



INSTRUCTIONS TO BIDDERS

Date: November 29, 2016

BID PACKAGES #: 622-CP1704 & 612-CP1704

1. **BID SUBMISSION**

The St. Clair Catholic District School Board (Board) is seeking roofing contractors to provide partial roof replacement at two facilities in Lambton County.

Bids from invited bidders shall be submitted on the Bid Form provided and submitted in an envelope clearly marked:

Bid Packages #: 622-CP1704 St. Anne Catholic School – Roof Replacement Tender
720-CP1704 St. Patrick's Catholic High School – Roof Replacement Tender

The envelope shall be sealed and delivered to: **St. Clair Catholic District School Board**
1930 Wildwood Drive
Bright's Grove, ON
N0N 1C0

Attention: Mr. Tony Prizio, Procurement Specialist

Bids will be accepted at the new Sarnia Facility Services office not later than **January 27, 2017 @ 2:00:00 p.m.** (No extensions to Bid Closing date are anticipated. Bidders are encouraged to act immediately to prepare their submissions!)

Bids shall be filled out in ink or typed, signed in longhand by a duly authorized company official (having authority to bind) and sealed with a company corporate seal. One original of the fully completed Tender Form must be submitted. **Failure to provide all of the requested information on the Tender Form may result in disqualification of the bid.**

Bids by telephone, fax or email will **not** be accepted.

After bid closing, sealed envelopes will be opened by the Board's Procurement Specialist (Tony Prizio) and a representative from Corporate Services' department.

2. **SCOPE OF WORK**

The Instructions to Bidders identifies the work to be performed in the Contract and takes priority if there is a conflict within the Bid Documents. **Refer to attached specifications for detailed description of work to be carried out by the successful proponent.**

3. **BID DOCUMENTS**

The following Bid Documents form the basis of this Bid Package and shall be examined by bidders:

- 3.1 Instructions to Bidders dated November 29, 2016
- 3.2 Tender Form, Specifications and Drawings – St. Anne School dated November 29, 2016
- 3.3 Tender Form, Specifications and Drawings – St. Patrick High School dated November 29, 2016
- 3.4 **Prime Contract – Will be a standard CCDC-2 2008 Stipulated Price Contract.** The Board assumes no responsibility for the bidder's failure to examine **all** of the Bid Documents. **(also refer to Appendix A – SCCDSB - Supplementary Conditions to CCDC-2 2008)**



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4. **BID ACCEPTANCE**

It shall be understood by all bidders, that the bid shall be valid and subject to acceptance by the Board, and that no adjustments shall be made to the Bid amounts for a period of up to and including sixty (60) days from the Bid Closing Date.

The Board reserves the right to determine the successful bidder by any combination of base bid, separate prices, requested alternate prices and voluntary alternate prices submitted with the bid. The Board is not obligated to select the bid with the lowest price and may cancel a bid prior to award without liability to any bidder.

The successful bidder shall be required to enter into a formal contract with the Board, which will include the terms and conditions of the Instructions to Bidders, Bid Form, and all other applicable documents.

5. **AWARD**

The Board has the right to reject any or all bids. The lowest Bid will not necessarily be accepted. The invitation to bid does not constitute an offer by the Contractor to enter into a contract.

6. **PAYMENT**

The Board shall pay within forty-five (45) days after receipt of the invoices which are received and approved by the Board.

7. **TAXES**

Include in Bid all Taxes and all other Customs Duties and Excise Taxes which are in force at Bid date as detailed in General Conditions. Harmonized Sales Tax (H.S.T.) is **not** to be included in the bid. The H.S.T. amount and the Bidder's **H.S.T. Registration Number** are to be indicated on the Bid Form in the spaces provided.

8. **ADDENDA**

Bidders finding discrepancies, ambiguities or omissions in the bid documents or having doubt as to the meaning or intent thereof, shall immediately notify the Procurement Specialist who may issue instructions and/or clarifications by Addendum to all Bidders. Bidders may also, during the Bidding Period, be advised by Addendum of any additions, deletions or alterations to bid documents. All such Addenda shall become part of the Bid Documents.

All questions to be addressed in writing to: Mr. Tony Prizio, Procurement Specialist
St. Clair Catholic District School Board
Fax 519.627.8230 or
E-mail: tony.prizio@st-clair.net
Copy: marcie.myers@st-clair.net
No later than 48 hours prior to bid closing date.



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9. CHANGE NOTICES, CHANGE ORDERS

The following fee percentage and overhead charges shall be applied to additional work ordered by the Board:

- For work carried out by the Contractor's own forces – 10% Overhead & Profit
- For work involving a subcontractor, the subcontractor may charge a maximum 10% fee. The General Contractor may charge a maximum of 5% in addition to subcontractor's fee.

10. BONDING: REQUIREMENT

On bids exceeding \$ 50,000.00, submit with the Bid an Agreement to Bond for a 50% Performance Bond, and a 50% Labour & Material Payment Bond. Upon request, the successful Bidder will be required to provide the 50% Performance Bond and 50% Labour and Material Payment Bond from a bonding company acceptable to the Board. The cost of the bond is not to be included in the bid sum, the amount of which is to be identified on the Bid Form.

Each bid shall be accompanied by bid security in the form of either:

Certified cheque payable to the "St. Clair Catholic District School Board" in the amount of 10% of the bid price;

OR

Bid bond in the amount of 10% of the bid price naming the Owner as obligee and issued by a surety licensed to conduct surety and insurance business in Canada. The bid bond shall remain valid for a period of sixty (60) days from the Submission Deadline.

11. VOLUNTARY ALTERNATE AND SEPARATE PRICES

The bid amounts are to be based on the bid documents. Where there is any conflict within the bid documents, the bid amount shall include the higher cost alternative. Alternative proposals are encouraged and must be identified in the bid. Submit complete information including any impact on schedule to allow a full evaluation of the proposal including, as applicable, any particulars in which the alternate proposal is at variance with or unable to meet the specifications. Note also any impact on other trades if the alternative is accepted. Alternative proposals may be made without limitation, including for items specified as single sourced.

12. EXAMINATION OF SITE & SITE VISIT

In submitting a bid, it will be assumed that the bidders have carefully examined the site and surrounding properties of the work and have informed themselves as to the existing conditions, access, storage areas and limitations, and have included in the bid price the complete cost of the work contemplated by the drawings and specifications and other bid documents.

A mandatory site visit has been scheduled for December 8, 2016 at 10:30 a.m. Interested parties should meet at the admin. office of St. Anne Catholic School, located at 1000 The Rapids Parkway, Sarnia. Following the St. Anne site visit, everyone will proceed to St. Patrick's Secondary Catholic School, located at 1001 The Rapids Parkway, Sarnia. ON.

13. TIMING OF PROJECT

Work on **BOTH** sites must take place during the months of **April 3, 2017** and completed no later than **June 16, 2017**.



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14. **PROJECT SPECIFIC REQUIREMENTS**

Contractor shall provide their own washroom facilities for their employees, board washrooms will be off-limits to the contractor's employees.

Please be advised that the Owner has a No Smoking Requirement on the Owners' property. Contractors are requested to ensure that employees and suppliers are advised of the Requirement. Contractor shall remove rubbish and debris from the site on a daily basis or as directed by the Board. On completion of the work, all debris shall be removed; the floor shall be thoroughly cleaned and swept; the site shall be left in a tidy condition (construction clean). Do not use the Board's equipment or facilities for cleaning or for any reason.

15. **INSURANCE**

Contractor must maintain, at the Contractor's expense for the entire term of the Contract or as otherwise required, all insurance as set out below:

- The successful Contractor shall provide the Board with proof of insurance for Comprehensive General Liability and Property Damage with a limit of not less than \$2,000,000.00 (two million dollars) inclusive prior to commencing work.
- The successful Contractor shall provide the Board with proof of insurance for Motor Vehicle Public Liability and Property Insurance on all owned and rented equipment with a limit of not less than **\$2,000,000.00 (two million dollars)** inclusive prior to commencing work.
- The Contractor agrees to indemnify, hold harmless, and defend the Board from and against any and all liability for loss, damage and expense, which the Board may suffer or for which the Board may be held liable by reason of injury (including death) or damage to any property arising out of negligence on the party of the proponent or any of its representatives or employees by way of ownership or operation of an automobile.
- The successful Contractor shall provide the Board with a complete certified copy of all policies.
- The successful Contractor must name the St. Clair Catholic District School Board as additional insured on their insurance policies.

16. **WORKPLACE SAFETY INSURANCE BOARD (WSIB)**

Contractor must furnish a copy of Workplace Safety and Insurance Board Clearance Certificate of good standing, "Section 748" of the Workplace Safety and Insurance Act with its bid documents.

17. **PERMITS**

The Board will apply and pay for the building permit. The Contractor shall apply for and include costs for any other permits and approvals required for the completion of their work.

18. **MEETINGS**

A Post Bid Meeting may be convened and chaired by the Board who will invite Contractor and his major Subcontractors to review the Contract Documents and Bid submitted. This meeting will be prior to the Board issuing a Letter of Intent or Contract. This meeting does not constitute or infer any contract award to the proposed contractor or any other contractor, nor that will the project proceed. During the course of Work, scheduled progress meetings may be required at the call of the Project Leader.



INSTRUCTIONS TO BIDDERS

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19. **GUARANTEE**

The guarantee shall be as outlined in the specifications starting from after completion of the entire job and acceptance thereof by the Board unless a different period of time is specified with the Board's approval. The Contractor's guarantee shall cover all work under the Contract whether or not any portion or trade has been sublet.

The Contractor agrees to correct promptly, at the Contractor's own expense, defects or deficiencies in the Work which appear prior to and during the period of guarantee, or such longer periods as may be specified for certain products or work.

If the Contractor fails to make any replacements or repairs required hereunder, after notice from the Board and reasonable opportunity to do so, the Board may have such work done at Contractor's expense, including all necessary labour costs in connection therewith. Board shall inform Contractor in advance of the approximate cost of such work to be done by the Board.

20. **SCHEDULE**

The Contractor will be required to perform the work in accordance with the Schedule dates provided in 13. Timing of Project. Ordering of major and long delivery items shall begin immediately upon successful bidder's receipt of contract award. The Contractor will provide a construction schedule within five (5) days of being awarded the project.

Time is of the essence. Bidders are to include adequate manpower, overtime and shift work necessary to meet or improve the schedule, and to make up any time lost to weather or normal delays. Include travel, room and board costs for out of town workers, shop overtime and other premiums to expedite material and equipment, shipping premiums and any incentive costs required to meet the schedule.

21. **CONTRACTED SERVICES PROGRAM**

Contractors performing work on Board property must complete the Contracted Services Program. This program has three basic components that **must** be met before the bid is awarded. Contractors who cannot meet the minimum requirements of this program will not be awarded this tender. Program information can be found on the Board's web site at www.st-clair.net or through the Board contact identified previously in this document.

22. **HEALTH and SAFETY**

The Occupational Health and Safety Act describes the responsibilities of an employer. The Board requires Contractors to maintain procedures, training, and enforcement so that the responsibilities are carried out in the workplace. The Contractor shall abide by and strictly adhere to the regulations and conditions set out and laid down by the most current versions of the Occupational Health and Safety Act. All staff employed or hired by the Contractor and working on the Board's premise **MUST** be trained in WHMIS in accordance with Occupational Health and Safety Act and Regulations. They **MUST** adhere to all of the Board's Health and Safety Procedures and Guidelines and to Municipal By-Laws.

Contractor will submit proof of its health and safety program, procedures and training as detailed above upon request by the Board.

The Contractor shall appoint a Competent Person as the Supervisor of this project. The Competent Person shall be as defined in Section 1 of the Occupational Health and Safety Act.



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The successful Contractor shall conform to the Ontario "Occupational Health and Safety Act" and all regulations made under said act and assume full responsibility for contraventions of same.

All workplace injuries or accidents on Board property MUST be reported by the Contractor to the Board's representative within 24 hours.

Any workplace injury that is defined under the Occupational Health and Safety Act as a "Critical Injury" must be reported to the Board's representative IMMEDIATELY.

23. SAFE SCHOOL PROCEDURES

Contractor's staff is required to report to the main office of each school during regular school hours and notify the school office staff of the purpose of the visit. The Contractor is required to adhere to all school specific procedures if applicable.

It is the responsibility of the Contractor's staff to sign in and sign out of the Log Book, which is located in the main office area, while performing their duties.

The following information must be recorded in a legible manner:

- Date
- Company Name
- Employee Name
- Employee Signature
- Reason for Visit
- Time Entering Building
- Time Leaving Building

24. PARKING

Contractors must park within the designated areas and allow for provisions to and from the designated parking area onto the job site.

25. TIE BIDS

In the event of a tie. A coin flip conducted by the Procurement Specialist with a minimum of one other Board staff will determine the successful proponent.

END OF INSTRUCTIONS TO BIDDERS

**ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD
ROOF REPLACEMENT**

FOR

ST. ANNE CATHOLIC SCHOOL
1000 THE RAPIDS PARKWAY
SARNIA ONTARIO
N7S 6K3

AND

ST. PATRICK'S CATHOLIC HIGH SCHOOL
1001 THE RAPIDS PARKWAY
SARNIA ONTARIO
N7S 6K2

TENDER FORM

**ST. ANNE CATHOLIC SCHOOL
PROJECT No. 627-CP1704**

**ST. PATRICK'S CATHOLIC HIGH SCHOOL
PROJECT No. 720-CP1704**

OCTOBER 2016

TENDER FORM

**Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704**

Name of Bidder _____
(Hereinafter Called the Tenderer Contractor)

Address _____

Being A _____ (A) which _____ (B)

Note: In space (A) above states type of company
Eg. "Incorporated", "limited", etc.
In space (B) above state "is" or "is not".

Registered under the laws of the Province of _____

DOES HEREBY AGREE TO:

- 1.** Furnish all labour, materials, equipment, and service necessary for the completion of the **Roof Replacement at St. Clair Catholic District School Board** in accordance with Information of Tenderers, Form of Tender, General Conditions of Contract and Drawings by Remlap Building Services, 1407 Gore Road, RR1 Harrow, Ontario – N0R 1G0 for **TOTAL TENDER PRICE "A" (H.S.T. INCLUDED)**,

_____ \$ _____
(HST Included)

or such other sums as may be finally ascertained in accordance with the allowance for Partial Roof Replacement and deductions as set out in the Tender Documents.

- 2.** And also agrees that upon Tender acceptance to furnish a Performance and Maintenance Bond, Labour and Material Payment Bond and Liability Insurance as required by the Contract Documents, the cost of which is included in the Total Tender Price. The Tenderer hereby proposes:

Name of Bonding Company

Stipulated prices shall include all labour, equipment and materials required to complete the work in every respect, including provincial sales tax.

TENDER FORM

**Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704**

Section "A"

Roof Replacement for St. Anne and St. Patrick's Catholic Schools

The Bidder offers to provide all labour, materials and equipment services for the execution and completion of the work of the trade or trades herein and in accordance with the instructions for Bidders including Provincial Sales Tax for the stipulated sum of:

Item

No.

Description

Total

**Option No.1
(HENRY)**

**Option No.2
(SOPREMA)**

**A. ST. ANNE CATHOLIC SCHOOL
(Includes Roof Areas B, D, E and I
as indicated on Key Plan Ra-1)**

The Roofing Contractor is to remove the existing Two-Ply Roof Membrane along with fiberboard insulation from the current roof system. Then the Contractor is to supply and install new rigid insulation and protection board to the existing roof insulation, etc. prior to installing a New Two Ply Modified Bitumen Roof System as shown on the Enclosed Drawings and in accordance with the Project Specifications for this facility. (The Contractor will include a Cash Allowance of \$20,000.00 with this price (if the allowance is not used, it will be taken off of the Total Tender Price).

\$ _____ \$ _____

**B. ST. PATRICK'S CATHOLIC HIGH SCHOOL
(Includes Roof Areas E, J, L, S and U
as indicated on Key Plan Rp-1)**

The Roofing Contractor is to remove the existing Two-Ply Roof Membrane along with fiberboard insulation from the current roof system. Then the Contractor is to supply and install new rigid insulation and protection board to the existing roof insulation, etc. prior to installing a New Two Ply Modified Bitumen Roof System as shown on the Enclosed Drawings and in accordance with the Project Specifications for this facility. (The Contractor will include a Cash Allowance of \$20,000.00 with this price (if the allowance is not used, it will be taken off of the Total Tender Price).

\$ _____ \$ _____

Total Tender Price "A" (excluding HST)

\$ _____

Add 13% HST

\$ _____

Total Tender Price "A" (including HST)

\$ _____

TENDER FORM

**Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704**

- 3.** And also agrees to submit the total tender price in compliance with the provisions of Section 1.21 of the Information to Tenderers regarding HST.
- 4.** And agrees to leave this tender open for acceptance a minimum period of sixty (60) days from the tender closing date and not to modify, withdraw, or cancel their bid during this period.

The Tenderer also agrees that until the form of Agreement is completed and executed, this Tender, together with the acceptance thereof by the Owner and the Tenderer, shall remain open regardless of whether or not any other Tender has been previously accepted.

CREDIT

The Contractor is to provide a credit to leave the existing half inch fiberboard insulation in place if this insulation is mechanically attached through the existing rigid insulation to the existing metal deck.

St. Anne Catholic School \$ _____

St. Patrick's Catholic High School \$ _____

- 5.** And also agrees to start the entire work within four (4) working days after the award of contract.

6. Documents and Acknowledgements

The Tenderer acknowledges that they have carefully examined the site of the proposed work, the existing premises and conditions; and thoroughly reviewed the Information to Tenderers, Tender Form, General Conditions, Supplementary General Conditions, Specifications, Drawings and the Addenda of the proposed Contract.

Addendum No. _____ **Date:** _____

Addendum No. _____ **Date:** _____

7. Completion of Work

We undertake to complete the work in _____ weeks after Receipt of Purchase Order or Written Authorization issued by **St. Clair Catholic School Board**

OR

To start work on _____ and to complete the work by _____

Completion date is not to exceed **JUNE 16TH, 2017.**

TENDER FORM

Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704

8. Subcontractors

The Tenderer proposes to use the following Subcontractors, the portion of the work to be performed by each being as indicated with no more than one Subcontractor being proposed for any such portions. (If Subcontractors are not proposed, write N/A in the blank space.)

| SUBCONTRACTOR | WORK OR TRADE |
|---------------|---------------|
| | |
| | |
| | |
| | |
| | |
| | |

Signature of Authorized Officer _____

Phone No. _____ Email _____

Name of Signature _____

Witness _____

Dated at _____

This _____ day of _____ 2017

NOTES:

1. *If this Tender is submitted by or on behalf of any Corporation by some duly authorized officer, or agent thereof, who shall subscribe their name and office, the Seal of the Corporation shall be affixed.*
2. *The Owner reserves the right to accept or reject any part OR all of bid and may not necessarily award the tender to the lowest bidder.*

**SPECIFICATION
ON
ROOF REPLACEMENT**

FOR

ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD

AT

**ST. ANNE CATHOLIC SCHOOL
1000 THE RAPIDS PARKWAY
SARNIA ONTARIO
N7S 6K3**

AND

**ST. PATRICK'S CATHOLIC HIGH SCHOOL
1001 THE RAPIDS PARKWAY
SARNIA ONTARIO
N7S 6K2**

**ST. ANNE CATHOLIC SCHOOL
PROJECT No. 627-CP1704**

**ST. PATRICK'S CATHOLIC HIGH SCHOOL
PROJECT No. 720-CP1704**

OCTOBER 2016

3.0 GENERAL

**Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704**

3.1 Warranties

3.1.1 Roofing Application Guarantee

Warrant the work of this section including insulation, membrane and sheet metal work against defects and any actual leakage in accordance with the General Conditions but for a period of two (2) years and agree to make good promptly any defects which occur or become apparent within the warranty period, such defects to include but not be restricted to leaking, blistering, lifting, curling, wrinkling, alligating, fish mouths, loosening and splitting of seams, buckling of counter flashing, improper securement of flashings, improper use or application of materials.

3.1.2 Membrane System Warranty:

Provide a Written Membrane System Warranty to **St. Clair Catholic District School Board – Partial Roof Replacement** stating that the Roofing Membrane Manufacturer will pay the entire cost to have the Authorized Roofing Applicator search any leaks which occur due to Membrane or Application (workmanship) failure within the warranty period of fifteen years.

4.0 PRODUCTS

**Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704**

OPTION NO. 1 – HENRY COMPANY

4.1 Modified Bitumen Membrane

- 4.1.1 Modified Bitumen Sheets shall conform to CGSB 37-GP-56M “Membrane, Modified, Bituminous, Prefabricated and Reinforced for Roofing”; Type 2, Class C, Grade 2 for Base Sheets and Type 1, Class A, Grade 2 for Cap Sheets.
- 4.1.2 The Contractor may bid on any Manufacturer's Systems specified for torching application of the base sheet and torching of the cap sheet for this roof area. The colour of the granular surface is to be selected by the Owner. Supply additional granules to be applied to bitumen outflows between membrane sheets.
- 4.1.3 Modified Bitumen Membrane Two-Ply System shall be as specified or approved equal and accepted by the Consultant and Owner.
- a) Henry Company**
- i) Base Sheet (NP180P/S) and (NP180 S/P 3.5 Cap Sheet)
 - ii) Self-Adhesive Membrane (NP 180 Tack Sheet)
 - iii) Cap Sheet (NP250gT4)

4.2 Primer (Flashing Membrane)

- 4.2.1 Primer shall consist of a stabilized bituminous emulsion primer used to enhance adhesion of self-adhesive membranes.

4.3 Rigid Insulation

- 4.3.1 Insulation shall be roof insulation which is rigid closed cell, Polyiso Foam Insulation, integrally laminated to fiber-reinforced paper facers, thermal resistance of insulation shall be R-11.4 (L.T.T.R.) (2.0 inch) for the main roof area of both St. Anne's and St. Patrick's Schools and R-23.6 (L.T.T.R.) (4.0 inch) for the raised platform area for St. Patrick's School, Resistance R-Value in accordance with ASTM C1289-11A. All insulation boards shall be 4 feet by 4 feet in size.

4.4 Insulation Overlay Boards

- 4.4.1 Bituminous Boards consisting of multi-ply, semi-rigid Asphaltic Roofing Substrate Board composed of a mineral fortified Asphaltic core formed between two Asphaltic saturated fiberglass liners. Length 1200mm x Width 1500mm x thickness 4.5 mm such as Recover Board by Bakor or approved equal by the Consultant.

4.5 Bitumen Adhesive

- 4.5.1 Royal Millennium One-Step Foamable Adhesive to be used for application of rigid insulation and overlay boards.

4.0 PRODUCTS

**Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704**

OPTION NO. 1 – HENRY COMPANY

4.6 Vent Pipe Stack Flange

- 4.6.1 The vent pipe stack flange shall be Thaler Roofing Specialties Products Inc. Model No. SJ-37 insulated flange. The Roofing Contractor shall verify the inside diameter of the vent pipe stack for each location.

4.7 Hot Exhaust Stack Flashings

- 4.7.1 The hot pipe flashings shall be Thaler Roofing Specialties Products Inc. Model № MEF-3A aluminum flashings with split collar to suit new roof system. The Contractor shall fill Roxul Insulation between pipe and flange.

4.8 Roof Drain

- 4.8.1 Roof Drain shall be Thaler Roof Specialties Products Inc. Model No. RD-4-RR with FURCO FOR DIRECT CONNECT. Outlet size shall be verified on site by the Roofing Contractor.

4.9 Tapered Insulation (Recessed Roof Drains)

- 4.9.1 The tapered insulation shall be faced Isocyanurate Boards conforming to CAN/CGSB-51.26-M86, 4.9.1 The tapered insulation shall be faced Isocyanurate Boards conforming to CAN/CGSB-51.26-M86, meeting the requirements of ULC S126 Polyisocyanurate foam panels chemically bonded during the foaming process to facers on the top and bottom organic surfaces. Tapered panels shall not be less than 13m at any point of the roof to the slope indicated on the Roof Plan and Details.

4.10 Elastomeric Modified Bitumen Adhesive

- 4.10.1 Bakor MBA Gold is a fib rated rubberized adhesive with a bonding strength designed for adhering SBS modified bitumen and asphalt coated membranes directly to properly prepared substrates.

4.11 Metal Flashings

- 4.11.1 Metal flashings shall be 24ga. Colorite 8000 Series pre-finished steel (both sides) as manufactured by Westeel Roscoe, Steelcolour 8000 Series or Owner approved equal, formed to comply with field conditions. The colour is to be selected by the Owner from the Manufacturer's standard colours. A one meter "test bend" for each general metal flashing condition shall be completed and presented to the Owner's Representative for approval prior to general fabrication.

4.0 PRODUCTS

**Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704**

OPTION NO. 1 – HENRY COMPANY

4.12 Sealants

- 4.12.1 Caulking Sealants for metal flashing shall be one part silicone to conform to CGSB 19 GP 96. Sealants shall be manufactured by Canadian General Electric, Dow Corning or approved equal. The colour of the sealant shall be identical to the colour of the metal flashing; the Owner is to approve the colour before ordering the sealant. This sealant shall be applied to all metal flashing joints including the reglet.

4.13 Roofing Gravel

- 4.13.1 The gravel shall be ¼" to 5/8" size; water washed pea gravel, well graded, opaque, non-porous material free of fines, moisture, ice, and snow or long splinters and conforms to ASTM D1863086.

4.14 Framing Lumber

- 4.14.1 Framing Lumber on top of roof area shall be pressure treated for rot resistance conforming to CSA 0322-1976 and CSA 080-M1983; sizes shown on the Drawings. Grade SPF No. 2 or better.

4.15 Plywood

- 4.15.1 Exterior Grade "fir" to CSA 0121 or CSA 0151, ½" and ¾" thick, as detailed on Enclosed Drawings.

4.16 Rough Hardware and Nails

- 4.16.1 The Roofing Contractor shall supply all rough hardware where required. Nails, spikes, screws, bolts, etc. shall be of sufficient size and type to rigidly secure all members into place. All nails shall be hot dip galvanized.

4.17 Painting

- 4.17.1 All existing gas lines, exhaust fan hoods and roof top units shall be cleaned and scraped prior to being repainted.
- 4.17.2 Clean and prime with Alkyd Metal Primer before applying two coats of enamel paint. The colour shall be selected by the Owner.

4.18 Plastic Roof Cement

- 4.18.1 Pro-Grade Plastomers 810-21 Plastic Cement is composed of asphalt synthetic rubber, fiber and fillers exceeding the requirements of CAN/CGSB-37.5. This product is manufactured by Bakor or approved equal.

4.0 PRODUCTS

Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704

OPTION NO. 1 – HENRY COMPANY

4.19 Precast Pads

- 4.19.1 Precast concrete pads shall be 24 inch by 24 inch by 2 inch thick for additional walkway, etc. as shown on Roof Plan. Pads shall be placed on a 20 inch by 20 inch by 2 inch thick sections of rigid Type 4 extruded polystyrene insulation.

19 New Pavers in Total for St. Anne Catholic School

14 New Pavers in Total for St. Patrick's Catholic High School

4.20 Roof Pipe Supports

- 4.20.1 Roof Pipe Supports as manufactured by C-Port (Model № CXP) are to be supplied and installed by the Roofing Contractor to replace the existing supports for gas line at **St. Patrick's Catholic High School only. Total of 40 Required**

5.0 EXECUTION

**Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704**

OPTION NO. 1 – HENRY COMPANY

5.1 TEAR-OFF

- 5.1.1 Prior to the start of installation, the roofing Contractor shall examine all roof areas included in this Specification. The Roofing Contractor shall notify the Consultant of any unacceptable conditions.
- 5.1.2 These conditions include, but are not limited to, uneven deck surfaces, improperly installed curbs and nailers, surfaces with fins or sharp projections, and surfaces contaminated with incompatible materials. Work shall not begin until these conditions have been corrected. Protect membrane in high traffic areas, work by other trades, application of gravel, etc.
- 5.1.3 Completely remove the existing Loose Laid Ballasted Roof System completely to the existing metal deck. Only tear-off those roofing components that can be re-roofed in the same day. Tear-off work shall not be left exposed at the end of the work day.

5.2 INSTALLATION – Two Ply Modified Bitumen Membrane Roof System

- 5.2.1 The areas to be re-roofed must have all the roofing components removed completely to the metal roof dish before applying the new roof system. Install all carpentry items such as curb extensions, wood blocking at roof perimeters, etc. as detailed on the Drawings. All wood members which are to be anchored to masonry construction shall be permanently fastened into place. Do not use fasteners which will cause spalling, cracking or deformation of fastened materials.
- 5.2.2 Apply roofing materials over clean and dry surfaces in accordance with the Manufacturer's Recommendations. The re-roofing operations shall be performed on a continuous basis as weather conditions allow.
- 5.2.3 Install all new wood blocking and plywood as detailed on the applicable details
- 5.2.4 **Installation of Rigid Insulation Boards**
 - .1 Install boards with low-rise foam adhesive to existing insulation boards and/or metal deck as detailed. On all insulation surfaces intended for board coverage apply beads of 20mm (3/4") wide on 200mm (8") centers.
 - .2 Firmly set the rigid insulation boards in staggered fashion. All boards must be butted tightly together.
 - .3 Apply only as many boards as can be covered in the same day.
- 5.2.5 **Installation of Insulation Overlay Boards**
 - .1 Install boards with low-rise foam adhesive to the rigid insulation as indicated. On all insulation surfaces intended for board coverage, apply beads of 20mm (3/4") wide on 200mm (8") centers.
 - .2 Firmly set the insulation overlay boards, long joints continuously and short joints staggered. All boards must be evenly and tightly butted together.
 - .3 All vertical joints between boards and insulation will be staggered.
 - .4 Apply only as many boards as can be covered in the same day.

5.0 EXECUTION

Roof Replacement for St. Anne Catholic School-Sarnia / Project № 627-CP1704 St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704

OPTION NO. 1 – HENRY COMPANY

5.2.6 Base Sheet Installation

- .1 Install the base sheet roof membrane starting from the low point (roof drain) to the high point. The base sheet is to be adhered with adhesive to the overlay boards to the parapet wall.
- .2 Unroll base sheet flashing at drain level with first side lap lined-up with drain center.
- .3 Overlap side laps by 75mm along lines provided to this end and overlap end laps by 150mm. Stagger end joints by at least 300mm.
- .4 Re-Roll base sheet and unroll again onto bed of cold adhesive with a notched squeegee having notches 6mm (1/4") wide 3mm (1/8") deep and spaced 25mm (1") on centers. The side and end lap must be HEAT WELDED (FUSED) TOGETHER WITH A LEISTER HAND HELD GUN OR APPROVED TO EQUAL TO ENSURE GOOD FUSION. Also avoid the cold adhesive from within two inches of the side and end laps.
- .5 Avoid forming wrinkles, air pockets or fish-mouthing. The modified bitumen membrane should be cut in maximum lengths of 55mm (18 ft) and allowed to relax on the jobsite.
- .6 This membrane is to be carried up to the inside face of parapet wall prior to installing new plywood on inside face of parapet wall.

5.2.7 Installation of Additional Plywood and/or Wood Blocking

- .1 Install all new wood blocking and plywood as detailed on the applicable Details.

Note: The new plywood detail on the inside face of parapet wall is not to be installed until the first ply of base sheet roof membrane is applied 3 inches up the vertical surface of parapet wall.

5.2.8 Base Sheet Flashing Installation

- .1 Apply base sheet flashing only once primer coat is dry.
- .2 Install base sheet flashing in one (1) metre widths to cover roofing substrate over 100mm. Overlap side laps by 75mm. Stagger side laps by a least 100mm from base sheet overlaps on the roof to avoid excessive layering.
- .3 Apply base sheet flashing directly onto substrate by removing silicone paper cover sheet. Proceed from top to bottom. Once in place, apply pressure manually in a uniformed fashion to obtain homogenous adherence over the entire surface. Preferably seal seams with aluminum applicator and rubber roller. The flashing membrane is to be adhered to the bottom of the wood blocking on the outside face of parapet wall. Nail outside edge at 300mm O.C. Burn off plastic film of base sheet membrane before adhering base sheet flashing over it.
- .4 Avoid forming wrinkles, air pockets or fish-mouths.

5.0 EXECUTION

Roof Replacement for St. Anne Catholic School-Sarnia / Project № 627-CP1704 St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704

OPTION NO. 1 – HENRY COMPANY

5.2.9 Cap Sheet Installation

- .1 Prior to installing the cap sheet membrane, all insulated flanges are to be installed around each roof penetration and secured to the metal roof deck with four (4) fasteners per flange before applying base sheet target section on top.
- .2 Once the base sheet has been applied, the stripping has been completed and no indications of defects are present, then the cap sheet shall be laid.
- .3 Begin application of the cap sheet at the lowest edge. Cap sheet shall be unrolled and care be taken to ensure proper alignment of the first roll.
- .4 Cap sheet shall be torched into place in accordance with the Recommendations of the Membrane Manufacturer, to the base sheet membrane.
- .5 The seams between the base sheet and cap sheet shall be staggered a minimum of 300 mm (12 inches).
- .6 Care should be taken to ensure heating is consistent across the width in order to avoid skips or voids. Bitumen should flow out from the lap 6mm (1/4") to ensure a tight seal.
- .7 All lap seams on the cap sheet are to be checked after membrane installation.

5.2.10 Cap Sheet Flashing Installation

- .1 Cap sheet membrane installation shall be laid in strips 1m wide along the parapet. End laps shall be a minimum of 100mm (4 inches) overlap.
- .2 Extend cap sheet a minimum of 150mm (6 inches) onto roof surface from the intersection of roof and vertical surfaces and extend to the top of the parapet wall to the outside of wall.
- .3 The flashing membrane shall be anchored to the wood nailers by nailing through discs or using nails with 25mm (1 inch) minimum diameter head semi-solidly attached. Nail a minimum of 200mm (8 inches) on center.
- .4 Matching granules shall be used to cover excess between flow at seams.

5.2.11 Flood Coat and Gravel Cover

- .1 Apply a flood coat of cold roofing adhesive (MBA Gold) at the rate of 6.5 gallons/100ft² as recommended by Manufacturer (Bakor).
- .2 Then embed new approved pea stone gravel at 20 kg/m² (450 lbs/100ft²) while adhesive is still wet.

5.2.12 Concrete Pavers

- .1 Install concrete pavers as indicated on the Roof Plan on top of one inch extruded polystyrene rigid insulation (Type 4).

5.0 EXECUTION

**Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704**

OPTION NO. 1 – HENRY COMPANY

5.3 INSTALLATION – Metal Flashings

- 5.3.1 Cap and counter flashings shall be jointed with a double S-type locked joint. Flashings shall be installed with continuous clips secured to wood capping blocking at 12 inches O.C.
- 5.3.2 Flashing shall be fabricated to shapes on site with all necessary breaks for adequate expansion.
- 5.3.3 The inside face of the metal cap flashing between the S-locked joints is to be secured with three (3) fasteners matching the colour of the metal cap with a neoprene washer between the fastener head and inside face of the metal cap flashing.
- 5.3.4 All joints shall be sealed with approved sealant.
- 5.3.5 Counter flashings shall be installed at all reglets and curbs with at least three (3) inches below the top of roof curb or reglet.

5.4 CLEAN-UP

- 5.4.1 Upon completion of the installation, the work shall be left clean and free of defects which might affect the durability or appearance of the building. Clean all roof surfaces, including adjacent roofs and grounds of all foreign matter resulting from this Roofing Project.

6.0 PRODUCTS

**Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704**

OPTION NO. 2 – SOPREMA

6.1 Modified Bitumen Membrane

- 6.1.1 Modified Bitumen Sheets shall conform to CGSB 37-GP-56M “Membrane, Modified, Bituminous, Prefabricated and Reinforced for Roofing”; Type 2, Class C, Grade 2 for Base Sheets and Type 1, Class A, Grade 2 for Cap Sheets.
- 6.1.2 The Contractor may bid on any Manufacturer's Systems specified for torching application of the base sheet and torching of the cap sheet for this roof area. The colour of the granular surface is to be selected by the Owner. Supply additional granules to be applied to bitumen outflows between membrane sheets.
- 6.1.3 Modified Bitumen Membrane Two-Ply System shall be as specified or approved equal and accepted by the Consultant and Owner.
- a) Soprema**
- i) Base Sheet (SOPRALENE 180 S/P 3.5 for Cap Sheet)
 - ii) Self-Adhesive Membrane (NP 180 Tack Sheet)
 - iii) Cap Sheet (NP250gT4) for flashing membrane.

6.2 Insulation Soprasmart Board 180

- 6.2.1 Soprasmart board 180 is a high performance high density support panel composed of SBS modified bitumen membrane with a non-woven polyester reinforcement, factory-laminated on asphaltic board (SOPRABOARD). The surface is covered with a thermo-fusible plastic film.

6.3 Primer

- 6.3.1 The primer shall consist of Elastocol Stick designed for use with self-adhered SBS modified bitumen base sheet flashing membrane. The risk of primer flare-up is eliminated when modified bitumen cap sheets are thermo-fused to the self-adhered base sheet flashing membranes.

6.4 Duotack

- 6.4.1 Duotack is a LOW-RISE two-part urethane adhesive to be used for the application of rigid insulation.

6.5 Vent Pipe Stack Flange

- 6.5.1 The vent pipe stack flange shall be Thaler Roofing Specialties Products Inc. Model No. SJ-38 insulated flange. The Roofing Contractor shall verify the inside diameter of the vent pipe stack for each location

6.0 PRODUCTS

**Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704**

OPTION NO. 2 – SOPREMA

6.6 Hot Exhaust Stack Flashings

- 6.6.1 The hot pipe flashings shall be Thaler Roofing Specialties Products Inc. Model № MEF-3A aluminum flashings with split collar to suit the new Two-Ply Modified Bitumen Roof System. The Roofing Contractor shall verify the inside diameter of the hot pipe stack for each location and fill between the flange and pipe with Roxul Insulation.

6.7 Roof Drain

- 6.7.1 Roof Drain shall be Thaler Roof Specialties Products Inc. Model No. RD-4-RR with FURCO FOR DIRECT CONNECT. Outlet size shall be verified on site by the Roofing Contractor.

6.8 Rigid Insulation

- 6.8.1 Insulation shall be roof insulation which is rigid closed cell, Polyiso Foam Insulation, integrally laminated to fiber-reinforced paper facers, thermal resistance of insulation shall be R-11.4 (L.T.T.R.) (2.0 inch) for the main roof area of both St. Anne's and St. Patrick's Schools and R-23.6 (L.T.T.R.) (4.0 inch) for the raised platform area for St. Patrick's School, Resistance R-Value in accordance with ASTM C1289-11A. All insulation boards shall be 4 feet by 4 feet in size.

6.9 Tapered Insulation (Recessed Roof Drains)

- 6.9.1 The tapered insulation shall be faced Isocyanurate Boards conforming to CAN/CGSB-51.26-M86, meeting the requirements of ULC S126 Polyisocyanurate foam panels chemically bonded during the foaming process to facers on the top and bottom organic surfaces. Tapered panels shall not be less than 13m at any point of the roof to the slope indicated on the Roof Plan and Details.

6.10 Elastomeric Modified Bitumen Adhesive

- 6.10.1 COLPLY EF is a low volatile organic compound (VOC), low odour, 100% solids and solvent-free polyether based adhesive.

6.11 Metal Flashings

- 6.11.1 Metal flashings shall be 24ga. Colorite 5000 Series pre-finished steel (both sides) as manufactured by Westeel Roscoe, Steelcolour 5000 Series or Owner approved equal, formed to comply with field conditions. The colour is to be selected by the Owner from the Manufacturer's standard colours. A one meter "test bend" for each general metal flashing condition shall be completed and presented to the Owner's Representative for approval prior to general fabrication.

6.0 PRODUCTS

**Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704**

OPTION NO. 2 – SOPREMA

6.12 Sealants

- 6.12.1 Caulking Sealants for metal flashing shall be one part silicone to conform to CGSB 19 GP 96. Sealants shall be manufactured by Canadian General Electric, Dow Corning or approved equal. The colour of the sealant shall be identical to the colour of the metal flashing; the Owner is to approve the colour before ordering the sealant. This sealant shall be applied to all metal flashing joints including the reglet.

6.13 Roofing Gravel

- 6.13.1 The gravel shall be ¼" to 5/8" size; water washed pea gravel, well graded, opaque, non-porous material free of fines, moisture, ice, and snow or long splinters and conforms to ASTM D1863086.

6.14 Framing Lumber

- 6.14.1 Framing Lumber on top of roof area shall be pressure treated for rot resistance conforming to CSA 0322-1976 and CSA 080-M1983; sizes shown on the Drawings. Grade SPF No. 2 or better.

6.15 Plywood

- 6.15.1 Exterior Grade "fir" to CSA 0121 or CSA 0151, ½" and ¾" thick, as detailed on Enclosed Drawings.

6.16 Rough Hardware and Nails

- 6.16.1 The Roofing Contractor shall supply all rough hardware where required. Nails, spikes, screws, bolts, etc. shall be of sufficient size and type to rigidly secure all members into place. All nails shall be hot dip galvanized.

6.17 Painting

- 6.17.1 All existing gas lines, exhaust fan hoods and roof top units shall be cleaned and scraped prior to being repainted.
- 6.17.2 Clean and prime with Alkyd Metal Primer before applying two coats of enamel paint. The colour shall be selected by the Owner.

6.18 Plastic Roof Cement

- 6.18.1 Pro-Grade Plastomers 810-21 Plastic Cement is composed of asphalt synthetic rubber, fiber and fillers exceeding the requirements of CAN/CGSB-37.5. This product is manufactured by Bakor or approved equal.

6.0 PRODUCTS

**Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704**

OPTION NO. 2 – SOPREMA

6.19 Precast Pads

- 6.19.1 Precast concrete pads shall be 24 inch by 24 inch by 2 inch thick for additional walkway, etc. as shown on Roof Plan. Pads shall be placed on a 20 inch by 20 inch by 2 inch thick sections of rigid Type 4 extruded polystyrene insulation. Also the supports under the electrical raceway shall be 12 inches by 12 inches by 2 inches and placed on a 10 inch square by 1 inch thick of rigid Type 4 extruded polystyrene insulation as detailed. (18 new pavers in total) along with existing pavers on roof area.

19 New Pavers in Total for St. Anne Catholic School

14 New Pavers in Total for St. Patrick's Catholic High School

6.20 Roof Pipe Supports

- 6.20.1 Roof Pipe Supports as manufactured by C-Port (Model № CXP) are to be supplied and installed by the Roofing Contractor to replace the existing supports for gas line at **St. Patrick's Catholic High School only. Total of 40 Required**

7.0 EXECUTION

Roof Replacement for St. Anne Catholic School-Sarnia / Project № 627-CP1704 St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704

OPTION NO. 2 – SOPREMA

7.1 Tear-Off

- 7.1.1 Prior to the start of installation, the roofing Contractor shall examine all roof areas included in this Specification. The Roofing Contractor shall notify the Consultant of any unacceptable conditions.
- 7.1.2 These conditions include, but are not limited to, uneven deck surfaces, improperly installed curbs and nailers, surfaces with fins or sharp projections, and surfaces contaminated with incompatible materials. Work shall not begin until these conditions have been corrected. Protect membrane in high traffic areas, work by other trades, application of gravel, etc.
- 7.1.3 Completely remove the existing Loose Laid Ballasted Roof System completely to the existing metal deck. Only tear-off those roofing components that can be re-roofed in the same day. Tear-off work shall not be left exposed at the end of the work day.

7.2 INSTALLATION – Two Ply Modified Bitumen Membrane Roof System

- 7.2.1 The areas to be re-roofed must have all the roofing components removed completely to the metal roof deck before applying the new roof system. Install all carpentry items such as curb extensions, wood blocking at roof perimeters, etc. as detailed on the Drawings. All wood members which are to be anchored to masonry construction shall be permanently fastened into place. Do not use fasteners which will cause spalling, cracking or deformation of fastened materials.
- 7.2.2 Apply roofing materials over clean and dry surfaces in accordance with the Manufacturer's Recommendations. The re-roofing operations shall be performed on a continuous basis as weather conditions allow.
- 7.2.3 Install all new wood blocking and plywood as detailed on the applicable details.
- 7.2.4 Installation of Rigid Insulation Boards
 - .1 Install boards with Duotack Adhesive to the existing insulation boards and/or metal deck as detailed. On all insulation surfaces intended for board coverage apply beads of 20mm (3/4") wide on 200mm (8") centers.
- 7.2.5 Installation of Soprasmart Board
 - .1 Install Smart Boards with Duotack Adhesive to the rigid insulation as indicated. On all insulation surfaces intended for board coverage, apply continuous strips of 13 to 19 mm (½ to ¾ inch) on 150 mm (6") centers for eight (8) feet around roof perimeter and 200 mm (8") centers for the field of the roof.
 - .2 Firmly set the Smart Boards, into the strips of Duotack Adhesive. All boards must be evenly and tightly butted together in soldier fashion.
 - .3 Apply only as many boards as can be covered in the same day.
 - .4 Install Sopralap cover strips across the end laps on the panels by heat-welded with a propane torch.

7.0 EXECUTION

Roof Replacement for St. Anne Catholic School-Sarnia / Project № 627-CP1704 St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704

OPTION NO. 2 – SOPREMA

7.2.6 Installation of Additional Plywood and/or Wood Blocking

Install all new wood blocking and plywood as detailed on the applicable Details.

Note: The new plywood detailed on the inside face of parapet wall is not to be installed until the first ply of base sheet roof membrane is applied 3 inches up the vertical surface of parapet wall.

7.2.7 Application of Primer

- .1 Apply primer to the wood blocking and plywood surfaces which will be in contact with the self-adhesive membranes at a rate of 0.2 to 0.3 l/m². All surfaces to be primed must be free of rust, dust or any residue that may hinder adherence. Cover primed surfaces with roofing membrane as directed by the Manufacturer.

