
These drawings and are provided for **information purposes only.**

They do not necessarily represent every detail of building construction, or all minimum standards which apply.

For more detailed information about construction regulations refer to the Ontario Building Code, or a BCIN qualified designer.

TACBOC
STANDARD DETAIL

# TACBOC STANDARD DETAILS

THESE DRAWINGS ILLUSTRATE SOME OF THE MINIMUM ONTARIO BUILDING CODE REQUIREMENTS WHICH APPLY TO TYPICAL RESIDENTIAL CONSTRUCTION IN THE GREATER TORONTO AREA, AND ARE PROVIDED FOR INFORMATION PURPOSES ONLY. THEY DO NOT NECESSARILY REPRESENT EVERY DETAIL OF BUILDING CONSTRUCTION, OR ALL MINIMUM STANDARDS WHICH APPLY. FOR MORE DETAILED INFORMATION ABOUT CONSTRUCTION REGULATIONS REFER TO THE ONTARIO BUILDING CODE, YOUR MUNICIPAL BUILDING DEPARTMENT, OR A QUALIFIED DESIGNER.

## CLIMATIC DESIGN REQUIREMENTS

THESE DETAILS APPLY TO ZONE 1 NON-ELECTRIC SPACE HEATING ONLY. AREAS OUTSIDE GREATER TORONTO MAY BE SUBJECT TO DIFFERENT CLIMATIC CONDITIONS WHICH MAY SIGNIFICANTLY AFFECT CONSTRUCTION REQUIREMENTS. THE CLIMATIC DESIGN DATA WHICH APPLIES TO THE SPECIFIC BUILDING LOCATION SHOULD BE CONFIRMED BEFORE ADOPTING ANY OF THE DETAILS IN A PROPOSED DESIGN. CLIMATIC DESIGN INFORMATION MAY BE FOUND IN THE SUPPLEMENTARY STANDARD SB-1 OF THE 2006 ONTARIO BUILDING CODE.

Click on the title to view the drawing

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DWG. NO.
T01a

03-2012

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BUILDING PERMITS MUST BE OBTAINED BEFORE YOU START WORK ON A NEW HOUSE, AN ADDITION, OR ANY ALTERATIONS TO AN EXISTING HOUSE WHICH ARE SIGNIFICANT IN NATURE. PERMITS ARE GEARED TO THOSE PROJECTS WHERE HEALTH & SAFETY MATTERS ARE INVOLVED, AND EXIST TO PROTECT YOU, OTHER HOMEOWNERS, BUILDING OCCUPANTS, FUTURE OWNERS AND THE COMMUNITY.

## WHEN DO I NEED A PERMIT ?

**CONTACT YOUR LOCAL MUNICIPAL OFFICE FOR SPECIFIC PERMIT REQUIREMENTS FOR ANY PARTICULAR PROJECT.**

**PERMITS ARE NORMALLY REQUIRED FOR:**

Building any detached structure larger than $10m^2$
Building any addition to your home
Raised porches or decks
Carports or garages
Structural alterations
Moving or lifting your house
Installing a wood stove or fireplace
Partitioning a basement or adding a basement entrance
Creating an apartment in your house
Altering or adding any plumbing
Demolishing a house

**PERMITS ARE NOT NORMALLY REQUIRED FOR:**

Detached structures $10m^2$ or less in area
Decks which are 600mm or less from grade
Replacement of windows, doors, roofing or siding
New interior wall, floor or ceiling finishes
Repairs to chimneys, porches, decks or roofs
Waterproofing repairs to a basement
Replacement of plumbing fixtures
Replacement of a furnace

## HOW DO I GET A PERMIT?

1. Prepare drawings which accurately and to scale describe the construction you propose. Standard technical details are available at your local municipal office to assist in the preparation of your plans. The attached sample plans are an example of the scope of drawings usually required for an addition to a house. THESE DRAWINGS ARE NOT INTENDED FOR USE IN YOUR PERMIT APPLICATION. If you have someone else prepare your plans, ensure the designer has the appropriate qualifications required in the building code. It is usually advisable to verify with your local municipal office that your proposed site plan will meet local zoning standards before you prepare the complete construction plans.
2. Visit your local municipal office, and complete a building permit application.
3. Provide the required number of copies (usually 2 or 3) of the construction drawings, including a site plan.
4. Pay the permit fee.
5. If the approval of other agencies such as the Conservation Authority applies to your application, contact the agency and apply for approval. Your local municipality can advise you if any outside agency approvals apply to your application.

## WHEN WILL I GET THE PERMIT?

Your permit will usually be issued within 10 to 15 business days if your drawings are complete and the proposed construction meets local zoning standards and the Ontario Building Code. If the approval of other agencies is required due to the location of your construction, such as the Conservation Authority, the permit may be delayed.

## WHAT DO I HAVE TO DO AFTER I GET THE PERMIT?

Review your approved permit drawings before you start work, and keep them on the project site at all times. Make working copies if necessary. The permit must be posted in a conspicuous place on your property prior to starting work. You can commence construction any time after obtaining the permit and your permit will remain valid for a minimum of six months. Local utilities such as hydro, gas and telephone operate independently from your municipality and should be contacted regarding their specific approval and inspection requirements. All utilities must be contacted prior to commencing any excavation to determine the location of any nearby underground services.

Inspection requirements are normally noted on your permit drawings or the permit itself and must be arranged by contacting the municipal building inspection office prior to covering the work. For a house addition, an inspection is usually required for footings & foundations, structural framing, plumbing, heating, insulation and vapour barriers and final inspections before using the new space. Smaller projects such as decks, garages and minor alterations will usually involve fewer inspections.

If changes to the approved work are anticipated, speak with the inspector to determine if a revision to your permit is required. PLEASE REMEMBER TO WORK SAFELY!

A small housing addition will usually require the submission of the following drawings. All drawings must be accurately drawn to scale, in ink. If the drawings are prepared by someone other than the owner, the designer must have the qualifications specified in the building code.

## SITE PLAN

A SITE PLAN is a drawing showing the complete property and identifying all structures in relation to the property boundaries. A property survey is commonly used as a template for developing the site plan. The site plan should include:

- Scale
- North arrow
- Street location & name
- Lot lines & dimensions to all buildings
- Existing & proposed buildings
- Proposed changes to existing grade

## FLOOR PLANS

A FLOOR PLAN is a drawing of the structure as seen as if it is cut horizontally a few feet above the floor line. One floor plan is required for every floor of the house which is affected by the new construction. Each plan shows the interior layout of the level in question as well as providing the structural framing information for the floor or roof above. Floor plans should include:

- Scale
- Use of rooms & spaces (label)
- Dimensions
- Extent of new construction including new work within existing building
- Size, type and location of exterior and interior walls and partitions
- Widths, locations and lintel sizes of all openings
- Location, dimensions and direction of stairs
- References to detailed drawings
- Material specifications or notes
- Heating and ventilation details
- Location of smoke alarms and carbon monoxide detectors

## ELEVATIONS

ELEVATIONS show the exterior view of each side of the house. Each elevation is identified by the direction it is facing, and should include:

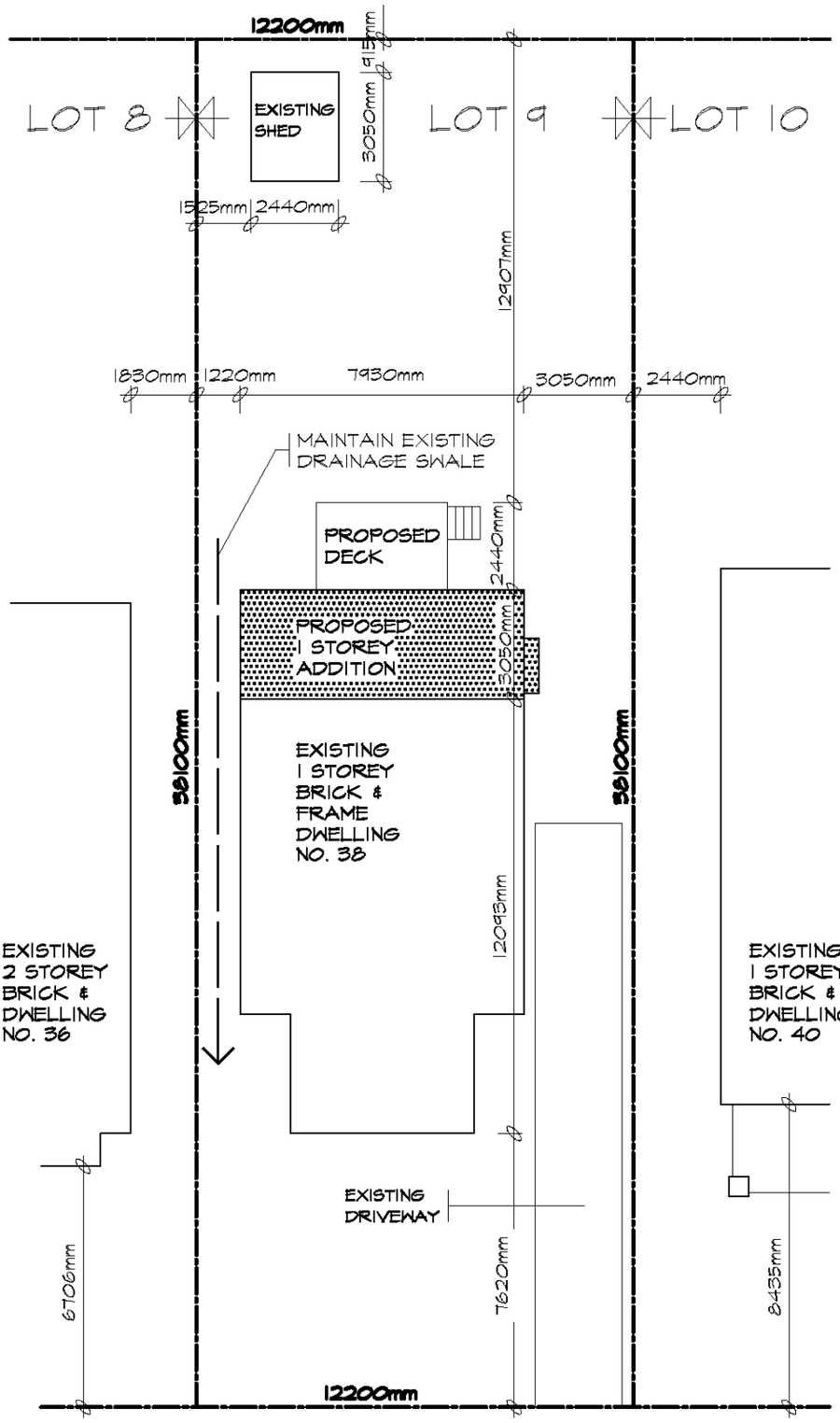
- Scale
- Extent of new & existing construction
- Dimensions of walls, windows & doors
- Grade level
- Exterior wall cladding, finishes & flashing
- Overhang dimensions
- Roof shape, slope & finish
- Rain water leader & eavestrough

## SECTIONS and DETAILS

A SECTION represents a view of the house along an imaginary line at a particular location, & illustrates construction details. The extent of the section should correspond with the sectional arrow shown on the plans. Sections should indicate the following:

- Scale
- Details of footings, foundations, walls, floors & the roof
- Distance from grade to floor & underside of footing
- Attic & crawl space ventilation

Some aspects of the project may require some specific details, such as engineered roof truss drawings.




# SITE PLAN

SCALE 1:200

SKETCH OF SURVEY OF
LOT 9
REG.'D PLAN 4220
CITY OF TORONTO
B.C. TRANSIT. O.L.S.
DECEMBER 31ST, 1999

## KHALMUR CRESCENT

| ZONING | LOT NO: | PLAN NO: | LOT AREA | LOT FRONTAGE | LOT DEPTH |
|---|---|---|---|---|---|
| R2 Z0.6 | LOT 9 | 4220 | 580.64m2 | 12200mm | 38110mm |

| DESCRIPTION | EXISTING | ADDITION | TOTAL | % | ALLOWED | % |
|---|---|---|---|---|---|---|
| LOT COVERAGE | 86.52m2 | 24.15m2 | 110.65m2 | 19.0 | --------- | |
| GROSS FLOOR AREA | 86.52m2 | 24.15m2 | 110.65m2 | 19.0 | 348.39m2 | 60.0 |
| LANDSCAPED AREA | ---------- | ---------- | ---------- | | --------- | |
| NO. OF STORIES HEIGHT | 1 STOREY 4550mm | 1 STOREY 4550mm | 1 STOREY 4550mm | | 10000mm | |
| WIDTH | 7930mm | 7930mm | 7930mm | | ---------- | |
| DEPTH | 12093mm | 3050mm | 15143mm | | 17000mm | |
| PARKING | ---------- | ---------- | ---------- | | ---------- | |

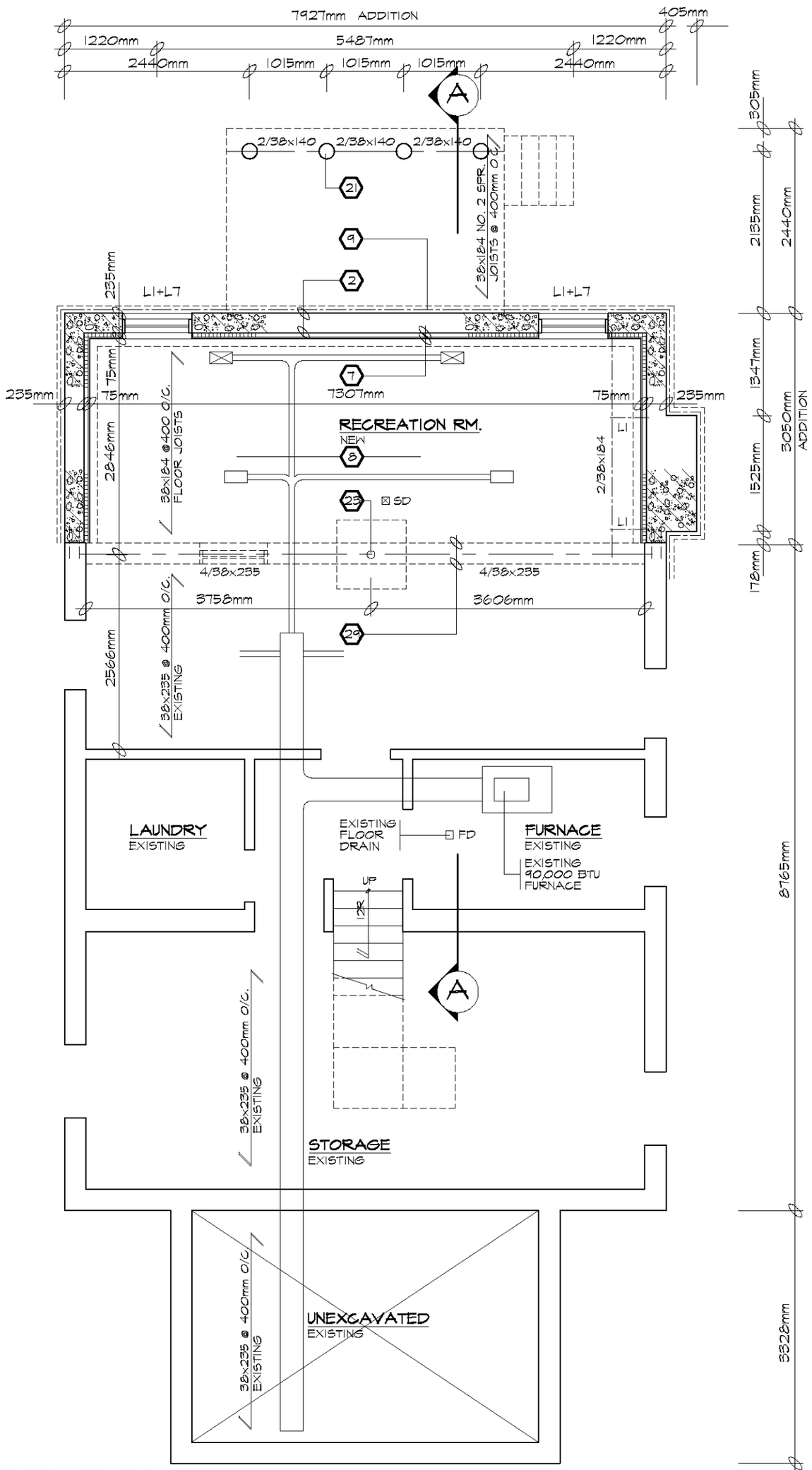
| SETBACKS | EXISTING | PROPOSED |
|---|---|---|
| FRONT YARD | 7620mm | 7620mm |
| REAR YARD | 18390mm | 12907mm |
| INTERIOR SIDE (east) | 3050mm | 3050mm |
| INTERIOR SIDE (west) | 1220mm | 1220mm |
| EXTERIOR | ---------- | ---------- |



TACBOC
STANDARD DETAIL

TITLE
SAMPLE DRAWING
SITE PLAN

DWG. NO.
A03a
2007




# BASEMENT PLAN

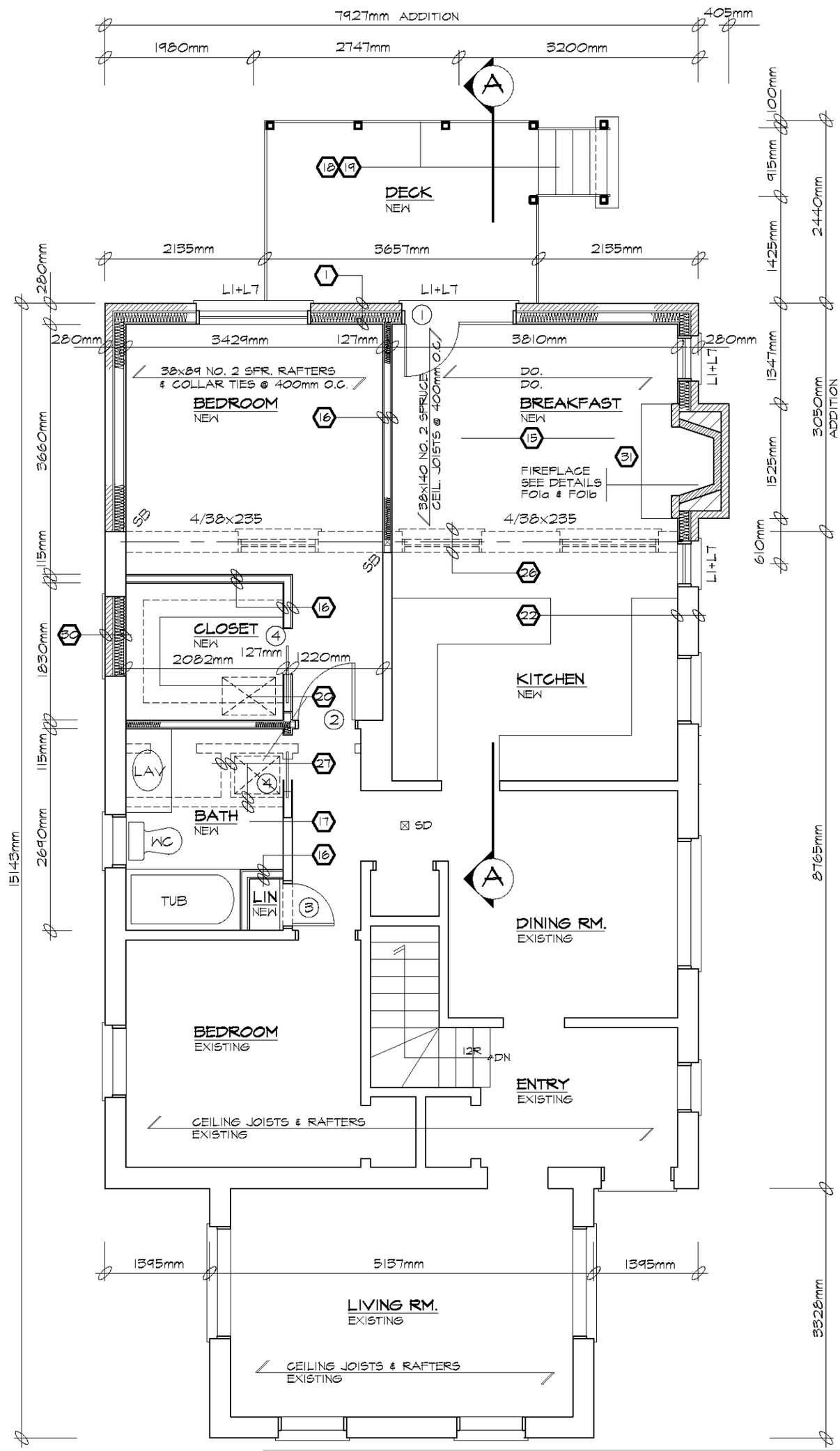


TACBOC
STANDARD DETAIL

TITLE
SAMPLE DRAWING
BASEMENT PLAN

DWG. NO.
A03b

2007




## GROUND FLOOR PLAN

SCALE 1:50

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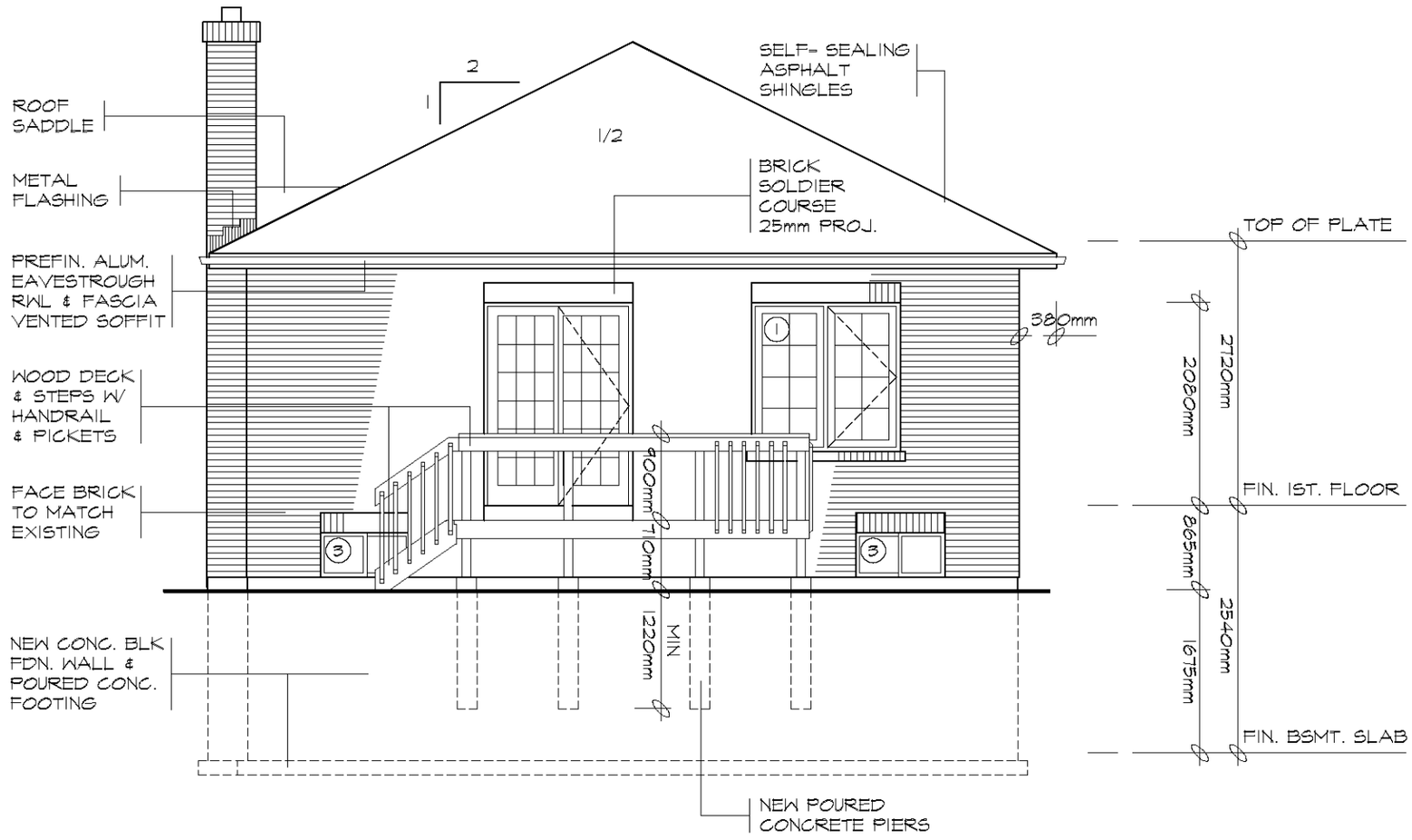
TACBOC
STANDARD DETAIL

TITLE
SAMPLE DRAWING
GROUND FLOOR PLAN

DWG. NO.
A03c
2007

TACBOC
STANDARD DETAIL

TITLE
SAMPLE DRAWING
ELEVATION




# NORTH ELEVATION

SCALE 1:50

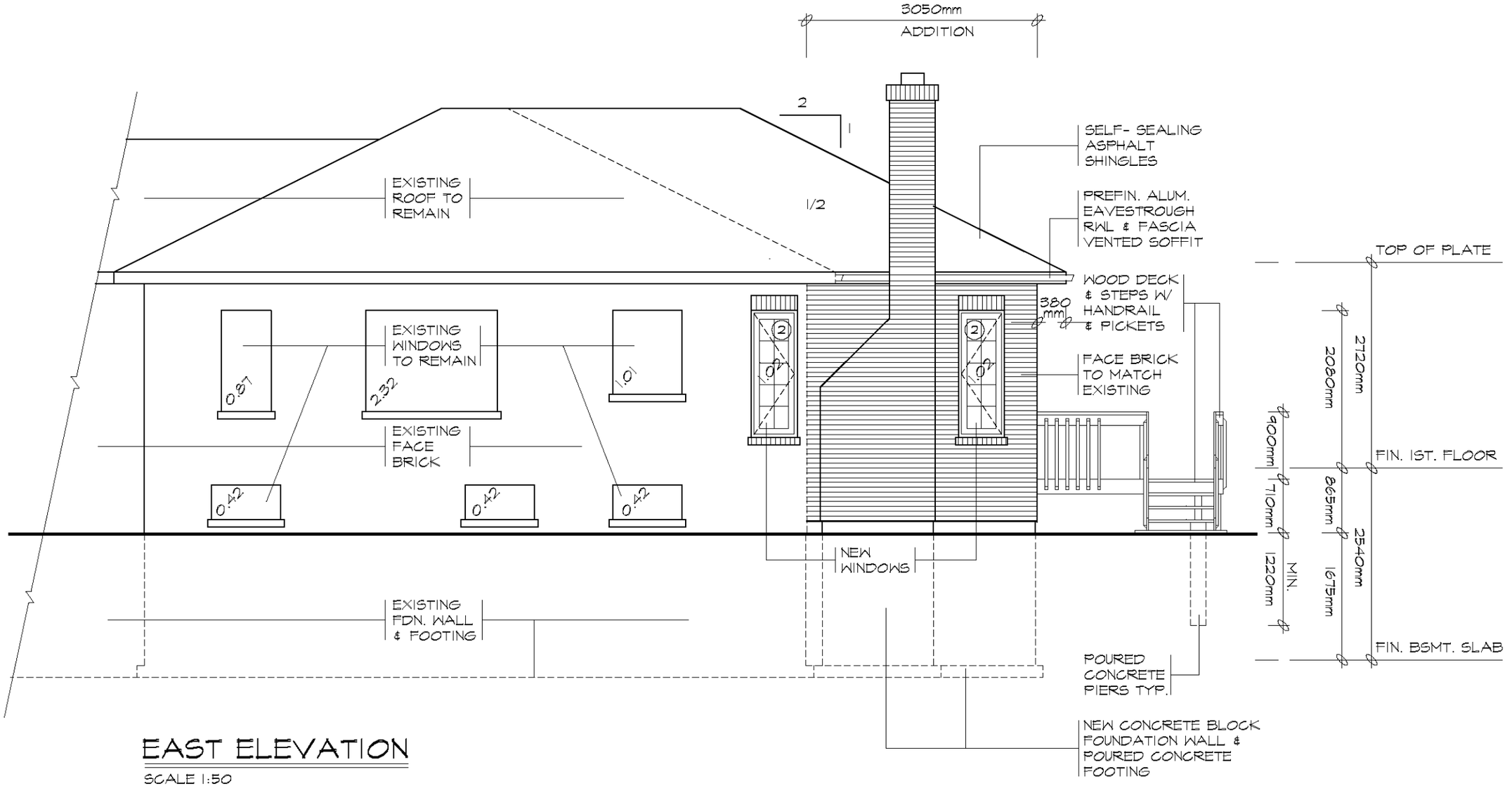


DWG. NO.
A03d

2007

TACBOC
STANDARD DETAIL

TITLE
SAMPLE DRAWING
ELEVATION




# EAST ELEVATION

SCALE 1:50

## UNPROTECTED OPENINGS

| | |
|---|---|
| WALL AREA | 42.36m2 |
| LIMITING DISTANCE | 3050mm @ 18.00% |
| MAX. ALLOWABLE OPENINGS | 7.62m2 |
| TOTAL OPENINGS PROVIDED | 7.50m2 |

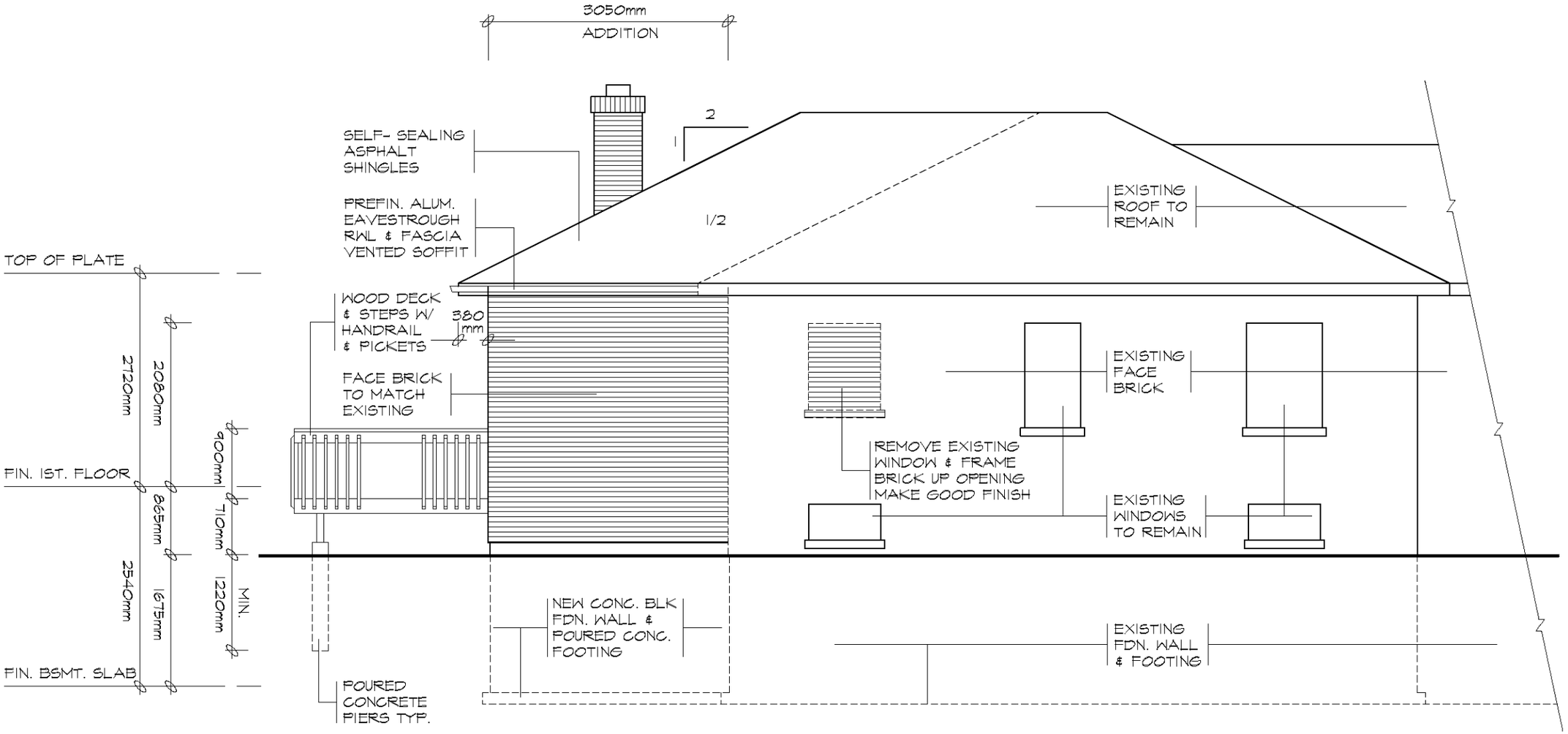


DWG. NO.
A03e

2007

TACBOC
STANDARD DETAIL

TITLE
SAMPLE DRAWING
ELEVATION




## WEST ELEVATION

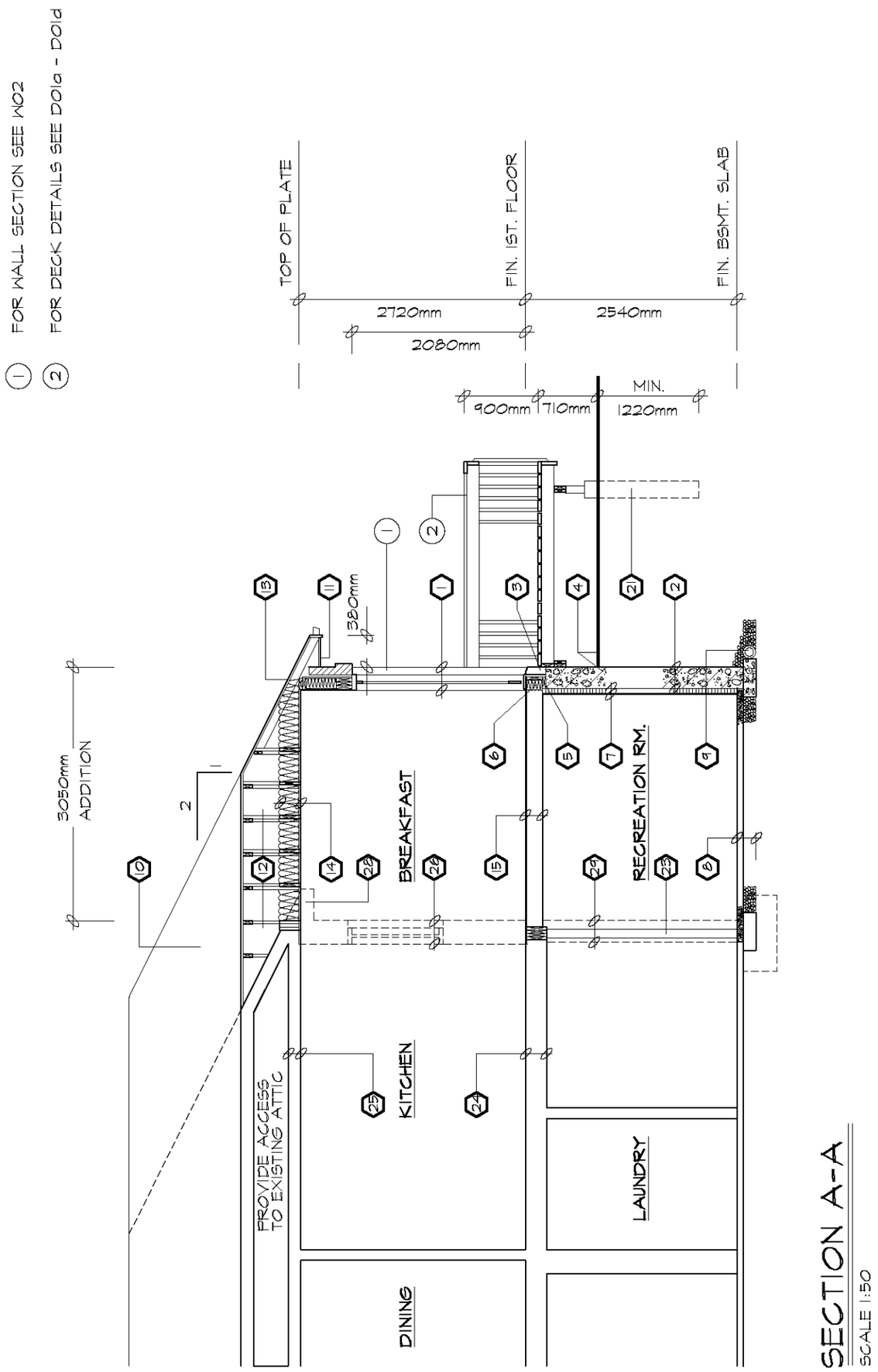
SCALE 1:50

## UNPROTECTED OPENINGS

NO NEW OPENINGS
EXISTING TO REMAIN

DWG. NO.
A03

2007




SECTION A-A

SCALE 1:50



TACBOC
STANDARD DETAIL

TITLE
SAMPLE DRAWING
CROSS SECTION

DWG. NO.
A03g
2007

# CONSTRUCTION SPECIFICATIONS

## 1 BRICK VENEER WALL

90mm FACE BRICK, 25mm AIR SPACE
0.76mm THICK x 22mm WIDE
GALVANIZED METAL TIES
INSTALLED W/ GALVANIZED
SPIRAL NAILS OR SCREWS
400mm O.C. HORIZ., 600mm O.C. VERT.
AIR BARRIER, LAYERS
TO OVERLAP EACH OTHER
EXTERIOR TYPE SHEATHING
38x140 WOOD STUDS @ 400mm O.C.
RSI 4.23 BATT INSUL. IN CONTINUOUS
CONTACT W/ EXTERIOR SHEATHING
CONTINUOUS AIR / VAPOUR BARRIER
12.7mm INTERIOR DRYWALL FINISH
DOUBLE PLATE @ TOP
SOLE PLATE @ BOTTOM

## 2 FOUNDATION WALL

BITUMINOUS DAMPPROOFING ON
MINIMUM 6mm PARGING ON
CONCRETE BLOCK FDN. WALL
TOP BLOCK COURSE FILLED
W/ MORTAR OR CONCRETE
PROVIDE PARGING COVED OVER
450mmx150mm POURED CONC. FOOTING
TO BEAR ON UNDISTURBED SOIL
PROVIDE DRAINAGE LAYER
- MIN. 19mm MINERAL FIBRE
  INSULATION W/ A DENSITY OF
  NOT LESS THAN 57kg/m3. OR
- MIN. 100mm OF FREE DRAINING
  GRANULAR MATERIAL OR
- A B.M.E.C. APPROVED
  DRAINAGE LAYER MATERIAL

## 3 BRICK VENEER @ FDN. WALL

0.5mm POLY FLASHING MINIMUM
150mm UP BEHIND SHEATHING PAPER
WEEP HOLES @ MIN. 800mm APART

## 4 GRADE

SLOPE GRADE AWAY FROM
BUILDING FACE & PROVIDE
SEMI-SOLID BLOCK COURSE
AT OR BELOW GRADE LEVEL

## 5 SILL PLATE

38x140 SILL PLATE FASTENED
TO FOUNDATION WALL WITH
MIN. 12.7mm DIA. ANCHOR BOLTS
EMBEDDED MIN. 100mm IN CONCRETE
@ 2400mm O/C. MAX. & PROVIDE A
CONTINUOUS AIR BARRIER BETWEEN
THE FOUNDATION WALL & WOOD
FRAME CONSTRUCTION

## 6 FLOOR INSULATION

CONTINUOUS HEADER JOIST WITH
RSI 5.46 BATT INSULATION, EXTEND
VAPOUR / AIR BARRIER & SEAL
TO JOIST AND SUBFLOOR

## 7 FOUNDATION INSULATION

12.7mm INTERIOR DRYWALL FINISH
38x89 WOOD STRAPPING @ 400mm O/C.
MIN. RSI 3.52 INSULATION W/ 0.15mm POLY
VAPOUR BARRIER FULL HEIGHT.
MOISTURE BARRIER TO HEIGHT OF
EXTERIOR GRADE BETWEEN
FOUNDATION WALL & WOOD FRAMING

## 8 BASEMENT SLAB

75mm POURED CONCRETE SLAB
(25 MPa CONC. STRENGTH)
100mm CRUSHED STONE BELOW

## 9 DRAINAGE

100mm DIA. WEEPING TILE W/
150mm CRUSHED STONE COVER

## 10 ROOF CONSTRUCTION

20 YEAR ASPHALT SHINGLES W/
EAVES PROTECTION ON MIN. 9.5mm
EXTERIOR PLYWOOD SHEATHING
ON APPROVED ROOF TRUSSES OR
CONVENTIONAL FRAMING (SEE PLANS)
USE 'H' CLIPS IF 600mm O.C. SPACING

## 11 OVERHANG CONSTRUCTION

PREFINISHED ALUMINUM FASCIA,
EAVESTROUGH & RAIN WATER LEADERS
TO MATCH EXISTING FINISHES. PROVIDE
DRIP EDGE AT FASCIA & VENTED SOFFIT
EXTEND DOWNSPOUTS TO GRADE LEVEL

## 12 ROOF VENTILATION

1:300 OF THE INSULATED CEILING
AREA UNIFORMLY DISTRIBUTED.

