

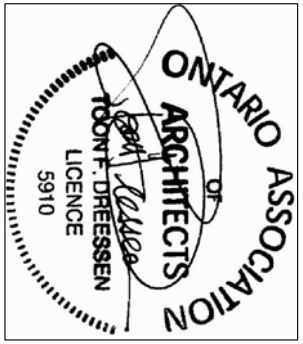
N.T.S.

PLAN-REPERE

PAS À L'ÉCHELLE

PROJECT NORTH

NORD DU PROJET



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1	ISSUED FOR 99% REVIEW	2014-10-16

A	B	C
A	B	C

CHILLER REPLACEMENT  
FOR TRANSPORT CANADA  
TRAINING CENTRE  
(BUILDING 0-276)

HYDRAULIC BUILDING  
REMOVALS & NEW WORKS  
ENVELOPE DETAILS

Designed By	RICHARD HUOT	Conçu par
Date	2014-10-09	(yyyy/mm/dd)
Drawn by	RICHARD HUOT	Dessiné par
Date	2014-10-09	(yyyy/mm/dd)
Reviewed By	TOON DREESSEN	Examiné par
Date	2014-10-09	(yyyy/mm/dd)
Approved By	TOON DREESSEN	Approuvé par
Date	2014-10-09	(yyyy/mm/dd)
Tender	-	Soumission
Project Manager	K. DUINN	Administrateur de projet
Project no.	R.060139.002	No du projet
Drawing no.	A-2	No du dessin

REMOVALS NOTES/LEGEND:

- ARCHITECTURAL WORK WITHIN BOX REQUIRED DURING STAGE 2. NOTE ALL OTHER ARCHITECTURAL WORK TO TAKE PLACE DURING STAGE 3
- EXISTING TO REMAIN
- EXISTING EQUIPMENT PAD TO BE MODIFIED (REFER TO MECHANICAL & STRUCTURAL DRAWINGS)
- REMOVE EXISTING GUARDRAILS, ROOF LADDER, WORK PLATFORM, LIME EQUIPMENT (REFER TO MECHANICAL & ELECTRICAL DRAWINGS)
- C/W STEEL STRUCTURE SUPPORTS
- EXISTING LOUVER TO BE REMOVED
- EXISTING 30mm METAL SIDING TO BE REMOVED. EXISTING RIGID INSULATION, GIRTS AND METAL THRU WALL FLASHING @ WALL BASE TO REMAIN. - RIGID INSULATION AROUND ENDS OF REMOVED LOUVERS TO BE REMOVED TO ALLOW THE INTO EXISTING AIR/MOISTURE DRAINAGE.
- EXISTING FANS, CAP FLASHING, BUILT UP CURBS & EXISTING COUNTER FLASHING TO BE REMOVED. REFER TO NEW WORKS NOTE 24.
- PRE-FINISHED METAL CAP FLASHING & ROOF COUNTER FLASHING IS TO BE REMOVED AND PROTECTED FOR REUSE. ROOF MEMBRANE IS TO BE REMOVED. ROOF PARAPET SHEATHING IS TO BE REPAIRED/ REPLACED AS NEEDED. CONTRACTOR TO CARRY IN PRICE REPLACEMENT OF 50% OF PARAPET SHEATHING WITH NEW 15mm PT WOOD SHEATHING.
- REMOVE EXISTING ROOF ASSEMBLY TO ROOF DECK AND PREP FOR NEW ROOF SHEATHING.
- REMOVE EXISTING H.S.S. SUPPORTS PASSING THROUGH PARAPET WALL, PATCH AND REPAIR PARAPET WALL FRAMING AND SHEATHING TO MATCH EXISTING.
- PREPARE & CLEAN CONCRETE FLOOR SURFACE, INCLUDING EQUIPMENT PAD FOR NEW GRT PAINT FINISH. REFER TO NEW WORKS NOTE 6.
- REMOVE EXISTING LIME EQUIPMENT AND ROOF CURBS C/W SLEEPERS. REFER TO NEW WORKS NOTE 23. (REFER TO MECHANICAL)