7.2.8 Base Sheet Flashing Installation

- .1 Apply base sheet flashing only once primer coat is dry.
- .2 Install base sheet flashing in one (1) metre widths to cover roofing substrate over 100mm. Overlap side laps by 75mm. Stagger side laps by a least 100mm from base sheet overlaps on the roof to avoid excessive layering.
- .3 Apply base sheet flashing directly onto substrate by removing silicone paper cover sheet. Proceed from top to bottom. Once in place, apply pressure manually in a uniformed fashion to obtain homogenous adherence over the entire surface. Preferably seal seams with aluminum applicator and rubber roller. The flashing membrane is to be adhered 4 inches over top of the Blueskin membrane on the outside face of parapet wall. Nail outside edge at 300mm O.C. Burn off plastic film of base sheet membrane before adhering base sheet flashing over it.
- .4 Avoid forming wrinkles, air pockets or fish-mouths.

7.2.9 Cap Sheet Installation

- .1 Prior to installing the cap sheet membrane, all insulated flanges are to be installed around each roof penetration and secured to the metal roof deck with four (4) fasteners per flange before applying base sheet target section on top.
- .2 Once the base sheet has been applied, the stripping has been completed and no indications of defects are present, then the cap sheet shall be laid.
- .3 Begin application of the cap sheet at the lowest edge. Cap sheet shall be unrolled and care be taken to ensure proper alignment of the first roll.
- .4 Cap sheet shall be torched into place in accordance with the Recommendations of the Membrane Manufacturer, to the base sheet membrane.
- .5 The seams between the base sheet and cap sheet shall be staggered a minimum of 300 mm (12 inches).
- .6 Care should be taken to ensure heating is consistent across the width in order to avoid skips or voids. Bitumen should flow out from the lap 6mm (1/4") to ensure a tight seal.
- .7 All lap seams on the cap sheet are to be checked after membrane installation.

7.0 EXECUTION

**Roof Replacement
for
St. Anne Catholic School-Sarnia / Project № 627-CP1704
St. Patrick's Catholic High School-Sarnia / Project № 720-CP1704**

OPTION NO. 2 – SOPREMA

7.2.10 **Cap Sheet Flashing Installation**

- .1 Cap sheet membrane installation shall be laid in strips 1m wide along the parapet. End laps shall be a minimum of 100mm (4 inches) overlap.
- .2 Extend cap sheet a minimum of 150mm (6 inches) onto roof surface from the intersection of roof and vertical surfaces and extend to the top of the parapet wall to the outside of wall.
- .3 The flashing membrane shall be anchored to the wood nailers by nailing through discs or using nails with 25mm (1 inch) minimum diameter head semi-solidly attached. Nail a minimum of 200mm (8 inches) on center.
- .4 Matching granules shall be used to cover excess between flow at seams.

7.2.11 **Flood Coat and Gravel Cover**

- .1 Apply a flood coat of cold roofing adhesive (COLPLY EF) at the rate of 5 gallons/100ft² as recommended by Manufacturer (Soprema).
- .2 Then embed new approved pea stone gravel at 20 kg/m² (450 lbs/100ft²) while adhesive is still wet.

7.2.12 **Concrete Pavers**

- .1 Install concrete pavers as indicated on the Roof Plan on top of one inch extruded polystyrene rigid insulation (Type 4).

7.3 INSTALLATION – Metal Flashings

- 7.3.1 Cap and counter flashings shall be jointed with a double S-type locked joint. Flashings shall be installed with continuous clips secured to wood capping blocking at 12 inches O.C.
- 7.3.2 Flashing shall be fabricated to shapes on site with all necessary breaks for adequate expansion.
- 7.3.3 The inside face of the metal cap flashing between the S-locked joints is to be secured with three (3) fasteners matching the colour of the metal cap with a neoprene washer between the fastener head and inside face of the metal cap flashing.
- 7.3.4 All joints shall be sealed with approved sealant.
- 7.3.5 Counter flashings shall be installed at all reglets and curbs with at least three (3) inches below the top of roof curb or reglet.

7.4 CLEAN-UP

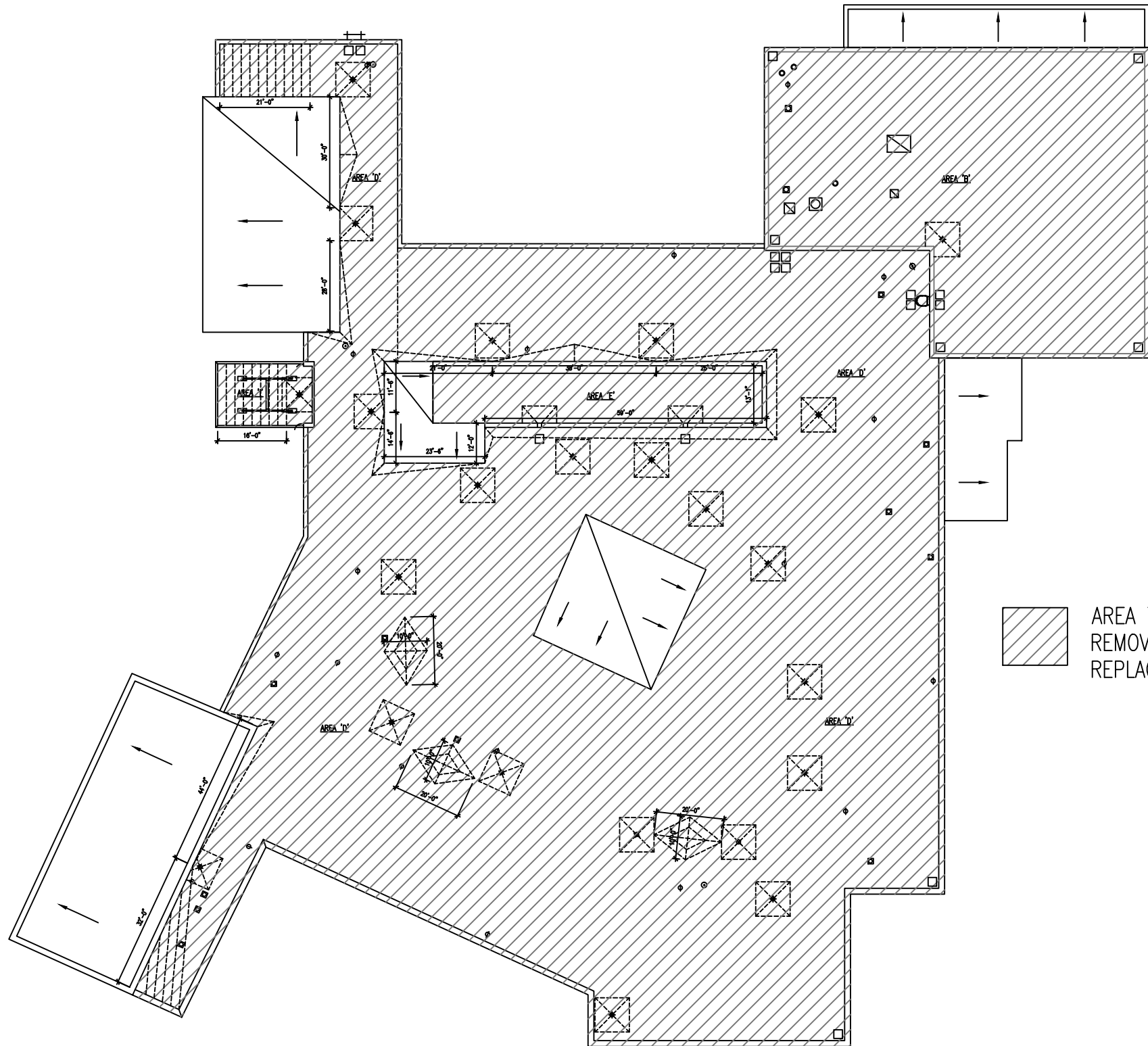
- 7.4.1 Upon completion of the installation, the work shall be left clean and free of defects which might affect the durability or appearance of the building. Clean all roof surfaces, including adjacent roofs and grounds of all foreign matter resulting from this Roofing Project.

ROOF REPLACEMENT
FOR
ST. ANNE CATHOLIC SCHOOL
1000 THE RAPIDS PARKWAY
SARNIA ONTARIO
N7S 6K3
PROJECT No. 627-CP1704

ENCLOSED DRAWINGS

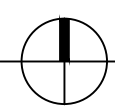
- Ra-1 Key Roof Plan**
- Ra-1a Existing and Design Roof System List**
- Ra-2 Enlarged Roof Plan – Area ‘B’**
- Ra-3 Enlarged Roof Plan – Part of Area ‘D’**
- Ra-4 Enlarged Roof Plan – Part of Area ‘D’, ‘E’ and ‘I’**
- Ra-5 Enlarged Roof Plan – Part of Area ‘D’**
- Ra-6 Enlarged Roof Plan – Part of Area ‘D’**
- Ra-7 Enlarged Roof Plan – Part of Area ‘D’**

- Da-1 Roof Drain Detail**
- Da-2 Vent Pipe Stack Detail**
- Da-3 Hot Exhaust Stack Detail**
- Da-4 Perimeter Detail**
- Da-5 Perimeter Detail**
- Da-6 Low Perimeter Detail**
- Da-6a Low Perimeter Detail**
- Da-7 Perimeter Detail**
- Da-8 High Perimeter Detail**
- Da-9 Detail @ Standing Seam Panels (Area ‘E’)**
- Da-10 Detail @ Standing Seam Panels (Area ‘D’)**
- Da-11 Exhaust Fan Detail**
- Da-12 Relief Vent Detail**
- Da-13a New Wall Ladder Detail**
- Da-13b Roof Ladder Detail**
- Da-14 Exhaust Vent Flashing Detail**
- Da-15 Dryer Vent Flashing Detail**



TAPERED INSULATION
 ROOF DRAIN - 2% SLOPE
 CRICKET - 1% SLOPE

 AREA TO BE REMOVED AND REPLACED

 **KEY ROOF PLAN**
 SCALE : 1" = 30'-0"

| | | | |
|--|--------------|--|------------------|
| REMLAP BUILDING SERVICES INC. R ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS B BUILDING ENVELOPES (AIR/WAPOUR BARRIER/WATER PROOFING) S SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road Tel: (519) 738-3458 Harrow, Ontario N0R 1G0 Fax: (519) 738-4787 | | PROJECT | DATE : |
| | | ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT | OCTOBER 2016 |
| | | 1000 THE RAPIDS PARKWAY, SARNIA ONTARIO | SCALE : |
| | | CLIENT | AS SHOWN |
| | | ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | DRAWN BY : |
| | | | CWP |
| | | | CHK. BY : |
| | | | CWP |
| | | | SHEET SIZE : |
| | | | 11"x17" |
| DATE (MM-DD-YY) | ISSUED FOR | DRAWING TITLE | PROJECT FILE NO. |
| 10-24-16 | OWNER REVIEW | KEY ROOF PLAN | RBS16-60 |
| 12-5-16 | TENDER | | DRAWING NO. |
| | | | Ra-1 |

**ROOF REPLACEMENT
ST. ANNE CATHOLIC SCHOOL
1000 THE RAPIDS PARKWAY, SARNIA ONTARIO N7S 6K3**

EXISTING ROOF SYSTEM

Two Ply Modified Bitumen Granulated Surface Membrane
On ½" Fiberboard Insulation
On 2.7" Rigid Insulation (ISO)
On Kraft Paper for Vapour Retarder
On 3" Acoustic Metal Deck

AREA 'B'

Two Ply Modified Bitumen Granulated Surface Membrane
On ½" Fibreboard Insulation
On 2.7" Rigid Insulation (ISO)
On Kraft Paper for Vapour Retarder
On 1½" Metal Deck

AREA 'D'

Two Ply Modified Bitumen Granulated Surface Membrane
On ½" Fibreboard Insulation
On 2.7" Rigid Insulation (ISO)
On Kraft Paper for Vapour Retarder
On 1½" Metal Deck

AREA 'E'

Two Ply Modified Bitumen Granulated Surface Membrane
On ½" Gypsum Board
On 1½" Metal Deck

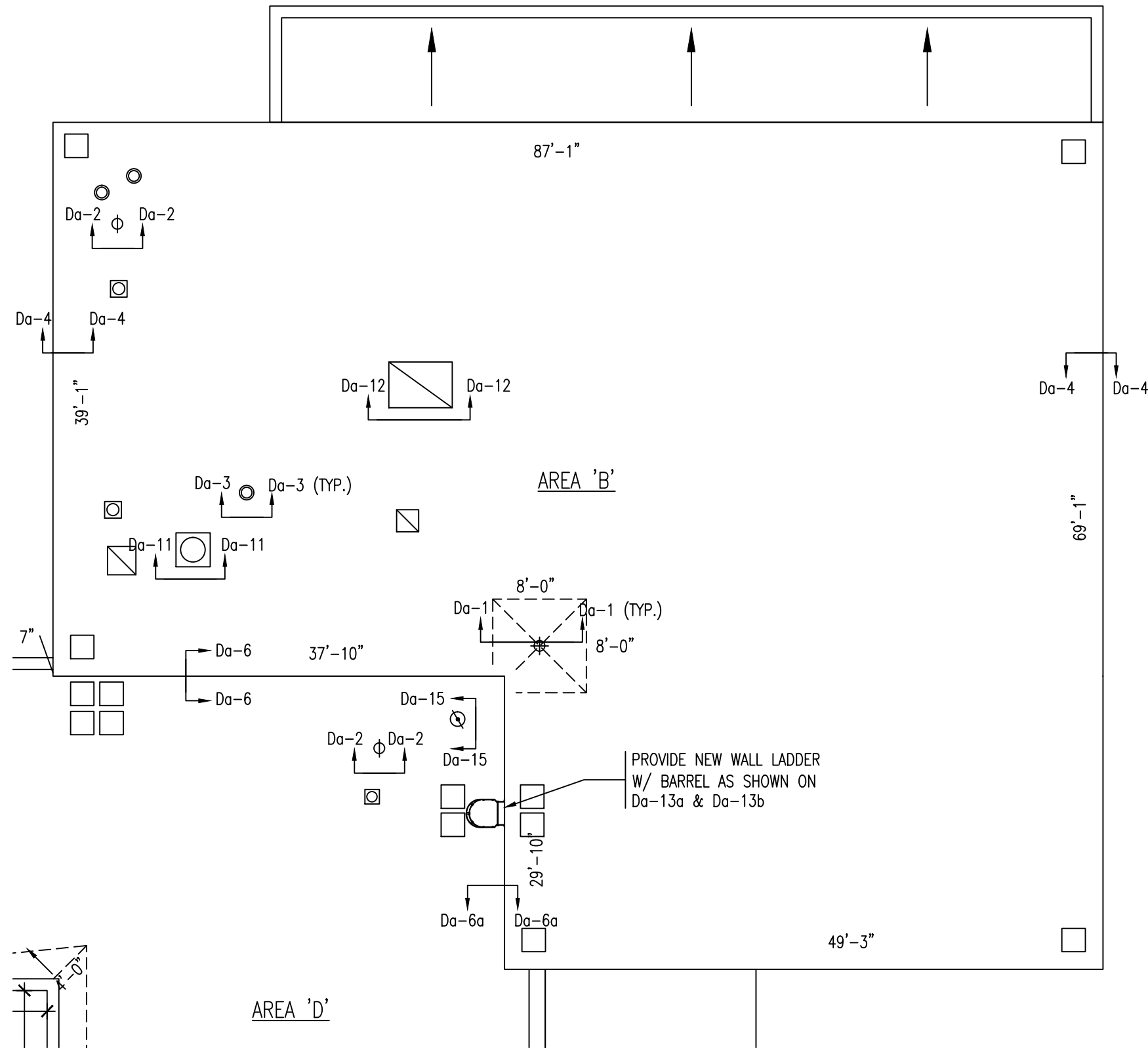
AREA 'I'**DESIGN ROOF SYSTEM**

Pea Stone Roofing Gravel
On Flood Coat of Adhesive
On Two Ply Modified Bitumen Membrane
On 3/16" Asphalt Protection Board
On Tapered Insulation as Noted
On New 2" Rigid Insulation (ISO)
On Existing 2.7" Rigid Insulation
On Existing Vapour Retarder
On Existing Metal Deck

Pea Stone Roofing Gravel
On Flood Coat of Adhesive
On Two Ply Modified Bitumen Membrane
On 3/16" Asphalt Protection Board
On Tapered Insulation as Noted
On New 2" Rigid Insulation (ISO)
On Existing 2.7" Rigid Insulation
On Existing Vapour Retarder
On Existing Metal Deck

Pea Stone Roofing Gravel
On Flood Coat of Adhesive
On Two Ply Modified Bitumen Membrane
On 3/16" Asphalt Protection Board
On Tapered Insulation as Noted
On New 2" Rigid Insulation (ISO)
On Existing 2.7" Rigid Insulation
On Existing Vapour Retarder
On Existing Metal Deck

Pea Stone Roofing Gravel
On Flood Coat of Adhesive
On Two Ply Modified Bitumen Membrane
On 3/16" Asphalt Protection Board
On Tapered Insulation as Noted
On 2" Rigid Insulation (ISO)
On Existing Metal Deck



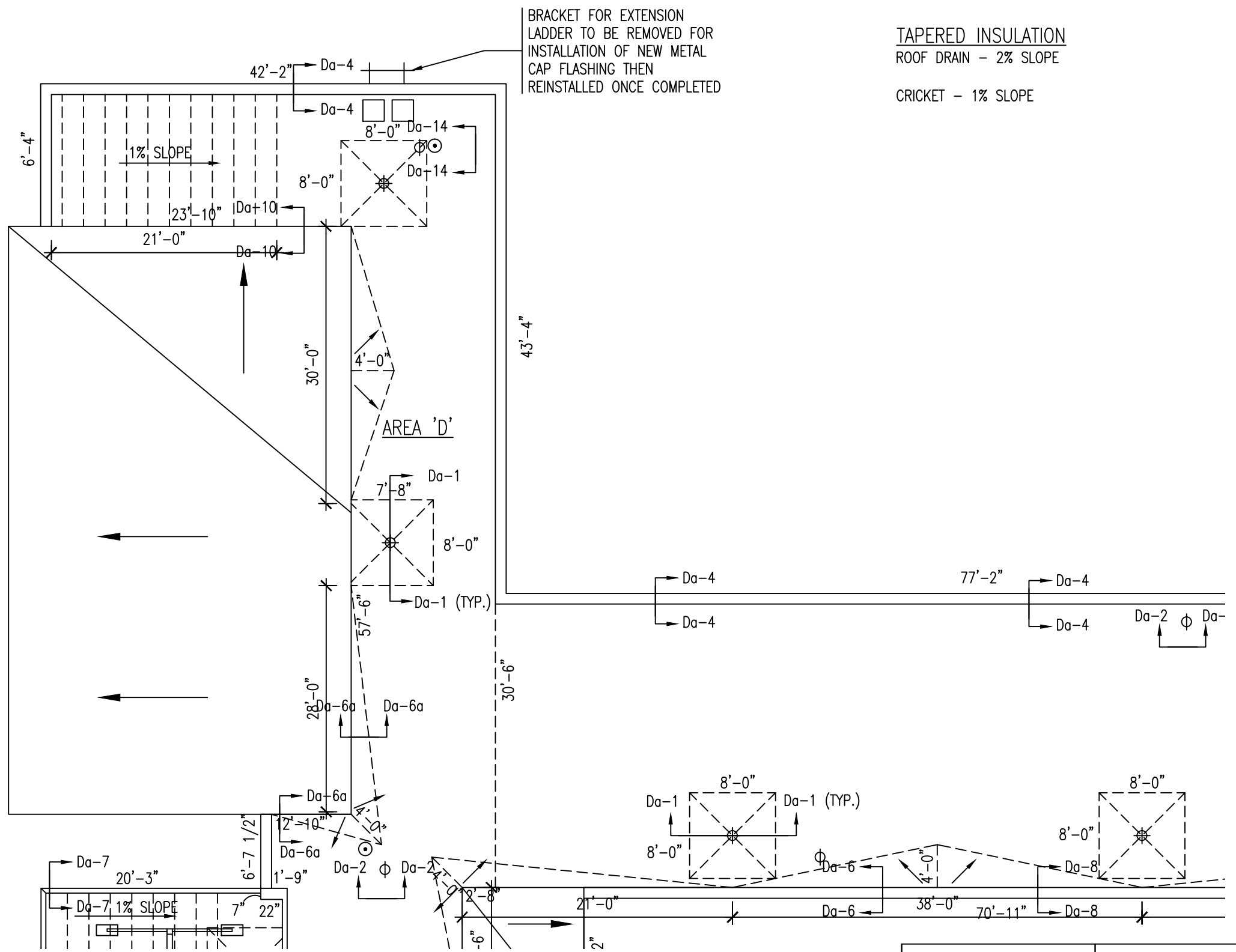
TAPERED INSULATION
 ROOF DRAIN - 2% SLOPE
 CRICKET - 1% SLOPE

| LEGEND | |
|--------|------------------------|
| OFS | OVERFLOW SCUPPER |
| ⊕ | ROOF DRAIN |
| ⊕ | VENT PIPE STACK |
| ⊙ | HOT EXHAUST STACK |
| RH | ROOF HATCH |
| ⊠ | EXHAUST FAN |
| G | GOOSE NECK EXHAUST FAN |
| •G | GAS LINE THRU ROOF |
| --G-- | GAS LINE |
| ↗ | SATELITE DISH |
| SD | SCUPPER DRAIN |
| ⊖ | VENT STACK |
| □ | CONCRETE PAVER (NEW) |
| ⊠ | RELIEF VENT |
| ⊙ | EXHAUST VENT FLASHING |
| ⊙ | DRYER VENT FLASHING |

ENLARGED ROOF PLAN - ROOF PENETRATION AND DIMENSIONS

SCALE : 3/32" = 1'-0"

| | | |
|---|---|---|
| REMLAP BUILDING SERVICES INC. ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/WATER BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Harrow, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519) 738-4787 | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT 1000 THE RAPIDS PARKWAY, SARNIA ONTARIO | DATE : OCTOBER 2016 SCALE : AS SHOWN DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 11"x17" PROJECT FILE NO. RBS16-60 DRAWING NO. Ra-2 |
| DATE (MM-DD-YY) 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER | DRAWING TITLE ENLARGED ROOF PLAN - ROOF AREA 'B' |

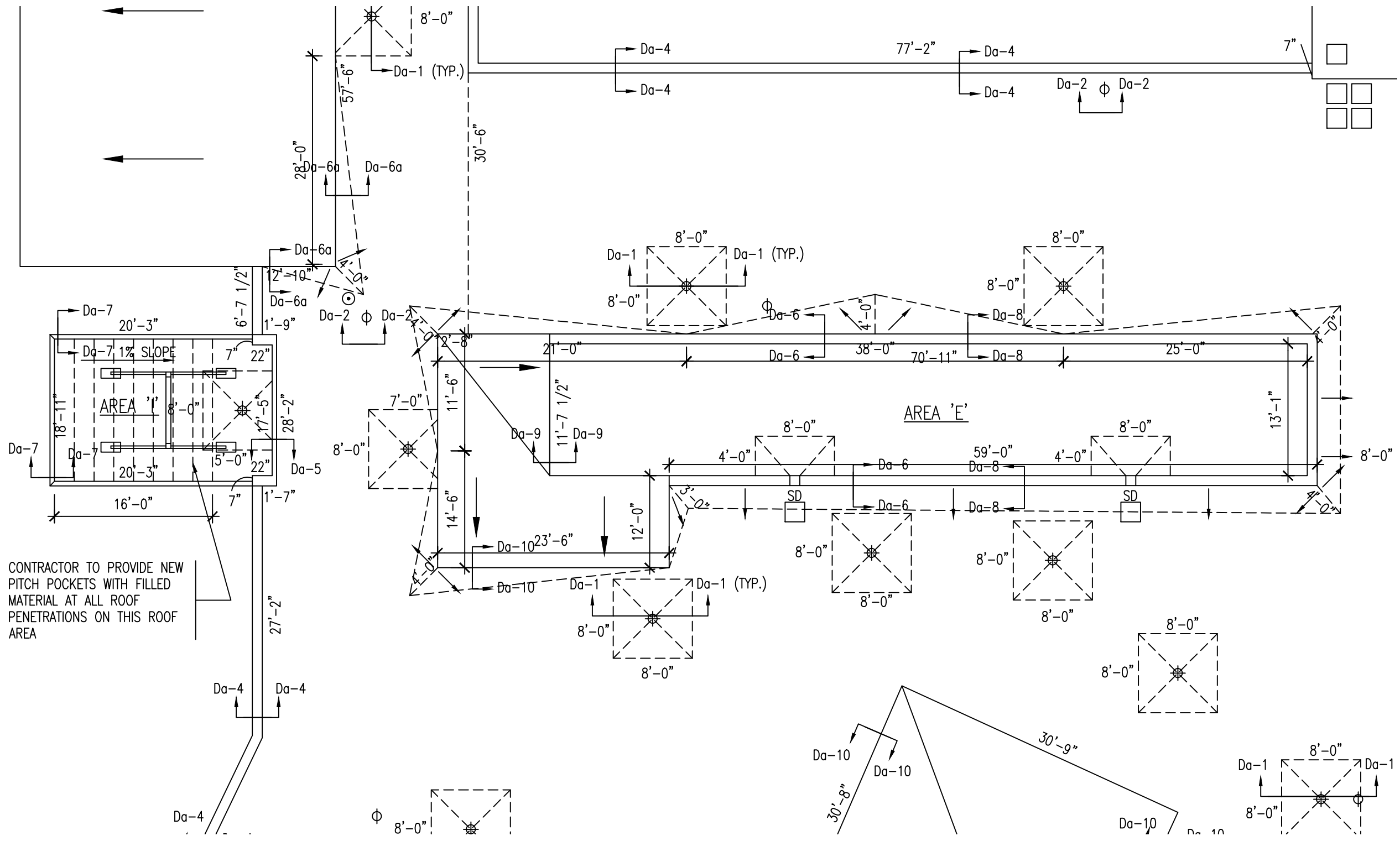


TAPERED INSULATION
 ROOF DRAIN - 2% SLOPE
 CRICKET - 1% SLOPE

| LEGEND | |
|--------|------------------------|
| OFS | OVERFLOW SCUPPER |
| ⊕ | ROOF DRAIN |
| ⊕ | VENT PIPE STACK |
| ⊙ | HOT EXHAUST STACK |
| RH | ROOF HATCH |
| ⊠ | EXHAUST FAN |
| G | GOOSE NECK EXHAUST FAN |
| •G | GAS LINE THRU ROOF |
| -G- | GAS LINE |
| ↗ | SATELITE DISH |
| SD | SCUPPER DRAIN |
| ⊕ | VENT STACK |
| □ | CONCRETE PAVER (NEW) |
| ⊠ | RELIEF VENT |
| ⊙ | EXHAUST VENT FLASHING |
| ⊙ | DRYER VENT FLASHING |

ENLARGED ROOF PLAN - ROOF PENETRATION AND DIMENSIONS
 SCALE : 3/32" = 1'-0"

| | | |
|--|--|---|
| REMLAP BUILDING SERVICES INC. ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/WATER BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road Harrow, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519) 738-4797 | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT 1000 THE RAPIDS PARKWAY, SARNIA ONTARIO | DATE : OCTOBER 2016 SCALE : AS SHOWN DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 11"x17" |
| | DRAWING TITLE ENLARGED ROOF PLAN - ROOF AREA 'D' | PROJECT FILE NO. RBS16-60 DRAWING NO. Ra-3 |



| LEGEND | |
|--------|------------------------|
| OFS | OVERFLOW SCUPPER |
| ⊕ | ROOF DRAIN |
| ⊕ | VENT PIPE STACK |
| ⊙ | HOT EXHAUST STACK |
| RH | ROOF HATCH |
| ⊠ | EXHAUST FAN |
| ⊠ | GOOSE NECK EXHAUST FAN |
| •G | GAS LINE THRU ROOF |
| -G- | GAS LINE |
| ↗ | SATELITE DISH |
| SD | SCUPPER DRAIN |
| ⊕ | VENT STACK |
| ⊠ | CONCRETE PAVER (NEW) |
| ⊠ | RELIEF VENT |
| ⊕ | EXHAUST VENT FLASHING |
| ⊕ | DRYER VENT FLASHING |

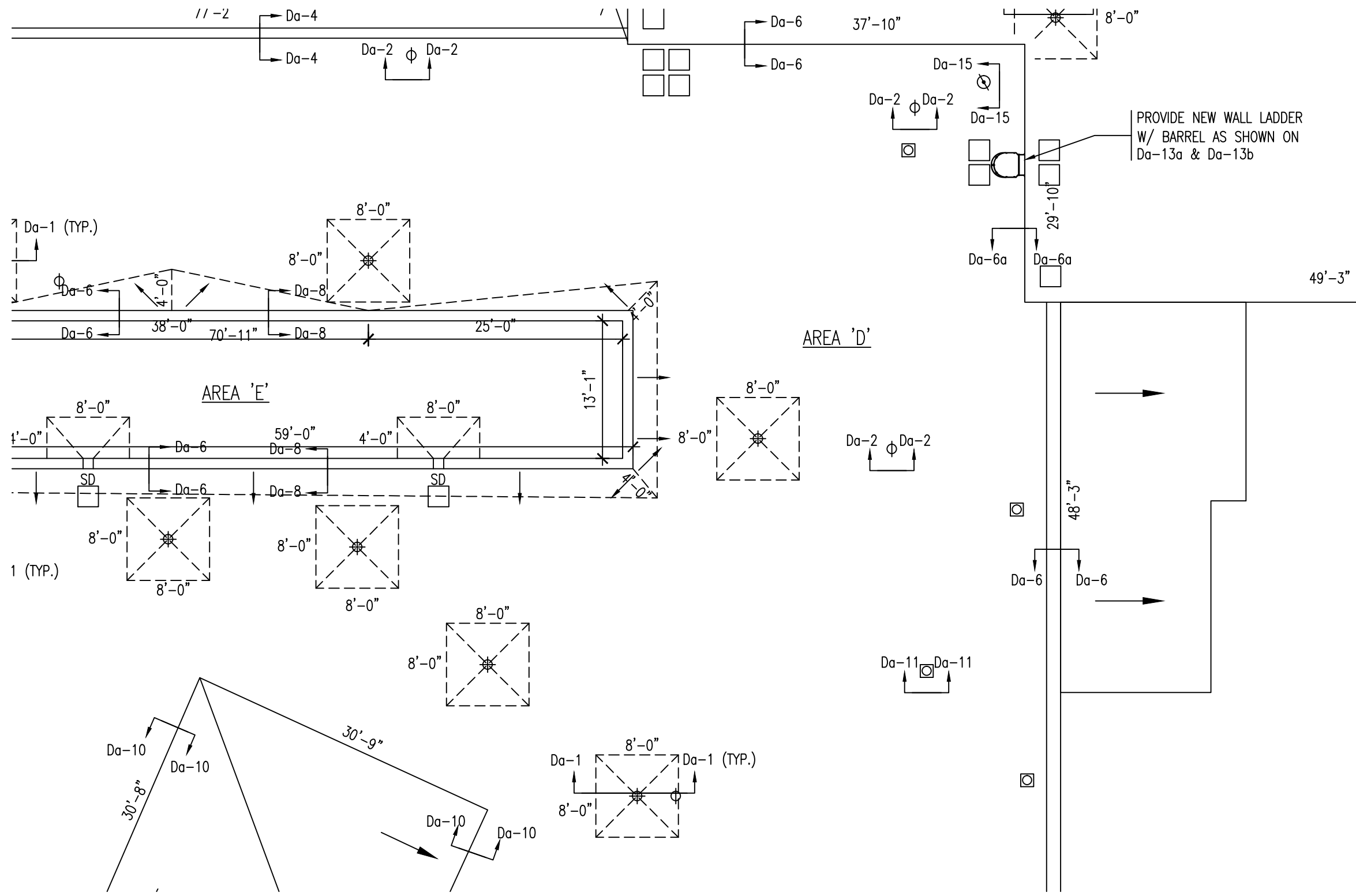
TAPERED INSULATION
 ROOF DRAIN - 2% SLOPE
 CRICKET - 1% SLOPE

CONTRACTOR TO PROVIDE NEW PITCH POCKETS WITH FILLED MATERIAL AT ALL ROOF PENETRATIONS ON THIS ROOF AREA

ENLARGED ROOF PLAN - ROOF PENETRATION AND DIMENSIONS
 SCALE : 3/32" = 1'-0"

| | | |
|---|--|---|
| REMLAP BUILDING SERVICES INC. ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/WAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road Harrow, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519) 738-4797 | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT 1000 THE RAPIDS PARKWAY, SARNIA ONTARIO | DATE : OCTOBER 2016 SCALE : AS SHOWN DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 11"x17" |
| | DRAWING TITLE ENLARGED ROOF PLAN - ROOF | PROJECT FILE NO. RBS16-60 DRAWING NO. Ra-4 |

| DATE (MM-DD-YY) | ISSUED FOR |
|-----------------|--------------|
| 10-24-16 | OWNER REVIEW |
| 12-5-16 | TENDER |

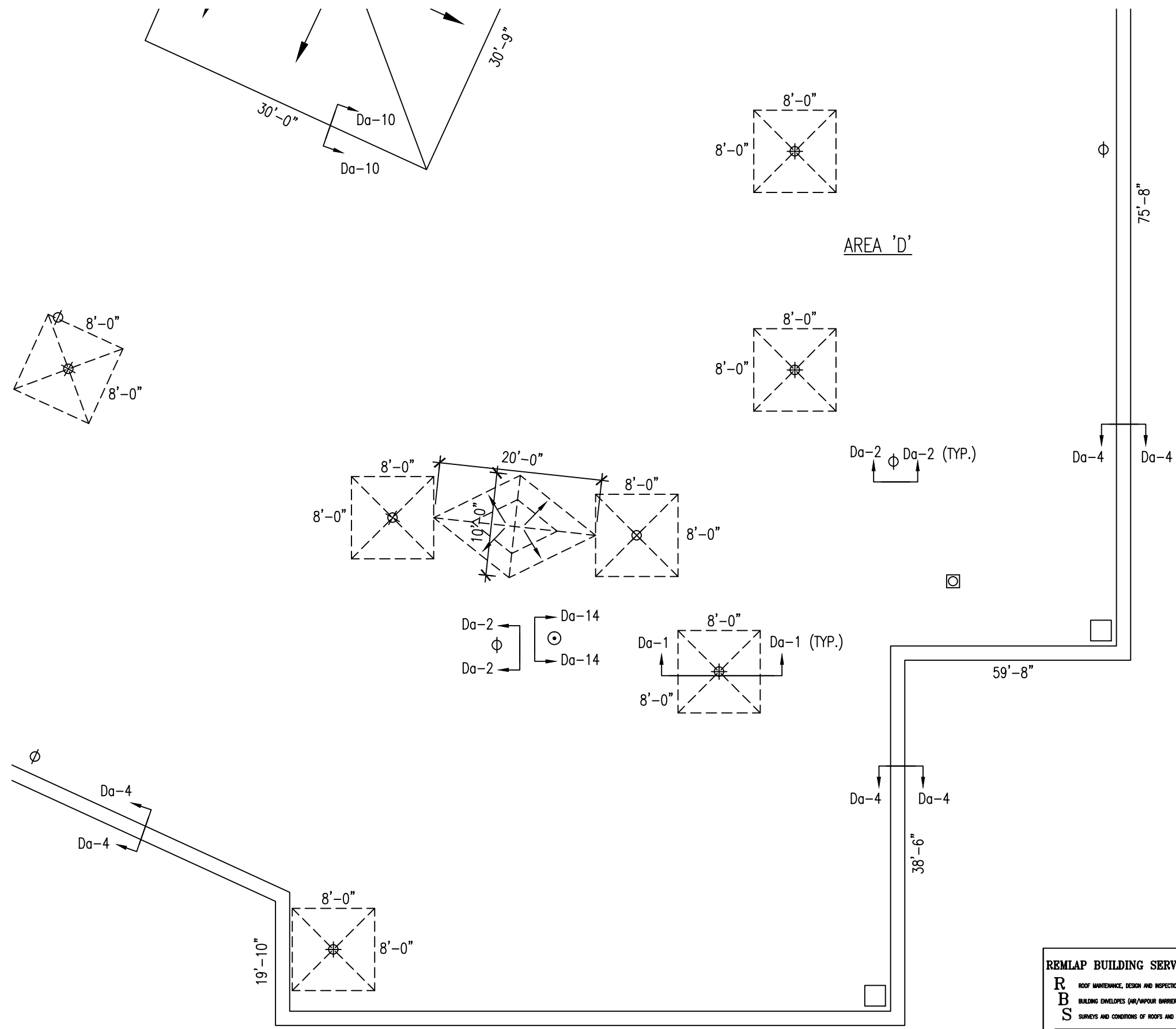


| LEGEND | |
|--------|------------------------|
| OFS | OVERFLOW SCUPPER |
| ⊕ | ROOF DRAIN |
| ⊕ | VENT PIPE STACK |
| ⊙ | HOT EXHAUST STACK |
| RH | ROOF HATCH |
| ⊕ | EXHAUST FAN |
| G | GOOSE NECK EXHAUST FAN |
| •G | GAS LINE THRU ROOF |
| -G- | GAS LINE |
| ↗ | SATELITE DISH |
| SD | SCUPPER DRAIN |
| ⊕ | VENT STACK |
| □ | CONCRETE PAVER (NEW) |
| ▧ | RELIEF VENT |
| ⊕ | EXHAUST VENT FLASHING |
| ⊕ | DRYER VENT FLASHING |

TAPERED INSULATION
 ROOF DRAIN - 2% SLOPE
 CRICKET - 1% SLOPE

ENLARGED ROOF PLAN - ROOF PENETRATION AND DIMENSIONS
 SCALE : 3/32" = 1'-0"

| | | |
|--|--|---|
| REMLAP BUILDING SERVICES INC. ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/WAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road Huron, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519) 738-4787 | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT 1000 THE RAPIDS PARKWAY, SARNIA ONTARIO | DATE : OCTOBER 2016 SCALE : AS SHOWN DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 11"x17" |
| | DRAWING TITLE ENLARGED ROOF PLAN - ROOF AREA 'D' | PROJECT FILE NO. RBS16-60 DRAWING NO. Ra-5 |



| LEGEND | |
|--------|------------------------|
| OFS | OVERFLOW SCUPPER |
| ⊕ | ROOF DRAIN |
| ⊕ | VENT PIPE STACK |
| ⊙ | HOT EXHAUST STACK |
| RH | ROOF HATCH |
| ⊠ | EXHAUST FAN |
| G | GOOSE NECK EXHAUST FAN |
| •G | GAS LINE THRU ROOF |
| -G- | GAS LINE |
| ↗ | SATELITE DISH |
| SD | SCUPPER DRAIN |
| ⊖ | VENT STACK |
| □ | CONCRETE PAVER (NEW) |
| ▣ | RELIEF VENT |
| ⊙ | EXHAUST VENT FLASHING |
| ⊙ | DRYER VENT FLASHING |

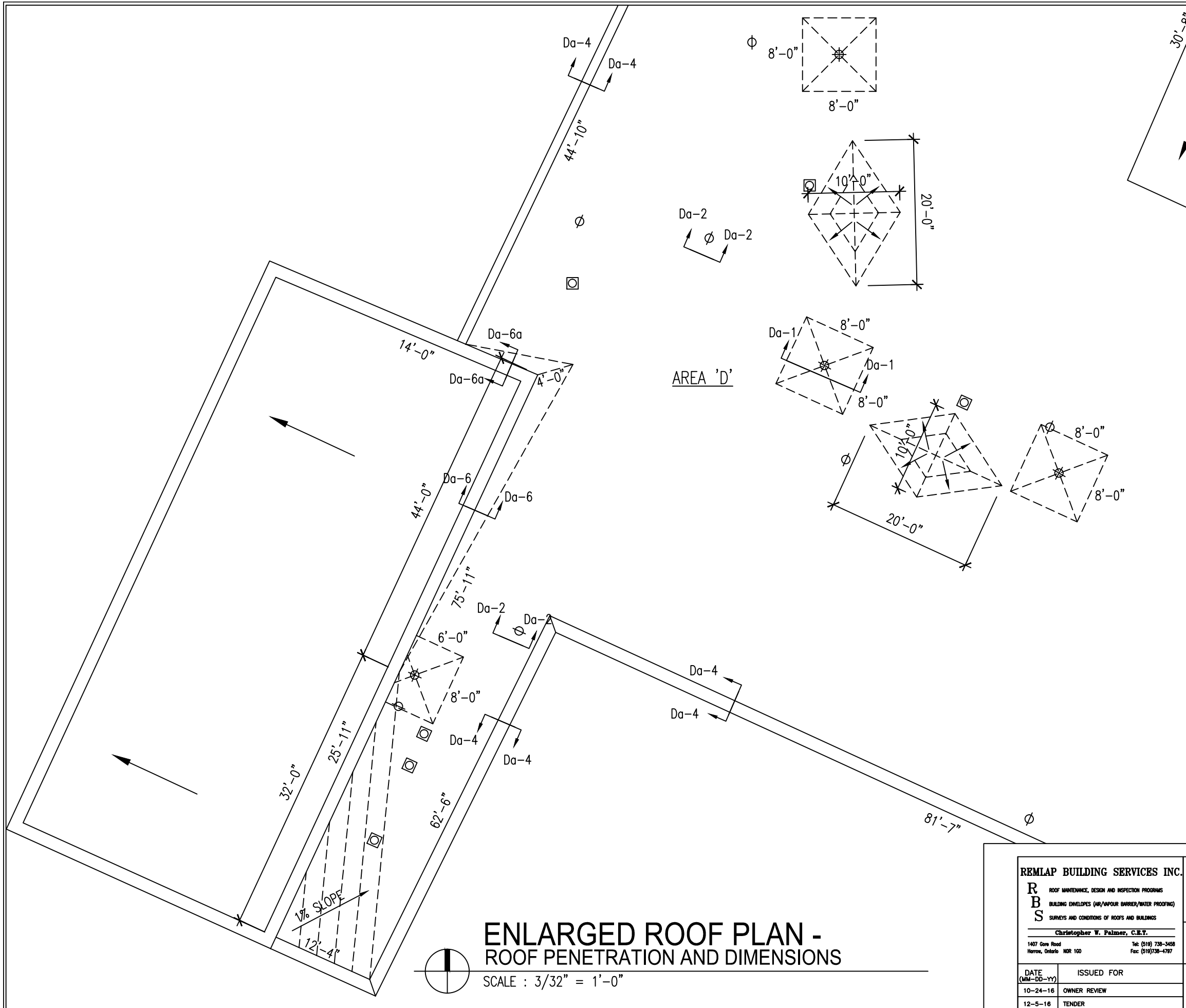
TAPERED INSULATION
 ROOF DRAIN - 2% SLOPE
 CRICKET - 1% SLOPE

ENLARGED ROOF PLAN - ROOF PENETRATION AND DIMENSIONS

SCALE : 3/32" = 1'-0"

| | | |
|--|--|---|
| REMLAP BUILDING SERVICES INC. ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/WATER BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road Harrow, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519) 738-4787 | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT 1000 THE RAPIDS PARKWAY, SARNIA ONTARIO | DATE : OCTOBER 2016 SCALE : AS SHOWN DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 11"x17" |
| | DRAWING TITLE ENLARGED ROOF PLAN - ROOF AREA 'D' | PROJECT FILE NO. RBS16-60 DRAWING NO. Ra-6 |

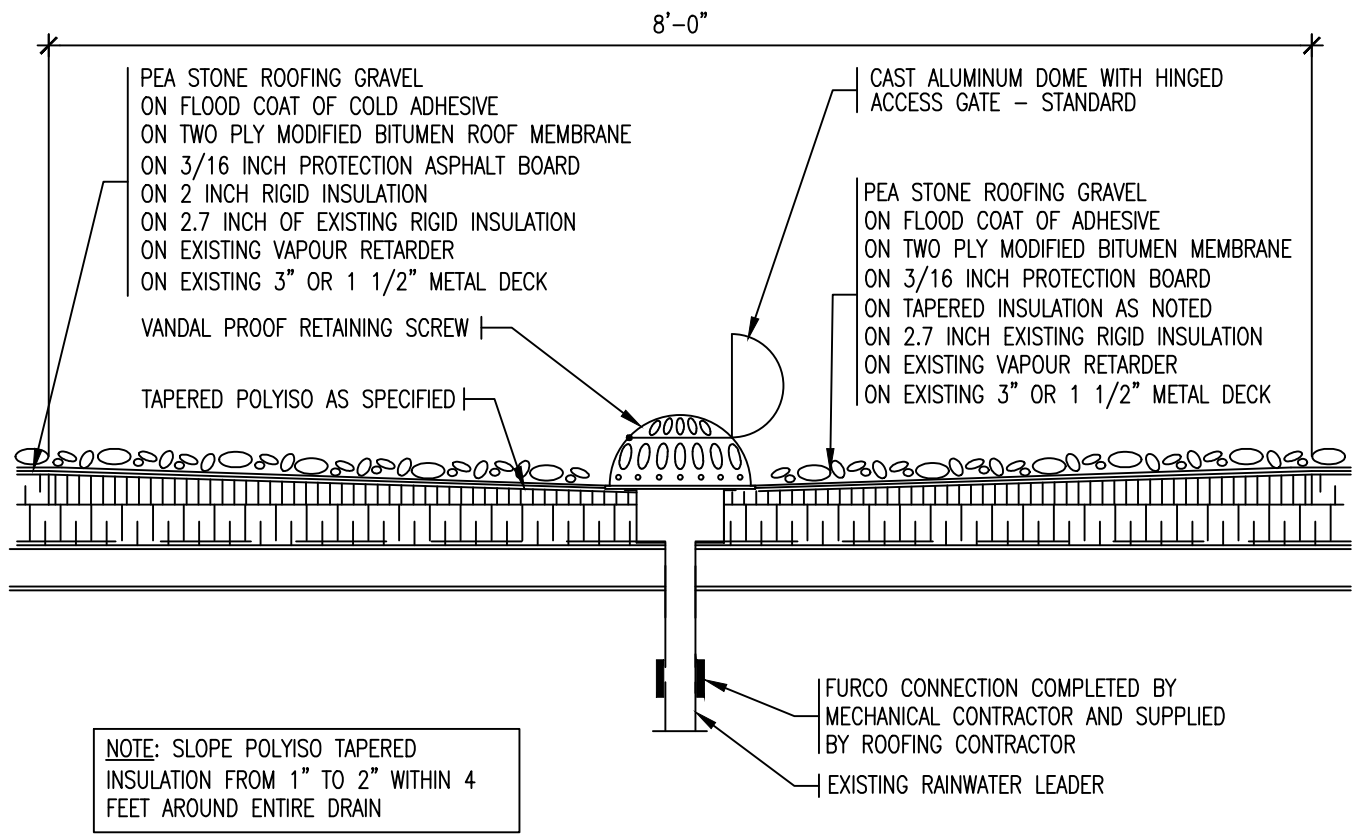
| DATE (MM-DD-YY) | ISSUED FOR |
|-----------------|--------------|
| 10-24-16 | OWNER REVIEW |
| 12-5-16 | TENDER |



| LEGEND | |
|--------|------------------------|
| OFS | OVERFLOW SCUPPER |
| ⊕ | ROOF DRAIN |
| ⊕ | VENT PIPE STACK |
| ⊙ | HOT EXHAUST STACK |
| RH | ROOF HATCH |
| ⊠ | EXHAUST FAN |
| G | GOOSE NECK EXHAUST FAN |
| •G | GAS LINE THRU ROOF |
| -G- | GAS LINE |
| ↗ | SATELITE DISH |
| SD | SCUPPER DRAIN |
| ⊕ | VENT STACK |
| □ | CONCRETE PAVER (NEW) |
| ⊠ | RELIEF VENT |
| ⊙ | EXHAUST VENT FLASHING |
| ⊙ | DRYER VENT FLASHING |