## 13 EAVES PROTECTION

EAVES PROTECTION MEMBRANE TO
EXTEND FROM THE EDGE OF THE
ROOF, 900mm UP THE SLOPE BUT NOT
LESS THAN 300mm BEYOND THE
INTERIOR FACE OF THE EXTERIOR WALL

## 14 CEILING CONSTRUCTION

15.9mm INTERIOR DRYWALL FINISH
CONTINUOUS AIR / VAPOUR BARRIER
W/ MINIMUM RSI 8.81 BATT INSULATION

## 15 FLOOR CONSTRUCTION

15.5mm T&G PLYWOOD SUBFLOOR
38x184 FLOOR JOISTS @ 400mm O/C.
FLOOR JOISTS BRIDGED W/
CONTINUOUS 19mmx64mm STRAPPING
OR 2 ROWS OF 38mmx38mm CROSS
BRIDGING OR SOLID BLOCKING

## 16 INTERIOR STUD PARTITION

12.7mm DRYWALL FINISH BOTH SIDES OF
38x89 WOOD STUDS @ 400mm O/C
2 TOP PLATES & 1 BOTTOM PLATE
PROVIDE REINFORCEMENT FOR FUTURE
GRAB BAR INSTALLATION IN BATHROOM

## 17 MECHANICAL VENTILATION

PROVIDE MIN. 5.0 L/S IN KITCHENS
AND BATHROOMS, 37.5 L/S FOR
PRINCIPAL EXHAUST FAN

## 18 STAIRS INTERIOR/EXTERIOR

| | | |
|---|---|---|
| MAXIMUM RISE | = | 200mm |
| MINIMUM RISE | = | 125mm |
| MINIMUM RUN | = | 210mm |
| MAXIMUM RUN | = | 355mm |
| MINIMUM TREAD | = | 235mm |
| MAXIMUM TREAD | = | 355mm |
| MAXIMUM NOSING | = | 25mm |
| MINIMUM WIDTH | = | 860mm |
| MINIMUM HEADROOM | = | 1950mm |

## 19 GUARDS

| | | |
|---|---|---|
| INTERIOR LANDINGS | = | 900mm |
| EXTERIOR BALCONY | = | 1070mm |
| INTERIOR STAIRS | = | 900mm |
| EXTERIOR STAIRS | = | 900mm |
| MAX. BETWEEN PICKETS | = | <100mm |

GUARD HEIGHT IF
DECK TO GRADE IS:

| | | |
|---|---|---|
| GREATER THAN 1800mm | = | 1070mm |
| 1800mm OR LESS | = | 900mm |

NO MEMBER OR ATTACHMENT
BETWEEN 140mm & 900mm HIGH
SHALL FACILITATE CLIMBING

## 20 ATTIC ACCESS

PROVIDE ATTIC ACCESS
MIN. 545mmx588mm W/ INSULATION
& WEATHER STRIPPING

## 21 PIERS

PROVIDE 200mm DIA. SONO TUBE
FOR POURED CONCRETE PIERS
MINIMUM 1200mm BELOW GRADE

22 EXISTING SOLID MASONRY EXTERIOR WALL TO REMAIN.

23 73mm DIA. PIPE COLUMN W/ 100mmx100mmx6.35mm TOP & BOTTOM PLATE 1mx1mx450mm CONCRETE FOOTING

24 EXISTING FLOOR STRUCTURE TO REMAIN.

25 EXISTING CEILING STRUCTURE TO REMAIN.

26 REMOVE EXISTING EXTERIOR WALL AS SHOWN DOTTED

27 REMOVE EXISTING INTERIOR STUD PARTITIONS AS SHOWN DOTTED

28 REMOVE EXISTING ROOF OVERHANG AS SHOWN DOTTED

29 REMOVE EXISTING FOUNDATION WALL AS SHOWN DOTTED

30 REMOVE EXISTING WINDOW & FRAME MAKE GOOD OPENING W/ BRICK TO MATCH EXISTING ON THE EXTERIOR

31 INSTALL A CARBON MONOXIDE DETECTOR CONFORMING TO CAN/CGA-6.19 OR UL 2034

## ROOM FINISH SCHEDULE

| RM. NO. | ROOM NAME | FLOOR | | BASE | | WALLS | | CEILING | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MATERIAL | FINISH | MATERIAL | FINISH | MATERIAL | FINISH | MATERIAL | FINISH | HEIGHT | |
| | FIRST FLOOR | | | | | | | | | | |
| 1. | KITCHEN | CERAMIC TILE | ---------- | WOOD | PAINT | DRYWALL | PAINT | DRYWALL | PAINT | 2720mm | |
| 2. | BREAKFAST | WOOD | STAIN | WOOD | PAINT | DRYWALL | PAINT | DRYWALL | PAINT | 2720mm | MAPLE TO MATCH EXISTING |
| 3. | BEDROOM | WOOD | STAIN | WOOD | PAINT | DRYWALL | PAINT | DRYWALL | PAINT | 2720mm | MAPLE TO MATCH EXISTING |
| 4. | CLOSET | WOOD | STAIN | WOOD | PAINT | DRYWALL | PAINT | DRYWALL | PAINT | 2720mm | MAPLE TO MATCH EXISTING |
| 5. | BATH | CERAMIC TILE | ---------- | WOOD | PAINT | DRYWALL | PAINT | DRYWALL | PAINT | 2720mm | |
| | | | | | | | | | | | |
| | BASEMENT | | | | | | | | | | |
| 6. | REC. ROOM | CONC. | CERAMIC TILE | WOOD | PAINT | DRYWALL | PAINT | | | 2340mm | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
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| | | | | | | | | | | | |

## DOOR SCHEDULE

| NO. | TYPE | SIZE | QTY. | REMARKS |
|---|---|---|---|---|
| 1. | EXTERIOR | 1525mmx 2030mm | 1. | FRENCH DOOR |
| 2. | SLAB | 760mmx 2030mm | 1. | 800 SERIES |
| 3. | SLAB | 610mmx 2030mm | 1. | 800 SERIES |
| 4. | POCKET DOOR | 610mmx 2030mm | 2. | |
| | | | | |
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## LINTEL SCHEDULE

| NO. | DESCRIPTION |
|---|---|
| L1 | 2-38x184 SPRUCE |
| L2 | 3-38x184 SPRUCE |
| L3 | 2-38x235 SPRUCE |
| L4 | 3-38x235 SPRUCE |
| L5 | 2-38x286 SPRUCE |
| L6 | 3-38x286 SPRUCE |
| L7 | 90mmx 90mmx 6mm L |
| L8 | 90mmx 90mmx 8mm L |
| L9 | 100mmx 90mmx 6mm L |
| | |
| | |
| | |

## LEGEND

- WP — DUPLEX OUTLET ( WEATHERPROOF )
- GFI — DUPLEX OUTLET ( HGT. ABOVE FLR. )
- DUPLEX OUTLET ( 300mm ABOVE FLR. )
- EXHAUST FAN
- SWITCH
- HB — HOSE BIB
- SD — SMOKE DETECTOR
- HEAVY DUTY OUTLET
- LIGHT FIXTURE ( WALL MOUNTED )
- LIGHT FIXTURE ( CEILING MOUNTED )
- P — POT LIGHT FIXTURE
- R — LIGHT FIXTURE ( WATER RESISTANT )
- LIGHT FIXTURE ( CAPPED )
- FL — FLUORESCENT LIGHT FIXTURE
- SOLID WOOD BEARING
- FD — FLOOR DRAIN
- TV CABLE OUTLET
- TELEPHONE OUTLET
- C — COMPUTER OUTLET
- DE — DRYER EXHAUST

## WINDOW SCHEDULE

ONE WINDOW PER FLOOR TO HAVE AN UNOBSTRUCTED OPEN PORTION W/ A MIN. AREA OF 0.35m2 W/ NO DIMENSION LESS THAN 380mm & MAXIMUM SILL HEIGHT OF 1M ABOVE FLOOR

| NO. | TYPE | SIZE | QTY. | REMARKS |
|---|---|---|---|---|
| 1. | CASEMENT | 1525mmx 1525mm | 1. | MAXIMUM U-VALUE 1.8 |
| 2. | CASEMENT | 610mmx 1525mm | 2. | MAXIMUM U-VALUE 1.8 |
| 3. | SLIDER | 915mmx 450mm | 2. | MAXIMUM U-VALUE 1.8 |
| | | | | |
| | | | | |
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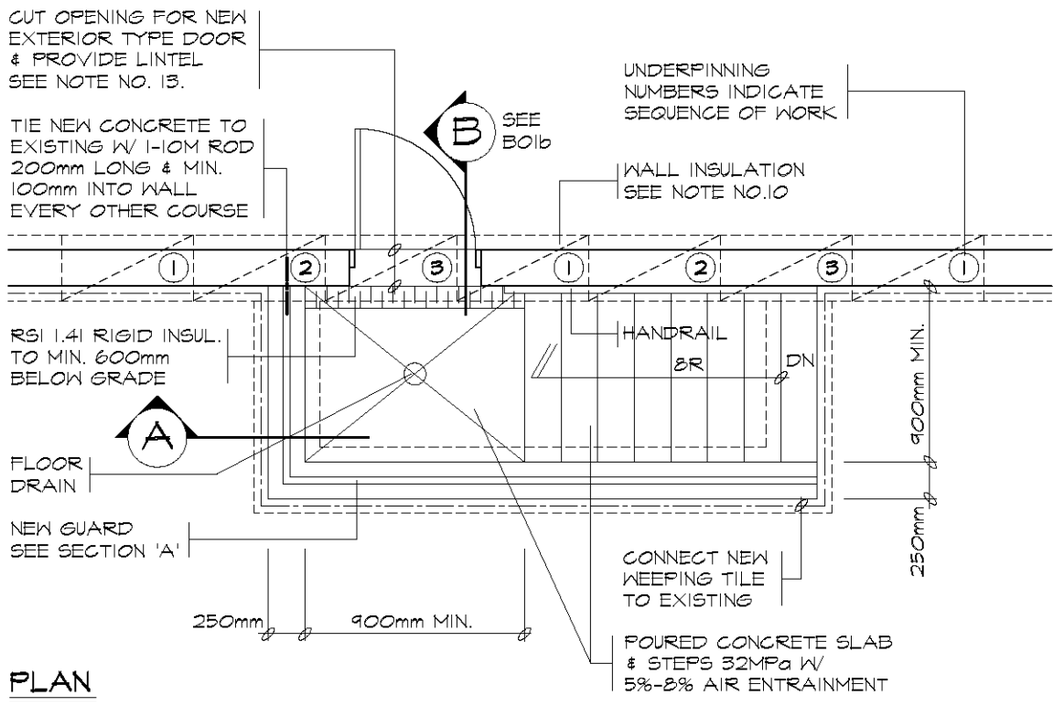
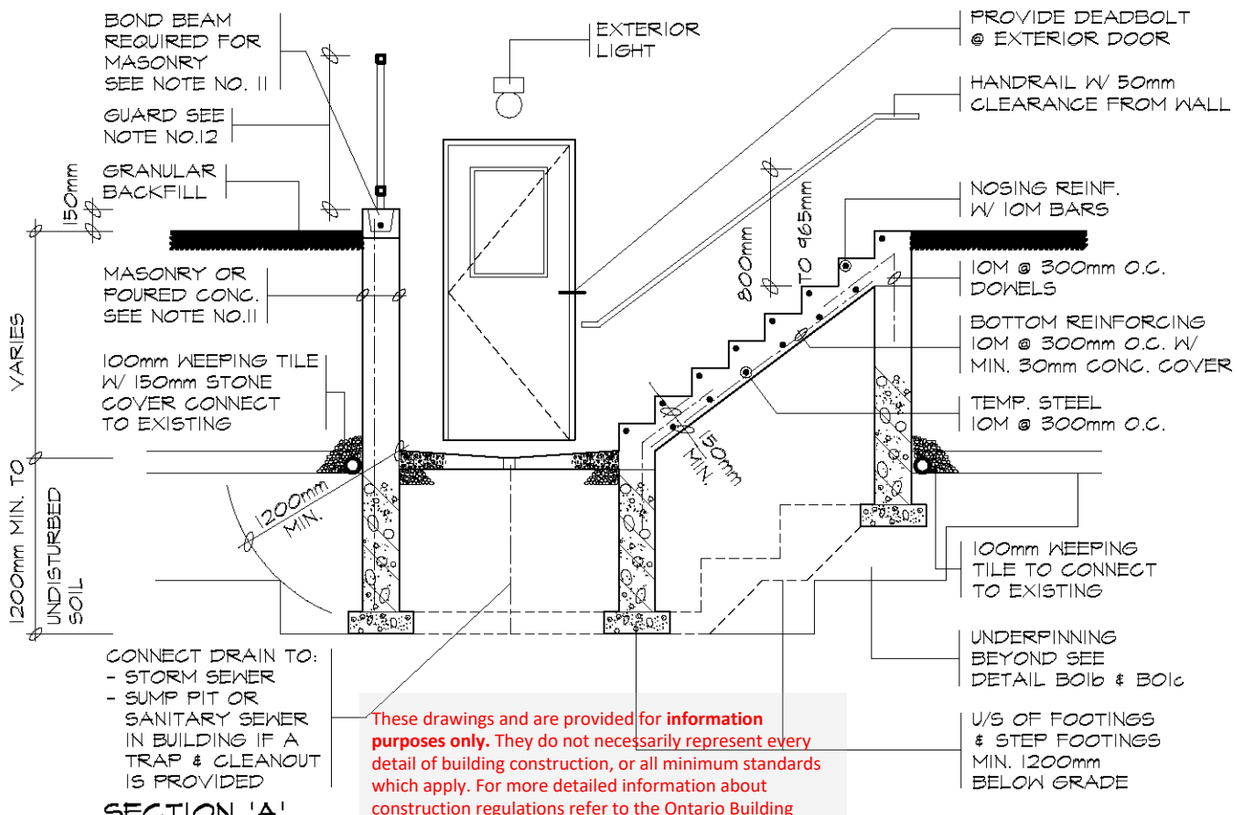
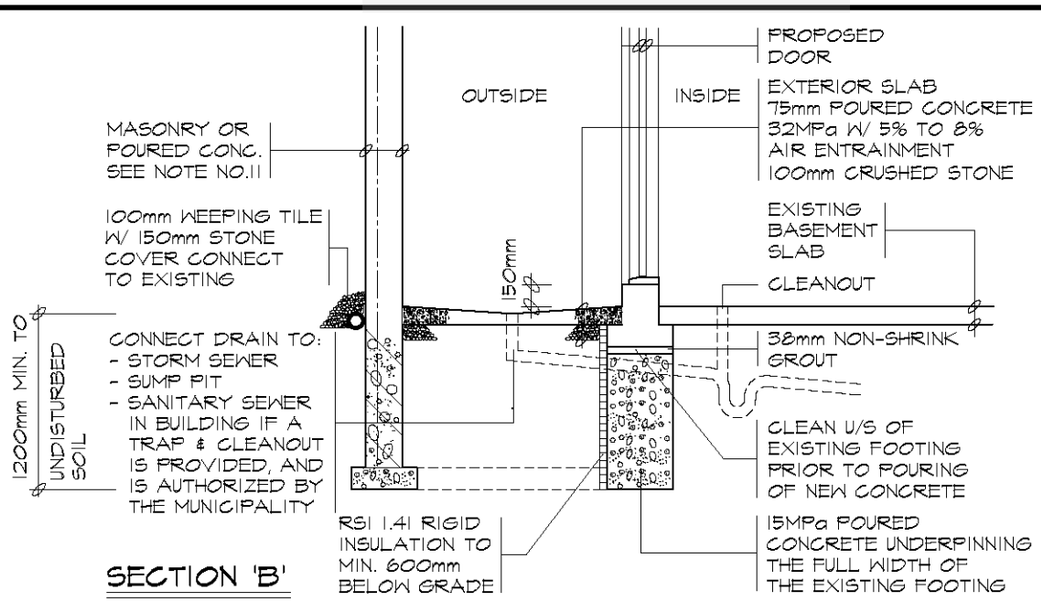



## PLAN




## SECTION 'A'






## SECTION 'B'

**TACBOC**
**STANDARD DETAIL**

TITLE

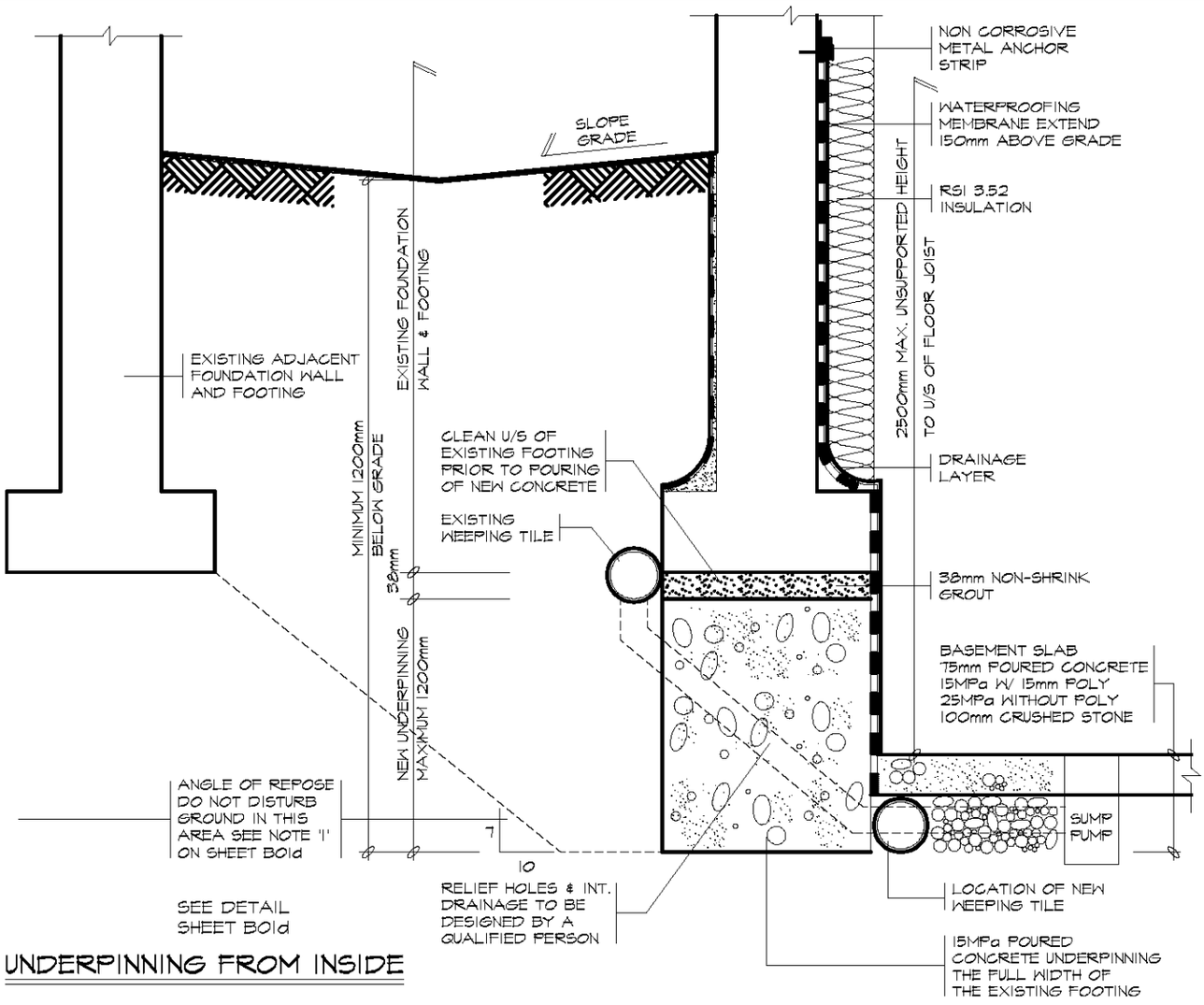
# BASEMENT WALKOUT

PLAN & SECTIONS

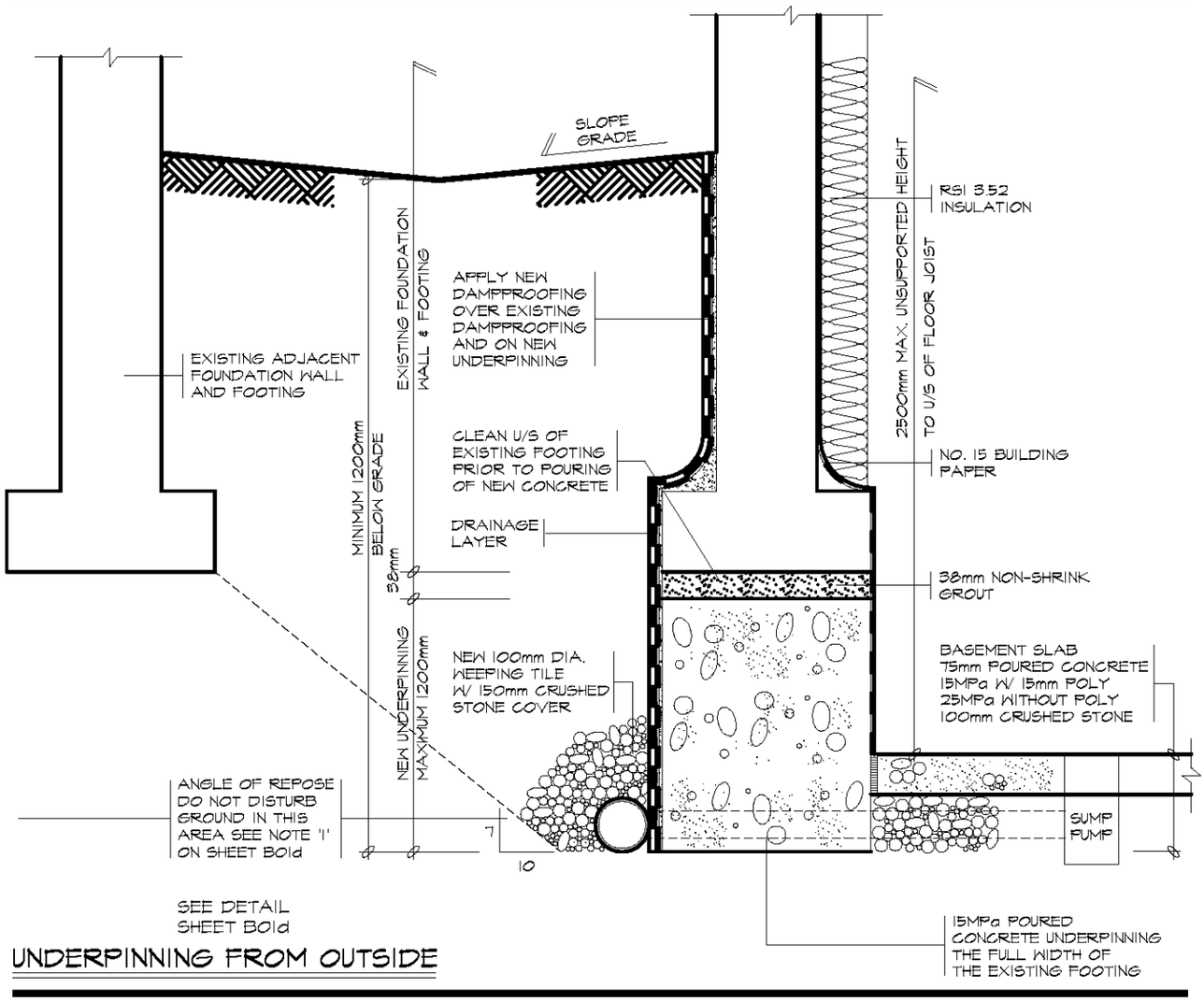
DWG. NO.

B01a

2007




## UNDERPINNING FROM INSIDE



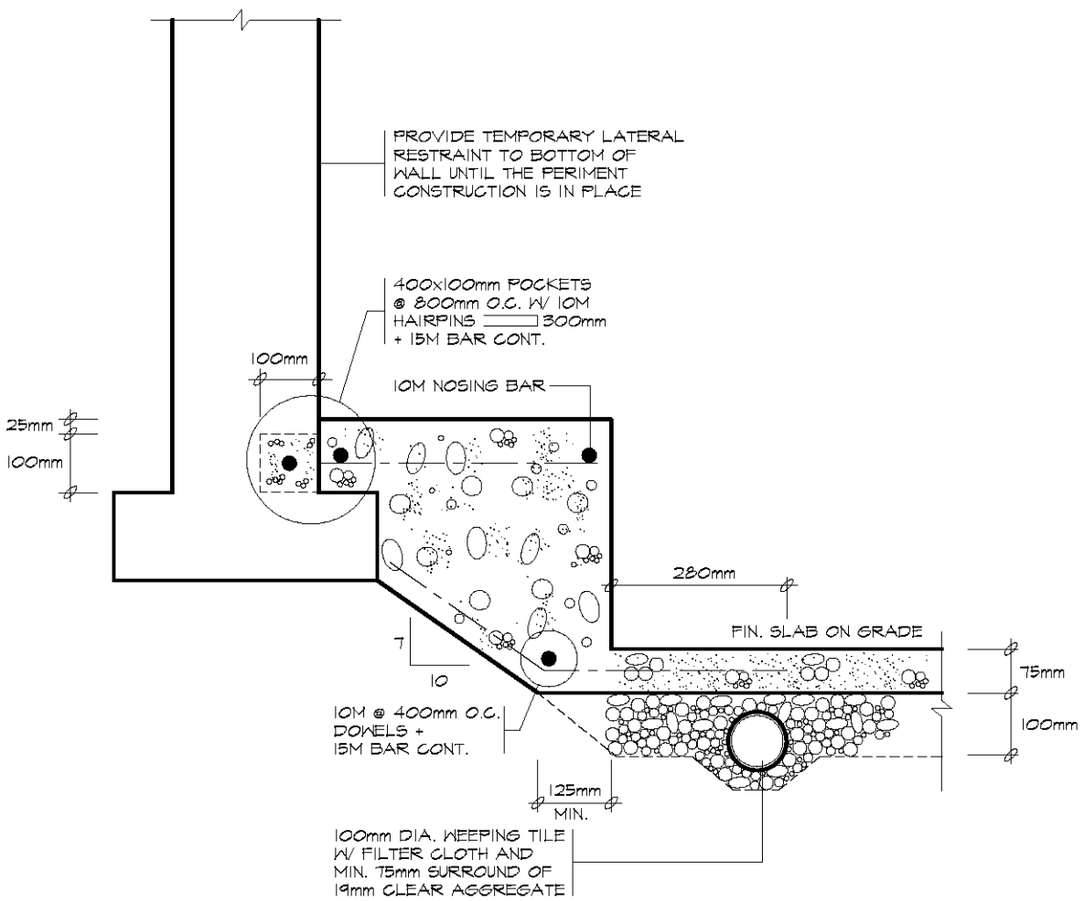

## UNDERPINNING FROM OUTSIDE

**TACBOC**
**STANDARD DETAIL**

TITLE
# UNDERPINNING
SECTIONS



DWG. NO.
B01b
03-2012




## GENERAL NOTES

1. EXCAVATION FOR THE PROPOSED WORK SHOULD NOT UNDERMINE THE FOUNDATIONS OF ADJOINING BUILDINGS, OR CAUSE DAMAGE TO UTILITIES, ROADS AND SIDEWALKS. A MAXIMUM 7:10 ANGLE OF REPOSE SHALL BE MAINTAINED UNLESS OTHERWISE CERTIFIED BY A GEOTECHNICAL ENGINEER

2. PROVIDE ALL BRACING, SHORING AND NEEDLING NECESSARY FOR THE SAFE EXECUTION OF THIS WORK.

3. CONCRETE STRENGTH SHALL BE A MINIMUM 15MPa AT 28 DAYS



TACBOC
STANDARD DETAIL

TITLE

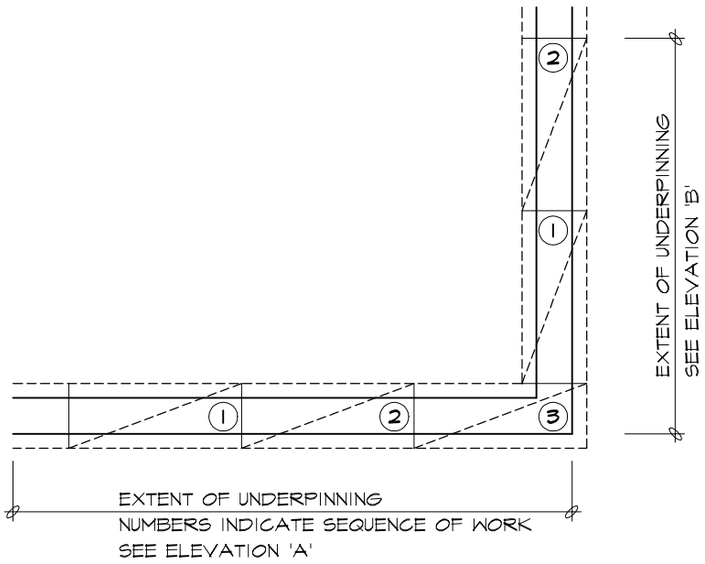
# BENCH-TYPE UNDERPINNING

SECTIONS, NOTES

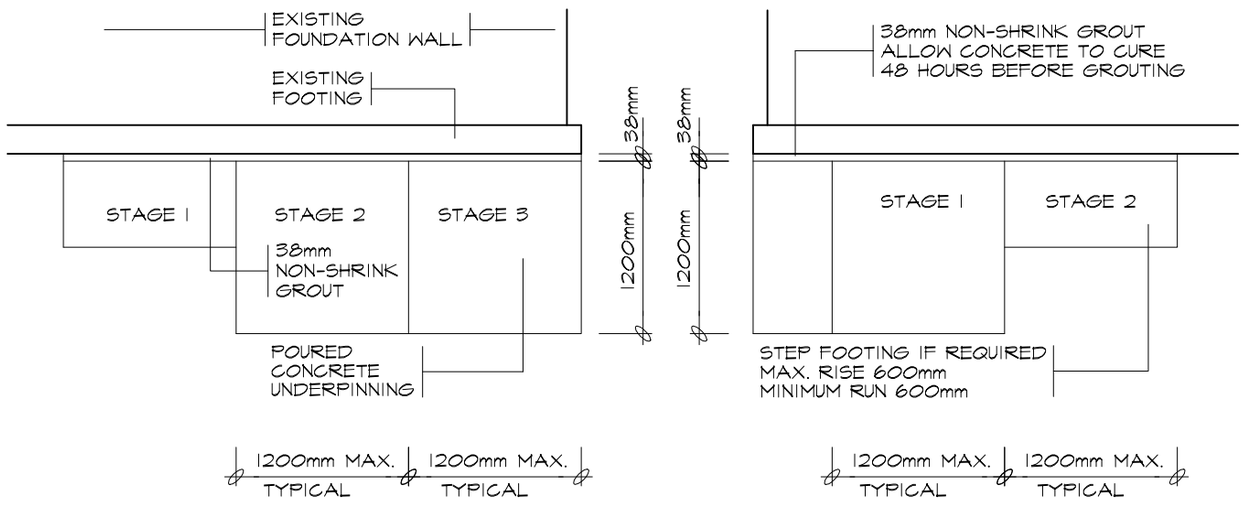
DWG. NO.

B01c

2007




## PLAN




## ELEVATION 'A'

## ELEVATION 'B'

## GENERAL NOTES

1. WHERE THE FOUNDATIONS OF A BUILDING ARE TO BE CONSTRUCTED BELOW THE LEVEL OF THE FOOTINGS OF AN ADJACENT BUILDING AND WITHIN THE ANGLE OF REPOSE OF THE SOIL, OR THE UNDERPINNING EXCEEDS 1200mm OF LATERALLY UNSUPPORTED HEIGHT OR THE SOIL IS CLAY OR SILT, THE UNDERPINNING & RELATED CONSTRUCTION SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER.

2. EXCAVATION SHALL BE UNDERTAKEN IN A MANNER SO AS TO PREVENT MOVEMENT WHICH WOULD CAUSE DAMAGE TO ADJACENT PROPERTY, STRUCTURES, UTILITIES, ROADS & SIDEWALKS. CONTACT YOUR LOCAL UTILITIES PRIOR TO COMMENCING EXCAVATION.

3. MINIMUM CONCRETE STRENGTH FOR UNDERPINNING SHALL BE 15MPa AT 28 DAYS. ALL EXTERIOR CONCRETE SHALL BE 32MPa W/ 5%-8% AIR ENTRAINMENT.

