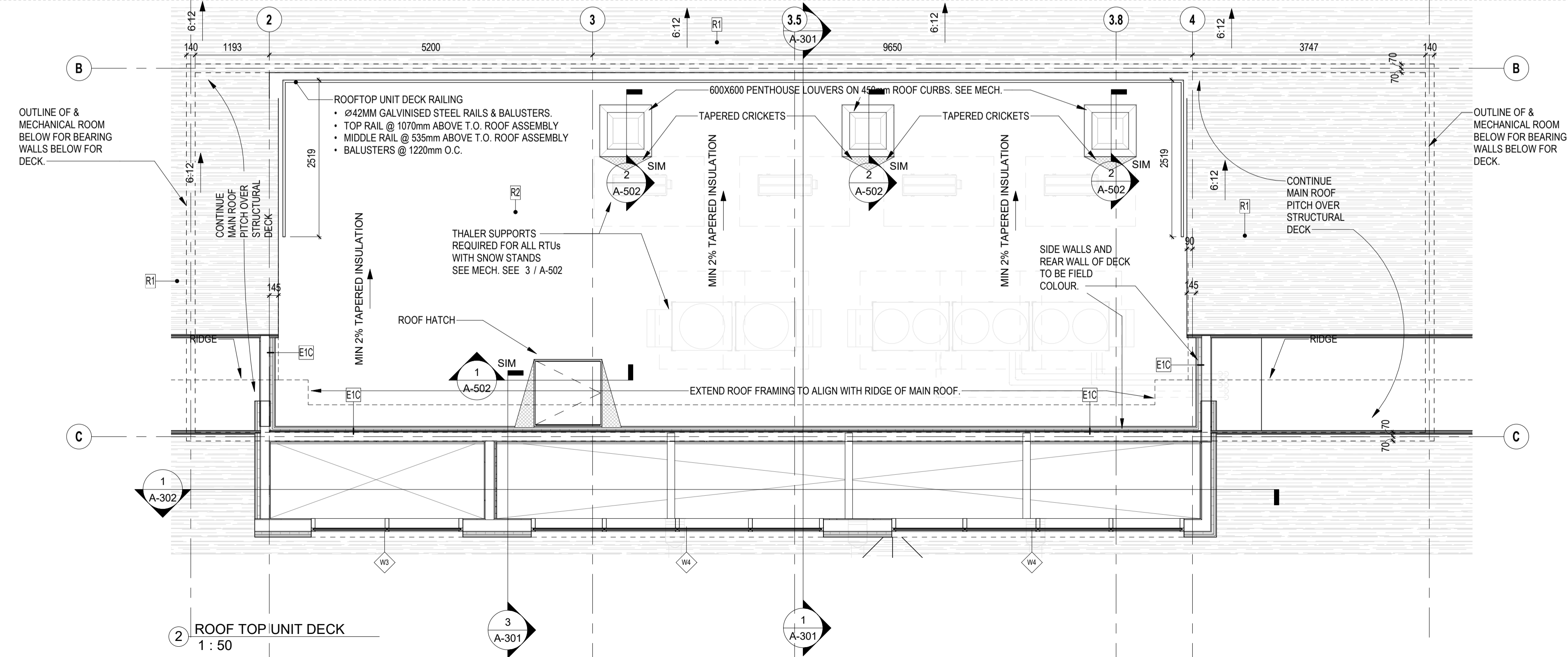
ROOF PLAN

A-102

Scale As indicated



Roof areas deemed appropriate for Solar Energy Project



2 ROOF TOP UNIT DECK
 1: 50

1 ROOF PLAN
 1: 100

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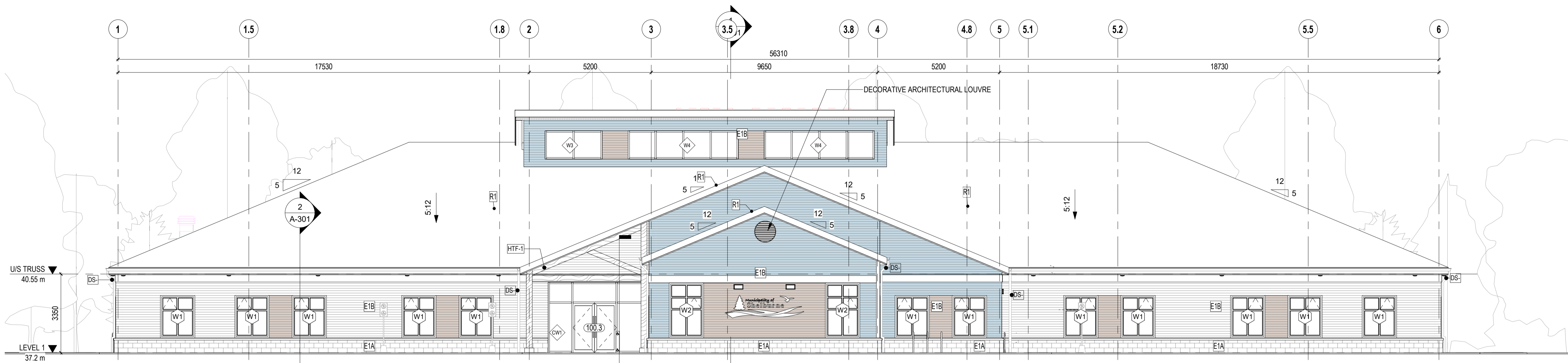
NO.	DESCRIPTION	DATE
5	ISSUE FOR CONSTRUCTION	2021-09-16
4	ISSUE FOR PRICING	2021-07-30
3	99% REVIEW	2021-06-30
2	66% REVIEW	2021-05-31
1	33% REVIEW	2021-04-30

NO.	DESCRIPTION	DATE
REVISIONS		

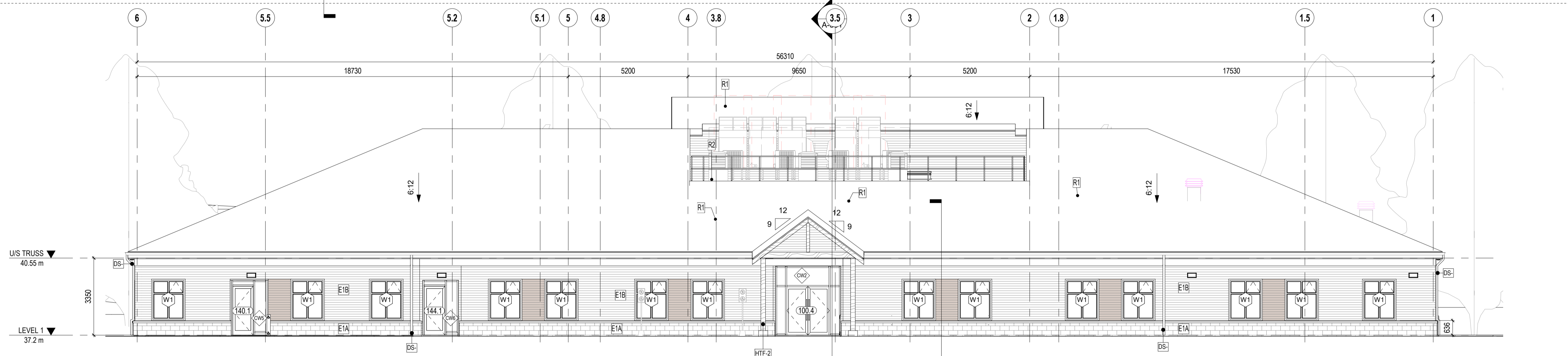


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Municipality of the District of Shelburne SHELburne MUNICIPAL BUILDING	
SHELburne, NOVA SCOTIA	
Project Number	21010
Date	Issue Date
Drawn By	Author
Checked By	Checker
BUILDING ELEVATIONS	
A-201	
Scale	1 : 100



1 NORTH
1 : 100



2 SOUTH
1 : 100

WOOD SIDING LEGEND

	WS-01 - FIELD
	WS-02 - ACCENT 1
	WS-03 - ACCENT 2 (BETWEEN PAIRED WINDOWS)

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NO.	DESCRIPTION	DATE
5	ISSUE FOR CONSTRUCTION	2021-09-16
4	ISSUE FOR PRICING	2021-07-30
3	99% REVIEW	2021-06-30
2	66% REVIEW	2021-05-31
1	33% REVIEW	2021-04-30



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Municipality of the District of Shelburne
SHELburne MUNICIPAL BUILDING

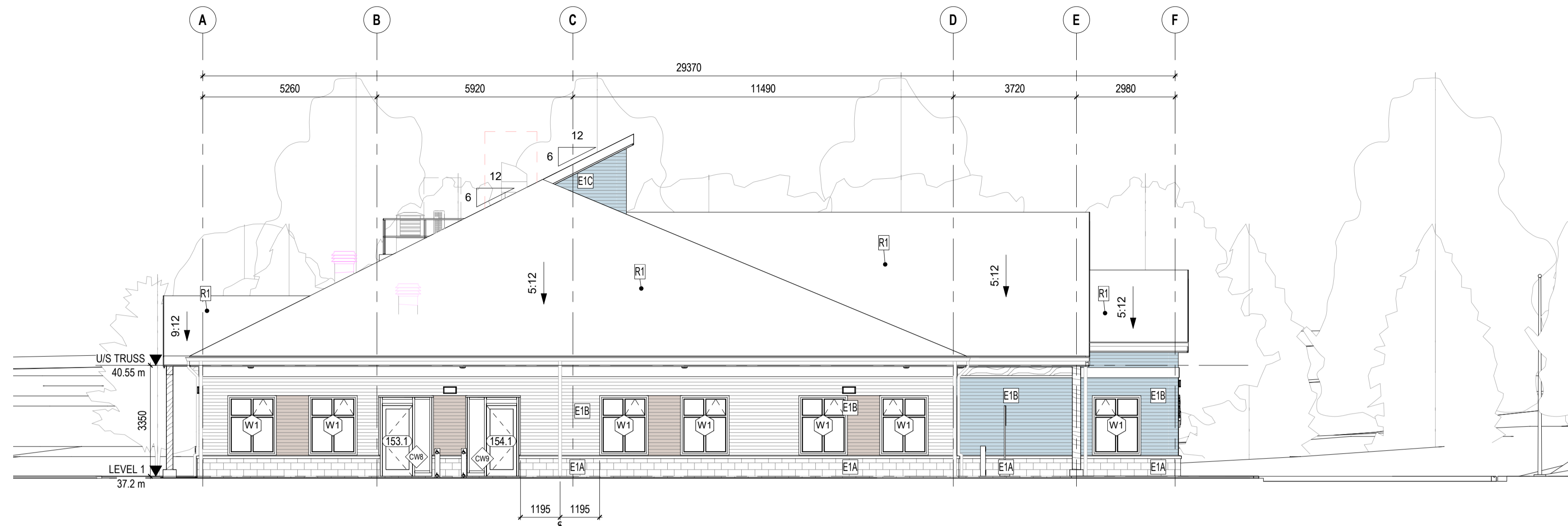
SHELburne, NOVA SCOTIA

Project Number	21010
Date	Issue Date
Drawn By	Author
Checked By	Checker

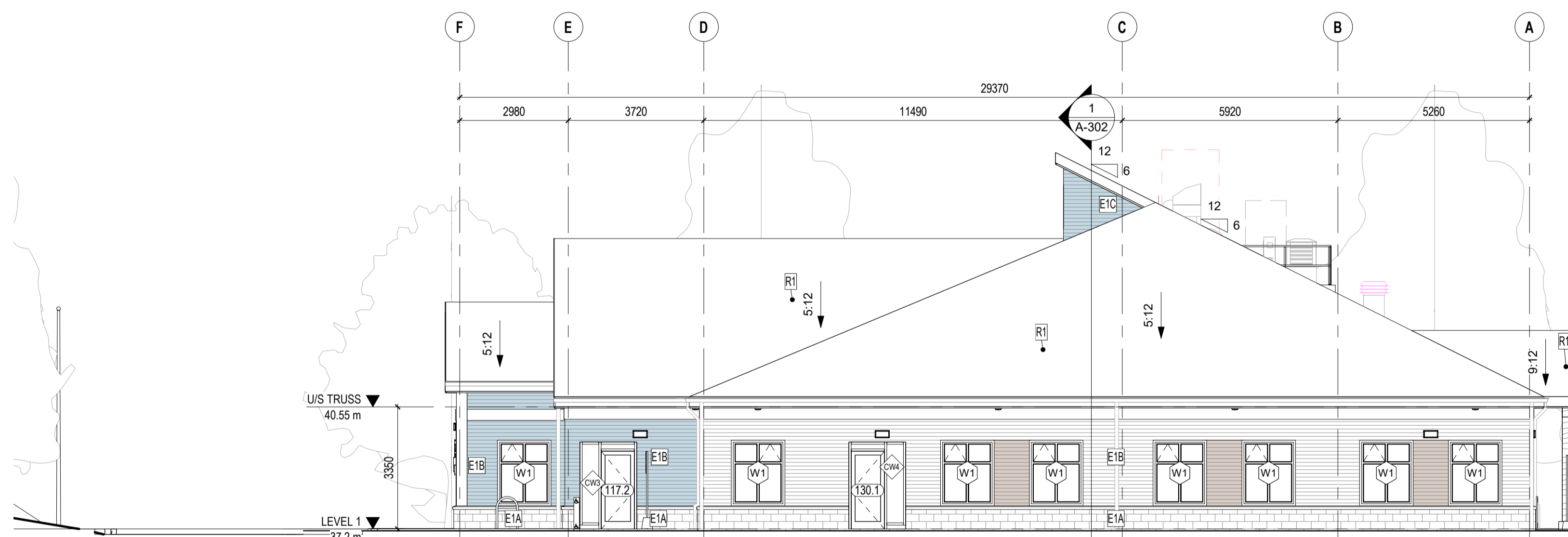
BUILDING ELEVATIONS

A-202

Scale As indicated



1 WEST
1 : 100



2 EAST
1 : 100

WOOD SIDING LEGEND

- WS-01 - FIELD
- WS-02 - ACCENT 1
- WS-03 - ACCENT 2 (BETWEEN PAIRED WINDOWS)