TAPERED INSULATION
 ROOF DRAIN - 2% SLOPE
 CRICKET - 1% SLOPE

| | | |
|---|--|---|
| REMLAP BUILDING SERVICES INC. ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/WAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road Harrow, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519) 738-4787 | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT 1000 THE RAPIDS PARKWAY, SARNIA ONTARIO | DATE : OCTOBER 2016 SCALE : AS SHOWN DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 11"x17" |
| | DRAWING TITLE ENLARGED ROOF PLAN - ROOF AREA 'D' | PROJECT FILE NO. RBS16-60 DRAWING NO. Ra-7 |
| DATE (MM-DD-YY) 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER | |

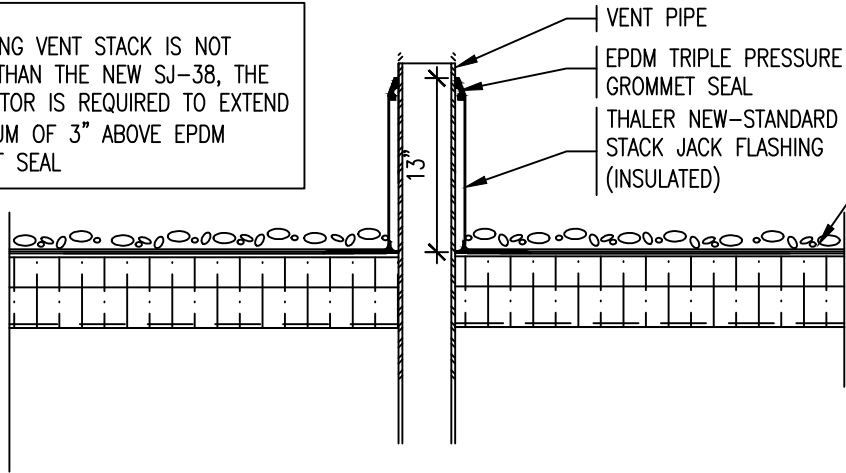


ROOF DRAIN DETAIL

SCALE : 1" = 1'-0"

| | | |
|---|---|------------------------------|
| REMLAP BUILDING SERVICES INC. R B S <small>ROOF REPAIRS, ROOFING AND INSULATION SERVICES INSULATION SPECIALISTS (POLYURETHANE FOAM/ROCK WOOL FIBRE) SUBJECTS AND CONSULTANTS OF ROOFS AND BUILDINGS 1400 Glen Road Toronto, Ontario M8Z 1K2 Tel: (416) 738-3888 Fax: (416) 738-0727</small> | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | 1000 THE RAPIDS PARKWAY, SARNAIA, ONTARIO | SCALE : N.T.S. |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | DRAWN BY : CWP |
| | DRAWING TITLE ROOF DETAIL | CHK. BY : CWP |
| DATE (MM-DD-YY) 10-24-16 | ISSUED FOR OWNER REVIEW | SHEET SIZE : 8.1/2"x11" |
| 12-5-16 | TENDER | PROJECT FILE NO. RBS16-60 |
| | | DRAWING NO. Da-1 |

NOTE:
 IF EXISTING VENT STACK IS NOT
 HIGHER THAN THE NEW SJ-38,
 THE CONTRACTOR IS REQUIRED TO
 EXTEND A MINIMUM OF 3" ABOVE
 EPDM GROMMET SEAL

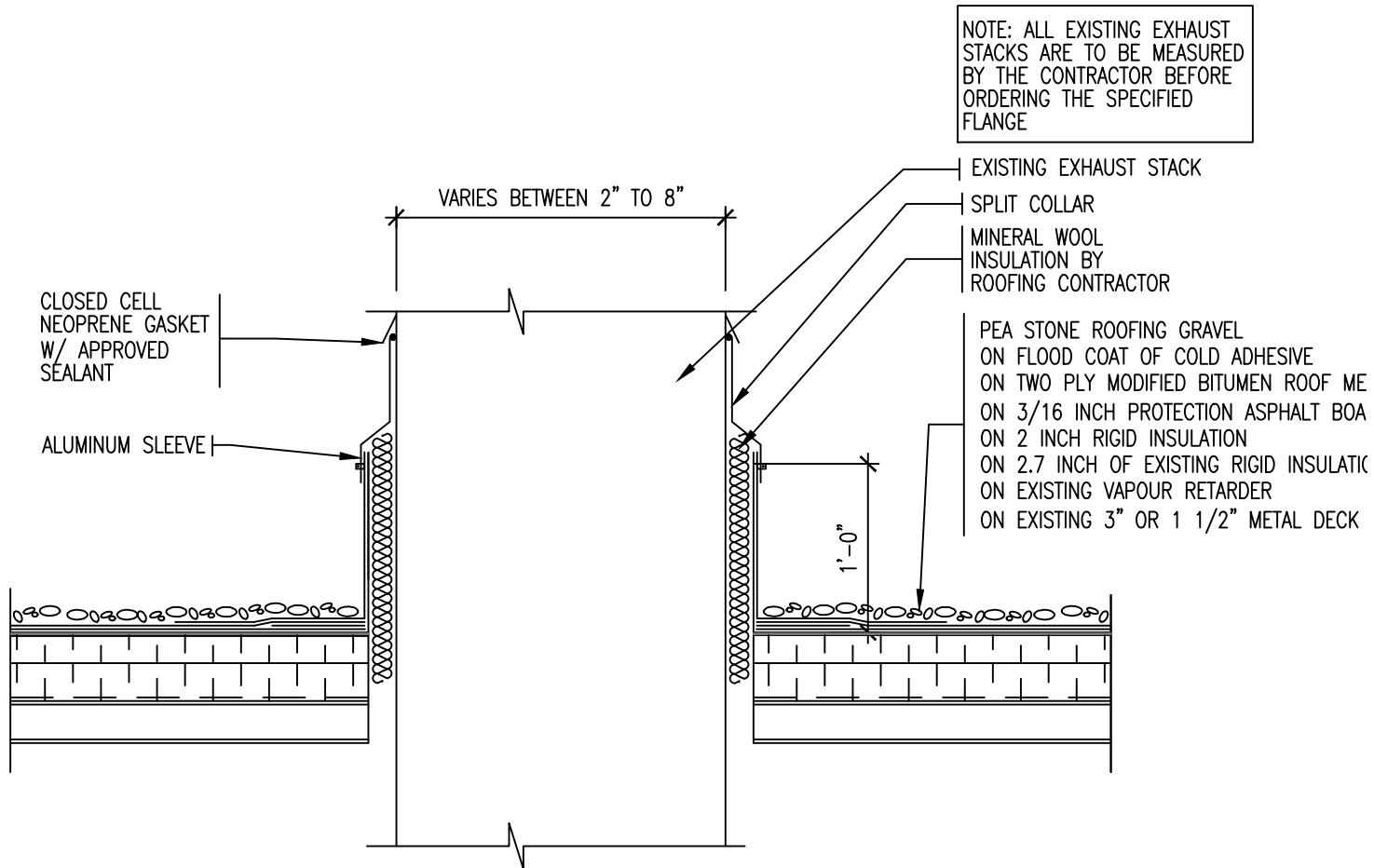


PEA STONE ROOFING GRAVEL
 ON FLOOD COAT OF ADHESIVE
 ON 2-PLY MODIFIED BITUMEN MEMBRANE
 ON 3/16" PROTECTION BOARD
 ON 2" RIGID INSULATION (NEW)
 ON 2.7 INCH EXISTING RIGID INSULATION
 ON EXISTING VAPOUR RETARDER
 ON EXISTING 3" OR 1 1/2" METAL DECK

VENT PIPE STACK DETAIL

SCALE : 1" = 1'-0"

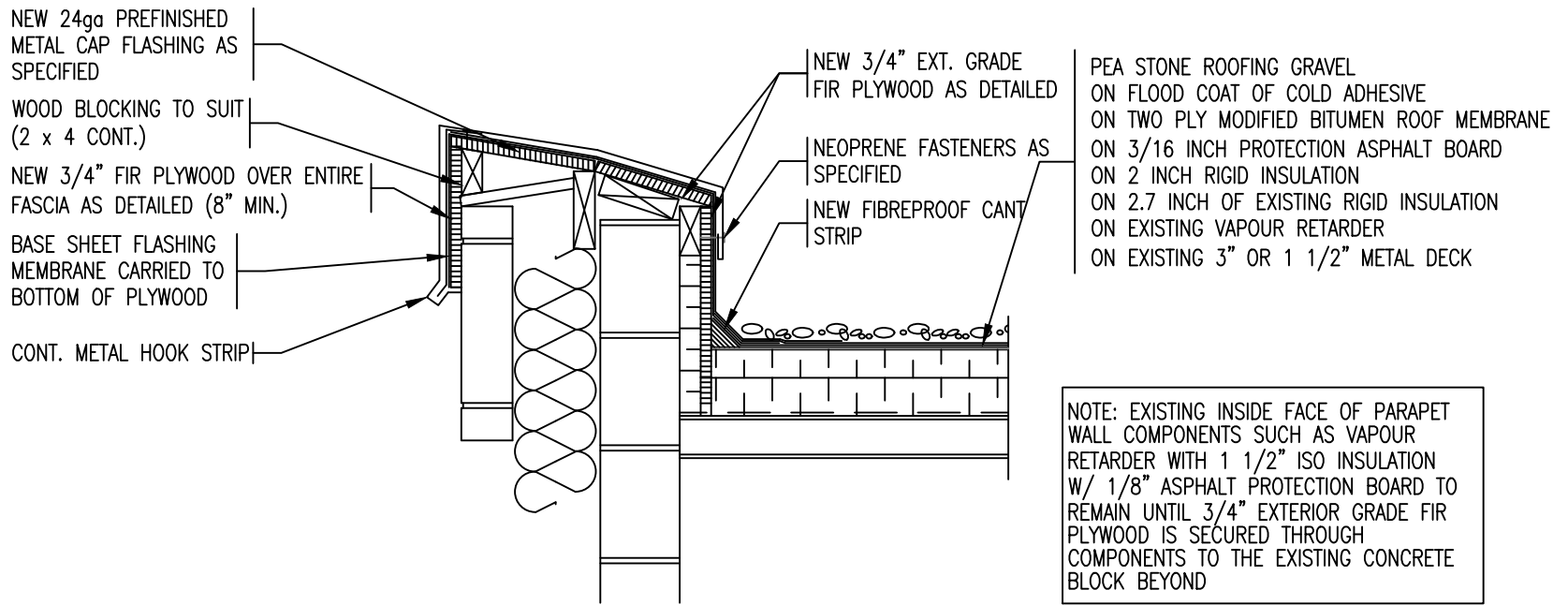
| | | |
|--|--|---|
| REMLAP BUILDING SERVICES INC. R ROOF ASSESSMENT, DESIGN AND SUPERVISION SERVICES B BUSINESS DEVELOPMENT (NEW/REPAIR/RENOVATION SERVICES) S SUBJECTS AND CONSULTANTS OF ROOFS AND BUILDINGS <small>1007 Glen Road Toronto, Ontario M8Z 5K2 Tel: (416) 738-3383 Fax: (416) 738-0727</small> | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | 1000 THE RAPIDS PARKWAY, SARNOIA, ONTARIO | SCALE : N.T.S. |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | DRAWN BY : CWP |
| DATE (DATE-20-YY) 10-24-16 | ISSUED FOR OWNER REVIEW | CHK. BY : CWP |
| 12-5-16 | TENDER | SHEET SIZE : 8.1/2"x11" PROJECT FILE NO. RBS16-60 DRAWING NO. Da-2 |



TYPICAL HOT EXHAUST STACK DETAIL

SCALE : 1" = 1'-0"

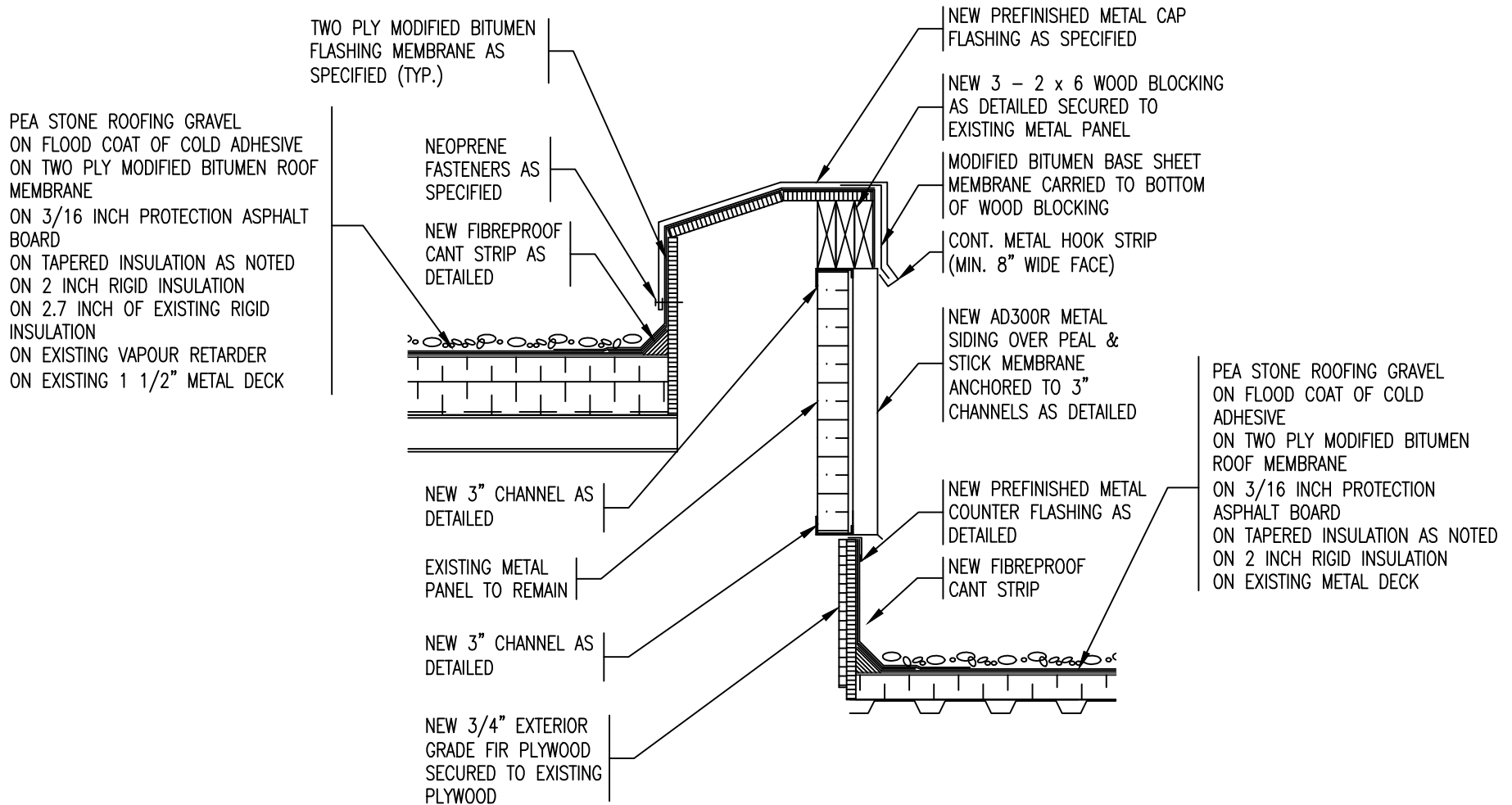
| | | |
|--|---|------------------------------|
| REMLAP BUILDING SERVICES INC. R B S <small>ROOF ASSESSMENT, DESIGN AND SUPERVISION SERVICES INSULATION SPECIALISTS (POLYURETHANE CONCRETE/ROOF RECEIVING) SUBJECTS AND CONSULTANTS OF ROOFS AND BUILDINGS</small> <small>1607 Glen Road Toronto, Ontario M8Z 1G9</small> | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | DRAWING TITLE ROOF DETAIL | DRAWN BY : CWP |
| DATE 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER | CHK. BY : CWP |
| | | SHEET SIZE : 8.1/2"x11" |
| | | PROJECT FILE NO. RBS16-60 |
| | | DRAWING NO. Da-3 |



PERIMETER DETAIL

SCALE : 1" = 1'-0"

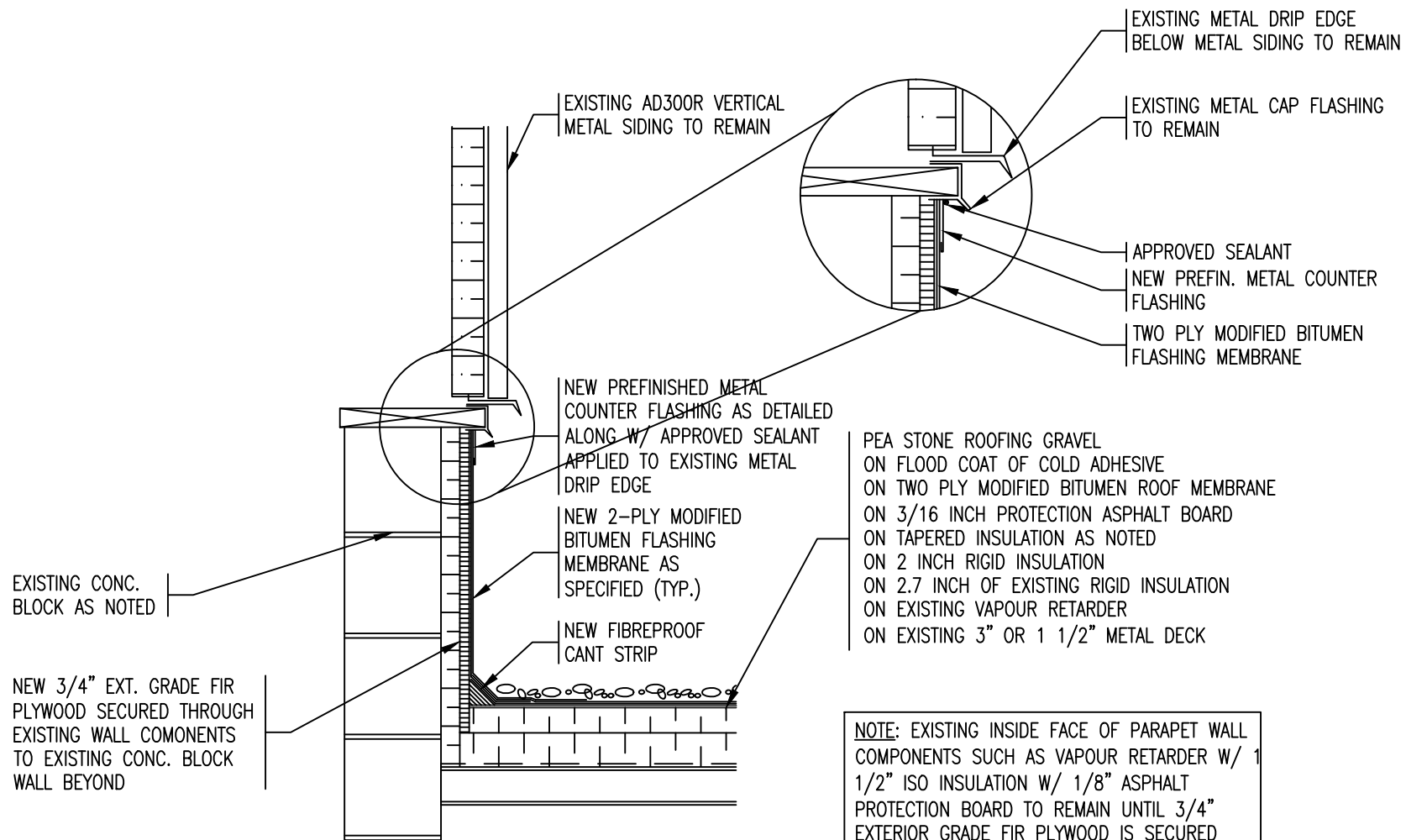
| | | |
|--|---|------------------------------|
| REMLAP BUILDING SERVICES INC. R B S <small>ROOF REPAIRS, ROOFING AND ROOFING PRODUCTS INSULATION (POLYURETHANE FOAM/ROCK WOOL FIBRE) FLASHING AND COMPANION OF ROOFS AND WALLS</small> | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | DRAWING TITLE ROOF DETAIL | DRAWN BY : CWP |
| 1607 Glen Road Huron, Ontario N2R 1K2 | Tel: (519) 738-3383 Fax: (519)738-0707 | CHK. BY : CWP |
| DATE (10-25-16) | ISSUED FOR OWNER REVIEW | SHEET SIZE : 8.1/2"x11" |
| 10-24-16 | TENDER | PROJECT FILE NO. RBS16-60 |
| | | DRAWING NO. Da-4 |



PERIMETER DETAIL

SCALE : 1" = 1'-0"

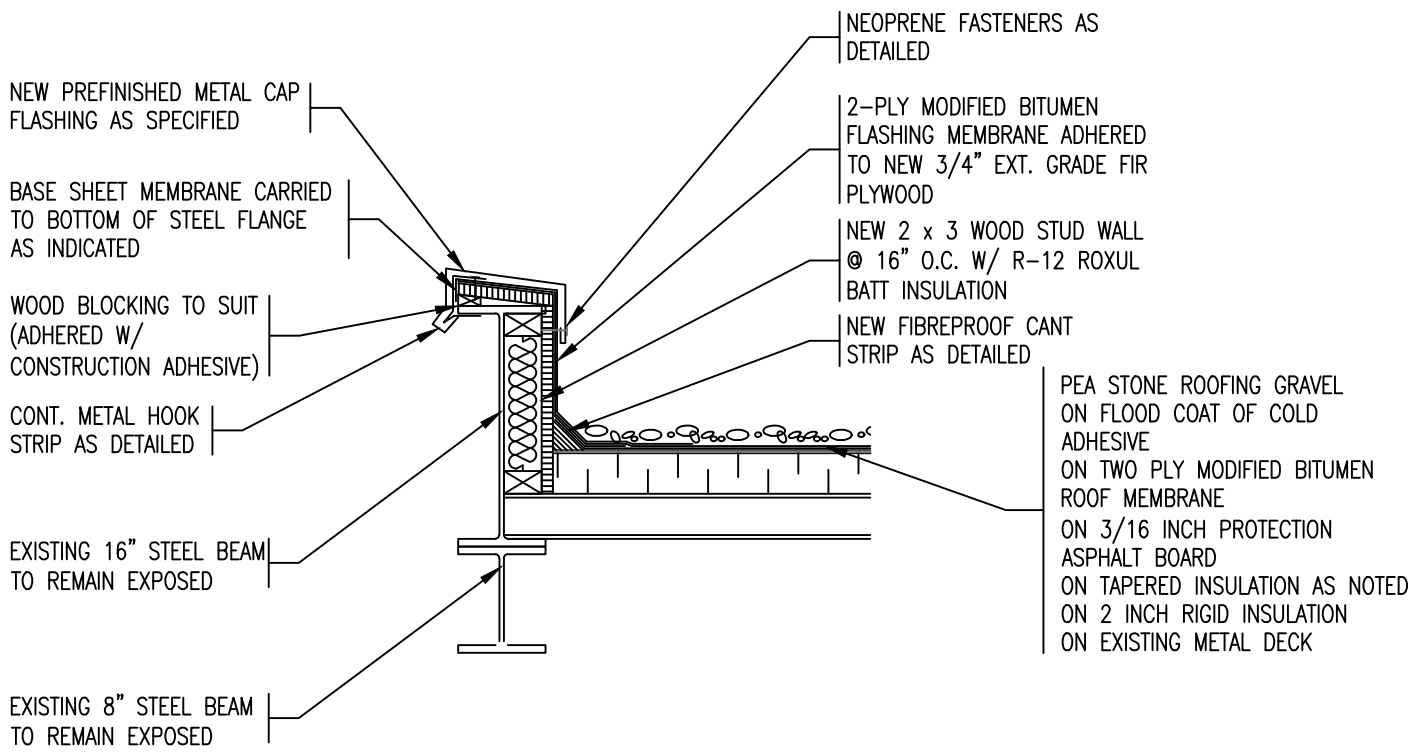
| | | |
|--|---|------------------------------|
| REMLAP BUILDING SERVICES INC. R B S <small>ROOF MEMBRANES, FLASHING AND DRAINAGE PRODUCTS INSULATION MATERIALS (POLYURETHAN FOAMS/FOAM PRODUCTS) SURFACES AND COATINGS OF ROOFS AND WALLS</small> <small>1407 Glen Road Toronto, Ontario M8Z 1K2</small> | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | DRAWING TITLE ROOF DETAIL | DRAWN BY : CWP |
| DATE 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER | CHK. BY : CWP |
| | | SHEET SIZE : 8.1/2"x11" |
| | | PROJECT FILE NO. RBS16-60 |
| | | DRAWING NO. Da-5 |



LOW PERIMETER DETAIL

SCALE : 1" = 1'-0"

| | | |
|--|---|------------------------------|
| REMLAP BUILDING SERVICES INC. R B S <small>ROOF REPAIRS, ROOFING AND ROOFING PRODUCTS INSULATION SPECIALISTS (POLYURETHANE FOAM/URETHANE FIBREGLASS) SURFACES AND COATINGS OF ROOFS AND BUILDINGS</small> <small>1407 Glen Road Toronto, Ontario M8Z 1X9</small> | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | DRAWING TITLE ROOF DETAIL | DRAWN BY : CWP |
| DATE 10-24-16 | ISSUED FOR OWNER REVIEW | CHK. BY : CWP |
| 12-5-16 TENDER | | SHEET SIZE : 8.1/2"x11" |
| | | PROJECT FILE NO. RBS16-60 |
| | | DRAWING NO. Da-6 |



PERIMETER DETAIL

SCALE : 1" = 1'-0"

| | | |
|--|---|----------------------------|
| REMLAP BUILDING SERVICES INC. R B S <small>1000 The Rapids Parkway, Sarnia, Ontario N6H 1S0 Tel: (519) 738-3885 Fax: (519) 738-4737</small> | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | DRAWING TITLE ROOF DETAIL | DRAWN BY : CWP |
| | PROJECT FILE NO. RBS16-60 | CHK. BY : CWP |
| DATE 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER | SHEET SIZE : 8.1/2"x11" |
| | | DRAWING NO. Da-7 |

NEW PREFINISHED METAL CAP
FLASHING AS SPECIFIED (FASCIA
TO BE 8" MIN.)

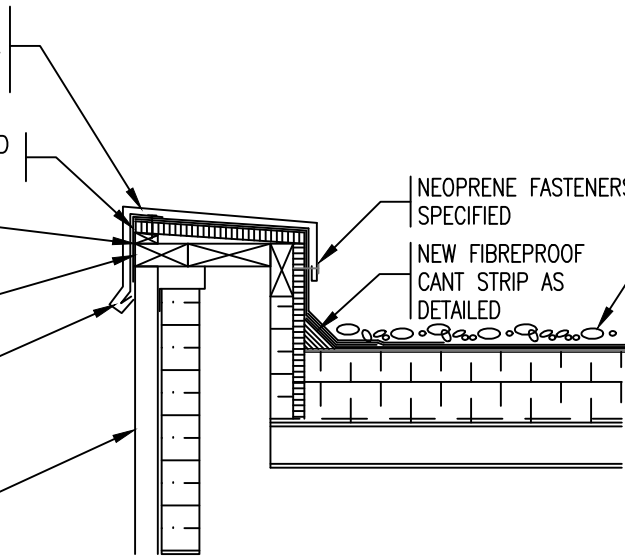
BASE SHEET MEMBRANE CARRIED
1" OVER VERT. METAL SIDING

WOOD BLOCKING TO SUIT

NEW WOOD BLOCKING
AS REQUIRED TO FILL
IN THE GAP

CONT. METAL HOOK
STRIP AS DETAILED

EXISTING AD300R
VERTICAL METAL
SIDING TO REMAIN



NEOPRENE FASTENERS AS
SPECIFIED

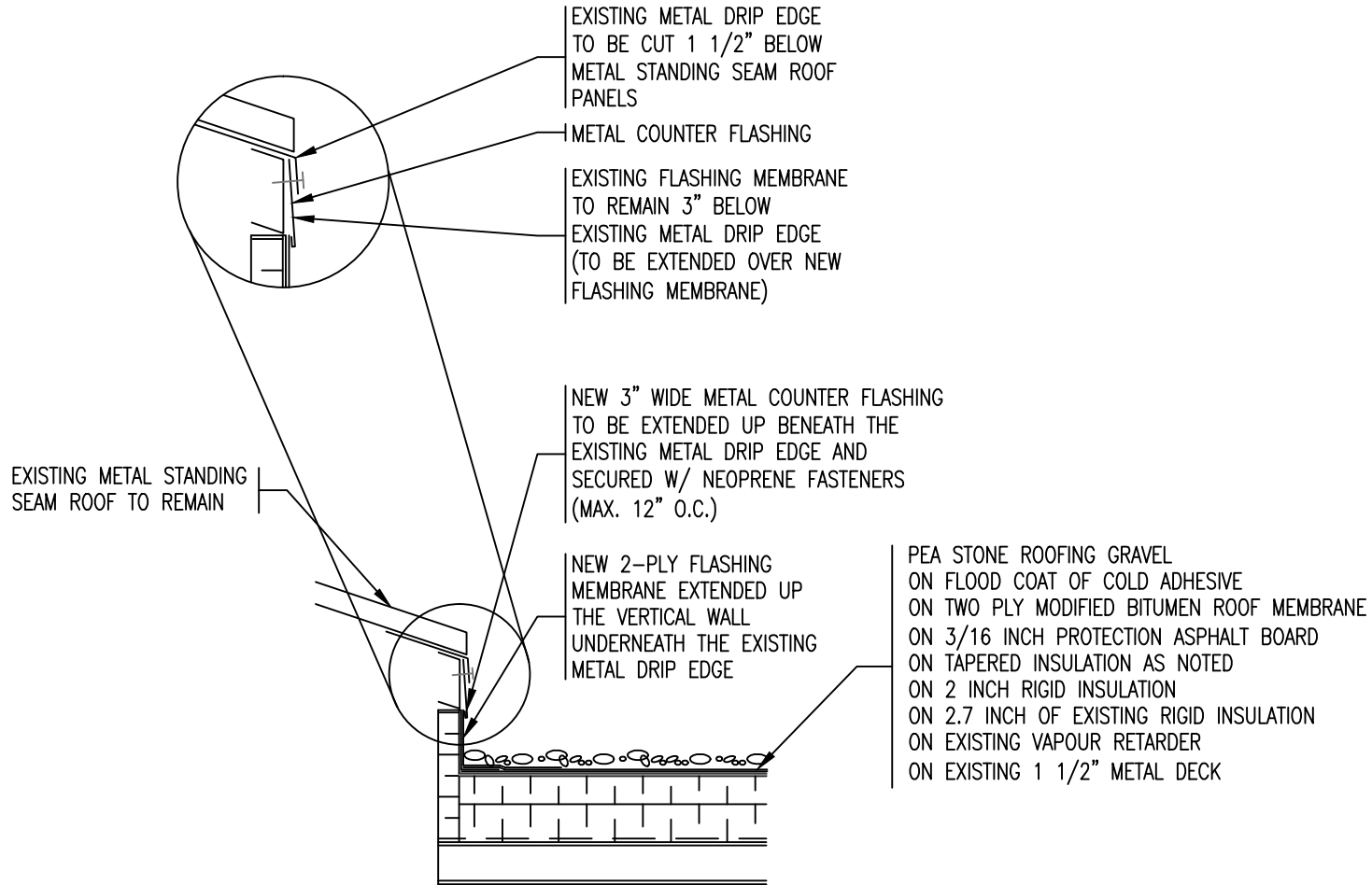
NEW FIBREPROOF
CANT STRIP AS
DETAILED

PEA STONE ROOFING GRAVEL
ON FLOOD COAT OF COLD ADHESIVE
ON TWO PLY MODIFIED BITUMEN ROOF MEMBRANE
ON 3/16 INCH PROTECTION ASPHALT BOARD
ON TAPERED INSULATION AS NOTED
ON 2 INCH RIGID INSULATION
ON 2.7 INCH OF EXISTING RIGID INSULATION
ON EXISTING VAPOUR RETARDER
ON EXISTING 3" OR 1 1/2" METAL DECK

HIGH PERIMETER DETAIL

SCALE : 1" = 1'-0"

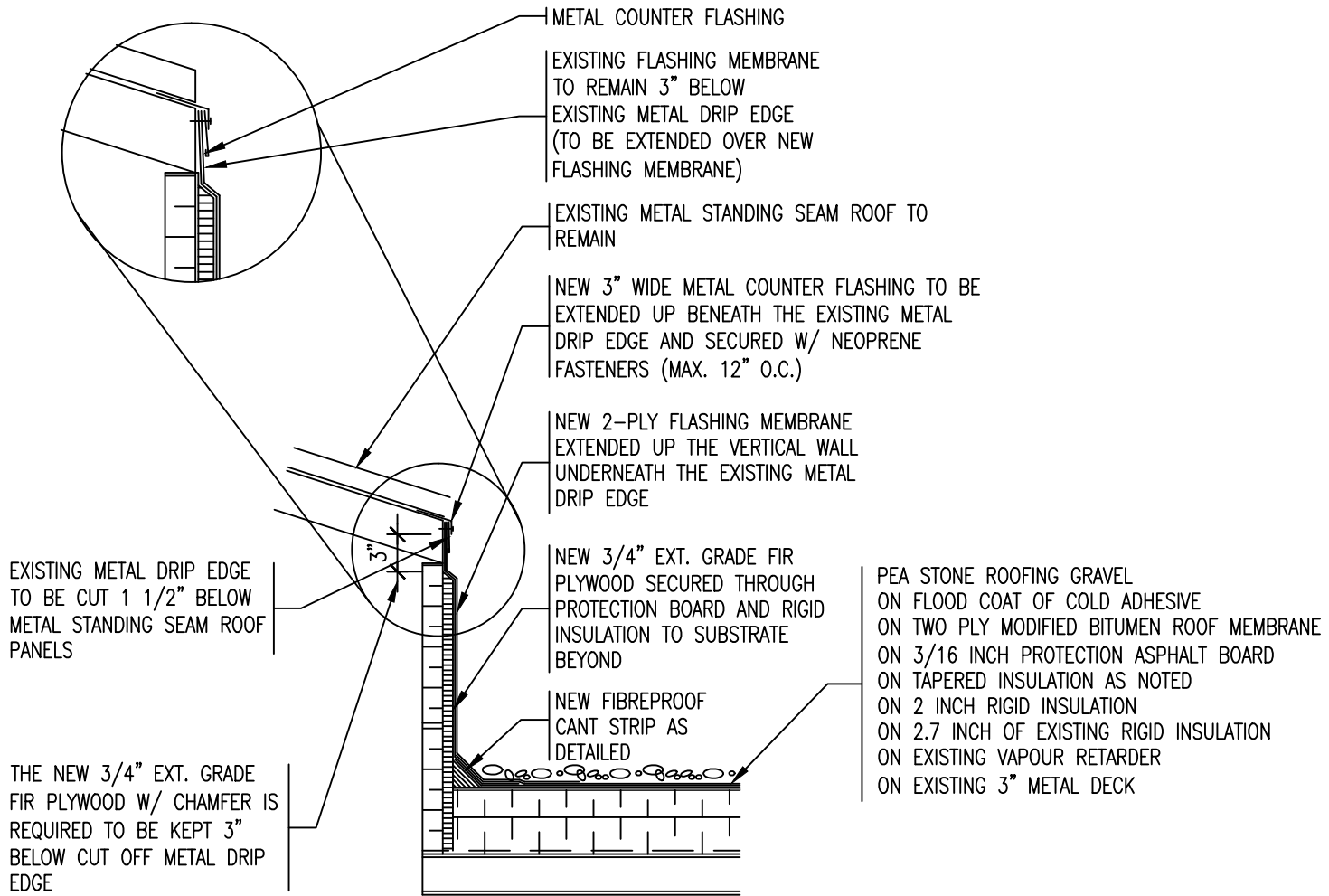
| | | | |
|---|---|--|---|
| REMLAP BUILDING SERVICES INC. R B S <small>1001 Glen Road Toronto, Ontario M8Z 1X9</small> | <small>ROOF ASSESSMENT, DESIGN AND SUPERVISION PROVIDED INSULATION INSTALLER (SEE/REFER DRAWINGS/OTHER RECORDS) SUBJECT AND CONDITIONS OF BIDDING AND BUILDING</small> Christopher W. Palmer, C.B.S. <small>140 (416) 738-3383 Fax (416)738-4737</small> | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT 1000 THE RAPIDS PARKWAY, SARNOIA, ONTARIO | DATE : OCTOBER 2016 SCALE : N.T.S. DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHECK BY : CWP SHEET SIZE : 8.1/2"x11" | |
| | DATE <small>(DATE-20-17)</small> 10-24-18 OWNER REVIEW 12-5-18 TENDER | ISSUED FOR DRAWING TITLE ROOF DETAIL | PROJECT FILE NO. RBS16-60 DRAWING NO. Da-8 |



DETAIL @ STANDING SEAM PANELS (AREA 'E')

SCALE : 1" = 1'-0"

| | | |
|---|---|------------------------------|
| REMLAP BUILDING SERVICES INC. R B S <small>1605 Glen Road Toronto, Ontario M8Z 1X2</small> | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | DRAWING TITLE ROOF DETAIL | DRAWN BY : CWP |
| 1000 THE RAPIDS PARKWAY, SARNOIA, ONTARIO | CHECKED BY : CWP | SHEET SIZE : 8.1/2"x11" |
| DATE (ISS-TO-YY) 10-24-16 | ISSUED FOR OWNER REVIEW | PROJECT FILE NO. RBS16-60 |
| 12-5-16 | TENDER | DRAWING NO. Da-9 |



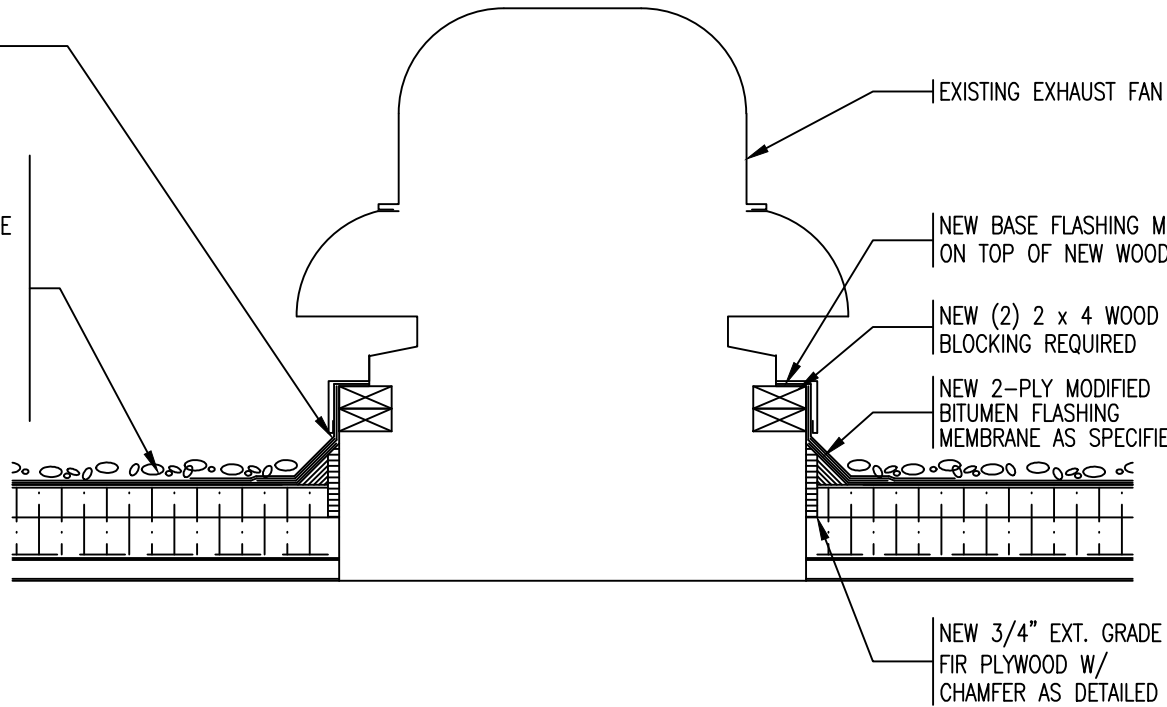
DETAIL @ STANDING SEAM PANELS (AREA 'D')

SCALE : 1" = 1'-0"

| | | |
|--|---|---|
| REMLAP BUILDING SERVICES INC. R ROOF REPAIRS, ROOFING AND ROOFING PRODUCTS B BUSINESS DEVELOPMENT (NEW/EXISTING ROOFING PRODUCTS) S SURVEY AND CONSULTING OF ROOFS AND BUILDINGS <small>1407 Glen Road Toronto, Ontario M8Z 1K2</small> | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 SCALE : N.T.S. DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 8.1/2"x11" |
| | DATE 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER |

NEW PREFINISHED METAL
COUNTER FLASHING AS
DETAILED

PEA STONE ROOFING GRAVEL
ON FLOOD COAT OF COLD ADHESIVE
ON TWO PLY MODIFIED BITUMEN ROOF MEMBRANE
ON 3/16 INCH PROTECTION ASPHALT BOARD
ON TAPERED INSULATION AS NOTED
ON 2 INCH RIGID INSULATION
ON 2.7 INCH OF EXISTING RIGID INSULATION
ON EXISTING VAPOUR RETARDER
ON EXISTING METAL DECK



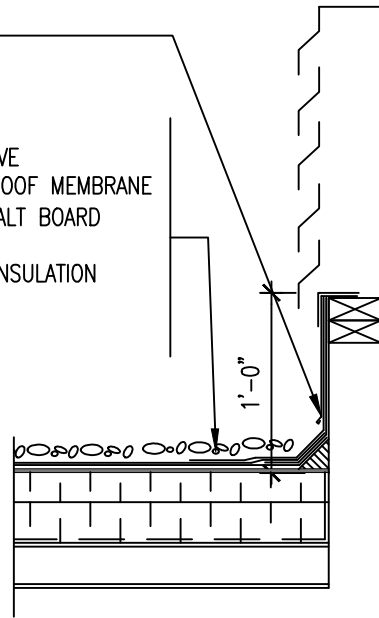
DETAIL - EXHAUST FAN

SCALE : 1" = 1'-0"

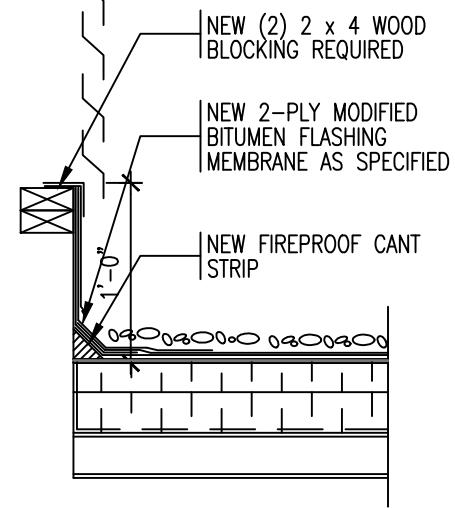
| | | |
|--|--|----------------------------------|
| REMLAP BUILDING SERVICES INC. RBS <small>WE'VE GOT YOU COVERED FROM DESIGN TO CONSTRUCTION</small> <small>DESIGN, CONSTRUCTION AND MAINTENANCE SERVICES</small> <small>1000 THE RAPIDS PARKWAY, SARINIA, ONTARIO</small> <small>1-800-387-7222</small> <small>1-800-387-7222</small> | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | DRAWING TITLE ROOF DETAIL | DRAWN BY : CWP |
| DATE 10-24-16 | ISSUED FOR OWNER REVIEW | CHK. BY : CWP |
| DATE 12-5-16 | ISSUED FOR TENDER | SHEET SIZE : 8.1/2"x11" |
| | | PROJECT FILE NO. RBS16-60 |
| | | DRAWING NO. Da-11 |