GENERAL PROJECT NOTES:

- REFER TO SPECIFICATIONS FOR DETAILED DESCRIPTION OF WORK TO BE COMPLETED AT EACH STAGE OF WORK.
- ANCHORING OF LADDER & STRUCTURAL STEEL TO BE COORDINATED WITH STRUCTURAL DRAWINGS.
- GRATING ON ALL STAIRS & LANDINGS TO BE CONTINUOUS BETWEEN SUPPORT BEAMS & ANCHORED IN PLACE.
- CONTRACTOR TO PATCH AND REPAIR ALL METAL GALVANIZING DAMAGED ON SITE WITH ZINC RICH PRIMER & PAINT FINISH TO MATCH EXISTING.
- ALL BALUSTRADES ARE TO BE CONSTRUCTED TO BE DEMOUNTABLE.
- THE CONTRACTOR IS CAUTIONED THAT CERTAIN PVC MEMBRANES ARE INCOMPATIBLE WITH ASPHALT, COAL TAR, HEAVY OILS, ROOFING CEMENTS, CEMENTSOTE AND SOME PRESERVATIVE MATERIALS. SUCH MATERIALS SHALL NOT REMAIN IN CONTACT WITH THE PVC MEMBRANE. THE CONTRACTOR SHALL CONSULT ROOF MEMBRANE MANUFACTURER REGARDING COMPATIBILITY, PRECAUTIONS AND RECOMMENDATIONS.

NEW WORKS ASSEMBLY SCHEDULE:

ROOF ASSEMBLY 1

NOTE:  
ROOF MEMBRANE TO BE REFLECTIVE TYPE COLOUR WHITE.  
PROVIDE GRT STRIPS AT ALL PARAPET WALLS AND CURBS AS RECOMMENDED BY MANUFACTURER OF ROOF MEMBRANE.  
PROVIDE SLOPED INSULATION IF NEEDED TO PROVIDE SLOPE OF MIN 1:100 TO DRAIN.

ADDITIONAL CAP SHEET PLY MAINTENANCE WALKWAY  
OVER ENTIRE ROOF SURFACE, MOD BIT ROOF (6 PLY TOTAL)

2 PLY MOD BIT ROOF MEMBRANE  
6mm OVERLAY ASPHALT RECOVER BOARD  
100mm RIGID INSULATION, MIN. RSL3.32 C/W SLOPED INSULATION SLOPED TO DRAIN, TYPE IV, (DOWN STYROMAX DECOMATE PLUS F2 OR APP. ALT.)  
13mm EXTERIOR GRADE GYPSUM ROOF SHEATHING  
MECHANICALLY FASTENED TO DECK  
EXISTING STEEL ROOF DECK (REFER TO STRUCTURAL)