4. CONCRETE SHALL BE CURED MINIMUM 48 HOURS BEFORE GROUTING AND PROCEEDING TO THE NEXT STAGE.

5. SHORE & BRACE WHERE NECESSARY TO ENSURE THE SAFETY & STABILITY OF THE EXISTING STRUCTURE DURING UNDERPINNING.

6. WEEPING TILE IS TO DRAIN TO THE STORM SEWER, DITCH, DRYWELL OR INSTALL COVERED SUMP PIT WITH AN AUTOMATIC PUMP.

7. FOOTINGS

   450mmx100mm POURED CONC. FOOTING
   ALL FOOTINGS SHALL REST ON
   NATURAL UNDISTURBED SOIL OR
   COMPACTED GRANULAR FILL

8. CONCRETE

   MINIMUM COMPRESSIVE STRENGTH
   OF 32MPa @ 28 DAYS W/
   5% TO 8% AIR ENTRAINMENT

9. EXTERIOR STAIRS

   200mm RISE MAXIMUM  125mm MINIMUM
   210mm RUN MINIMUM  355mm MAXIMUM
   235mm TREAD MINIMUM  355mm MAXIMUM

10. INSULATION

   - MIN. RSI 3.52 (R20) INSULATION & VAPOUR BARRIER ON THE INSIDE FACE OF THE EXPOSED FOUNDATION WALL
   - MIN. RSI 1.76 (R10) INSULATION FOR 600mm BELOW GRADE AT WALKOUT LANDING

11. RETAINING WALL

   250mm MASONRY OR POURED CONCRETE
   W/ NO REINFORCING REQUIRED FOR
   WALL HEIGHTS TO A MAX. OF 1200mm
   PROVIDE 25M VERTICAL REINFORCEMENT
   @ 600mm O.C. AND A BOND BEAM
   CONTAINING AT LEAST ONE 15M REINFORCEMENT
   FOR BACKFILL HEIGHTS TO A MAX. OF 2400mm

12. PRE-ENGINEERED GUARDS

   1070mm HIGH WHERE DISTANCE FROM GRADE
   TO BOTTOM OF WALKOUT EXCEEDS 1800mm;
   900mm FOR LESSER HEIGHTS. MAXIMUM 100mm
   BETWEEN VERTICAL PICKETS

13. LINTELS (FOR MAX. 1200mm OPENINGS)

   1. SOLID MASONRY: 2- 90mmx90mmx6mm ANGLES
   2. BRICK VENEER: 1- 90mmx90mmx6mm L + 2-38x184
   3. WOOD FRAME/SIDING: 2-38x184



TACBOC
STANDARD DETAIL

TITLE
UNDERPINNING
PLAN, ELEVATIONS & NOTES

DWG. NO.
B01d
03-2012

## MINIMUM ROOM AREAS

| APARTMENTS FOR ONE OR TWO PERSONS WHERE SPACE IS NOT PARTITIONED | |
|---|---|
| **REQUIRED SPACE** | **MINIMUM AREA** |
| LIVING, DINING, KITCHEN & SLEEPING SPACE | 13.5M$^2$ IN TOTAL |
| **OTHER PARTITIONED APARTMENTS** | |
| LIVING AREA | 13.5M$^2$ |
| | 11.0M$^2$ IF LIVING AREA IS COMBINED W/ DINING & KITCHEN SPACE |
| DINING AREA | 7.0M$^2$ |
| | 3.25M$^2$ IF DINING AREA IS COMBINED W/ ANOTHER SPACE |
| KITCHEN | 3.7M$^2$ |
| AT LEAST ONE BEDROOM | 9.8M$^2$ |
| | 8.8M$^2$ IF A BUILT IN CLOSET IS PROVIDED |
| | 4.2M$^2$ IF THE BEDROOM AREA IS COMBINED W/ ANOTHER SPACE |
| OTHER BEDROOMS | 7.0M$^2$ |
| | 6.0M$^2$ IF A BUILT IN CLOSET IS PROVIDED |
| | 4.2M$^2$ IF THE BEDROOM AREA IS COMBINED W/ ANOTHER SPACE |

- MINIMUM CEILING HEIGHT SHALL BE NOT LESS THAN 1950mm

## MINIMUM WINDOW AREAS FOR LIGHT

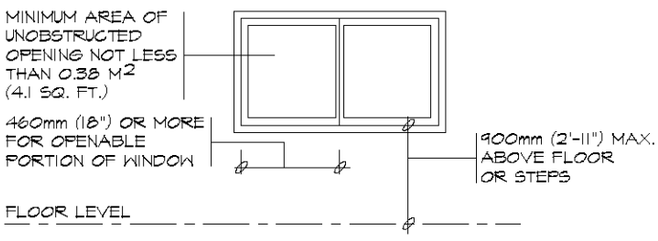
| LOCATION | MINIMUM UNOBSTRUCTED GLASS AREA |
|---|---|
| LAUNDRY ROOM, KITCHEN, WATER CLOSET ROOM | WINDOWS NOT REQUIRED |
| LIVING/DINING ROOMS | 5% OF FLOOR AREA |
| BEDROOMS AND OTHER FINISHED ROOMS | 2 1/2% OF FLOOR AREA |

- WHERE A DOOR ON THE SAME LEVEL AS A BEDROOM IS NOT PROVIDED, A WINDOW THAT IS ABLE TO BE OPENED FROM THE INSIDE WITHOUT THE USE OF TOOLS PROVIDING AN INDIVIDUAL UNOBSTRUCTED OPEN PORTION HAVING A MINIMUM AREA OF 0.35M$^2$ WITH NO DIMENSION LESS THAN 380mm SHALL BE PROVIDED. IF THIS WINDOW OPENS INTO A WINDOW WELL, A CLEARANCE OF NOT LESS THAN 550mm SHALL BE PROVIDED IN FRONT OF THE OPERATING SASH.
- NEW OPENINGS IN EXTERIOR WALLS ARE NOT PERMITTED IF THE DISTANCE FROM THE WALL TO AN ADJACENT LOT LINE IS LESS THAN 1200mm

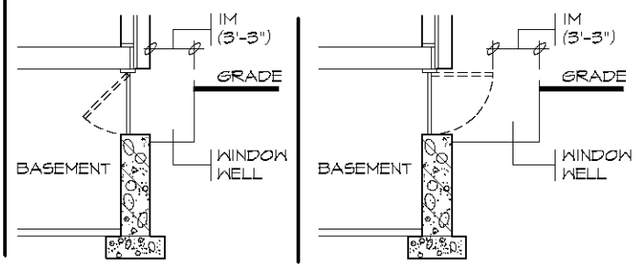
## EGRESS REQUIREMENTS

| EGRESS PROVIDED FROM APARTMENT | CONDITIONS |
|---|---|
| A SEPARATE DOOR LEADING DIRECTLY TO THE EXTERIOR FROM THE ACCESSORY APARTMENT | SMOKE ALARMS IN EACH DWELLING |
| A 'SHARED EXIT', SUCH AS A STAIRWAY USED BY BOTH UNITS | 1/2 HOUR FIRE SEPARATION AROUND EXIT, AND INTERCONNECTED SMOKE ALARMS IN BOTH UNITS AND ALL COMMON AREAS. |
| EGRESS AVAILABLE ONLY THROUGH ANOTHER DWELLING | AN EGRESS WINDOW MUST BE PROVIDED. INTERCONNECTED SMOKE ALARMS MUST BE INSTALLED IN BOTH UNITS, AND ALL COMMON AREAS, OR THE ENTIRE BUILDING MUST BE SPRINKLERED, AND SMOKE ALARMS INSTALLED IN BOTH UNITS. |

### EGRESS WINDOW




### WINDOW WELL FOR EGRESS WINDOW




## SEPARATION BETWEEN UNITS

| REQUIRED FIRE SEPARATIONS/CLOSURES | CONDITIONS |
|---|---|
| 30 MINUTE FIRE SEPARATION (12.7mm TYPE 'X' GYPSUM BD. CEILING) | SMOKE ALARM IN BOTH UNITS |
| 15 MINUTE HORIZONTAL FIRE SEPARATION | INTERCONNECTED SMOKE ALARMS IN BOTH UNITS AND IN ALL COMMON AREAS |
| NO FIRE SEPARATIONS | THE ENTIRE BUILDING MUST BE SPRINKLERED |
| 20 MINUTE LABELED DOORS, UNLABELED MINIMUM 45mm THICK SOLID CORE WOOD DOOR OR METAL CLAD | EQUIPPED WITH SELF CLOSERS |
| UNRATED CLOSURES | THE APARTMENT FLOOR AREA MUST BE SPRINKLERED |

## SMOKE ALARMS AND CARBON MONOXIDE DETECTORS

| | |
|---|---|
| **REQUIRED SMOKE ALARMS** WITHIN EACH DWELLING UNIT | MAY BE BATTERY OPERATED EXCEPT WHERE SMOKE ALARMS ARE REQUIRED TO BE INTERCONNECTED DUE TO **SEPARATION BETWEEN UNITS** AND **EGRESS REQUIREMENTS.** ALARMS MUST BE LOCATED ON OR NEAR THE CEILING WITHIN 5M OF BEDROOM DOORS. |
| **REQUIRED CARBON MONOXIDE DETECTORS** WITHIN EACH DWELLING UNIT ADJACENT TO EACH SLEEPING AREA | MUST CONFORM TO CAN/CSA-6.19 OR UL 2034. CO DETECTORS MAY BE BATTERY OPERATED OR PLUGGED INTO AN ELECTRICAL OUTLET. |

## PLUMBING, HEATING AND VENTILATION

| | |
|---|---|
| CENTRAL HEATING SYSTEM | EXISTING SYSTEM MAY SERVE BOTH UNITS PROVIDED<br>I) BOTH UNITS ARE EQUIPPED WITH SMOKE ALARMS, AND<br>II) A SMOKE DETECTOR IS INSTALLED IN THE SUPPLY OR RETURN AIR DUCT SYSTEM WHICH WOULD TURN OFF THE FUEL SUPPLY AND ELECTRICAL POWER TO THE HEATING SYSTEM UPON ACTIVATION. |
| NATURAL VENTILATION (OPENABLE WINDOWS/DOORS) FOR LIVING/DINING ROOMS, BEDROOMS, KITCHEN | MINIMUM 0.28M$^2$ (3SQ. FT.) PER ROOM OR COMBINATION OF ROOMS |
| NATURAL VENTILATION (OPENABLE WINDOW) FOR BATHROOMS OR WATER CLOSET ROOMS | MINIMUM 0.09M$^2$ (0.97SQ. FT.) |
| MECHANICAL VENTILATION, IF NATURAL VENTILATION IS NOT PROVIDED | ONE-HALF AIR CHANGE PER HOUR IF THE ROOM IS MECHANICALLY COOLED IN SUMMER, AND ONE AIR CHANGE PER HOUR IF IT IS NOT. |
| REQUIRED PLUMBING FACILITIES | |



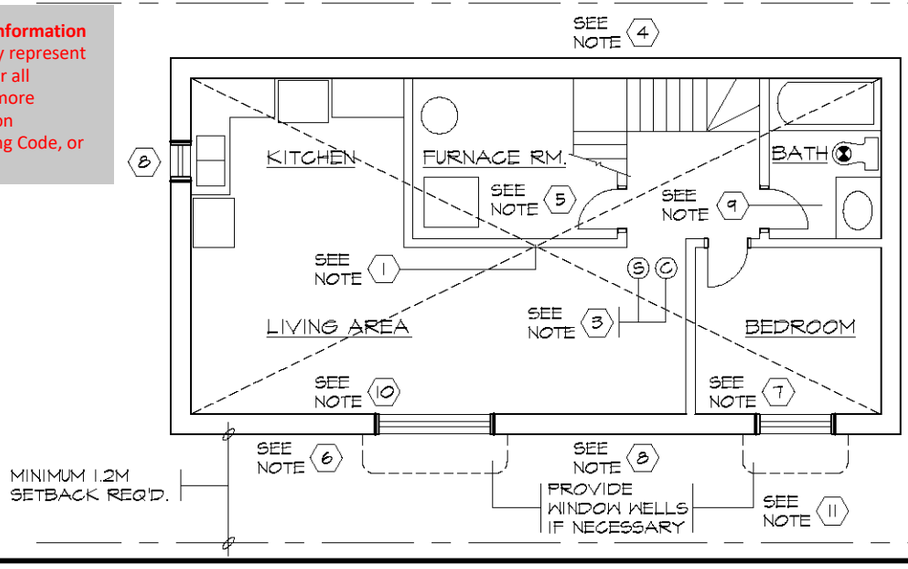
TACBOC
STANDARD DETAIL

TITLE
# BASEMENT ACCESSORY APARTMENT
BUILDING CODE REQUIREMENTS - EXISTING BUILDING

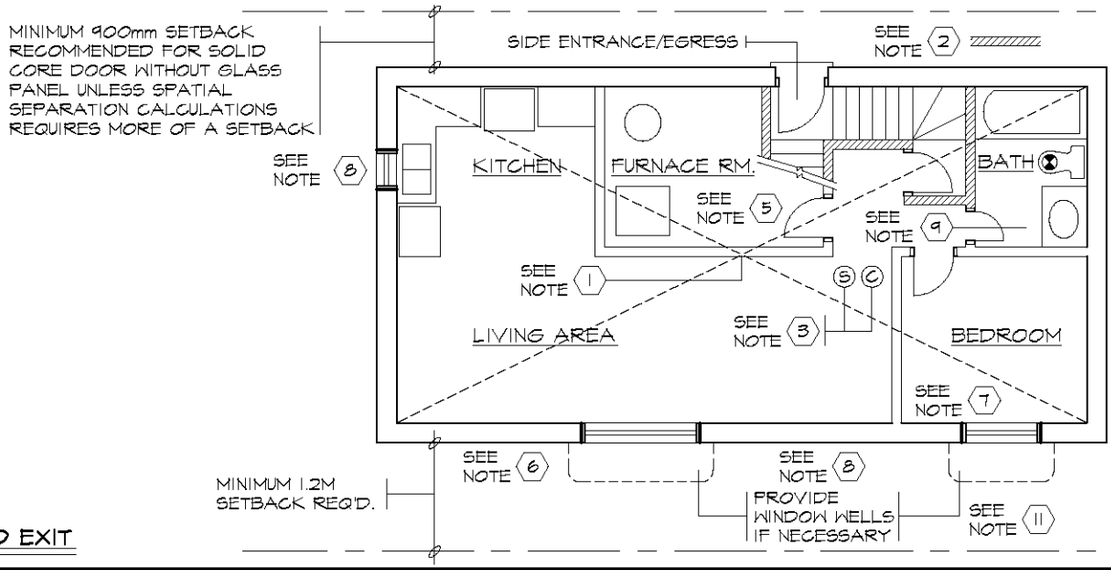
DWG. NO.
B02a
2007

These drawings and are provided for **information purposes only.** They do not necessarily represent every detail of building construction, or all minimum standards which apply. For more detailed information about construction regulations refer to the Ontario Building Code, or a qualified designer.

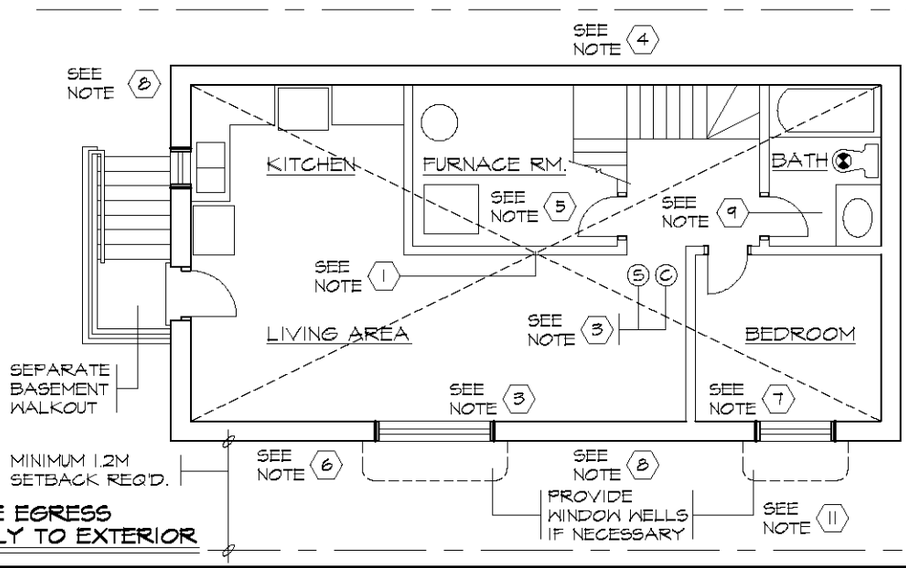
## EGRESS THROUGH ANOTHER DWELLING




## WITH A SHARED EXIT




## WITH ITS OWN SEPARATE EGRESS DOOR LEADING DIRECTLY TO EXTERIOR




## NOTES RELATING TO PLANS ABOVE (1)

1. MINIMUM 30 MINUTE FIRE SEPARATION UNLESS INTERCONNECTED SMOKE ALARMS ARE PROVIDED IN BOTH UNITS AND ALL COMMON AREAS, IN WHICH CASE, A 15 MINUTE FIRE SEPARATION WOULD ONLY BE REQUIRED. INSTALLING SPRINKLERS IN THE BUILDING WOULD WAIVE ALL FIRE SEPARATION REQUIREMENTS.
2. MIN. 30 MINUTE FIRE SEPARATION AROUND SHARED EXIT.
3. SEE REQUIRED INSTALLATION INFORMATION FOR SMOKE ALARMS & CARBON MONOXIDE DETECTORS ON ATTACHED SHEET B02a.
4. STAIRWELL TO BE ENCLOSED AT TOP MOST, OR AT BOTTOM MOST LEVELS.
5. EXISTING FURNACE MAY SERVE BOTH UNITS PROVIDED A SMOKE DETECTOR IS INSTALLED IN THE SUPPLY OR RETURN AIR DUCT SYSTEM WHICH WOULD TURN OFF THE FUEL SUPPLY AND ELECTRICAL POWER TO THE HEATING SYSTEM UPON ACTIVATION OF SUCH DETECTOR.
6. MINIMUM 5% OF LIVING/DINING FLOOR AREA OF NATURAL LIGHT (GLASS AREA) TO BE PROVIDED.
7. MINIMUM 2 1/2% OF BEDROOM AND OTHER FINISHED ROOMS FLOOR AREAS OF NATURAL LIGHT (GLASS AREA) TO BE PROVIDED.
8. 3 SQ. FT. CLEAR OPENING OF NATURAL VENTILATION REQUIRED FOR LIVING/DINING, BEDROOMS & KITCHEN
9. 1 SQ. FT. CLEAR OPENING OF NATURAL VENTILATION REQUIRED FOR BATHROOMS. MECHANICAL VENT PROVIDING 1 AIR CHANGE PER HOUR IS ACCEPTABLE.
10. AN EGRESS WINDOW OR CASEMENT WINDOW, AS DESCRIBED ON ATTACHED SHEET, MUST BE PROVIDED IN THE ACCESSORY APARTMENT. OR, THE ENTIRE BUILDING IS TO BE SPRINKLERED AND SMOKE ALARMS INSTALLED IN BOTH UNITS.
11. FOR WINDOWS USED AS MEANS OF ESCAPE, WITHIN WINDOW WELLS, SEE ATTACHED SHEET FOR CLEARANCES.

TACBOC
STANDARD DETAIL

TITLE

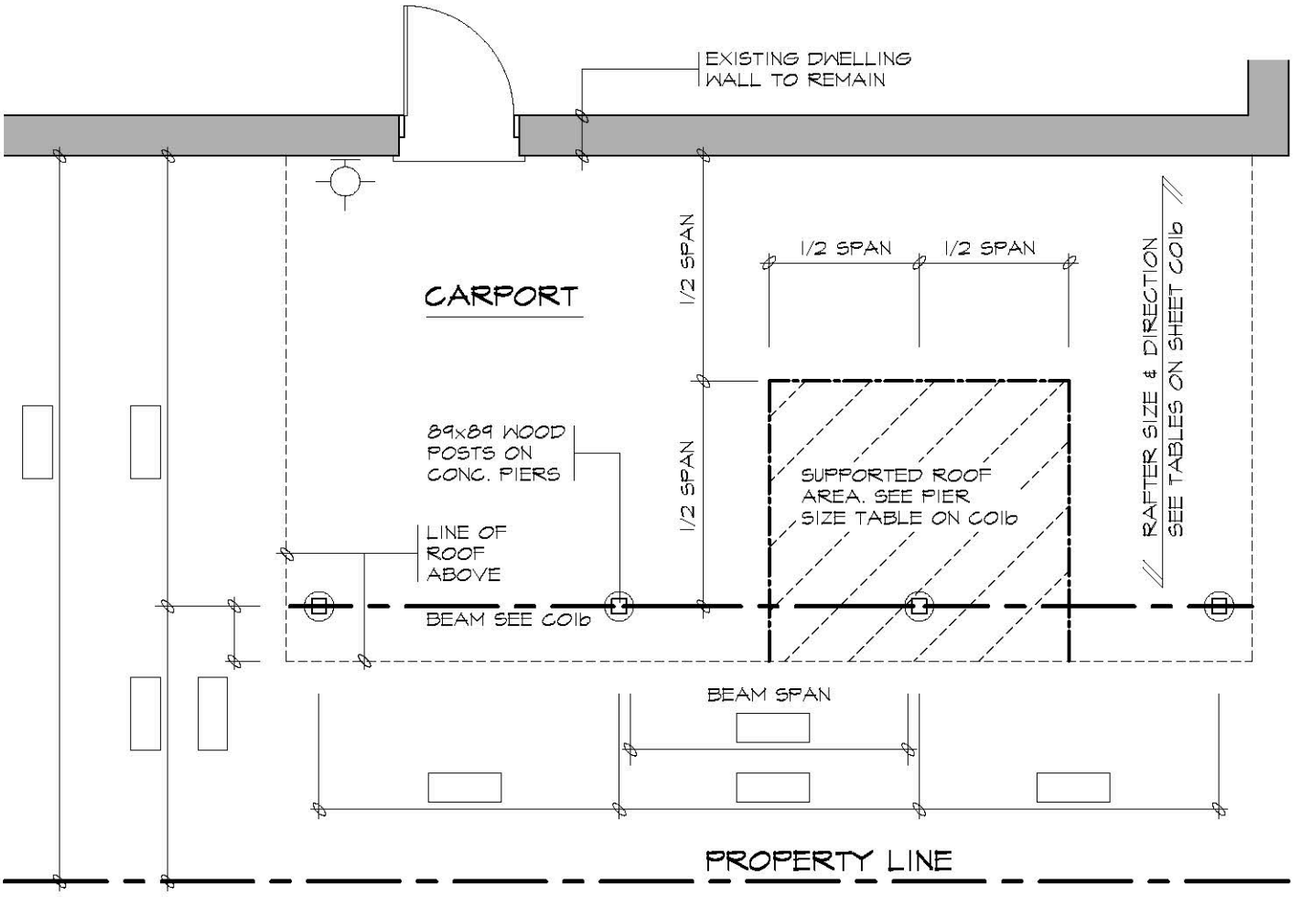
# BASEMENT ACCESSORY APARTMENT

SAMPLE PLANS AND SPECIFICATIONS

DWG. NO.

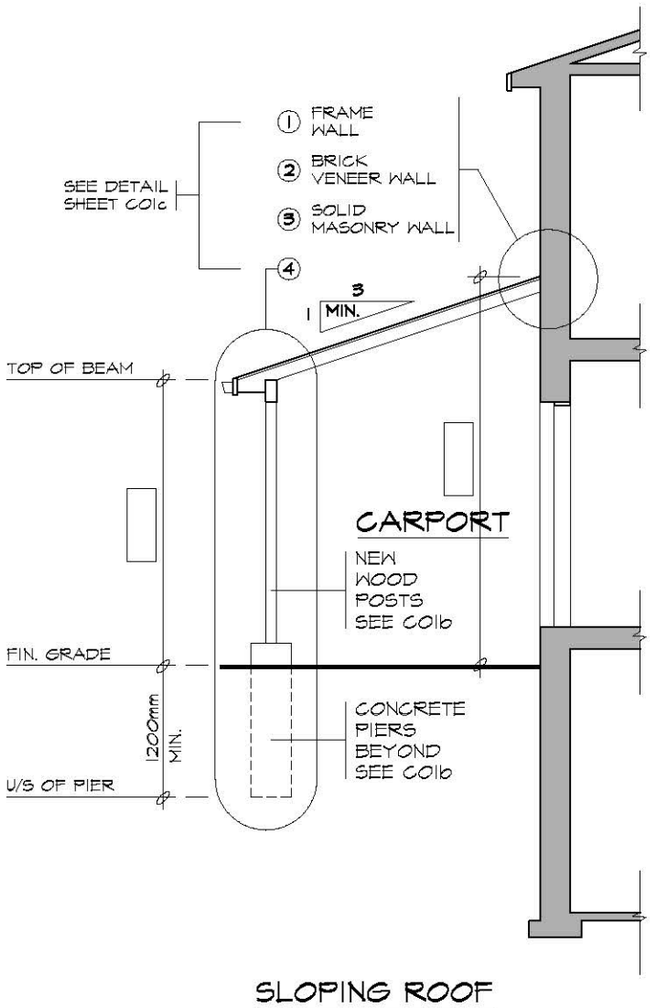
B02b

2007

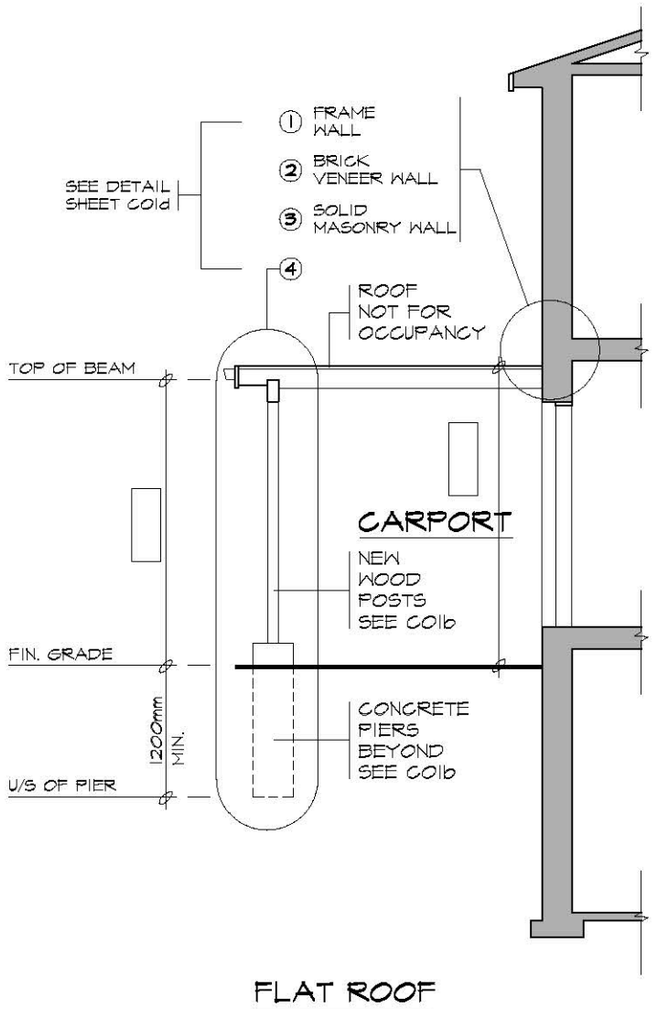



## CARPORT PLAN (PROVIDE DIMENSIONS IN BOXES)

SEE C01b FOR STRUCTURAL SIZES




SLOPING ROOF




FLAT ROOF



TACBOC
STANDARD DETAIL

TITLE

# ATTACHED CARPORT

SLOPING OR FLAT ROOF PLAN & SECTIONS

DWG. NO.

C01a

2007

## ROOF RAFTERS (WHERE NO CEILING IS INSTALLED)

| RAFTER SIZE | MAXIMUM CLEAR SPAN (M) | | | | | |
|---|---|---|---|---|---|---|
| | ROOF SNOW LOAD 1.0kPa | | | ROOF SNOW LOAD 1.5kPa | | |
| | RAFTER SPACING (mm) O.C. | | | RAFTER SPACING (mm) O.C. | | |
| | 300 | 400 | 600 | 300 | 400 | 600 |
| 38x89 | 3.11 | 2.83 | 2.47 | 2.72 | 2.47 | 2.16 |
| 38x140 | 4.90 | 4.45 | 3.89 | 4.28 | 3.89 | 3.40 |
| 38x184 | 6.44 | 5.85 | 5.11 | 5.62 | 5.11 | 4.41 |
| 38x235 | 8.22 | 7.47 | 6.38 | 7.18 | 6.52 | 5.39 |

## ROOF JOISTS (WHERE CEILING IS INSTALLED)

| JOIST SIZE | MAXIMUM CLEAR SPAN (M) | | | | | |
|---|---|---|---|---|---|---|
| | ROOF SNOW LOAD 1.0kPa | | | ROOF SNOW LOAD 1.5kPa | | |
| | JOIST SPACING (mm) O.C. | | | JOIST SPACING (mm) O.C. | | |
| | 300 | 400 | 600 | 300 | 400 | 600 |
| 38x89 | 2.47 | 2.24 | 1.96 | 2.16 | 1.96 | 1.71 |
| 38x140 | 3.89 | 3.53 | 3.08 | 3.40 | 3.08 | 2.69 |
| 38x184 | 5.11 | 4.64 | 4.05 | 4.46 | 4.05 | 3.54 |
| 38x235 | 6.52 | 5.93 | 5.18 | 5.70 | 5.18 | 4.52 |

## ROOFING

| ROOF FRAMING (mm) O.C. | ROOF SHEATHING |
|---|---|
| RAFTERS @ 300 | 7.5mm PLYWOOD W/ H-CLIPS OR 17mm LUMBER |
| RAFTERS @ 400 | |
| RAFTERS @ 600 | 9.5mm PLYWOOD W/ 'H'-CLIPS OR 19mm LUMBER |

## BEAMS

| MAXIMUM CLEAR SPAN (M) | | MINIMUM BEAM SIZE |
|---|---|---|
| ROOF SNOW LOAD | | |
| 1.0kPa | 1.5kPa | |
| 2.35 | 2.02 | 2 - 38x184 |
| 2.88 | 2.47 | 2 - 38x235 |
| 3.34 | 2.87 | 2 - 38x286 |

## PIERS

| PIER SIZE (mm) | SUPPORTED ROOF AREA (M2) | | | | | |
|---|---|---|---|---|---|---|
| | ROOF SNOW LOAD 1.0kPa | | | ROOF SNOW LOAD 1.5kPa | | |
| | ALLOWABLE BEARING CAPACITY OF SOIL | | | ALLOWABLE BEARING CAPACITY OF SOIL | | |
| | 75kPa | 120kPa | 190kPa | 75kPa | 120kPa | 190kPa |
| 200 DIA. | 1.95 | 3.25 | 5.48 | 1.39 | 2.32 | 3.62 |
| 250 DIA. | 3.07 | 5.11 | 8.08 | 2.14 | 3.62 | 5.76 |
| 300 DIA. | 4.37 | 7.34 | 11.71 | 3.16 | 5.20 | 8.36 |
| 350 DIA. | 5.95 | 9.94 | 15.87 | 4.27 | 7.06 | 11.33 |
| 400 DIA. | 7.62 | 13.01 | 20.72 | 5.48 | 9.29 | 14.77 |

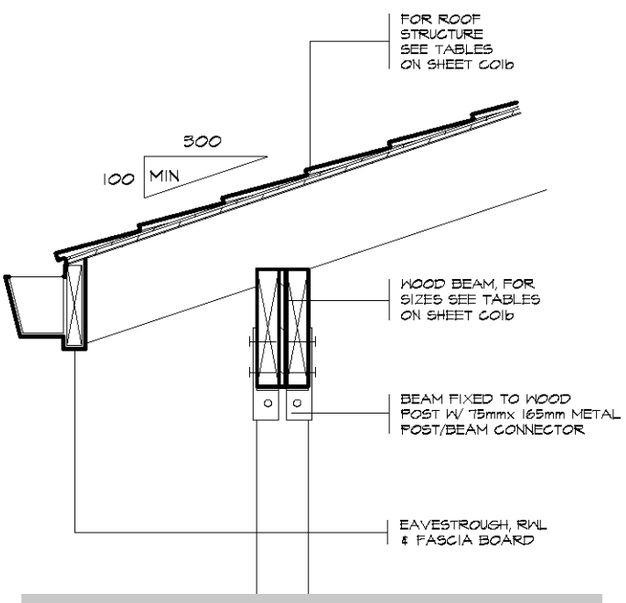
## POSTS

| POST SIZE (mm) (SEE NOTE 5) | MAX. HEIGHT (M) | SUPPORTED ROOF AREA (M2) ROOF SNOW LOAD (kPa) | | | | |
|---|---|---|---|---|---|---|
| | | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 |
| 89x89 | 1.0 | 17.19 | 12.98 | 10.43 | 8.71 | 7.48 |
| | 1.5 | 9.39 | 7.09 | 5.69 | 4.76 | 4.09 |
| | 2.0 | 4.98 | 3.76 | 3.02 | 2.53 | 2.17 |
| | | | | | | |
| 140x140 | 2.0 | 21.65 | 16.35 | 13.13 | 10.98 | 9.43 |
| | 2.5 | 14.77 | 11.15 | 8.96 | 7.48 | 6.43 |
| | 3.0 | 10.06 | 7.60 | 6.10 | 5.10 | 4.38 |
| | 3.5 | 6.98 | 5.27 | 4.23 | 3.54 | 3.04 |

## GENERAL NOTES



1. ALL LUMBER TO BE NO. 1&2 SPF OR BETTER
2. ALL PLYWOOD SHALL BE STAMPED EXTERIOR GRADE
3. WHERE SUPPORTED ROOF AREAS EXCEED THOSE LISTED IN THIS TABLE, THE POSTS SHALL BE BRACED AS SHOWN IN D01c.
4. WOOD POSTS TO BE MINIMUM 89mmx89mm
5. BEARING CAPACITY OF SOIL SHALL BE CONFIRMED PRIOR TO CONSTRUCTION.