ROOF ASSEMBLIES LEGEND

- R1 TYPICAL WOOD TRUSS**
- mm ASPHALT SHINGLES
 - mm ROOF UNDERLAY C/W ICE & WATER MEMBRANE AT LOCATIONS SHOWN ON ROOF PLAN
 - 16mm T&G PLYWOOD SHEATHING
 - mm PRE-ENG WOOD TRUSS
 - mm LOOSE FILL INSULATION R50
 - 6mil POLY VAPOUR BARRIER
 - 19mm WOOD STRAPPING AS PER MANUFACTURER'S REQUIREMENTS
 - 12.7mm TYPE-X GWB TAPED & FILLED
 - TYPICAL DROPPED CEILING BELOW. SEE RCPS.
- NOM. R-VAL [R50] REF. []
- R2 2 PLY MODIFIED BITUMEN ROOF**
- mm 2 PLY MODIFIED BITUMEN ROOF
 - 13 mm ROOFBOARD C/W INTEGRAL BASE SHEET
 - 165mm AVERAGE THICKNESS POLYISO. R-VALUE TO BE MINIMUM R39. (TAPERED CRICKETS AS NOTED ON PLAN)
 - 16mm T&G PLYWOOD SHEATHING. SEE STR.
 - 400mm TJI. SEE STR.
 - 19mm WOOD STRAPPING AS PER MANUFACTURER'S REQUIREMENTS
 - 12.7mm TYPE-X GWB TAPED & FILLED
- ROOF MEMBRANE ULC S107 COMPLIANCE
- NOM. R-VAL [R39] REF. [] ULC S107

EXTERIOR WALL LEGEND

E1 E1A@ 610mm AFF + E1B

E1A

STONE CLADDING, 184mm WOOD STUD

- 90mm STONE VENEER
- 25mm AIR GAP
- 38mm SEMI-RIGID CAVITY INSULATION R7
- X VAPOUR PERMEABLE AIR BARRIER
- 12.7mm EXTERNAL GRADE SHEATHING BOARD
- 184mm WOOD STUD WALL (SEE STR.) C/W R28 BATT INSULATION
- X VAPOUR BARRIER
- 15.9mm GWB - TAPED, FILLED, SANDED & PRIMED

NOTES - REFER TO ELEVATIONS FOR SPECIFIC COLOUR LOCATIONS

FRR [] NOM. R-VAL [R35]

E1B

WOOD SIDING, 184mm WOOD STUD

- 12-19mm SIDING
- 19mm STRAPPING AS PER SIDING MANUFACTURER'S REQUIREMENTS
- 38mm SEMI-RIGID CAVITY INSULATION R7 WITH Z-GIRTS FOR STRAPPING
- X VAPOUR PERMEABLE AIR BARRIER
- 12.7mm EXTERNAL GRADE SHEATHING BOARD
- 184mm WOOD STUD WALL (SEE STR.) C/W R28 BATT INSULATION
- X VAPOUR BARRIER
- 15.9mm GWB - TAPED, FILLED, SANDED & PRIMED

NOTES - REFER TO ELEVATIONS FOR SPECIFIC COLOUR LOCATIONS

FRR [] NOM. R-VAL [R35]

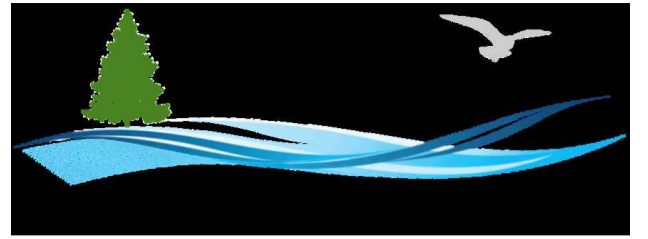
E1C

WOOD SIDING, 140mm WOOD STUD

- 12-19mm SIDING
- 19mm STRAPPING AS PER SIDING MANUFACTURER'S REQUIREMENTS
- 38mm SEMI-RIGID CAVITY INSULATION R7 WITH Z-GIRTS FOR STRAPPING
- X VAPOUR PERMEABLE AIR BARRIER
- 12.7mm EXTERNAL GRADE SHEATHING BOARD
- 140mm WOOD STUD WALL (SEE STR.) C/W R24 BATT INSULATION
- X VAPOUR BARRIER
- 15.9mm GWB - TAPED, FILLED, SANDED & PRIMED

NOTES - REFER TO ELEVATIONS FOR SPECIFIC COLOUR LOCATIONS

FRR [] NOM. R-VAL [R31]



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NO.	DESCRIPTION	DATE
3	ISSUED FOR CONSTRUCTION	2021-09-16
2	ISSUED FOR ADDENDUM	2021-08-20
1	ISSUED FOR PRICING	2021-07-30

REVISIONS



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Municipality of the District of Shelburne
 SHELBURNE MUNICIPAL BUILDING