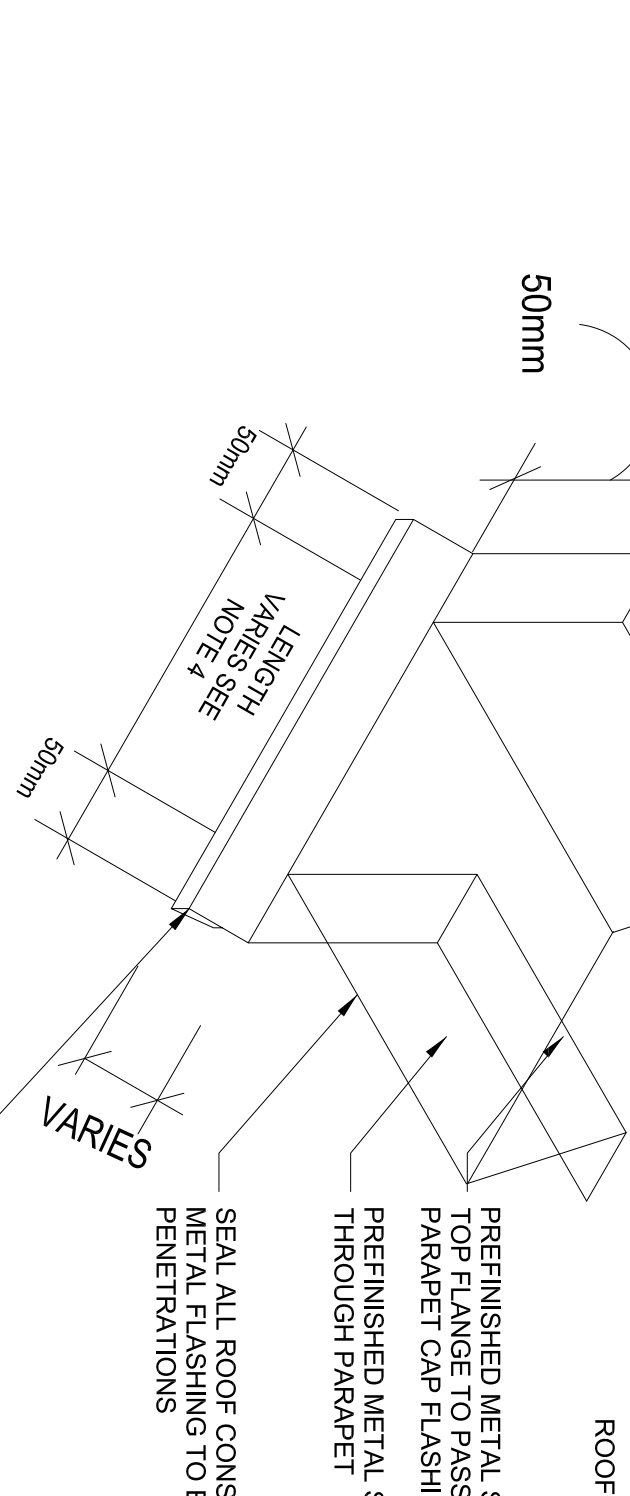
WALL ASSEMBLY 1

NOTE:  
W1

NEW WORKS NOTES/LEGEND:

- ARCHITECTURAL WORK WITHIN BOX REQUIRED DURING STAGE 2. NOTE ALL OTHER ARCHITECTURAL WORK TO TAKE PLACE DURING LATER STAGES. REFER TO SPECIFICATIONS
- EXISTING TO REMAIN
- EXISTING EQUIPMENT PAD TO BE MODIFIED (REFER TO MECHANICAL & STRUCTURAL DRAWINGS)
- INSTALL NEW 25mm SIDING TO MATCH EXISTING LIME WEST HIDDEN FASTENER, AD 300 RSR OR APP. ALT.1, COLOUR TO MATCH EXISTING. CONTRACTOR TO CARRY IN PRICE FOR 100% REPLACEMENT (WITH NEW) OF SIDING AREA INDICATED.
- OPENING TO BE FILLED IN WITH NEW 150mm BLOCK, BLOCK WEIL TO THE INTO EXISTING BLOCK WALLS. REFER TO SPECIFICATIONS.
- PROVIDE NEW GRAY COLOUR GRT PAINT FINISH ON CONCRETE FLOOR & EQUIPMENT PAD. PREPARE SURFACE AND PROVIDE PRIMER COATS AS DIRECTED BY MANUFACTURER.
- PROVIDE NEW ROOF DRAIN REFER TO DRAWING 5A.2 (REFER TO MECHANICAL & STRUCTURAL)
- PROVIDE NEW PRE-FINISHED METAL ROOF SCUPPER (COLOUR TO MATCH EXISTING CAP FLASHING) (REFER TO DRAWINGS 6 & 7) A.2.
- REMOVE SMALL SECTION OF EXISTING PARAPET WALL, SIDING AND INSULATION TO ACCOMMODATE NEW SCUPPER.
- PROVIDE NEW PRE-FINISHED METAL THRU WALL FLASHING AT WALL BASE TO OVERLAP EXISTING BY A MIN OF 150mm. COLOUR TO MATCH EXISTING. REFER TO DRAWING 8A.2.
- PROVIDE 75mm RIGID INSULATION, TYPE X EXTRUDED POLYSTYRENE FOAM (DOW STYROFOAM CAVITYMATE OR APP. ALT.1), TIE THERMAL BARRIER INTO EXISTING.
- PROVIDE AIR BARRIER & TIE INTO EXISTING. PROVIDE MIN. OVERLAP AS PER MANUFACTURERS RECOMMENDATIONS.
- PROVIDE CONT. SEALANT BEAD AT JUNCTION BETWEEN MATERIALS
- PROVIDE NEW H.S.S. SUPPORTS (REFER TO STRUCTURAL). REMOVE SMALL SECTION OF PARAPET WALL TO SUIT NEW H.S.S. SUPPORT, PATCH AND REPAIR PARAPET WALL AS NEEDED TO SUIT NEW SUPPORT. PROVIDE PRE-FINISHED METAL STACK FLASHING C/W PRESSURE GROMMET SEAL AND SEALANT BEAD AT JUNCTION BETWEEN PRE-FINISHED METAL CAP FLASHING AND STACK FLASHING & AT TOP OF STACK FLASHING TO H.S.S. SUPPORT. H.S.S. SUPPORTS TO BE COMPLETELY FILLED WITH SPRAY FOAM INSULATION.
- REINSTALL UNDAMAGED EXISTING PARAPET CAP FLASHING & NEW PRE-FINISHED METAL CAP FLASHING COLOUR TO MATCH EXISTING. CONTRACTOR TO CARRY IN PRICE FOR 50% REPLACEMENT (WITH NEW) OF LINEAR PERIMETER OF ENTIRE HYDRAULIC BUILDING PARAPET CAP FLASHING.
- NEW LIME EQUIPMENT (REFER TO MECHANICAL & ELECTRICAL DRAWINGS)
- NEW ROOF MEMBRANE TO BE CARRIED UP AND OVER ENTIRE PARAPET WALL
- PROVIDE NEW STEEL GRATE PLATFORM AS INDICATED (REFER TO SPECIFICATIONS & STRUCTURAL)
- PROVIDE NEW GALVANIZED STEEL LADDER. REFER TO DRAWING 1A.3
- PROVIDE NEW GALVANIZED STEEL GUARDRAILS. REFER TO DRAWING 2A.3
- OPENING IN NEW GRATE PLATFORM TO ACCOMMODATE LIME PIPING. REFER TO DRAWING 3A.2 (REFER TO STRUCTURAL & MECHANICAL)
- PROVIDE NEW PARAPET DEPRESSION TO ACCOMMODATE NEW LIME PIPING GC TO COORDINATE.
- PATCH & REPAIR DAMAGE TO EXISTING FINISHES AROUND DUCT WORK. PROVIDE TOOLED SEALANT BEAD AROUND FULL PERIMETER OF DUCT WORK.
- PROVIDE NEW PRESSURE TREATED WOOD SLEEPERS C/W PVC ROOF MEMBRANE & PRE-FINISHED METAL CAP FLASHING. PATCH AND REPAIR PVC ROOF MEMBRANE. ROOF MEMBRANE TO BE CONTINUOUS UP & OVER NEW CURBS, ROOF CURBS SIZES AND AREAS OF PVC AREAS STATED PREVIOUSLY. ENTIRE PVC ROOF SURFACE TO BE CONSIDERED A MAINTENANCE WALKWAY.
- FILL IN OPENING WITH NEW ROOF DECK, ROOF ASSEMBLY TO BE R1. (REFER TO STRUCTURAL)

NOTE: LENGTH TO  
ACCOMMODATE NEW LIME  
PG TO COORDINATE.