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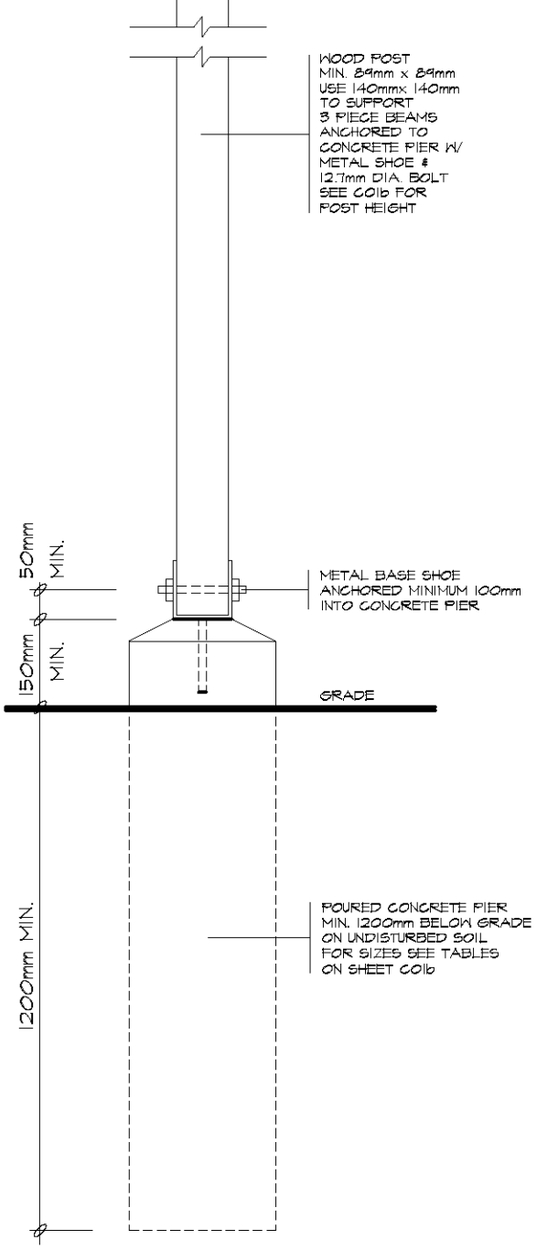
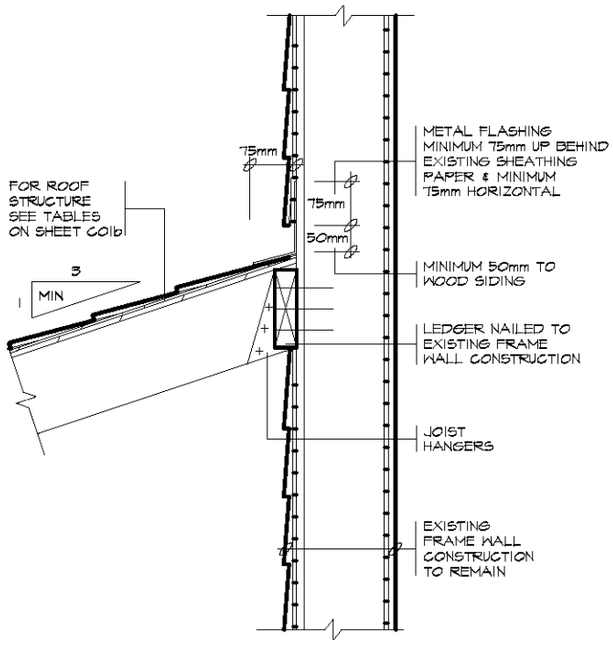
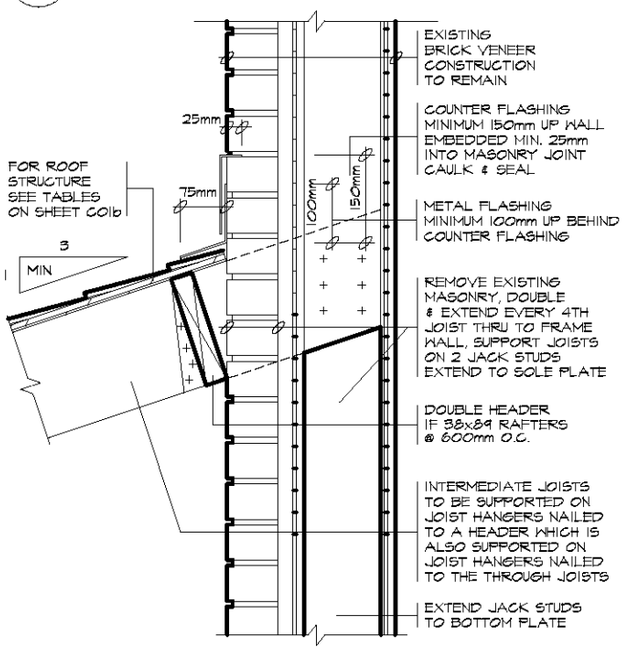


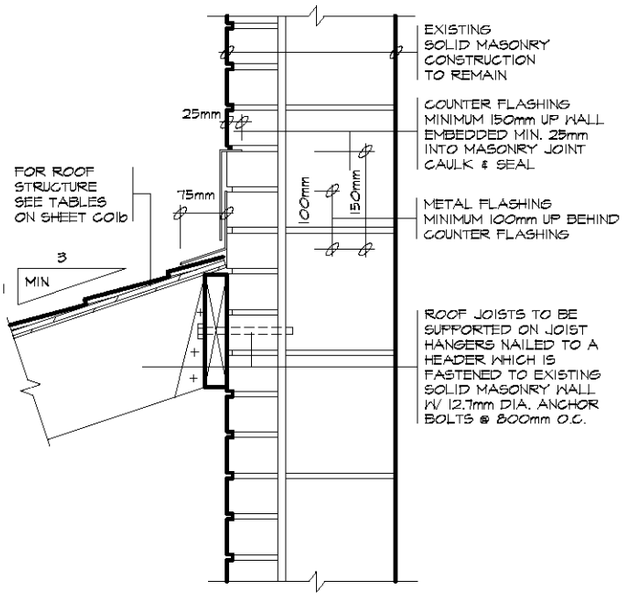

## 4 SUPPORT DETAIL




## 1 FRAME WALL




## 2 BRICK VENEER WALL




## 3 SOLID MASONRY WALL

**TACBOC**
**STANDARD DETAIL**

TITLE

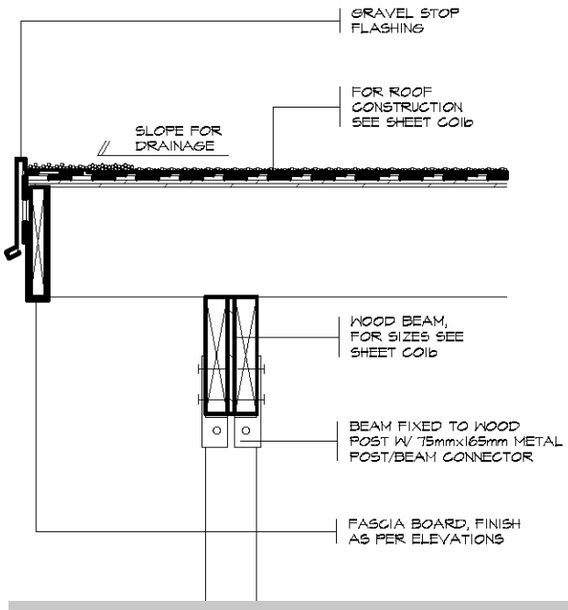
# ATTACHED CARPORT

SLOPING ROOF DETAILS

DWG. NO.

C01c

2007

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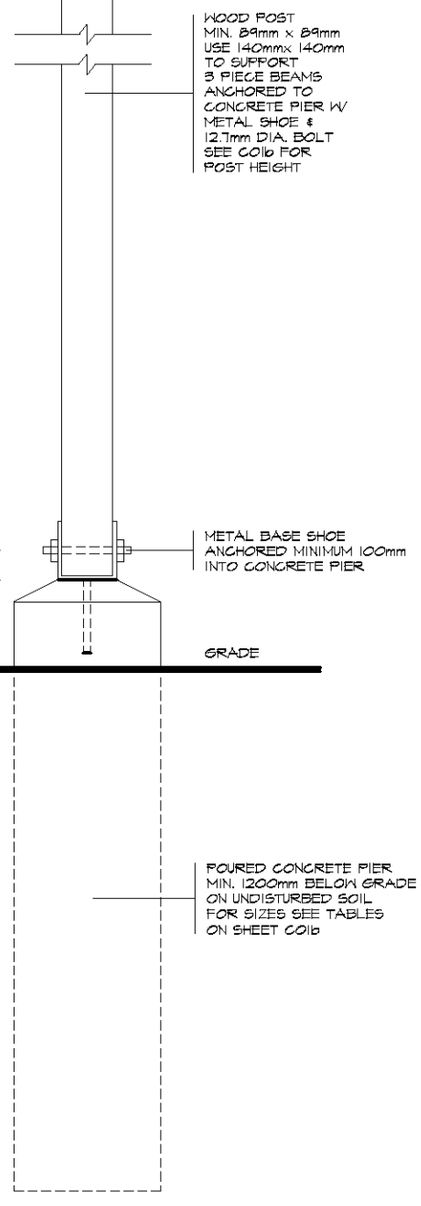
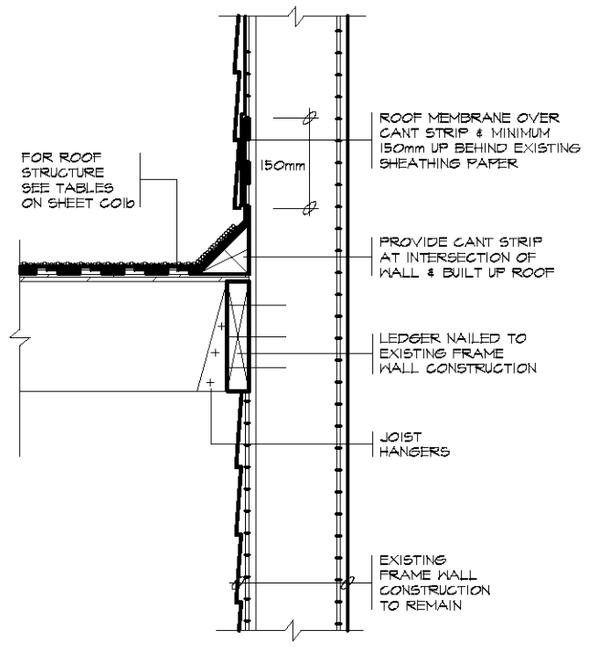
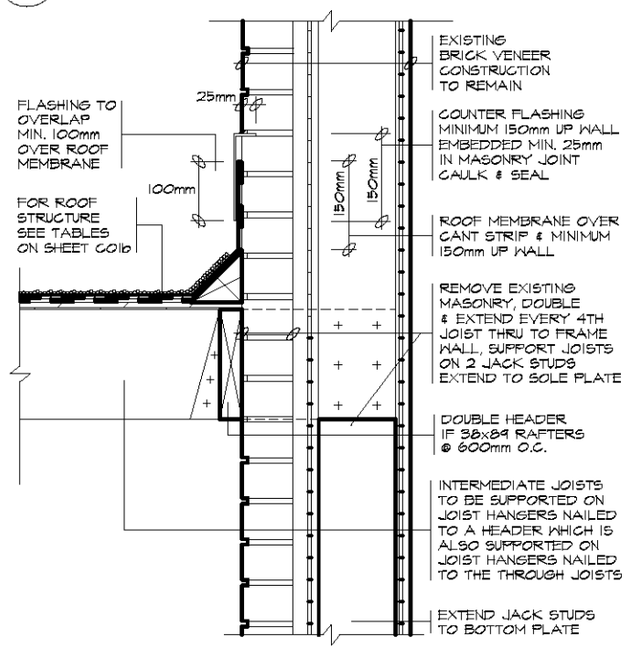


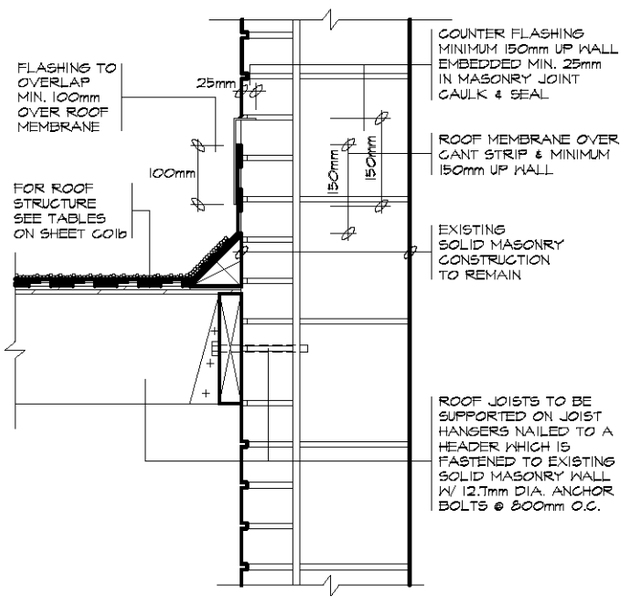

4 SUPPORT DETAIL




1 FRAME WALL




2 BRICK VENEER WALL




3 SOLID MASONRY WALL

TACBOC STANDARD DETAIL

TITLE

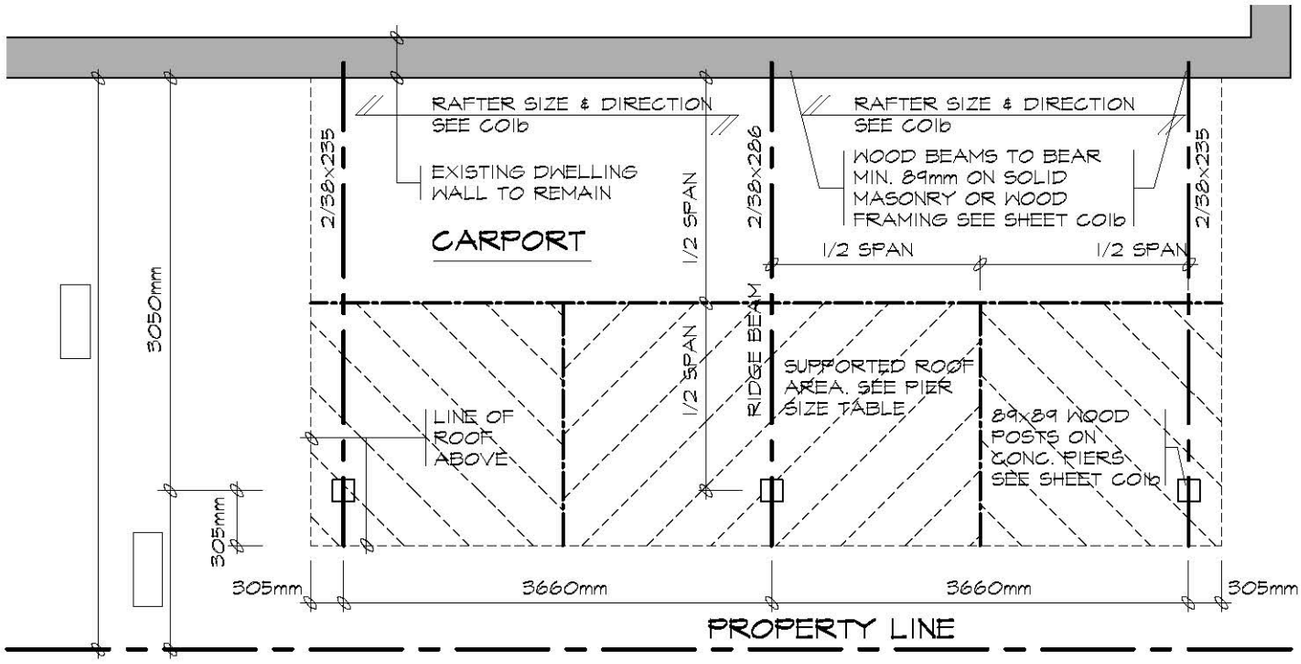
# ATTACHED CARPORT

## FLAT ROOF DETAILS

DWG. NO.

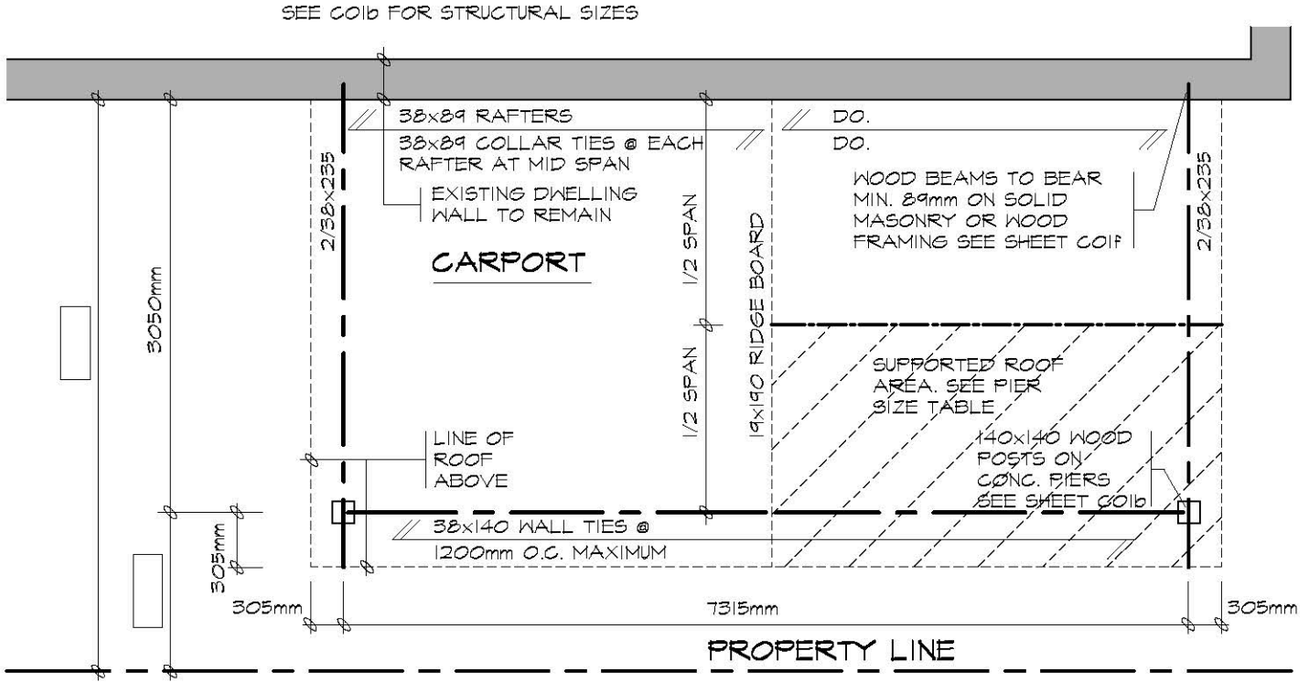
C01d

2007



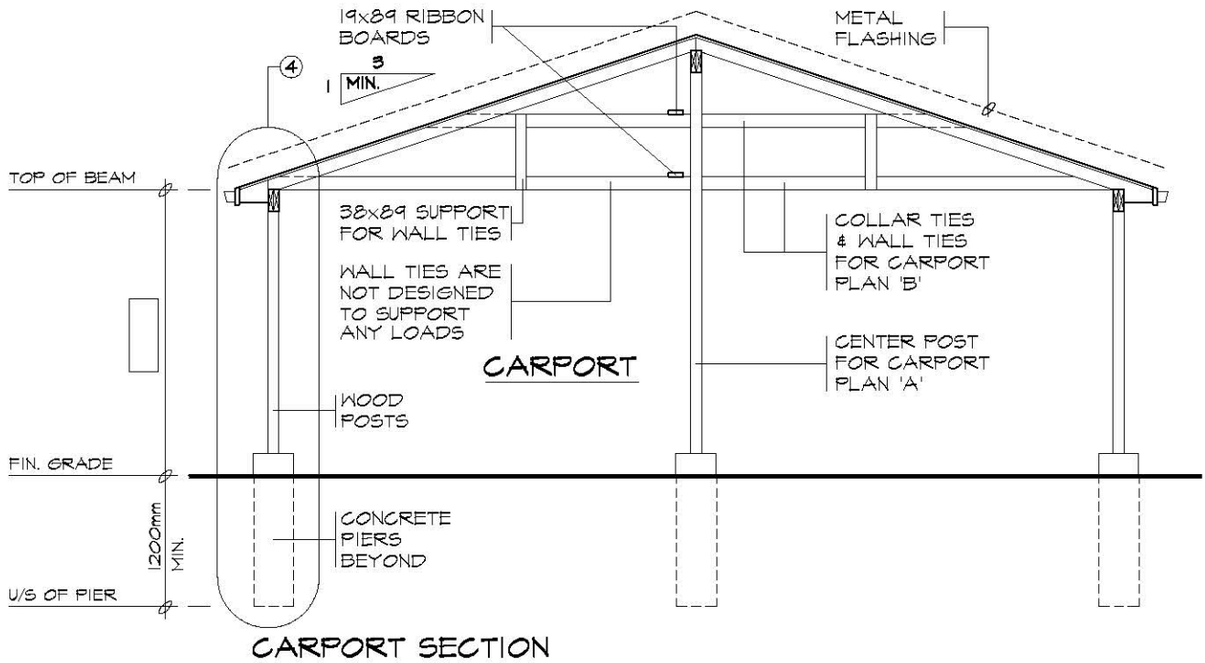

## CARPORT PLAN 'A' POST & BEAM (PROVIDE DIMENSIONS)

SEE C01b FOR STRUCTURAL SIZES




## CARPORT PLAN 'B' CONVENTIONAL FRAMING (PROVIDE DIMENSIONS)

SEE C01b FOR STRUCTURAL SIZES




## CARPORT SECTION

**TACBOC**
**STANDARD DETAIL**

TITLE

# ATTACHED CARPORT

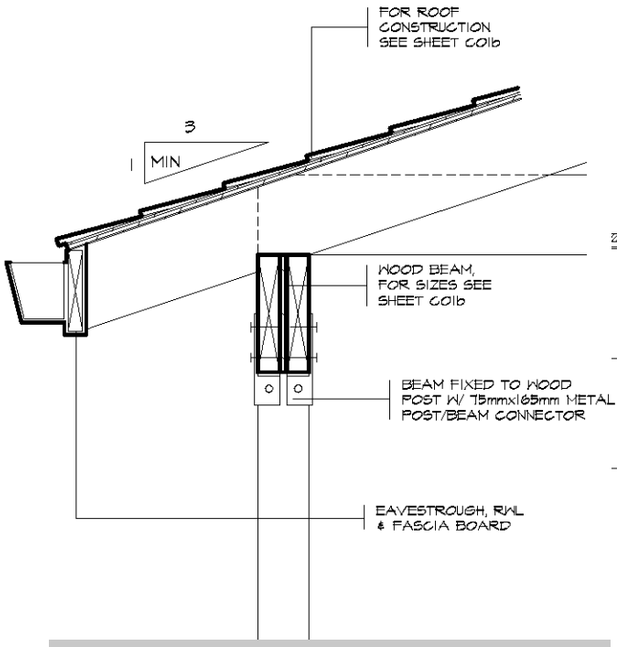
GABLE ROOF, PLAN & SECTION

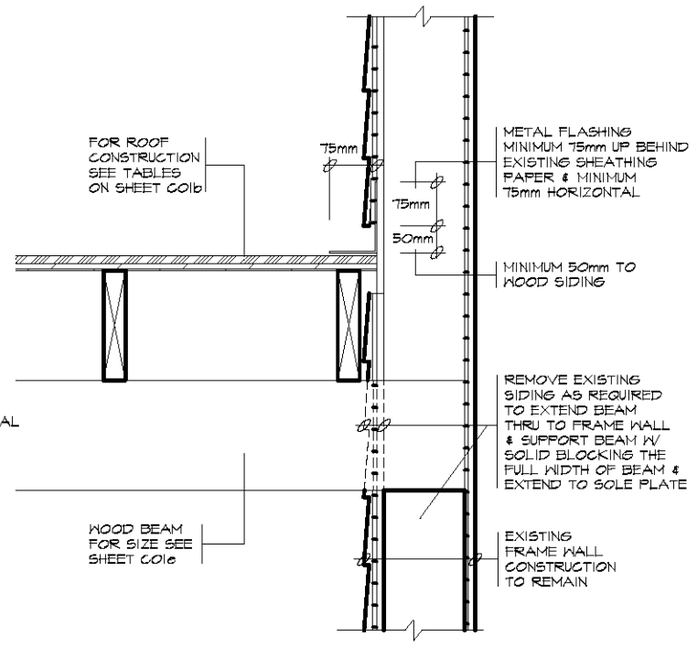


DWG. NO.

C01e

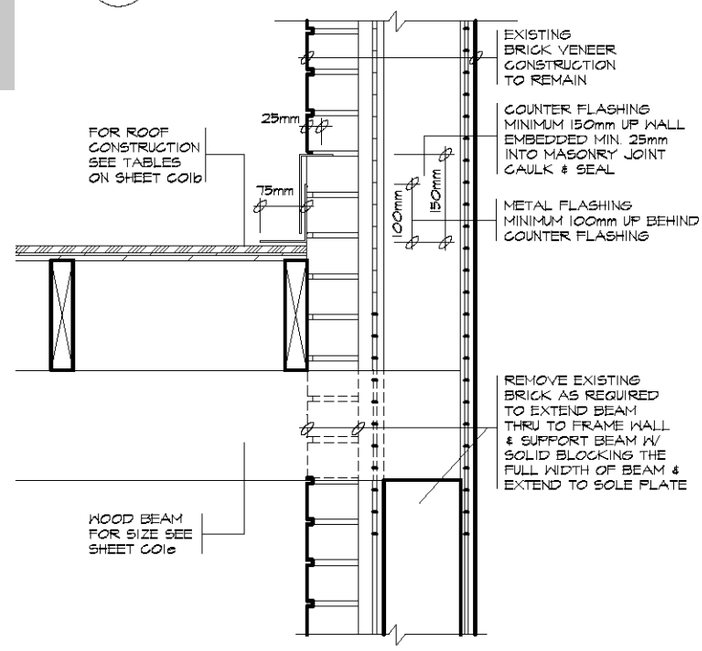
2007



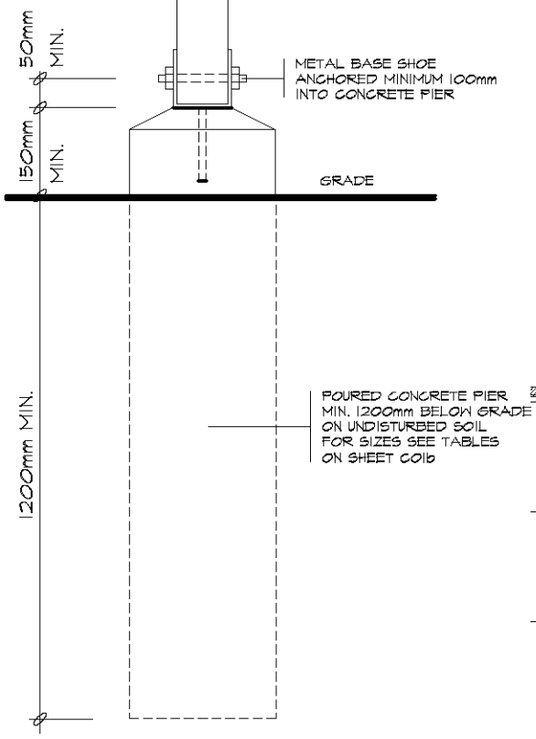




1 FRAME WALL

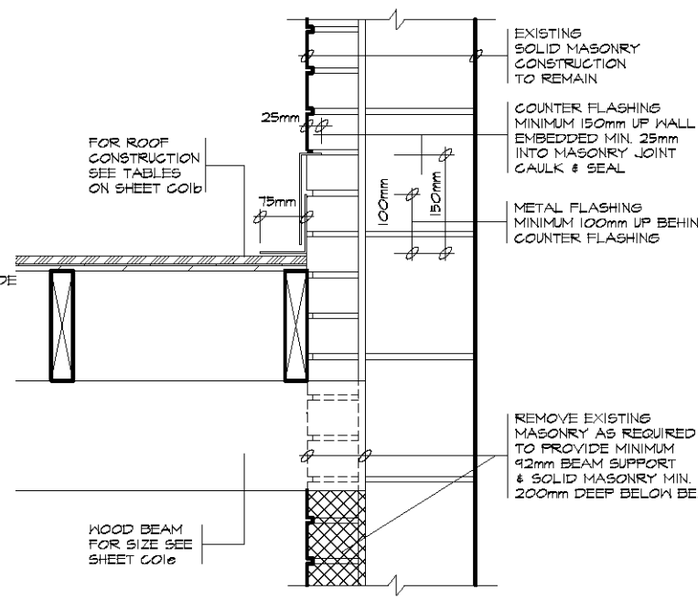
These drawings and are provided for **information purposes only.** They do not necessarily represent every detail of building construction, or all minimum standards which apply. For more detailed information about construction regulations refer to the Ontario Building Code, or a qualified designer.




2 BRICK VENEER WALL




4 SUPPORT DETAIL



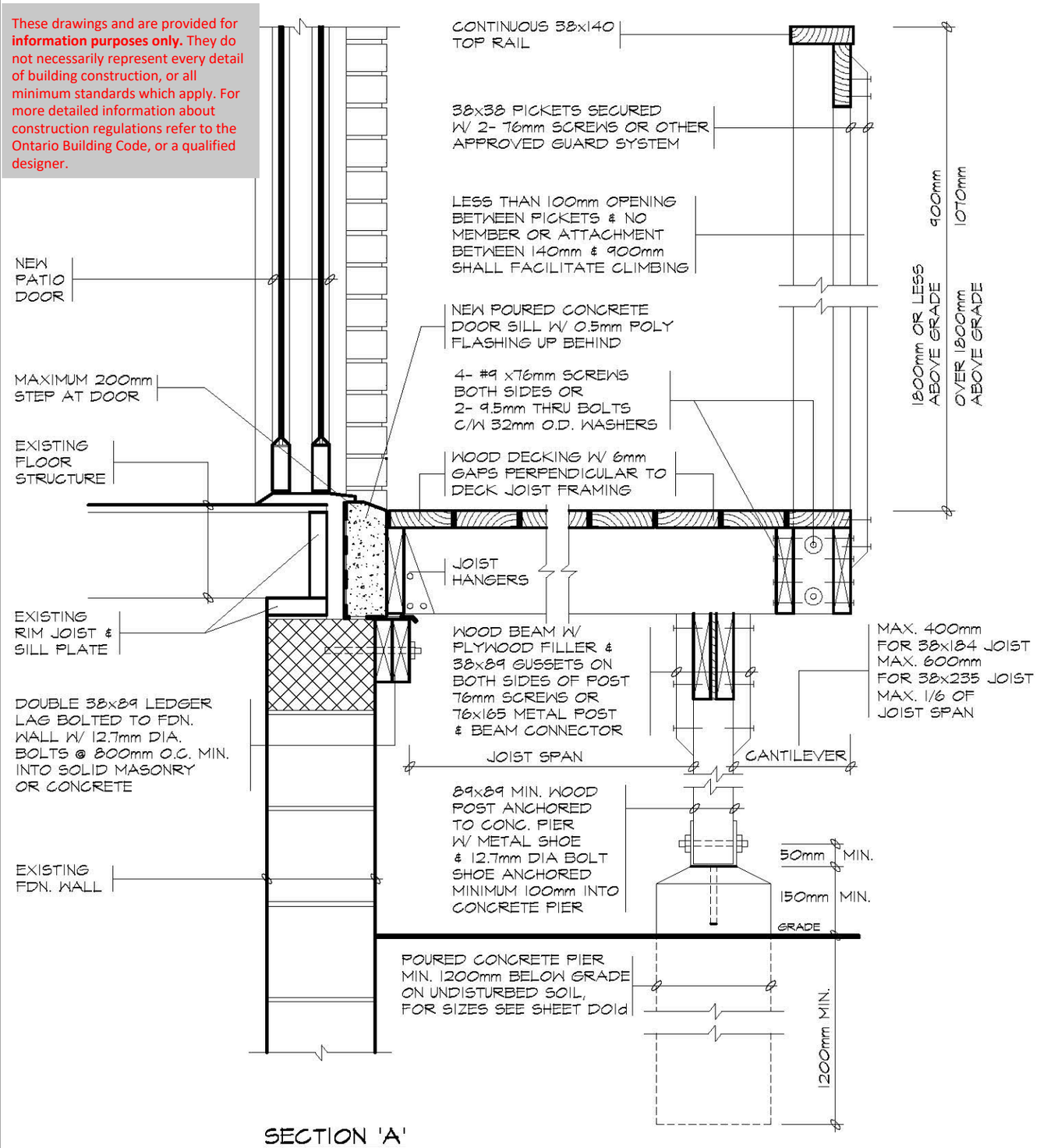

3 SOLID MASONRY WALL

**TACBOC**
**STANDARD DETAIL**

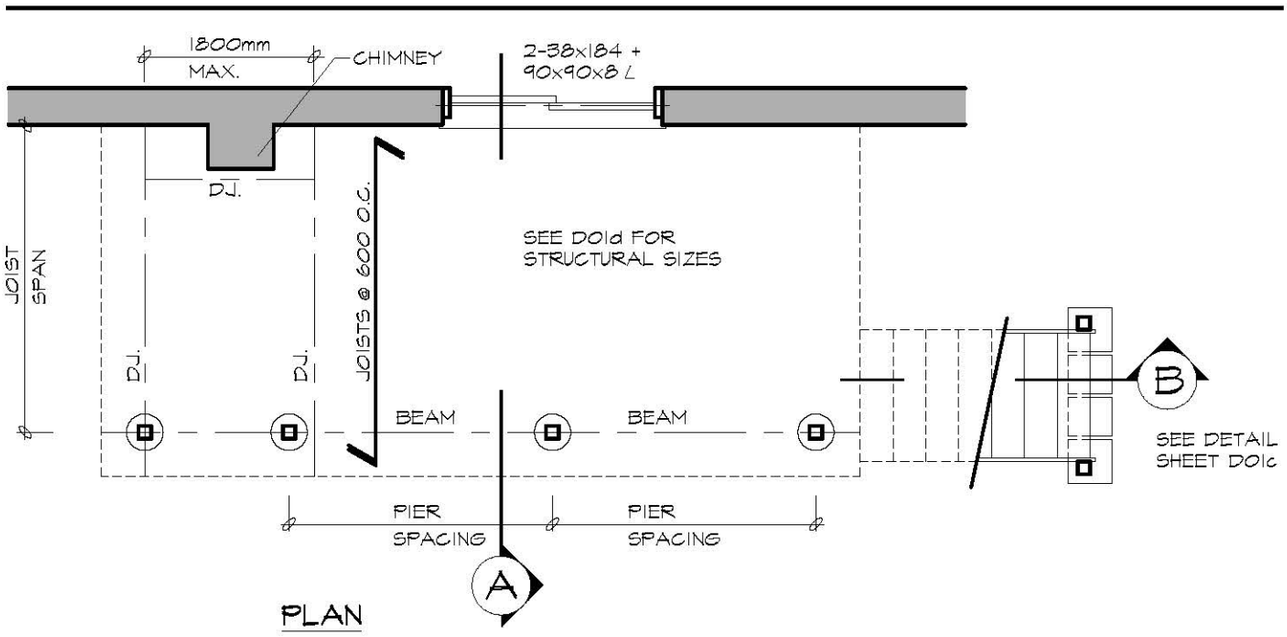
TITLE
# ATTACHED CARPORT
GABLE ROOF, DETAILS

DWG. NO.
C01f
2007

These drawings and are provided for **information purposes only.** They do not necessarily represent every detail of building construction, or all minimum standards which apply. For more detailed information about construction regulations refer to the Ontario Building Code, or a qualified designer.




SECTION 'A'




PLAN

TACBOC STANDARD DETAIL

TITLE

# WOOD DECK

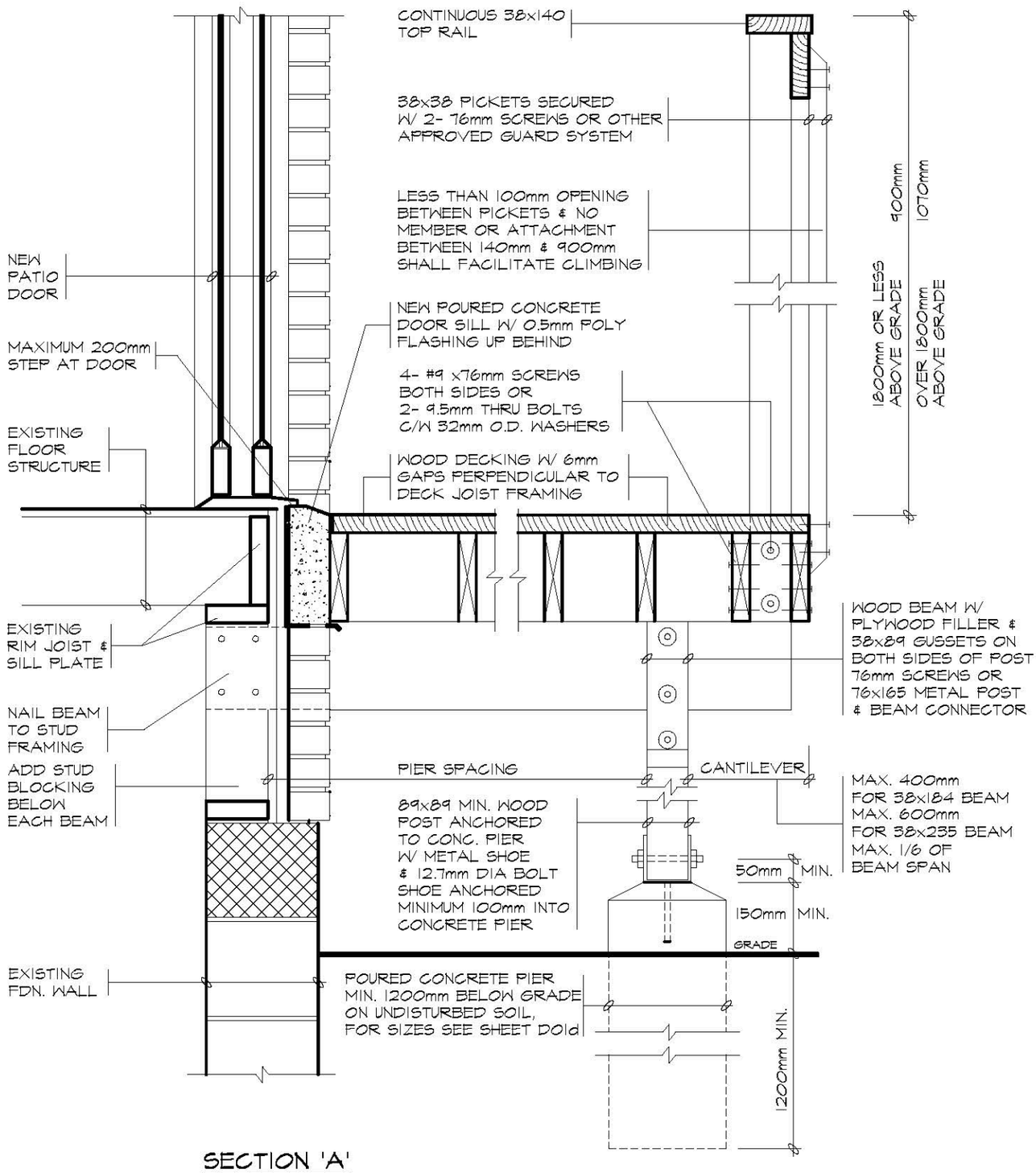
FIXED TO SOLID MASONRY FOUNDATION WALL

PLAN & SECTION

DWG. NO.