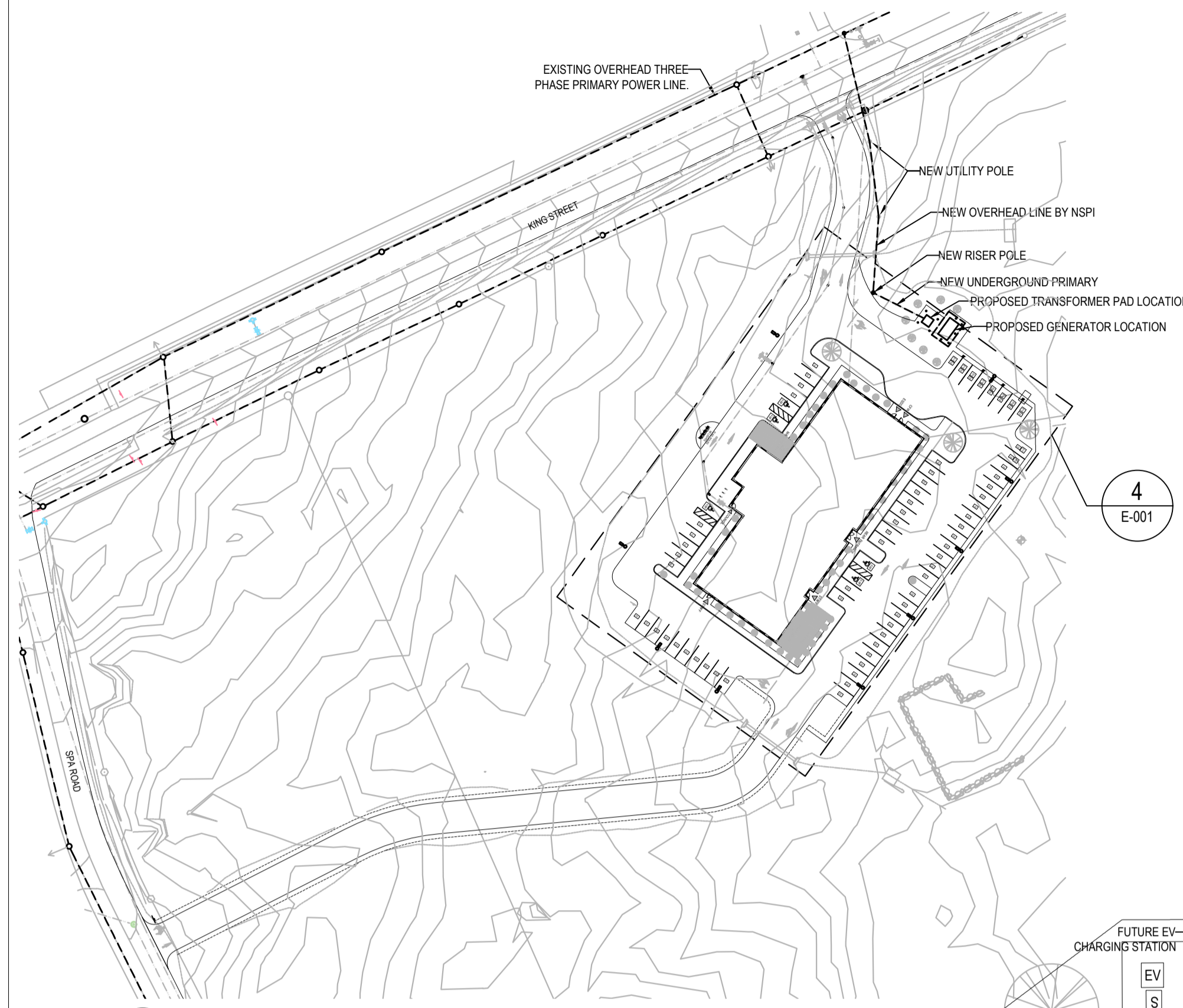
SHELBURNE, NOVA SCOTIA

Project Number	21045
Date	08-17-2021
Drawn By	SCW
Checked By	CM

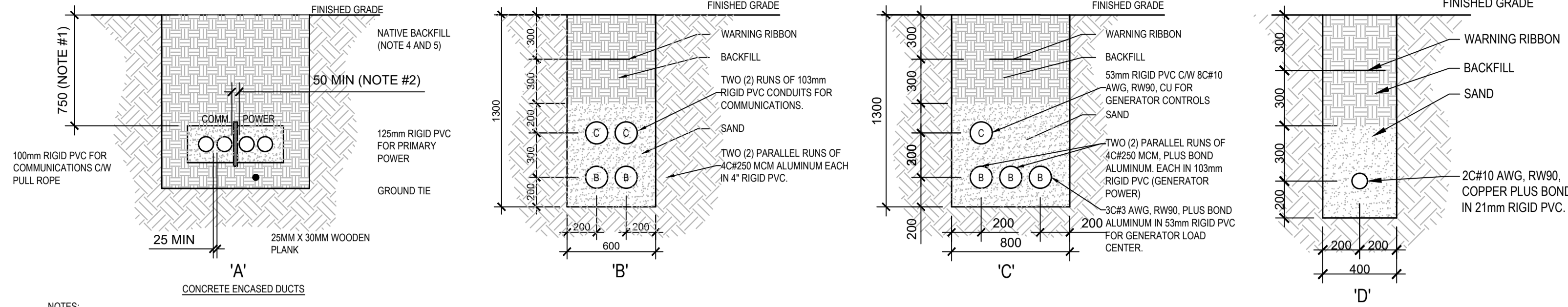
SITE PLAN AND
 DETAILS

E-001

Scale As Noted

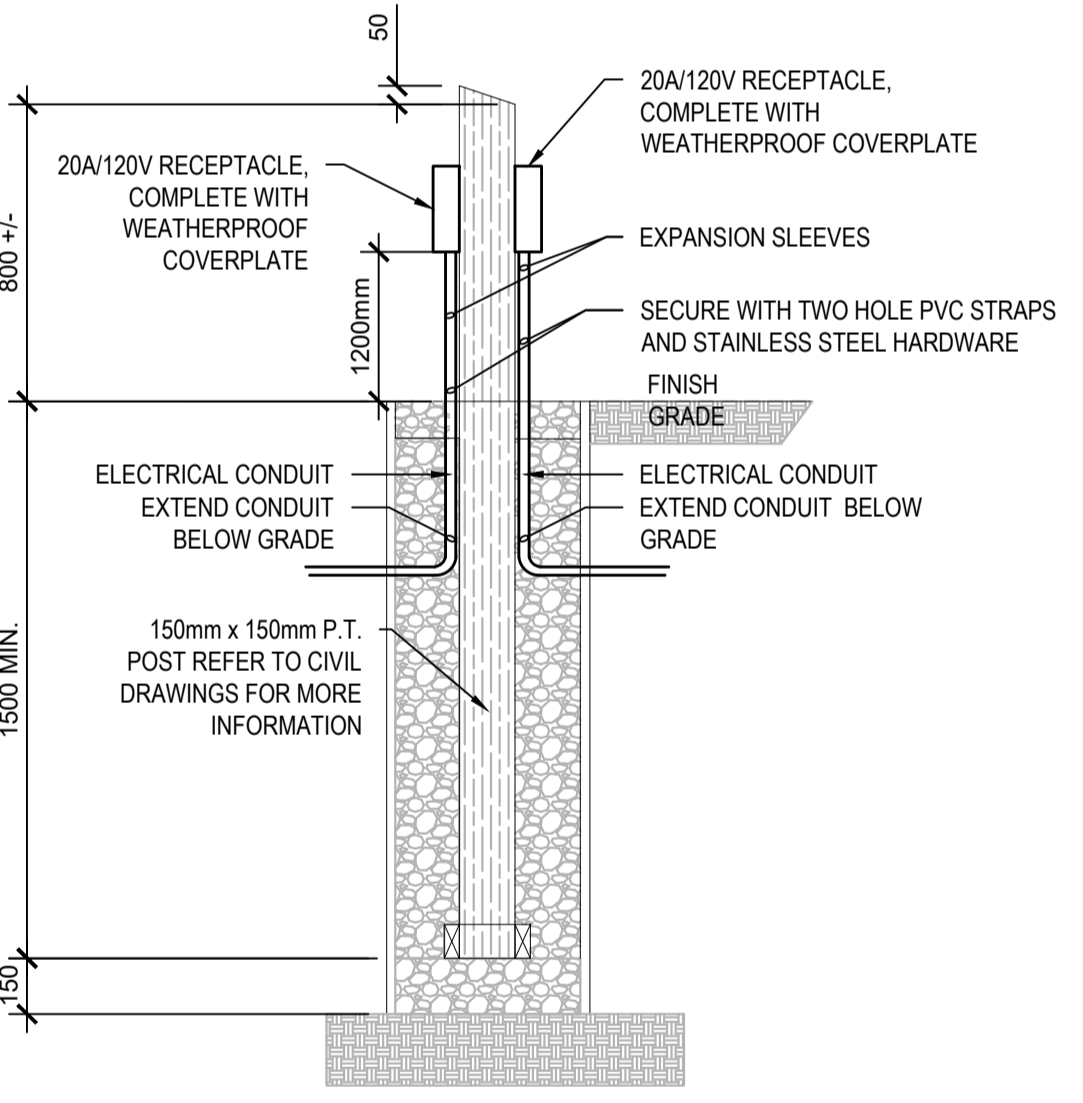


1 SITE PLAN
 E-001 SCALE: 1:1000

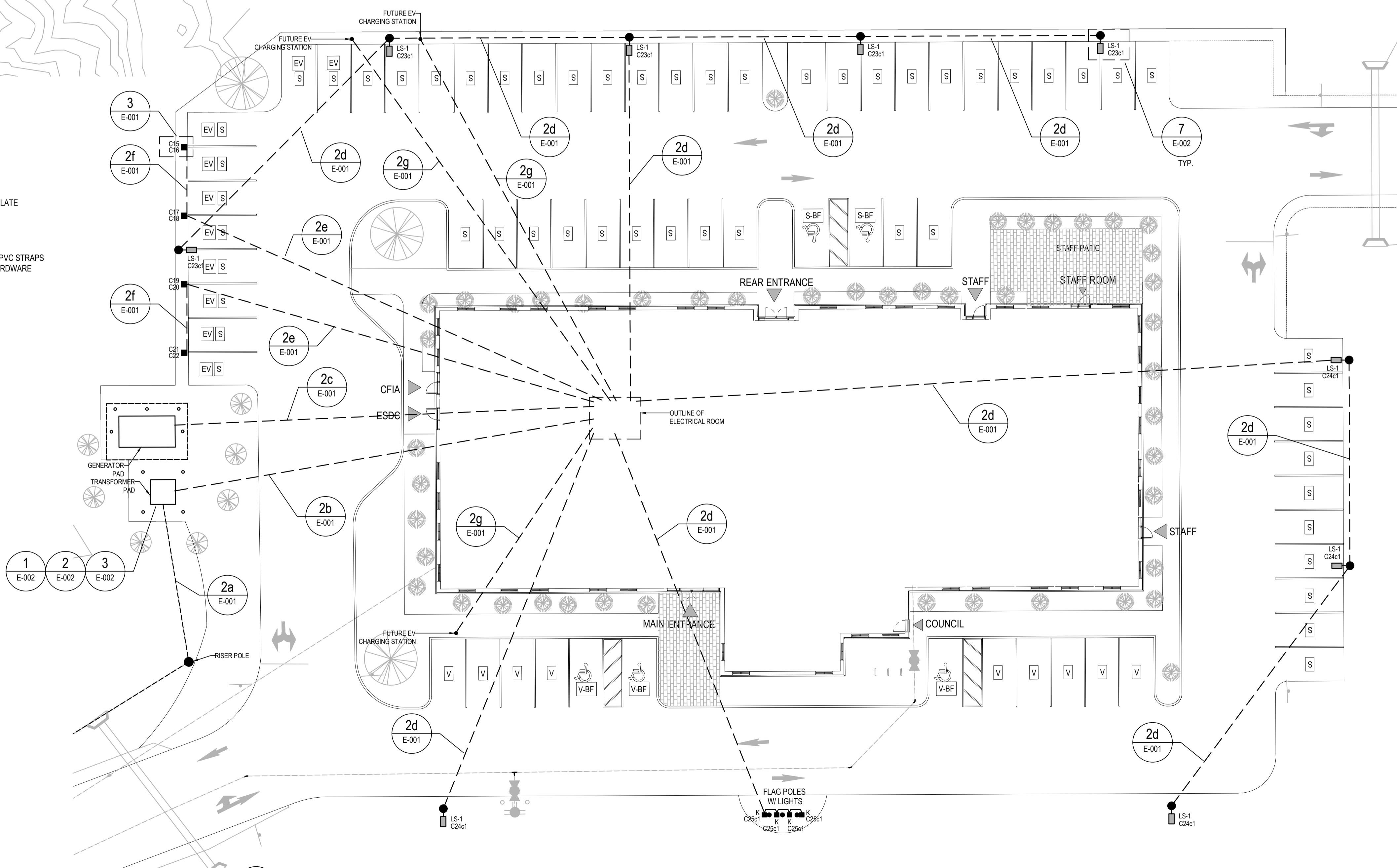


- NOTES:
- DEPTH SHALL BE INCREASED TO 1000mm IN VEHICULAR AREAS. MAY BE REDUCED TO 600mm IF VOLTAGE DOES NOT EXCEED 750 VOLTS PHASE TO PHASE.
 - MUST BE INCREASED TO 300mm IF ONE (1) UTILITY'S DUCTS ARE NOT CONCRETE ENCASED.
 - NATIVE BACKFILL MATERIAL SHALL NOT CONTAIN ROCKS OVER 50mm IN DIAMETER FOR THE FIRST 300mm OVER DUCTS OR CABLES. CLASS 'A' GRAVEL IS ACCEPTABLE.
 - BACKFILL COMPACTED EVERY 300mm MINIMUM.
 - IF POWER CABLES OPERATING AT DIFFERENT VOLTAGES ARE INSTALLED IN THE SAME TRENCH, THE LOWEST VOLTAGE CABLES SHALL BE INSTALLED ADJACENT TO THE COMMUNICATIONS CIRCUIT.
 - ALL CROSSING OF THE COMMUNICATIONS AND NSPI DUCTS SHALL BE AT RIGHT ANGLES WITH A MINIMUM CLEARANCE OF 300mm.
 - NUMBER, SIZE AND TYPE OF CONDUITS/DUCTS TO BE SPECIFIED BY THE USER UTILITY.
 - ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

2 TRENCH DETAILS
 E-001 SCALE: N.T.S.



3 SERVICE POST
 E-001 SCALE: N.T.S.



4 ENLARGED SITE PLAN
 E-001 SCALE: 1:200

POWER LEGEND	
SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE 15A 125V, COMMERCIAL SPECIFICATION GRADE, 18" AFF COMPLETE WITH OFFICE WHITE NYLON FACE AND WHITE COVERPLATE. HUBBELL #BR150W OR EQUAL BY LEVITON.
	DUPLEX RECEPTACLE 15A 125V, COMMERCIAL SPECIFICATION GRADE, 40" AFF COMPLETE WITH OFFICE WHITE NYLON FACE AND WHITE COVERPLATE. HUBBELL #BR150W OR EQUAL BY LEVITON.
	DUPLEX GROUND FAULT INTERRUPTER, CLASS A RECEPTACLE 15A 125V, COMMERCIAL SPECIFICATION GRADE, 18" AFF COMPLETE WITH OFFICE WHITE NYLON FACE AND WHITE COVERPLATE. HUBBELL #GFI150WLA OR EQUAL BY LEVITON.
	DUPLEX RECEPTACLE 20A 125V, COMMERCIAL SPECIFICATIONS GRADE, 42" AFF C/W OFFICE WHITE NYLON FACE AND WHITE COVERPLATE. HUBBELL #BR200W OR EQUAL BY LEVITON.
	ELECTRICAL PANEL AS NOTED, SURFACE MOUNTED
	POWER DOOR OPERATOR, SUPPLIED AND INSTALLED BY OTHERS. WIRED BY ELECTRICAL CONTRACTOR.
	PUSH BUTTON FOR POWER DOOR OPERATORS, SUPPLIED AND INSTALLED BY OTHERS. WIRED BY THIS CONTRACTOR.
	JUNCTION BOX WITH THREE (3) DEDICATED 120 VOLT CIRCUITS IN THE CENTER OF EVERY 48 SQUARE METRES (517 SQUARE FEET) OF USEABLE AREA. BRANCH CIRCUIT CONDUCTORS SHALL BE A MINIMUM OF #12 WITH AN INSULATED #12 GROUND AND OVERSIZE NEUTRAL OF #10.
	FLOOR BOX (AC-DATA-AV)
	DEDICATED CAST IN PLACE FLOOR BOX FOR AUDIO VISUAL, SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR, HUBBELL SYSTEM 1 OR EQUAL.
	CAST IN PLACE RECTANGULAR FLOOR BOX, FOUR GANG, HUBBELL #CFB4G30 OR EQUAL, C/W SATIN NICKEL POWDER COATED COVER.
MISCELLANEOUS LEGEND	
SYMBOL	DESCRIPTION
	GFI GROUND FAULT CIRCUIT INTERRUPTER
	WP WEATHER PROOF
	UF UNFUSED
	AFF ABOVE FINISHED FLOOR
	CW COMPLETE WITH
	WAP WIRELESS ACCESS POINT

COMMUNICATIONS LEGEND	
SYMBOL	DESCRIPTION
	R45 CAT6 MODULAR OUTLET MOUNTED AT 18" AFF UNLESS OTHERWISE NOTED. 1ST - # OF VOICE 2ND - # OF DATA
	WAP WIRELESS ACCESS POINT, ONE (1) CAT6 CABLE
	WALL MOUNTED TELEVISION OUTLET, COMPLETE WITH ONE (1) CAT6 MODULAR OUTLET AND ONE COAXIAL OUTLET. EXTEND BACK TO STRUCTURED MEDIA CABINET

FIRE SYSTEMS LEGEND	
SYMBOL	DESCRIPTION
	FIRE ALARM PULL STATION
	FIRE ALARM PANEL
	SMOKE DETECTOR
	FIRE HORN W/ STROBE LIGHT
	FIRE ALARM REMOTE ANNUNCIATOR

MECHANICAL LEGEND	
SYMBOL	DESCRIPTION
	THREE PHASE MOTOR AS NOTED
	SINGLE PHASE MOTOR AS NOTED
	DIRECT CONNECTION

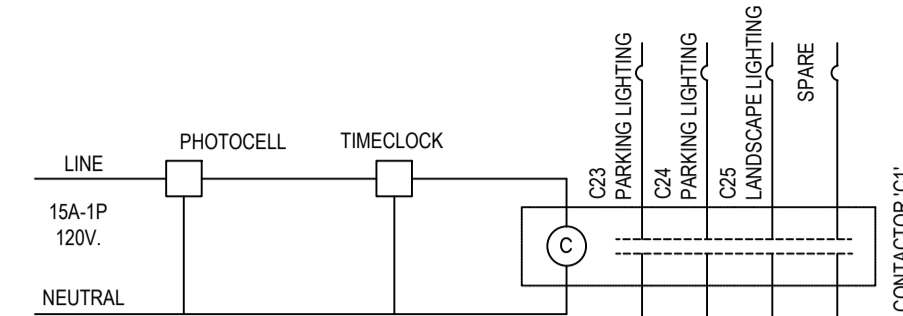
LIFE SAFETY LEGEND	
SYMBOL	DESCRIPTION
	LED RUNNING MAN EXIT LIGHT, CEILING MOUNTED, SELF POWERED, 120V AC, LED LIGHT PANEL AND STEEL HOUSING, WHITE FINISH. AIM LITE RPST SERIES OR EQUAL BY EMERGLITE, LUMACELL, BEGHELLI.
	LED RUNNING MAN EXIT LIGHT, WALL MOUNTED, SELF POWERED, 120V AC, LED LIGHT PANEL AND STEEL HOUSING, WHITE FINISH. AIM LITE RPST SERIES OR EQUAL BY EMERGLITE, LUMACELL, BEGHELLI.

SWITCHING LEGEND	
SYMBOL	DESCRIPTION
	15A, 120V TOGGLE SWITCH, MOUNTED AT 48" AFF UNLESS NOTED OTHERWISE WHITE IN COLOR C/W WHITE COVERPLATE. HUBBELL #CSB150W OR EQUAL BY LEVITON, COPPER.
	15A, 120V THREE WAY TOGGLE SWITCH, MOUNTED AT 48" AFF UNLESS NOTED OTHERWISE WHITE IN COLOR C/W WHITE COVERPLATE. HUBBELL #CSB150W OR EQUAL BY LEVITON, COPPER.
	15A, 120V DIMMER SWITCH, MOUNTED AT 48" AFF UNLESS NOTED OTHERWISE WHITE IN COLOR C/W WHITE COVERPLATE. HUBBELL #CSB150W OR EQUAL BY LEVITON, COPPER.
	DUAL TECHNOLOGY OCCUPANCY SWITCH, 120V, MOUNTED AT 48" AFF, WHITE IN COLOR, C/W WHITE COVER PLATE, AUTO ON/AUTO OFF. LUTRON #MS-B102-WH, OR EQUAL.
	INFRARED VACANCY SENSOR C/W DIMMING CONTROLS, 120V, MOUNTED @ 48" AFF, WHITE IN COLOR C/W WHITE COVER PLATE, MANUAL ON/AUTO OFF. LUTRON #MS-VF153M-WH
	DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR, LUTRON #LOS-CDT-2000-WH OR EQUAL BY WATTSOPPER, LEVITON.