9  
NEW WORKS TYP. DEPRESSED PARAPET DETAIL

SCALE: 1 : 20

PRE-FINISHED METAL SLEEVE  
TOP FLANGE TO PASS BELOW  
PARAPET CAP FLASHING.  
PRE-FINISHED METAL SLEEVE  
THROUGH PARAPET

SEAL ALL ROOF CONSTRUCTION TO  
METAL FLASHING TO ENSURE NO  
PENETRATIONS

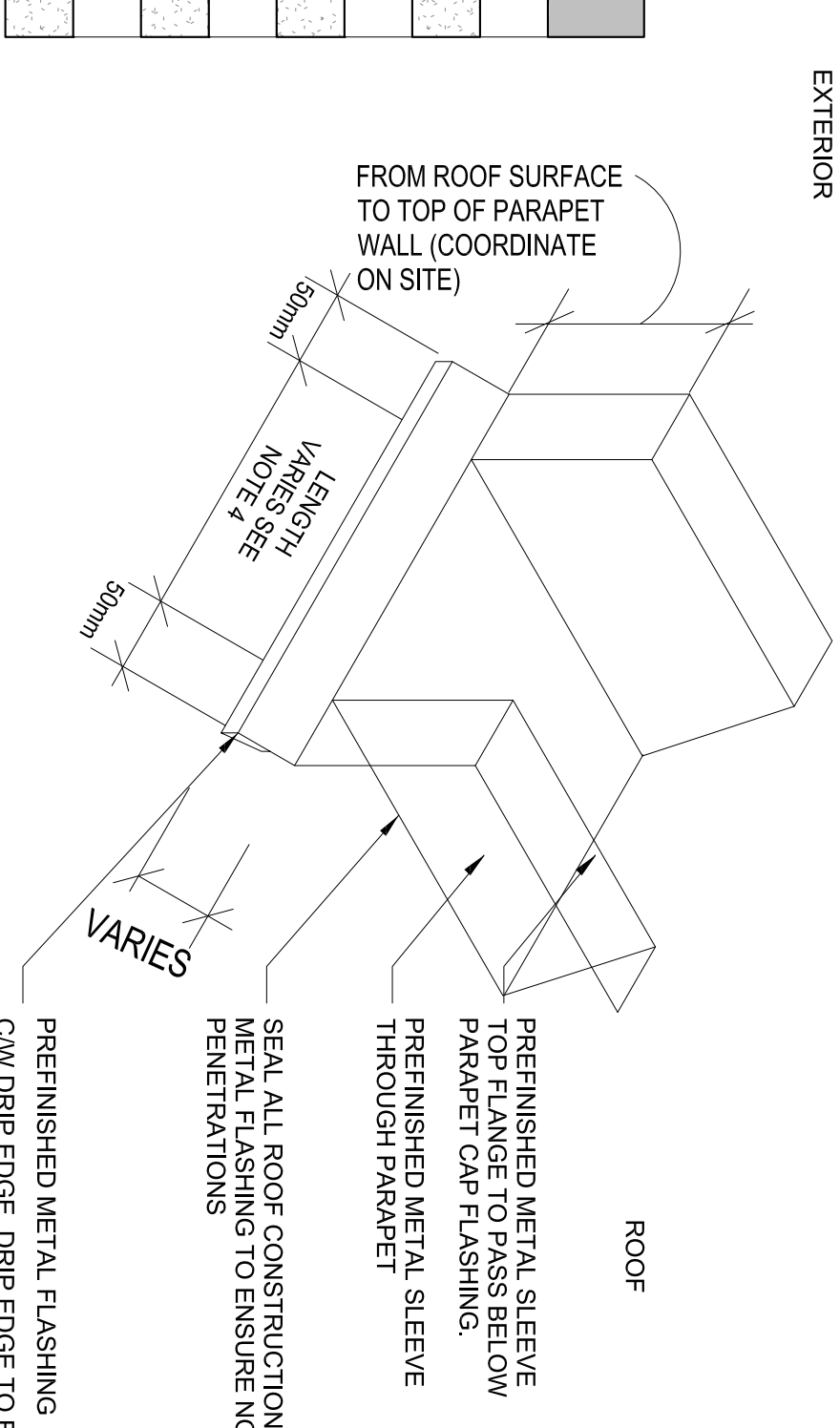
PRE-FINISHED METAL FLASHING  
C/W DRIP EDGE. DRIP EDGE TO BE  
PROTRUDING A MINIMUM OF  
13mm FROM EXTERIOR FINISH  
VERTICAL EDGE. (EXTERIOR FINISH  
VARIES)