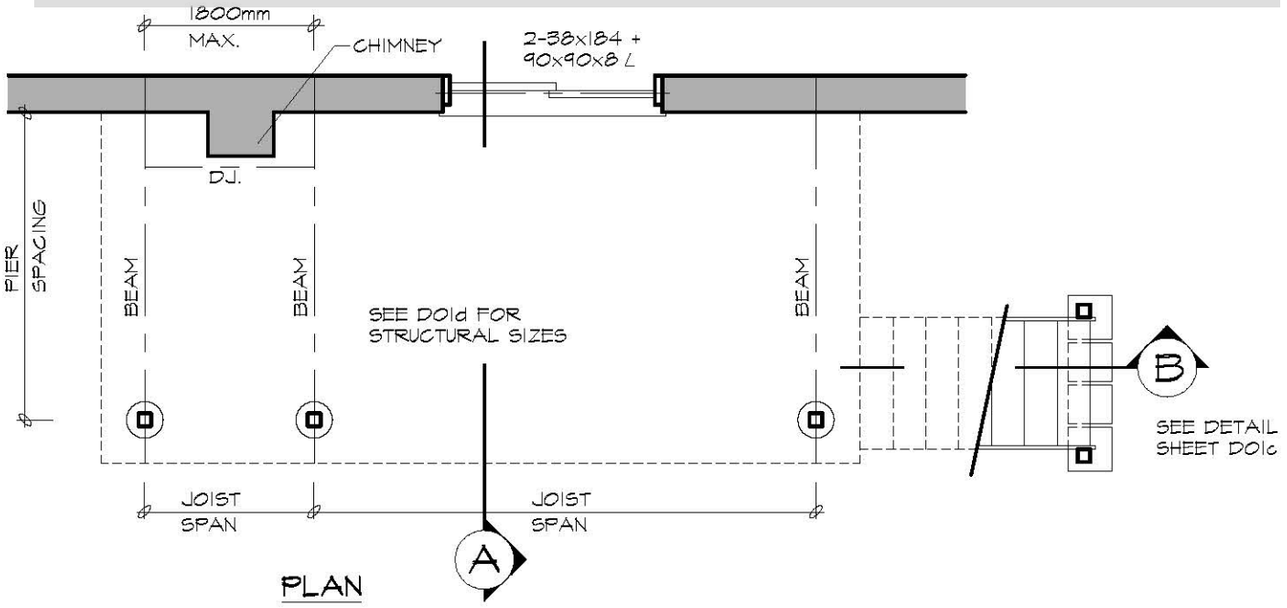
D01a

2007




## SECTION 'A'



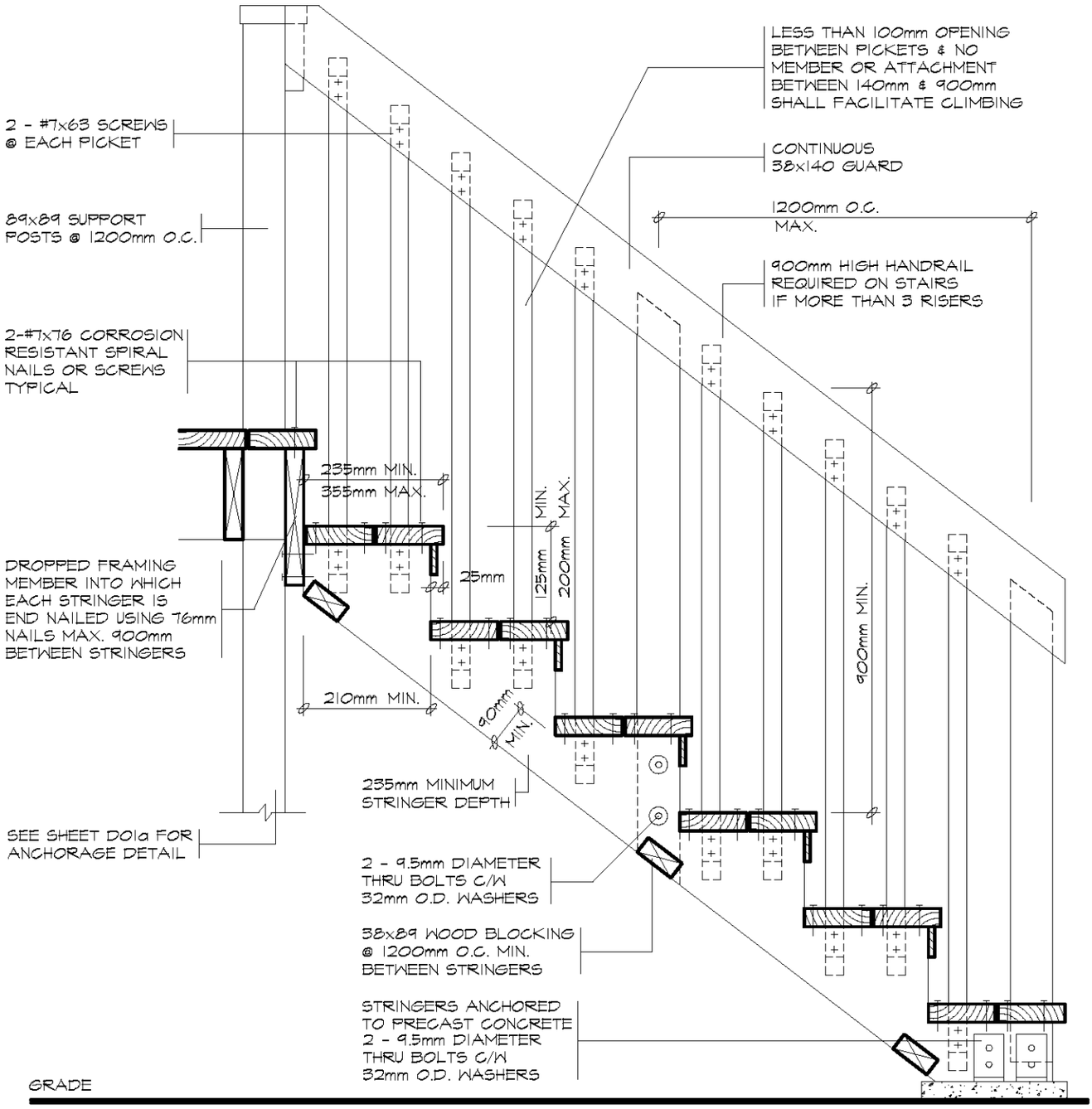



## PLAN

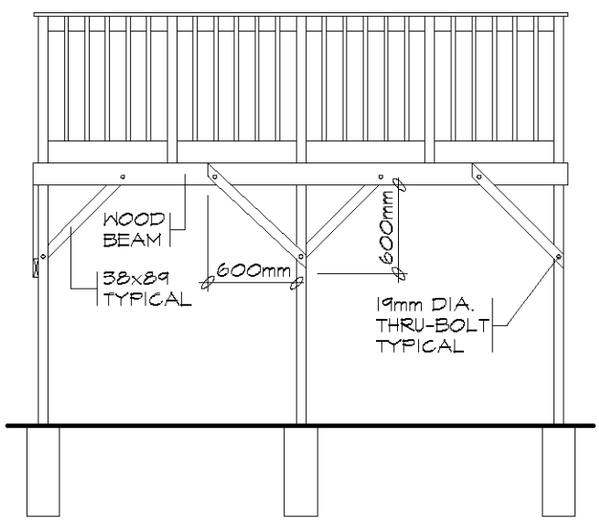
**TACBOC**
**STANDARD DETAIL**

TITLE
# WOOD DECK
FIXED TO BRICK VENEER & WOOD FRAMING
PLAN & SECTION

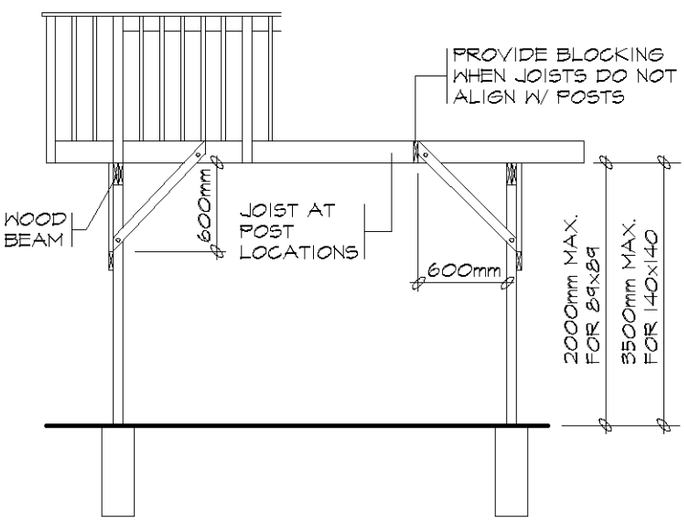
DWG. NO.
D01b
2007




## SECTION 'B'




BRACING PARALLEL TO BEAM




BRACING PERPENDICULAR TO BEAM

FREE STANDING DECKS GREATER THAN 600mm ABOVE GRADE SHALL RESIST LATERAL LOADING & MOVEMENT. ALL POSTS MUST BE BRACED WHERE THE SUPPORTED AREA EXCEEDS THOSE LISTED IN THE TABLE ON D01d



TACBOC
STANDARD DETAIL

TITLE
WOOD DECK
STAIR SECTION
LATERAL SUPPORT FOR FREE STANDING DECKS

DWG. NO.
D01c
2007

## BEAM SIZING TABLE

| SUPPORTED JOIST LENGTH (mm) | LIVE LOAD 1.9 kPa | | | LIVE LOAD 2.5 kPa | | | LIVE LOAD 3.0 kPa | | |
|---|---|---|---|---|---|---|---|---|---|
| | PIER SPACING (mm) | | | PIER SPACING (mm) | | | PIER SPACING (mm) | | |
| | 2000 | 3000 | 4000 | 2000 | 3000 | 4000 | 2000 | 3000 | 4000 |
| 1500 | 2/38x140 | 2/38x184 | 3/38x235 | 2/38x140 | 3/38x184 | 3/38x235 | 3/38x140 | 2/38x235 | 2/38x286 |
| 2000 | 2/38x140 | 3/38x184 | 3/38x235 | 2/38x184 | 2/38x235 | 3/38x286 | 2/38x184 | 2/38x235 | 3/38x286 |
| 2500 | 2/38x184 | 2/38x235 | 3/38x286 | 2/38x184 | 3/38x235 | 3/38x286 | 2/38x184 | 3/38x235 | 4/38x286 |
| 3000 | 2/38x184 | 2/38x235 | 3/38x286 | 2/38x184 | 3/38x235 | 4/38x286 | 2/38x184 | 3/38x235 | 4/38x286 |
| 3500 | 2/38x184 | 3/38x235 | 3/38x286 | 2/38x184 | 3/38x235 | 4/38x286 | 3/38x184 | 3/38x286 | N/A |
| 4000 | 2/38x184 | 3/38x235 | 4/38x286 | 2/38x184 | 3/38x286 | N/A | 3/38x184 | 3/38x286 | N/A |

## JOIST SIZING TABLE

| JOIST SPAN (mm) | LIVE LOAD 1.9 kPa | | | LIVE LOAD 2.5 kPa | | | LIVE LOAD 3.0 kPa | | |
|---|---|---|---|---|---|---|---|---|---|
| | JOIST SPACING (mm) | | | JOIST SPACING (mm) | | | JOIST SPACING (mm) | | |
| | 300 | 400 | 600 | 300 | 400 | 600 | 300 | 400 | 600 |
| 2000 | 38x140 | 38x140 | 38x140 | 38x140 | 38x140 | 38x140 | 38x140 | 38x140 | 38x140 |
| 2500 | 38x140 | 38x140 | 38x184 | 38x140 | 38x140 | 38x184 | 38x140 | 38x184 | 38x184 |
| 3000 | 38x140 | 38x184 | 38x184 | 38x184 | 38x184 | 38x235 | 38x184 | 38x184 | 38x235 |
| 3500 | 38x184 | 38x184 | 38x235 | 38x184 | 38x235 | 38x235 | 38x235 | 38x235 | 38x235 |
| 4000 | 38x235 | 38x235 | 38x286 | 38x235 | 38x235 | 38x286 | 38x235 | 38x235 | 38x286 |

## FOOTING SIZES

SOIL BEARING CAPACITIES (kPa)

| SOIL TYPE | BEARING PRESSURE (kPa) |
|---|---|
| SOFT CLAY | 40 |
| LOOSE SAND OR GRAVEL | 50 |
| FIRM CLAY | 75 |
| DENSE OR COMPACT SILT | 100 |
| STIFF CLAY | 150 |
| DENSE COMPACT SAND OR GRAVEL | 150 |
| TILL | 200 |
| CLAY SHALE | 300 |
| SOUND ROCK | 500 |

## PIER SIZES

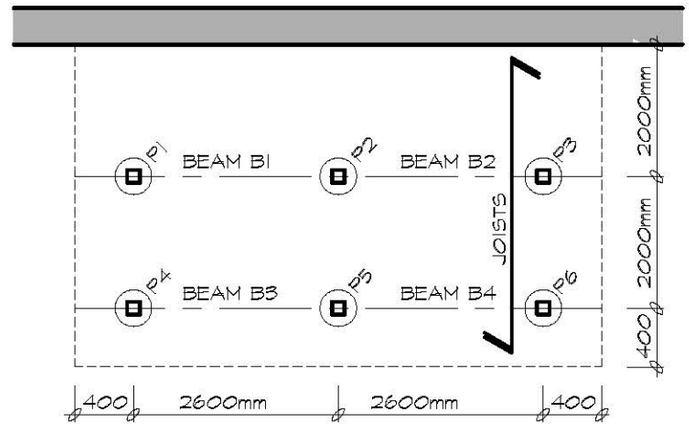
| DIAMETER (mm) | $M^2$ |
|---|---|
| 200 | 0.03 |
| 250 | 0.05 |
| 300 | 0.08 |
| 350 | 0.10 |
| 400 | 0.13 |
| 500 | 0.20 |
| 600 | 0.30 |

## POST SIZING TABLE

| POST SIZE (mm) | MAXIMUM HEIGHT (M) | MAX. SUPPORTED DECK AREA (M2) LIVE LOAD (kPa) | | |
|---|---|---|---|---|
| | | 1.9 | 2.5 | 3.0 |
| 89x89 | 1.0 | 10.86 | 8.71 | 7.48 |
| | 1.5 | 5.93 | 4.76 | 4.09 |
| | 2.0 | 3.15 | 2.53 | 2.17 |
| 140x140 | 2.0 | 13.67 | 10.98 | 9.43 |
| | 2.5 | 9.32 | 7.48 | 6.43 |
| | 3.0 | 6.35 | 5.10 | 4.38 |
| | 3.5 | 4.41 | 3.54 | 3.04 |

## EXAMPLE PLAN

| PIERS | SUPPORTED DECK AREA |
|---|---|
| P1 | 2 x 1.7 = 3.4m$^2$ |
| P2 | 2 x 2.6 = 5.2m$^2$ |
| P3 | 2 x 1.7 = 3.4m$^2$ |
| P4 | 1.4 x 1.7 = 2.4m$^2$ |
| P5 | 1.4 x 2.6 = 3.6m$^2$ |
| P6 | 1.4 x 1.7 = 2.4m$^2$ |
| **BEAMS** | **SUPPORTED JOIST LENGTH** |
| B1 | 2000mm |
| B2 | 2000mm |
| B3 | 1400mm |
| B4 | 1400mm |
| BEAM SPAN = | 2600mm |
| JOIST SPAN = | 2000mm |




PIER SIZE (M2) = SUPPORTED DECK AREA (M2) x MIN. 1.9 (kpa) LIVE LOAD / SOIL BEARING CAPACITY (kpa)

## GENERAL NOTES

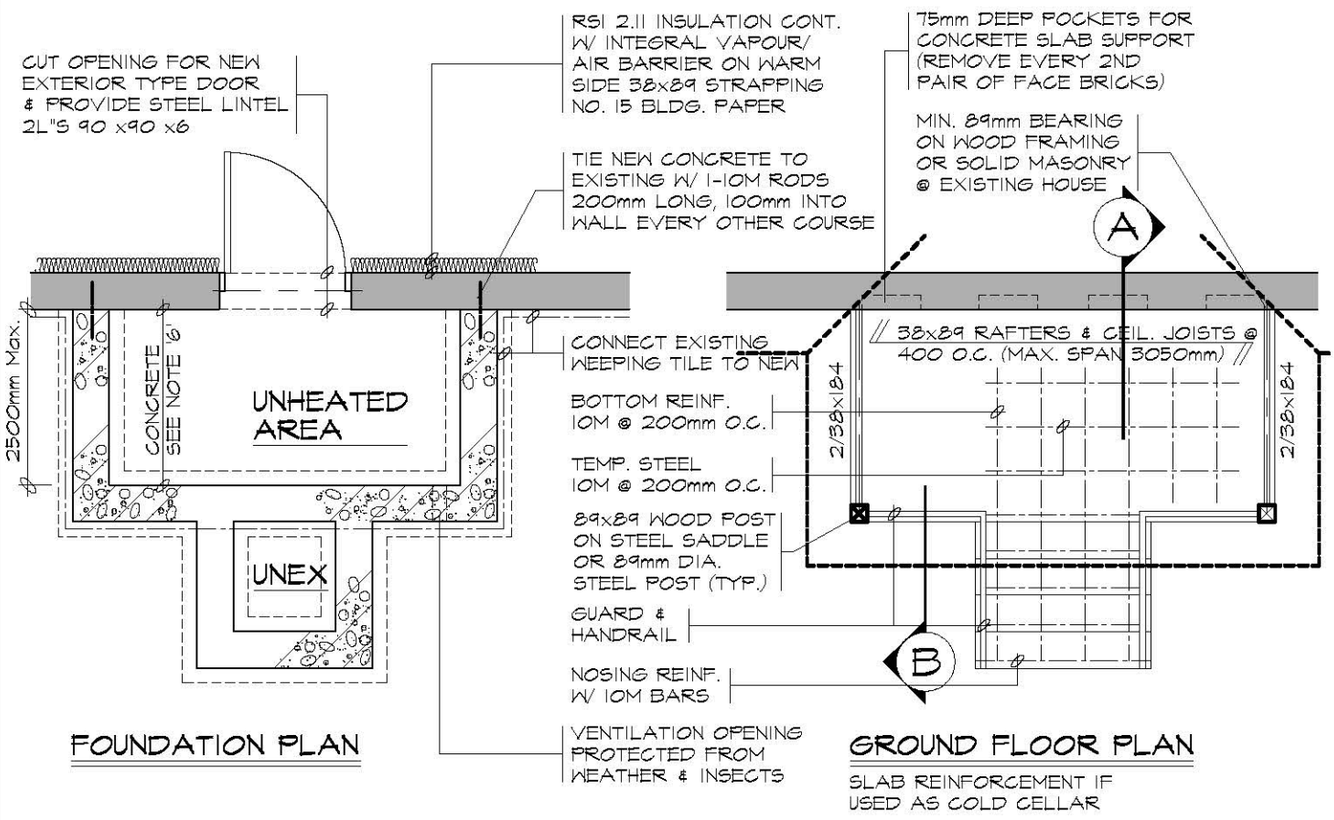
1. A MINIMUM LIVE LOAD OF 1.9 (kPa) SHALL BE APPLIED IN ALL LOCATIONS.
2. THE PRESCRIBED SNOW LOAD FOR 225 SELECTED ONTARIO LOCATIONS IS INDICATED IN COLUMN 12 OF TABLE 1.2 IN SUPPLEMENTARY GUIDELINE SB-1 OF THE ONTARIO BUILDING CODE. THE SNOW LOAD SHALL BE APPLIED AS THE MINIMUM LIVE LOAD WHERE IT IS GREATER THAN 1.9 (kPa)
3. A SITE PLAN OR SURVEY IS REQUIRED SHOWING ALL LOT LINES & DIMENSIONS, SIZE & LOCATION OF ALL EXISTING BUILDINGS & DECKS.
4. LUMBER NO. 2 SPF OR BETTER WOOD POSTS MIN. 89x89 (SOLID). USE CORROSION RESISTANT SPIRAL NAILS OR SCREWS.
5. A DECK IS NOT PERMITTED TO BE SUPPORTED ON BRICK VENEER.
6. CANTILEVERED JOISTS AND BEAMS ARE LIMITED TO 1/6 THE MEMBERS LENGTH.
7. CONCRETE PIERS SHALL BEAR ON UNDISTURBED SOIL. THE BEARING CAPACITY OF THE SOIL SHALL BE DETERMINED PRIOR TO CONSTRUCTION.
8. MAXIMUM HEIGHT REFERS TO THE HEIGHT OF THE POST FROM THE TOP OF THE PIER TO THE DECK SURFACE.
9. BEAMS WITH MORE THAN 2 MEMBERS MUST BE SUPPORTED BY 140x140 POSTS.
10. THE ALLOWABLE SOIL BEARING PRESSURE SHALL BE REDUCED BY 50% WHILE THE WATER IS AT OR NEAR THE BOTTOM OF THE FOOTING EXCAVATION.
11. CONTACT YOUR LOCAL BUILDING DEPARTMENT FOR FURTHER INFORMATION ABOUT LOCAL SOIL BEARING CAPACITIES.
12. JOISTS SPANNING MORE THAN 2100mm ARE TO HAVE BRIDGING AT LEAST EVERY 2100mm O.C..

**TACBOC**
**STANDARD DETAIL**

TITLE
# WOOD DECK
STRUCTURAL SIZING TABLES



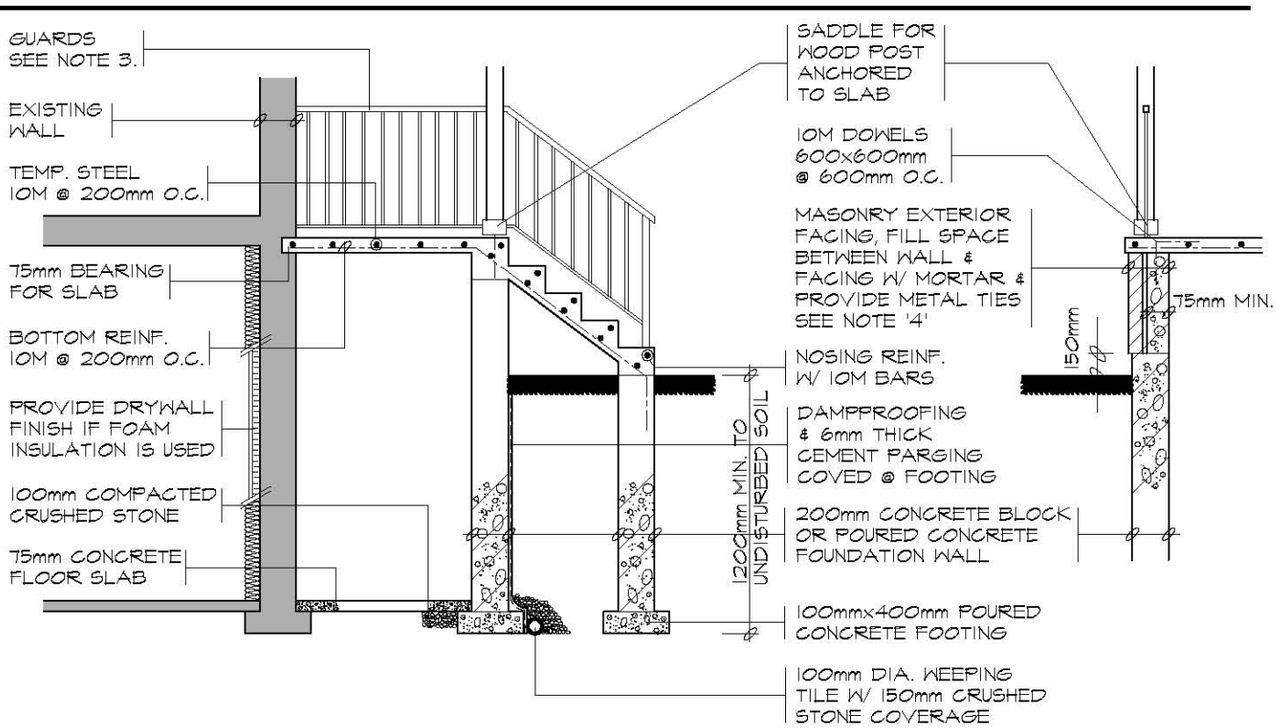
DWG. NO.
D01d
2007




## FOUNDATION PLAN

## GROUND FLOOR PLAN

SLAB REINFORCEMENT IF USED AS COLD CELLAR




## SECTION 'A'

## SECTION 'B'



## GENERAL NOT

1. EXTERIOR STAIRS

   125mm - 200mm RISE
   210mm - 355mm RUN
   235mm - 355mm TREAD
   STEPS ARE TO BE UNIFORM THROUGHOUT FLIGHT

2. HANDRAILS

   ARE REQUIRED WHERE STEPS HAVE MORE THAN 3 RISERS. HANDRAIL HEIGHT 800mm - 965mm

3. GUARDS

   ARE REQUIRED AROUND CONCRETE SLAB IF MORE THAN 600mm ABOVE GRADE & ON BOTH SIDES OF STAIRS
   MINIMUM 900mm HIGH FOR STAIRS
   MINIMUM 900mm HIGH FOR PORCHES UP TO 1800mm ABOVE GRADE.
   MINIMUM 1070mm HIGH FOR GREATER HTS.
   MAXIMUM 100mm BETWEEN PICKETS AND NO MEMBER DESIGNED TO FACILITATE CLIMBING BETWEEN 140mm & 900mm

4. MASONRY TIES

   WHEN BRICK FACING IS USED ABOVE GROUND LEVEL, PROVIDE 0.76mm THICK & 22mm WIDE CORROSION RESISTANT METAL TIES @ 600mm HORIZ. & 500mm VERTICAL

5. FOUNDATION WALLS

   THICKNESS OF UNREINFORCED FOUNDATION WALLS LATERALLY SUPPORTED AT THE TOP ARE DEPENDANT UPON HEIGHT OF FINISH GRADE ABOVE BASEMENT FLOOR

   UNIT MASONRY THICKNESS 190mm - MAX. HEIGHT 1200mm
   UNIT MASONRY THICKNESS 240mm - MAX. HEIGHT 1800mm
   UNIT MASONRY THICKNESS 290mm - MAX. HEIGHT 2200mm

6. CONCRETE

   MINIMUM CONCRETE STRENGTH SHALL BE 32Mpa W/ 5%-8% AIR ENTRAINMENT
   CONCRETE SLAB THICKNESS 125mm
   PROVIDE MIN. 50mm CLEAR CONCRETE COVER TO REINFORCING BARS

**TACBOC**
**STANDARD DETAIL**

TITLE

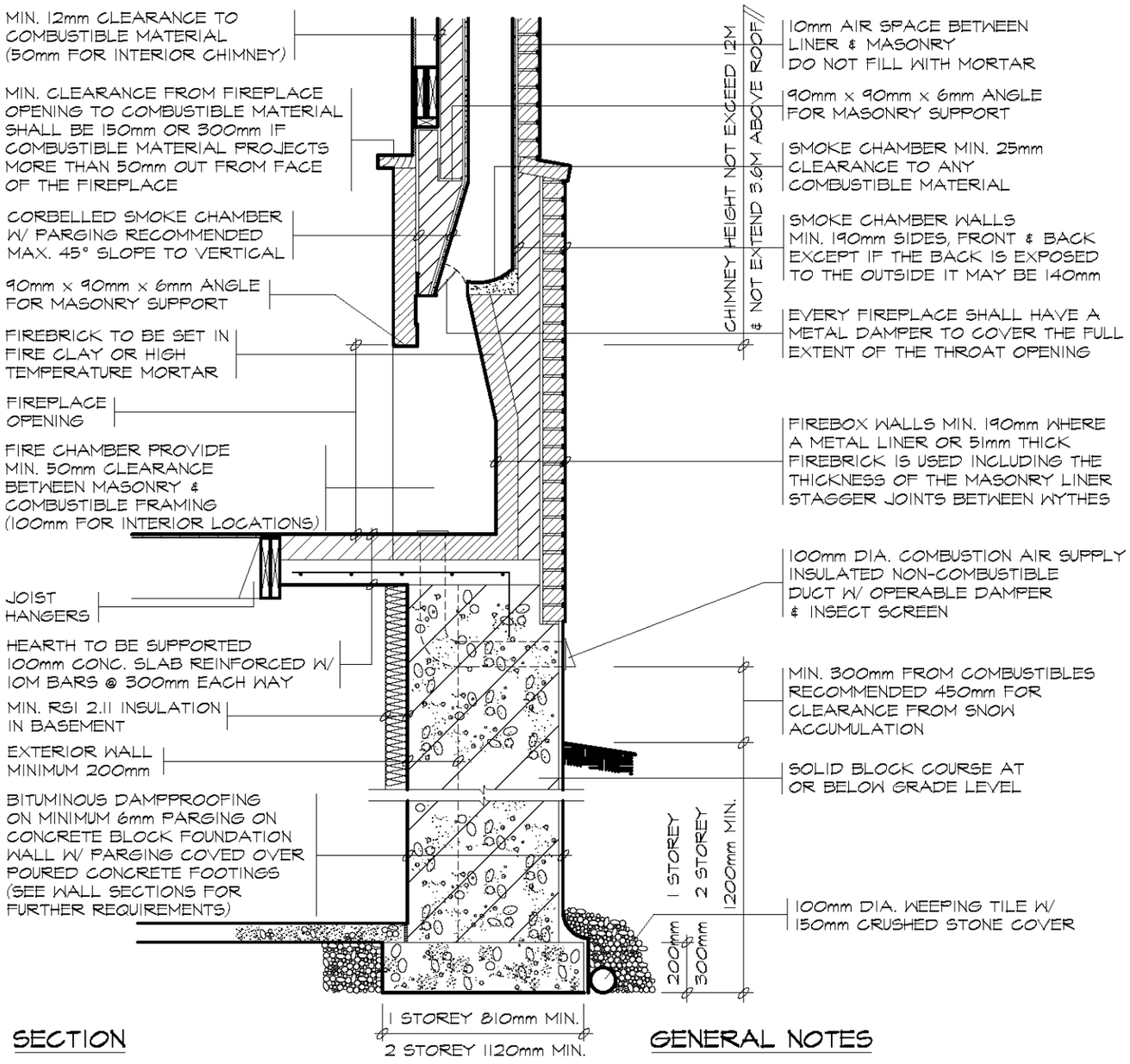
# CONCRETE PORCH & COLD CELLAR

PLANS, SECTIONS & NOTES

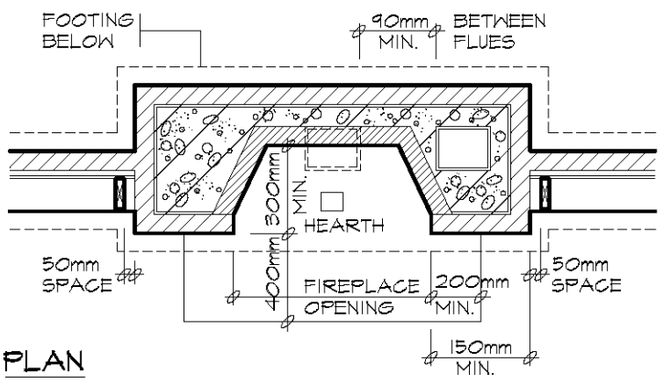
DWG. NO.

D02

2007




## SECTION




## PLAN

## GENERAL NOTES

1. JOISTS OR BEAMS SUPPORTED ON CHIMNEY FLUE SHALL BE SEPARATED BY 290mm OF SOLID MASONRY
2. MAXIMUM ANGLE OF SLOPE FOR SMOKE CHAMBER IS 45° FROM VERTICAL
3. COMBUSTIBLE FLOORING, SUB FLOORING & CEILING FINISHES SHALL HAVE A MINIMUM 12mm CLEARANCE TO MASONRY CHIMNEY.
5. EXCEPT AS REQUIRED IN SENTENCE (2) FIREPLACES SHALL HAVE A NONCOMBUSTIBLE HEARTH EXTENDING NOT LESS THAN 400mm IN FRONT OF THE FIREPLACE OPENING MEASURED FROM THE FACING & NOT LESS THAN 200mm BEYOND EACH SIDE OF THE FIREPLACE OPENING.
6. WHERE THE HEARTH IS ELEVATED MORE THAN 150MM ABOVE THE HEARTH EXTENSION. THE WIDTH OF THE HEARTH EXTENSION SHALL BE INCREASED BY:
   (A) 50mm FOR AN ELEVATION ABOVE 150mm & NOT MORE THAN 300mm &
   (B) AN ADDITIONAL 25mm FOR EVERY 50mm IN ELEVATION ABOVE 300mm
7. INSTALL A CARBON MONOXIDE DETECTOR CONFORMING TO CAN/CGA-6.19 OR UL 2034
8. PROVIDE FIRESTOPPING BETWEEN FLOOR, CEILING LEVELS AND CHIMNEY

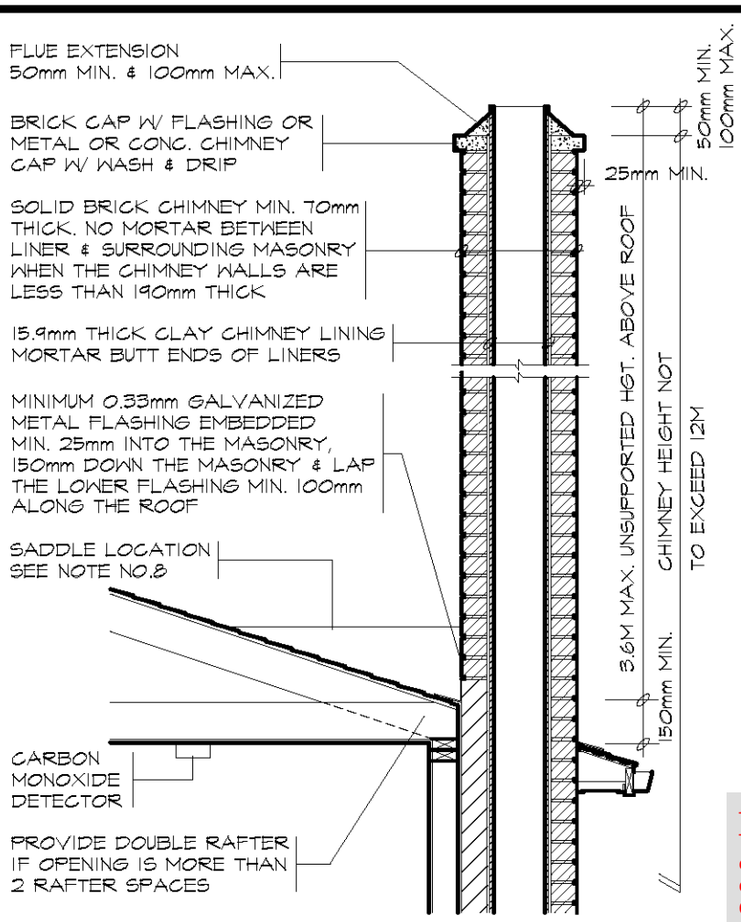
| FIREPLACE OPENING (M2) | CHIMNEY HEIGHT (M) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 3.0 - 4.5 | | >4.5 - 5.9 | | >5.9 - 8.9 | | >8.9 - 12.0 | |
| | FLUE SIZES (mm) | | | | | | | |
| | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. | MIN. | MAX. |
| UP TO 0.15 | 200x200 | 200x200 | 100x200 | 100x200 | 100x200 | 100x200 | 100x200 | 100x200 |
| 0.151 - 0.250 | 200x200 | 200x200 | 200x200 | 200x200 | 200x200 | 200x200 | 200x200 | 200x200 |
| 0.251 - 0.350 | 200x300 | 200x300 | 200x200 | 200x300 | 200x200 | 200x200 | 200x200 | 200x200 |
| 0.351 - 0.500 | 300x300 | 300x300 | 200x300 | 200x300 | 200x300 | 200x300 | 200x200 | 200x300 |
| 0.501 - 0.650 | 300x300 | 300x400 | 300x300 | 300x300 | 300x300 | 300x300 | 200x300 | 200x300 |
| 0.651 - 0.800 | 300x400 | 300x400 | 300x300 | 300x400 | 300x300 | 300x300 | 300x300 | 300x300 |
| 0.801 - 1.00 | 400x400 | 400x400 | 300x400 | 300x400 | 300x400 | 300x400 | 300x300 | 300x300 |
| 1.01 - 1.20 | 400x400 | 400x400 | 400x400 | 400x400 | 300x400 | 300x400 | 300x400 | 300x400 |
| 1.21 - 1.40 | | | 400x400 | 400x400 | 400x400 | 400x400 | 300x400 | 300x400 |
| 1.41 - 1.60 | | | | | 400x400 | 400x400 | 400x400 | 400x400 |
| 1.61 - 1.80 | | | | | | | 400x400 | 400x400 |
| 1.81 - 2.00 | | | | | | | 400x400 | 400x400 |
| COLUMN 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. |

**TACBOC**
**STANDARD DETAIL**

TITLE
# MASONRY FIREPLACE
PLAN & SECTION



DWG. NO.
F01a
2007



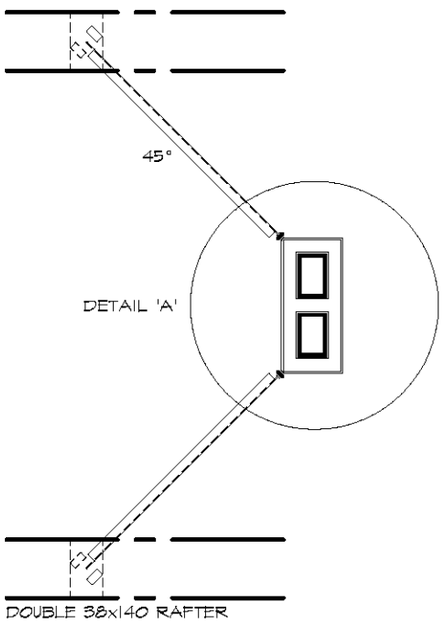

## SECTION

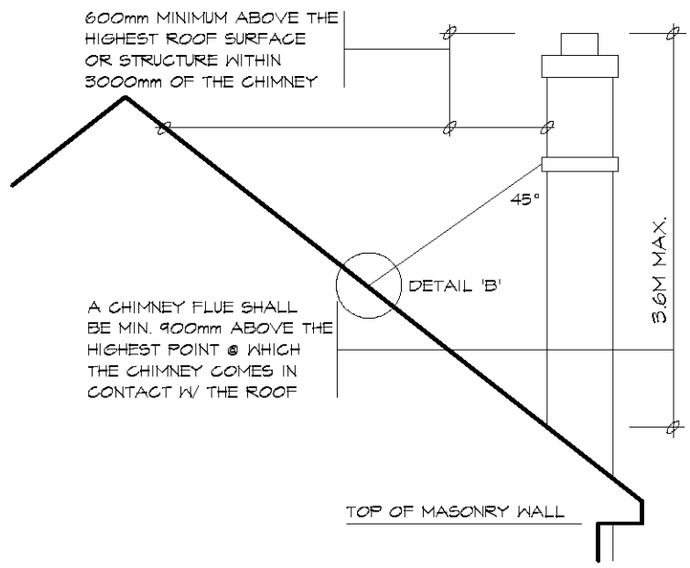
## GENERAL NOTES

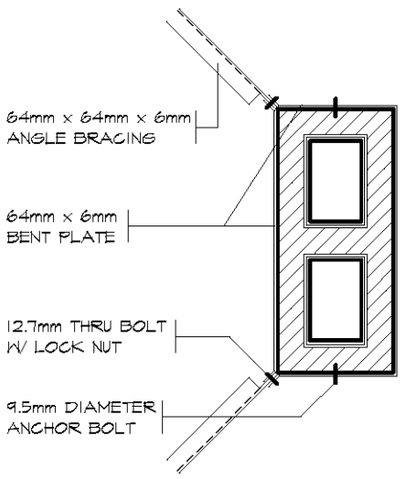
1. ALL STRUCTURAL STEEL SHALL BE 300W GRADE ALL BOLTS SHALL BE A-307 GRADE OR SAE STANDARD GRADE 1 W/ MINIMUM TENSILE STRENGTH OF 414 MPa. ALL EXPOSED STEEL & FASTENERS SHALL BE GALVANIZED OR PAINTED WITH 2 COATS OF ZINK-RICH PAINT.
2. ALL TIMBER SHALL BE MIN. SPRUCE NO. 2 GRADE.
3. ROOF RAFTERS TO BE 38x140 NO. 2 SPR. @ 400mm O.C. W/ A MAXIMUM SPAN OF 3900mm. FOR OTHER ROOF RAFTER CONSTRUCTION, ROOF REINFORCEMENT SHALL BE DESIGNED BY A STRUCTURAL ENGINEER.
4. FOR HOUSE W/ ROOF TRUSS STRUCTURE, TRUSS DESIGN ENGINEER TO DESIGN FOR A MINIMUM ADDITIONAL UNFACTORED CHIMNEY BRACE LOAD OF 4.2KN
5. BASIC HOURLY WIND PRESSURE $q_{\frac{1}{50}}$ = 0.52 kPa. DESIGN ROOF SNOW LOAD = 1.5 kPa.
6. CHIMNEYS W/ MORE THAN DOUBLE FLUE AND/OR EXTENDED MORE THAN 4.40M ABOVE ROOF SHALL BE DESIGNED BY A STRUCTURAL ENGINEER.
7. CHIMNEY BRACES EXCEEDING 2500mm IN LENGTH SHALL BE DESIGNED BY A STRUCTURAL ENGINEER.
8. SADDLE NOT REQUIRED IF FLASHING USED THAT EXTENDS UP THE CHIMNEY TO HEIGHT EQUAL TO NOT LESS THAN 1/6 THE WIDTH OF THE CHIMNEY BUT NOT LESS THAN 150mm UP THE ROOF SLOPE TO A POINT EQUAL IN HEIGHT TO THE FLASHING ON THE CHIMNEY, BUT NOT LESS THAN 1 1/2 TIMES THE SHINGLE EXPOSURE. PROVIDE COUNTERFLASHING AT THE CHIMNEY.