PA/SOUND SYSTEM LEGEND	
SYMBOL	DESCRIPTION
	AUDIO VISUAL SPEAKER SUPPLIED AND INSTALLED BY IVANS, ELECTRICAL CONTRACTOR SHALL EXTEND 3/4" EMT FROM SPEAKERS BACK TO ACCESSIBLE CEILING IN AV ROOM 116.3.
	PENDANT MICROPHONE

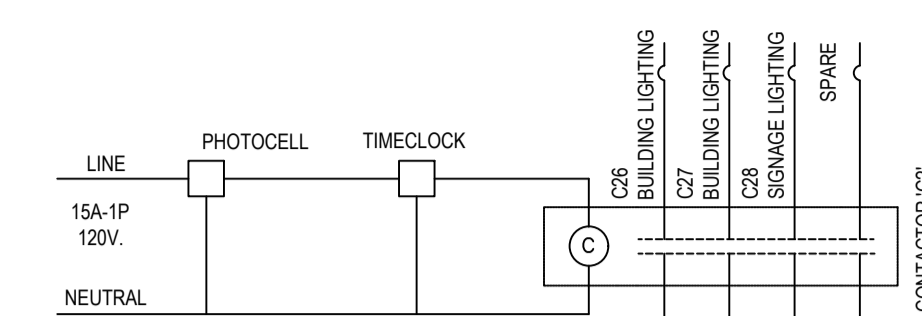
SECURITY LEGEND	
SYMBOL	DESCRIPTION
	AUDIO VISUAL CAMERA SUPPLIED AND INSTALLED BY IVANS, ELECTRICAL CONTRACTOR SHALL EXTEND 3/4" EMT FROM SPEAKERS BACK TO ACCESSIBLE CEILING IN AV ROOM 116.3.
	SECURITY SYSTEM DOOR CONTACT LOCATED AT THE TOP OF DOOR FRAME
	MOTION DETECTOR
	SECURITY PANEL
	SECURITY KEY PAD
	CARD READER

LIGHT FIXTURE SCHEDULE								
TAG	DESCRIPTION	VOLTS	WATTS	LUMENS	CCT	MANUFACTURER	MODEL #	ACCEPTED ALTERNATIVES
A	2x4 LED FLAT PANEL, 0-10V DIMMING	120		4800	3500K	LITHONIA	EPANL-2X4-4800LM-80CRI-35K-MN10	ACCUITY, CREE, EATON, PHILLIPS
B	2x2 LED FLAT PANEL, 0-10V DIMMING	120		4800	3500K	LITHONIA	EPANL-2X2-4800LM-80CRI-35K-MN10	ACCUITY, CREE, EATON, PHILLIPS
C	6" RECESSED WAFFER LIGHT, 0-10V DIMMING, WHITE IN COLOR.	120	14	1100	3500K	LITHONIA	WF6-LED-35K-90CRI-MW	ACCUITY, CREE, EATON, PHILLIPS
D	48" SURFACE LED FIXTURE	120		5000	3500K	LITHONIA	CLX-L48-5000LM-SEF-FDL-WD-1-20-GZ10-35K-80CRI	ACCUITY, CREE, EATON, PHILLIPS
E	FLUSH MOUNTED, CONTINUOUS, LED FIXTURE, 6" WIDE, 96" IN LENGTH, 3500K, FLUSH LENS.	120	10FT	1200FT	3500K	MARK SLOT 6	SL6-QS-L0P-XX-FLP-TG-80CRI-30K-1200LMF-MN1-120-NLGH	ACCUITY, CREE, EATON, PHILLIPS
F	SUSPENDED LED FIXTURE, 0-10V DIMMING, 12" IN LENGTH, WHITE FINISH, 30% UP 70% DOWN	120		1500FT	3500K	LITHONIA	PLN8-QS-LLP-12FT-MSL4-80CRI-35K-101500LMF-3070-SCT-M1-N1-120-WHSQ-Z1-FLP-F118A-WHTCY-WCRD-CSA	ACCUITY, CREE, EATON, PHILLIPS
G	LED TAPE LIGHT, C/W CHANNEL LENS, AND DRIVER RECESSED MOUNT FIXTURE, LENGTH AS SHOWN, MOUNT DRIVER ABOVE ACCESSIBLE CEILING, 3000K.	120			3000K	DIODE	BLAZE-24VOC-200-3000-(TAPE LIGHT) CHROMOPATH, SLIM CHANNEL, RECESSED CLEAR COVER	ACCUITY, CREE, EATON, PHILLIPS
H	EXTERIOR LED POT LIGHT FIXTURE, CRI OF 80	120	38	3000	3000K	LITHONIA	LB4-30LM-35K-WR-TRW-L53-M-WD-MVOLT	ACCUITY, CREE, EATON, PHILLIPS
I	EXTERIOR WALL PACK	120	59	7838	3000K	LITHONIA	WDGE3-LED-P3-30K-80CRI-MV-OLT-SRM	ACCUITY, CREE, EATON, PHILLIPS
J	18" PENDANT LIGHT	120	35	3560	3500K	OCL	N01-P1FA-18-MW-LED3-35K-UN	ACCUITY, CREE, EATON, PHILLIPS
K	LANDSCAPE LIGHTING	120				LITHONIA	DSXF2LED-P3-30K-70CRI-MFL-MVOLT-THK	ACCUITY, CREE, EATON, PHILLIPS
L	EXTERIOR LED, GOOSENECK FIXTURE, WIDE DISTRIBUTION, BLACK IN COLOR, MARINE PAINT GRADE	120	16	2000	3000K	ANP	M016LD-D-W30K-RTC-UNVE6-S-Q	ACCUITY, CREE, EATON, PHILLIPS
LS-1	EXTERIOR LED LIGHT STANDARD, COMPLETE WITH 20" POWDER COATED ALUMINUM POLE AND THREE LED PARKING LOT AREA FIXTURES. TYPE R4 WIDE DISTRIBUTION, FIXTURES TO HAVE AN EPA OF 1.27, POLE EPA RATING OF 6.6 AT 100 MPH.	120	228	17660	3000K	LITHONIA	FIXTURE: RSK2LED-P2-30K-R4-MVOLT-S-PA-DBLX2 POLE: SSA-20-SG-DBLX2	ACCUITY, CREE, EATON, PHILLIPS
M	27" LOBBY FIXTURE	120	28	2850	3000K	LIHGSTART	ACC-SHPE-EMP-27D-STD-BP-8-350K-2800LM-PL-PL-LV01	ACCUITY, CREE, EATON, PHILLIPS
N	LED TAPE LIGHT, C/W CHANNEL LENS, AND DRIVER RECESSED MOUNT FIXTURE, LENGTH AS SHOWN, MOUNT DRIVER ABOVE ACCESSIBLE CEILING, 3000K.	120			3000K	DIODE	BLAZE-24VOC-200-3000-(TAPE LIGHT) CHROMOPATH, SLIM CHANNEL RECESSED CLEAR COVER	ACCUITY, CREE, EATON, PHILLIPS
O	SAME AS G - ONLY ASYMMETRICAL	120			3000K			ACCUITY, CREE, EATON, PHILLIPS



- NOTES:**
- LIGHTING CONTACTOR TO BE MECHANICALLY OPERATED, ELECTRICAL HELD, 4 POLE MINIMUM RATING 30A, 600 VOLT, CUTLER HAMMER CN3S.
 - TIME CLOCK TO BE C/W 24 HOUR SKIP A DAY, CARRYOVER

1 CONTACTOR DETAIL - 'C1'
E-003 SCALE: N.T.S.

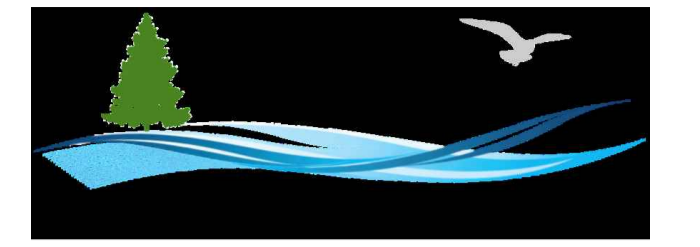


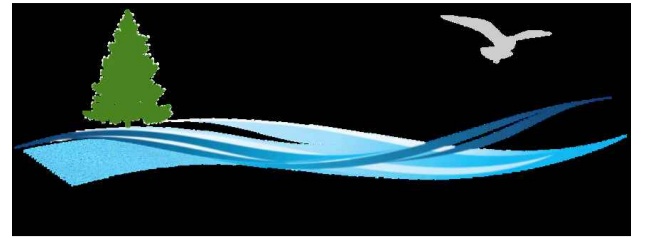
- NOTES:**
- LIGHTING CONTACTOR TO BE MECHANICALLY OPERATED, ELECTRICAL HELD, 4 POLE MINIMUM RATING 30A, 600 VOLT, CUTLER HAMMER CN3S.
 - TIME CLOCK TO BE C/W 24 HOUR SKIP A DAY, CARRYOVER

2 CONTACTOR DETAIL - 'C2'
E-003 SCALE: N.T.S.

MOTOR SCHEDULE											
EQUIPMENT TAG	DESCRIPTION	MOTOR			MOTOR STARTER				CONNECTION	DISCONNECT SWITCH	NOTES
		KW (HP)	VOLTS	PHASE	AMPS	MANUAL TOGGLE SWITCH	MAGNETIC PAIR COMBINATION FNBR				
DWH-1	DOMESTIC WATER HEATER	6	600	3					DIRECT	UF/E	
DWH-2	DOMESTIC WATER HEATER	6	600	3					DIRECT	UF/E	
DWH-3	DOMESTIC WATER HEATER	3	208	1					DIRECT	UF/E	
ERV-1	ENERGY RECOVERY VENTILATOR		230	1	9.9				DIRECT	UF/E	
ERV-2	ENERGY RECOVERY VENTILATOR		230	1	10.8				DIRECT	UF/E	
ERV-3	ENERGY RECOVERY VENTILATOR		208	1	10.8				DIRECT	UF/E	
ERV-4	ENERGY RECOVERY VENTILATOR		208	1	6.0				DIRECT	UF/E	
HP-1	HEAT PUMP		230	1	13				DIRECT	UF/WPIE	
HP-2	HEAT PUMP		230	1	13				DIRECT	UF/WPIE	
HP-3	HEAT PUMP		230	1	13				DIRECT	UF/WPIE	
HP-4	HEAT PUMP		230	1	13				DIRECT	UF/WPIE	
CU-1A	CONDENSING UNIT		600	3	14				DIRECT	UF/WPIE	
CU-1B	CONDENSING UNIT		600	3	14				DIRECT	UF/WPIE	
CU-2	CONDENSING UNIT		600	3	14				DIRECT	UF/WPIE	
CU-3	CONDENSING UNIT		600	3	14				DIRECT	UF/WPIE	
CU-4	CONDENSING UNIT		600	3	16				DIRECT	UF/WPIE	
EV-01	EVAPORATOR		230	1	2.2				DIRECT	UF/E	
EV-02	EVAPORATOR		230	1	1.8				DIRECT	UF/E	
EV-03	EVAPORATOR		230	1	1.2				DIRECT	UF/E	
EV-04	EVAPORATOR		230	1	1.2				DIRECT	UF/E	
EV-05	EVAPORATOR		230	1	1.2				DIRECT	UF/E	
EV-06	EVAPORATOR		230	1	1.0				DIRECT	UF/E	
EV-07	EVAPORATOR		230	1	1.9				DIRECT	UF/E	
EV-08	EVAPORATOR		230	1	1.2				DIRECT	UF/E	
EV-09	EVAPORATOR		230	1	1.0				DIRECT	UF/E	
EV-10	EVAPORATOR		230	1	1.7				DIRECT	UF/E	
EV-11	EVAPORATOR		230	1	1.9				DIRECT	UF/E	
EV-12	EVAPORATOR		230	1	1.7				DIRECT	UF/E	
EV-13	EVAPORATOR		230	1	1.2				DIRECT	UF/E	
EV-14	EVAPORATOR		230	1	1.7				DIRECT	UF/E	
EV-15	EVAPORATOR		230	1	1.2				DIRECT	UF/E	
EV-16	EVAPORATOR		230	1	1.8				DIRECT	UF/E	
EV-17	EVAPORATOR		230	1	3.5				DIRECT	UF/E	
EV-18	EVAPORATOR		230	1	3.5				DIRECT	UF/E	
EF-1	FAN		120	1	3.9				DIRECT	UF/E	
EF-2	FAN		120	1	3.9				DIRECT	UF/E	
TF-1	FAN		120	1	0.46				DIRECT	UF/E	
COB-1	VRF		208	1	0.6				DIRECT	UF/E	
COB-2	VRF		208	1	0.4				DIRECT	UF/E	
DH-1	ELECTRIC DUCT HEATER		4	600	1				DIRECT	UF/E	
DH-2	ELECTRIC DUCT HEATER		3	600	1				DIRECT	UF/E	
DH-3	ELECTRIC DUCT HEATER		4	600	1				DIRECT	UF/E	
DH-4	ELECTRIC DUCT HEATER		2	600	1				DIRECT	UF/E	
DH-5	ELECTRIC DUCT HEATER		600	3					DIRECT	UF/E	
DH-6	ELECTRIC DUCT HEATER		600	3					DIRECT	UF/E	
HUMD-1	ELECTRIC DUCT HEATER		600	3					DIRECT	UF/E	
HUMD-2	ELECTRIC DUCT HEATER		600	1					DIRECT	UF/E	
DEHUMD-1	ELECTRIC DUCT HEATER		120	1					DIRECT	UF/E	
DEHUMD-2	ELECTRIC DUCT HEATER		120	1					DIRECT	UF/E	
EV-C-01	CFIA EVAPORATOR		230	1	2.2				DIRECT	UF/E	
EV-C-02	CFIA EVAPORATOR		230	1	1.2				DIRECT	UF/E	
EV-C-03	CFIA EVAPORATOR		230	1	1.2				DIRECT	UF/E	
EV-C-04	CFIA EVAPORATOR		230	1	2.2				DIRECT	UF/E	
EV-C-05	CFIA EVAPORATOR		230	1	1.0				DIRECT	UF/E	
EV-C-06	CFIA EVAPORATOR		230	1	1.0				DIRECT	UF/E	
EV-E-01	ESDC EVAPORATOR		230	1	2.2				DIRECT	UF/E	
EV-E-02	ESDC EVAPORATOR		230	1	1.8				DIRECT	UF/E	
EV-E-03	ESDC EVAPORATOR		230	1	1.7				DIRECT	UF/E	
EV-E-04	ESDC EVAPORATOR		230	1	2.4				DIRECT	UF/E	
EV-E-05	ESDC EVAPORATOR		230	1	1.0				DIRECT	UF/E	
EV-E-06	ESDC EVAPORATOR		230	1	2.4				DIRECT	UF/E	
EV-E-07	ESDC EVAPORATOR		230	1	1.7				DIRECT	UF/E	