SOLUTION:

(23mmX2) x 74.8 sq. m = 3,441 L  
3,441 L - 0 L (0 ROOF DRAINS) = 3,441 L  
180mm / 1 SCUPPER = 180mm

180mm MINIMUM LENGTH REQUIRED PER SCUPPER

EXTERIOR



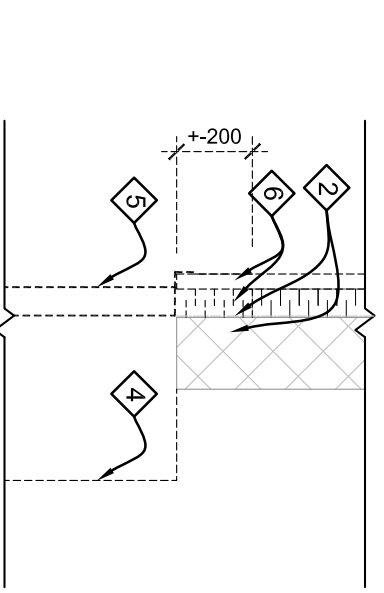
PRE-FINISHED METAL SLEEVE  
TOP FLANGE TO PASS BELOW  
PARAPET CAP FLASHING.  
PRE-FINISHED METAL SLEEVE  
THROUGH PARAPET

SEAL ALL ROOF CONSTRUCTION TO  
METAL FLASHING TO ENSURE NO  
PENETRATIONS

PRE-FINISHED METAL FLASHING  
C/W DRIP EDGE. DRIP EDGE TO BE  
PROTRUDING A MINIMUM OF  
13mm FROM EXTERIOR FINISH  
VERTICAL EDGE. (EXTERIOR FINISH  
VARIES)

1  
REMOVALS PARAPET SECTIONS DETAIL

SCALE: 1 : 20



2  
REMOVALS LOUVER PLAN DETAIL

SCALE: 1 : 20

SCUPPER DETAIL NOTES:

- IF SCUPPERS ARE INDICATED IN DRAWING SET OR PARAPET WALL HEIGHT EXCEEDS 150mm SCUPPERS ARE TO BE PROVIDED.
- SCUPPERS ARE TO BE LOCATED NO MORE THAN 30m FROM ADJACENT DRAINS.
- MAXIMUM DEPTH OF CONTROLLED WATER IS LIMITED TO 150mm.
- LENGTH OF SCUPPERS WITH 25mm OF WATER DRAINAGE IS DETERMINED AS FOLLOWS:

FORMULA:

(15 MINUTE RAINFALL (0.023m in Ontario)x2) x AREA OF ROOF (IN sq.  
m) = TOTAL HYDRAULIC LOAD DRAINED IN LITERS

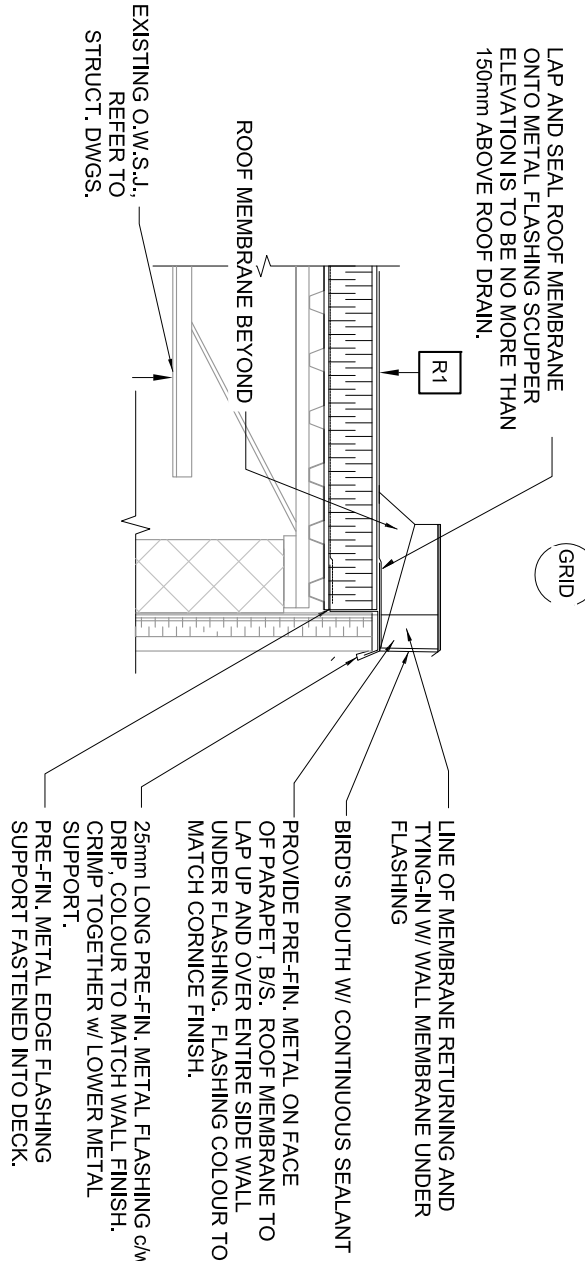
TOTAL HYDRAULIC LOAD DRAINED IN LITERS - TOTAL HYDRAULIC LOAD ALLEVATED BY ADJOINING ROOF  
DRAINS = TOTAL HYDRAULIC LOAD DRAINED BY SCUPPERS

TOTAL LENGTH OF SCUPPERS REQ.	TOTAL HYDRAULIC LOAD DRAINED @ 1 in 25 SLOPE
180mm or 76mm dia. PIPE	3,910 L
320mm or 102mm dia. PIPE	8,430 L
500mm or 127mm dia. PIPE	15,300 L
720mm or 152mm dia. PIPE	24,900 L
1,280mm or 204mm dia. PIPE	53,600 L
1,995mm or 254mm dia. PIPE	97,000 L
2,875mm or 305mm dia. PIPE	158,000 L
4,490mm or 381mm dia. PIPE	287,000 L