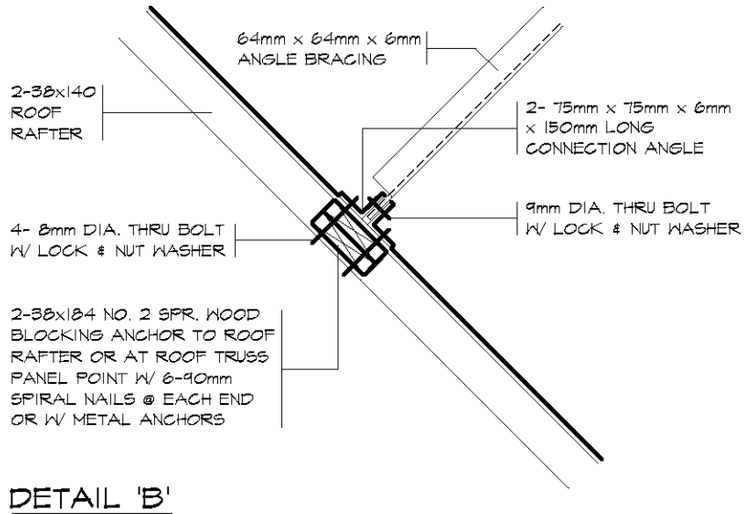
## LATERAL BRACING FOR CHIMNEYS EXTENDING MORE THAN 3.6M ABOVE ROOF




## DETAIL 'A'

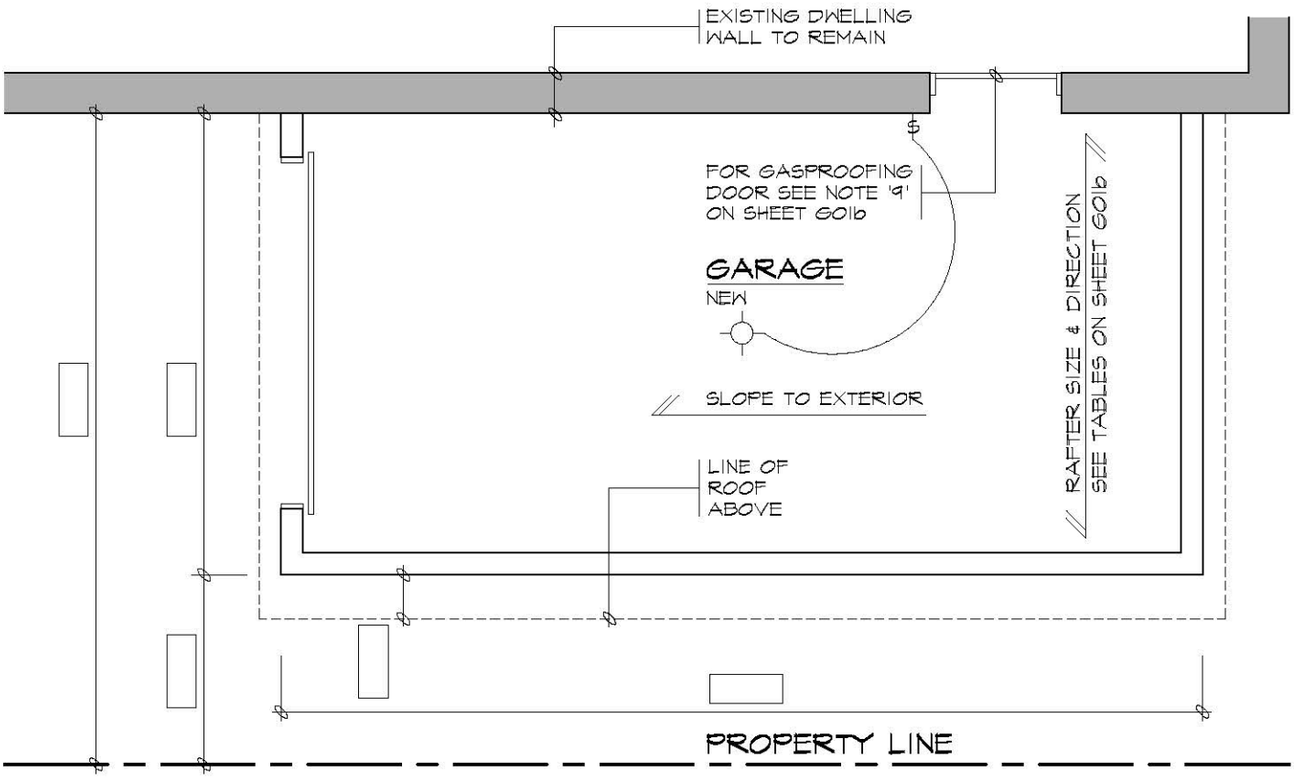



## DETAIL 'B'

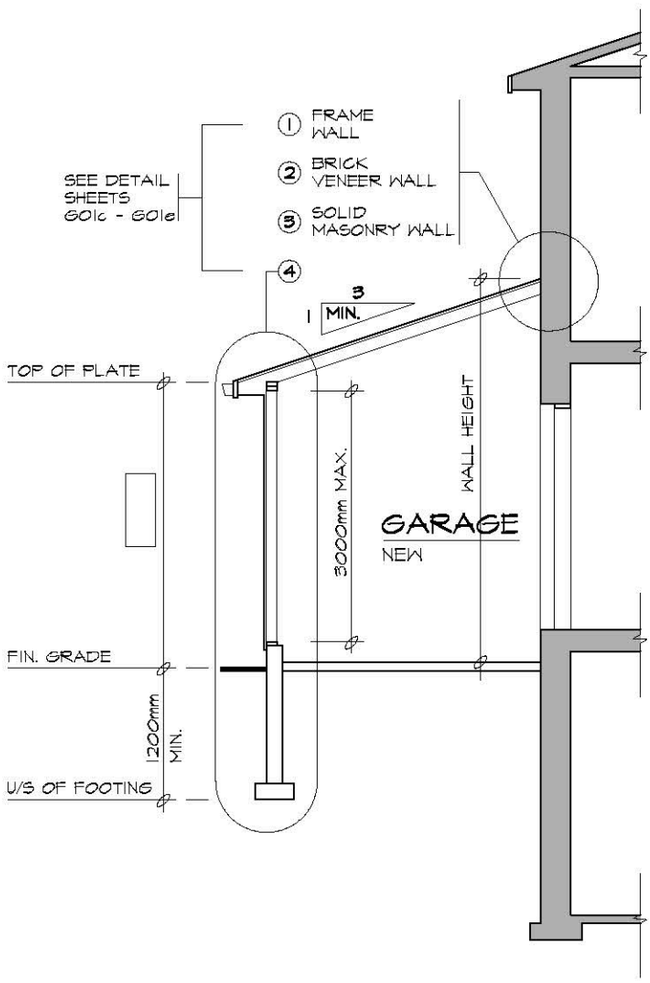
**TACBOC**
**STANDARD DETAIL**

TITLE
MASONRY FIREPLACE
DETAILS

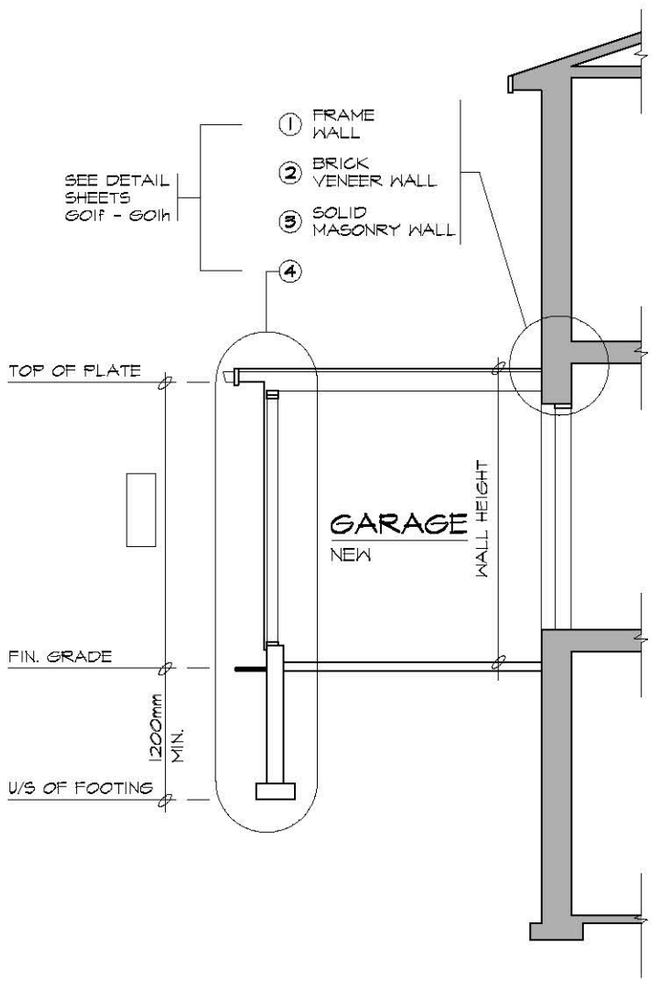
DWG. NO.
F01b
2007




GARAGE PLAN (PROVIDE DIMENSIONS IN BOXES)




SLOPING ROOF




FLAT ROOF



TACBOC
STANDARD DETAIL

TITLE
ATTACHED GARAGE
PLAN & SECTIONS

DWG. NO.
G01a
2007

## ROOF RAFTERS (WHERE NO CEILING IS INSTALLED)

| MAXIMUM CLEAR SPAN (M) | | | | | | |
|---|---|---|---|---|---|---|
| RAFTER SIZE | ROOF SNOW LOAD 1.0kPa | | | ROOF SNOW LOAD 1.5kPa | | |
| | RAFTER SPACING (mm) O.C. | | | RAFTER SPACING (mm) O.C. | | |
| | 300 | 400 | 600 | 300 | 400 | 600 |
| 38x89 | 3.11 | 2.83 | 2.47 | 2.72 | 2.47 | 2.16 |
| 38x140 | 4.90 | 4.45 | 3.89 | 4.28 | 3.89 | 3.40 |
| 38x184 | 6.44 | 5.85 | 5.11 | 5.62 | 5.11 | 4.41 |
| 38x235 | 8.22 | 7.47 | 6.38 | 7.18 | 6.52 | 5.39 |

## ROOF JOISTS (WHERE CEILING IS INSTALLED)

| MAXIMUM CLEAR SPAN (M) | | | | | | |
|---|---|---|---|---|---|---|
| JOIST SIZE | ROOF SNOW LOAD 1.0kPa | | | ROOF SNOW LOAD 1.5kPa | | |
| | JOIST SPACING (mm) O.C. | | | JOIST SPACING (mm) O.C. | | |
| | 300 | 400 | 600 | 300 | 400 | 600 |
| 38x140 | 3.89 | 3.53 | 3.08 | 3.40 | 3.08 | 2.69 |
| 38x184 | 5.11 | 4.64 | 4.05 | 4.46 | 4.05 | 3.54 |
| 38x235 | 6.52 | 5.93 | 5.18 | 5.70 | 5.18 | 4.52 |

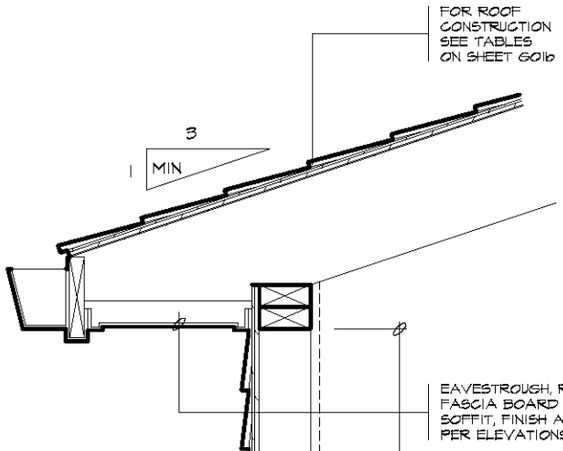
## LINTELS (MAXIMUM 1.5 kPa ROOF SNOW LOAD)

| DOOR WIDTH | LINTELS FOR WOOD FRAMING | | LINTELS FOR BRICK VENEER 90mm | | LINTELS FOR SOLID MASONRY 200mm | |
|---|---|---|---|---|---|---|
| | NOT SUPPORTING THE ROOF | SUPPORTING THE ROOF | NOT SUPPORTING THE ROOF | SUPPORTING THE ROOF | NOT SUPPORTING THE ROOF | SUPPORTING THE ROOF |
| UP TO 3000mm | 2/38x184 | 2/38x286 | 2/38x184 + ANGLE 125x90x8 | 2/38x286 + ANGLE 125x90x8 | 2 ANGLES 150x100x10 | W150x22 + PLATE 200x10 |
| UP TO 4900mm | 2/38x286 | 4/38x286 OR 2-45x300 1.9E LVL | W200x27 + PLATE 200x10 | W200x27 + PLATE 200x10 | MUST BE DESIGNED | MUST BE DESIGNED |

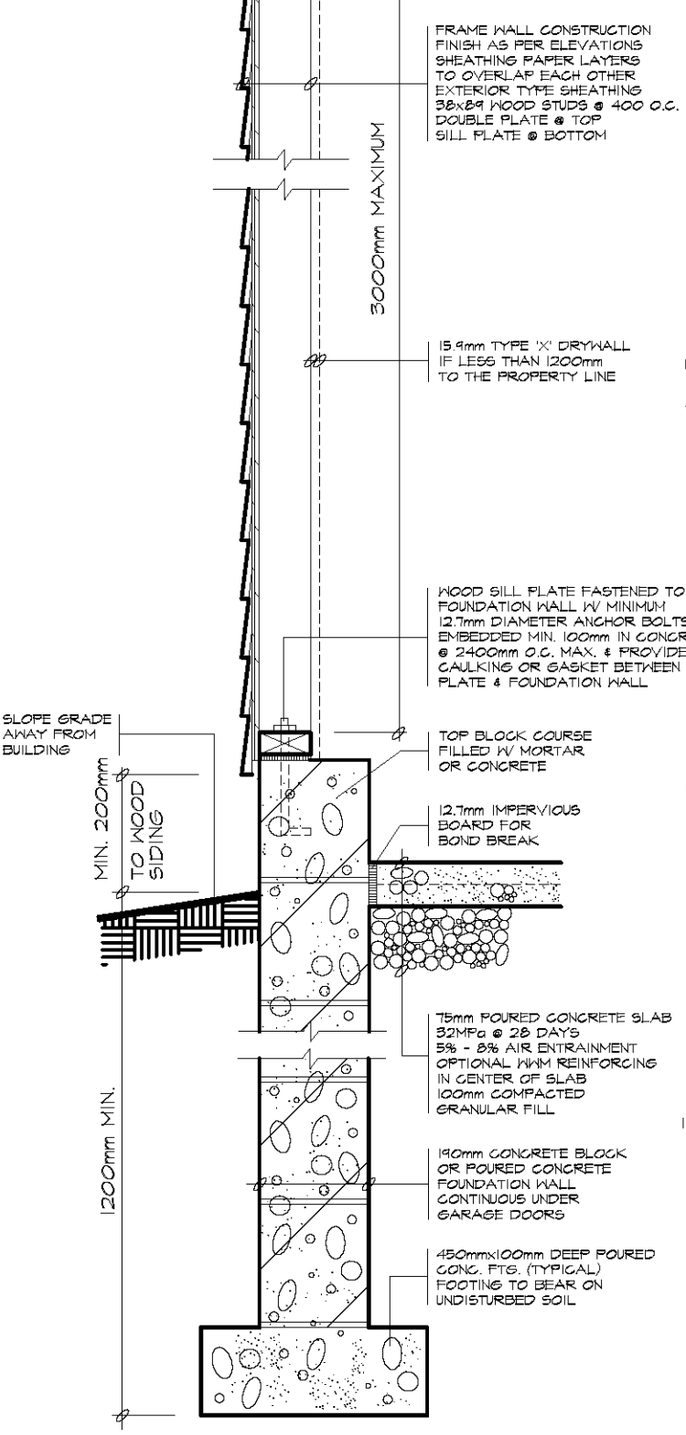
## GENERAL NOTES

These drawings and are provided for **information purposes only.** They do not necessarily represent every detail of building construction, or all minimum standards which apply. For more detailed information about construction regulations refer to the Ontario Building Code, or a qualified designer.

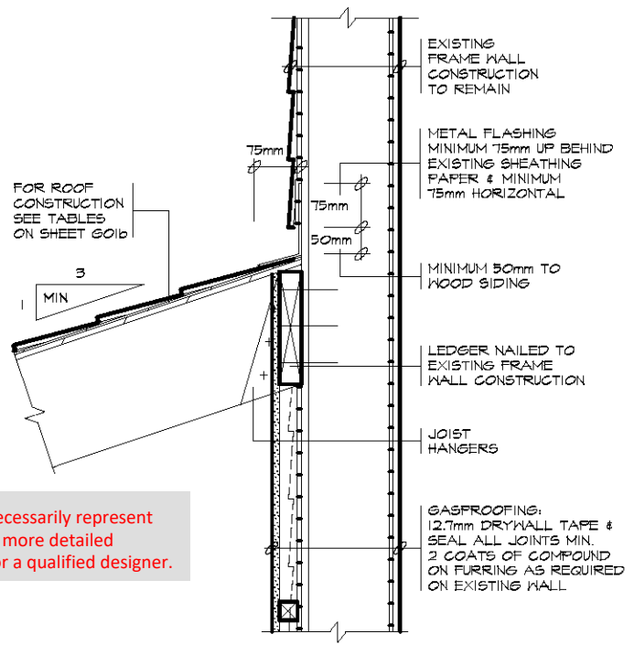
1. ALL LUMBER TO BE NO. 1&2 SPRUCE OR BETTER
2. ALL PLYWOOD SHALL BE STAMPED EXTERIOR GRADE
3. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL
4. IF GARAGE WALL IS LESS THAN 1200mm TO THE PROPERTY LINE PROVIDE 15.9mm TYPE 'X' DRYWALL INTERIOR SHEATHING. NO WINDOWS ARE PERMITTED.
5. IF GARAGE WALL IS LESS THAN 600mm TO THE PROPERTY LINE NON-COMBUSTIBLE CLADDING OR VINYL SIDING W/ GYPSUM SHEATHING IS REQUIRED.
6. GARAGE WALLS ADJOINING DWELLING MUST BE COMPLETELY SEALED TO PREVENT ANY INFILTRATION OF GASES INTO THE DWELLING.
7. CAULK ALL PENETRATIONS SUCH AS HOSE BIB & JOINTS BETWEEN GYPSUM BD. & OTHER SURFACES W/ ACOUSTICAL SEALANT.
8. WHERE ATTACHED GARAGE IS ADJACENT TO AN ATTIC SPACE, CARRY GYPSUM BOARD UP TO ROOF SHEATHING & SEAL W/ FLEXIBLE CAULKING.
9. DOORS BETWEEN THE GARAGE & DWELLING MUST BE EXTERIOR TYPE, TIGHT FITTING, WEATHERSTRIPPED & PROVIDED W/ A SELF CLOSING DEVICE & A DEADBOLT LOCK. DOOR MUST NOT OPEN DIRECTLY INTO A BEDROOM.
10. GARAGE SLAB SHALL BE SLOPED TO DRAIN TO THE OUTSIDE. CONCRETE SHALL BE MIN. 32MPa W/ 5%-8% AIR ENTRAINMENT.
11. ALL ROOF SHEATHING TO BE 9.5mm PLYWOOD OR 11mm OSB, FOR ROOF RAFTERS @ 300mm OR 400mm O.C. USE "H" CLIPS FOR ROOF RAFTERS @ 600mmO.C..
12. STEPPED FOOTINGS, IF REQUIRED, SHALL HAVE A MAXIMUM RISE OF 600mm & A MINIMUM RUN OF 600mm.
13. PROVIDE A LIGHT FIXTURE IN THE GARAGE.
14. STEEL BEAMS TO BE SUPPORTED BY SOLID MASONRY (190mm BEARING ON MASONRY OR 73mm DIA. STEEL COLUMN).
15. LINTELS AND BEAMS TO BE DESIGNED BY A QUALIFIED PERSON FOR SPANS GREATER THAN 4900mm