NOTE: E = SUPPLIED AND INSTALLED BY ELECTRICAL VFD = VARIABLE FREQUENCY DRIVE UF = UNFUSED WP = WEATHERPROOF PROVIDE THERMAL OVERLOADS ON ALL MOTORS



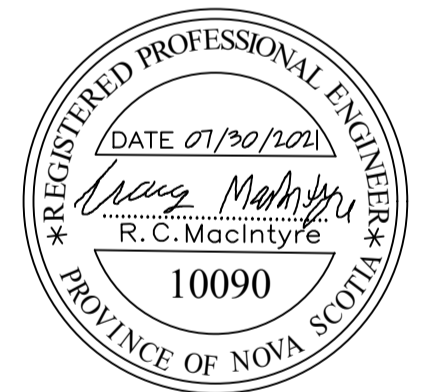


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NO.	DESCRIPTION	DATE
3	ISSUED FOR CONSTRUCTION	2021-09-16
2	ISSUED FOR ADDENDUM	2021-08-20
1	ISSUED FOR PRICING	2021-07-30

REVISIONS



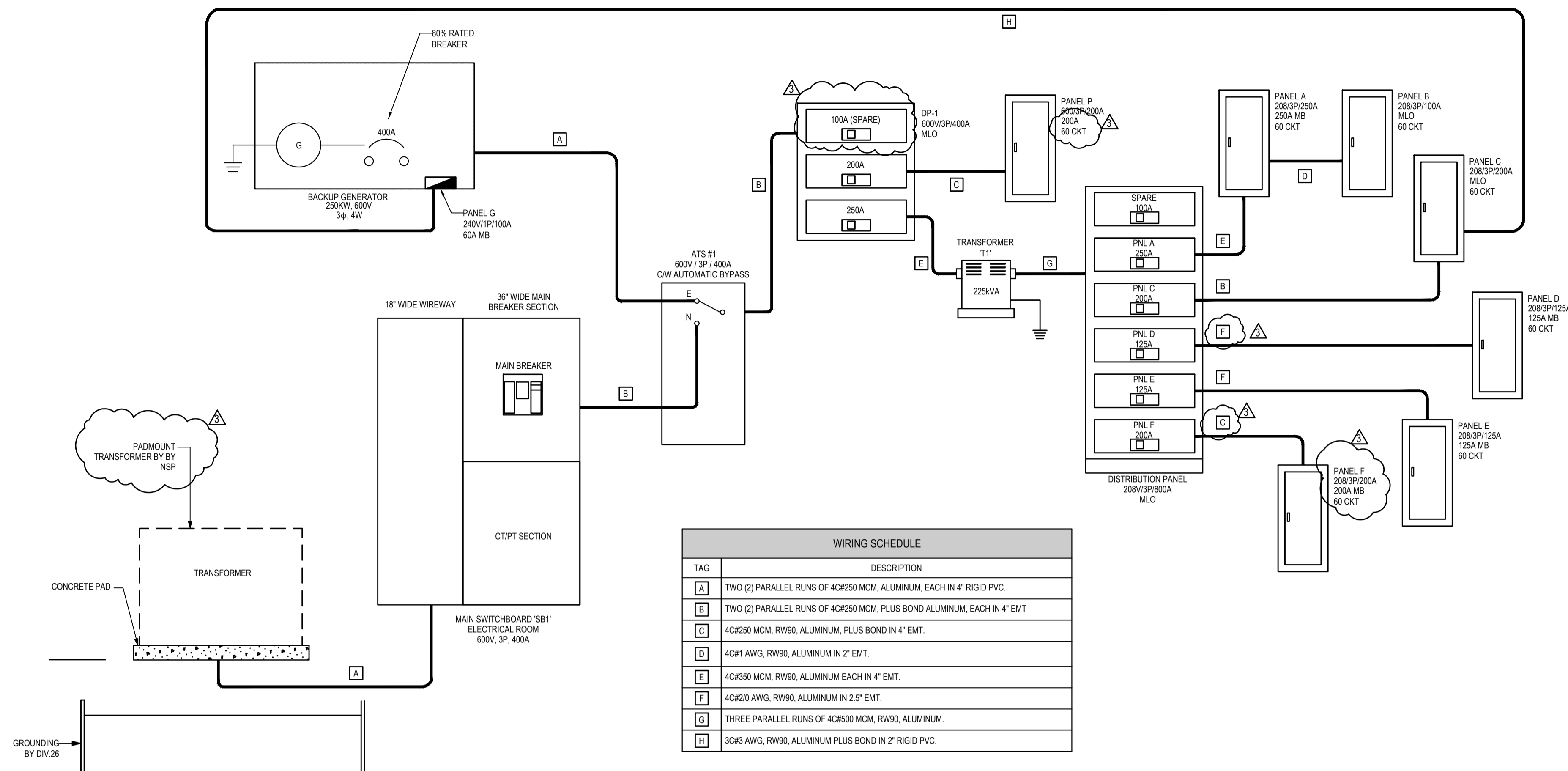
Municipality of the District of Shelburne
 SHELburne MUNICIPAL BUILDING
 SHELburne, NOVA SCOTIA

Project Number	21045
Date	08-17-2021
Drawn By	SCW
Checked By	CM

RISERS & SCHEMATICS

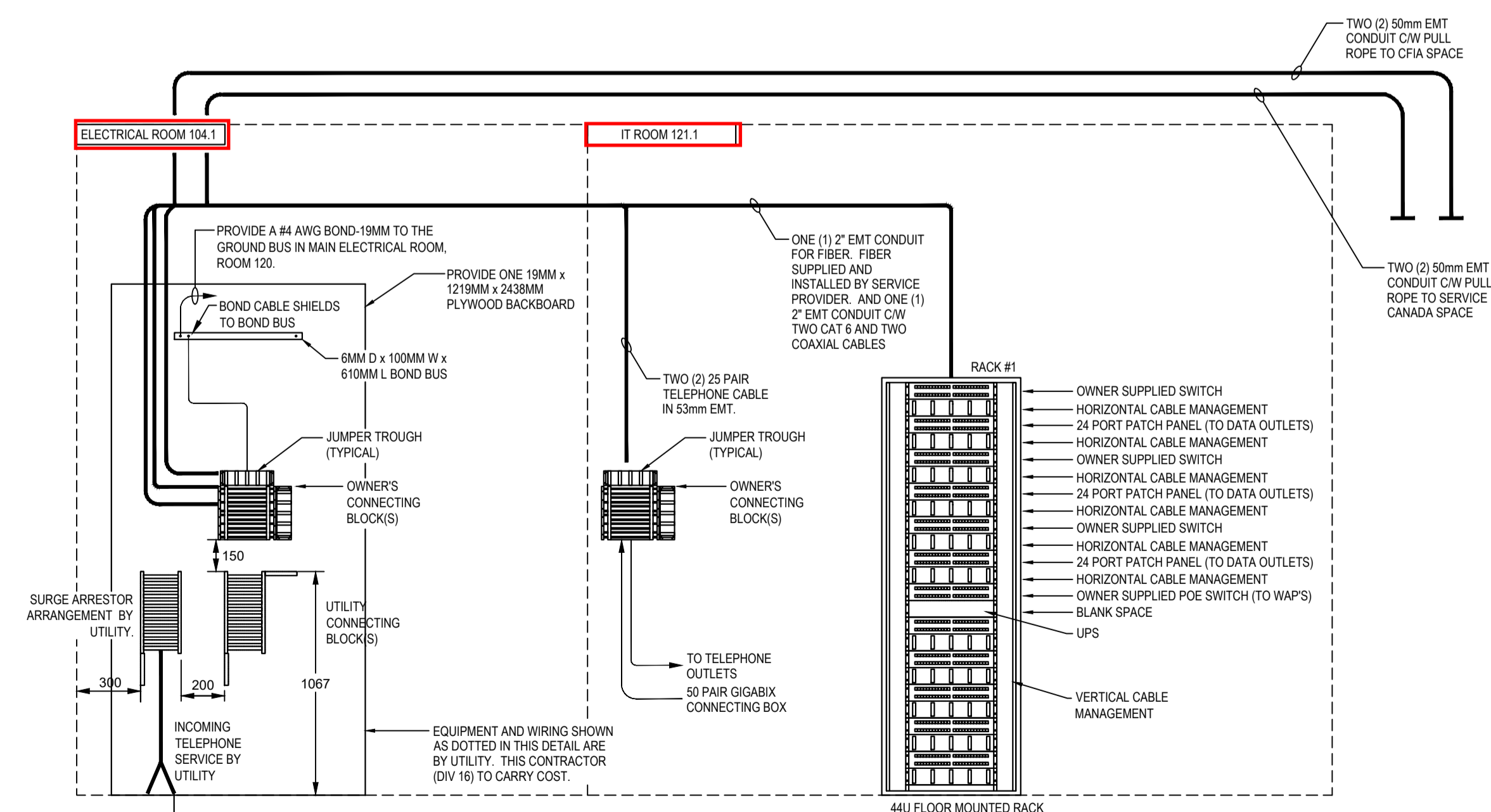
E-201

Scale As Noted



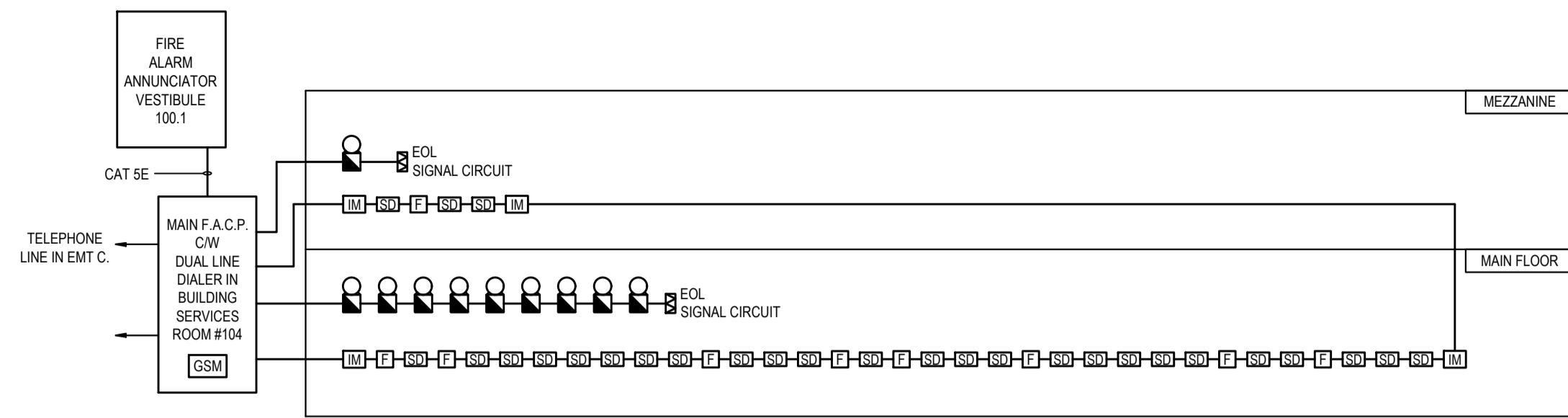
1 ELECTRICAL SCHEMATIC

E-201 SCALE: N.T.S.



2 COMMUNICATIONS RISER

E-201 SCALE: N.T.S.



NOTE:
IF THERE IS A DISCREPANCY BETWEEN THE PLANS AND THE RISERS IN THE QUANTITY OF DEVICES, GO BY THE PLANS.

28.31.00 - FIRE DETECTION AND ALARM SYSTEMS

GENERAL

- ALL NEW EQUIPMENT SHALL BE ULC APPROVED AND INSTALLED TO THE STANDARD FOR THE INSTALLATION OF FIRE ALARM SYSTEMS, ULC-S524.
- THE NORMAL POWER SUPPLY TO THE FIRE ALARM SYSTEM SHALL BE 120 VOLTS 60 HZ.
- ALL WIRING SHALL BE INSTALLED TO CONFORM WITH THE REQUIREMENTS OF THE CANADIAN ELECTRICAL CODE, PART 1 AND APPLICABLE PROVINCIAL CODES. WIRING SHALL BE SIZED IN ACCORDANCE WITH CLASS 2 REQUIREMENTS, BUT SHALL BE PROTECTED FROM MECHANICALLY INJURY OR OTHER INJURIOUS CONDITIONS SUCH AS MOISTURE, EXCESSIVE HEAT OR CORROSIVE ACTION IN ACCORDANCE WITH CLASS 1 REQUIREMENTS. CONDUCTORS SHALL BE SOLID COPPER, 18 AWG. CABLE SHALL BE TYPE FAS, 300 VOLT, FT4 INSULATED, COLOR RED, FOR ALARM RECEIVING DEVICES AND #14 AWG FOR SIGNAL DEVICES.
- MANUFACTURERS
 - STANDARD OF ACCEPTANCE: SIMPLEX 4007ES
 - OTHER APPROVED MANUFACTURERS: MIROCOM, NOTIFIER, SIEMENS.

PRODUCTS

- CONTROL PANEL
 - THE CONTROL PANEL SHALL BE LOCATED IN THE VESTIBULE.
 - COMPLIES WITH ULC-S527-99 STANDARD FOR FIRE ALARM CONTROL UNITS
 - STANDARD OF ACCEPTANCE SIMPLEX 4007ES OR APPROVED EQUAL.
- ALARM INITIATING DEVICES
 - MANUAL PULL STATIONS SHALL BE SIMPLEX #4099-9004
 - SMOKE DETECTORS SHALL BE SIMPLEX #4098-9714 COMPLETE WITH STANDARD BASE.
- AUDIBLE SIGNALS
 - HORN UNITS SHALL BE SIMPLEX #404V-WWF-(BA) CAPABLE OF 90DBA AND SUITABLE FOR INSTALLATION ON 100 MM SQUARE ELECTRICAL BOX WALL MOUNTED. WHITE IN COLOUR.