NEW PREFINISHED METAL
COUNTER FLASHING AS
SPECIFIED

PEA STONE ROOFING GRAVEL
ON FLOOD COAT OF COLD ADHESIVE
ON TWO PLY MODIFIED BITUMEN ROOF MEMBRANE
ON 3/16 INCH PROTECTION ASPHALT BOARD
ON 2 INCH RIGID INSULATION
ON 2.7 INCH OF EXISTING RIGID INSULATION
ON EXISTING VAPOUR RETARDER
ON EXISTING 3" METAL DECK



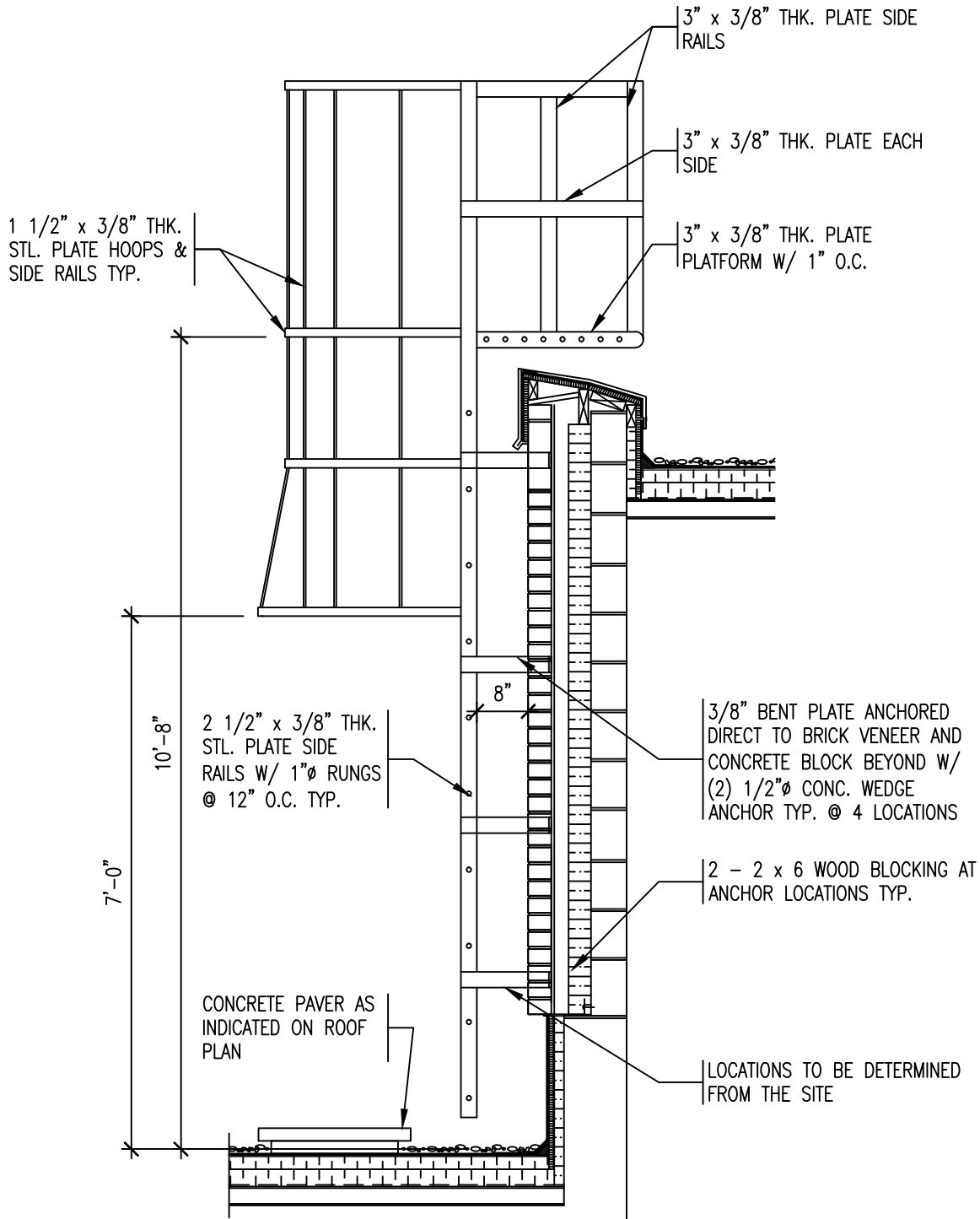
NOTE:
EXISTING HOOD TO BE REMOVED
TO ALLOW FOR BASE FLASHING
MEMBRANE W/ METAL COUNTER
FLASHING TO SIT ON TOP OF
NEW WOOD BLOCKING ON TOP
OF EXISTING ROOF CURB



RELIEF VENT DETAIL

SCALE : 1" = 1'-0"

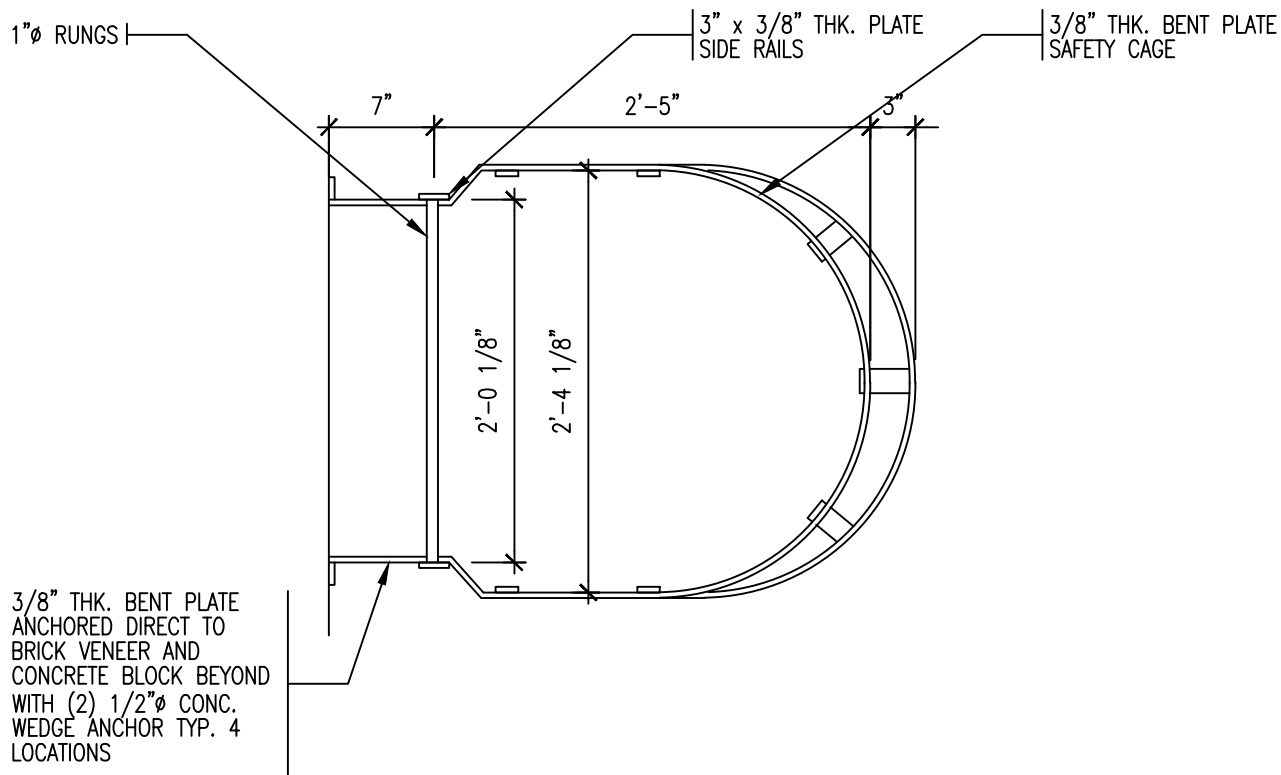
| | | |
|---|---|----------------------------|
| REMLAP BUILDING SERVICES INC. RBS <small>ROOF REPAIR, ROOFING AND INSULATION SERVICES ROOFING CONTRACTORS (SINCE 1978) SUBJECTS AND CONSULTANTS OF ROOFS AND BUILDINGS</small> <small>1407 Glen Road Huron, Ontario N2R 1K0</small> | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | DRAWING TITLE ROOF DETAIL | DRAWN BY : CWP |
| | PROJECT FILE NO. RBS16-60 | CHECKED BY : CWP |
| DATE (ISSUE-DATE) 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER | SHEET SIZE : 8.1/2"x11" |
| | | DRAWING NO. Da-12 |



NEW WALL LADDER DETAIL

SCALE : 1/2" = 1'-0"

| | | | |
|---|---|--|--|
| REMLAP BUILDING SERVICES INC. R B S <small>ROOF MAINTENANCE, REPAIR AND INSPECTION PROGRAMS BUILDING ENVELOPE (DR/UPPER ENERGY/EFFICIENCY PROGRAMS) STRAINS AND CORROSION OF ROOFS AND BUILDINGS</small> <small>Christopher W. Fellows, C.E.B.</small> <small>1407 Glen Road North, Sarnia, ON N6H 1S9</small> <small>tel: (810) 728-3100 Fax: (810) 728-0707</small> | | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT 1000 THE RAPIDS PARKWAY, SARNIA, ONTARIO | DATE : OCTOBER 2016 SCALE : N.T.S. DRAWN BY : CWP |
| | | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 8.1/2"x11" DRAWING NO. RBS16-60 DRAWING TITLE ROOF DETAIL |
| DATE <small>(MM-DD-YY)</small> 10-24-16 OWNER REVIEW 12-5-16 TENDER | ISSUED FOR OWNER REVIEW TENDER | DRAWING NO. Da-13a | |

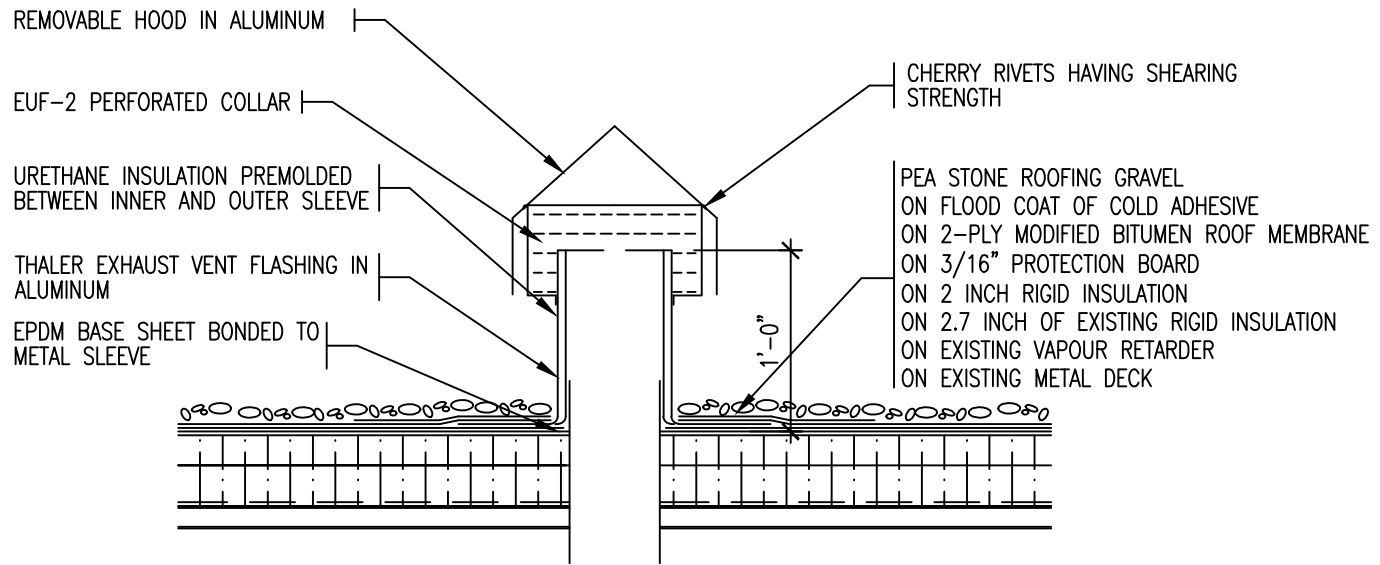


ROOF LADDER DETAIL PLAN

SCALE : 1" = 1'-0"

| | | |
|---|--|----------------------------------|
| REMLAP BUILDING SERVICES INC. R ROOF REPAIRS, ROOFING AND ROOFING PRODUCTS B BUSINESS DEVELOPMENT (NEW/EXISTING ROOFS/ROOFING PRODUCTS) S SURVEY AND CONSULTING OF ROOFS AND BUILDINGS <small>1607 Glen Road Toronto, Ontario M8Z 1X9 Tel: (416) 738-3383 Fax: (416) 738-0737</small> | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | 1000 THE RAPIDS PARKWAY, SARNOIA, ONTARIO | SCALE : N.T.S. |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | DRAWN BY : CWP |
| DATE (DATE-20-YY) 10-24-16 | ISSUED FOR OWNER REVIEW | CHK. BY : CWP |
| 12-5-16 | TENDER | SHEET SIZE : 8.1/2"x11" |
| | DRAWING TITLE ROOF DETAIL | PROJECT FILE NO. RBS16-60 |
| | | DRAWING NO. Da-13b |

NOTE: ALL EXISTING EXHAUST STACKS ARE TO BE MEASURED BY THE CONTRACTOR BEFORE ORDERING THE SPECIFIED FLANGE

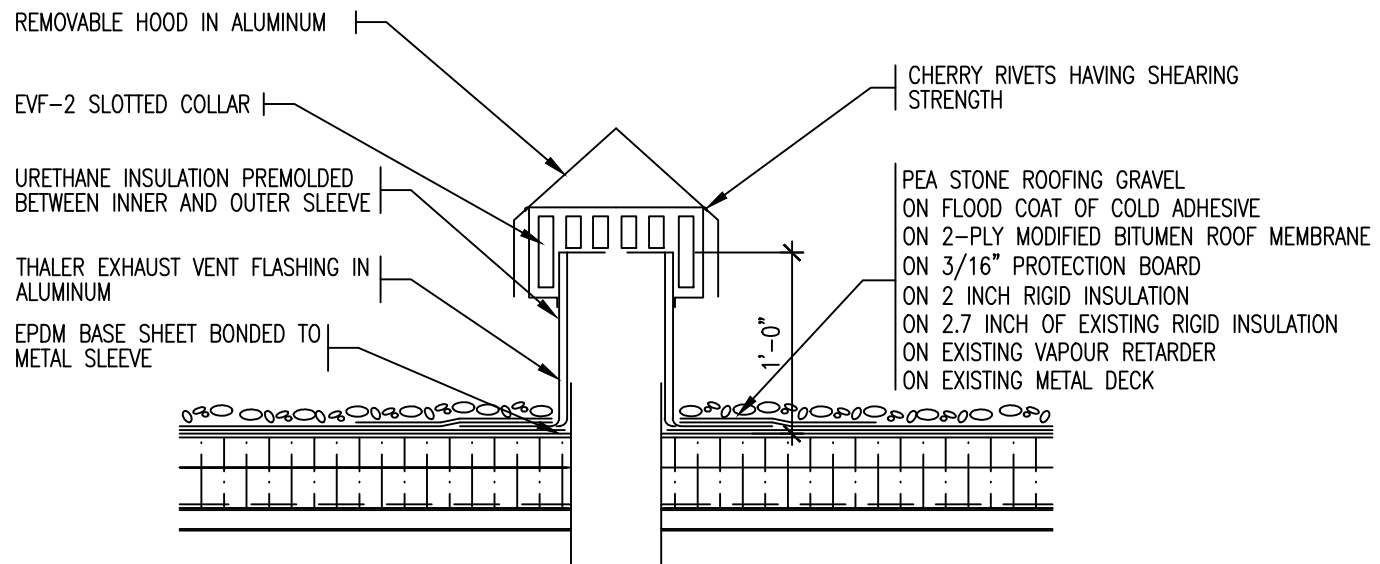


EXHAUST VENT FLASHING DETAIL

SCALE : 1" = 1'-0"

| | | | |
|---|---|--|---|
| REMLAP BUILDING SERVICES INC. R B S <small>1607 Glen Road Toronto, Ontario M8Z 1X9</small> | <small>ROOF ASSESSMENT, DESIGN AND INSPECTION SERVICES</small> <small>INSULATION INSTALLATION (POLYURETHANE FOAM/ROCK WOOL FIBRE FIBRE)</small> <small>SUBJECTS AND CONDITIONS OF BIDDING AND BIDDINGS</small> Christopher W. Palmer, C.B.S. <small>1607 Glen Road Toronto, Ontario M8Z 1X9 Tel: (416) 738-3885 Fax: (416) 738-4077</small> | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT 1000 THE RAPIDS PARKWAY, SARNOIA, ONTARIO | DATE : OCTOBER 2016 SCALE : N.T.S. DRAWN BY : CWP |
| | <small>CLIENT</small> ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 8.1/2"x11" | |
| | <small>DATE</small> (MM-DD-YY) 10-24-16 OWNER REVIEW 12-5-16 TENDER | <small>ISSUED FOR</small> ROOF DETAIL | PROJECT FILE NO. RBS16-60 DRAWING NO. Da-14 |

NOTE: ALL EXISTING EXHAUST STACKS ARE TO BE MEASURED BY THE CONTRACTOR BEFORE ORDERING THE SPECIFIED FLANGE



DRYER VENT FLASHING DETAIL

SCALE : 1" = 1'-0"

| | | |
|--|---|------------------------------|
| REMLAP BUILDING SERVICES INC. R B S <small>WE'VE GOT YOU COVERED. DESIGN AND CONSTRUCTION MANAGEMENT. INSURANCE SPECIALISTS (WILL WORK WITH YOUR INSURANCE PROVIDER). SUBJECTS AND CONDITIONS OF BIDDING AND BUILDING.</small> <small>1000 One Road Toronto, Ontario M8Z 1X2</small> | PROJECT ST. ANNE CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | DRAWING TITLE ROOF DETAIL | DRAWN BY : CWP |
| DATE 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER | CHK. BY : CWP |
| | | SHEET SIZE : 8.1/2"x11" |
| | | PROJECT FILE NO. RBS16-60 |
| | | DRAWING NO. Da-15 |

ROOF REPLACEMENT

FOR

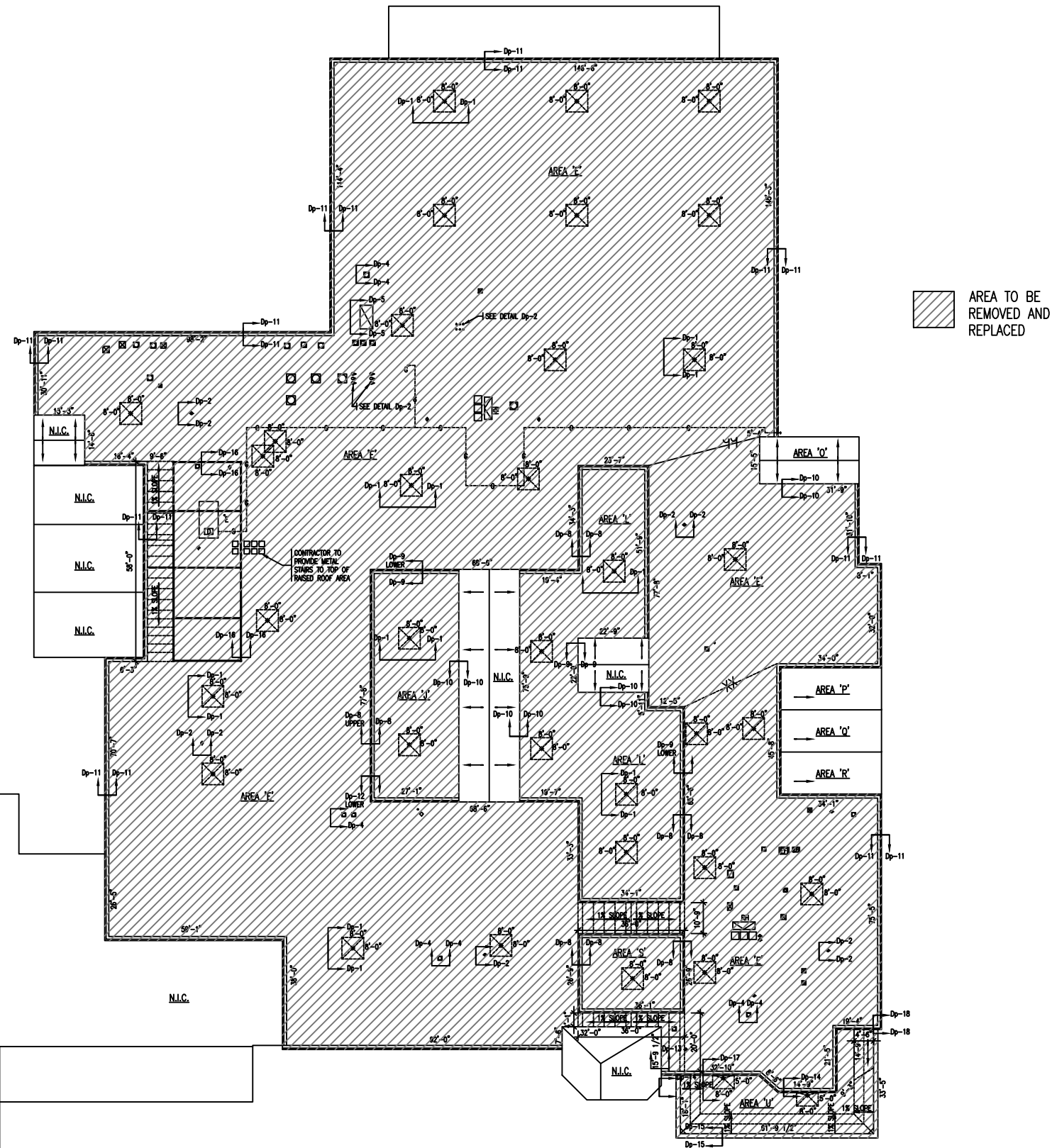
ST. PATRICK'S CATHOLIC HIGH SCHOOL
1001 THE RAPIDS PARKWAY
SARNIA ONTARIO
N7S 6K2

PROJECT No. 720-CP1704

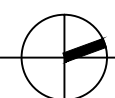
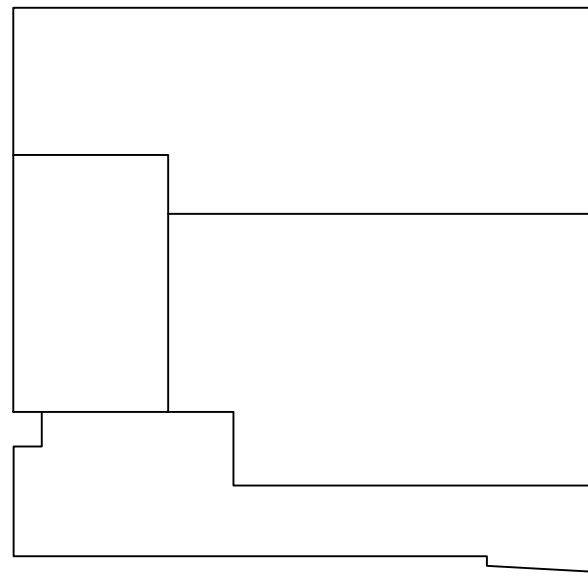
ENCLOSED DRAWINGS

- Rp-1 Key Roof Plan
- Rp-1a Existing and Design Roof System List
- Rp-2 Enlarged Roof Plan – Area 'E'
- Rp-3 Enlarged Roof Plan – Area 'E', 'J' and 'L'
- Rp-4 Enlarged Roof Plan – Area 'E', 'J', 'L', 'S' and 'U'
- Rp-5 Enlarged Roof Plan – Area 'E', 'J' and 'L'
- Rp-6 Enlarged Roof Plan – Area 'E'

- Dp-1 Roof Drain Detail
- Dp-2 Vent Pipe Stack Detail
- Dp-3 Hot Exhaust Stack Detail
- Dp-4 Exhaust Fan Detail
- Dp-5 Relief Vent Detail
- Dp-6 Exhaust Vent Flashing Detail
- Dp-7 Dryer Vent Flashing Detail
- Dp-8 Upper Perimeter Roof Detail
- Dp-9 Roof Perimeter Detail
- Dp-10 Roof Perimeter Detail
- Dp-11 Lower Roof Perimeter Detail
- Dp-12 Roof Detail – Below Windows
- Dp-13 Roof Detail @ Standing Seam Panels
- Dp-14 Interior Wall Roof Detail – Area 'U'
- Dp-15 Perimeter Wall Roof Detail – Area 'U'
- Dp-16 Raised Platform Detail
- Dp-17 Curtain Wall Detail – Area 'U'
- Dp-18 Brick Veneer Wall Detail – Area 'U'



 AREA TO BE REMOVED AND REPLACED



KEY ROOF PLAN

SCALE : 1" = 50'-0"

| | |
|---|--------------|
| REMLAP BUILDING SERVICES INC. ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/WAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Huron, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519) 738-4797 | |
| DATE (MM-DD-YY) | ISSUED FOR |
| 10-24-16 | OWNER REVIEW |
| 12-5-16 | TENDER |

| | |
|--|--------------------|
| PROJECT | DATE : |
| ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT | OCTOBER 2016 |
| 1001 THE RAPIDS PARKWAY, SARNIA ONTARIO | SCALE : |
| | AS SHOWN |
| CLIENT | DRAWN BY : |
| ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CWP |
| | CHK. BY : |
| | CWP |
| | SHEET SIZE : |
| | 11"x17" |
| | PROJECT FILE NO. : |
| | RBS16-61 |
| | DRAWING NO. : |
| | Rp-1 |

**ROOF REPLACEMENT
ST. PATRICKS CATHOLIC HIGH SCHOOL
1001 THE RAPIDS PARKWAY, SARNIA ONTARIO N7S 6K2**

AREA 'E'

Two Ply Modified Bitumen Granulated Surface Membrane
On ½" Fibreboard Insulation
On 2.7" Rigid Insulation (ISO)
On Kraft Paper for Vapour Retarder
On 1½" Metal Deck

Pea Stone Roofing Gravel
On Flood Coat of Adhesive
On Two Ply Modified Bitumen Membrane
On 3/16" Asphalt Protection Board
On Tapered Insulation as Noted
On New 2" Rigid Insulation (ISO)
On Existing 2.7" Rigid Insulation
On Existing Vapour Retarder
On Existing Metal Deck

AREA 'J'

Two Ply Modified Bitumen Granulated Surface Membrane
On ½" Fibreboard Insulation
On 2.7" Rigid Insulation (ISO)
On Kraft Paper for Vapour Retarder
On 1½" Metal Deck

Pea Stone Roofing Gravel
On Flood Coat of Adhesive
On Two Ply Modified Bitumen Membrane
On 3/16" Asphalt Protection Board
On Tapered Insulation as Noted
On New 2" Rigid Insulation (ISO)
On Existing 2.7" Rigid Insulation
On Existing Vapour Retarder
On Existing Metal Deck

AREA 'L'

Two Ply Modified Bitumen Granulated Surface Membrane
On ½" Fibreboard Insulation
On 2.7" Rigid Insulation (ISO)
On Kraft Paper for Vapour Retarder
On 1½" Metal Deck

Pea Stone Roofing Gravel
On Flood Coat of Adhesive
On Two Ply Modified Bitumen Membrane
On 3/16" Asphalt Protection Board
On Tapered Insulation as Noted
On New 2" Rigid Insulation (ISO)
On Existing 2.7" Rigid Insulation
On Existing Vapour Retarder
On Existing Metal Deck

AREA 'S'

Two Ply Modified Bitumen Granulated Surface Membrane
On ½" Fibreboard Insulation
On 2.7" Rigid Insulation (ISO)
On Kraft Paper for Vapour Retarder
On 1½" Metal Deck

Pea Stone Roofing Gravel
On Flood Coat of Adhesive
On Two Ply Modified Bitumen Membrane
On 3/16" Asphalt Protection Board
On Tapered Insulation as Noted
On New 2" Rigid Insulation (ISO)
On Existing 2.7" Rigid Insulation
On Existing Vapour Retarder
On Existing Metal Deck

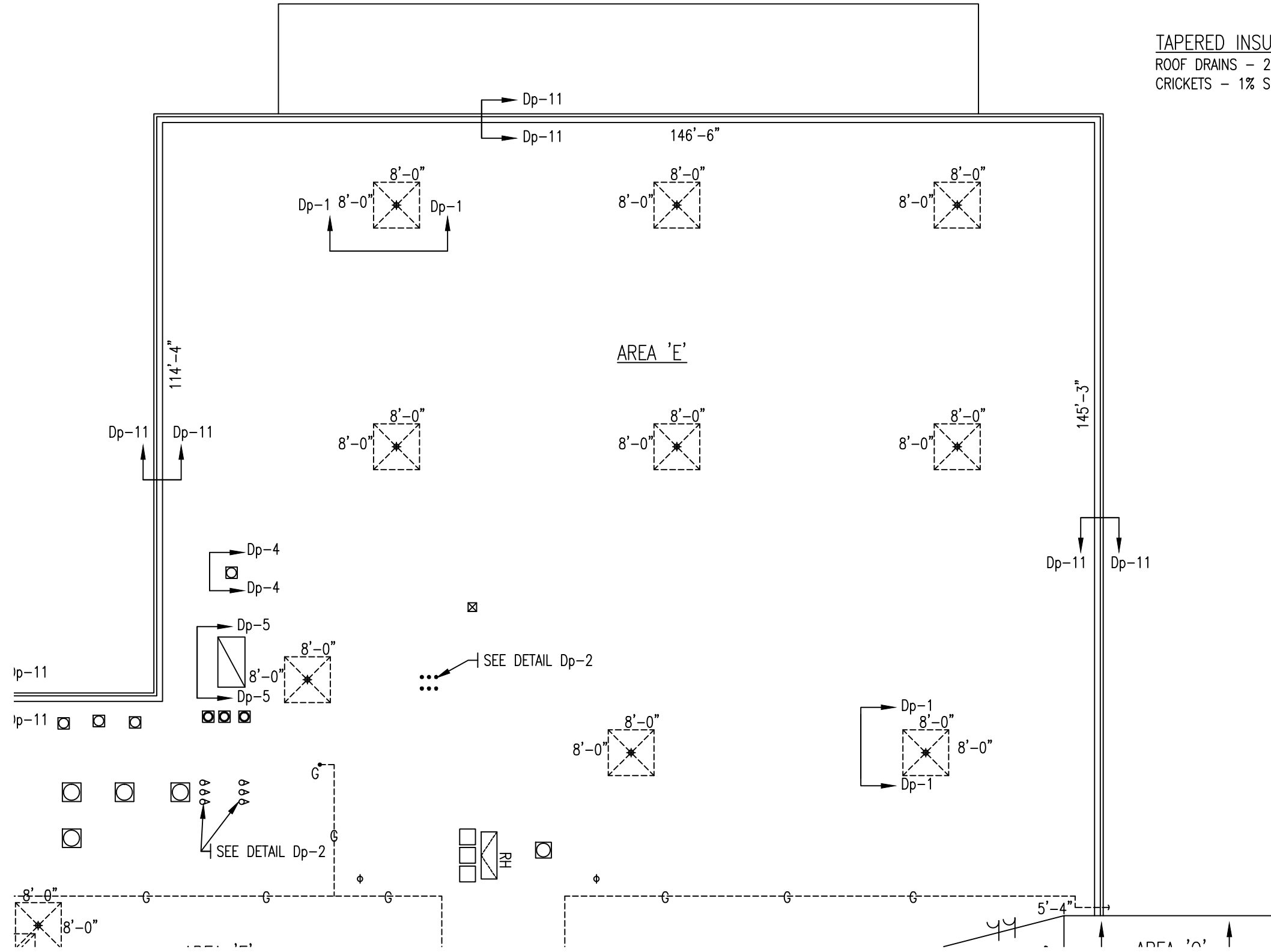
AREA 'U'

Three Ply Modified Bitumen Granulated Surface Membrane
On ½" Gypsum Board
On 1½" Metal Deck

Pea Stone Roofing Gravel
On Flood Coat of Adhesive
On Two Ply Modified Bitumen Membrane
On 3/16" Asphalt Protection Board
On Tapered Insulation as Noted
On New 2" Rigid Insulation (ISO)
On Existing Metal Deck

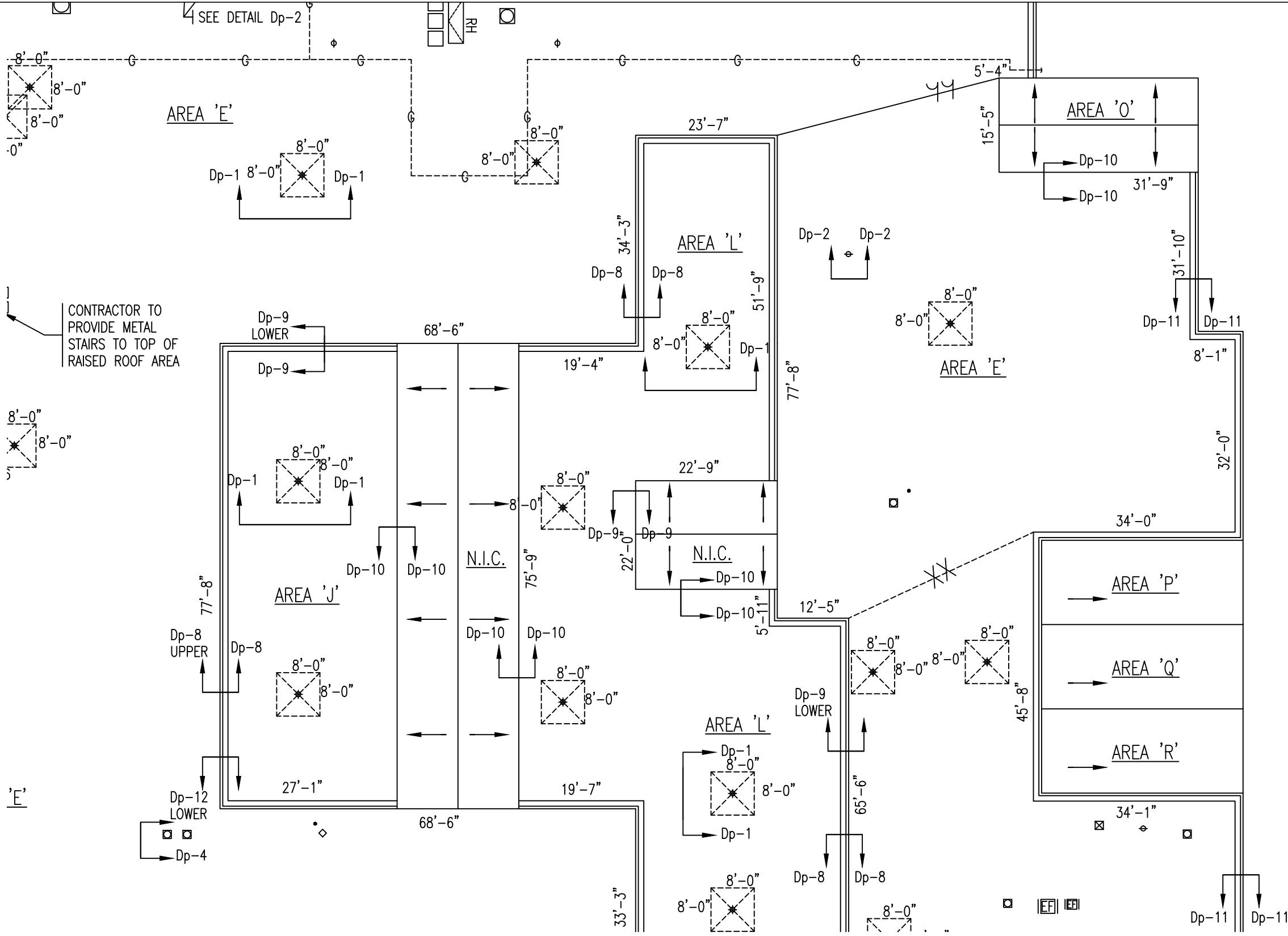
TAPERED INSULATION
 ROOF DRAINS - 2% SLOPE
 CRICKETS - 1% SLOPE

| LEGEND | |
|--------|--|
| OFS | OVERFLOW SCUPPER |
| ⊕ | ROOF DRAIN |
| ⊕ | VENT PIPE STACK |
| ⊙ | HOT EXHAUST STACK |
| RH | ROOF HATCH |
| ⊠ | EXHAUST FAN |
| G | GOOSE NECK EXHAUST FAN |
| •G | GAS LINE THRU ROOF |
| -G- | GAS LINE |
| ↗ | SATELITE DISH |
| SD | SCUPPER DRAIN |
| ⊖ | VENT STACK |
| □ | CONCRETE PAVER (NEW) |
| ⊠ | ABANDONED CURB (TO BE ELIMINATED AND DECK CLOSED IN) |



ENLARGED ROOF PLAN - ROOF PENETRATION AND DIMENSIONS
 SCALE : 1" = 20'-0"

| | | |
|---|---|---|
| REMLAP BUILDING SERVICES INC. ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/WAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Huron, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519) 738-4787 | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT 1001 THE RAPIDS PARKWAY, SARNIA ONTARIO | DATE : OCTOBER 2016 SCALE : AS SHOWN DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 11"x17" PROJECT FILE NO. RBS16-61 DRAWING NO. Rp-2 |
| DATE (MM-DD-YY) 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER | DRAWING TITLE ENLARGED ROOF PLAN - ROOF AREA 'E' |



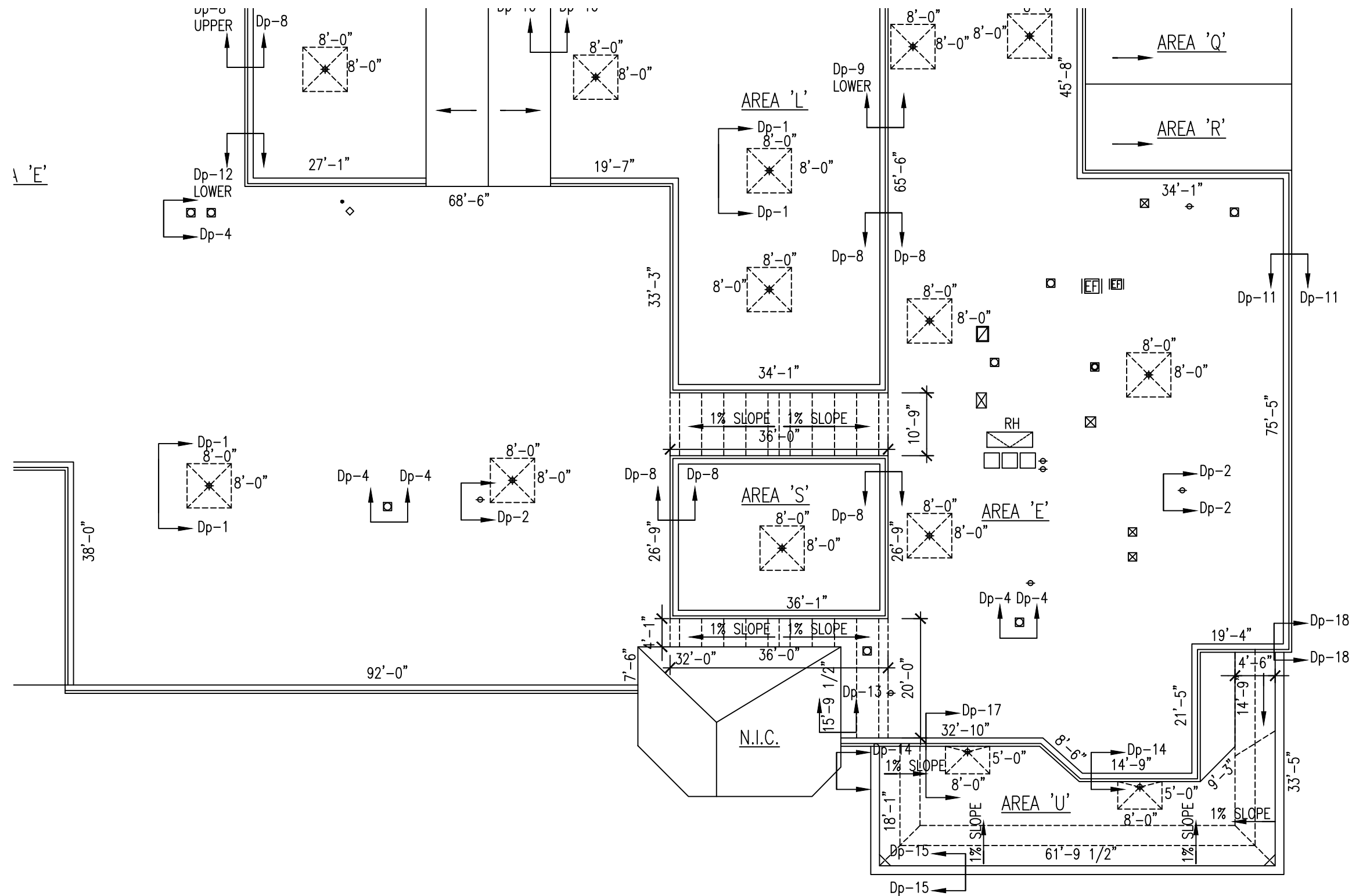
LEGEND

- OFS OVERFLOW SCUPPER
- ⊕ ROOF DRAIN
- ⊕ VENT PIPE STACK
- ⊙ HOT EXHAUST STACK
- RH ROOF HATCH
- ⊠ EXHAUST FAN
- ⊠ GOOSE NECK EXHAUST FAN
- G GAS LINE THRU ROOF
- G- GAS LINE
- ⌒ SATELITE DISH
- SD SCUPPER DRAIN
- ⊕ VENT STACK
- CONCRETE PAVER (NEW)
- ⊠ ABANDONED CURB (TO BE ELIMINATED AND DECK CLOSED IN)

TAPERED INSULATION
 ROOF DRAINS - 2% SLOPE
 CRICKETS - 1% SLOPE

ENLARGED ROOF PLAN - ROOF PENETRATION AND DIMENSIONS
 SCALE : 1" = 20'-0"

| | | |
|---|---|---|
| REMLAP BUILDING SERVICES INC. ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Huron, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519) 738-4797 | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT 1001 THE RAPIDS PARKWAY, SARNIA ONTARIO | DATE : OCTOBER 2016 SCALE : AS SHOWN DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 11"x17" PROJECT FILE NO. : RBS16-61 DRAWING NO. : Rp-3 |
| DATE (MM-DD-YY) 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER | DRAWING TITLE ENLARGED ROOF PLAN - ROOF AREA 'E', 'J' & 'L' |

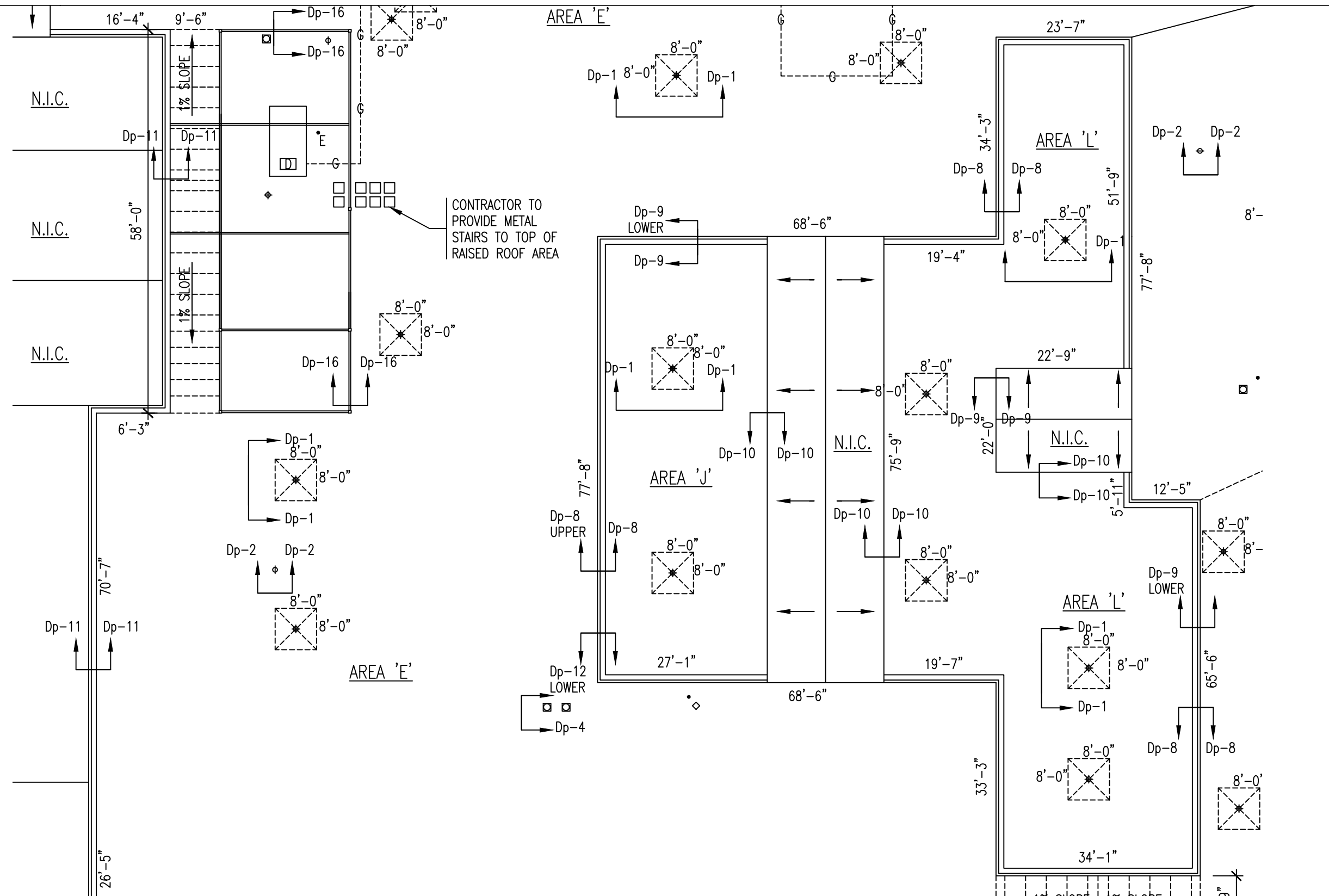


| LEGEND | |
|--------|--|
| OFS | OVERFLOW SCUPPER |
| ⊕ | ROOF DRAIN |
| ⊙ | VENT PIPE STACK |
| ⊙ | HOT EXHAUST STACK |
| RH | ROOF HATCH |
| ⊠ | EXHAUST FAN |
| ⊠ | GOOSE NECK EXHAUST FAN |
| •G | GAS LINE THRU ROOF |
| -G- | GAS LINE |
| ↗ | SATELITE DISH |
| SD | SCUPPER DRAIN |
| ⊙ | VENT STACK |
| □ | CONCRETE PAVER (NEW) |
| ⊠ | ABANDONED CURB (TO BE ELIMINATED AND DECK CLOSED IN) |