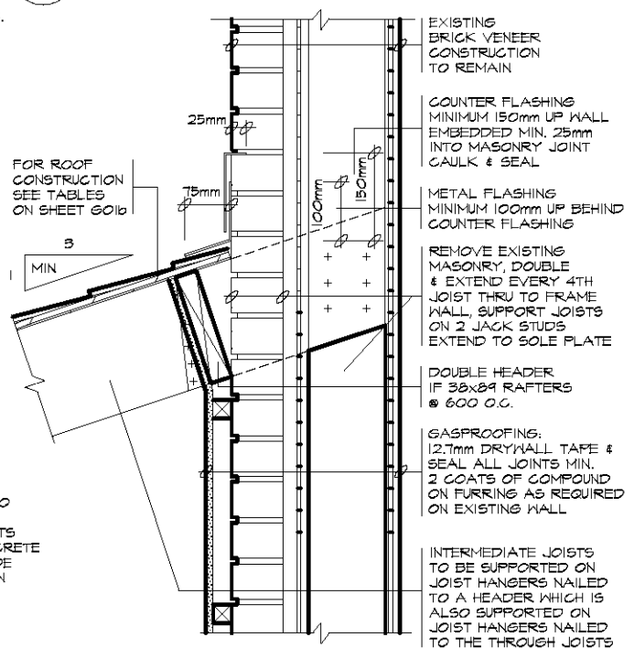


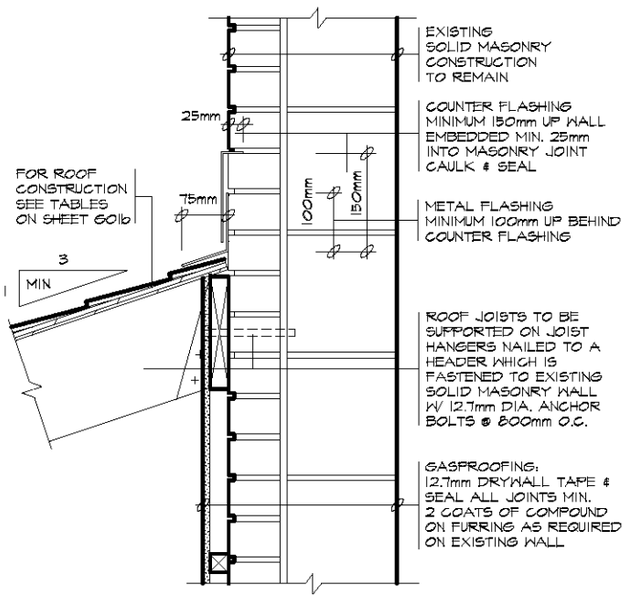

4 FRAME WALL SECTION




1 FRAME WALL




2 BRICK VENEER WALL



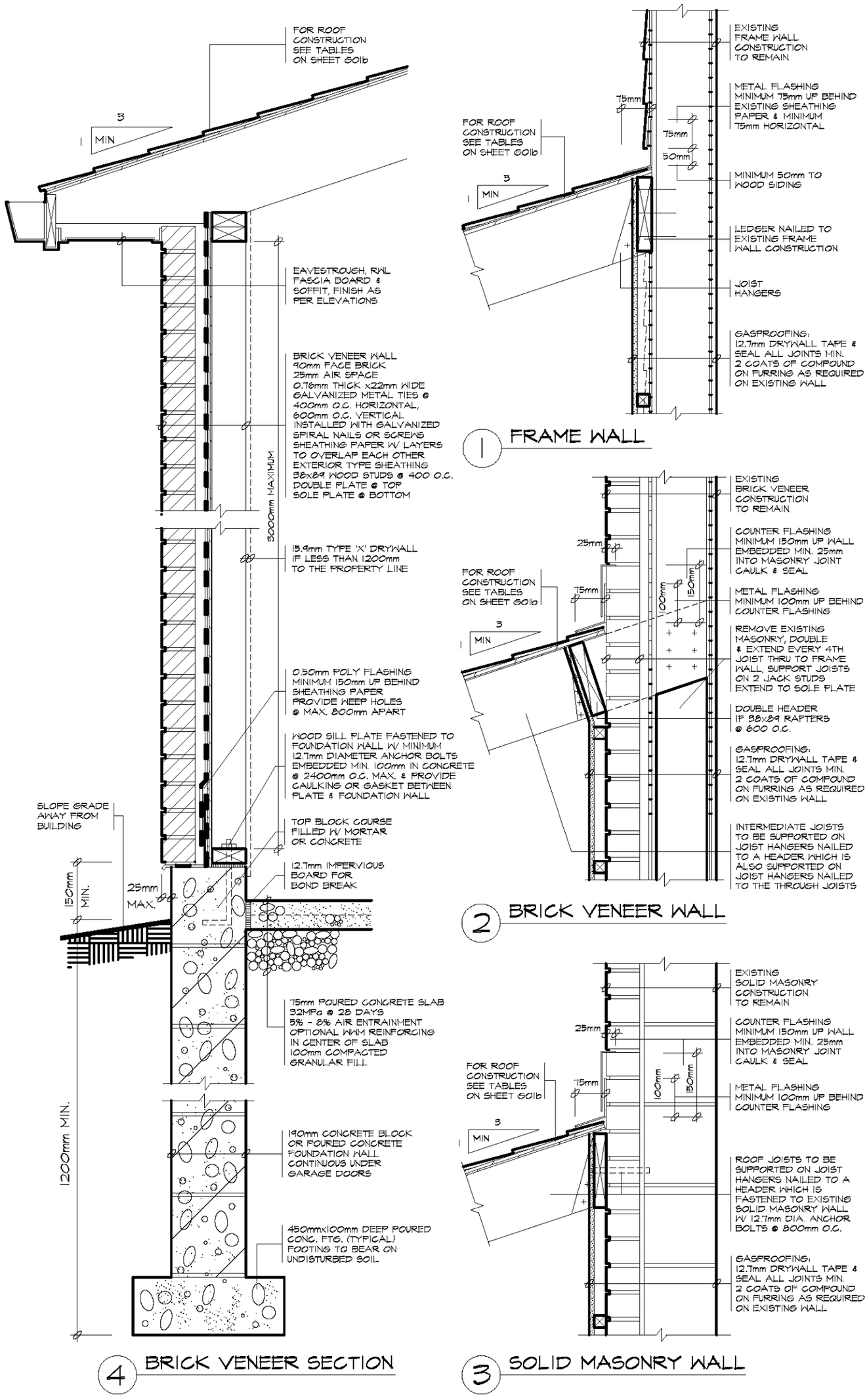

3 SOLID MASONRY WALL

NOTE: THESE DETAILS ARE NOT TO BE USED FOR ADDITION OF LIVING SPACES

TACBOC
STANDARD DETAIL

TITLE
ATTACHED GARAGE
SLOPING ROOF W/ FRAME WALL DETAILS

DWG. NO.
G01c
2007

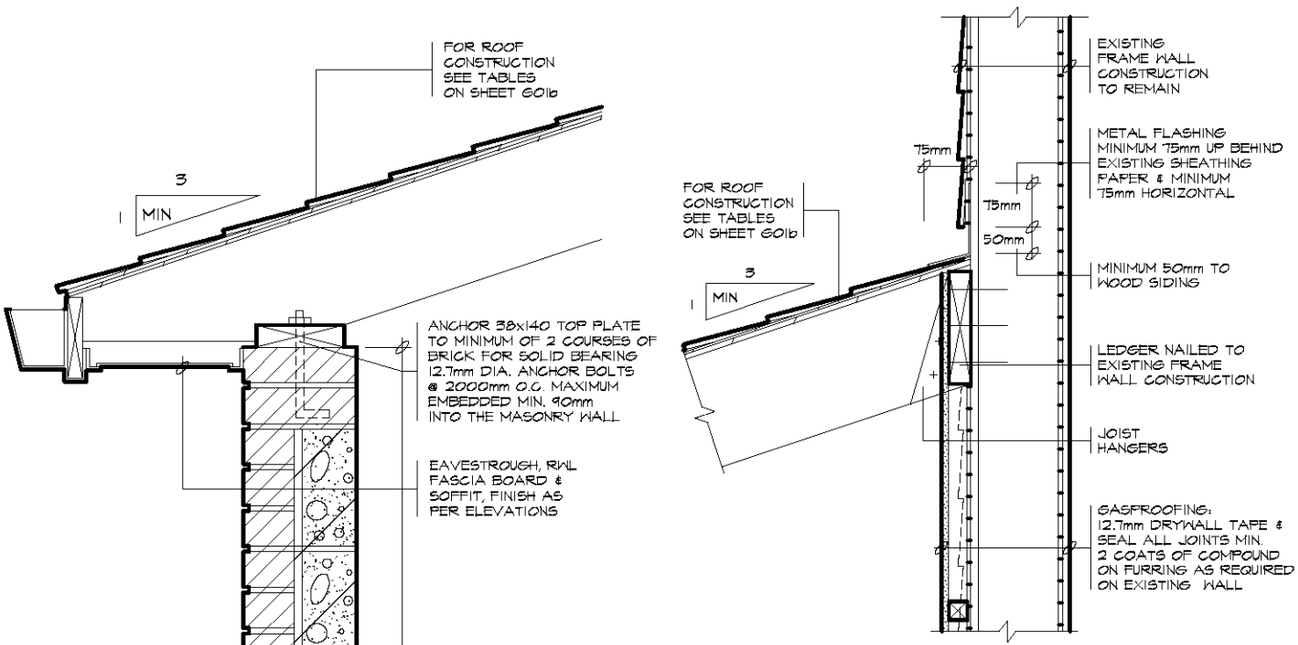




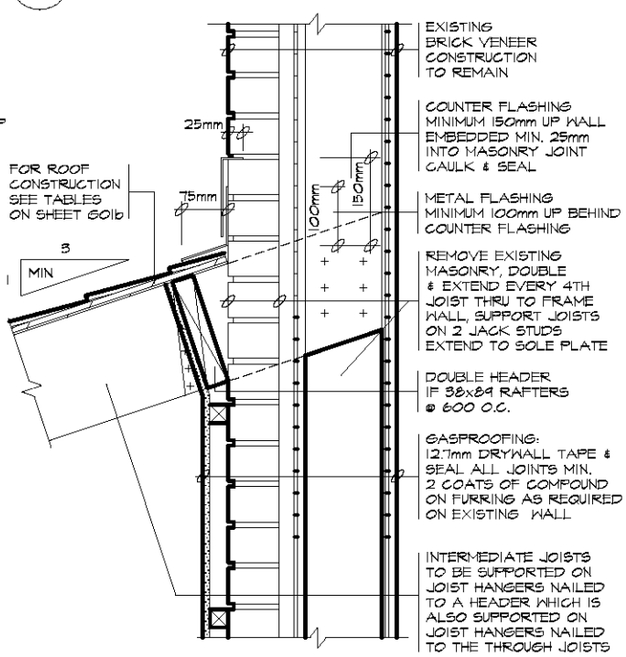

TACBOC
STANDARD DETAIL

TITLE
# ATTACHED GARAGE
## SLOPING ROOF & BRICK VENEER DETAILS

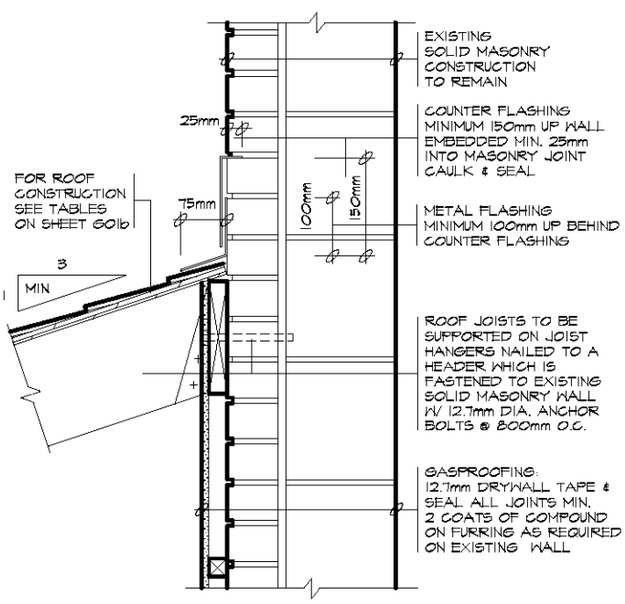
DWG. NO.
G01d
2007



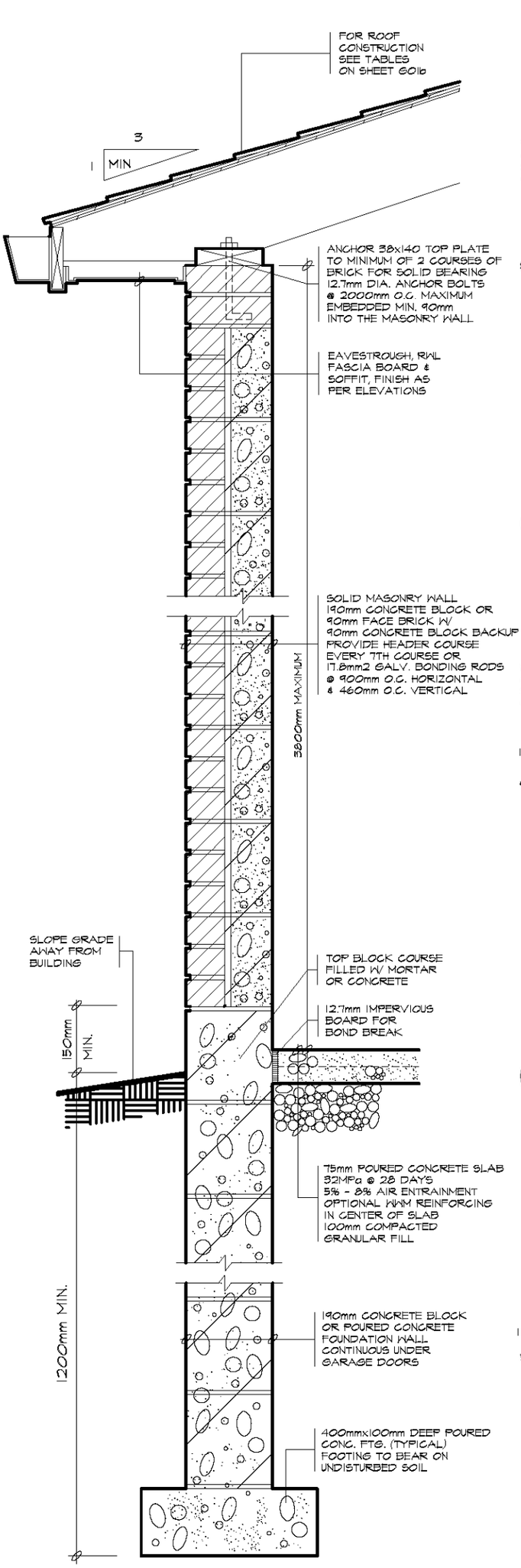

## 1 FRAME WALL




## 2 BRICK VENEER WALL




## 3 SOLID MASONRY WALL




## 4 SOLID MASONRY SECTION



**TACBOC**
**STANDARD DETAIL**

TITLE

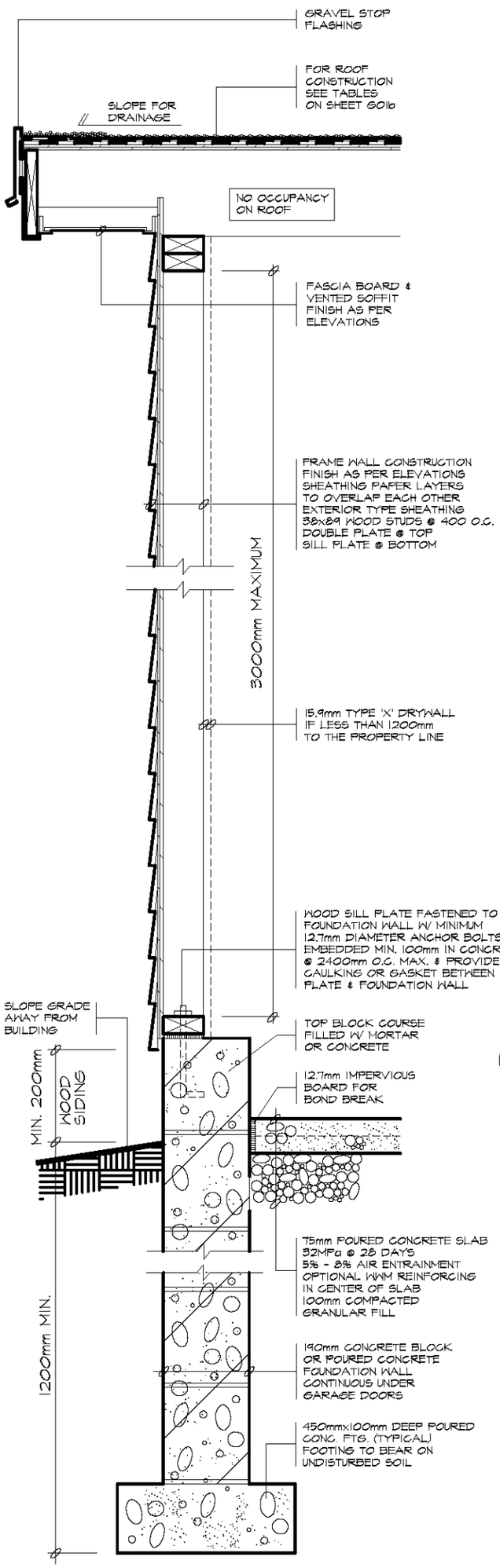
# ATTACHED GARAGE

SLOPING ROOF & SOLID MASONRY DETAILS

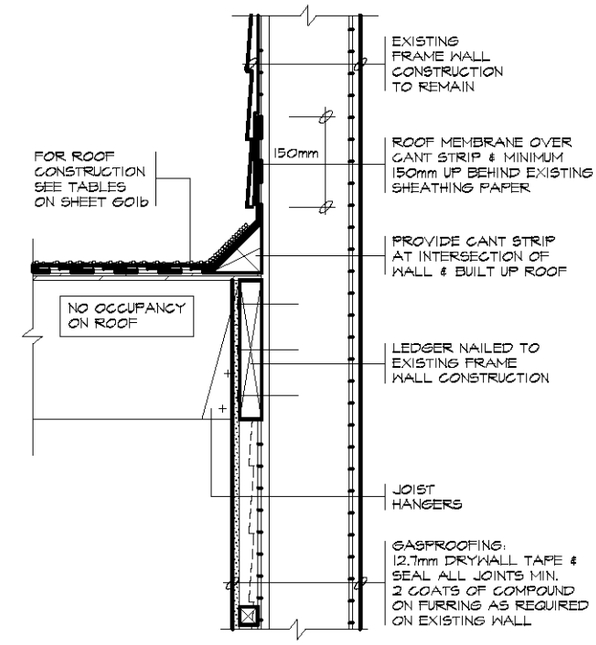
DWG. NO.

G01e

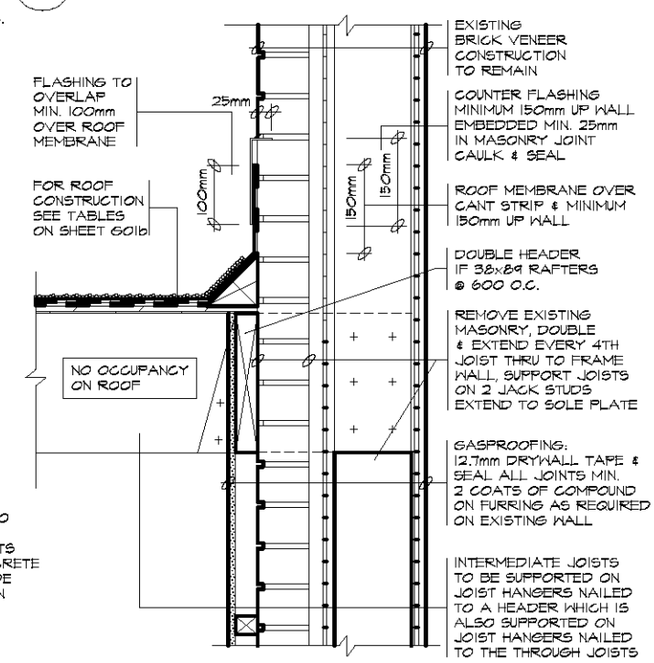
2007



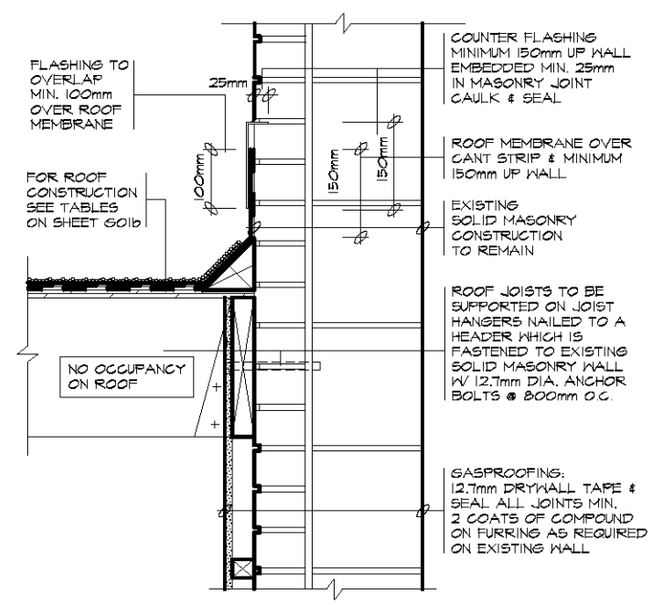

4 WALL SECTION




1 FRAME WALL




2 BRICK VENEER WALL




3 SOLID MASONRY WALL

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**TACBOC**
**STANDARD DETAIL**

TITLE

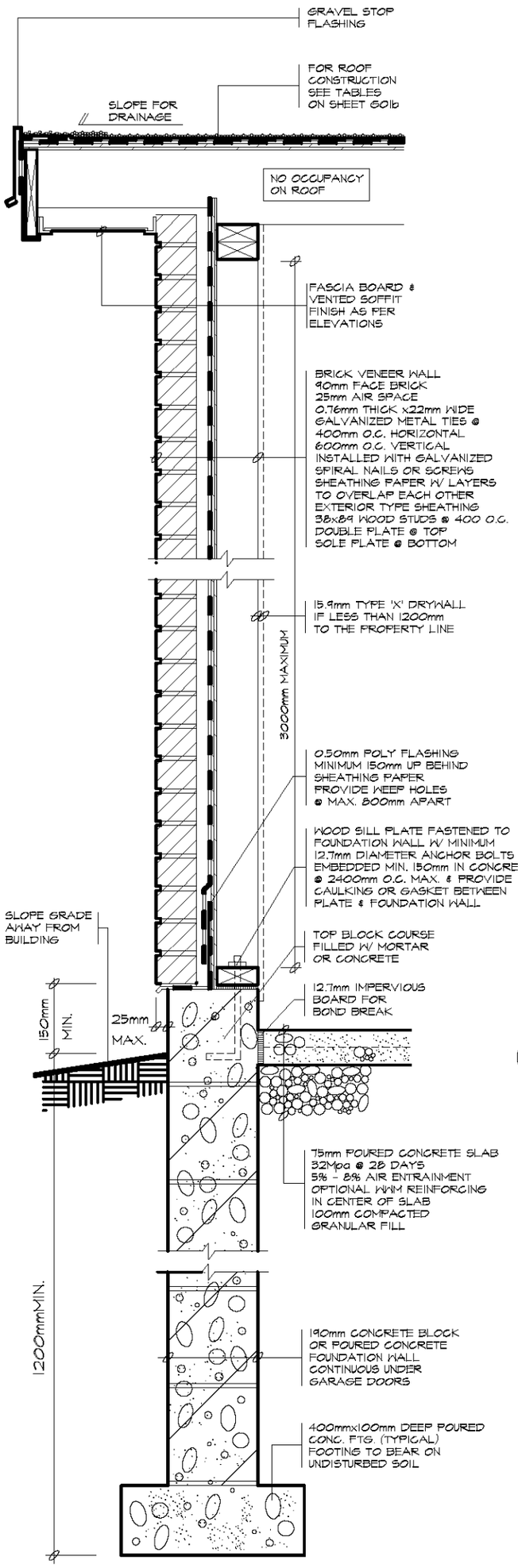
# ATTACHED GARAGE

## FLAT ROOF & FRAME WALL DETAILS

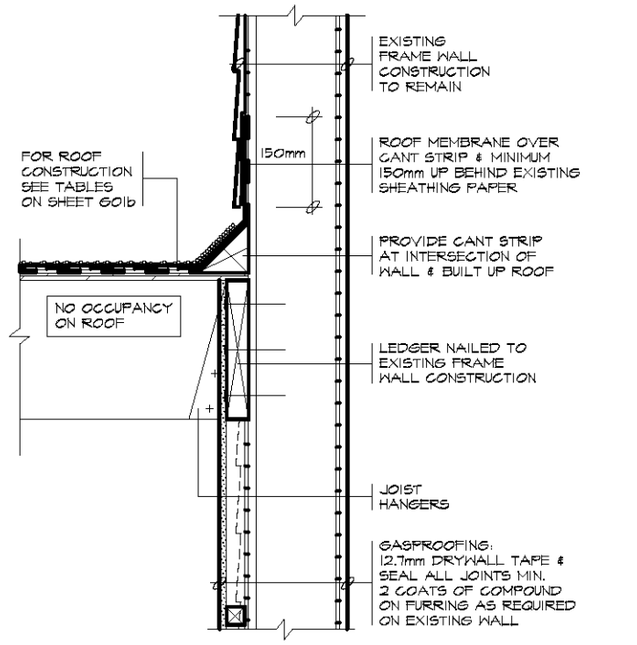
DWG. NO.

G01f

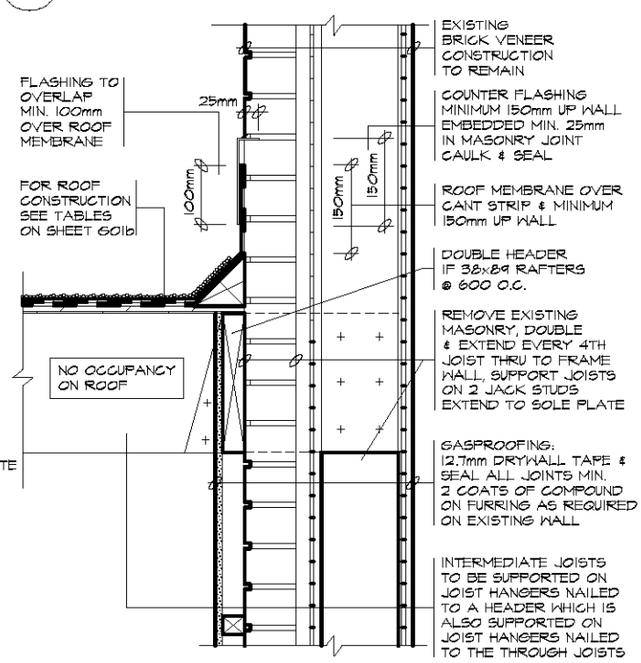
2007



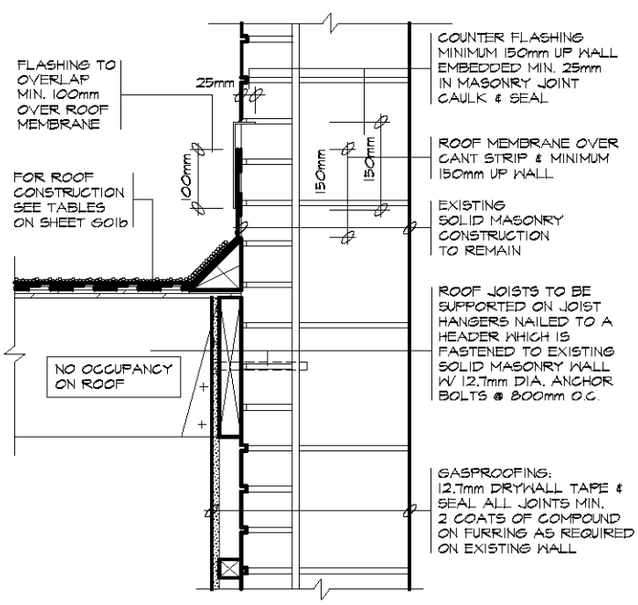

4 WALL SECTION




1 FRAME WALL




2 BRICK VENEER WALL



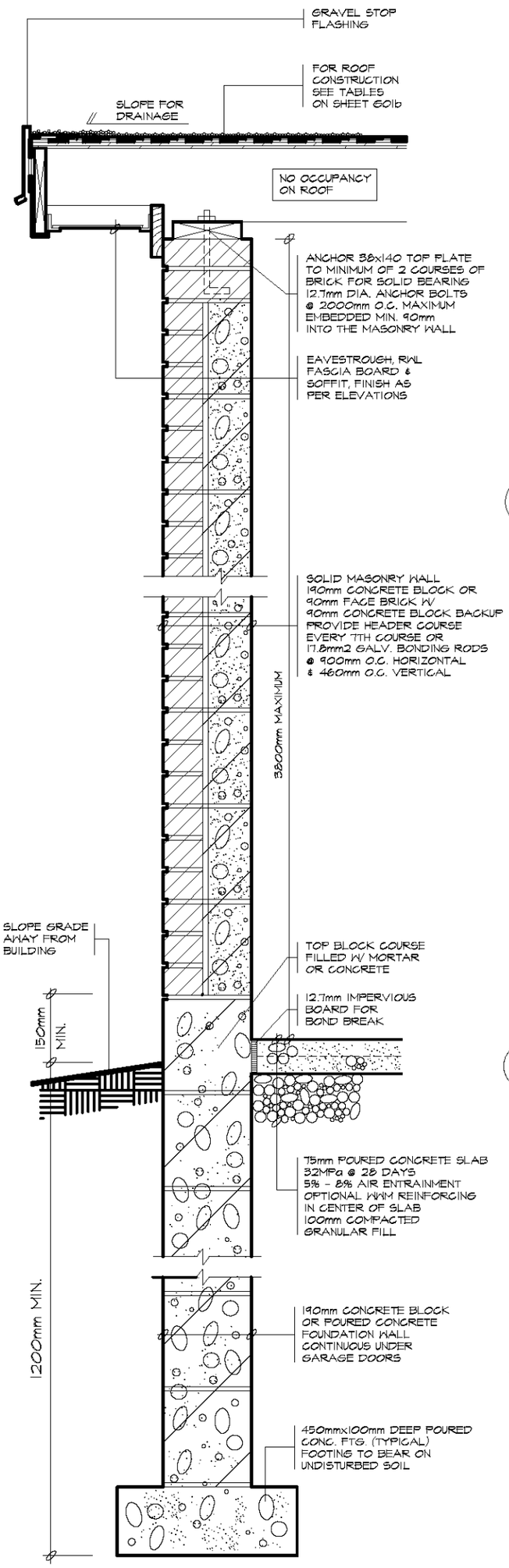

3 SOLID MASONRY WALL



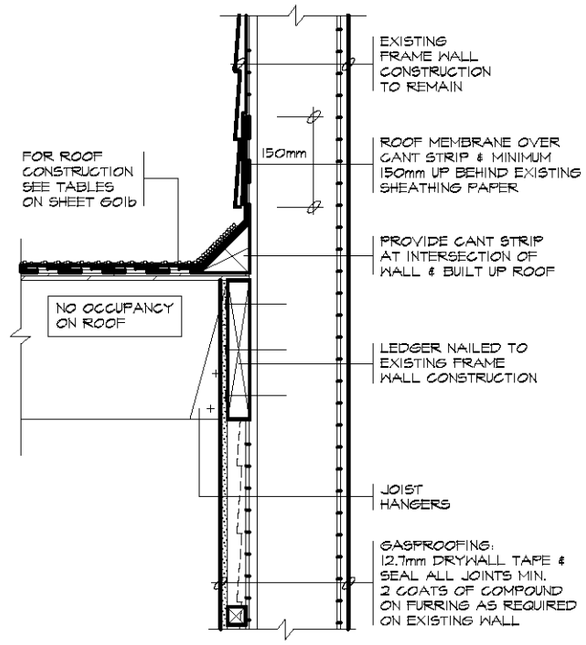
TACBOC
STANDARD DETAIL

TITLE
# ATTACHED GARAGE
## FLAT ROOF & BRICK VENEER DETAILS

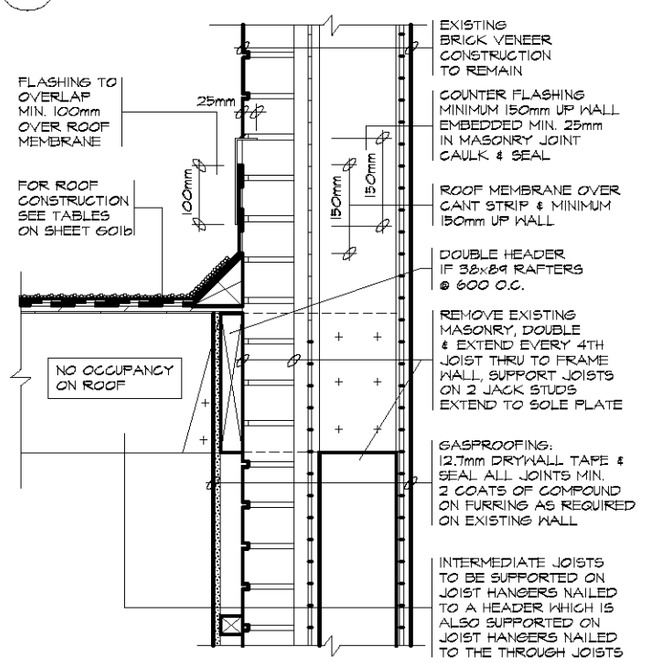
DWG. NO.
G01g
2007



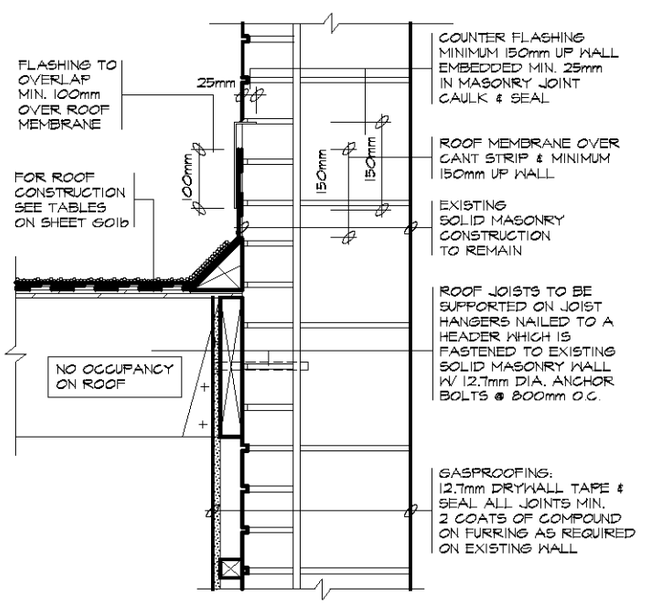

4 WALL SECTION




1 FRAME WALL




2 BRICK VENEER WALL




3 SOLID MASONRY WALL



TACBOC
STANDARD DETAIL

TITLE
# ATTACHED GARAGE
## FLAT ROOF & SOLID MASONRY DETAILS

DWG. NO.
G01h
2007

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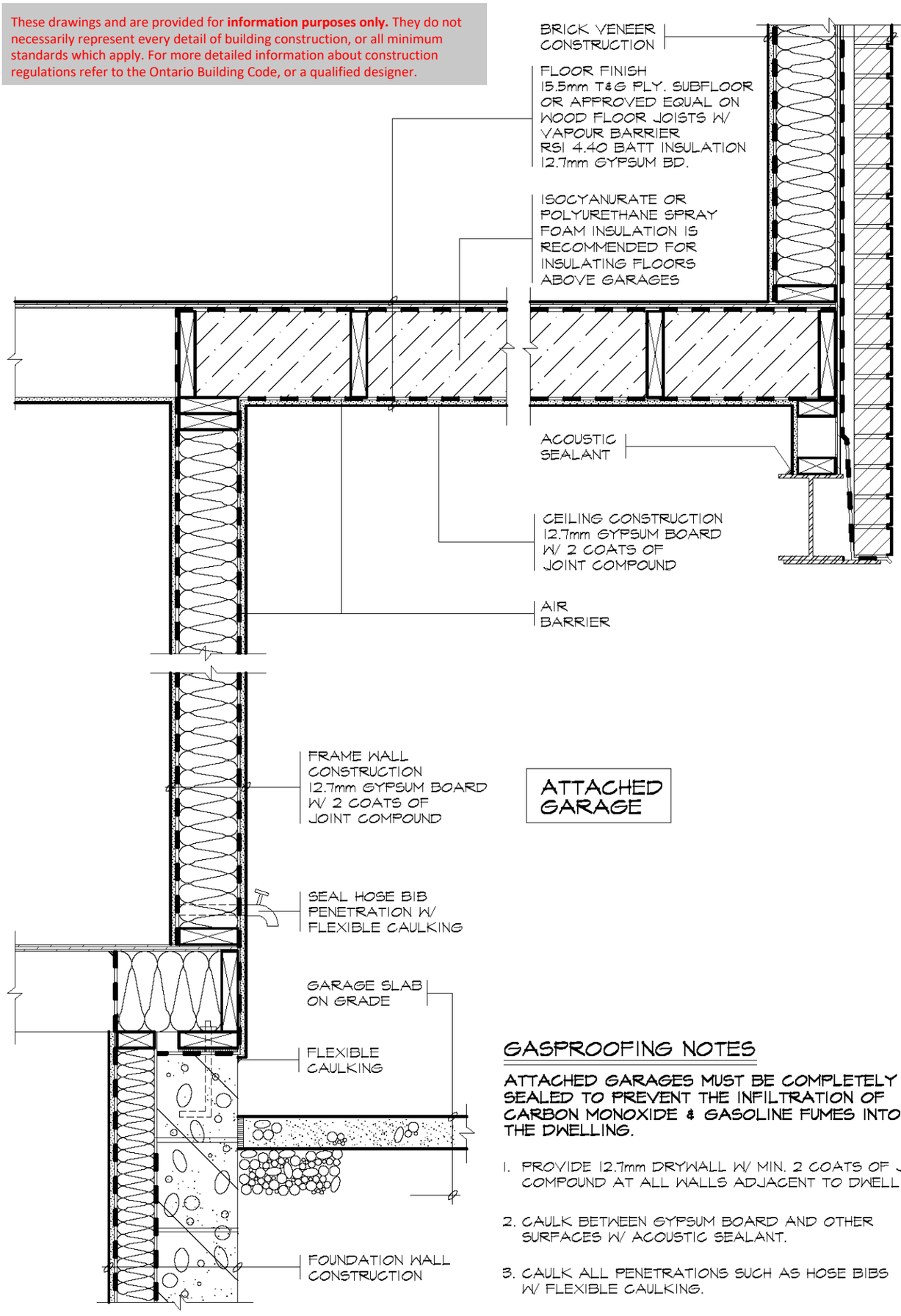



# ATTACHED GARAGE

## GASPROOFING NOTES

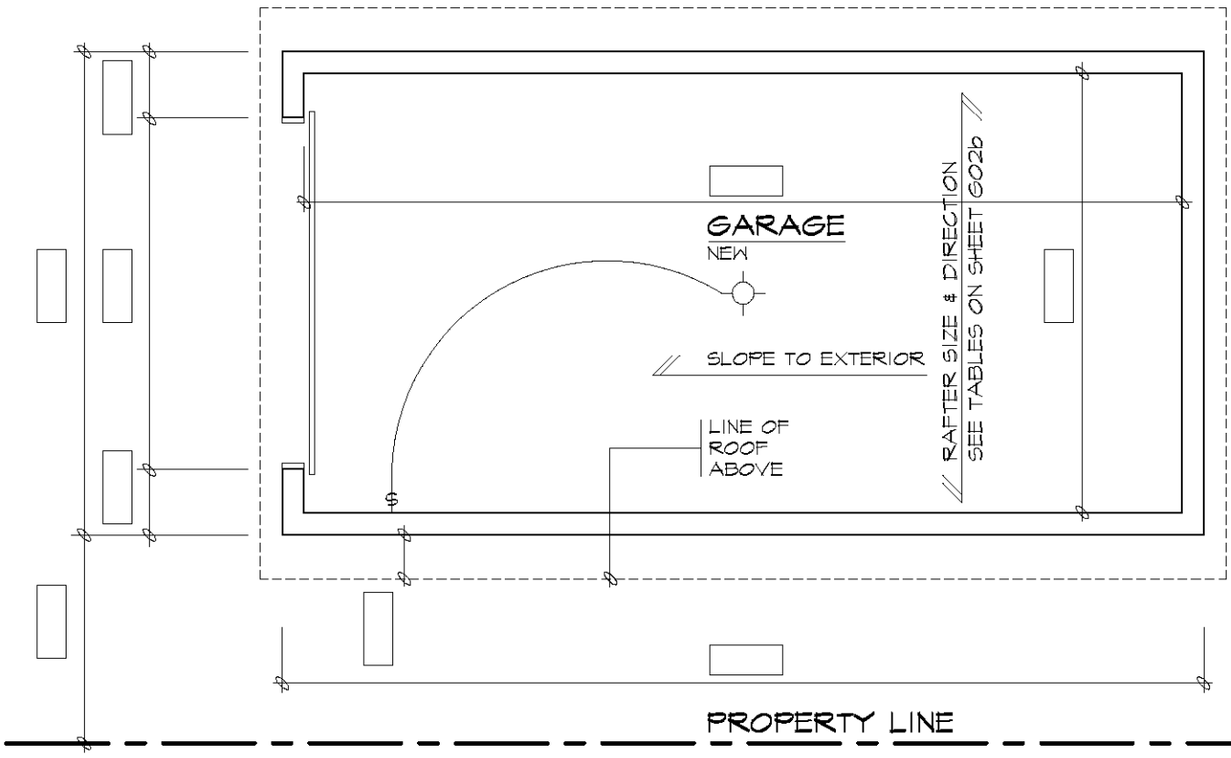
**ATTACHED GARAGES MUST BE COMPLETELY SEALED TO PREVENT THE INFILTRATION OF CARBON MONOXIDE & GASOLINE FUMES INTO THE DWELLING.**

1. PROVIDE 12.7mm DRYWALL W/ MIN. 2 COATS OF JOINT COMPOUND AT ALL WALLS ADJACENT TO DWELLING.
2. CAULK BETWEEN GYPSUM BOARD AND OTHER SURFACES W/ ACOUSTIC SEALANT.
3. CAULK ALL PENETRATIONS SUCH AS HOSE BIBS W/ FLEXIBLE CAULKING.
4. DOORS BETWEEN GARAGE & DWELLING SHALL BE TIGHT FITTING & WEATHERSTRIPPED & PROVIDED W/ A SELF CLOSING DEVICE. DOOR MUST NOT OPEN DIRECTLY INTO A ROOM INTENDED FOR SLEEPING.
5. GARAGE SLAB SHALL BE SLOPED TO DRAIN OUTDOORS
6. WHERE AN ATTACHED GARAGE IS ADJACENT TO AN ATTIC SPACE CARRY DRYWALL UP TO ROOF SHEATHING & CAULK W/ FLEXIBLE CAULKING.
7. UNIT MASONRY WALLS FORMING THE SEPARATION BETWEEN THE DWELLING & ATTACHED GARAGE SHALL BE PROVIDED W/ 2 COATS OF A SEALER OR COVERED W/ PLASTER OR GYPSUM BOARD ON THE GARAGE SIDE.

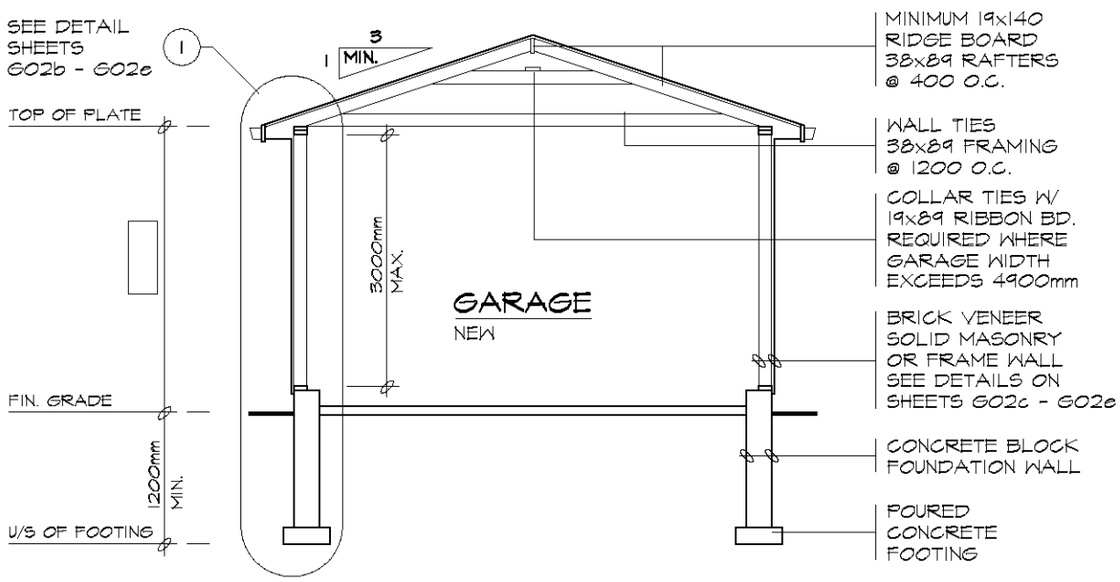
**TACBOC**
**STANDARD DETAIL**

TITLE
ATTACHED GARAGE
GASPROOFING & INSULATION DETAILS

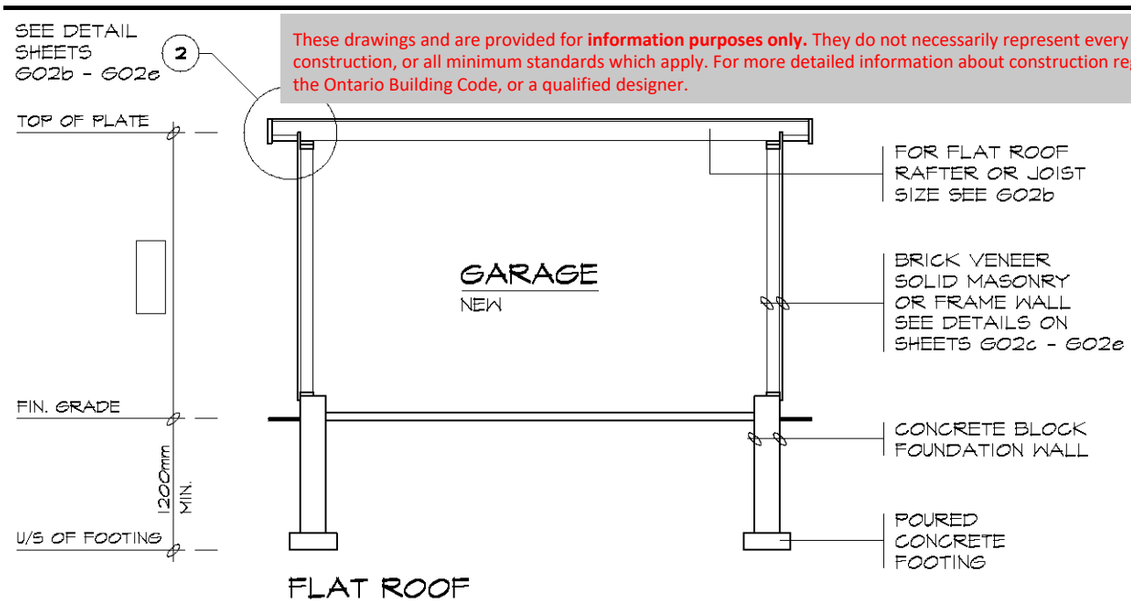
DWG. NO.
GOIi
2007




GARAGE PLAN (PROVIDE DIMENSIONS IN BOXES)




GABLE ROOF






FLAT ROOF

TACBOC
STANDARD DETAIL

TITLE
DETACHED GARAGE
SLOPING OR FLAT ROOF PLAN & SECTIONS

DWG. NO.
G02a
2007

## ROOF RAFTERS (FLAT ROOF - WHERE NO CEILING IS INSTALLED)

| MAXIMUM CLEAR SPAN (M) | | | | | | |
|---|---|---|---|---|---|---|
| RAFTER SIZE | ROOF SNOW LOAD 1.0kPa | | | ROOF SNOW LOAD 1.5kPa | | |
| | RAFTER SPACING (mm) O.C. | | | RAFTER SPACING (mm) O.C. | | |
| | 300 | 400 | 600 | 300 | 400 | 600 |
| 38x89 | 3.11 | 2.83 | 2.47 | 2.72 | 2.47 | 2.16 |
| 38x140 | 4.90 | 4.45 | 3.89 | 4.28 | 3.89 | 3.40 |
| 38x184 | 6.44 | 5.85 | 5.11 | 5.62 | 5.11 | 4.41 |
| 38x235 | 8.22 | 7.47 | 6.38 | 7.18 | 6.52 | 5.39 |