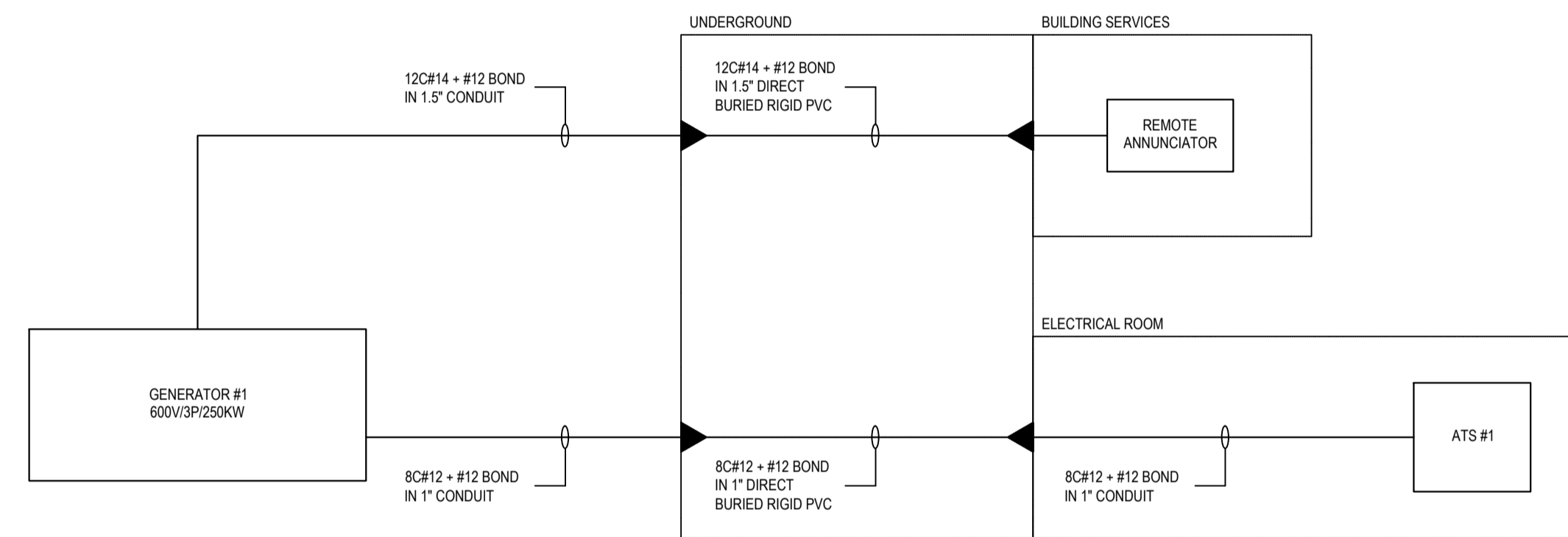
TESTING

- VERIFICATION AND CERTIFICATION OF FIRE ALARM EQUIPMENT
 - THE MANUFACTURER SHALL MAKE AN INSPECTION OF THE FIRE ALARM EQUIPMENT, INCLUDING THOSE COMPONENTS NECESSARY TO THE DIRECT OPERATION OF THE SYSTEM SUCH AS MANUAL STATIONS, THERMAL DETECTORS AND CONTROLS, WHETHER OR NOT MANUFACTURED BY THE MANUFACTURER. THE INSPECTION SHALL COMPRISE AN EXAMINATION OF SUCH EQUIPMENT FOR THE FOLLOWING:
 - THAT THE TYPE OF EQUIPMENT INSTALLED IS THAT DESIGNATED BY THE ENGINEER'S SPECIFICATIONS.
 - THAT THE WIRING CONNECTIONS TO ALL EQUIPMENT COMPONENTS SHOW THAT THE INSTALLER

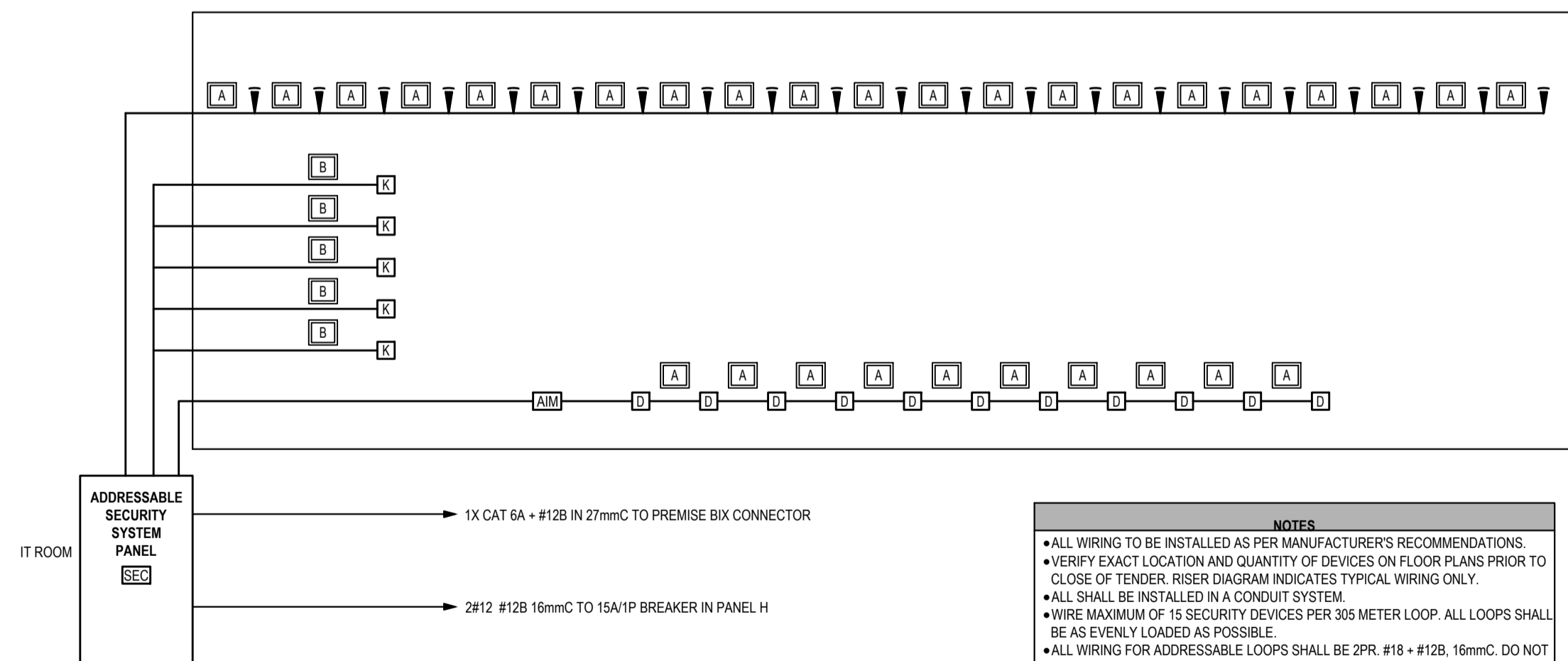
- UNDERTOOK TO HAVE OBSERVED ULC AND CSA REQUIREMENTS.
 - THAT THE MANUFACTURERS EQUIPMENT HAS BEEN INSTALLED IN ACCORDANCE WITH THE WRITTEN RECOMMENDATIONS, AND THAT ALL SIGNALLING DEVICES OF WHATEVER MANUFACTURE HAVE BEEN OPERATED OR TESTED TO VERIFY THEIR OPERATION.
 - THAT THE SUPERVISORY WIRING OF THOSE ITEMS OF EQUIPMENT CONNECTED TO A SUPERVISED CIRCUIT IS OPERATING AND THAT THE GOVERNMENTAL REGULATIONS, IF ANY, CONCERNING SUCH SUPERVISORY WIRING, HAVE BEEN MET TO THE SATISFACTION OF INSPECTING OFFICIALS.
- THE MANUFACTURER SHALL SUPPLY TO THE ELECTRICAL CONTRACTOR REASONABLE AMOUNTS OF TECHNICAL ASSISTANCE WITH RESPECT TO ANY CHANGES NECESSARY TO CONFORM THE WORK OF PARAGRAPHS 1, 2, 3 AND 4 ABOVE, DURING PERIOD OF INSPECTION BY THE MANUFACTURER ELECTRICIANS AS DESIGNATED BY THE MANUFACTURER.
- INSPECTION
 - ON COMPLETION OF THE INSPECTIONS AND WHEN ALL OF THE ABOVE CONDITIONS HAVE BEEN COMPLIED WITH, THE MANUFACTURER SHALL ISSUE TO THE CONSULTING ENGINEER:
 - A COPY OF THE INSPECTIONS TECHNICIAN REPORT SHOWING LOCATION OF EACH DEVICE AND CERTIFYING THE TEST RESULTS OF EACH DEVICE.
 - A CERTIFICATE OF VERIFICATION CONFIRMING THAT THE INSPECTION HAS BEEN COMPLETED AND SHOWING THE CONDITIONS UPON WHICH SUCH INSPECTION AND C VERIFICATION HAVE BEEN RENDERED.
 - PROOF OF LIABILITY INSURANCE FOR THE INSPECTION.
- INSPECTION COSTS
 - ALL COSTS INVOLVED IN THIS INSPECTION BOTH FROM THE MANUFACTURER AND THE ELECTRICAL CONTRACTOR'S WORK SHALL BE INCLUDED WITH THE ELECTRICAL CONTRACTOR'S TOTAL TENDER PRICE.
- MONITORING
 - OWNER SHALL BE CAPABLE OF USING THEIR OWN EXISTING MONITORING COMPANY.

FIRE ALARM WIRING	
1.	ADDRESSABLE F.A. DEVICES - ONE TWISTED PAR #18 AWG CW #18 GREEN PVC BONDING CONDUCTOR. UNARMORED SECUREX CAT. #720-02-18
2.	SIGNAL CIRCUITS - ONE PAIR #12 AWG CW #18 GREEN OVC BONDING CONDUCTOR. UNARMORED SECUREX CAT. #720-02-12
FIRE ALARM NOTES	
1.	EXACT QUANTITY AND LOCATION OF SPRINKLER DEVICES REQUIRING FIRE ALARM SUPERVISION SHALL BE COORDINATED WITH SPRINKLER CONTRACTOR.

1 FIRE ALARM RISER
E-202 SCALE: N.T.S.



2 GENERATOR BLOCK DIAGRAM
E-202 SCALE: N.T.S.



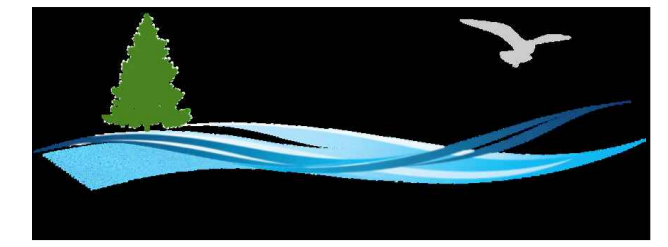
NOTES	
ALL WIRING TO BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.	
VERIFY EXACT LOCATION AND QUANTITY OF DEVICES ON FLOOR PLANS PRIOR TO CLOSE OF TENDER. RISER DIAGRAM INDICATES TYPICAL WIRING ONLY.	
ALL SHALL BE INSTALLED IN A CONDUIT SYSTEM.	
WIRE MAXIMUM OF 15 SECURITY DEVICES PER 305 METER LOOP. ALL LOOPS SHALL BE AS EVENLY LOADED AS POSSIBLE.	
ALL WIRING FOR ADDRESSABLE LOOPS SHALL BE 2PR. #18 + #12B, 16mmC. DO NOT USE SHIELDED WIRING FOR DEVICES.	
LOCATE MOTION SENSORS A MINIMUM OF 1830mm FROM ANY SUPPLY OR RETURN GRILLE. COORDINATE WITH MECHANICAL CONTRACTOR.	
ENSURE TO PROVIDE ZONING AS PER THIS DIAGRAM AS IT MAY BE DESIRABLE TO PARTITION IN FUTURE BY WING.	
WIRING DIAGRAM	
A	1PR#18 TWISTED + 12B IN 16mmC
B	1 QUAD #22GA + 12B IN 16mmC