TAPERED INSULATION
 ROOF DRAINS - 2% SLOPE
 CRICKETS - 1% SLOPE

ENLARGED ROOF PLAN - ROOF PENETRATION AND DIMENSIONS
 SCALE : 1" = 20'-0"

| | | |
|--|---|---|
| REMLAP BUILDING SERVICES INC. ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/WAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Harrow, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519) 738-4797 | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT 1001 THE RAPIDS PARKWAY, SARNIA ONTARIO | DATE : OCTOBER 2016 SCALE : AS SHOWN DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 11"x17" PROJECT FILE NO. RBS16-61 DRAWING NO. Rp-4 |
| DATE (MM-DD-YY) 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER | DRAWING TITLE ENLARGED ROOF PLAN - ROOF AREA 'E', 'J', 'L', 'S' & 'U' |

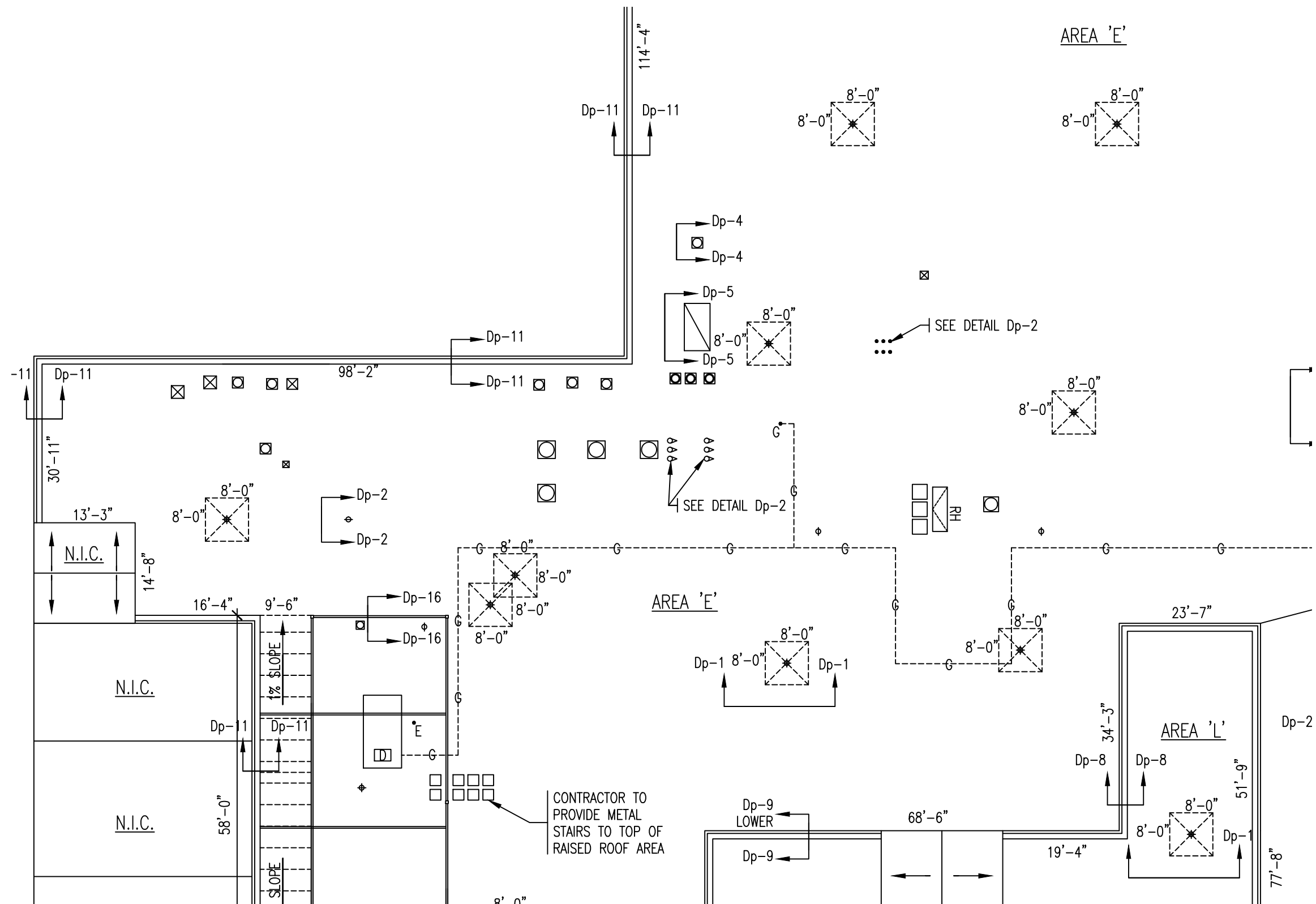


| LEGEND | |
|--------|--|
| OFS | OVERFLOW SCUPPER |
| ⊕ | ROOF DRAIN |
| ⊙ | VENT PIPE STACK |
| ⊙ | HOT EXHAUST STACK |
| RH | ROOF HATCH |
| ⊠ | EXHAUST FAN |
| G | GOOSE NECK EXHAUST FAN |
| •G | GAS LINE THRU ROOF |
| -G- | GAS LINE |
| ⌒ | SATELITE DISH |
| SD | SCUPPER DRAIN |
| ⊙ | VENT STACK |
| □ | CONCRETE PAVER (NEW) |
| ⊠ | ABANDONED CURB (TO BE ELIMINATED AND DECK CLOSED IN) |

TAPERED INSULATION
 ROOF DRAINS - 2% SLOPE
 CRICKETS - 1% SLOPE

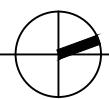
ENLARGED ROOF PLAN - ROOF PENETRATION AND DIMENSIONS
 SCALE : 1" = 20'-0"

| | | |
|---|---|---|
| REMLAP BUILDING SERVICES INC. ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/WAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Huron, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519) 738-4797 | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT 1001 THE RAPIDS PARKWAY, SARNIA ONTARIO | DATE : OCTOBER 2016 SCALE : AS SHOWN DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 11"x17" PROJECT FILE NO. : RBS16-61 DRAWING NO. : Rp-5 |
| DATE (MM-DD-YY) 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER | DRAWING TITLE ENLARGED ROOF PLAN - ROOF AREA 'E', 'J' & 'L' |



| LEGEND | |
|--------|--|
| OFS | OVERFLOW SCUPPER |
| ⊕ | ROOF DRAIN |
| ⊕ | VENT PIPE STACK |
| ⊙ | HOT EXHAUST STACK |
| RH | ROOF HATCH |
| ⊠ | EXHAUST FAN |
| G | GOOSE NECK EXHAUST FAN |
| •G | GAS LINE THRU ROOF |
| -G- | GAS LINE |
| ⤴ | SATELITE DISH |
| SD | SCUPPER DRAIN |
| ⊕ | VENT STACK |
| □ | CONCRETE PAVER (NEW) |
| ⊠ | ABANDONED CURB (TO BE ELIMINATED AND DECK CLOSED IN) |

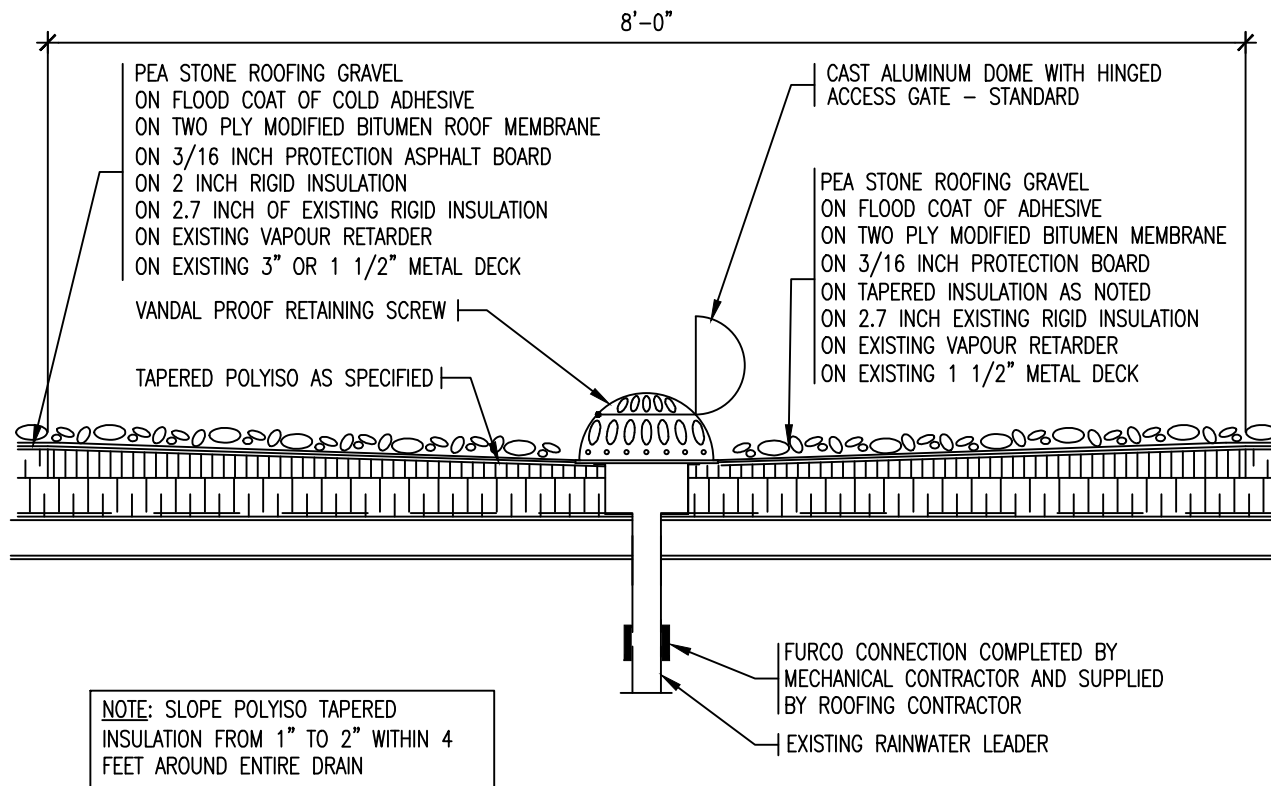
TAPERED INSULATION
 ROOF DRAINS - 2% SLOPE
 CRICKETS - 1% SLOPE



ENLARGED ROOF PLAN - ROOF PENETRATION AND DIMENSIONS

SCALE : 1" = 20'-0"

| | | |
|---|--|---|
| REMLAP BUILDING SERVICES INC. ROOF MAINTENANCE, DESIGN AND INSPECTION PROGRAMS BUILDING ENVELOPES (AIR/VAPOUR BARRIER/WATER PROOFING) SURVEYS AND CONDITIONS OF ROOFS AND BUILDINGS Christopher W. Palmer, C.E.T. 1407 Gore Road, Huron, Ontario N0R 1G0 Tel: (519) 738-3458 Fax: (519) 738-4797 | PROJECT ST. PATRICK CATHOLIC SCHOOL 1001 THE RAPIDS PARKWAY, SARNIA ONTARIO | DATE : OCTOBER 2016 SCALE : AS SHOWN DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 11"x17" PROJECT FILE NO. : RBS16-61 DRAWING NO. : Rp-6 |
| DATE (MM-DD-YY) 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER | DRAWING TITLE ENLARGED ROOF PLAN - ROOF |

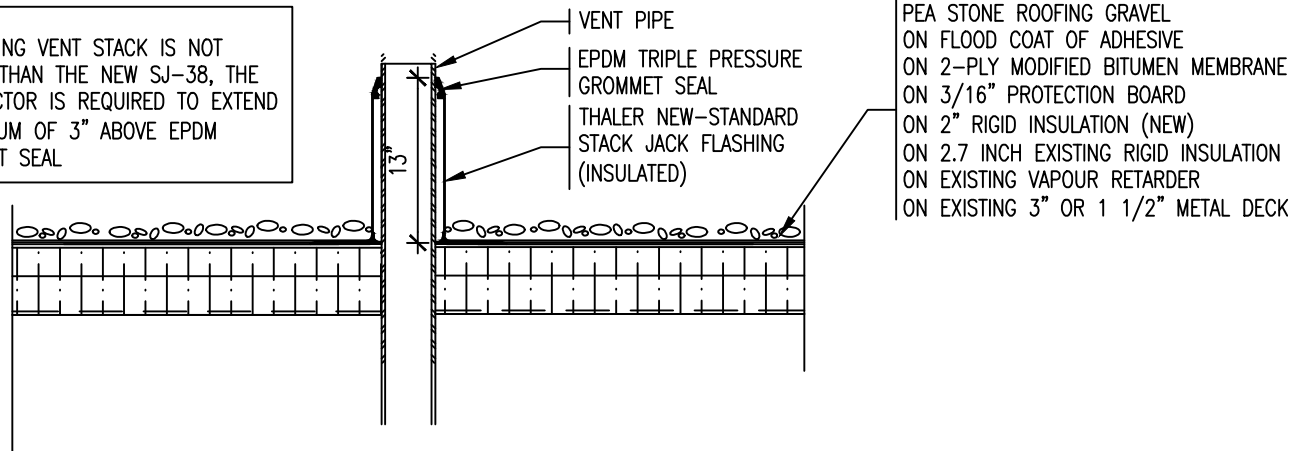


ROOF DRAIN DETAIL

SCALE : 1" = 1'-0"

| | | |
|---|---|--------------|
| REMLAP BUILDING SERVICES INC. R B S <small>ROOF ASSESSMENT, DESIGN AND INSPECTION SERVICES INSULATION INSTALLATION (POLYURETHANE SPRAY/FORCE APPLIED) SURVEYS AND CONSULTING OF ROOFS AND BUILDINGS</small> <small>Christophorus W. Palmer, C.B.S.</small> <small>1607 Glen Road Toronto, Ontario M6H 1G0 Tel: (416) 738-3885 Fax: (416) 738-4077</small> | PROJECT | DATE : |
| | ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT | OCTOBER 2016 |
| | 1001 THE RAPIDS PARKWAY, SARNAIA, ONTARIO | SCALE : |
| | CLIENT | N.T.S. |
| ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | DRAWN BY : | CWP |
| | CHK. BY : | CWP |
| | SHEET SIZE : | 8.1/2"x11" |
| | PROJECT FILE NO. | RBS16-61 |
| | DRAWING TITLE | DRAWING NO. |
| | DETAIL | Dp-1 |
| DATE (10-25-17) | ISSUED FOR | |
| 10-24-18 | OWNER REVIEW | |
| 12-5-18 | TENDER | |

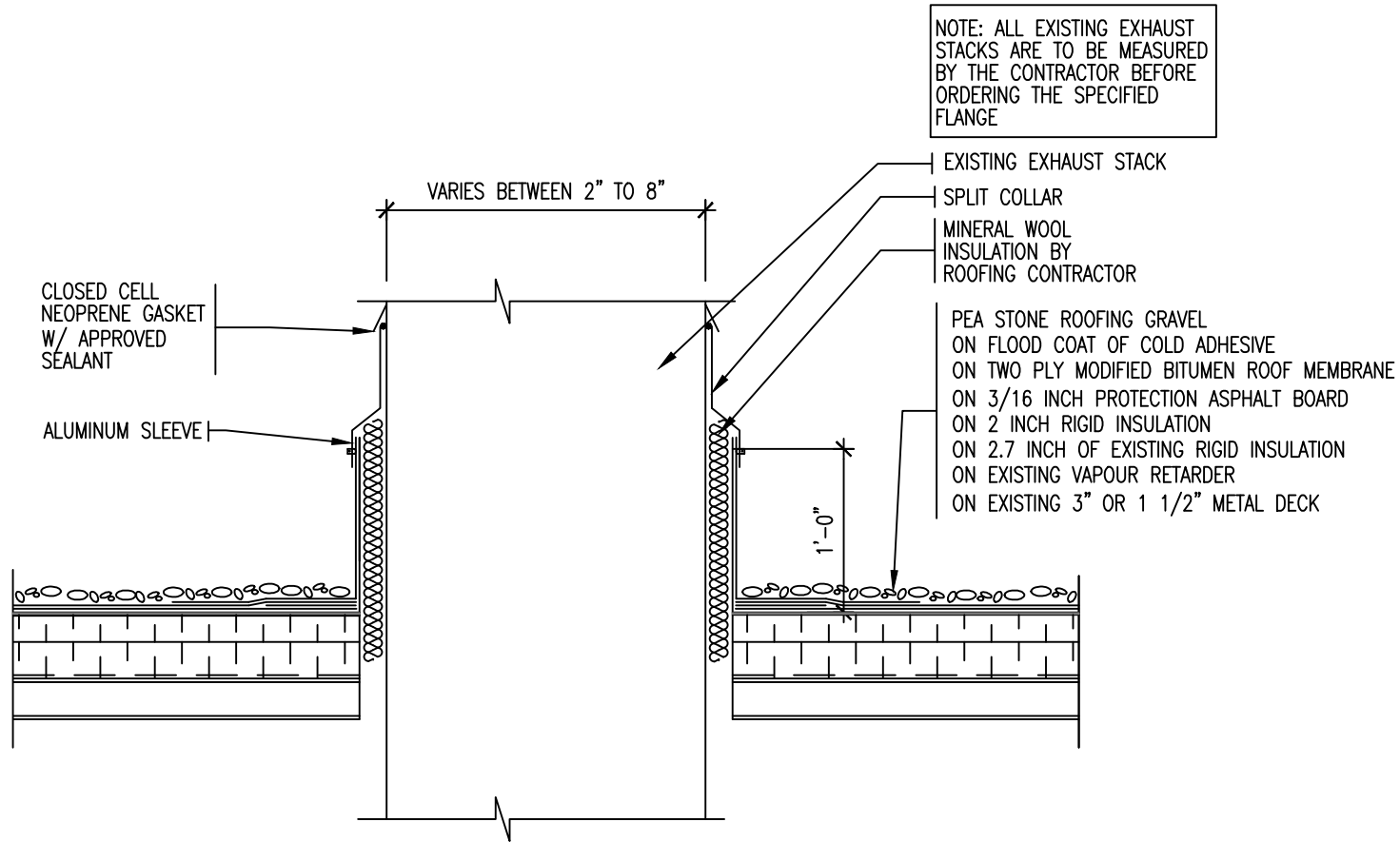
NOTE:
 IF EXISTING VENT STACK IS NOT
 HIGHER THAN THE NEW SJ-38, THE
 CONTRACTOR IS REQUIRED TO EXTEND
 A MINIMUM OF 3" ABOVE EPDM
 GROMMET SEAL



VENT PIPE STACK DETAIL

SCALE : 1" = 1'-0"

| | | | |
|---|---|---|---|
| REMLAP BUILDING SERVICES INC. R B S <small>ROOF REPAIRS, ROOFING AND ROOFING PRODUCTS INSULATION SPECIALISTS (POLYURETHANE FOAM/FOAM POLYSTYRENE) SUBJECTS AND COMPONENTS OF ROOFS AND BUILDINGS</small> <small>1407 Glen Road Toronto, Ontario M8Z 1X9</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT 1001 THE RAPIDS PARKWAY, SARNOIA, ONTARIO | DATE : OCTOBER 2016 SCALE : N.T.S. DRAWN BY : CWP | |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 8.1/2"x11" | |
| | DATE <small>(DATE-20-YY)</small> 10-24-16 OWNER REVIEW 12-5-16 TENDER | DRAWING TITLE DETAIL | PROJECT FILE NO. RBS16-61 DRAWING NO. Dp-2 |
| | <small>1407 Glen Road Toronto, Ontario M8Z 1X9</small> | <small>TEL: (416) 738-3885 FAX: (416) 738-4027</small> | |



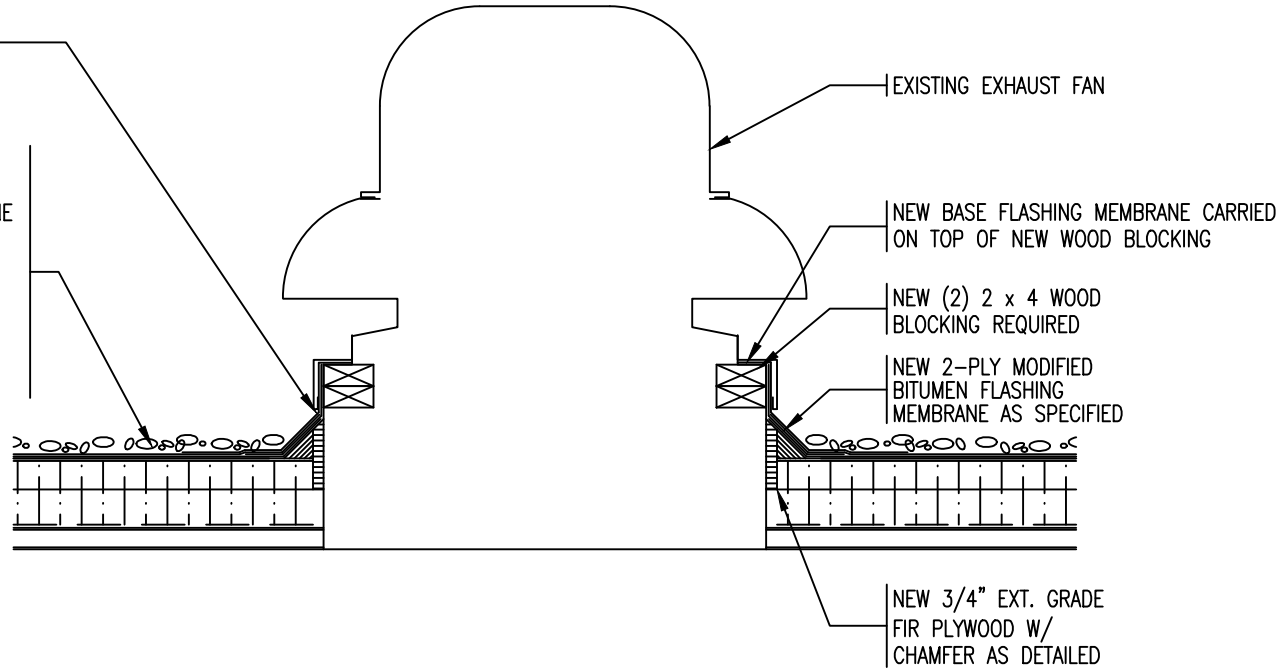
TYPICAL HOT EXHAUST STACK DETAIL

SCALE : 1" = 1'-0"

| | | |
|---|--|---|
| REMLAP BUILDING SERVICES INC. R B S <small>ROOF ASSESSMENT, DESIGN AND INSPECTION SERVICES ROOFING CONTRACTORS (RESIDENTIAL COMMERCIAL/INDUSTRIAL) SUBJECTS AND CONSULTANTS OF ROOFS AND BUILDINGS</small> <small>1407 Glen Road Toronto, Ontario M8Z 1X9</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | 1001 THE RAPIDS PARKWAY, SARASOTA, ONTARIO | DRAWN BY : CWP |
| | DATE (DATE-20-YY) 10-24-16 | ISSUED FOR OWNER REVIEW |
| 12-5-16 TENDER | DRAWING TITLE DETAIL | SHEET SIZE : 8.1/2"x11" PROJECT FILE NO. RBS16-61 DRAWING NO. Dp-3 |

NEW PREFINISHED METAL
COUNTER FLASHING AS
DETAILED

PEA STONE ROOFING GRAVEL
ON FLOOD COAT OF COLD ADHESIVE
ON TWO PLY MODIFIED BITUMEN ROOF MEMBRANE
ON 3/16 INCH PROTECTION ASPHALT BOARD
ON TAPERED INSULATION AS NOTED
ON 2 INCH RIGID INSULATION
ON 2.7 INCH OF EXISTING RIGID INSULATION
ON EXISTING VAPOUR RETARDER
ON EXISTING METAL DECK



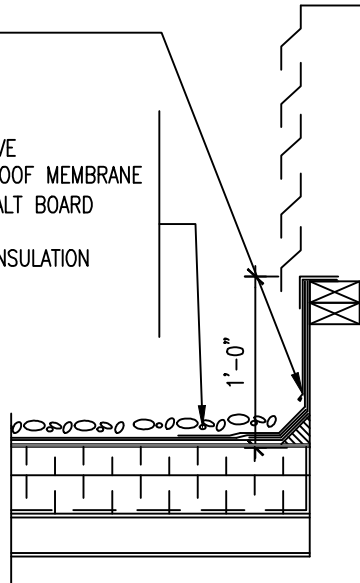
DETAIL - EXHAUST FAN

SCALE : 1" = 1'-0"

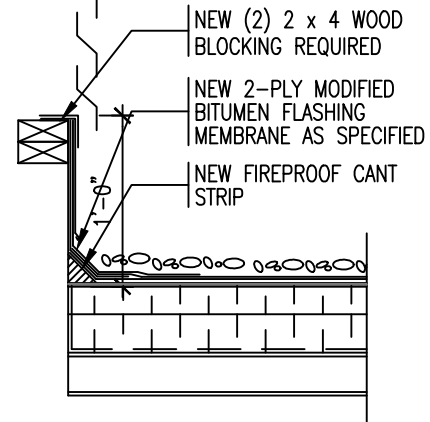
| | | | | |
|--|--|--|--|---|
| REMLAP BUILDING SERVICES INC. R B S <small>1001 One Road Rama, Ontario N0R 1R0</small> | <small>NEW ARCHITECTURAL, DESIGN AND SERVICES PROVIDED EXISTING CHANGELAP (POLYMER CONCRETE/BRICK PAVING) SUBJECT AND CONDITIONS OF BIDS AND BIDDING</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT 1001 THE RAPIDS PARKWAY, SARNOIA, ONTARIO | DATE : OCTOBER 2016 SCALE : N.T.S. DRAWN BY : CWP | |
| | <small>Client: Christopher W. Palmer, C.M.A.S.</small> | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 8.1/2"x11" | |
| | DATE <small>(MM-DD-YY)</small> 10-24-16 | ISSUED FOR OWNER REVIEW | DRAWING TITLE DETAIL | PROJECT FILE NO. RBS16-61 DRAWING NO. Dp-4 |
| | 12-5-16 | TENDER | | |

NEW PREFINISHED METAL
COUNTER FLASHING AS
SPECIFIED

PEA STONE ROOFING GRAVEL
ON FLOOD COAT OF COLD ADHESIVE
ON TWO PLY MODIFIED BITUMEN ROOF MEMBRANE
ON 3/16 INCH PROTECTION ASPHALT BOARD
ON 2 INCH RIGID INSULATION
ON 2.7 INCH OF EXISTING RIGID INSULATION
ON EXISTING VAPOUR RETARDER
ON EXISTING 3" METAL DECK



NOTE:
EXISTING HOOD TO BE REMOVED
TO ALLOW FOR BASE FLASHING
MEMBRANE W/ METAL COUNTER
FLASHING TO SIT ON TOP OF
CURB

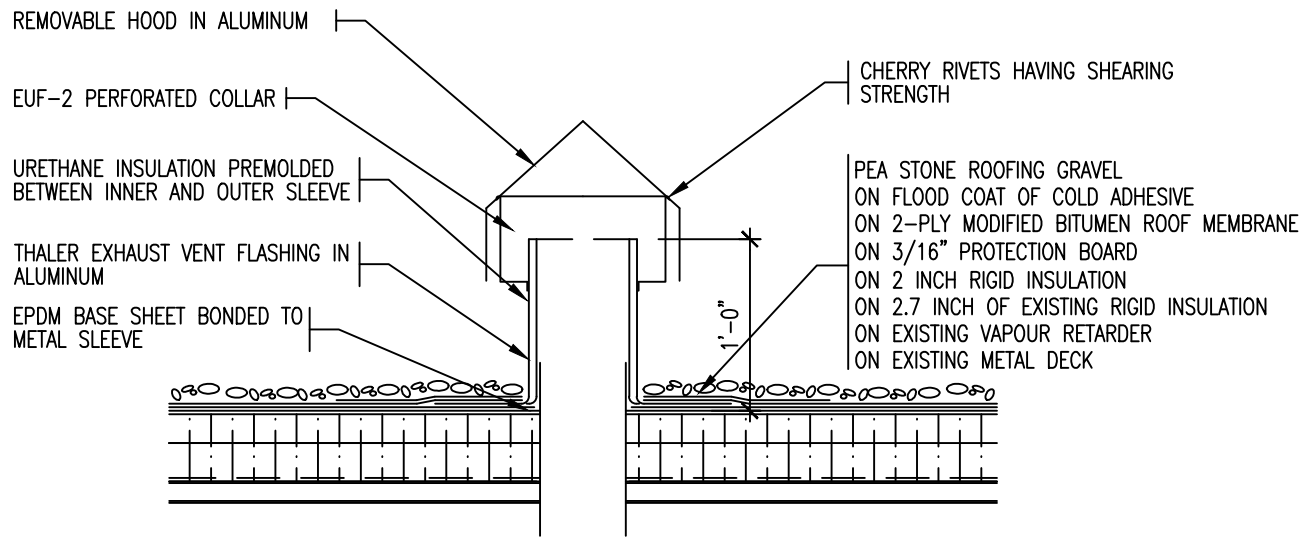


RELIEF VENT DETAIL

SCALE : 1" = 1'-0"

| | | | | |
|--|---|---|---|---|
| REMLAP BUILDING SERVICES INC. R B S <small>1607 Glen Road Huron, Ontario N2R 1K0</small> | <small>ROOF ASSESSMENT, DESIGN AND SUPERVISION SERVICES</small> <small>INSULATION INSTALLATION (POLYURETHANE FOAM/ROCK WOOL FIBRE) RECEIVING</small> <small>SUBJECTS AND CONDITIONS OF BIDDING AND BUILDING</small> <small>Christopher W. Palmer, C.B.S.</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT 1001 THE RAPIDS PARKWAY, SARNOIA, ONTARIO | DATE : OCTOBER 2016 SCALE : N.T.S. DRAWN BY : CWP | |
| | <small>1607 Glen Road Huron, Ontario N2R 1K0</small> | <small>160 (905) 738-3885 Fax (905)738-4707</small> | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 8.1/2"x11" |
| | DATE <small>(MM-DD-YY)</small> 10-24-16 | ISSUED FOR OWNER REVIEW | DRAWING TITLE DETAIL | PROJECT FILE NO. RBS16-61 DRAWING NO. Dp-5 |
| | 12-5-16 | TENDER | | |

NOTE: ALL EXISTING EXHAUST STACKS ARE TO BE MEASURED BY THE CONTRACTOR BEFORE ORDERING THE SPECIFIED FLANGE

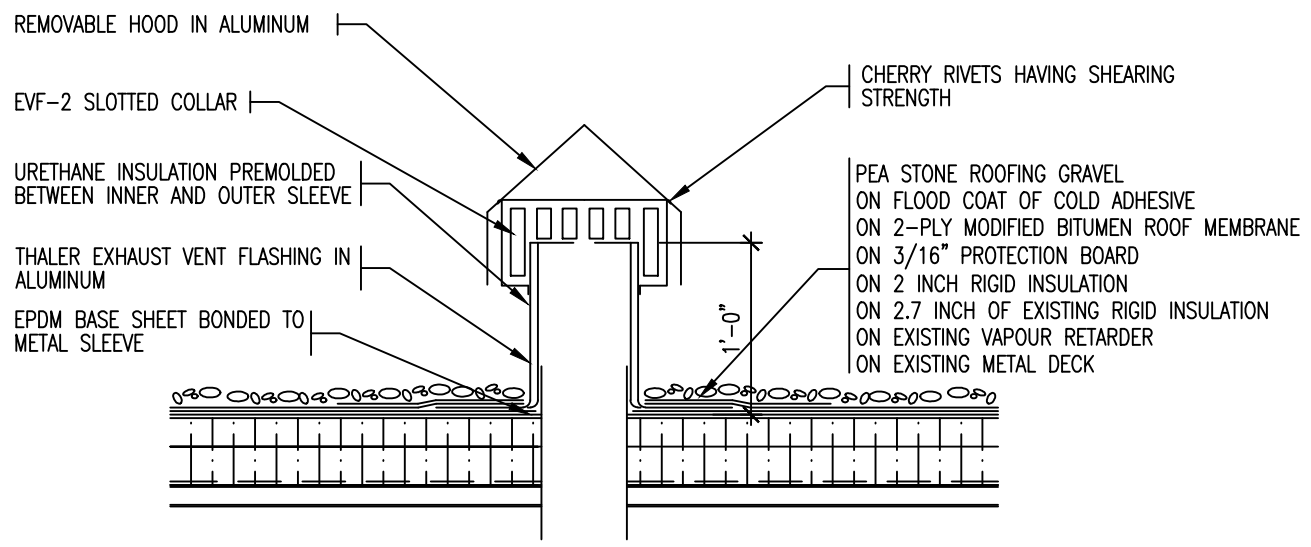


EXHAUST VENT FLASHING DETAIL

SCALE : 1" = 1'-0"

| | | |
|---|--|------------------------------|
| REMLAP BUILDING SERVICES INC. R B S <small>WE'VE GOT YOU COVERED</small> <small>1007 Glen Road Toronto, Ontario M8Z 1X2</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | DRAWING TITLE DETAIL | DRAWN BY : CWP |
| DATE (MM-DD-YY) 10-24-16 | ISSUED FOR OWNER REVIEW | CHK. BY : CWP |
| DATE (MM-DD-YY) 12-5-16 | ISSUED FOR TENDER | SHEET SIZE : 8.1/2"x11" |
| | | PROJECT FILE NO. RBS16-61 |
| | | DRAWING NO. Dp-6 |

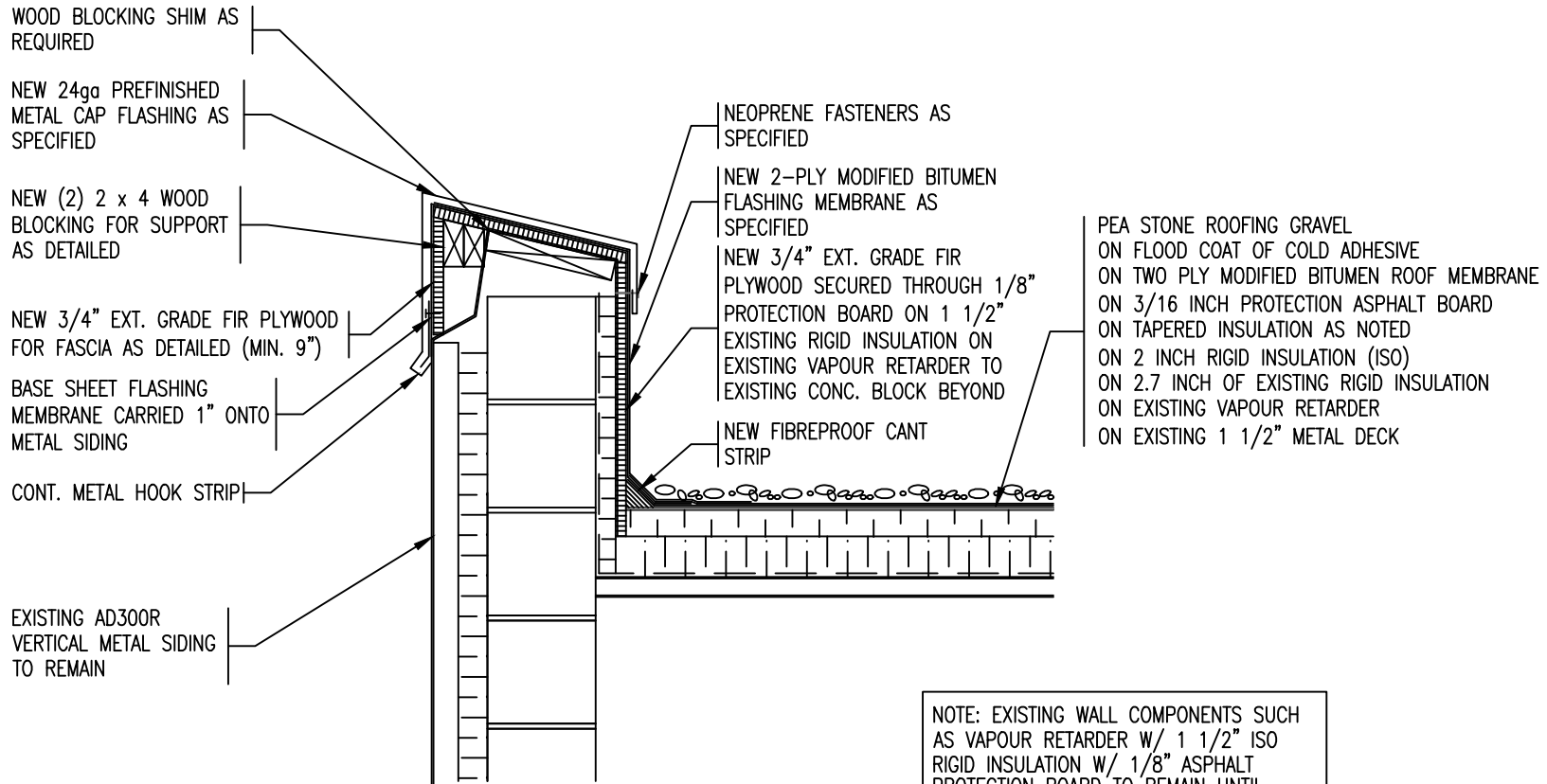
NOTE: ALL EXISTING EXHAUST STACKS ARE TO BE MEASURED BY THE CONTRACTOR BEFORE ORDERING THE SPECIFIED FLANGE



DRYER VENT FLASHING DETAIL

SCALE : 1" = 1'-0"

| | | | |
|---|---|---|---|
| REMLAP BUILDING SERVICES INC. R ROOF REPAIRS, ROOFING AND ROOFING PRODUCTS B BUSINESS DEVELOPMENT (NEW/REPAIR ROOFING PRODUCTS) S SUBJECTS AND CONSULTANTS OF ROOFS AND BUILDINGS <small>1607 Glen Road Toronto, Ontario M8H 1G9</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT 1001 THE RAPIDS PARKWAY, SARNOIA, ONTARIO | DATE : OCTOBER 2016 SCALE : N.T.S. DRAWN BY : CWP | |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 8.1/2"x11" | |
| | DATE (DATE-15-17) 10-24-16 OWNER REVIEW 12-5-16 TENDER | ISSUED FOR OWNER REVIEW TENDER | PROJECT FILE NO. RBS16-61 DRAWING NO. Dp-7 |
| | <small>1607 Glen Road Toronto, Ontario M8H 1G9</small> | <small>TEL (416) 738-3885 FAX (416) 738-4077</small> | |

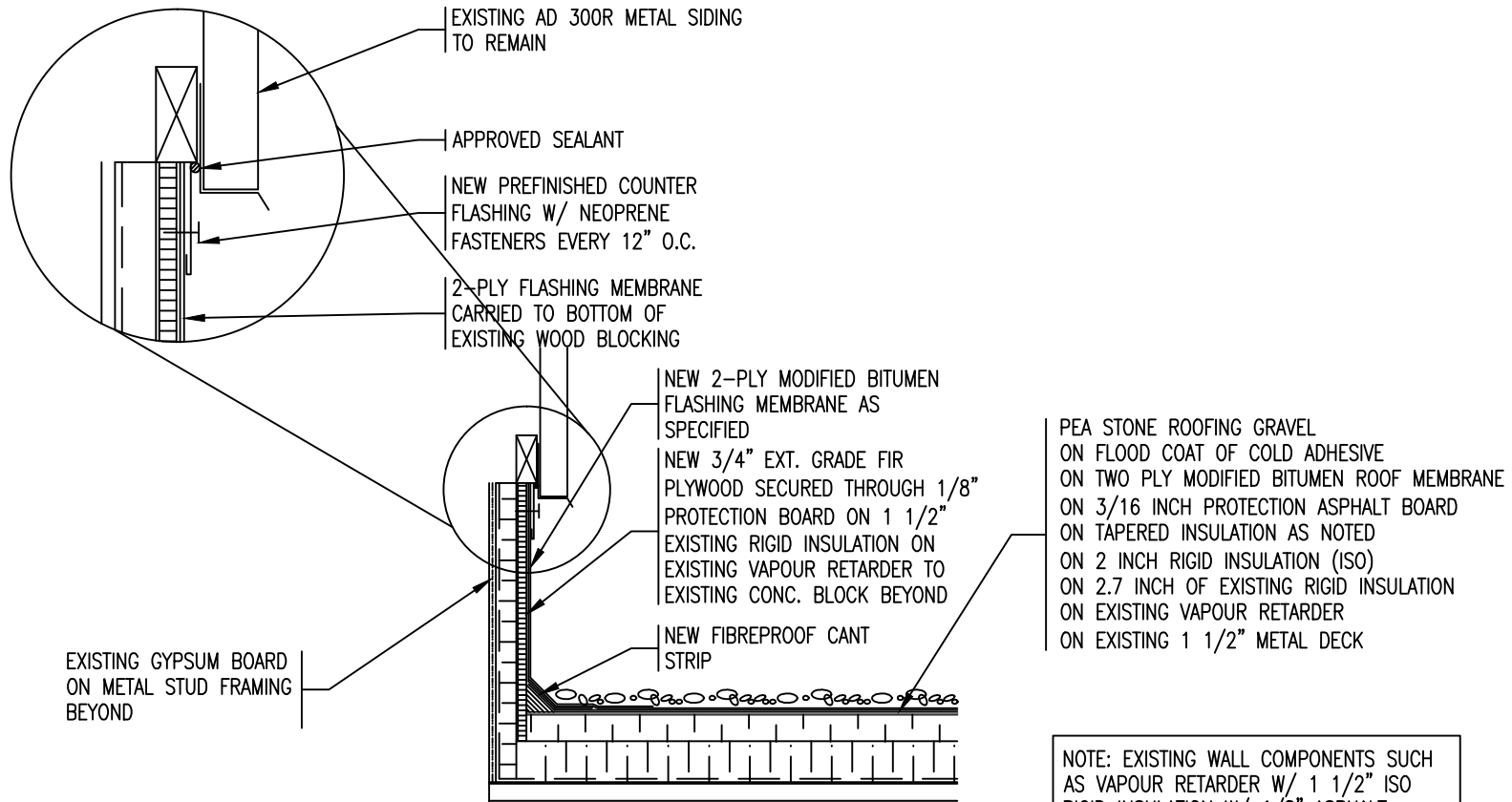


NOTE: EXISTING WALL COMPONENTS SUCH AS VAPOUR RETARDER W/ 1 1/2" ISO RIGID INSULATION W/ 1/8" ASPHALT PROTECTION BOARD TO REMAIN UNTIL 3/4" EXTERIOR GRADE FIR PLYWOOD IS SECURED THROUGH COMPONENTS TO THE EXISTING CONCRETE BLOCK

UPPER PERIMETER ROOF DETAIL

SCALE : 1" = 1'-0"

| | | |
|--|--|------------------------------|
| REMLAP BUILDING SERVICES INC. RBS <small>WEATHERING, ROOFING AND INTERIOR FINISHES INSULATION SPECIALISTS (POLYURETHANE SPRAY/FORM POLYURETHANE) SURFACES AND COMPONENTS OF ROOFS AND BUILDINGS</small> <small>Christopher W. Palmer, C.M.A.S.</small> <small>1607 Glen Road Toronto, Ontario M8Z 1K2</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | DRAWING TITLE ROOF DETAIL | DRAWN BY : CWP |
| DATE (ISS-17) 10-24-16 | ISSUED FOR OWNER REVIEW | CHK. BY : CWP |
| DATE 12-5-16 | TENDER | SHEET SIZE : 8.1/2"x11" |
| | | PROJECT FILE NO. RBS16-61 |
| | | DRAWING NO. Dp-8 |

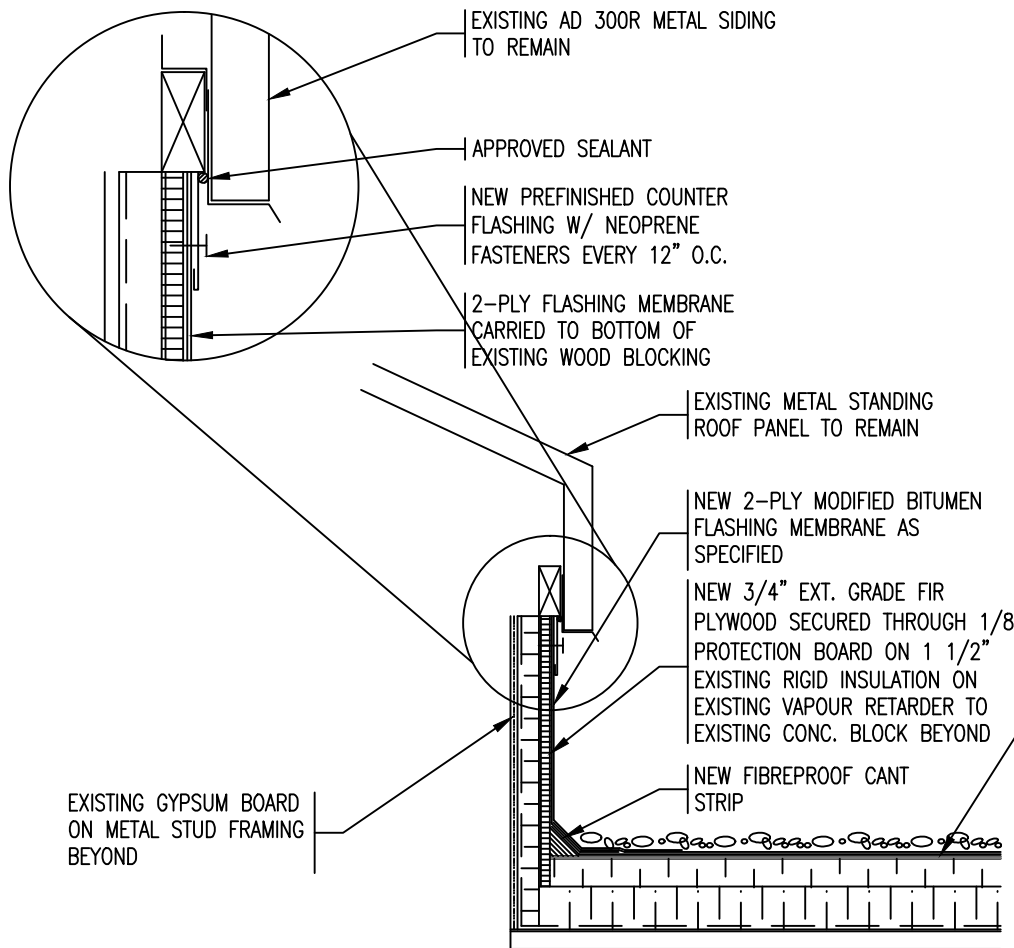


NOTE: EXISTING WALL COMPONENTS SUCH AS VAPOUR RETARDER W/ 1 1/2" ISO RIGID INSULATION W/ 1/8" ASPHALT PROTECTION BOARD TO REMAIN UNTIL 3/4" EXTERIOR GRADE FIR PLYWOOD IS SECURED THROUGH COMPONENTS TO THE EXISTING CONCRETE BLOCK

ROOF PERIMETER DETAIL

SCALE : 1" = 1'-0"

| | | | |
|--|---|---|---|
| REMLAP BUILDING SERVICES INC. R B S <small>1607 Glen Road Huron, Ontario N2R 1K0</small> | <small>NEW ARCHITECTURAL, ENGINE AND INTERIOR FINISHES EXISTING CHANGEOVER (NEW/WORK CHANGEOVER/REPAIR) SUBJECT AND CONDITIONS OF BIDDING AND AGREEMENT</small> <small>Client: Christopher W. Palmer, C.M.A.S.</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT 1001 THE RAPIDS PARKWAY, SARNOIA, ONTARIO | DATE : OCTOBER 2016 SCALE : N.T.S. DRAWN BY : CWP |
| | <small>1607 Glen Road Huron, Ontario N2R 1K0</small> | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 8.1/2"x11" |
| | DATE <small>(DATE-20-17)</small> 10-24-18 OWNER REVIEW 12-5-18 TENDER | ISSUED FOR DRAWING TITLE ROOF DETAIL | PROJECT FILE NO. RBS16-61 DRAWING NO. Dp-9 |



EXISTING AD 300R METAL SIDING
TO REMAIN

APPROVED SEALANT

NEW PREFINISHED COUNTER
FLASHING W/ NEOPRENE
FASTENERS EVERY 12" O.C.