TOTAL LENGTH OF SCUPPERS REQ. (FROM CHART) # OF SCUPPERS = LENGTH REQ. PER SCUPPER

7  
NEW WORKS TYP. SCUPPER ISOMETRIC DETAIL

SCALE: NTS

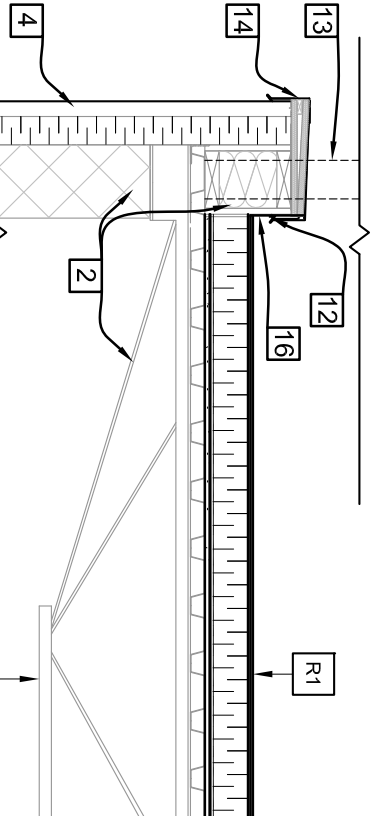
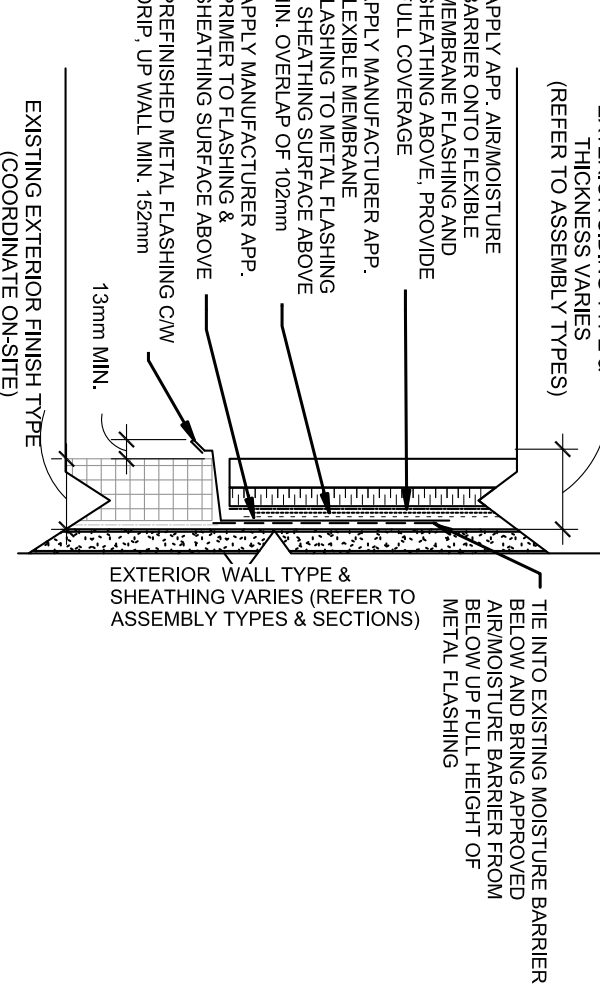


6  
NEW WORKS TYP. SCUPPER SEC. DETAIL

SCALE: NTS

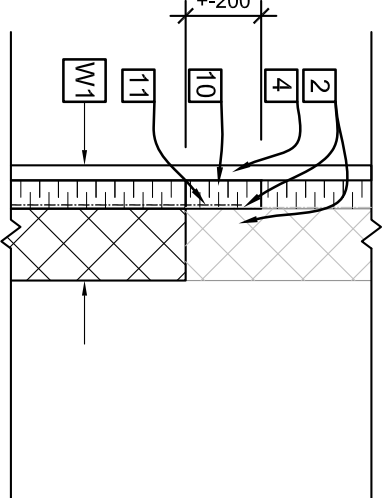
8  
NEW WORKS TYP. PRE-FINISHED METAL THRU  
WALL FLASHING TRANS. @ SIDING

SCALE: NTS



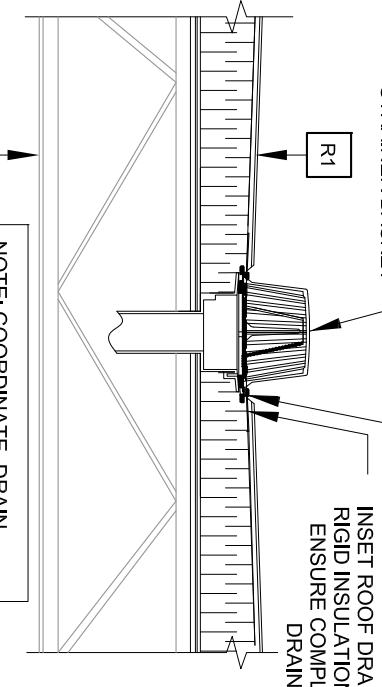
3  
NEW WORKS  
PARAPET SECTIONS DETAIL

SCALE: 1 : 20



4  
NEW WORKS  
LOUVER PATCH PLAN DETAIL

SCALE: 1 : 20



5  
NEW WORKS  
TYP ROOF DRAIN DETAIL

SCALE: NTS