3 SECURITY RISER
E-202 SCALE: N.T.S.

SECURITY SYSTEM

- PART 1 - GENERAL
 - SYSTEM COMPONENTS
 - SYSTEM TO CONSIST OF THE FOLLOWING SUB SUB-SYSTEMS WHICH SHALL PERFORM IN AN INTEGRATED MANNER WITH EACH OTHER:
 - INTRUSION SYSTEM - ALARM CONTROL PANEL, MOTION DETECTORS AND INTRUSION SWITCHES LOCATED AT DOOR TO BE SUPERVISED AND LOCAL ALARMS.
 - ACCESS CONTROL SYSTEM - READERS, CONTROLLERS, DOOR STATUS INDICATORS, CENTRAL CONTROL COMPUTER, MONITOR, SOFTWARE AND OTHER ASSOCIATED CONTROLS.
 - PROVIDE CONDUITS, OUTLET BOXES, COVER PLATES, WIRING, GROUNDING FOR SECURITY SYSTEM.
 - ALL SECURITY WIRING TO BE CONTAINED IN CONDUIT.
 - SYSTEM FUNCTIONS
 - THE SYSTEM SHALL BE CAPABLE OF CONTROLLING ACCESS INTO THE BUILDING, AND TO CERTAIN SPACES WITH IN THE BUILDING, ACCORDING TO A PROGRAMMABLE SET OF CRITERIA. THE SYSTEM SHALL PERMIT OR DENY ACCESS BASED ON AN INDIVIDUAL'S AUTHORITY, AND TO ALLOW OR RESTRICT ACCESS DURING SPECIFIED PERIODS.
 - THE SYSTEM SHALL BE CAPABLE OF PROVIDING TIME AND DATE STAMPED RECORDS OF ALL ACCESS TRANSACTIONS AND/OR ALARM CONDITIONS.
 - THE SYSTEM SHALL BE INTEGRATED WITH THE BUILDING FIRE ALARM SYSTEM.
 - ALL THE COMPONENTS, SYSTEMS AND SUBSYSTEMS SHALL WORK IN CONCERT TO PROVIDE A COMPLETE CONTROLLED, AUDITED AND MANAGED ACCESS CONTROL SYSTEM. SYSTEM TO CONSIST OF THE FOLLOWING SUB SUB-SYSTEMS WHICH SHALL PERFORM IN AN INTEGRATED MANNER WITH EACH OTHER:
- PART 2 - PRODUCTS
 - INTRUSION CONTROL PANEL
 - CONTROL PANEL - SURFACE MOUNTED PROGRAMMABLE, ADDRESSABLE, EXPANDABLE TO 128 ZONE CAPACITY. "POWER ON" LIGHT, "RESET" KEY SWITCH, "ACKNOWLEDGE" BUTTON, "COMMON" TROUBLE LIGHT, BUZZER AND SILENCING SWITCH. SEPARATE ALARM LAMP, TROUBLE LAMP AND DEACTIVATING KEY SWITCH FOR EACH ZONE AND NECESSARY MODULES, AND RELAYS AS REQUIRED FOR OPERATION AS INDICATED. POWER SUPPLY FROM 120V AC CIRCUIT WITH RECTIFIER TO SUPPLY 24V DC TO OPERATE COMPLETE SYSTEM. STANDBY POWER OF NIOXEL CADMIUM BATTERIES SIZED TO PROVIDE SUPERVISORY AND TROUBLE SIGNAL CURRENT FOR 4 H. CAPABLE OF DIFFERENTIATING BETWEEN OPEN LINE CONDITION AND ALARM. PANEL TO DISPLAY "TROUBLE" CONDITIONS WHEN FAULT OCCURS IN WIRING.
 - PROVIDE BUILT IN DIALER/MODEM FOR CONNECTION TO ULC MONITORING AGENCY.
 - ACCEPTABLE MATERIAL: DSC PC04020 OR EQUAL.

- MOTION DETECTOR
 - THE MOTION DETECTORS SHALL BE ADDRESSABLE, LOW NOISE, DUAL ELEMENT SENSOR DESIGNED FOR COMMERCIAL APPLICATIONS. RF, STATIC, TRANSIENT AND WHITE LIGHT IMMUNITY. CEILING AND WALL MOUNT CONSTRUCTION CW MOUNTING BRACKET.
 - ACCEPTABLE MATERIAL: DSC AMB600.
- KEYPAD
 - LCD TOUCHPAD, BUILT-IN BUZZER FOR KEY BEEPS. LIQUID CRYSTAL DISPLAY, BACKLIT, TO ALLOW IDENTIFICATION OF EACH SECURITY SYSTEM DEVICE, BY ROOM NUMBER.
 - ACCEPTABLE MATERIAL: DSC MAXSYS 4501.
- LOCAL ALARM
 - BUZZER FOR LOCAL ALARM MOUNTED IN SINGLE GANG BOX AS INDICATED.
 - ACCEPTABLE MATERIAL: DSC MAXSYS SD15W.
- SMART SENSOR
 - NOT REQUIRED.
- DOOR CONTACT
 - DOOR CONTACTS: SUITABLE FOR FLUSH MOUNTING ON DOOR AS INDICATED.
 - SENTROL 107D CW AMP-701 ADDRESSABLE MODULE.
- PART 3 - EXECUTION
 - INSTALL CONDUIT, OUTLETS AND WIRING AS PER MANUFACTURER'S DIRECTION.
 - PERFORM TESTS TO ENSURE OPERATION S PER MANUFACTURER'S RECOMMENDATIONS.
 - PROVIDE TRAINING TO OWNERS STAFF. ALLOW FOR AN INITIAL FOUR HOURS, WITH AN ADDITIONAL FOUR HOURS ONE WEEK LATER.

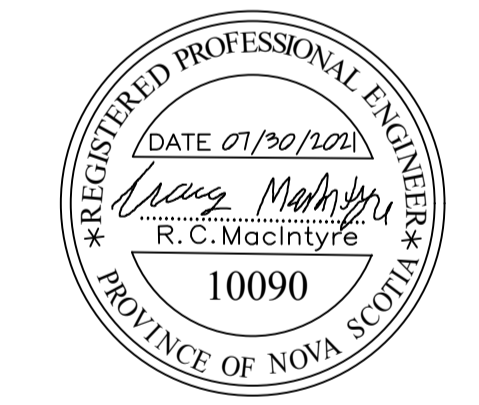


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1	ISSUED FOR PRICING	2021-07-30

REVISIONS



Municipality of the District of Shelburne SHELburne MUNICIPAL BUILDING	
SHELburne, NOVA SCOTIA	
Project Number	21045
Date	08-17-2021
Drawn By	SCW
Checked By	CM
RISERS & SCHEMATICS	
E-202	
Scale	As Noted

PANEL: A											
LOCATION: MAIL, PRINTING, BINDING 147				VOLTAGE: 208				AIC RATING: 10			
SUPPLY FROM: DP-1				PHASES: 3				MAINS TYPE: ALUMINUM			
ENCLOSURE: NEMA 1				NUMBER OF WIRES: 4				MAINS RATING: 250A			
MOUNTING: SURFACE				MCB RATING: 250A MB							
CKT	CIRCUIT DESCRIPTION	TRIP	POLES	LOAD	PHASE	LOAD	POLES	TRIP	CIRCUIT DESCRIPTION	CKT	
1	LIGHTING	15A	1		A		1	15A	LIGHTING	2	
3	LIGHTING	15A	1		B		1	15A	LIGHTING	4	
5	EXIT LIGHTING	15A	1		C		1	15A	REC, VESTIBULE, CORRIDOR	6	
7	REC, DIRECTOR OF FINACE	15A	1		A		1	15A	REC, ECONOMIC DIRECTOR	8	
9	REC, EXECUTIVE ASSISTANT	15A	1		B		1	15A	REC, CAO	10	
11	REC, WARDEN	15A	1		C		1	15A	REC, STORAGE, CORRIDOR	12	
13	REC, FINANCIAL CLERK	15A	1		A		1	15A	REC, TAX CLERK	14	
15	REC, EXECUTIVE STAFF	15A	1		B		1	15A	REC, MEETING ROOM	16	
17	REC, CUSTODIAL	15A	1		C		1	15A	REC, BUILDING INSPECTOR	18	
19	REC, DIRECTOR CORP SERVICES	15A	1		A		1	15A	REC, WASTE DIVERSION	20	
21	REC, BYLAW OFFICE	15A	1		B		1	15A	REC, VESTIBULE, CORRIDOR	22	
23	REC, MAIL, PRINTING, BINDING	15A	1		C		1	15A	REC, PUBLIC WORKS	24	
25	REC, RECREATION STORAGE	15A	1		A		1	15A	REC, RECREATION SUMMER STAFF	26	
27	REC, STAFF ROOM	15A	1		B		1	15A	REC, STAFF ROOM FRIDGE	28	
29	REC, STAFF ROOM KITCHENETTE	20A	1		C		1	20A	REC, STAFF ROOM KITCHENETTE	30	
31	REC, STAFF ROOM KITCHENETTE	20A	1		A		1	15A	REC, RECREATION COORDINATOR	32	
33	REC, RECREATION DIRECTOR	15A	1		B		1	15A	REC, FUTURE GROWTH	34	
35	REC, COMMUNITY DEV	15A	1		C		1	15A	REC, FUTURE GROWTH	36	
37	REC, FUTURE GROWTH	15A	1		A		1	15A	REC, STORAGE	38	
39	REC, COUNCIL CHAMBER	15A	1		B		1	15A	REC, COUNCIL ANTI-CHAMBER	40	
41	REC, COUNCIL FRIDGE	15A	1		C		1	20A	REC, COUNCIL KITCHENETTE	42	
43	REC, COUNCIL KITCHENETTE	20A	1		A		1	20A	REC, COUNCIL KITCHENETTE	44	
45	REC, VAULT	15A	1		B		1	15A	REC, TRANSACTION COUNTER	46	
47	REC, STORAGE	15A	1		C		1	20A	REC, STAFF ROOM KITCHENETTE	48	
49	REC, EXTERIOR	15A	1		A		1	15A	REC, MEETING ROOM	50	
51	REC, FLOOR BOX	15A	1		B		1	15A		52	
53	REC, FLOOR BOX	15A	1		C		3	100A	PAN B	54	
55	REC, FLOOR BOX	15A	1		A		1	15A		56	
57	SPARE	15A	1		B		1	15A	SPARE	58	
59	SPARE	15A	1		C		1	15A	SPARE	60	

PANEL: B											
LOCATION: MAIL, PRINTING, BINDING 147				VOLTAGE: 208				AIC RATING: 10			
SUPPLY FROM: DP-1				PHASES: 3				MAINS TYPE: ALUMINUM			
ENCLOSURE: NEMA 1				NUMBER OF WIRES: 4				MAINS RATING: 100A			
MOUNTING: SURFACE				MCB RATING: MLO							
CKT	CIRCUIT DESCRIPTION	TRIP	POLES	LOAD	PHASE	LOAD	POLES	TRIP	CIRCUIT DESCRIPTION	CKT	
1	EV-02, EV-03	15A	2		A		2	15A	EV-04, EV-05	2	
3					B					4	
5	EV-14, EV-15	15A	2		C		2	15A	EV-06, EV-13	6	
7					A					8	
9	EV-01, EV-07, EV-08	15A	2		B		2	15A	EV-09	10	
11					C					12	
13	EV-10, EV-11	15A	2		A		2	15A	EV-16, EV-17, EV-18	14	
15					B					16	
17	COB-1	15A	2		C		2	15A	COB-2	18	
19					A					20	
21	ACCESS CONTROL PANEL #1	15A	1		B		1	15A	ACCESS CONTROL PANEL #2	22	
23	ACCESS CONTROL PANEL #3	15A	1		C		1	15A	ACCESS CONTROL PANEL #4	24	
25	TF-1	15A	1		A		1	15A	SPARE	26	
27	HEATER	20A	2		B		2	15A	SPARE	28	
29					C					30	
31	HEATER	20A	2		A		2	15A	SPARE	32	
33					B					34	
35	SPARE	20A	1		C		1	15A	SPARE	36	
37	SPARE	20A	1		A		1	15A	SPARE	38	
39	SPARE	15A	1		B		1	15A	SPARE	40	
41	SPARE	15A	1		C		1	15A	SPARE	42	
43	SPARE	15A	1		A		1	15A	SPARE	44	
45	SPARE	15A	1		B		1	15A	SPARE	46	
47	SPARE	15A	1		C		1	15A	SPARE	48	
49	SPARE	15A	1		A		1	15A	SPARE	50	
51	SPARE	15A	1		B		1	15A	SPARE	52	
53	SPARE	15A	1		C		1	15A	SPARE	54	
55	SPARE	15A	1		A		1	15A	SPARE	56	
57	SPARE	15A	1		B		1	15A	SPARE	58	
59	SPARE	15A	1		C		1	15A	SPARE	60	

PANEL: C											
LOCATION: ELECTRICAL ROOM 104.1				VOLTAGE: 208				AIC RATING: 10			
SUPPLY FROM: DP-1				PHASES: 3				MAINS TYPE: ALUMINUM			
ENCLOSURE: NEMA 1				NUMBER OF WIRES: 4				MAINS RATING: 200A			
MOUNTING: SURFACE				MCB RATING: MLO							
CKT	CIRCUIT DESCRIPTION	TRIP	POLES	LOAD	PHASE	LOAD	POLES	TRIP	CIRCUIT DESCRIPTION	CKT	
1	LIGHTING	15A	1		A		1	15A	LIGHTING	2	
3	LIGHTING, PENTHOUSE	15A	1		B		1	15A	EXIT LIGHTING	4	
5	REC, VESTIBULE, LOBBY	15A	1		C		1	15A	REC, VESTIBULE, LOBBY	6	
7	REC, EXTERIOR	15A	1		A		1	15A	REC, EXTERIOR	8	
9	REC, STAIRS	15A	1		B		1	15A	REC, PENTHOUSE	10	
11	REC, PENTHOUSE	15A	1		C		1	15A	REC, ELECTRICAL	12	
13	REC, DATA RACK	15A	1		A		1	15A	REC, IT	14	
15	REC, SERVICE POST	15A	1		B		1	15A	REC, SERVICE POST	16	
17	REC, SERVICE POST	15A	1		C		1	15A	REC, SERVICE POST	18	
19	REC, SERVICE POST	15A	1		A		1	15A	REC, SERVICE POST	20	
21	REC, SERVICE POST	15A	1		B		1	15A	REC, SERVICE POST	22	
23	LIGHTING, PARKING	15A	1		C		1	15A	LIGHTING, PARKING	24	
25	LIGHTING, LANDSCAPE	15A	1		A		1	15A	LIGHTING, EXTERIOR	26	
27	LIGHTING, EXTERIOR	15A	1		B		1	15A	LIGHTING, EXTERIOR	28	
29	FACP	15A	1		C		1	15A	COMMUNICATIONS	30	
31					A					32	
33	EV-11	15A	2		B		2	60A	PANEL G	34	
35					C					36	
37	EV-12	15A	2		A		2	20A	SPARE	38	
39					B					40	
41	HTR	20A	2		C		2	15A	SPARE	42	
43	SPARE	15A	1		A		1	15A	SPARE	44	
45	SPARE	15A	1		B		1	15A	SPARE	46	
47	SPARE	15A	1		C		1	15A	SPARE	48	
49	SPARE	15A	1		A		1	15A	SPARE	50	
51	SPARE	15A	1		B		1	15A	SPARE	52	
53	SPARE	15A	1		C		1	15A	SPARE	54	
55	SPARE	15A	1		A		1	15A	SPARE	56	
57	SPARE	15A	1		B		1	15A	SPARE	58	
59	SPARE	15A	1		C		1	15A	SPARE	60	