2-PLY FLASHING MEMBRANE
CARRIED TO BOTTOM OF
EXISTING WOOD BLOCKING

EXISTING METAL STANDING
ROOF PANEL TO REMAIN

NEW 2-PLY MODIFIED BITUMEN
FLASHING MEMBRANE AS
SPECIFIED

NEW 3/4" EXT. GRADE FIR
PLYWOOD SECURED THROUGH 1/8"
PROTECTION BOARD ON 1 1/2"
EXISTING RIGID INSULATION ON
EXISTING VAPOUR RETARDER TO
EXISTING CONC. BLOCK BEYOND

NEW FIBREPROOF CANT
STRIP

EXISTING GYPSUM BOARD
ON METAL STUD FRAMING
BEYOND

PEA STONE ROOFING GRAVEL
ON FLOOD COAT OF COLD ADHESIVE
ON TWO PLY MODIFIED BITUMEN ROOF MEMBRANE
ON 3/16 INCH PROTECTION ASPHALT BOARD
ON TAPERED INSULATION AS NOTED
ON 2 INCH RIGID INSULATION (ISO)
ON 2.7 INCH OF EXISTING RIGID INSULATION
ON EXISTING VAPOUR RETARDER
ON EXISTING 1 1/2" METAL DECK

NOTE: EXISTING WALL COMPONENTS SUCH
AS VAPOUR RETARDER W/ 1 1/2" ISO
RIGID INSULATION W/ 1/8" ASPHALT
PROTECTION BOARD TO REMAIN UNTIL
3/4" EXTERIOR GRADE FIR PLYWOOD IS
SECURED THROUGH COMPONENTS TO THE
EXISTING CONCRETE BLOCK

ROOF PERIMETER DETAIL

SCALE : 1" = 1'-0"

| | | |
|---|--|------------------------------|
| REMLAP BUILDING SERVICES INC. R BEST QUALITY SERVICE AND SUPPORT PROVIDED B BOLDLY CHALLENGED (OLD/NEW/OTHER/NEVER RECEIVED) S SUBJECT AND COMPANION OF TODAY AND TOMORROW <small>1607 Glen Road Rexdale, Ontario M9L 1S2</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | DRAWING TITLE ROOF DETAIL | DRAWN BY : CWP |
| DATE 10-24-16 | ISSUED FOR OWNER REVIEW | CHK. BY : CWP |
| DATE 12-5-16 | ISSUED FOR TENDER | SHEET SIZE : 8.1/2"x11" |
| | | PROJECT FILE NO. RBS16-61 |
| | | DRAWING NO. Dp-10 |

NEW 24ga PREFINISHED
METAL CAP FLASHING AS
SPECIFIED

WOOD BLOCKING TO SUIT
(2 x 4 CONT.)

NEW 3/4" EXT. GRADE FIR
PLYWOOD FOR FASCIA AS
DETAILED (MIN. 8")

BASE SHEET FLASHING
MEMBRANE CARRIED TO
BOTTOM OF PLYWOOD

CONT. METAL HOOK STRIP

EXISTING BRICK VENEER
OVER ROXUL WALL CAVITY
INSULATION

NEOPRENE FASTENERS AS
SPECIFIED

NEW 2-PLY MODIFIED BITUMEN
FLASHING MEMBRANE AS
SPECIFIED

NEW 3/4" EXT. GRADE FIR
PLYWOOD SECURED THROUGH 1/8"
PROTECTION BOARD ON 1 1/2"
EXISTING RIGID INSULATION ON
EXISTING VAPOUR RETARDER TO
EXISTING CONC. BLOCK BEYOND

NEW FIBREPROOF CANT
STRIP

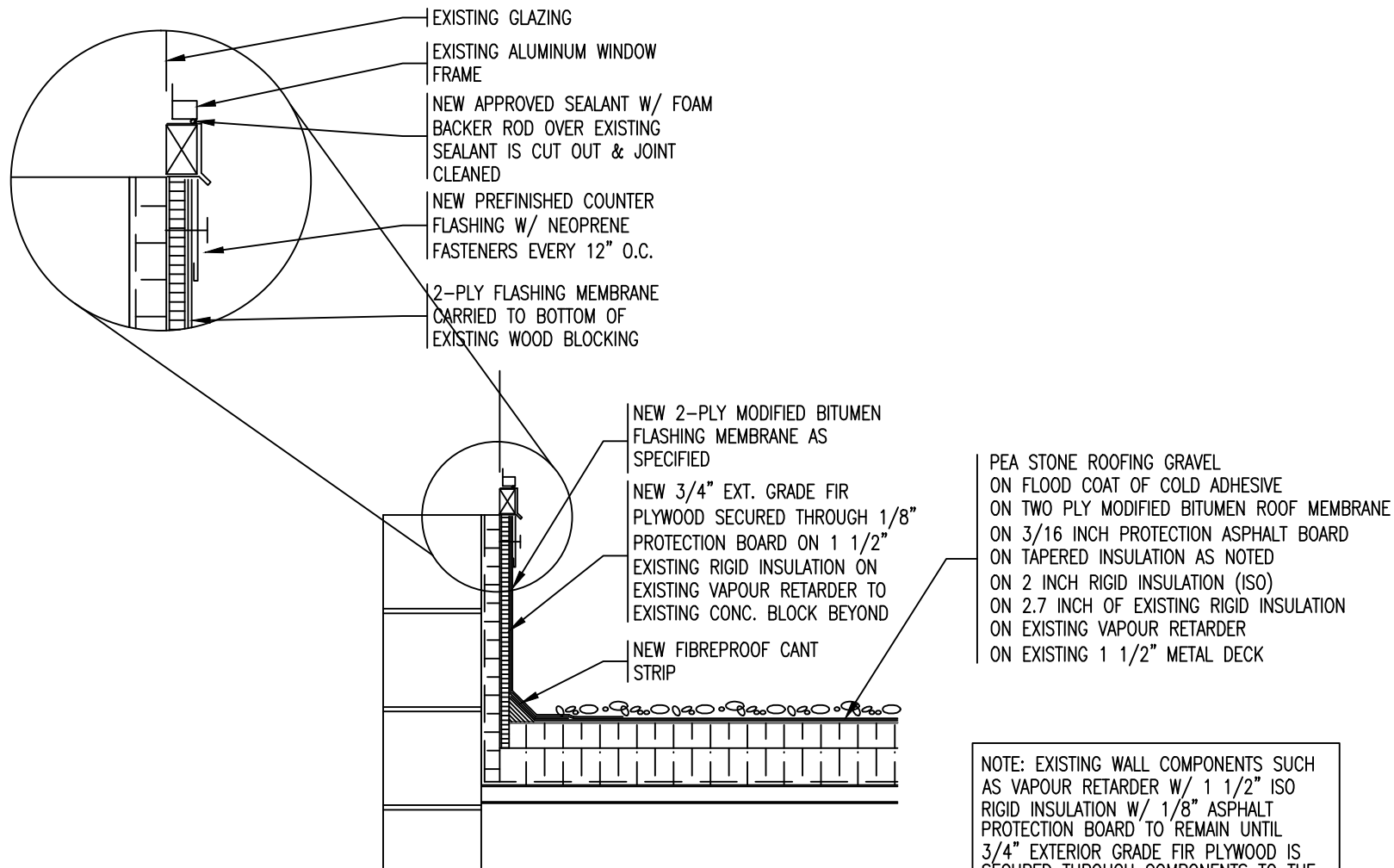
PEA STONE ROOFING GRAVEL
ON FLOOD COAT OF COLD ADHESIVE
ON TWO PLY MODIFIED BITUMEN ROOF MEMBRANE
ON 3/16 INCH PROTECTION ASPHALT BOARD
ON TAPERED INSULATION AS NOTED
ON 2 INCH RIGID INSULATION (ISO)
ON 2.7 INCH OF EXISTING RIGID INSULATION
ON EXISTING VAPOUR RETARDER
ON EXISTING 1 1/2" METAL DECK

NOTE: EXISTING WALL COMPONENTS SUCH
AS VAPOUR RETARDER W/ 1 1/2" ISO
RIGID INSULATION W/ 1/8" ASPHALT
PROTECTION BOARD TO REMAIN UNTIL
3/4" EXTERIOR GRADE FIR PLYWOOD IS
SECURED THROUGH COMPONENTS TO THE
EXISTING CONCRETE BLOCK

ROOF DETAIL - LOWER PERIMETER

SCALE : 1" = 1'-0"

| | | | |
|---|---|---|---|
| REMLAP BUILDING SERVICES INC. RBS <small>1001 One Road Rexdale, Ontario M9W 1K0</small> | <small>WE'VE ASSURED, BUILT AND MAINTAINED PROJECTS THROUGH CHALLENGE (AND/WHEN CHALLENGE PRESENTS) SUBJECT AND CONDITIONS OF BIDS AND AGREEMENTS</small> <small>Christopher W. Palmer, C.B.S.</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT 1001 THE RAPIDS PARKWAY, SARNOIA, ONTARIO | DATE : OCTOBER 2016 SCALE : N.T.S. DRAWN BY : CWP |
| | <small>1001 One Road Rexdale, Ontario M9W 1K0</small> | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 8.1/2"x11" |
| | DATE (DATE-20-17) 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER | DRAWING TITLE ROOF DETAIL |



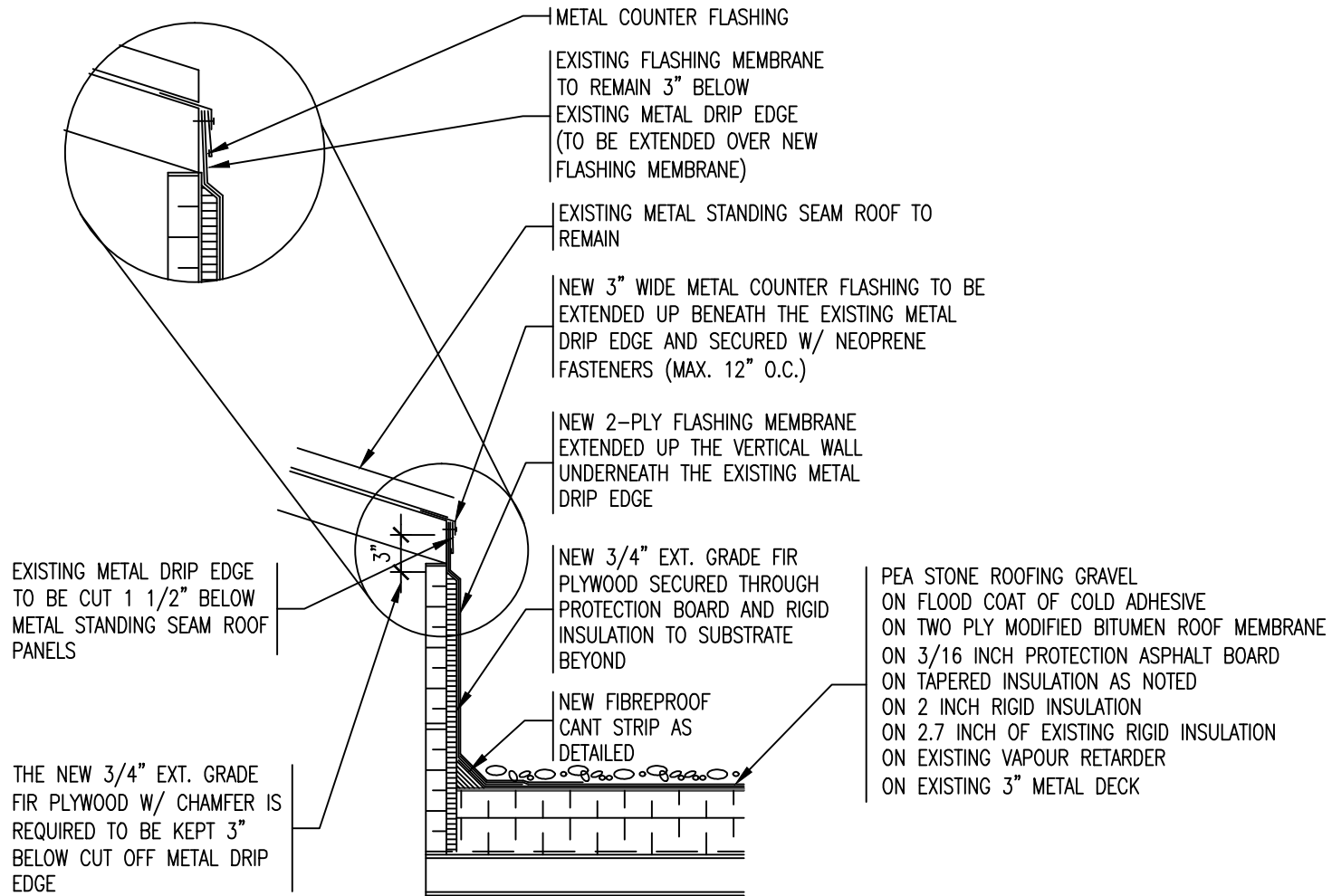
PEA STONE ROOFING GRAVEL
 ON FLOOD COAT OF COLD ADHESIVE
 ON TWO PLY MODIFIED BITUMEN ROOF MEMBRANE
 ON 3/16 INCH PROTECTION ASPHALT BOARD
 ON TAPERED INSULATION AS NOTED
 ON 2 INCH RIGID INSULATION (ISO)
 ON 2.7 INCH OF EXISTING RIGID INSULATION
 ON EXISTING VAPOUR RETARDER
 ON EXISTING 1 1/2" METAL DECK

NOTE: EXISTING WALL COMPONENTS SUCH
 AS VAPOUR RETARDER W/ 1 1/2" ISO
 RIGID INSULATION W/ 1/8" ASPHALT
 PROTECTION BOARD TO REMAIN UNTIL
 3/4" EXTERIOR GRADE FIR PLYWOOD IS
 SECURED THROUGH COMPONENTS TO THE
 EXISTING CONCRETE BLOCK

ROOF DETAIL - BELOW WINDOWS

SCALE : 1" = 1'-0"

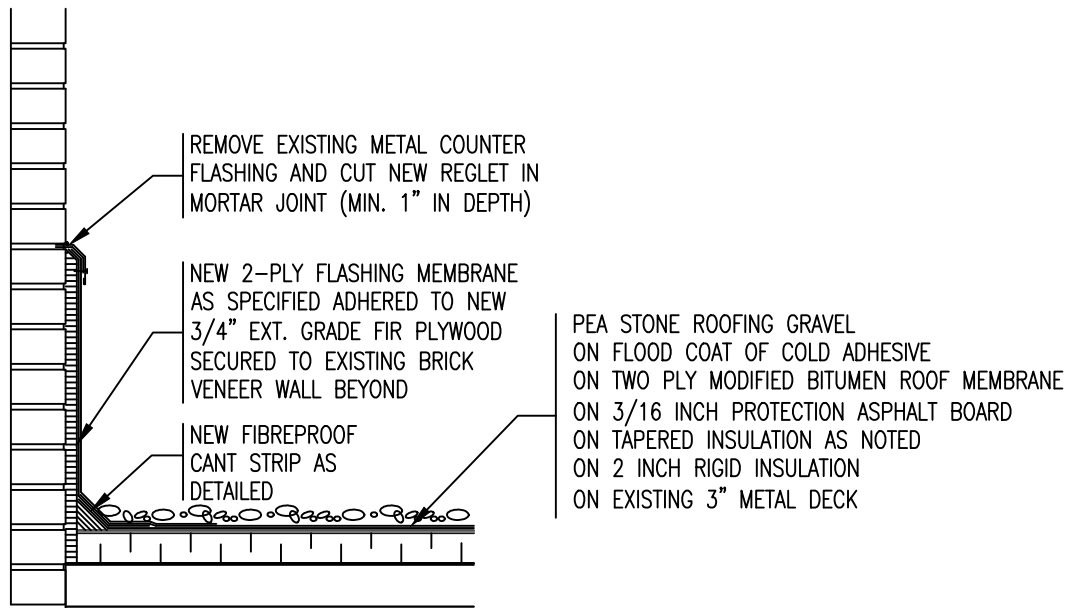
| | | |
|--|--|------------------------------|
| REMLAP BUILDING SERVICES INC. RBS <small>ROOF REPAIRS, ROOFING AND ROOFING PRODUCTS ROOFING CONTRACTORS (S/S) (S/S) (S/S) (S/S) (S/S) SUBJECTS AND CONSULTANTS OF ROOFS AND BUILDINGS</small> <small>1407 Glen Road Toronto, Ontario M8Z 1X9</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | DRAWING TITLE ROOF DETAIL | DRAWN BY : CWP |
| DATE 10-24-16 | ISSUED FOR OWNER REVIEW | CHK. BY : CWP |
| DATE 12-5-16 | ISSUED FOR TENDER | SHEET SIZE : 8.1/2"x11" |
| | | PROJECT FILE NO. RBS16-61 |
| | | DRAWING NO. Dp-12 |



ROOF DETAIL @ STANDING SEAM PANELS

SCALE : 1" = 1'-0"

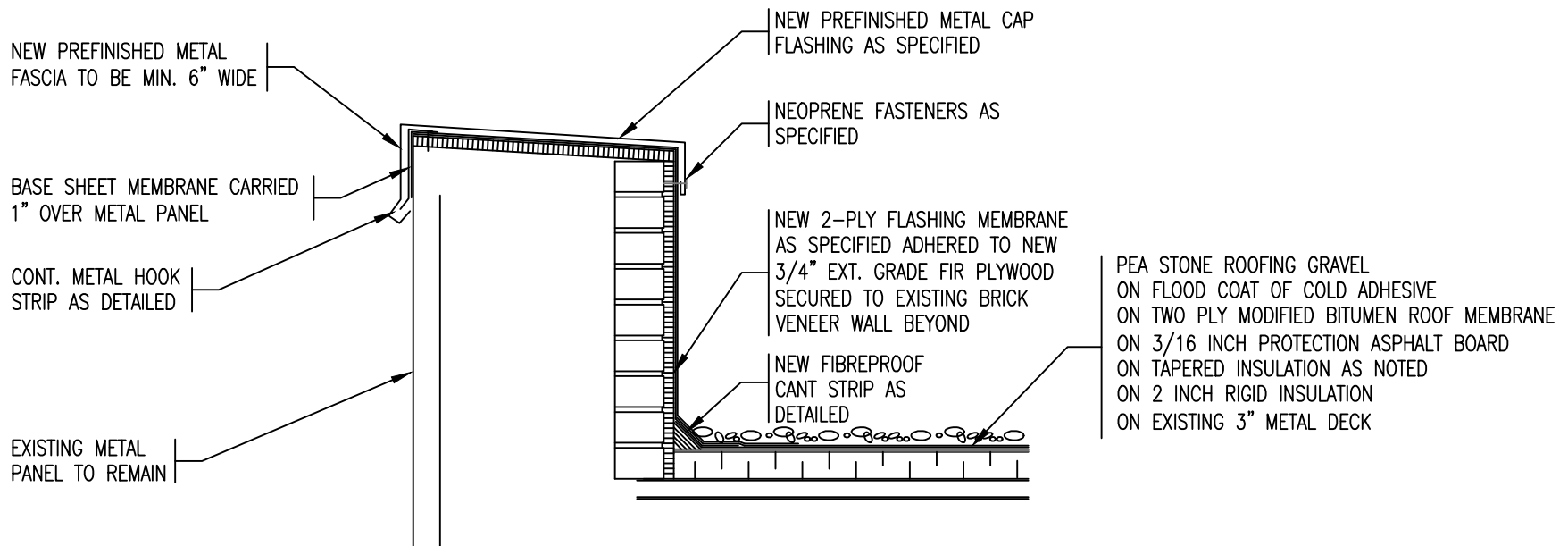
| | | | |
|---|---|---|---|
| REMLAP BUILDING SERVICES INC. R B S <small>1007 Glen Road Toronto, Ontario M8Z 1X2</small> | <small>NEW ARCHITECTURAL, DESIGN AND SERVICES PROVIDED</small> <small>ISSUES CHANGES (BY/WORK ORDER/DATE RECEIVED)</small> <small>SUBJECT AND CONTENTS OF SHEETS AND SHEETS</small> Christopher W. Palmer, C.B.S. <small>16 (416) 738-3383 Fax (416)738-0757</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT 1001 THE RAPIDS PARKWAY, SARNAIA, ONTARIO | DATE : OCTOBER 2016 SCALE : N.T.S. DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 8.1/2"x11" | |
| | DATE <small>08-25-17</small> 10-24-18 OWNER REVIEW 12-5-18 TENDER | ISSUED FOR ROOF DETAIL | PROJECT FILE NO. RBS16-61 DRAWING NO. Dp-13 |



ROOF DETAIL - INTERIOR WALL

SCALE : 1" = 1'-0"

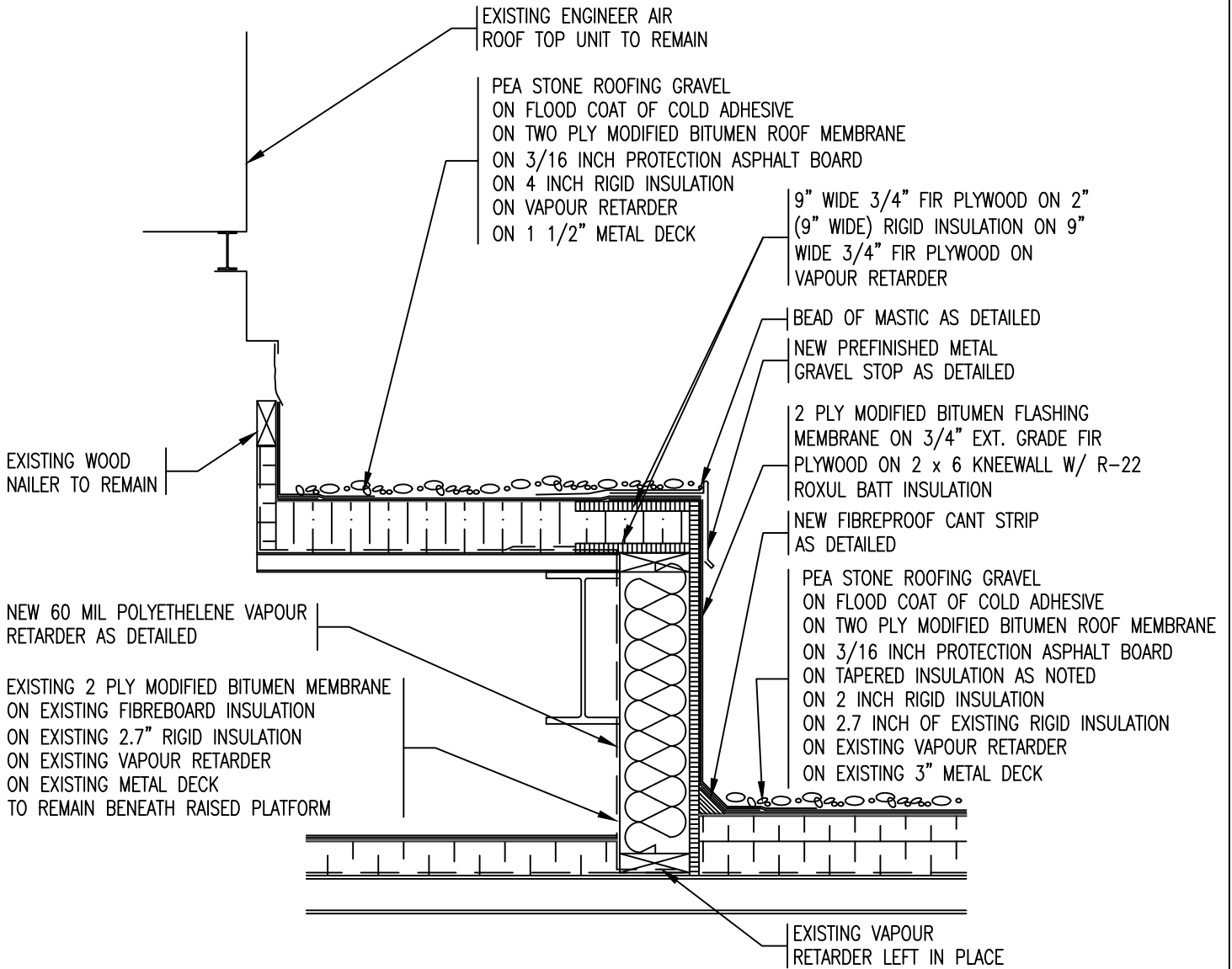
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|---|---|---|
| REMLAP BUILDING SERVICES INC. R B S <small>ROOF REPAIRS, ROOFING AND ROOFING PRODUCTS INSULATION SPECIALISTS (POLYURETHANE FOAMS/FOAM PRODUCTS) SURFACES AND COATINGS OF ROOFS AND BUILDINGS</small> <small>Christopher W. Palmer, C.E.S.</small> <small>1607 Glen Road Huron, Ontario N2R 1K0</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT 1001 THE RAPIDS PARKWAY, SARNOIA, ONTARIO | DATE : OCTOBER 2016 SCALE : N.T.S. DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 8.1/2"x11" |
| | DRAWING TITLE ROOF DETAIL | PROJECT FILE NO. RBS16-61 DRAWING NO. Dp-14 |
| DATE 08-25-17 10-24-18 12-5-18 | ISSUED FOR OWNER REVIEW TENDER | |



ROOF DETAIL - PERIMETER WALL

SCALE : 1" = 1'-0"

| | | |
|--|--|------------------------------|
| REMLAP BUILDING SERVICES INC. R B S <small>1007 Glen Road Huron, Ontario N2R 1K0 Tel: (519) 738-3885 Fax: (519)738-4757</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | DRAWING TITLE ROOF DETAIL | DRAWN BY : CWP |
| DATE 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER | CHK. BY : CWP |
| | | SHEET SIZE : 8.1/2"x11" |
| | | PROJECT FILE NO. RBS16-61 |
| | | DRAWING NO. Dp-15 |



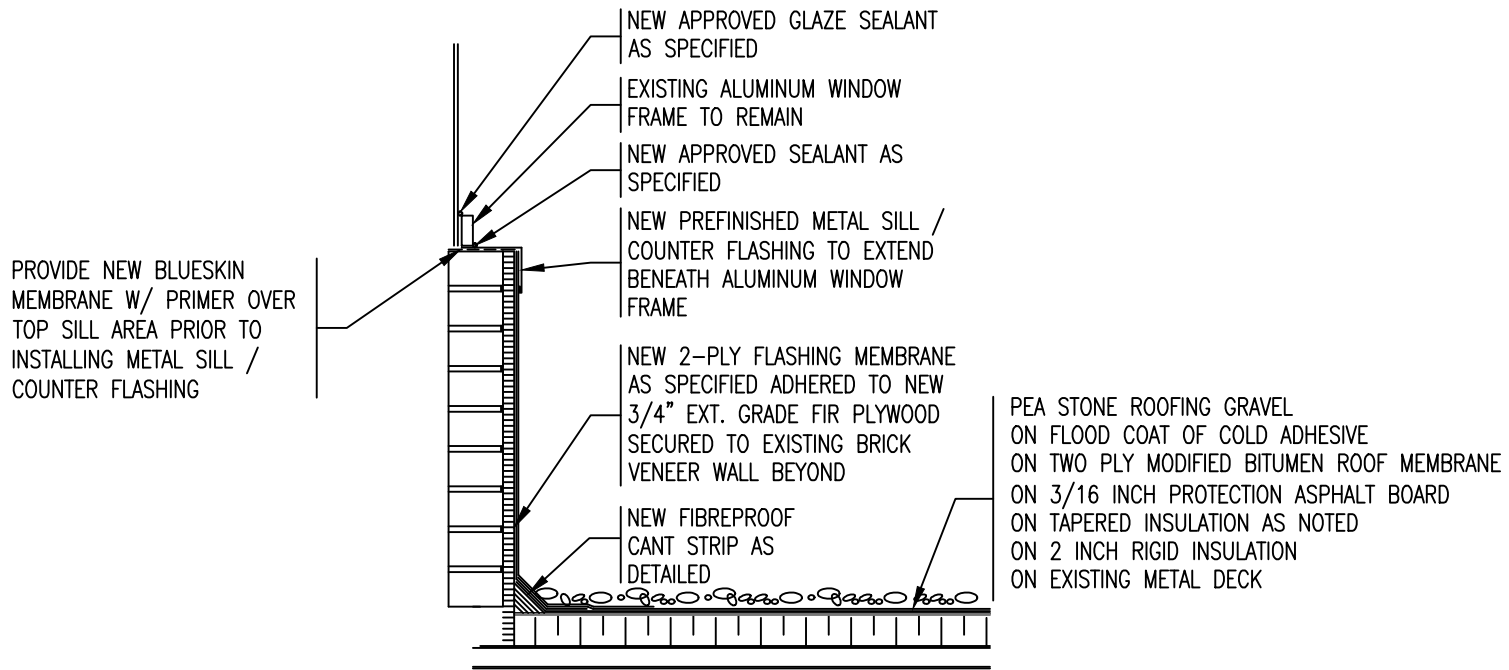
PLATFORM DETAIL

SCALE : 1" = 1'-0"

NOTE: ONCE THE NEW KNEE WALL IS CONSTRUCTED, THE EXISTING ROOF AREA BENEATH THE RAISED PLATFORM IS TO BE COMPLETELY CLEANED OF ALL DEBRIS PRIOR OF CLOSING IN THE WALLS

NOTE: NEW 2 x 6 WOOD KNEE WALL IS TO BE SECURED TO THE EXISTING METAL DECK AT BOTH TOP AND BOTTOM WITH ALL STUD SPACING TO BE 16" O.C.

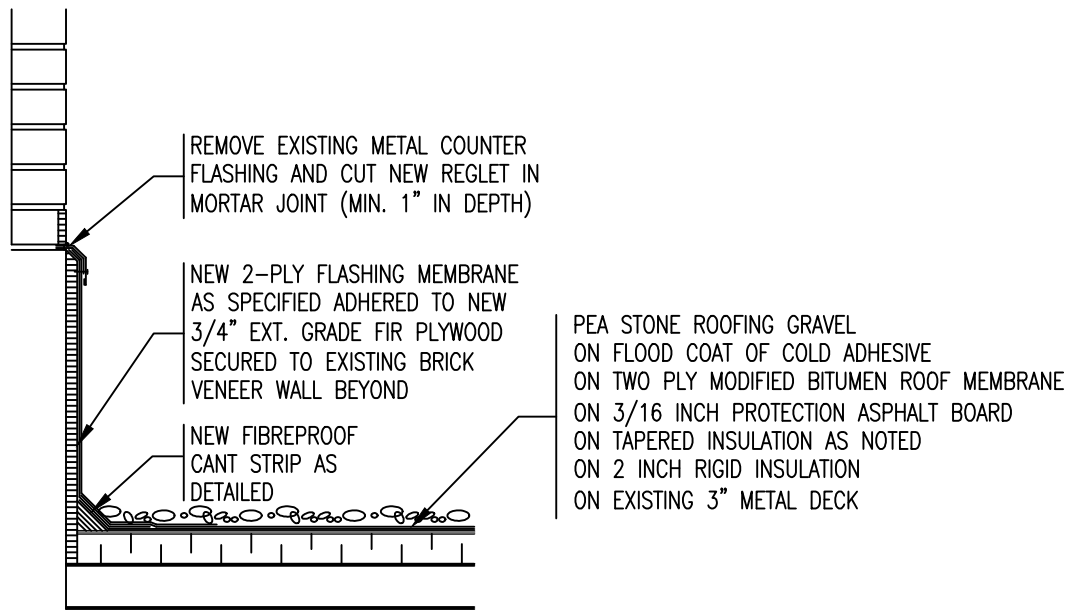
| | | | |
|---|--|---|-------------------------------------|
| REMLAP BUILDING SERVICES INC. ROOF MAINTENANCE, REPAIR AND INSPECTION PROGRAM BUILDING ENVELOPE (DR/VAPOUR BARRIERS/WATER PROOFING) STRINGS AND CORROSION OF ROOFS AND BALCONIES Christopher W. Fellows, C.E.T. 1407 Glen Road Keweenaw, Ontario N0B 1S0 Tel: (519) 738-3388 Fax: (519) 738-0207 | | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT 1001 THE RAPIDS PARKWAY, SARNIA, ONTARIO | DATE : OCTOBER 2016 |
| | | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | SCALE : N.T.S. |
| | | DATE 10-24-16 | DRAWN BY : CWP |
| | | ISSUED FOR OWNER REVIEW | CHK. BY : CWP |
| | | DATE 12-8-16 | SHEET SIZE : 8.1/2"x11" |
| | | TENDER | DRAWING TITLE ROOF DETAIL |
| | | | PROJECT FILE NO. RBS16-61 |
| | | | DRAWING NO. Dp-16 |



ROOF DETAIL @ CURTAIN WALL

SCALE : 1" = 1'-0"

| | | |
|--|--|---|
| REMLAP BUILDING SERVICES INC. R ROOF ASSESSMENT, DESIGN AND SUPERVISION SERVICES B BUSINESS DEVELOPMENT (NEW/REPAIR ROOFS/OTHER PROJECTS) S SURVEY AND CONSULTING OF ROOFS AND BUILDINGS <small>1407 Glen Road Toronto, Ontario M8Z 1X2</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT | DATE : OCTOBER 2016 SCALE : N.T.S. DRAWN BY : CWP |
| | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHECK BY : CWP SHEET SIZE : 8.1/2"x11" |
| | DRAWING TITLE ROOF DETAIL | PROJECT FILE NO. RBS16-61 DRAWING NO. Dp-17 |
| DATE (MM-DD-YY) 10-24-16 12-5-16 | ISSUED FOR OWNER REVIEW TENDER | |



ROOF DETAIL @ BRICK VENEER WALL

SCALE : 1" = 1'-0"

| | | | | |
|--|--|--|--|--|
| REMLAP BUILDING SERVICES INC. R B S <small>1001 One Road Paris, Ontario N6B 1K0</small> | <small>ROOF ASSEMBLIES, GUTTERS AND DRAINAGE SYSTEMS INSULATION CHALLENGES (POLYURETHANE CONCRETE FLOORS) SUBJECTS AND COMPONENTS OF ROOFS AND BUILDINGS</small> <small>Christopher W. Palmer, C.B.S.</small> | PROJECT ST. PATRICK CATHOLIC SCHOOL ROOF REPLACEMENT 1001 THE RAPIDS PARKWAY, SARNOIA, ONTARIO | DATE : OCTOBER 2016 SCALE : N.T.S. DRAWN BY : CWP | |
| | <small>1001 One Road Paris, Ontario N6B 1K0</small> | <small>1001 One Road Paris, Ontario N6B 1K0</small> | CLIENT ST. CLAIR CATHOLIC DISTRICT SCHOOL BOARD | CHK. BY : CWP SHEET SIZE : 8.1/2"x11" |
| | DATE <small>(MM-DD-YY)</small> 10-24-16 | ISSUED FOR OWNER REVIEW | DRAWING TITLE ROOF DETAIL | PROJECT FILE NO. RBS16-61 DRAWING NO. Dp-18 |
| | 12-5-16 | TENDER | | |



ST. CLAIR CATHOLIC
DISTRICT SCHOOL BOARD

APPENDIX A

**CCDC 2- 2008
Stipulated Price Contract**



Supplementary Conditions

The Standard Construction Document CCDC 2 2008 for a Stipulated Price Contract, English version, consisting of the Agreement Between *Owner* and *Contractor*, Definitions and General Conditions of the Stipulated Price Contract, Parts 1 to 12 inclusive, governing same is hereby made part of these *Contract Documents*, with the following amendments, additions and modifications:

AGREEMENT BETWEEN OWNER AND CONTRACTOR

ARTICLE A-3 – CONTRACT DOCUMENTS

3.1 Add the following to the list of *Contract Documents* in paragraph 3.1:

- Amendments to CCDC 2 – 2008
- *Drawings*
- *Specifications*
- Performance Bond
- Labour and Material Payment Bond

ARTICLE A-5 – PAYMENT

5.1.3 Amend paragraph 5.1.3, in the first line, by deleting the words “...the issuance of the...” and replacing them with “...receipt of the *Consultant’s*...”

5.3.1 Delete paragraph 5.3.1 in its entirety and replace it with the following:

Interest

.1 Should either party fail to make payments as they become due under the terms of the Contract or in an award by arbitration or court, interest shall also become due and payable on such unpaid amounts at 0% above the prime rate. Such interest shall be compounded on a monthly basis. The prime rate shall be the rate of interest quoted by the Bank of Canada for prime business loans, as it may change from time to time.

ARTICLE A-9 – CONFLICT OF INTEREST

Add new Article A-9 – Conflict of Interest:

9.1 The *Contractor*, all of the *Subcontractors* and *Suppliers* and any of their respective advisors, partners, directors, officers, employees, agents, and volunteers shall not engage in any activity or provide any services where such activity or the provision of such services creates a conflict of interest (actually or potentially, in the sole opinion of the *Owner*) with the provision of the *Work* pursuant to the *Contract*. The *Contractor* acknowledges and agrees that a conflict of interest, as described in this Article A-9, includes, but is not limited to, the use of *Confidential Information* where the *Owner* has not specifically authorized such use.

9.2 The *Contractor* shall disclose to the *Owner*, in writing, without delay, any actual or potential situation that may be reasonably interpreted as either a conflict of interest or a potential conflict of interest, including the retention of any *Subcontractor* or *Supplier* that is directly or indirectly affiliated with or related to the *Contractor*.

9.3 The *Contractor* covenants and agrees that it will not hire or retain the services of any employee or previous employee of the *Owner* where to do so constitutes a breach by such employee or previous employee of the *Owner’s* conflict of interest policy, as it may be amended from time to time, until after completion of the *Work* under the *Contract*.

9.4 It is of the essence of the *Contract* that the *Owner* shall not have direct or indirect liability to any *Subcontractor* or *Supplier*, and that the *Owner* relies on the maintenance of an arm's-length relationship between the *Contractor* and its *Subcontractors* and *Suppliers*. Consistent with this fundamental term of the *Contract*, the *Contractor* will not enter into any agreement or understanding with any *Subcontractor* or *Supplier*, whether as part of any contract or any written or oral collateral agreement, pursuant to which the parties thereto agree to cooperate in the presentation of a claim for payment against the *Owner*, directly or through the *Contractor*, where such claim is, in whole or in part, in respect of a disputed claim by the *Subcontractor* or *Supplier* against the *Contractor*, where the payment to the *Subcontractor* or *Supplier* by the *Contractor* is agreed to be conditional or contingent on the ability to recover those amounts or a portion thereof from the *Owner*, failing which the *Contractor* shall be saved harmless from all or a portion of those claims. The *Contractor* acknowledges that any such agreement would undermine the required arm's-length relationship and constitute a conflict of

interest. For greater certainty, the *Contractor* shall only be entitled to advance claims against the *Owner* for amounts pertaining to *Subcontractor* or *Supplier* claims where the *Contractor* has actually paid or unconditionally acknowledged liability for those claims or where those claims are the subject of litigation or binding arbitration between the *Subcontractor* or *Supplier* and the *Contractor* has been found liable for those claims.

- 9.5 Notwithstanding paragraph 7.1.2 of GC 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK OR TERMINATE THE CONTRACT, a breach of this Article by the *Contractor*, any of the *Subcontractors*, or any of their respective advisors, partners, directors, officers, employees, agents, and volunteers shall entitle the *Owner* to terminate the *Contract*, in addition to any other rights and remedies that the *Owner* has in the *Contract*, in law, or in equity.

DEFINITIONS

Add the following new definitions:

27. Confidential Information

Confidential Information means all the information or material of the *Owner* that is of a proprietary or confidential nature, whether it is identified as proprietary or confidential or not, including but not limited to information and material of every kind and description (such as drawings and move-lists) which is communicated to or comes into the possession or control of the *Contractor* at any time, but *Confidential Information* shall not include information that:

- 1) is or becomes generally available to the public without fault or breach on the part of the *Contractor*, including without limitation breach of any duty of confidentiality owed by the *Contractor* to the *Owner* or to any third party, but only after that information becomes generally available to the public;
- 2) the *Contractor* can demonstrate to have been rightfully obtained by the *Contractor* from a third party who had the right to transfer or disclose it to the *Contractor* free of any obligation of confidence;
- 3) the *Contractor* can demonstrate to have been rightfully known to or in the possession of the *Contractor* at the time of disclosure, free of any obligation of confidence; or
- 4) is independently developed by the *Contractor* without use of any *Confidential Information*.

28. Construction Schedule

Construction Schedule means the schedule for the performance of the *Work* provided by the *Contractor* pursuant to GC 3.5, including any amendments to the *Construction Schedule* made pursuant to the *Contract Documents*.

29. Force Majeure

Force Majeure means any cause, beyond the *Contractor's* control, other than bankruptcy or insolvency, which prevents the performance by the *Contractor* of any of its obligations under the *Contract* and the event of *Force Majeure* was not caused by the *Contractor's* default or active commission or omission and could not be avoided or mitigated by the exercise of reasonable effort or foresight by the *Contractor*. *Force Majeure* includes *Labour Disputes*, fire, unusual delay by common carriers or unavoidable casualties, civil disturbance, acts, orders, legislation, regulations or directives of any government or other public authority, acts of a public enemy, war, riot, sabotage, blockage, embargo, lightning, earthquake, or acts of God.

30. Install

Install means install and connect. *Install* has this meaning whether or not the first letter is capitalized.

31. Labour Dispute

Labour Dispute means any lawful or unlawful labour problems, work stoppage, labour disruption, strike, job action, slow down, lock-outs, picketing, refusal to work or continue to work, refusal to supply materials, cessation or work or other labour controversy which does, or might, affect the *Work*.

32. Overhead

Overhead means all site and head office operations and facilities, all site and head office administration and supervision; all duties and taxes for permits and licenses required by the authorities having jurisdiction at the *Place of the Work*; all requirements of Division 1, including but not limited to submittals, warranty, quality control, insurance and bonding; calculations, testing and inspections; meals and accommodations; and, tools, expendables and clean-up costs.

33. Request for Information/RFI

Request for Information or *RFI* means written documentation sent by the *Contractor* to the *Owner* or to the *Owner's* representative or the *Consultant* requesting written clarification(s) and/or interpretation(s) of the *Drawings* and/or *Specifications*, *Contract* requirements and/or other pertinent information required to complete the *Work* of the *Contract* without applying for a change or changes to the *Work*.

4. Amend Definition 4 by adding the following to the end of the Definition:

For the purposes of the *Contract*, the terms “*Consultant*”, “*Architect*” and “*Engineer*” shall be considered synonymous.

16. Amend Definition 16 by adding the following to the end of the Definition:

Provide has this meaning whether or not the first letter is capitalized.

GENERAL CONDITIONS OF THE STIPULATED PRICE CONTRACT

1.0 Where a General Condition or paragraph of the General Conditions of the *Contract* is deleted by these amendments, the numbering of the remaining General Conditions or paragraphs shall remain unchanged, unless stated otherwise herein, and the numbering of the deleted item will be retained, unused.

GC 1.1 CONTRACT DOCUMENTS

1.1.6 Add the following to the end of paragraph 1.1.6:

The *Specifications* are divided into divisions and sections for convenience but shall be read as a whole and neither such division nor anything else contained in the *Contract Documents* will be construed to place responsibility on the *Owner* or the *Consultant* to settle disputes among the *Subcontractors* and *Suppliers* with respect to such divisions. The *Drawings* are, in part, diagrammatic and are intended to convey the scope of the *Work* and indicate general and appropriate locations, arrangements and sizes of fixtures, equipment and outlets. The *Contractor* shall obtain more accurate information about the locations, arrangements and sizes from study and coordination of the *Drawings*, including *Shop Drawings* and shall become familiar with conditions and spaces affecting those matters before proceedings with the *Work*. Where site conditions require reasonable minor changes in indicated locations and arrangements, the *Contractor* shall make such changes at no additional cost to the *Owner*. Similarly, where known conditions or existing conditions interfere with new installation and require relocation, the *Contractor* shall include such relocation in the *Work*. The *Contractor* shall arrange and install fixtures and equipment in such a way as to conserve as much headroom and space as possible. The schedules are those portions of the *Contact Documents*, wherever located and whenever issued, which compile information of similar content and may consist of drawings, tables and/or lists.

1.1.7 Amend paragraph 1.1.7.1 by adding “Amendments to CCDC 2 – 2008” before “the Agreement between the Owner and the Contractor” and deleting the reference to “Supplementary Conditions”.

Add new paragraphs 1.1.7.5, 1.1.7.6, 1.1.7.7, 1.1.7.8, 1.1.7.9 and 1.1.7.10 as follows:

- .5 noted materials and annotations on the *Drawings* shall govern over the graphic representation of the *Drawings*.
- .6 finishes in the room finish schedules shall govern over those shown on the *Drawings*.
- .7 Schedules of Division 01 – General Requirements of the *Specifications* shall form part of and be read in conjunction with the technical specification section as listed in the table of contents of the *Specifications*.

- .8 architectural drawings shall have precedence over structural, plumbing, mechanical, electrical and landscape drawings insofar as outlining, determining and interpreting conflicts over the required design intent of all architectural layouts and architectural elements of construction, it being understood that the integrity and installation of the systems designed by the *Consultant* or its sub-*Consultants* are to remain with each of the applicable drawing disciplines.
- .9 fixturing drawings provided by the *Owner* shall have precedence over architectural drawings insofar as outlining, determining and interpreting conflicts over the required design intent of all architectural layouts.
- .10 should reference standards contained in the *Specifications* conflict with the *Specifications*, the *Specifications* shall govern. Should reference standards and *Specifications* conflict with each other or if certain requirements of the *Specifications* conflict with other requirements of the *Specifications*, the more stringent requirements shall govern.

1.1.8 Delete paragraph 1.1.8 in its entirety and substitute as follows:

The *Consultant*, on behalf of the *Owner* shall provide the *Contractor* without charge, twelve (12) copies of the *Contract Documents*, exclusive of those required by jurisdictional authorities and the executed *Contract Documents*. Additional copies can be purchased by the *Contractor* at the *Consultant's* cost of reproduction, handling and sales tax.

1.1.11 Add new paragraph 1.1.11 as follows:

The *Contract Documents* shall be signed in triplicate (3) by the *Owner* and the *Contractor*, and each of the *Contractor*, the *Owner* and the *Consultant* shall retain one set of signed and sealed (if required by the governing law of the *Contract*) *Contract Documents*.

GC 1.3 RIGHTS AND REMEDIES

1.3.2 Delete the word “No” from the beginning of paragraph 1.3.2 and substitute the words:

“Except with respect to the requirements set out in paragraphs 2.2.13, 6.4.1, 6.5.4, 6.6.1 and 8.2.2, no...”

GC 1.4 ASSIGNMENT

Delete paragraph 1.4.1 in its entirety and replace with the following:

1.4.1 The *Contractor* shall not assign the *Contract*, or any portion thereof, without the prior written consent of the *Owner*, which consent may be unreasonably withheld. The *Owner* shall be entitled to assign the *Contract* to a corporation, partnership or other entity (the “Assignee”). Upon the assumption by the Assignee of the *Owner's* obligations under the *Contract*, the *Owner* shall be released from its obligations under the *Contract*.

GC 1.5 EXAMINATION OF DOCUMENTS AND SITE

Add new GC 1.5 – EXAMINATION OF DOCUMENTS AND SITE as follows:

1.5.1 The *Contractor* declares and represents that in tendering for the *Work*, and in entering into a *Contract* with the *Owner* for the performance of the *Work*, it has either investigated for itself the character of the *Work* to be done and all local conditions, including the location of any utility which can be determined from the records or other information available at the offices of any person, partnership, corporation, including a municipal corporation and any board or commission thereof having jurisdiction or control over the utility that might affect its tender or its acceptance of the *Work*, or that, not having so investigated, the *Contractor* has assumed and does hereby assume all risk of conditions now existing or arising in the course of the *Work* which might or could make the *Work*, or any items thereof more expensive in character, or more onerous to fulfil, than was contemplated or known when the tender was made or the *Contract* signed.

1.5.2 The *Contractor* also declares that in tendering for the *Work* and in entering into this *Contract*, the *Contractor* did not and does not rely upon information furnished by the *Owner* or any of its agents or servants respecting the nature or confirmation of the ground at the site of the *Work*, or the location, character, quality or quantity of the materials to be removed or to be employed in the construction of *Work*, or the character of the construction machinery and equipment or facilities needed to perform the *Work*, or the general and local performance of the work under the *Contract* and expressly waives and releases the *Owner* from all claims with respect to the said information with respect to the *Work*.

GC 1.6 TIME IS OF THE ESSENCE OF THE CONTRACT

Add new GC 1.6 - TIME IS OF THE ESSENCE OF THE CONTRACT as follows:

1.6.1 All time limits stated in the *Contract Documents* are of the essence of the *Contract*.

GC 2.2 ROLE OF THE CONSULTANT

2.2.7 Delete the words “Except with respect to GC 5.1 – FINANCING INFORMATION REQUIRED OF THE OWNER” .

2.2.13 Amend paragraph 2.2.13 by the addition of the following to the end of that paragraph:

If, in the opinion of the *Contractor*, the *Supplemental Instruction* involves an adjustment in the *Contract Price* or in the *Contract Time*, it shall, within ten (10) *Working Days* of receipt of a *Supplemental Instruction*, provide the *Consultant* with a notice in writing to that effect. Failure to provide written notification within the time stipulated in this paragraph 2.2.13 shall be deemed an acceptance of the *Supplemental Instruction* by the *Contractor*, without any adjustment in the *Contract Price* or *Contract Time*.

2.2.19 Add new paragraph 2.2.1.9 as follows:

The *Consultant* or the *Owner*, acting reasonably, may from time to time require the *Contractor* to remove from the *Project* any personnel of the *Contractor*, including project managers, superintendents or *Subcontractors*. Such persons shall be replaced by the *Contractor* in a timely fashion to the satisfaction of the *Consultant* or the *Owner*, as the case may be, at no cost to the *Owner*.

GC 2.3 REVIEW AND INSPECTION OF THE WORK

2.3.2 Amend paragraph 2.3.2 by adding the words “and *Owner*” after the words “*Consultant*” in the second and third lines.

2.3.3 Delete paragraph 2.3.3 in its entirety and replace it with the following:

The *Contractor* shall furnish promptly two copies to the *Consultant* and one copy to the *Owner* of all certificates and inspection reports relating to the *Work*.

2.3.4 Insert the word “review” after the word “inspections” in the first line of paragraph 2.3.4.

2.3.5 In the first line after “*Consultant*”, add “or the *Owner*”.

2.3.8 Add a new paragraph 2.3.8 as follows:

The *Consultant* will conduct periodic reviews of the *Work* in progress, to determine general conformance with the requirements of the *Contract Documents*. Such reviews, or lack thereof, shall not give rise to any claims by the *Contractor* in connection with construction means, methods, techniques, sequences and procedures, nor in connection with construction safety at the *Place of Work*, responsibility for which belongs exclusively to the *Contractor*.

GC 2.4 DEFECTIVE WORK

2.4.1 Amend GC 2.4.1 by inserting “, the *Owner* and/or its agent” in the first sentence following “rejected by the *Consultant*”.

Add new paragraphs 2.4.1.1 and 2.4.1.2:

2.4.1.1 The *Contractor* shall rectify, in a manner acceptable to the *Owner* and the *Consultant*, all defective work and deficiencies throughout the *Work*, whether or not they are specifically identified by the *Consultant*.

2.4.1.2 The *Contractor* shall prioritize the correction of any defective work, which, in the sole discretion of the *Owner*, adversely affects the day to day operations of the *Owner* or which, in the sole discretion of the *Consultant*, adversely affects the progress of the *Work*.

2.4.2 Delete paragraph 2.4.2 in its entirety and replace it with the following:

The *Contractor* shall promptly pay the *Owner* for costs incurred by the *Owner*, the *Owner's* own forces or the *Owner's* other contractors, for work destroyed or damaged or any alterations necessitated by the *Contractor's* removal, replacement or re-execution of defective work. The *Owner* may request that the *Contractor* rectify any such deficiencies to other contractors' work, at the *Contractor's* expense.

Add new paragraph 2.4.4 as follows:

- 2.4.4 Neither acceptance of the *Work* by the *Consultant* or the *Owner*, nor any failure by the *Consultant* or the *Owner* to identify, observe or warn of defective *Work* or any deficiency in the *Work* shall relieve the *Contractor* from the sole responsibility for rectifying such defect or deficiency at the *Contractor's* sole cost, even where such failure to identify, observe or warn is negligent.

GC 3.1 CONTROL OF THE WORK

3.1.3 Add a new paragraph 3.1.3 as follows:

Prior to commencing individual procurement, fabrication and construction activities, the *Contractor* shall verify at the *Place of the Work*, all relevant measurements and levels necessary for proper and complete fabrication, assembly and installation of the *Work* and shall further carefully compare such field measurements and conditions with the requirements of the *Contract Documents*. Where dimensions are not included or exact locations are not apparent, the *Contractor* shall immediately notify the *Consultant* in writing and obtain written instructions from the *Consultant* before proceedings with any part of the affected *Work*.

3.1.4 Add a new paragraph 3.1.4 as follows:

Notwithstanding the provisions of paragraphs 3.1.1 and 3.1.2, the *Owner* shall have access to the site at all times to monitor all aspects of construction. Such access shall in no circumstances affect the obligations of the *Contractor* to fulfill its contractual obligations.

GC 3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS

3.2.2.1 Delete paragraph 3.2.2.1 in its entirety.

3.2.2.2 Delete paragraph 3.2.2.2 in its entirety.

3.2.2.3 Delete paragraph 3.2.2.3 in its entirety.

3.2.2.4 Delete paragraph 3.2.2.4 in its entirety.

3.2.3.2 Delete paragraph 3.2.3.2 and replace it with the following:

Co-ordinate and schedule the activities and work of other contractors and *Owner's* own forces with the *Work* of the *Contractor* and connect as specified or shown in the *Contract Documents*.

3.2.3.4 Add new paragraph 3.2.3.4 as follows:

Subject to GC 9.4 CONSTRUCTION SAFETY, for the *Owner's* own forces and for other contractors, assume overall responsibility for compliance with all aspects of the applicable health and safety legislation in force at the *Place of the Work*, including all of the responsibilities of the "constructor", pursuant to the *Occupational Health and Safety Act* (Ontario)...

GC 3.3 TEMPORARY WORK

3.3.2 In paragraph 3.3.2, in the second line after the words "where required by law", insert "or the *Consultant*".

GC 3.4 DOCUMENT REVIEW

3.4.1 Delete paragraph 3.4.1 in its entirety and substitute new paragraph 3.4.1:

The *Contractor* shall review the *Contract Documents* and shall report promptly to the *Consultant* any error, inconsistency, or omission the *Contractor* may discover. Such review by the *Contractor* shall be undertaken with the standard of care described in paragraph 3.14.1 of the *Contract*. Except for its obligation to make such review and report the result, the *Contractor* does not assume any responsibility to the *Owner* or to the *Consultant* for the accuracy of the *Contract Documents*. Provided it has exercised the degree of care and skill described in this paragraph 3.4.1, the *Contractor* shall not be liable for damage or costs resulting from such errors, inconsistencies, or omissions in the *Contract Documents*, which the *Contractor* could not reasonably have discovered through the exercise of the required standard of care.

3.4.2 Add new paragraph 3.4.2. as follows:

If, at any time, the *Contractor* finds errors, inconsistencies, or omissions in the *Contract Documents* or has any doubt as to the meaning or intent of any part thereof, including laying out of the *Work*, the *Contractor* shall immediately notify the *Consultant*, and request instructions, a *Supplemental Instruction*, *Change Order*, or *Change Directive*, as the case may require, and the *Contractor* shall not proceed with the work affected until the *Contractor* has received such instructions, a *Supplemental Instruction*, *Change Order* or *Change Directive*. Neither the *Owner* nor the *Consultant* will be responsible for the consequences of any action of the *Contractor* based on oral instructions.

3.4.3 Add new paragraphs 3.4.3 and 3.4.4 as follows:

Errors, inconsistencies and/or omissions in the *Drawings* and/or *Specifications* which do not allow completion of the *Work* of the *Contract* shall be brought to the *Consultant's* attention prior to the execution of the *Contract* by means of an *RFI*.

3.4.4 Notwithstanding the foregoing, errors, inconsistencies, discrepancies and/or omissions shall not include lack of reference on the *Drawings* or in the *Specifications* to labour and/or *Products* that are required or normally recognized within respective trade practices as being necessary for the complete execution of the *Work*. The *Contractor* shall not use subsequent *RFIs*, issued during execution of the *Work* to establish a change and/or changes in the *Work* pursuant to Part 6 – CHANGES IN THE WORK.

GC 3.5 CONSTRUCTION SCHEDULE

3.5.1 Delete paragraph 3.5.1 in its entirety and replace with the following:

The *Contractor* shall:

.1 within five (5) calendar days of receiving written confirmation of the award of the *Contract*, prepare and submit to the *Owner* and the *Consultant* for their review and acceptance, a construction schedule in the format indicated below that indicates the timing of the activities of the *Work* and provides sufficient detail of the critical events and their inter-relationship to demonstrate the *Work* will be performed in conformity with the *Contract Time* and in accordance with the *Contract Documents*. Such schedule is to include a delivery schedule for *Products* whose delivery is critical to the schedule for the *Work* or are required by the *Contract* to be included in a *Products* delivery schedule. The *Contractor* shall employ construction scheduling software, being the latest version of "Microsoft Project", that permits the progress of the *Work* to be monitored in relation to the critical path established in the schedule. The *Contractor* shall provide the schedule and any successor or revised schedules in both electronic format and hard copy. Once accepted by the *Owner* and the *Consultant*, the construction schedule submitted by the *Contractor* shall become the baseline construction schedule; and,

.2 provide the expertise and resources, such resources including manpower and equipment, as are necessary to maintain progress under the accepted baseline construction schedule or revised schedule accepted by the *Owner* pursuant to GC 3.5 CONSTRUCTION SCHEDULE; and,

.3 monitor the progress of the *Work* on a weekly basis relative to the baseline construction schedule, or any revised schedule accepted by the *Owner* pursuant to GC 3.5 CONSTRUCTION SCHEDULE, update and submit to the *Consultant* and *Owner* the electronic and hard copy schedule on a monthly basis, at a minimum, or as required by the *Consultant* and advise the *Consultant* and the *Owner* weekly in writing of any variation from the baseline or slippage in the schedule; and,

.4 provide overtime work without change to the *Contract Price* if such work is deemed necessary to meet the schedule; and,

.5 ensure that the *Contract Price* shall include all costs required to phase or stage the *Work*.

3.5.2 Add new paragraph 3.5.2 as follows:

If, at any time, it should appear to the *Owner* or the *Consultant* that the actual progress of the *Work* is behind schedule or is likely to become behind schedule, or if the *Contractor* has given notice of such to the *Owner* or the *Consultant* pursuant to subparagraph 3.5.1.3, the *Contractor* shall, either at the request of the *Owner* or the *Consultant*, or following giving notice pursuant to subparagraph 3.5.1.3, take appropriate steps to cause the actual progress of the *Work* to conform to the schedule or minimize the resulting delay. Within five (5) calendar days of the request by the *Owner* or the *Consultant* or the notice being given pursuant to subparagraph 3.5.1.3, the *Contractor* shall produce and present to the *Owner* and the *Consultant* a plan demonstrating how the *Contractor* will achieve the recovery of the last accepted schedule.

3.5.3 The *Contractor* is responsible for performing the *Work* within the *Contract Time*. Any schedule submissions revised from the accepted baseline construction schedule or revised schedule accepted by the *Owner* pursuant to GC 3.5 CONSTRUCTION SCHEDULE, during construction are not deemed to be approved extensions to the *Contract Time*. All extensions to the *Contract Time* must be made in accordance with the *Contract Documents*.

GC 3.6 SUPERVISION

Delete paragraph 3.6.1 in its entirety and replace with the following:

3.6.1 The *Contractor* shall employ a competent full-time superintendent, acceptable to the *Owner* and *Consultant*, who shall be in full time attendance at the *Place of Work* while the *Work* is being performed. The superintendent shall not be changed by the *Contractor* without valid reason which shall be provided in writing and shall not be changed without prior consultation with and agreement by the *Owner* and the *Consultant*. The *Contractor* shall replace the superintendent within 7 *Working Days* of the *Owner's* written notification, if the superintendent's performance is not acceptable to the *Owner*. The *Contractor* shall provide the *Owner* and the *Consultant* with the names, addresses and telephone numbers of the superintendent referred to in this paragraph 3.6.1 and other responsible persons who may be contacted for emergency and other reasons during non-working hours.

Delete paragraph 3.6.2 in its entirety and replace with the following:

3.6.2 The superintendent, and any project manager appointed by the *Contractor*, shall represent the *Contractor* at the *Place of Work* and shall have full authority to act on written instructions given by the *Consultant* and/or the *Owner*. Instructions given to the superintendent or the project manager shall be deemed to have been given to the *Contractor* and both the superintendent and any project manager shall have full authority to act on behalf of the *Contractor* and bind the *Contractor* in matters related to the *Contract*.

3.6.3 Add new paragraph 3.6.3, 3.6.4, 3.6.5 and 3.6.6 as follows:

The *Owner* may, at any time during the course of the *Work*, request the replacement of the appointed representative(s). Immediately upon receipt of the request, the *Contractor* shall make arrangements to appoint an acceptable replacement, which is approved by the *Owner*.

3.6.4 The supervisory staff assigned to the *Project* shall also be fully competent to implement efficiently all requirements for scheduling, coordination, field engineering, reviews, inspections and submittals defined in the *Specifications*, and have minimum 5 years documented "Superintendent/Project Management" experience.

3.6.5 The *Consultant and Owner* shall reserve the right to review the record of experience and credentials of supervisory staff assigned to the *Project* prior to commencement of the *Work*.

3.6.6 A superintendent assigned to the *Work* shall be "Gold Seal Certified" as per the Canadian Construction Association; or a superintendent that can demonstrate the requisite experience and success related to the *Project* to the sole satisfaction of the *Owner*.

GC 3.7 SUBCONTRACTORS AND SUPPLIERS

3.7.1.1 In paragraph 3.7.1.1 add to the end of the second line "including any warranties and service agreements which extend beyond the term of the *Contract*."

- 3.7.1.2 In subparagraph 3.7.1.2 after the words “the *Contract Documents*” insert the words “including any required surety bonding”.

Delete paragraph 3.7.2. in its entirety and replace with the following:

- 3.7.2 Substitution of any *Subcontractor* and/or *Suppliers* after submission of the *Contractor*'s bid will not be accepted unless a valid reason is given in writing to and approved by the *Owner*, whose approval may be arbitrarily withheld. The reason for substitution must be provided to the *Owner* and to the original *Subcontractor* and/or *Supplier* and the *Subcontractor* and/or *Supplier* shall be given the opportunity to reply to the *Contractor* and *Owner*. The *Contractor* shall be fully aware of the capability of each *Subcontractor* and/or *Supplier* included in its bid, including but not limited to technical ability, financial stability and ability to maintain the proposed construction schedule.

- 3.7.4 Change the word “shall” to “may” in the second line.

Add new paragraphs 3.7.7 and 3.7.8 as follows:

- 3.7.7 Where provided in the *Contract*, the *Owner* may assign to the *Contractor*, and the *Contractor* agrees to accept, any contract procured by the *Owner* for *Work* or services required on the *Project* that has been pre-tendered or pre-negotiated by the *Owner*, and upon such assignment, the *Owner* shall have no further liability to any party for such contract.
- 3.7.8 The *Contractor* covenants that each subcontract or supply contract which the *Contractor* enters into for the purpose of performing the *Work* shall expressly provide for the assignment thereof to the *Owner* (at the option of the *Owner*) and the assumption by the *Owner* of the obligations of the *Contractor* thereunder, upon the termination of the *Contract* and upon written notice by the *Owner* to the other parties to such subcontracts or supply contracts, without the imposition of further terms or conditions; provided, however, that until the *Owner* has given such notice, nothing herein contained shall be deemed to create any contractual or other liability upon the *Owner* for the performance of obligations under such subcontracts or supply contracts and the *Contractor* shall be fully responsible for all of its obligations and liabilities (if any) under such subcontracts and supply contracts.

GC 3.8 LABOUR AND PRODUCTS

- 3.8.2 Delete paragraph 3.8.2 and substitute with the following:

Products provided shall be new and shall conform to all current applicable specifications of the Canadian Standards Association, Canadian Standards Board or General Standards Board, ASTM, National Building Code, provincial and municipal building codes, fire safety standards, and all governmental authorities and regulatory agencies having jurisdiction at the *Place of the Work*, unless otherwise specified. *Products* which are not specified shall be of a quality consistent with those specified and their use acceptable to the *Consultant*. *Products* brought on to the *Place of the Work* by the *Contractor* shall be deemed to be the property of the *Owner*, but the *Owner* shall be under no liability for loss thereof or damage thereto arising from any cause whatsoever. The said *Products* shall be at the sole risk of the *Contractor*. Workmanship shall be, in every respect, first class and the *Work* shall be performed in accordance with the best modern industry practice.

- 3.8.3 Amend paragraph 3.8.3 by adding the words, “..., agents, *Subcontractors* and *Suppliers*...” after the word “employees” in the first line.

Add new paragraphs 3.8.4, 3.8.5, 3.8.6, 3.8.7, 3.8.8, 3.8.9 and 3.8.10 as follows:

- 3.8.4 Upon receipt of a written notice from the *Consultant*, the *Contractor* shall immediately dismiss, from the *Place of the Work*, tradesmen and labourers whose *Work* is unsatisfactory to the *Consultant* or who are considered by the *Consultant* to be unskilled or otherwise objectionable.
- 3.8.5 The *Contractor* shall cooperate with the *Owner* and its representatives and shall take all reasonable and necessary actions to maintain stable and harmonious labour relations with respect to the *Work* at the *Place of the Work*, including cooperation to attempt to avoid *Work* stoppages, trade union jurisdictional disputes and other *Labour Disputes*. Any costs arising from labour disputes shall be at the sole expense of the *Contractor*.

- 3.8.7 The cost for overtime required beyond the normal *Working Day* to complete individual construction operations of a continuous nature, such as pouring or finishing of concrete or similar work, or *Work* that the *Contractor* elects to perform at overtime rates without the *Owner* requesting it, shall not be chargeable to the *Owner*.
- 3.8.8 All manufactured *Products* which are identified by their proprietary names or by part or catalogue number in the *Specifications* shall be used by the *Contractor*. No substitutes for such specified *Products* shall be used without the written approval of the *Owner* and the *Consultant*. Substitutes will only be considered by the *Consultant* when submitted in sufficient time to permit proper review and investigation. When requesting approval for the use of substitutes, the *Contractor* shall include in its submission any proposed change in the *Contract Price*. The *Contractor* shall use all proprietary *Products* in strict accordance with the manufacturer's directions. Where there is a choice of proprietary *Products* specified for one use, the *Contractor* may select any one of the *Products* so specified for this use.
- 3.3.9 No consideration will be given to claims by the *Contractor* of unsuitability or unavailability of any *Products*, nor to the *Contractor's* unwillingness to use, or to produce first class work with, any *Products*, or to provide the specified warranties or guarantees.
- 3.8.10 Materials, appliances, equipment and other *Products* are sometimes specified by reference to brand names, proprietary names, trademarks or symbols. In such cases, the name of a manufacturer, distributor, *Supplier* or dealer is sometimes given to assist the *Contractor* to find a source *Supplier*. This shall not relieve the *Contractor* from its responsibility from finding its own source of supply even if the source names no longer supplies the *Product* specified. If the *Contractor* is unable to obtain the specified *Product*, the *Contractor* shall supply a substitute product equal to or better than the specified *Product*, as approved by the *Consultant* with no extra compensation. Should the *Contractor* be unable to obtain a substitute *Product* equal to or superior to the specified *Product* and the *Owner* accepts a different *Product*, the *Contract Price* shall be adjusted accordingly, as approved by the *Consultant*.

GC 3.9 DOCUMENTS AT THE SITE

- 3.9.1 Delete paragraph 3.9.1 in its entirety and substitute the following:

The *Contractor* shall keep one copy of the current *Contract Documents*, *Supplemental Instructions*, contemplated *Change Orders*, *Change Orders*, *Change Directives*, cash allowance disbursement authorizations, reviewed *Shop Drawings*, submittals, reports and records of meeting at the *Place of the Work*, in good order and available to the *Owner* and *Consultant*.

GC 3.10 SHOP DRAWINGS

- 3.10.1 Delete paragraph 3.10.1 in its entirety and replace with the following:

The *Contractor* shall provide shop drawings as described in the *Contract Documents* and as the *Consultant* may reasonably request

- 3.10.9 Delete paragraph 3.10.9 in its entirety and substitute the following:

At the time of providing *Shop Drawings*, the *Contractor* shall advise the *Consultant* in writing of any deviations in *Shop Drawings* from the requirements of the *Contract Documents*. The *Consultant* shall indicate the acceptance of such deviation expressly in writing. Where manufacturers' literature is submitted in lieu of scaled drawings, it shall be clearly marked in ink, to indicate the specific items for which review is requested.

Add new paragraphs 3.10.13, 3.10.14, 3.10.15, 3.10.16, 3.10.17 and 3.10.18 as follows:

- 3.10.13 Reviewed *Shop Drawings* shall not authorize a change in the *Contract Price* and/or the *Contract Time*.
- 3.10.14 The *Contractor* shall prepare a *Shop Drawings* schedule acceptable to the *Owner* and the *Consultant* prior to the first application for payment. A draft of the proposed *Shop Drawings* schedule shall be submitted by the *Contractor* to the *Consultant* and the *Owner* for approval. The draft *Shop Drawings* schedule shall clearly indicate the phasing of *Shop Drawings* submissions. The *Contractor* shall periodically re-submit the *Shop Drawings* schedule to correspond to changes in the construction schedule.

- 3.10.15 Except where the parties have agreed to a different *Shop Drawings* schedule pursuant to paragraph 3.10.3, the *Contractor* shall comply with the requirements for *Shop Drawings* submissions stated in the *Specifications*.
- 3.10.16 The *Contractor* shall not use the term “by others” on *Shop Drawings* or other submittals. The related trade, *Subcontractor* or *Supplier* shall be stated.
- 3.10.17 Certain *Specifications* sections require the *Shop Drawings* to bear the seal and signature of a professional engineer. Such professional engineer must be registered in the jurisdiction of the *Place of the Work* and shall have expertise in the area of practice reflected in the *Shop Drawings*.
- 3.10.18 The *Consultant* will review and return *Shop Drawings* and submittals in accordance with the schedule agreed upon in paragraph 3.10.3, The *Contractor* shall allow the *Consultant* a minimum of 14 days to review *Shop Drawings* from the date of receipt. If resubmission of *Shop Drawings* is required, a further 14 day period is required for the *Consultant’s* review.

GC 3.11 USE OF THE WORK

- 3.11.1 In the second line between the words “permits and “or” add”, by direction of the *Owner* or *Consultant*.
- 3.11.3 Add new paragraph 3.11.3 as follows:

The *Owner* shall have the right to enter or occupy the *Work* in whole or in part for the purpose of placing fittings and equipment, or for other use before *Substantial Performance of the Work*, if, in the opinion of the *Consultant*, such entry and occupation does not prevent or substantially interfere with the *Contractor* in the performance of the *Contract* within the *Contract Time*. Such entry or occupation shall neither be considered as acceptance of the *Work*, nor in any way relieve the *Contractor* from its responsibility to complete the *Contract*.

GC 3.12 CUTTING AND REMEDIAL WORK

Add new paragraphs 3.12.5 and 3.12.6 as follows:

- 3.12.5 Unless specifically stated otherwise in the *Specifications*, the *Contractor* shall do all cutting and making good necessary for the proper installation and performance of the *Work*.
- 3.12.6 To avoid unnecessary cutting, the *Contractor* shall lay out its work and advise the *Subcontractors*, when necessary, where to leave holes for installation of pipes and other work.

GC 3.13 CLEAN UP

- 3.13.1 At the end of the paragraph 3.13.1, add the following:

Remove accumulated waste and debris at least once a week as a minimum or as required by the nature of the *Work*.

- 3.13.2 In paragraph 3.13.2, in the fourth line add the word “materials” between the word “tools” and the words “*Construction Equipment*”.
- 3.13.3 In paragraph 3.13.3, in the first and second lines add the word “materials” between the word “tools” and the words “*Construction Equipment*”.

Add new paragraphs 3.13.4, 3.13.5, 3.13.6 and 3.13.7 as follows:

- 3.13.4 In the event that the *Contractor* fails to remove waste and debris as provided in this GC 3.13, then the *Owner* or the *Consultant* may give the *Contractor* twenty-four (24) hours written notice to meet its obligations respecting clean up. Should the *Contractor* fail to meet its obligations pursuant to this GC 3.13 within the twenty-four (24) hour period next following delivery of the notice, the *Owner* may remove such waste and debris and deduct from payments otherwise due to the *Contractor*, the *Owner’s* costs for such clean up, including a reasonable mark-up for administration costs.
- 3.13.5 The *Contractor* shall clean up garbage during and after construction, and maintain the site in a neat and orderly condition on a daily basis. Prior to leaving the site at the end of construction, the *Contractor* shall make good all damage to the building and its components caused by the performance of the *Work* or by any *Subcontractor* or *Supplier*. The *Contractor*

shall leave the site in a clean and finished state; remove all equipment and materials; remove all paint, stains, labels, dirt, etc. from the *Work*; and touch up all damaged painted areas.

3.13.6 Without limitation to or waiver of the *Owner's* other rights and remedies, the *Owner* shall have the right to back charge to the *Contractor* the cost of damage to the site caused by transportation in and out of the site by the *Contractor*, *Subcontractors* or *Suppliers*, if not repaired before final payment.

3.13.7 The *Contractor* shall dispose of debris at location and in a manner acceptable to the *Owner*, and authorities having jurisdiction in the area of the *Work* and the disposal area, and cover containers with tarpaulins tied in place to prevent scattering of debris on site and during transport.

GC 3.14 CONTRACTOR STANDARD OF CARE

Add a new General Condition 3.14 – CONTRACTOR STANDARD OF CARE as follows:

3.14.1 In performing its services and obligations under the *Contract*, the *Contractor* shall exercise the standard of care, skill and diligence that would normally be provided by an experienced and prudent contractor supplying similar services for similar projects. The *Contractor* acknowledges and agrees that throughout the *Contract*, the performance of the *Contractor's* obligations, duties and responsibilities shall be judged against this standard. The *Contractor* shall exercise the same standard of care, skill and diligence in respect of any *Products*, personnel or procedures which it may recommend to the *Owner*.

3.14.2 The *Contractor* further represents, covenants and warrants to the *Owner* that:

- .1 the personnel it assigns to the *Project* are appropriately experienced;
- .2 it has a sufficient staff of qualified and competent personnel to replace any of its appointed representatives, subject to the *Owner's* approval, in the event of death, incapacity, removal or resignation; and
- .3 there are no pending, threatened or anticipated claims, liabilities or contingent liabilities that would have a material effect on the financial ability of the *Contractor* to perform its work under the *Contract*.

GC 3.15 OCCUPANCY OF THE WORK

3.15.1 The *Owner* reserves the right to take possession of and use for any intended purpose any portion or all of the undelivered portion of the *Project* even though the *Work* may not be substantially performed, provided that such taking possession and use will not interfere, in any material way, with the progress of the *Work*. The taking of possession or use of any such portion of the *Project* shall not be deemed to be the *Owner's* acknowledgement or acceptance of the *Work* or the *Project*, nor shall it relieve the *Contractor* of any of its obligations under the *Contract*.

3.15.2 Whether the *Project* contemplates *Work* by way of renovations in buildings which will be in use or be occupied during the course of the *Work* or where the *Project* involves *Work* that is adjacent to a structure which is in use or is occupied, the *Contractor*, without in any way limiting its responsibilities under the *Contract*, shall take all reasonable steps to avoid interference with fire exits, building access and egress, continuity of electric power and all other utilities, to suppress dust and noise and to avoid conditions likely to propagate mould or fungus of any kind and all other steps reasonably necessary to promote and maintain the safety and comfort of the users and occupants of such structures or adjacent structures.

GC 4.1 CASH ALLOWANCES

4.1.1 Delete the second sentence in paragraph 4.1.1

4.1.4 Delete paragraph 4.1.4 in its entirety and substitute the following:

Where the actual cost of the *Work* under any cash allowance exceeds the amount of the allowance, any unexpended amounts from other cash allowances shall be reallocated, at the *Consultant's* direction, to cover the shortfall, and, in that case, there shall be no additional amount added to the *Contract Price* for overhead and profit. Only where the actual cost of the *Work* under all cash allowances exceeds the total amount of all cash allowances shall the *Contractor* be compensated for the excess incurred and substantiated, plus an amount for overhead and profit on the excess only, as set out in the *Contract Documents*.

4.1.5 Delete paragraph 4.1.5 in its entirety and substitute the following:

The net amount of any unexpended cash allowances, after providing for any reallocations as contemplated in paragraph 4.1.4, shall be deducted from the *Contract Price* by *Change Order* without any adjustment for the *Contractor's* overhead and profit on such amount.

Add new paragraphs 4.1.8 and 4.1.9 as follows:

4.1.8 The *Owner* reserves the right to call, or to have the *Contractor* call, for competitive bids for portions of the *Work*, which are to be paid for from cash allowances.

4.1.9 Cash allowances cover the net cost to the *Contractor* of services, *Products*, *Construction Equipment*, freight, unloading, handling, storage, installation, provincial sales tax, and other authorized expenses incurred in performing any *Work* stipulated under the cash allowances but does not include any *Value Added Taxes* payable by the *Owner* and the *Contractor*.

GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

5.1.1 Delete paragraph 5.1.1 in its entirety.

5.1.2 Delete paragraph 5.1.2 in its entirety.

GC 5.2 APPLICATIONS FOR PROGRESS PAYMENT

Delete paragraph 5.2.2 in its entirety and substitute the following:

5.2.2 Applications for payment shall be dated the last day of each payment period, which is the last day of the month or an alternative day of the month agreed in writing by the parties. The amount claimed shall be for the value, proportionate to the amount of the *Contract*, or work performed and *Products* delivered and incorporated into the *Work* at that date. No amount claimed shall include products delivered and incorporated into the work, unless the products are free and clear of all security interests, liens and other claims of third parties.

Each application for payment, except the first, shall include a statutory declaration, in the CCDC 9A – 2001 form, up to the date of the application for payment, in a form approved by the Consultant. Each application for payment (including the first), shall also include:

.1 A certificate, issued by an agency or firm providing workers' compensation insurance to the *Contractor*, verifying that coverage is in force at the time of making the application for payment, and that coverage will remain in force for at least sixty (60) days thereafter.

.2 A declaration by the *Contractor*, in a form approved by the *Consultant*, verifying that the performance of the *Work* is in compliance with all applicable regulatory requirements respecting environmental protection, first safety, public safety and occupational health and safety.

.3 A pre-approved schedule of values, supplied by the *Contractor*, for Divisions 1 through 14 of the *Work*, aggregating the total amount of the *Contract Price*.

.4 A separate pre-approved schedule of values, supplied by each *Subcontractor*, for each of Division 15, 16, and 17 of the *Work*, aggregating the total amount of the *Contract Price*.

.5 Invoices to support all claims against the cash allowance.

.6 An acceptable construction schedule pursuant to GC 3.5.

5.2.3 Amend paragraph 5.2.3 by adding the following to the end of that paragraph:

No amount claimed shall include *Products* delivered to the *Place of the Work* unless the *Products* are free and clear of all security interests, liens, and other claims of third parties.

5.2.7 Delete existing paragraph 5.2.7:

Add new paragraphs 5.2.7, and 5.2.8 as follows:

5.2.7 The *Contractor* shall prepare and maintain current as-built drawings which shall consist of the *Drawings* and *Specifications* revised by the *Contractor* during the *Work*, showing changes to the *Drawings* and *Specifications*, which current as-built drawings shall be maintained by the *Contractor* and made available to the *Consultant* for review with each application for progress payment. The *Consultant* shall retain a reasonable amount for the value of the as-built drawings not presented for review.

5.2.8 Prior to each application for payment, the *Contractor* and the *Consultant* shall jointly review the progress of the *Work*.

GC 5.3 PROGRESS PAYMENT

5.3.1.2 In the first sentence amend as follows: After the words “issue to the *Owner*” delete “and copy to the *Contractor*”. After the words “after the receipt of the” add “complete”.

5.3.1.3 Delete subparagraph 5.3.1.3 in its entirety and substitute as follows:

the *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement – PAYMENT no later than 30 calendar days after the date of a complete certificate of payment is issued by the *Consultant*

Add new paragraphs 5.3.2 and 5.3.3 as follows:

5.3.2 If the *Contractor* fails to provide all documentation as required by GC 5.2 – APPLICATIONS FOR PROGRESS PAYMENT, the *Contractor* or *Owner* shall be entitled to return the application for progress payment to the *Contractor* for completion. The 10 day review period by the *Consultant* and 30 day payment period by the *Owner* will commence upon receipt of a complete application for progress payment.

5.3.3 Payment will be mailed to the *Contractor*. The payment date shall be the date the cheque is mailed. Delay resulting from mail shall not be used in calculating payment date.

GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK

5.4.2 Delete paragraph 5.4.2 in its entirety and substitute the following:

The *Consultant* will review the *Work* to verify the validity of the application and shall promptly, and in any event, no later than 30 calendar days after receipt of the *Contractor's* complete deficiency list and application, the *Consultant* shall:

.1 prepare a final deficiency list incorporating all items to be completed or corrected. Each item is to have an indicated value for correction or completion. Determination of the value is defined in GC 5.10 – DEFICIENCY HOLDBACK. The final deficiency list complete with values is to be included with the *Consultant's* draft verification and shall be reviewed with the *Owner* prior to 5.4.2.2.

.2 having completed 5.4.2.1, the *Consultant* shall:

.1 advise the *Contractor* in writing that the *Work* or the designated portion of the *Work* is not substantially performed and give reasons why, or

.2 state the date of *Substantial Performance of the Work* in a certificate and issue a copy of that certificate to each the *Owner* and the *Contractor*.

5.4.3 Delete paragraph 5.4.3 in its entirety and substitute the following:

Following the issuance of the certificate of *Substantial Performance of the Work*, the following shall apply to completing the *Work*:

.1 *Contractor* is to complete the *Work* within sixty (60) calendar days.

.2 No payments will be processed between *Substantial Performance of the Work* and the completion of the *Work*.

- .3 The *Owner* reserves the right to contract out any or all unfinished *Work* if it has not been completed within sixty (60) days of *Substantial Performance of the Work* without prejudice to any other right or remedy and without affecting the warranty period. The cost of completing the *Work* shall be deducted from the *Contract Price*.

Add new paragraphs 5.4.4, 5.4.5 and 5.4.6:

- 5.4.4 Within the time prescribed by the construction/builder’s lien legislation in force at the *Place of the Work*, or where there is no legislation or no time prescribed, within a reasonable time of receiving a copy of the certificate of *Substantial Performance of the Work* signed by the *Consultant*, the *Contractor* shall take whatever steps are required to publish or post a signed copy of the certificate, as is required by such legislation. If the *Contractor* fails to comply with this provision, the *Owner* may take the required steps pursuant to the legislation and charge the *Contractor* for any costs so incurred.
- 5.4.5 Prior to submitting its written application for *Substantial Performance of the Work*, the *Contractor* shall submit to the *Consultant* all:
- .1 guarantees;
 - .2 warranties;
 - .3 certificates;
 - .4 final testing and balancing reports;
 - .5 distribution system diagrams;
 - .6 spare parts;
 - .7 maintenance manuals;
 - .8 samples;
 - .9 reports and correspondence from authorities having jurisdiction in the *Place of the Work*;
 - .10 shop drawings;
 - .11 inspection certificates;
 - .12 marked-up record or as-built drawings from the construction trailer.

and other materials or documentation required to be submitted under the *Contract*, together with written proof acceptable to the *Owner* and the *Consultant* that the *Work* has been substantially performed in conformance with the requirements of municipal, governmental, and utility authorities having jurisdiction in the *Place of the Work*. The *Consultant* shall refuse to certify *Substantial Performance of the Work* if the submittals referred to in this paragraph 5.4.5 are not provided by the *Contractor*.

- 5.4.6 The *Contractor* shall submit full and complete digital record or as-built drawings to the *Consultant* within forty-five (45) days of the issuance of the certificate of *Substantial Performance of the Work* and the *Owner* shall be at liberty to withhold, from amounts otherwise payable to the *Contractor*, an amount not to exceed one (1) percent of the *Contract Price* as security for the obligation of the *Contractor* to deliver such digital record or as built drawings.

GC 5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK

- 5.5.1.1. Add to end of sentence “, and the application by the *Contractor* shall be accompanied by:

- .1 a certificate, issued by an agency or firm providing workers’ compensation insurance to the *Contractor*, verifying that coverage is in force at the time of making application for payment, and that coverage will remain in force for at least sixty (60) days thereafter; and,
- .2 a declaration by the *Contractor*, in a form approved by the *Consultant*, verifying performance of the *Work* in compliance with all applicable regulatory requirements respecting environmental protection, fire safety, public safety and occupational health and safety.

Add new subparagraph 5.5.1.3 as follows

- 5.5.1.3 submit a statement that no written notices of liens have been received by it

- 5.5.2 Amend paragraph 5.5.2 by adding the following sentence to the end of that paragraph:

A reserve fund may be retained by the *Owner* to secure the correction of deficiencies and/or warranty claims. Included in the reserve fund would be all *Consultant* and *Owner* costs related to the correction of deficiencies and/or warranty claims.

5.5.3 Delete paragraph 5.5.3 in its entirety.

5.5.5 Delete paragraph 5.5.5 in its entirety.

GC 5.6 PROGRESSIVE RELEASE OF HOLDBACK

Delete GC 5.6 in its entirety.

GC 5.7 FINAL PAYMENT

5.7.1 Delete paragraph 5.7.1 in its entirety and substitute as follows:

When the *Contractor* considers that the *Work* is completed, as defined in the lien legislation applicable to the *Place of the Work* or if such definition does not exist, in accordance with other applicable legislation, industry practice or provisions which may be agreed to between the parties, the *Contractor* shall submit an application for final payment. The *Contractor's* application for final payment shall be accompanied by any documents or materials not yet delivered pursuant to paragraph 5.4.5, together with complete and final as-built drawings and:

- .1 the *Contractor's* written request for release of the deficiency holdback, including a statement that no written notices of lien have been received by it;
- .2 a Statutory Declaration CCDC 9A-2001;
- .3 the evidence of workers' compensation compliance required by GC 10.4.1.

The *Work* shall be deemed not to be completed until all of the aforementioned documents have been delivered, and the *Owner* may withhold payment in respect of the delivery of any documents in an amount determined by the *Consultant* in accordance with the provisions of GC 5.8 - WITHHOLDING OF PAYMENT.

5.7.2 Delete from the first line of paragraph 5.7.2 the words, "calendar days" and substitute the words "*Working Days*".

5.7.4 Delete from the second line of paragraph 5.7.4 the words, "5 calendar days after the issuance" and substitute the words "30 calendar days after receipt of".