PANEL: D											
LOCATION: FEDERAL CFIA 153				VOLTAGE: 208				AIC RATING: 10			
SUPPLY FROM: DP-1				PHASES: 3				MAINS TYPE: ALUMINUM			
ENCLOSURE: NEMA 1				NUMBER OF WIRES: 4				MAINS RATING: 125A			
MOUNTING: SURFACE				MCB RATING: 125A MB							
CKT	CIRCUIT DESCRIPTION	TRIP	POLES	LOAD	PHASE	LOAD	POLES	TRIP	CIRCUIT DESCRIPTION	CKT	
1	LIGHTING	15A	1		A		1	15A	EXIT LIGHTING	2	
3	REC, FEDERAL CFIA	15A	1		B		1	15A	REC, FEDERAL CFIA	4	
5	REC, JUNCTION BOX	15A	1		C		1	15A	REC, JUNCTION BOX	6	
7	REC, JUNCTION BOX	15A	1		A		1	15A	REC, JUNCTION BOX	8	
9	REC, JUNCTION BOX	15A	1		B		1	15A	REC, JUNCTION BOX	10	
11	REC, JUNCTION BOX	15A	1		C		1	15A	REC, JUNCTION BOX	12	
13	REC, JUNCTION BOX	15A	1		A		1	15A	LIGHTING	14	
15	EV-C-01	15A	2		B		2	15A	EV-C-02	16	
17					C					18	
19	EV-C-03	15A	2		A		2	15A	EV-C-04	20	
21					B					22	
23	EV-C-05	15A	2		C		2	15A	EV-C-06	24	
25					A					26	
27	SPARE	20A	1		B		2	20A	HP-4	28	
29	SPARE	15A	1		C		1	15A		30	
31	SPARE	15A	1		A		1	15A		32	
33	SPARE	20A	1		B		3	20A	SPARE	34	
35	SPARE	15A	1		C		1	15A		36	
37	SPARE	15A	1		A		1	15A		38	
39	SPARE	15A	1		B		3	20A	SPARE	40	
41	SPARE	15A	1		C		1	15A		42	
43	SPARE	15A	1		A		1	20A	SPARE	44	
45	SPARE	15A	1		B		1	20A	SPARE	46	
47	SPARE	15A	1		C		1	20A	SPARE	48	
49	SPARE	15A	1		A		1	15A	SPARE	50	
51	SPARE	15A	1		B		1	15A	SPARE	52	
53	SPARE	15A	1		C		1	15A	SPARE	54	
55	SPARE	15A	1		A		1	15A	SPARE	56	
57	SPARE	15A	1		B		1	15A	SPARE	58	
59	SPARE	15A	1		C		1	15A	SPARE	60	

PANEL: E											
LOCATION: FEDERAL ESDC 154				VOLTAGE: 208				AIC RATING: 10			
SUPPLY FROM: DP-1				PHASES: 3				MAINS TYPE: ALUMINUM			
ENCLOSURE: NEMA 1				NUMBER OF WIRES: 4				MAINS RATING: 125A			
MOUNTING: SURFACE				MCB RATING: 125A MB							
CKT	CIRCUIT DESCRIPTION	TRIP	POLES	LOAD	PHASE	LOAD	POLES	TRIP	CIRCUIT DESCRIPTION	CKT	
1	LIGHTING	15A	1		A		1	15A	EXIT LIGHTING	2	
3	REC, FEDERAL ESDC	15A	1		B		1	15A	REC, FEDERAL ESDC	4	
5	REC, FEDERAL ESDC	15A	1		C		1	15A	REC, JUNCTION BOX	6	
7	REC, JUNCTION BOX	15A	1		A		1	15A	REC, JUNCTION BOX	8	
9	REC, JUNCTION BOX	15A	1		B		1	15A	REC, JUNCTION BOX	10	
11	REC, JUNCTION BOX	15A	1		C		1	15A	REC, JUNCTION BOX	12	
13	REC, JUNCTION BOX	15A	1		A		1	15A	REC, JUNCTION BOX	14	
15	REC, JUNCTION BOX	15A	1		B		1	15A	REC, JUNCTION BOX	16	
17	REC, JUNCTION BOX	15A	1		C		1	15A	REC, JUNCTION BOX	18	
19	REC, JUNCTION BOX	15A	1		A		1	15A	REC, JUNCTION BOX	20	
21	EV-E-01	15A	2		B						

Appendix C

Activities & Deliverables

1.0 ACTIVITIES AND DELIVERABLES

The Proponent shall provide all services necessary to complete the detailed design procurement and construction of the approved SEP option and obtain all necessary permits / approvals. The following is a description of the major tasks and key deliverables required under the Scope of Work.

1.1 Project Administration

The primary purpose of project administration is to keep the Project within scope, budget, and on schedule and to ensure the best product possible is provided.

Major activities include:

- A start up meeting with the Municipality to confirm requirements, alignment of project scope, schedule, deliverables, project risks and mitigation measures, and budget.
- Maintain all project documentation.
- Provide project updates to the Municipality's Project Manager (Catalyst Consulting Engineers – Andrew Amos, P.Eng.).
- Identify and manage risks associated with the Project.
- Ensure innovation is considered and applied where and when ever practicable throughout the planning, and design phases.
- Manage overall Project scope, schedule, budget, and quality control; and
- Ensure all Project changes are discussed and approved by the Municipality in advance of proceeding with the work.

Key Deliverables:

- All recorded information including Project reports, templates, surveys, calculations, sketches, drawings, meeting minutes & correspondence submitted in an electronic package.
- Project updates outlining progress for the review period.
- Documentation of any Project changes (scope, schedule, budget & quality impacts) including correspondence reflecting the Municipality's approval prior to proceeding with the proposed changes.

1.2 Approvals

The purpose of this task is to ensure that all pertinent legislation is followed, and all necessary approvals are in place in a timely manner.

Major activities include:

- Identify and obtain all applicable approvals required for this Project;
- Consult with all relevant approval authorities to ensure all approval requirements are incorporated into the design in the most cost-effective manner; and
- Meet with all approval agencies as required.

Key Deliverables:

- Documented legislation and approvals required for this Project; and
- Final approval certificates or authorizations from the applicable approval agency.

1.3 Detailed Design

The purpose of this component is to complete the detailed design. In addition to meeting the Standard Specifications for Municipal Services (Latest edition); National Building Code of Canada; the engineered design shall meet the minimum requirements of NSP and conform to the requirements of other regulatory agencies, from which approval may be required. Proponents will be required to liaise and consult with all relevant Project stakeholders and regulatory agencies at all stages of the design.

Major activities include:

- Prepare detailed design reports (50% and 100% levels).
- Prepare the final design drawings and shop drawings

Key Deliverables:

- Detailed design reports.
- Detailed design drawings and shop drawings.

The Proponent will be responsible for preparing design reports including design drawings, that will address all elements of the Project. The reports will also provide rationale for the design and adequately demonstrate how the proposed design will meet the Project objectives and is founded on sound engineering principles and practice. All primary design criteria and performance objectives for the detailed design shall be established along with sufficient technical information to demonstrate the suitability of the proposed design for the site. Generally, the design reports at each submission level will include, but not be limited to:

Design – Issued for Review (50% complete)

The Proponent will prepare the design and layout of the SEP to be constructed at the site. Generally, the submission of Design – Issued for review at 50% completion will include but not limited to the following:

- A. Solar Resource Assessment (SRA) at the site location shall be carried out. Simulation study and preliminary energy estimate shall be carried out using PV System software that includes the calculation of energy generation, system losses, system efficiency, and performance prediction. Estimated quantity of electricity generation based on SRA shall be considered during the design of the SEP.
- B. Shadow analysis, and its impact on the selected design option shall be analyzed using tools such as Solar Pathfinder.
- C. The proponent will initiate an engagement process with Nova Scotia Power Inc. and host meetings as required to finalize an effective interconnection policy (including solar credits earned for excess energy produced), utility rates, model PPA, and other specifications related to the project. Provide summary of project related agreements with Nova Scotia Power Inc.

The proponent will meet with Municipal staff after submission of the Design issued at 50% completion to provide an update on the project, get feedback from the Municipality and discuss any issues or areas of concerns associated with the project.

Design – Issued for Review (100% complete)

The Proponent will incorporate the comments from the Municipality from 50% review and further the design development process by encompassing complete description of each aspect of the project with complete design drawings and detailed specifications.

Generally, the submission of Design – Issued for review at 100% completion will include but is not limited to the following:

- A. Detailed Plan of the system including configuration and all necessary specifications required to comply with Canadian Electrical Code, Nova Scotia

Power Inc's guidelines, National Building Code of Canada, and compliance with any other relevant federal and provincial standards.

- B. Required electrical upgrades to the New House for to supply power to the building or NSP.
- C. Required site improvements, adaptations or alterations of existing electrical systems, transmission and distribution systems and other related work for the selected option.
- D. An electronic monitoring and control system that will provide system information such as, live status of solar panels, energy production, system malfunctions or failures, error messages and any other information deemed necessary.
- E. Ensure the design meets all Nova Scotia Power Inc. requirements to participate in the Net Metering Program.
- F. Complete Issued for Construction drawings of SEP layout with all relevant details for construction. Ensure design development is in accordance with National Building Code of Canada, Renewable Electricity Regulations and other relevant codes, regulations, and standards.
- G. Provide shop drawings and drawings submitted for the sole purpose of ascertaining the information set forth therein generally conforms to the design and intent of the work.

The proponent will meet with Municipal staff after submission of the Design issued at 100% completion to provide an update on the project, get feedback from the Municipality, discuss any issues or areas of concerns associated with the project, and the project readiness for the construction phase.

The Proponent shall address all comments provided by the Municipality and re-submit the revised document to the Municipality. The Final Design Report(s) and detailed design drawings must be sealed and certified by a Professional Engineer registered in Nova Scotia.

1.4 Construction Oversight and Contract Administration

The Proponent shall provide a qualified site representative(s) familiar with the Contract Documents and knowledgeable with respect to construction practices. Oversight shall be provided on a full-time basis, with the site representative(s) on the site at all times during construction activities and when QC/QA testing or installation

verification is required. For each element, where the Proponent is to provide construction oversight and contract administration, Proponents will fully define the individuals that will be involved in this phase of the work.

The Proponent shall conduct a pre-construction meeting at the Project site with the Municipality and their agents, and other parties whose involvement is required for completion of the Project. The purpose of the meeting is to discuss the Contract Documents and Project in detail, communication protocols, health and safety protocol, the Municipality requirements, and other Contract issues. The Proponent shall record and distribute minutes to the attendees of all meetings no later than three (3) days following each meeting.

The Proponent shall conduct a pre-final inspection of deficiencies when the Contract is substantially complete. Representatives of the Proponent and the Municipality (and their agents) shall conduct a final Project review prior to the expiration of the warranty period and advise the Municipality in writing as to continuing or newly observed defects or deficiencies in the Work. The Proponent shall coordinate and provide oversight for any repairs conducted. The Proponent shall advise the Contractor and the Municipality upon satisfactory completion of any repairs.

Major activities include:

- Perform full-time construction oversight and contract administration services;
- Facilitate and attend the pre-construction and construction meetings;
- Maintain communication and liaise with all relevant Project stakeholders and regulatory agencies;
- Provide all documentation as required by the contract documents, with respect to sureties, insurance, and other warranties and guarantees;
- Provide updates to the Municipality via email;
- Provide shop drawings and drawings submitted for the sole purpose of ascertaining that the information set forth therein generally conforms to the design and intent of the work;
- Provide all payment certificates of the work completed, in a timely manner;
- Identify construction deficiencies and work to immediately resolve;

- Manage and administer site instructions, directives, contemplated change orders, and change orders;
- Collect and compile all necessary information for inclusion in the record information package;
- Manage and administer the commissioning process. Proponent is to specify in the documents the requirement for a methodical and organized commissioning process;
- Coordinate a training program for the Municipality staff in the operation and maintenance of the constructed infrastructure. The training session is to include, as appropriate, the participation of the Proponent, subcontractors, suppliers, and other project stakeholders; and
- Facilitate wrap-up meeting. This meeting shall serve as a general review of the Project. It shall also serve as the appropriate setting for dissemination of information such as presentation of the “Notice of Acceptability of the Work” and Project certification, record information package, operation and maintenance manuals and the handing over of spare parts and warranties to RMHCA operations staff.

Key Deliverables:

- Completion of the Project on schedule, on budget, and that minimizes long-term operational costs;
- QA/QC testing and reports;
- Log of documented construction issues including resolutions;
- Record meeting minutes, reports and other correspondence related to design and construction;
- Commissioning report;
- Record Information including final as-built record drawings and relevant operational and maintenance details and warranties;

- Provide results from system load test detailing actual capacity of the system as constructed.
- Provide training session for the Municipality's operating staff; and

1.5 As-Built Package

- A. The Proponent will be responsible for the development of an As-Built Package at project completion. This will include as-built design drawings, record drawings, site survey files, SRA results, and other information related to the Project design and construction that the Municipality may require.
- B. Provide results from system load test detailing actual capacity of the system as constructed.
- C. The Proponent will be responsible for collecting all information required for the preparation of As-Built and Record drawings. This will include site surveys, notes, and sketches prepared during and after construction to confirm actual As-built locations, materials, inverts, diameters, thicknesses, dimensions, etc. This recorded As-built information will be utilized to develop a complete set of drawings which will accurately depict the precise location and specifications of all materials and equipment installed during the construction of this project.

The Proponent will collate project reports, design drawings, operating and maintenance manuals for all equipment, and other relevant material into a structured As-Built Package.