GC 5.8 WITHHOLDING OF PAYMENT

Delete paragraph 5.8.1 and replace with the following:

5.8.1 If because of conditions reasonably beyond the control of the *Contractor*, there are items of work that cannot be performed, payment in full for that portion of the *Work* which has been performed as certified by the *Consultant* shall not be withheld or delayed by the *Owner* on account thereof, but the *Owner* may withhold, until the remaining portion of the *Work* is finished, only such an amount that the *Consultant* determines is sufficient and reasonable to cover the cost of performing such remaining work.

GC 5.10 DEFICIENCY HOLDBACK

Add a new General Condition 5.10 as follows:

5.10.1 Notwithstanding any provisions contained in the *Contract Documents* concerning certification and release of monies to the *Contractor*, the *Owner* reserves the right to establish a deficiency holdback, at the time of the review for *Substantial Performance*, based on a 200% dollar value of the deficiencies listed by the *Consultant*. The value of work outstanding for the calculation of *Substantial Performance of the Work* under the *Construction Lien Act* (Ontario) shall utilize the 100% dollar value. No individual deficiency will be valued at less than two hundred dollars (\$200.00). The *Owner* shall retain the entire deficiency holdback amount until completion of all of the deficiencies listed by the *Consultant* to the satisfaction of the *Consultant*.

GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

Add new paragraphs 6.1.3, 6.1.4, 6.1.5, 6.1.6, 6.1.7 and 6.1.8 as follows:

- 6.1.3 The *Contractor* agrees that changes resulting from construction coordination, including but not limited to, site surface conditions, site coordination, and *Subcontractor and Supplier* coordination are included in the *Contract Price* and the *Contractor* shall be precluded from making any claim for a change in the *Contract Price* as a result of such changes.
- 6.1.4 Labour costs shall be actual, prevailing rates at the *Place of the Work* paid to workers, plus statutory charges on labour including WSIB, unemployment insurance, Canada pension, vacation pay, hospitalization and medical insurance. The *Contractor* shall provide these rates, when requested by the *Consultant*, for review and/or agreement.
- 6.1.5 Quotations for changes to the *Work* shall be accompanied by itemized breakdowns together with detailed, substantiating quotations or cost vouchers from *Subcontractors* and *Suppliers*, submitted in a format acceptable to the *Consultant* and including any costs associated with extensions in *Contract Time*.
- 6.1.6 When both additions and deletions covering related *Work* or substitutions are involved in a change to the *Work*, payment, including *Overhead* and profit, shall be calculated on the basis of the net difference, if any, with respect to that change in the *Work*.
- 6.1.7 No extension to the *Contract Time* shall be granted for changes in the *Work* unless the *Contractor* can clearly demonstrate that such changes significantly alter the overall construction schedule submitted at the commencement of the *Work*. Extensions of *Contract Time* and all associated costs, if approved pursuant to GC 3.4.2, are to be included in the relevant *Change Order*.
- 6.1.8 When a change in the *Work* is proposed or required, the *Contractor* shall within 10 calendar days submit to the *Consultant* for review a claim for a change in *Contract Price* and/or *Contract Time*. Should 10 calendar days be insufficient to prepare the submission, the *Contractor* shall within 5 calendar days, advise the *Consultant* in writing of the proposed date of submission of the claim. Claims submitted after the dates prescribed herein will not be considered.

GC 6.2 CHANGE ORDER

- 6.2.1 Add after the last sentence in the paragraph:

The adjustment in the *Contract Time* and the *Contract Price* shall include an adjustment, if any, for delay or for the impact that the change in the *Work* has on the *Work* of the *Contractor*, and once such adjustment is made, the *Contractor* shall be precluded from making any further claims for delay or impact with respect to the change in the *Work*.

Add new paragraph 6.2.3 as follows:

- 6.2.3 The value of a change shall be determined in one or more of the following methods as directed by the *Consultant*.
 - .1 by estimate and acceptance of a lump sum;
 - .2 by negotiated unit prices which include the *Contractor's Overhead* and profit, or;
 - .3 by the actual cost to the *Owner*, such costs to be the actual cost after all credits included in the change have been deducted, plus the following ranges of mark-up on such costs:
 - .1 for *Change Orders* with a value of \$0 to \$15,000 the total *Subcontractor/Supplier* mark-up including *Overhead* and profit shall be 10% and the total *Contractor* mark-up including overhead and profit shall be 5%.
 - .2 For *Change Orders* in excess of \$15,000, the total *Subcontractor/Supplier* mark-up including *Overhead* and profit shall be 5% and the total *Contractor* mark-up including *Overhead* and profit shall be 3%.

Add new paragraph 6.2.4 as follows:

6.2.4 All quotations will be submitted in a complete manner listing:

- .1 quantity of each material,
- .2 unit cost of each material,
- .3 man hours involved,
- .4 cost per hour,
- .5 *Subcontractor* quotations submitted listing items 1 to 4 above and item 6 below.
- .6 mark-up

Add new paragraph 6.2.5 as follows:

6.2.5 The *Owner* and the *Consultant* will not be responsible for delays to the *Work* resulting from late, incomplete or inadequately broken down valuations submitted by the *Contractor*.

GC 6.3 CHANGE DIRECTIVE

6.3.6.1 Amend paragraph 6.3.6.1 by deleting the final period and adding as follows:

- .1 Ten percent (10%) for profit plus five percent (5%) for overhead on work by the *Contractor's* own forces up to the value of \$15,000 and five percent (5%) for profit plus three percent (3%) for *Overhead* on work by the *Contractor's* own forces in excess of \$15,000 and,
- .2 Ten percent (10%) fee on amounts paid to *Subcontractors* or *Suppliers* under subparagraph 6.3.7.9 for changes up to the value of \$15,000 and five percent (5%) on changes over \$15,000.

Unless a *Subcontractor's* or *Supplier's* price has been approved by the *Owner*, the *Subcontractor* or *Supplier* shall be entitled to its actual net cost as determined in accordance with paragraph 6.3.7, plus ten percent (10%) for profit and five percent (5%) for *Overhead* on such actual net cost for changes in the *Work*, up to the value of \$15,000 and five percent (5%) for profit and three percent (3%) for overhead on such actual net cost changes in the *Work* in excess of \$15,000.

6.3.6.2 Delete paragraph 6.3.6.2 and replace it with the following:

If a change in the *Work* results in a net decrease in the *Contract Price* in excess of \$15,000 the amount of the credit shall be the net cost, with deduction for *Overhead* and profit. If a change in the *Work* results in a net decrease in the *Contract Price* of \$15,000 or less, the amount of the credit shall be the net cost, without deduction for *Overhead* or profit.

6.3.7.1 In subparagraph 6.3.7.1 insert “while directly engaged in the work attributable to the change” after the words “in the direct employ of the *Contractor*”.

6.3.7 At the end of paragraph 6.3.7 add the following:

All other costs attributable to the change in the *Work* including the costs of all administrative or supervisory personnel are included in *Overhead* and profit calculated in accordance with the provisions of paragraph 6.1.5 of GC6.1 – OWNER'S RIGHT TO MAKE CHANGES.

GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

6.4.1 Delete paragraph 6.4.1 and replace with the following:

6.4.1.1 Prior to the submission of the bid on which the *Contract* was awarded, the *Contractor* confirms that it carefully investigated the *Place of the Work* and carried out such tests as it deemed appropriate and, in doing so, applied to that investigation the degree of care and skill required by paragraph 3.14.1.

6.4.1.2 The *Contractor* is deemed to assume all risk of conditions or circumstances now existing or arising in the course of the *Work* which could make the work more expensive or more difficult to perform than was contemplated at the time the *Contract* was executed. No claim by the *Contractor* will be considered by the *Owner* or the *Consultant* in connection with

conditions which could reasonably have been ascertained by such investigation or other due diligence undertaken prior to the execution of the *Contract*.

- 6.4.2 Amend paragraph 6.4.2 by adding a new first sentence as follows:

Having regard to paragraph 6.4.1, if the *Contractor* believes that the conditions of the *Place of the Work* differ materially from those reasonably anticipated, differ materially from those indicated in the *Contract Documents* or were concealed from discovery notwithstanding the conduct of the investigation described in paragraph 6.4.1, it shall provide the *Owner* and the *Consultant* with *Notice in Writing* no later than five (5) *Working Days* after the first observation of such conditions.

Amend the existing second sentence of paragraph 6.4.2 in the second line, following the word “materially” by adding the words “or were concealed from discovery notwithstanding the conduct of the investigation described in paragraph 6.4.1,”

- 6.4.3 Delete paragraph 6.4.3 in its entirety and substitute the following:

If the *Consultant* makes a finding pursuant to paragraph 6.4.2 that no change in the *Contract Price* or the *Contract Time* is justified, the *Consultant* shall report in writing the reasons for this finding to the *Owner* and the *Contractor*.

Add new paragraph 6.4.5 as follows:

- 6.4.5 No claims for additional compensation or for an extension of *Contract Time* shall be allowed if the *Contractor* fails to give *Notice in Writing* to the *Owner* or *Consultant*, as required by paragraph 6.4.2.

GC 6.5 DELAYS

- 6.5.1 Delete the words after the word “for” in the fourth line of paragraph 6.5.1, and add the words “...reasonable direct costs directly flowing from the delay, but excluding any consequential, indirect or special damages (including, without limitation, loss of profits, loss of opportunity or loss of productivity).”

- 6.5.2 Delete the words after the word “for” in the fourth line of paragraph 6.5.2, and add the words “...reasonable direct costs directly flowing from the delay, but excluding any consequential, indirect or special damages (including, without limitation, loss of profits, loss of opportunity or loss of productivity).”

- 6.5.3 Delete paragraph 6.5.3 in its entirety and replace with the following:

If the *Contractor* is delayed in the performance of the *Work* by *Force Majeure*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The extension of time shall not be less than the time lost as a result of the event causing the delay, unless the *Contractor* agrees to a shorter extension. The *Contractor* shall not be entitled to payment for costs incurred by such delays unless such delays result from the actions of the *Owner*.

Delete paragraph 6.5.4 in its entirety and replace with the following:

- 6.5.4 No extension or compensation shall be made for delay or impact on the *Work* unless notice in writing of a claim is given to the *Consultant* not later than ten (10) *Working Days* after the commencement of the delays or impact on the *Work*, provided however, that, in the case of a continuing cause of delay or impact on the *Work*, only one notice of claim shall be necessary.

Add new paragraphs 6.5.6, 6.5.7 and 6.5.8 as follows:

- 6.5.6 If the *Contractor* is delayed in the performance of the *Work* by an act or omission of the *Contractor* or anyone directly or indirectly employed or engaged by the *Contractor*, or by any cause within the *Contractor’s* control, then the *Contract Time* may be extended for such reasonable time as the *Owner* may decide in consultation with the *Consultant* and the *Contractor*. The *Owner* shall be reimbursed by the *Contractor* for all reasonable costs incurred by the *Owner* as the result of such delay, including, but not limited to, the cost of all additional services required by the *Owner* from the *Consultant* or any sub-consultants, project managers, or others employed or engaged by the *Owner*, and in particular, the costs of the *Consultant’s* services during the period between the date of *Substantial Performance of the Work* stated in Article A-1 herein, as the same may be extended through the provision of these General Conditions, and any later or actual date of *Substantial Performance of the Work* achieved by the *Contractor*.

- 6.5.7 Without limiting the obligations of the *Contractor* described in GC 3.2 – CONSTRUCTION BY OWNER OR OTHER CONTRACTORS or GC 9.4 – CONSTRUCTION SAFETY, the *Owner* or *Consultant* may, by notice in writing, direct the *Contractor* to stop the *Work* where the *Owner* or *Consultant* determines that there is an imminent risk to the safety of persons or property at the *Place of the Work*. In the event that the *Contractor* receives such notice, it shall immediately stop the *Work* and secure the site. The *Contractor* shall not be entitled to an extension of the *Contract Time* or to an increase in the *Contract Price* unless the resulting delay, if any, would entitle the *Contractor* to an extension of the *Contract Time* or the reimbursement of the *Contractor's* costs as provided in paragraphs 6.5.1, 6.5.2 or 6.5.3.
- 6.5.8 No claim for delay shall be made and the *Contract Time* shall not be extended due to climatic conditions or arising from the *Contractor's* efforts to maintain the *Contract* schedule.

GC 6.6 CLAIMS FOR A CHANGE IN THE CONTRACT PRICE

Delete GC 6.6 in its entirety.

GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT

Revise the heading to read **“OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK OR TERMINATE THE CONTRACT”**

Delete paragraph 7.1.2 and replace with the following:

- 7.1.2 If the *Contractor* should neglect to prosecute the *Work* properly, fails or neglects to maintain the latest schedule provided pursuant to GC 3.5, or otherwise fails to comply with the requirements of the *Contract*, and if the *Consultant* has given a written statement to the *Contractor* that sufficient cause exists to justify such action, the *Owner* may notify the *Contractor*, in writing, that the *Contractor* is in default of the *Contractor's* contractual obligations and instruct the *Contractor* to correct the default in the five (5) *Working Days* immediately following the receipt of such notice.

Add a new subparagraph 7.1.3.4 as follows:

- 7.1.3.4 An “acceptable schedule” as referred to in subparagraph 7.1.3.2. means a schedule approved by the *Consultant* and the *Owner* wherein the default can be corrected within the balance of the *Contract Time* and shall not cause delay to any other aspect of the *Work* or the work of other contractors, and in no event shall it be deemed to give a right to extend the *Contract Time*.

- 7.1.4.1 Delete sentence and replace with the following:

Correct such default and deduct the cost, including *Owner's* expenses, thereof from any payment then or thereafter due the *Contractor*.

- 7.1.5.3 In subparagraph 7.1.5.3 delete the words: “however, if such cost of finishing the *Work* is less than the unpaid balance of the *Contract Price*, the *Owner* shall pay the *Contractor* the difference;”

Delete paragraph 7.1.6 in its entirety and add new paragraphs 7.1.6, 7.1.7, 7.1.8, 7.1.9 and 7.1.10 as follows:

- 7.1.6 In addition to its right to terminate the Contract set out herein, the *Owner* may terminate this *Contract* at any time for any other reason and without cause upon giving the *Contractor* fifteen (15) *Working Days Notice in Writing* to that effect. In such event, the *Contractor* shall be entitled to be paid for all *Work* performed including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor* may have sustained as a result of the termination of the *Contract*, but in no event shall the *Contractor* be entitled to be compensated for any loss of profit on unperformed portions of the *Work*, or indirect, special, or consequential damages incurred.
- 7.1.7 The *Owner* may suspend *Work* under this *Contract* at any time for any reason and without cause upon giving the *Contractor Notice in Writing* to that effect. In such event, the *Contractor* shall be entitled to be paid for all *Work* performed to the date of suspension and be compensated for all actual costs incurred arising from the suspension, including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor*

may have sustained as a result of the suspension of the *Work*, but in no event shall the *Contractor* be entitled to be compensated for any indirect, special, or consequential damages incurred. In the event that the suspension continues for more than thirty (30) calendar days, the *Contract* shall be deemed to be terminated and the provisions of paragraph 7.1.6 shall apply.

- 7.1.8 In the case of either a termination of the *Contract* or a suspension of the *Work* under GC 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK, OR TERMINATE THE CONTRACT or GC 7.2 - CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the *Contractor* shall use its best commercial efforts to mitigate the financial consequences to the *Owner* arising out of the termination or suspension, as the case may be.
- 7.1.9 Upon the resumption of the *Work* following a suspension under GC 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK OR TERMINATE THE CONTRACT or GC 7.2 - CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the *Contractor* will endeavour to minimize the delay and financial consequences arising out of the suspension.
- 7.1.10 The *Contractor's* obligations under the *Contract* as to quality, correction, and warranty of the *Work* performed by the *Contractor* up to the time of termination or suspension shall continue after such termination of the *Contract* or suspension of the *Work*.

GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT

- 7.2.2 Delete paragraph 7.2.2 in its entirety.
- 7.2.3.1 Delete subparagraph 7.2.3.1 in its entirety.
- 7.2.3.2 Delete subparagraph 7.2.3.2 in its entirety
- 7.2.3.3 Delete subparagraph 7.2.3.3 in its entirety.
- 7.2.3.4 In subparagraph 7.2.3.4, delete the words "except for GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER".

Re-number paragraph 7.2.5 as paragraph 7.2.6. Add a new paragraph 7.2.5 as follows:

- 7.2.5 If the default cannot be corrected within the 5 *Working Days* specified in paragraph 7.2.4, the *Owner* shall be deemed to have cured the default if it:
 - .1 commences correction of the default within the specified time;
 - .2 provides the *Contractor* with an acceptable schedule for such correction; and,
 - .3 completes the correction in accordance with such schedule.

Delete paragraph 7.2.6 entirely and replace with the following:

- 7.2.6 If the *Contractor* terminates the *Contract* under the conditions described in GC 7.2 – CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the *Contractor* shall be entitled to be paid for all *Work* performed to the date of termination, as determined by the *Consultant*. The *Contractor* shall also be entitled to recover the direct costs associated with termination, including the costs of demobilization and losses sustained on *Products* and *Construction Equipment*. The *Contractor* shall not be entitled to any recovery for any special, indirect or consequential losses, including loss of profit.

Add new paragraphs 7.2.7, 7.2.8 and 7.2.9 as follows

- 7.2.7 The *Contractor* shall not be entitled to give notice of the *Owner's* default or terminate the *Contract* in the event the *Owner* withholds certificates or payment or both in accordance with the *Contract* because of:

- (a) the *Contractor's* failure to pay all legitimate claims promptly, or
- (b) the failure of the *Contractor* to discharge construction liens which are registered against the title to the *Place of the Work*.

7.2.8 The *Contractor's* obligations under the *Contract* as to quality, correction and warranty of the *Work* performed by the *Contractor* up to the effective date of termination shall continue in force and shall survive termination by the *Contractor* in accordance with paragraph 7.2.4.

7.2.9 If the *Contractor* suspends the *Work* or terminates the *Contract* as provided for in GC 7.2 – CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the *Contractor* shall ensure the site and the *Work* are left in a safe, secure condition as required by authorities having jurisdiction at the *Place of the Work* and the *Contract Documents*.

GC 8.1 AUTHORITY OF THE CONSULTANT

Delete paragraph 8.3.1 in its entirety and substitute as follows:

8.1.3 If a dispute is not resolved promptly, the *Consultant* will give such instruction as in the *Consultant's* opinion are necessary for the proper performance of the *Work* and to prevent delays pending settlement of the dispute. The parties shall act immediately according to such instructions, it being understood that by doing so neither party will jeopardize any claim the party may have.

GC 8.2 NEGOTIATION, MEDIATION AND ARBITRATION

8.2.1 Amend paragraph 8.2.1 by changing part of the second line from "shall appoint a *Project Mediator*" to "may appoint a *Project Mediator*, except that such an appointment shall only be made if both the *Owner* and the *Contractor* agree."

8.2.4 Amend paragraph 8.2.4 by changing part of the second line from "the parties shall request the *Project Mediator*" to "and subject to paragraph 8.2.1 the parties may request the *Project Mediator*".

Delete paragraphs 8.2.6, 8.2.7 and 8.2.8 in their entirety.

Add new paragraph 8.2.6 as follows:

8.2.6 The dispute may be finally resolved by arbitration under the Rules for Arbitration of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing, provided that both the *Contractor* and the *Owner* agree. If the *Contractor* and the *Owner* agree to resolve the dispute by arbitration, the arbitration shall be conducted in the jurisdiction of the *Place of the Work*.

GC 9.1 PROTECTION OF WORK AND PROPERTY

Delete subparagraph 9.1.1.1 in its entirety and substitute the following:

9.1.1.1 errors in the *Contract Documents* which the *Contractor* could not have discovered applying the standard of care described in paragraph 3.14.1;

Delete paragraph 9.1.2 in its entirety and substitute as follows:

9.1.2 Before commencing any *Work*, the *Contractor* shall determine the locations of all underground or hidden utilities and structures indicated in or inferable from the *Contract Documents*, or that are inferable from an inspection of the *Place of the Work* exercising the degree of care and skill described in paragraph 3.14.1.

Add new paragraph 9.1.5 as follows:

9.1.5 With respect to any damage to which paragraphs 9.1.3 or 9.1.4 apply, the *Contractor* shall neither undertake to repair or replace any damage whatsoever to the work of other contractors, or to adjoining property, nor acknowledge that the same was caused or occasioned by the *Contractor*, without first consulting the *Owner* and receiving written instructions as to the course of action to be followed from either the *Owner* or the *Consultant*. Where, however, there is danger to life, the environment, or public safety, the *Contractor* shall take such emergency action as it deems necessary to remove the danger.

GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

Add a new subparagraph 9.2.5.5 as follows:

9.2.5.5 in addition to the steps described in subparagraph 9.2.5.3, take any further steps it deems necessary to mitigate or stabilize any conditions resulting from encountering toxic or hazardous substances or materials.

9.2.6 Add the following to paragraph 9.2.6, after the word “responsible” in the second line:

...or whether any toxic or hazardous substances or materials already at the *Place of the Work* (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the *Contractor* or anyone for whom the *Contractor* is responsible in a manner which does not comply with legal and regulatory requirements, or which threatens human health and safety or the environment, or material damages to the property of the *Owner* or others,...

9.2.8 Add the following to paragraph 9.2.8, after the word “responsible” in the second line:

...or whether any toxic or hazardous substances or materials already at the *Place of the Work* (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the *Contractor* or anyone for whom the *Contractor* is responsible in a manner which does not comply with legal and regulatory requirements, or which threatens human health and safety or the environment, or material damages to the property of the *Owner* or others,...

Add new paragraphs 9.2.10 and 9.2.11 as follows:

9.2.10 The *Contractor*, *Subcontractors* and *Suppliers* shall not bring on to the *Place of the Work* any toxic or hazardous substances and materials except as required in order to perform the *Work*. If such toxic or hazardous substances or materials are required, storage in quantities sufficient to allow work to proceed to the end of any current work week only shall be permitted. All such toxic and hazardous materials and substances shall be handled and disposed of only in accordance with all laws and regulations that are applicable at the *Place of the Work*.

9.2.11 The *Contractor* shall indemnify and hold harmless the *Owner*, its parent, subsidiaries and affiliates, the *Consultant* and their respective partners, officers, directors, agents and employees from and against any and all liabilities, costs, expenses, and claims resulting from bodily injury, including death, and damage to property of any person, corporation or other body politic, that arises from the use by the *Contractor*, *Subcontractors* and *Suppliers* of any toxic or hazardous substances or materials at the *Place of the Work*.

GC 9.4 CONSTRUCTION SAFETY

Delete paragraph 9.4.1 in its entirety and substitute as follows:

9.4.1 The *Contractor* shall be solely responsible for construction safety at the *Place of the Work* and for compliance with the rules, regulations, and practices required by the applicable construction health and safety legislation and shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the *Work*.

Add new paragraphs 9.4.2 to 9.4.10 as follows:

9.4.2 Prior to the commencement of the *Work*, the *Contractor* shall submit to the *Owner*:

- .1 the evidence of workers’ compensation compliance required by GC 10.4.1;
- .2 copies of the *Contractor’s* insurance policies having application to the *Project* or certificates of insurance, at the option of the *Owner*;
- .3 documentation setting out the *Contractor’s* in-house safety programs;
- .4 copies of any documentation or notices to be filed or delivered to the authorities having jurisdiction for the regulation of occupational health and safety at the *Place of the Work*.

- 9.4.3 The *Contractor* shall indemnify and save harmless the *Owner*, its agents, trustees, officers, directors, employees, consultants, successors, appointees, and assigns from and against the consequences of any and all safety infractions committed by the *Contractor* under the occupational health and safety legislation in force at the *Place of the Work* including the payment of legal fees and disbursements on a substantial indemnity basis.
- 9.4.4 The *Owner* undertakes to include in its contracts with other contractors and in its instructions to its own forces the requirement that the other contractor or its own forces, as the case may be, comply with the policies and procedures of and the directions and instructions from the *Contractor* with respect to occupational health and safety and related matters.
- 9.4.5 If the *Owner* is of the reasonable opinion that the *Contractor* has not taken such precautions as are necessary to ensure compliance with the requirements of paragraph 9.4.1, the *Owner* may take any remedial measures which it deems necessary, including stopping the performance of all or any portion of the *Work*, and the *Owner* may use its employees, the *Contractor*, any *Subcontractor* or any other contractors to perform such remedial measures.
- 9.4.6 The *Contractor* shall file any notices or any similar document required pursuant to the *Contract* or the safety regulations in force at the *Place of the Work*. This duty of the *Contractor* will be considered to be included in the *Work* and no separate payment therefore will be made to the *Contractor*.
- 9.4.7 Unless otherwise provided in the *Contract Documents*, the *Contractor* shall develop, maintain and supervise for the duration of the *Work* a comprehensive safety program that will effectively incorporate and implement all required safety precautions. The program shall, at a minimum, respond fully to the applicable safety regulations and general construction practices for the safety of persons or property, including, without limitation, any general safety rules and regulations of the *Owner* and any workers' compensation or occupational health and safety statutes or regulations in force at the *Place of the Work*.
- 9.4.8 The *Contractor* shall provide a copy of the safety program described in paragraph 9.4.7 hereof to the *Consultant* for delivery to the *Owner* prior to the commencement of the *Work*, and shall, ensure, as far as it is reasonably practical to do so, that every employer and worker performing work in respect of the *Project* complies with such program.
- 9.4.9 The *Contractor* shall arrange regular safety meetings, and shall supply and maintain, at its own expense, at its office or other well-known place at the job site, safety equipment necessary to protect the workers and general public against accident or injury as prescribed by the authorities having jurisdiction at the *Place of the Work*, including, without limitation, articles necessary for administering first-aid to any person and an emergency procedure for the immediate removal of any injured person to a hospital or a doctor's care.
- 9.4.10 The *Contractor* shall promptly report in writing to the *Owner* and the *Consultant* all accidents of any sort arising out of or in connection with the performance of the *Work*, whether on or adjacent to the job site, giving full details and statement of witnesses. If death or serious injuries or damages are caused, the accident shall be promptly reported by the *Contractor* to the *Owner* and the *Consultant* by telephone or messenger in addition to any reporting required under the applicable safety regulations.

GC 9.5 MOULD

Delete subparagraph 9.5.3.3 and replace with the following:

- 9.5.3.3 extend the *Contract Time* for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the *Owner*. If, in the opinion of the *Consultant*, the *Contractor* has been delayed in performing the *Work* and/or has incurred additional costs under paragraph 9.5.1.2, the *Owner* shall reimburse the *Contractor* for the reasonable costs incurred as a result of the delay and as a result of taking those steps, and

GC 10.1 TAXES AND DUTIES

- 10.1.2 Amend paragraph 10.1.2 by adding the following sentence to the end of the paragraph:

For greater certainty, the *Contractor* shall not be entitled to any mark-up for overhead or profit on any increase in such taxes and duties and the *Owner* shall not be entitled to any credit relating to mark-up for overhead or profit on any decrease in such taxes. The *Contractor* shall provide a detailed breakdown of additional taxes if requested by the *Owner* in a form satisfactory to the *Owner*.

Add new paragraph 10.1.3 as follows:

- 10.1.3 Where the *Owner* is entitled to an exemption or a recovery of sales taxes, customs duties, excise taxes or *Value Added Taxes* applicable to the *Contract*, the *Contractor* shall, at the request of the *Owner*, assist with the application for any exemption, recovery or refund of all such taxes and duties and all amounts recovered or exemptions obtained shall be for the sole benefit of the *Owner*. The *Contractor* agrees to endorse over to the *Owner* any cheques received from the federal or provincial governments, or any other taxing authority, as may be required to give effect to this paragraph.

GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

- 10.2.5 Amend paragraph 10.2.5 by addition the words “Subject to paragraph 3.4” at the beginning of the paragraph. Add the following to the end of the second sentence:

...and no further *Work* on the affected components of the *Contract* shall proceed until these directives have been obtained by the *Contractor* from the *Consultant*.

- 10.2.6 Amend paragraph 10.2.6 by adding the following sentence to the end of the paragraph:

In the event the *Owner* suffers loss or damage as a result of the *Contractor's* failure to comply with paragraph 10.2.5 and notwithstanding any limitations described in paragraph 12.1.1, the *Contractor* agrees to indemnify and to hold harmless the *Owner* and the *Consultant* from and against any claims, demands, losses, costs, damages, actions suits or proceedings resulting from such failure by the *Contractor*.

Add new paragraph 10.2.8 as follows:

- 10.2.8 The *Contractor* shall furnish all certificates that are required or given by the appropriate governmental authorities as evidence that the *Work* as installed conforms with the laws and regulations of authorities having jurisdiction, including certificates of compliance for the *Owner's* occupancy or partial occupancy. The certificates are to be final certificates giving complete clearance of the *Work*, in the event that such governmental authorities furnish such certificates.

GC 10.4 WORKERS' COMPENSATION

- 10.4.1 Delete paragraph 10.4.1 and replace with the following:

Prior to commencing the *Work*, and with each and every application for payment thereafter, including the *Contractor's* application for payment of the holdback amount following *Substantial Performance of the Work* and again with the *Contractor's* application for final payment, the *Contractor* shall provide evidence of compliance with workers' compensation legislation in force at the *Place of the Work*, including payments due thereunder.

GC 11.1 INSURANCE

Delete entirety of general condition and CCDC 41 and replace with the following:

- 11.1 Without restricting the generality of GC 12 – INDEMNIFICATION, the *Contractor* shall provide, maintain, and pay for the insurance coverages specified in GC 11.1 – INSURANCE. Unless otherwise stipulated, the duration of each insurance policy shall be from the date of commencement of the *Work* until the expiration of the warranty periods set out in the *Contract Documents*. Prior to commencement of the *Work* and upon the placement, renewal, amendment, or extension of all or any part of the insurance, the *Contractor* shall promptly provide the *Owner* with confirmation of coverage and, if required, a certified true copy of the policies certified by an authorized representative of the insurer together with copies of any amending endorsements.

.1 General Liability Insurance

General liability insurance shall be in the name of the *Contractor*, with the *Owner* and the *Consultant* named as additional insureds, with limits of not less than \$5,000,000.00 inclusive per occurrence for bodily injury, death, and damage to property, including loss of use thereof, for itself and each of its employees, *Subcontractors* and/or agents. The insurance coverage shall not be less than the insurance required by IBC Form 2100, or its equivalent replacement, provided that IBC Form 2100 shall contain the latest edition of the relevant CCDC endorsement form. To achieve the desired limit, umbrella,

or excess liability insurance may be used. All liability coverage shall be maintained for completed operations hazards from the date of *Substantial Performance of the Work*, as set out in the certificate of *Substantial Performance of the Work*, on an ongoing basis for a period of 6 years following *Substantial Performance of the Work*. Where the *Contractor* maintains a single, blanket policy, the addition of the *Owner* and the *Consultant* is limited to liability arising out of the *Project* and all operations necessary or incidental thereto. The policy shall be endorsed to provide the *Owner* with not less than 30 days' notice, in writing, in advance of any cancellation and of change or amendment restricting coverage.

.2 Automobile Liability Insurance

Automobile liability insurance in respect of licensed vehicles shall limits of not less than \$2,000,000.00 inclusive per occurrence for bodily injury, death and damage to property, covering all licensed vehicles *owned* or leased by the *Contractor*, and endorsed to provide the *Owner* with not less than 30 days' notice, in writing, in advance of any cancellation, change or amendment restricting coverage. Where the policy has been issued pursuant to a government-operated automobile insurance system, the *Contractor* shall provide the *Owner* with confirmation of automobile insurance coverage for all automobiles registered in the name of the *Contractor*.

.3 Aircraft and Watercraft Liability Insurance [NTD: This can come out if N/A]

Where determined necessary by the *Contractor*, acting reasonably, aircraft and watercraft liability insurance will be obtained in accordance with the provisions of paragraph 11.1.3. Aircraft and watercraft liability insurance with respect to owned or non-owned aircraft and watercraft if used directly or indirectly in the performance of the *Work*, including use of additional premises, shall be subject to limits of not less than \$2,000,000.00 inclusive per occurrence for bodily injury, death and damage to property, including loss of use thereof and limits of not less than \$2,000,000.00 for aircraft passenger hazard. Such insurance shall be in a form acceptable to the *Owner*. The policies shall be endorsed to provide the *Owner* with not less than 30 days' notice, in writing, in advance of cancellation, change or amendment restricting coverage.

.4 Property and Boiler and Machinery Insurance

(1) Builder's Risk property insurance shall be in the name of the *Contractor* with the *Owner* and the *Consultant* named as additional insureds. The policy shall insure against all risks of direct physical loss or damage to the property insured which shall include all property included in the *Work*, whether owned by the *Contractor* or the owner or owned by others, so long as the property forms part of the *Work*. The property insured also includes all materials and supplies necessary to complete the work, whether installed in the work temporarily or permanently, in storage on the project site, or in transit to the project site, as well as temporary buildings, scaffolding, falsework forms, hoardings, excavation, site preparation and similar work. The insurance shall be for not less than the sum of the amount of the contract price and the full value of products that are specified to be provided by the owner for incorporation into the work, if applicable, with the deductible of \$10,000.00 payable by the contractor. The insurance shall include the foregoing and, otherwise, shall not be less than the insurance required by IBC Form 4042 or its equivalent replacement provided that the IBC Form 4042 shall include the latest addition of the relevant CCDC endorsement form. The coverage shall be based on a completed value form and shall be maintained continuously until ten (10) days after the date of the final certificate of payment.

(2) Boiler and machinery insurance shall be in the name of the *Contractor*, with the *Owner* and the *Consultant* named as additional insureds, for not less than the replacement value of the boilers, pressure vessels and other insurable objects forming part of the *Work*. The insurance provided shall not be less than the insurance provided by the "Comprehensive Boiler and Machinery Form" and shall be maintained continuously from commencement of use or operation of the property insured and until 10 days after the date of the final certificate for payment.

(3) The policies shall allow for partial or total use or occupancy of the *Work*.

(4) The policies shall provide that, in the case of a loss or damage, payment shall be made to the *Owner* and the *Contractor* as their respective interests may appear. The *Contractor* shall act on behalf of the *Owner* for the purpose of adjusting the amount of such loss or damage payment with the insurers. When the extent of the loss or damage is determined, the *Contractor* shall proceed to restore the *Work*. Loss or damage shall not affect the rights and obligations of either party under the *Contract* except that the *Contractor* shall be entitled to such reasonable extension of the *Contract Time*, relative to the extent of the loss or damage, as determined by the *Owner*, in its sole discretion.

(5) The *Contractor* shall be entitled to receive from the *Owner*, in addition to the amount due under the *Contract*, the amount at which the *Owner's* interest in restoration of the *Work* has been appraised, such amount to be paid as the restoration of the *Work* proceeds and as provided in GC 5.2 – APPLICATIONS FOR PROGRESS PAYMENT and GC 5.3

– PROGRESS PAYMENT. In addition, the *Contractor* shall be entitled to receive from the payments made by the insurer the amount of the *Contractor's* interest in the restoration of the *Work*.

(6) In the case of loss or damage to the *Work* arising from the work of other contractors, or the *Owner's* own forces, the *Owner*, in accordance with the *Owner's* obligations under paragraph 3.2.2.4 of GC 3.2 – CONSTRUCTION BY OWNER OR OTHER CONTRACTORS, shall pay the *Contractor* the cost of restoring the *Work* as the restoration of the *Work* proceeds and as provided in GC 5.2 – APPLICATIONS FOR PROGRESS PAYMENT and GC 5.3 – PROGRESS PAYMENT.

.5 Contractors' Equipment Insurance

“All risks” contractors' equipment insurance covering construction machinery and equipment used by the *Contractor* for the performance of the *Work*, excluding boiler insurance, shall be in a form acceptable to the *Owner* and shall not allow subrogation claims by the insurer against the *Owner*. The policies shall be endorsed to provide the *Owner* with not less than 30 days' notice, in writing, in advance of cancellation, change or amendment restricting coverage. Subject to satisfactory proof of financial capability by the *Contractor* for self-insurance of his equipment, the *Owner* agrees to waive the equipment insurance requirement.

- 11.1.2 The *Contractor* shall be responsible for deductible amounts under the policies except where such amounts may be excluded from the *Contractor's* responsibility by the terms of GC 9.1 - PROTECTION OF WORK AND PROPERTY and GC 9.2 - DAMAGES AND MUTUAL RESPONSIBILITY.
- 11.1.3 Where the full insurable value of the *Work* is substantially less than the *Contract Price*, the *Owner* may reduce the amount of insurance required to waive the course of construction insurance requirement.
- 11.1.4 If the *Contractor* fails to provide or maintain insurance as required by the *Contract Documents*, then the *Owner* shall have the right to provide and maintain such insurance and provide evidence of same to the *Contractor*. The *Contractor* shall pay the costs thereof to the *Owner* on demand, or the *Owner* may deduct the amount that is due or may become due to the *Contractor*.
- 11.1.5 All required insurance policies shall be with insurers licensed to underwrite insurance in the jurisdiction of the *Place of the Work*.

GC 11.2 CONTRACT SECURITY

- 11.2.2 Delete paragraph after the word “provided” and replace with the following:

Such bonds shall be issued by a duly licensed surety company, which has been approved by the *Owner*, authorized to transact a business of suretyship in the province or territory of the *Place of the Work* and shall be maintained in good standing until the fulfillment of the *Contract*, including all warranty and maintenance periods set out in the *Contract Documents*.

Add new paragraph 11.2.3 as follows:

- 11.2.3 It is the intention of the parties that the performance bond shall be applicable to all of the *Contractor's* obligations in the *Contract Document* and, wherever a performance bond is provided with language which conflicts with this intention, it shall be deemed to be amended to comply. The *Contractor* represents and warrants to the *Owner* that it has provided its surety with a copy of the *Contract Documents* prior to the issuance of such bonds.

GC 12.1 INDEMNIFICATION

Delete General Condition 12.1 – INDEMNIFICATION in its entirety and substitute as follows:

- 12.1.1 The *Contractor* shall indemnify and hold harmless the *Owner*, its parent, subsidiaries and affiliates, the *Consultant* and their respective partners, trustees, officers, directors, agents and employees from and against any and all claims, liabilities, expenses, demands, losses, damages, actions, costs, suits, or proceedings (hereinafter called “claims”), whether in respect of claims suffered by the *Owner* or in respect of claims by third parties, that directly or indirectly arise out of, or are attributable to, the acts or omissions of the *Contractor*, its employees, agents, *Subcontractors*, *Suppliers* or any other persons for whom it is in law responsible (including, without limitation, claims that directly or indirectly arise out of, or are

attributable to, loss of use or damage to the *Work*, the *Owner's* property or equipment, the *Contractor's* property or equipment or equipment or property adjacent to the *Place of the Work* or death or injury to the *Contractor's* personnel).

12.1.2 The provisions of GC 12.1 - INDEMNIFICATION shall survive the termination of the *Contract*, howsoever caused and no payment or partial payment, no issuance of a final certificate of payment and no occupancy in whole or in part of the *Work* shall constitute a waiver or release of any of the provisions of GC 12.1.

GC 12.2 WAIVER OF CLAIMS

12.2.1 In the fourth line, add the words “claims for delay pursuant to GC 6.5 DELAYS” after the word “limitation”. Add the words “(collectively “Claims”)” after “*Substantial Performance of the Work*” in the sixth line.

12.2.1.1 Change the word “claims” to “Claims” and change the word “claim” to “Claim”.

12.2.1.2 Change the word “claims” to “Claims”.

12.2.1.3 Delete paragraph in its entirety.

12.2.1.4 Change the word “claims” to “Claims”.

12.2.2 Change the words “in paragraphs 12.2.1.2 and 12.2.1.3” to “in paragraph 12.2.1.2”. Change the word “claims” to “Claims” in both instances and change the word “claim” to “Claim”.

12.2.3 Delete paragraph in its entirety.

12.2.4 Delete paragraph in its entirety.

12.2.5 Delete paragraph in its entirety.

12.2.6 Change the word “claim” to “Claim” in all instances in the paragraph.

12.2.7 Change “The party” to “The *Contractor*”. Change the word “claim” to “Claim” in all instances in the paragraph.

12.2.8 Change “under paragraphs 12.2.1 or 12.2.3” to “under paragraph 12.2.1”. Change both instances of the words “the party” to “the *Contractor*”. Change the word “claim” to “Claim” in all instances in the paragraph.

12.2.9 Delete paragraph 12.2.9 in its entirety.

12.2.10 Delete paragraph 12.2.10 in its entirety.

GC 12.3 WARRANTY

12.3.2 Delete from the first line of paragraph 12.3.2 the word, “The” and substitute the words “Subject to paragraph 3.4.1, the...”

Add new paragraphs 12.3.7 to 12.3.12 as follows:

12.3.7 Where required by the *Contract Documents*, the *Contractor* shall provide a maintenance bond as security for the performance of the *Contractor's* obligations as set out in GC 12.3 WARRANTY.

12.3.8 The *Contractor* shall provide fully and properly completed and signed copies of all warranties and guarantees required by the *Contract Documents*, containing:

- .1 the proper name of the *Owner*;
- .2 the proper name and address of the *Project*;
- .3 the date the warranty commences, which shall be at the “date of *Substantial Performance of the Work*” unless otherwise agreed upon by the *Consultant* in writing.
- .4 a clear definition of what is being warranted and/or guaranteed as required by the *Contract Documents*; and
- .5 the signature and seal (if required by the governing law of the *Contract*) of the company issuing the warranty, countersigned by the *Contractor*.

- 12.3.9 Should any *Work* be repaired or replaced during the time period for which it is covered by the specified warranty, a new warranty shall be provided under the same conditions and for the same period as specified herein before. The new warranty shall commence at the completion of the repair or replacement.
- 12.3.10 The *Contractor* shall ensure that its *Subcontractors* are bound to the requirements of GC 12.3 – WARRANTY for the *Subcontractor's* portion of the *Work*.
- 12.3.11 The *Contractor* shall ensure that all warranties, guarantees or other obligations for *Work*, services or *Products* performed or supplied by any *Subcontractor*, *Supplier* or other person in connection with the *Work* are obtained and available for the direct benefit of the *Owner*. In the alternative, the *Contractor* shall assign to the *Owner* all warranties, guarantees or other obligations for *Work*, services or *Products* performed or supplied by any *Subcontractor*, *Supplier* or other person in connection with the *Work* and such assignment shall be with the consent of the assigning party, where required by law, or by the terms of that party's contract. Such assignment shall be in addition to, and shall in no way limit, the warranty rights of the *Owner* under the *Contract Documents*.
- 12.3.12 The *Contractor* shall commence or correct any deficiency within 2 Working Days after receiving a notice from the *Owner* or the *Consultant*, and shall complete the *Work* as expeditiously as possible, except in the case where the deficiency prevents maintaining security or where basic systems essential to the ongoing business of the *Owner* and/or its tenants cannot be maintained operational as designed. In those circumstances all necessary corrections and/or installations of temporary replacements shall be carried out immediately as an emergency service. Should the *Contractor* fail to provide this emergency service within 8 hours of a request being made during the normal business hours of the *Contractor*, the *Owner* is authorized, notwithstanding GC 3.1, to carry out all necessary repairs or replacements at the *Contractor's* expense.

PART 13 OTHER PROVISIONS

Add new Part 13 OTHER PROVISIONS as follows:

GC 13.1 OWNERSHIP OF MATERIALS

- 13.1.1 Unless otherwise specified, all materials existing at the *Place of the Work* at the time of execution of the *Contract* shall remain the property of the *Owner*. All *Work* and *Products* delivered to the *Place of the Work* by the *Contractor* shall be the property of the *Owner*. The *Contractor* shall remove all surplus or rejected materials as its property when notified in writing to do so by the *Consultant*.

GC 13.2 CONSTRUCTION LIENS

- 13.2.1 In the event that a claim for lien is registered against the *Project* by a *Subcontractor*, *Sub-subcontractor* or *Supplier*, and provided the *Owner* has paid all amounts properly owing under the *Contract*, the *Contractor* shall, at its own expense:
- .1 within 10 calendar days, ensure that any and all claims for lien and certificates of action are discharged, released, or vacated by the posting of security or otherwise; and
 - .2 in the case of written notices of lien, ensure that such notices are withdrawn, in writing.
- 13.2.2 In the event that the *Contractor* fails to conform with the requirements of paragraph 13.2.1, the *Owner* may fulfil those requirements without *Notice in Writing* to the *Contractor* and set off and deduct from any amount owing to the *Contractor*, all costs and associated expenses, including the costs of posting security and all legal fees and disbursements associated with discharging or vacating the claim for lien or certificate of action and defending the action. If there is no amount owing by the *Owner* to the *Contractor*, then the *Contractor* shall reimburse the *Owner* for all of the said costs and associated expenses.
- 13.2.3 Notwithstanding any other provision in the *Contract*, the *Consultant* shall not be obligated to issue a certificate and the *Owner* shall not be obligated to make payment to the *Contractor* if, at the time such certificate or payment was otherwise due:
- .1 a claim for lien has been registered against the *Project* lands, or

- .2 if the *Owner* or mortgagee of the *Project* lands has received written notice of a lien or
 - .3 the *Owner* or *Consultant* reasonably believe that any party has purported to retain title to *Products* or materials in respect of which an application for payment has been made.
- 13.2.4 Without limiting the foregoing, the *Contractor* shall, if requested by the *Owner*, defend, indemnify and save the *Owner* harmless from the amount of all such claims and the costs of defending any and all actions commenced against the *Owner* pursuant to the construction/builder's lien legislation in force at the *Place of the Work*, including the legal costs of the *Owner*, unless the lien was a direct result of a breach of the *Contract* by the *Owner* or the non-payment by the *Owner* of a valid charge or claim under the *Contract*.
- 13.2.5 GC 13.2 – CONSTRUCTION LIENS does not apply to construction/builder's liens claimed by the *Contractor*.

END OF AMENDMENTS TO CCDC 2 - 2008