## ROOF JOISTS (FLAT ROOF - WHERE CEILING IS INSTALLED)

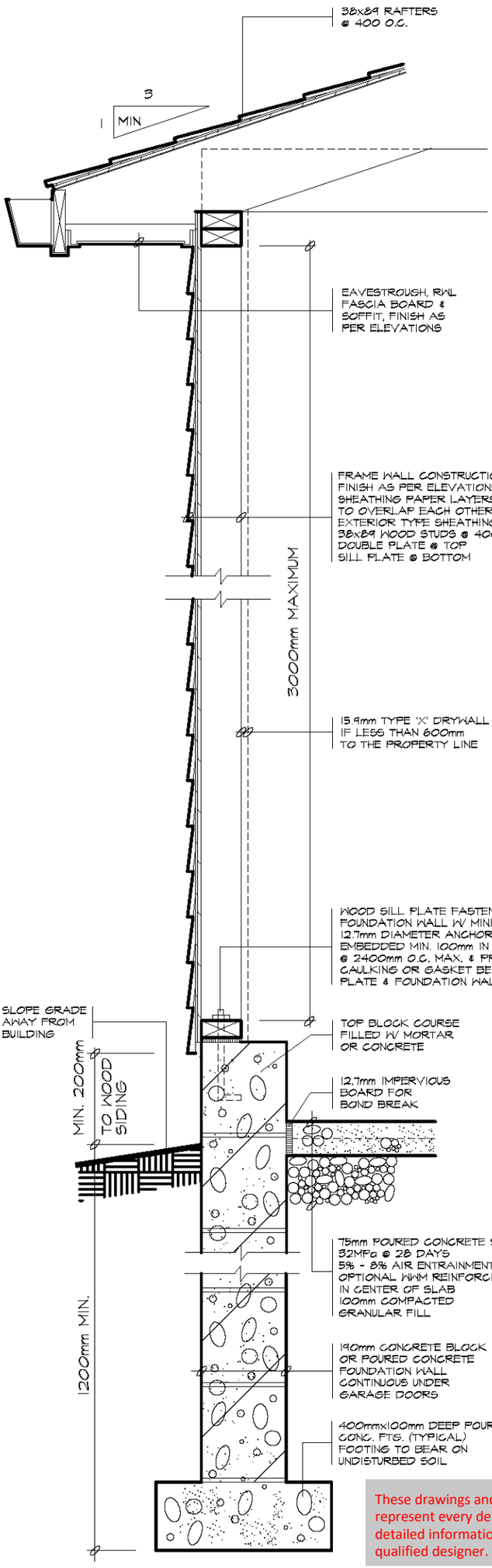
| MAXIMUM CLEAR SPAN (M) | | | | | | |
|---|---|---|---|---|---|---|
| JOIST SIZE | ROOF SNOW LOAD 1.0kPa | | | ROOF SNOW LOAD 1.5kPa | | |
| | JOIST SPACING (mm) O.C. | | | JOIST SPACING (mm) O.C. | | |
| | 300 | 400 | 600 | 300 | 400 | 600 |
| 38x140 | 3.89 | 3.53 | 3.08 | 3.40 | 3.08 | 2.69 |
| 38x184 | 5.11 | 4.64 | 4.05 | 4.46 | 4.05 | 3.54 |
| 38x235 | 6.52 | 5.93 | 5.18 | 5.70 | 5.18 | 4.52 |
| 38x286 | 7.94 | 7.21 | 6.30 | 6.94 | 6.30 | 5.50 |

## LINTELS

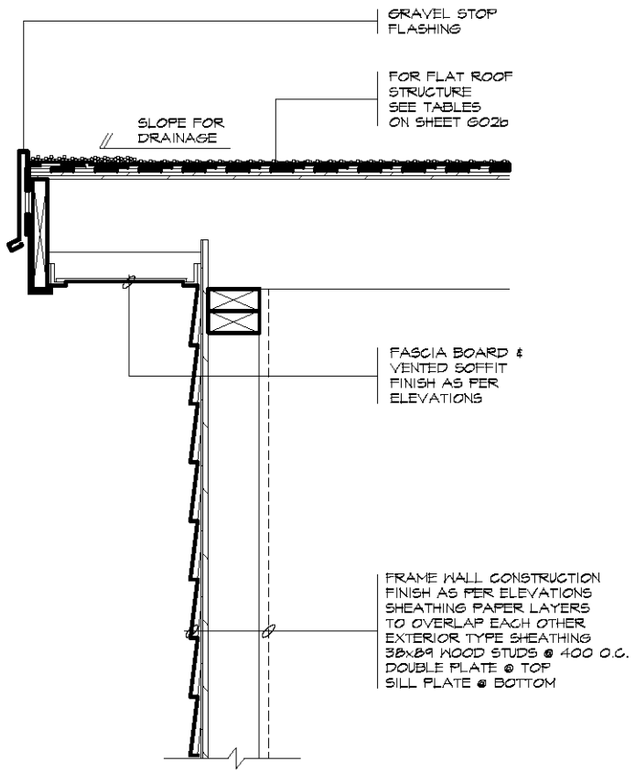
| DOOR WIDTH | LINTELS FOR WOOD FRAMING | | LINTELS FOR BRICK VENEER 90mm | | LINTELS FOR SOLID MASONRY 200mm | |
|---|---|---|---|---|---|---|
| | NOT SUPPORTING THE ROOF | SUPPORTING THE ROOF | NOT SUPPORTING THE ROOF | SUPPORTING THE ROOF | NOT SUPPORTING THE ROOF | SUPPORTING THE ROOF |
| UP TO 3000mm | 2/38x184 | 2/38x286 | 2/38x184 + ANGLE 125x90x8 | 2/38x286 + ANGLE 125x90x8 | 2 ANGLES 150x100x10 | W150x22 + PLATE 200x10 |
| UP TO 4900mm | 2/38x286 | 4/38X286 OR 2- 45x300 1.9E LVL | W200x27 + PLATE 200x10 | W200x27 + PLATE 200x10 | MUST BE DESIGNED | MUST BE DESIGNED |

## GENERAL NOTES

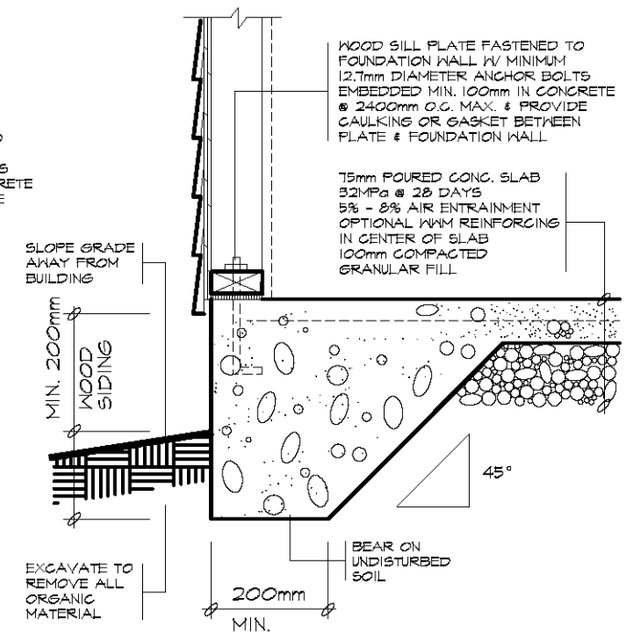
1. ALL LUMBER TO BE NO. 1&2 SPRUCE OR BETTER
2. ALL PLYWOOD SHALL BE STAMPED EXTERIOR GRADE
3. ROOF LOAD DESIGN 1.0 kPa OR 1.5 kPa
4. ALL FOOTINGS TO BEAR ON UNDISTURBED SOIL.
5. IF GARAGE WALL IS LESS THAN 600mm TO THE PROPERTY LINE PROVIDE 15.9mm TYPE 'X' DRYWALL INTERIOR SHEATHING. NO WINDOWS ARE PERMITTED IN GARAGE WALLS LESS THAN 1200mm FROM PROPERTY LINE.
6. FOR ONE STOREY WOOD FRAME DETACHED GARAGES LESS THAN 55M2. AN ALTERNATE FOOTING MAY BE USED, SEE DETAIL SHEET G02c
7. GARAGE SLAB SHALL BE 32 Mpa CONCRETE W/ 5% - 8% AIR ENTRAINMENT SLOPED TO DRAIN TO THE OUTSIDE.
8. ROOF SHEATHING SHALL BE MIN. 9.5mm PLYWOOD PROVIDE 'H' CLIPS IF RAFTERS OR JOISTS ARE SPACED GREATER THAN 400mm O.C.
9. PROVIDE A LIGHT FIXTURE IN THE GARAGE.
10. STEEL BEAMS TO BE SUPPORTED BY SOLID MASONRY (190mm BEARING ON MASONRY OR 73mm DIA. STEEL COLUMN).
11. LINTELS AND BEAMS TO BE DESIGNED BY A QUALIFIED PERSON FOR SPANS GREATER THAN 4900mm




1 WALL SECTION




2 FLAT ROOF




3 ALTERNATE FOR FRAME GARAGE

MAXIMUM 55M2, ONE STOREY WOOD FRAME ONLY

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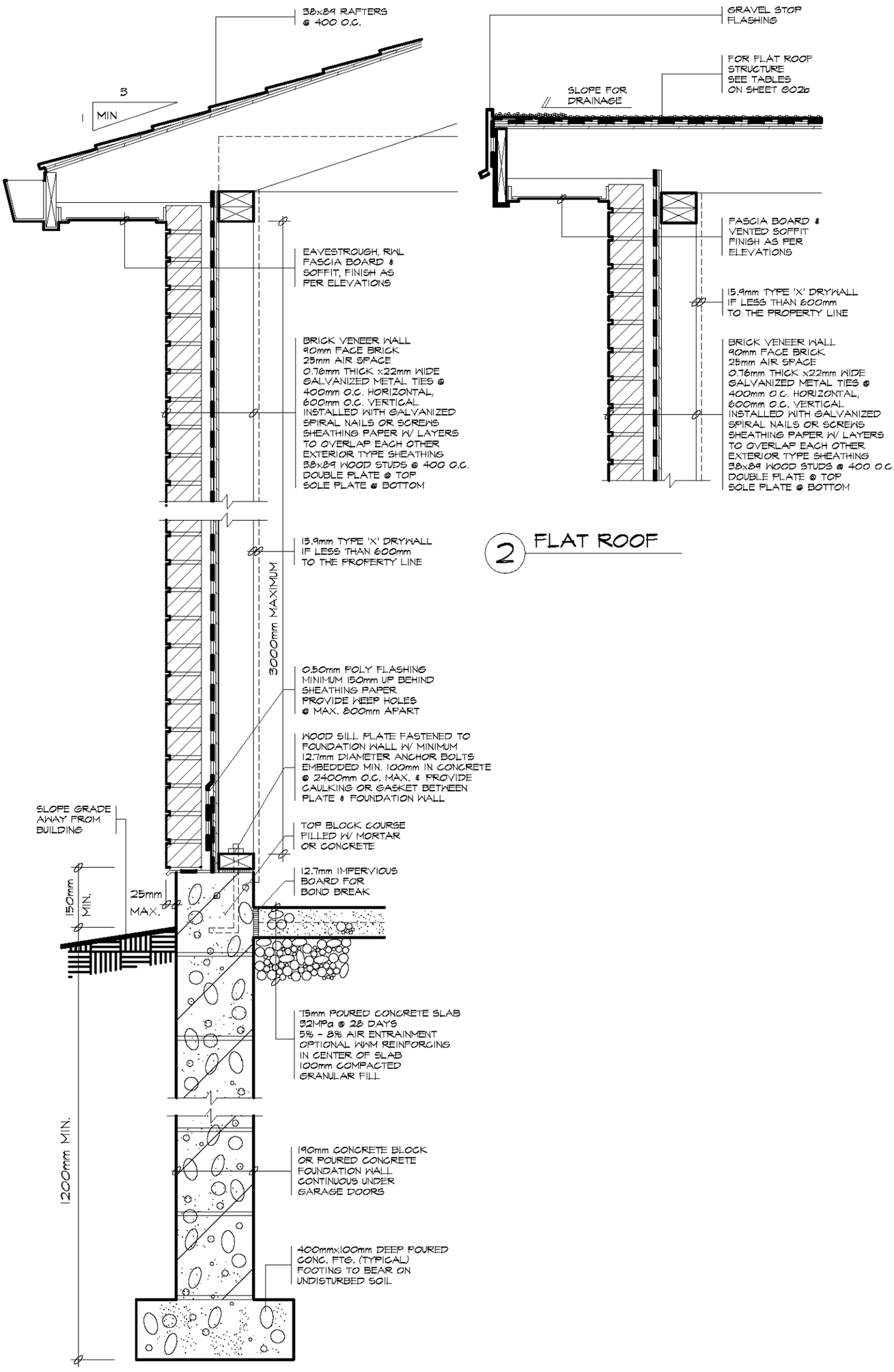
TACBOC
STANDARD DETAIL

TITLE
DETACHED GARAGE
FRAME DETAILS

DWG. NO.
G02c

2007




2 FLAT ROOF

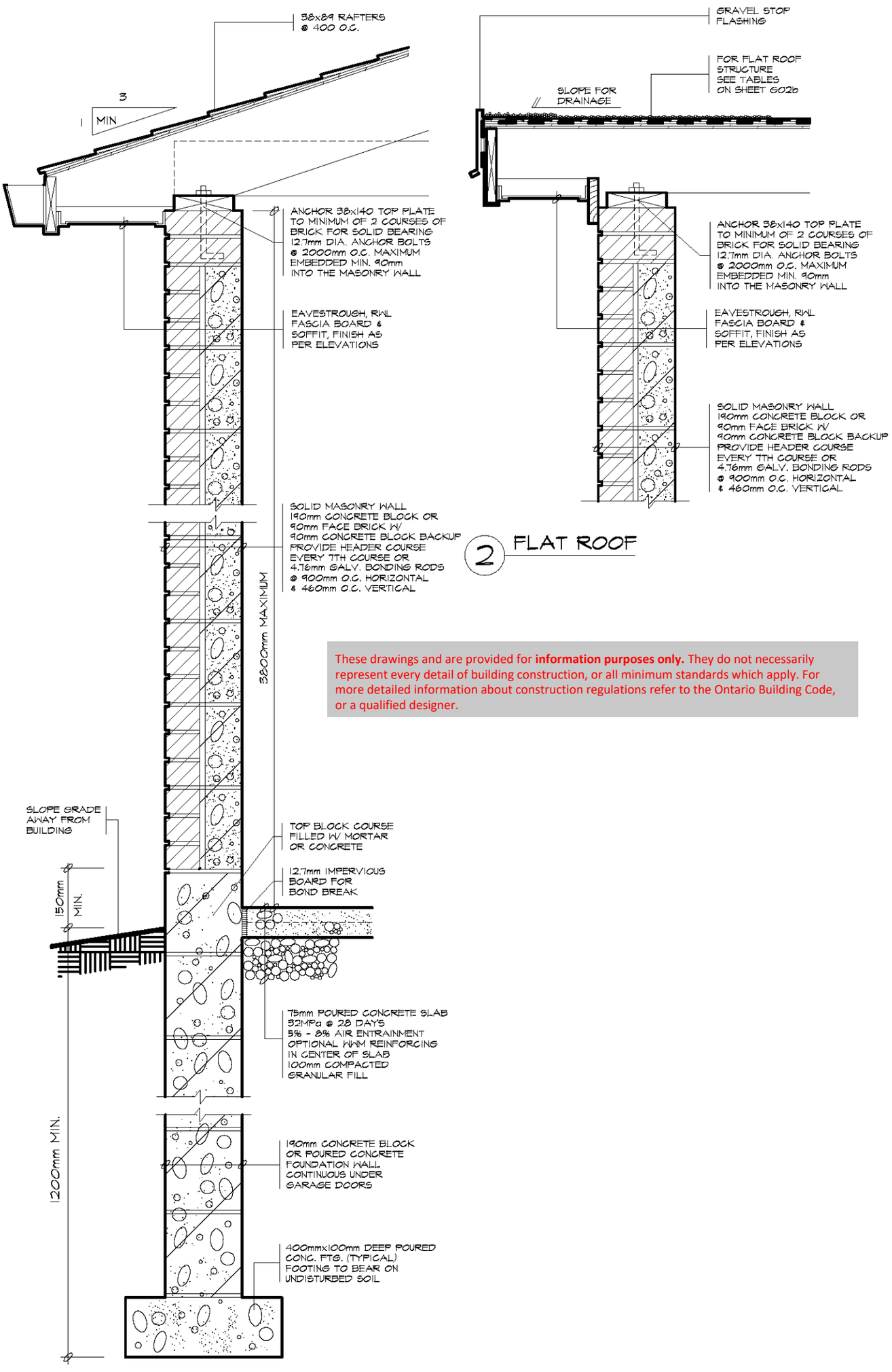
1 WALL SECTION



TACBOC
STANDARD DETAIL

TITLE
# DETACHED GARAGE
## BRICK VENEER DETAILS

DWG. NO.
G02d
2007

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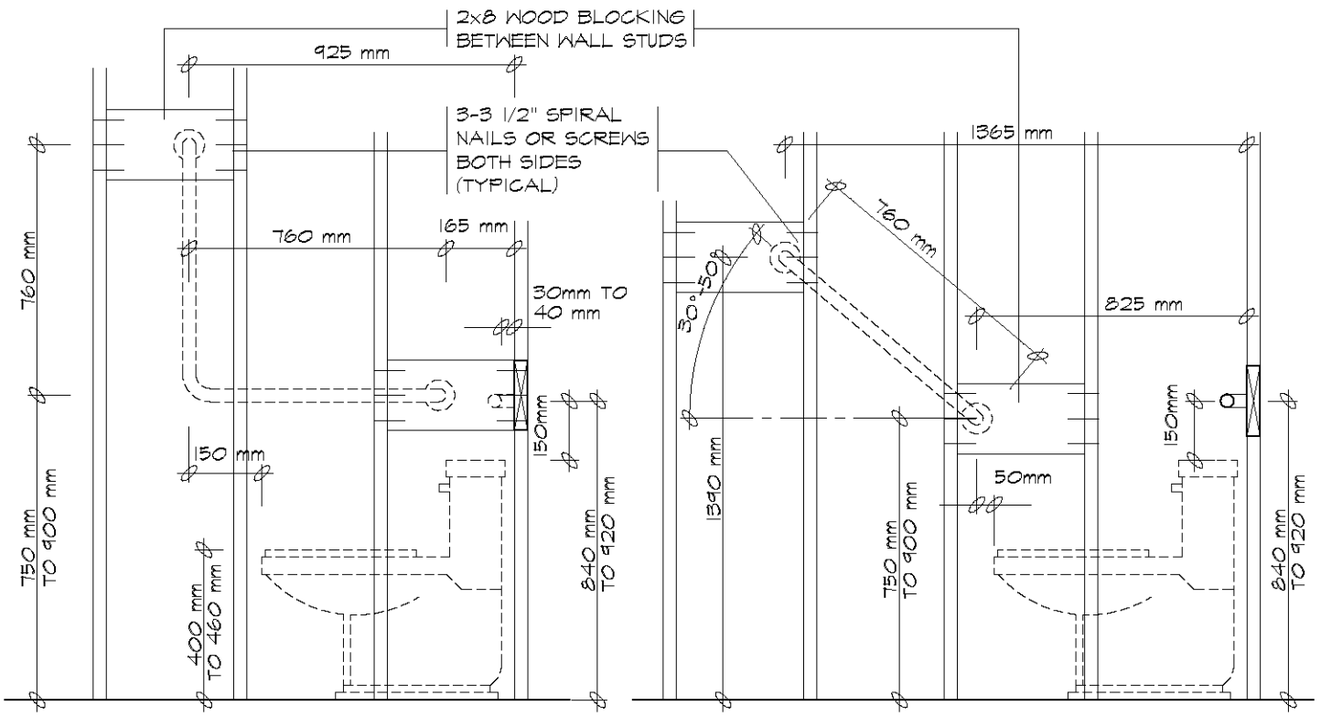
TACBOC
STANDARD DETAIL

TITLE
# DETACHED GARAGE
## SOLID MASONRY DETAILS

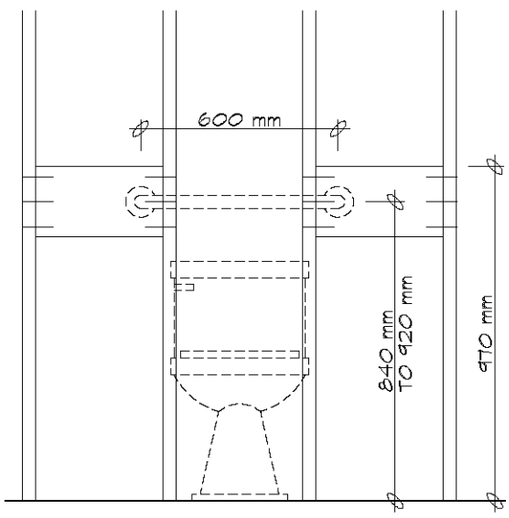
DWG. NO.
G02e
2007



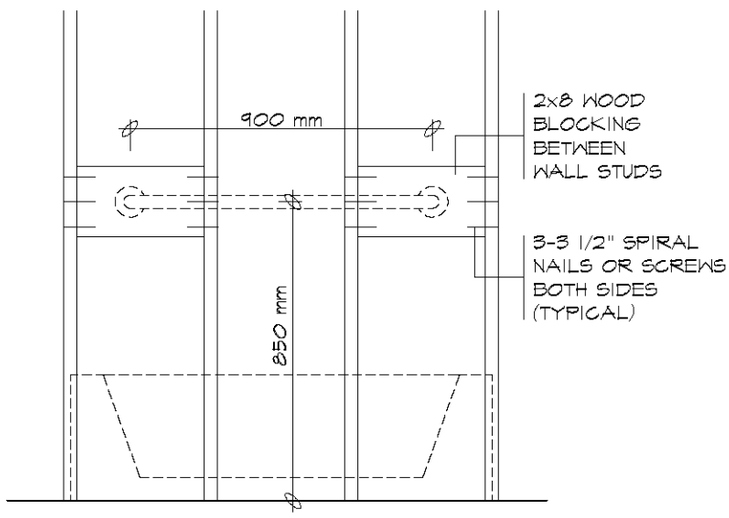

## OPTION 1

## OPTION 2

## W.C. SIDE ELEVATION




## W.C. FRONT ELEVATION




## SHOWER/TUB WALL SIDE ELEVATION

## GRAB BAR REINFORCEMENT

REINFORCEMENT SHALL BE INSTALLED TO PERMIT THE FUTURE INSTALLATION OF A GRAB BAR IN THE MAIN BATHROOM OF A DWELLING UNIT. IF GRAB BAR IS NOT INSTALLED AT TIME OF CONSTRUCTION, BLOCKING FOR BOTH CONFIGURATIONS AT SIDE OF WATER CLOSET IS REQUIRED.



## GRAB BAR INSTALLATION SPECIFICATION

### 1. BESIDE WATER CLOSET

OPTION 1
L-SHAPED GRAB BAR WITH 760mm LONG HORIZ. AND VERT. COMPONENTS MOUNTED W/ HORIZ. COMPONENT 750mm TO 900mm A.F.F. AND THE VERTICAL COMPONENT 150mm IN FRONT OF TOILET BOWL.

OPTION 2
MIN. 760mm LONG GRAB BAR MOUNTED AT A 30° TO 50° ANGLE SLOPING UPWARDS AWAY FROM WATER CLOSET W/ LOWER END OF BAR MOUNTED 750mm TO 900mm A.F.F. AND 50mm IN FRONT OF TOILET BOWL.

### 2. BEHIND WATER CLOSET

MIN. 600mm LONG GRAB BAR MOUNTED HORIZONTALLY ON WALL 840mm TO 920mm ABOVE THE FLOOR AND 150mm ABOVE THE WATER TANK IF APPLICABLE.

### 3. BEHIND BATHTUB OR SHOWER

MIN. 900mm LONG GRAB BAR MOUNTED HORIZONTALLY ON WALL APPROXIMATELY 850mm ABOVE FINISHED FLOOR LOCATE OPPOSITE SHOWER ENTRANCE SO THAT NOT LESS THAN 300mm OF ITS LENGTH IS AT ONE SIDE OF THE SEAT.

### 4. GRAB BAR ATTACHMENT

GRAB BAR MUST BE ATTACHED WITH SCREWS WHICH PENETRATE AT LEAST 32mm INTO THE SOLID BLOCKING.

**TACBOC**
**STANDARD DETAIL**

TITLE
# BARRIER FREE WASHROOM
GRAB BAR WALL REINFORCING

DWG. NO.
H01
2007

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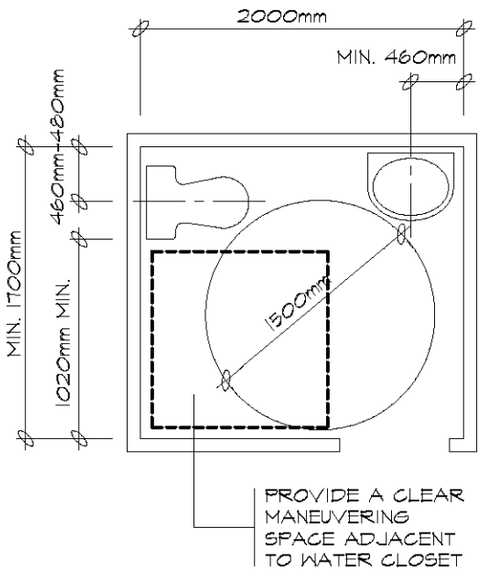
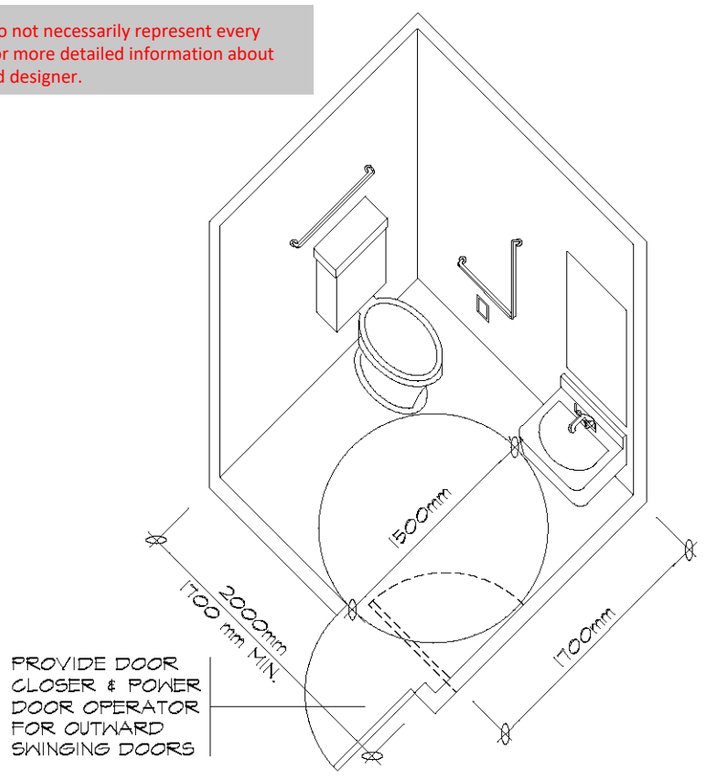
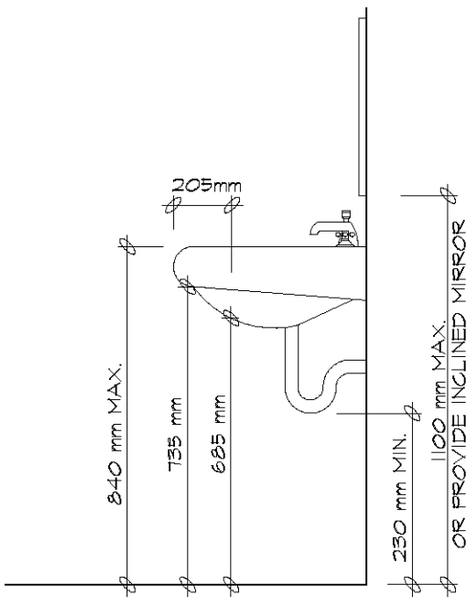


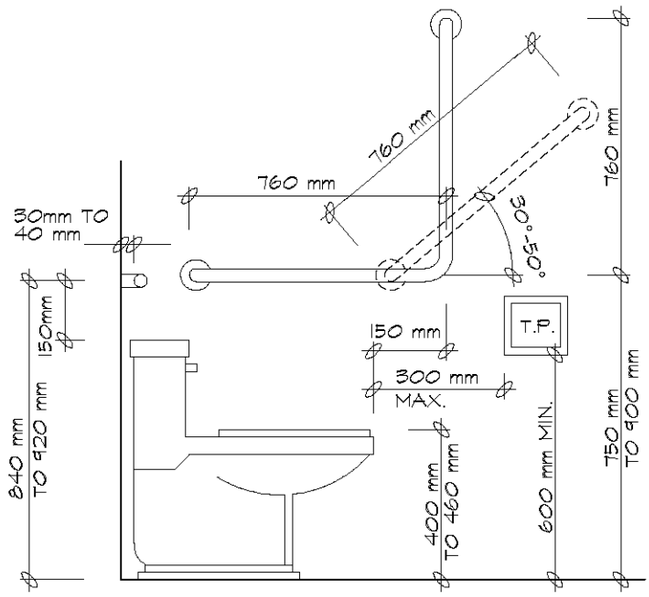

## CLEARANCES FROM WALL TO FIXTURES




## UNIVERSAL TOILET ROOM W/ OUTWARD SWINGING DOOR




## CLEARANCES BENEATH A LAVATORY




## WATER CLOSET & GRAB BARS

## DOORS

A MINIMUM 900mm DOOR IS REQUIRED WITH A MINIMUM UNOBSTRUCTED CLEAR WIDTH OF 850mm. THE DOOR MUST SWING OUT, UNLESS ENOUGH AREA IS PROVIDED WITHIN THE WASHROOM TO PERMIT CLOSING THE DOOR WITHOUT INTERFERING WITH THE WHEELCHAIR. DOORS MAY BE LOCKABLE, BUT CAPABLE OF EMERGENCY RELEASE FROM THE OUTSIDE. DOOR OPENING DEVICES SHALL BE LEVER TYPE DESIGN THAT DOES NOT REQUIRE TIGHT GRASPING OR TWISTING OF THE WRIST. A DOOR CLOSER & A POWER OPERATOR IS REQUIRED WHERE THE DOOR OPENS OUTWARD.

## WATER CLOSET

A SEAT HEIGHT OF 400mm TO 460mm IS REQUIRED. FLUSHING CONTROLS MUST BE EASILY ACCESSIBLE TO A WHEELCHAIR USER OR BE AUTOMATICALLY OPERABLE. A BACK SUPPORT IS REQUIRED WHERE THERE IS NO SEAT LID OR TANK. SEATS MUST NOT BE SPRING-ACTIVATED

## ACCESSORIES

A COAT HOOK MUST BE PROVIDED. ALL ACCESSORIES, SUCH AS SOAP AND TOWEL DISPENSERS, MUST BE MOUNTED NOT MORE THAN 1200mm FROM THE FLOOR. TOILET PAPER DISPENSERS SHALL BE LOCATED (BELOW THE GRAB BAR) WITHIN 300mm IN FRONT OF THE TOILET SEAT AND MORE THAN 600mm ABOVE THE FLOOR

## LAVATORIES

MUST BE NOT MORE THAN 840mm FROM THE TOP OF A BASIN OR VANITY TO THE FLOOR. A 760mm WIDE AREA REQUIRES THE FOLLOWING CLEARANCES BENEATH THE LAVATORY: 735mm UNDER THE FRONT EDGE; 685mm AT A POINT 205mm BACK FROM THE FRONT EDGE; 230mm OVER THE DISTANCE FROM A POINT 280mm TO A POINT 430mm BACK FROM THE FRONT EDGE. INSULATED PLUMBING OR WATER SUPPLY TEMPERATURE LIMITED TO 43° TO PREVENT BURNS. FAUCET HANDLES OF THE LEVER TYPE OR AUTOMATICALLY OPERABLE ARE REQUIRED, AND MUST NOT BE SPRING-LOADED NOR LOCATED NO FURTHER THAN 485mm FROM THE CENTRE LINE TO THE FRONT EDGE OF THE BASIN OR VANITY.

## GRAB BARS

TWO ARE REQUIRED, ONE BEHIND THE WATER CLOSET, THE OTHER TO BE MOUNTED BESIDE THE WATER CLOSET. SEE THE ILLUSTRATION ABOVE FOR DIMENSIONING. GRAB BARS MUST BE SLIP RESISTANT, 30-40mm DIAMETER, AND MUST SUPPORT A LOAD UP TO 1.3kN APPLIED VERTICALLY & HORIZONTALLY. GRAB BARS MUST BE ATTACHED WITH SCREWS WHICH PENETRATE AT LEAST 32mm INTO THE SOLID BLOCKING.

**TACBOC**
**STANDARD DETAIL**

TITLE

# UNIVERSAL BARRIER FREE TOILET ROOM

DWG. NO.

H02

2007

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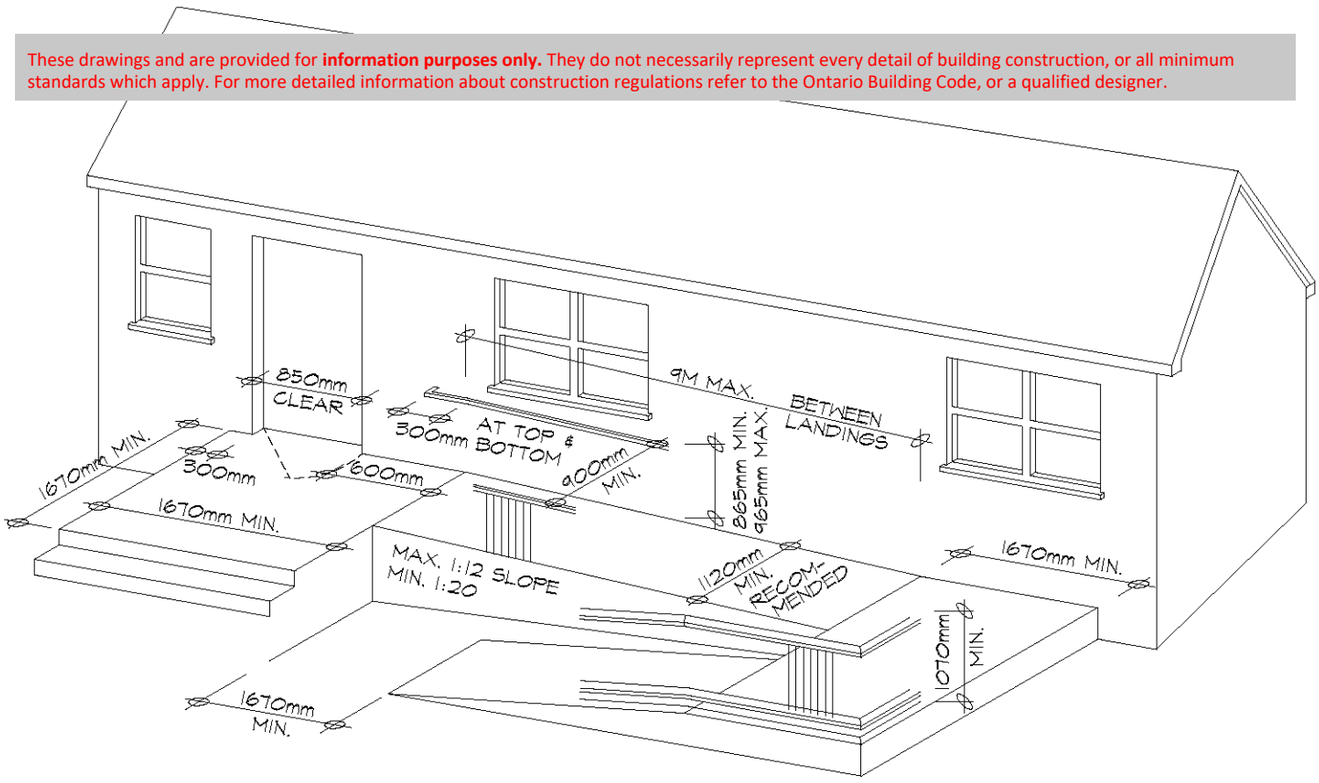
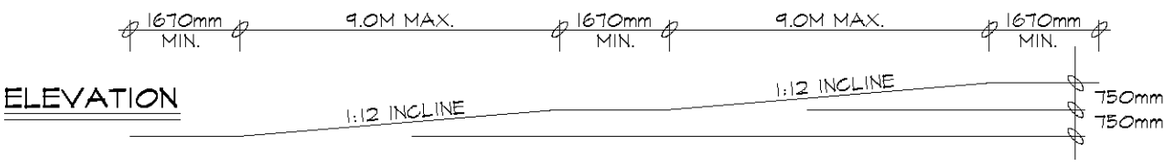
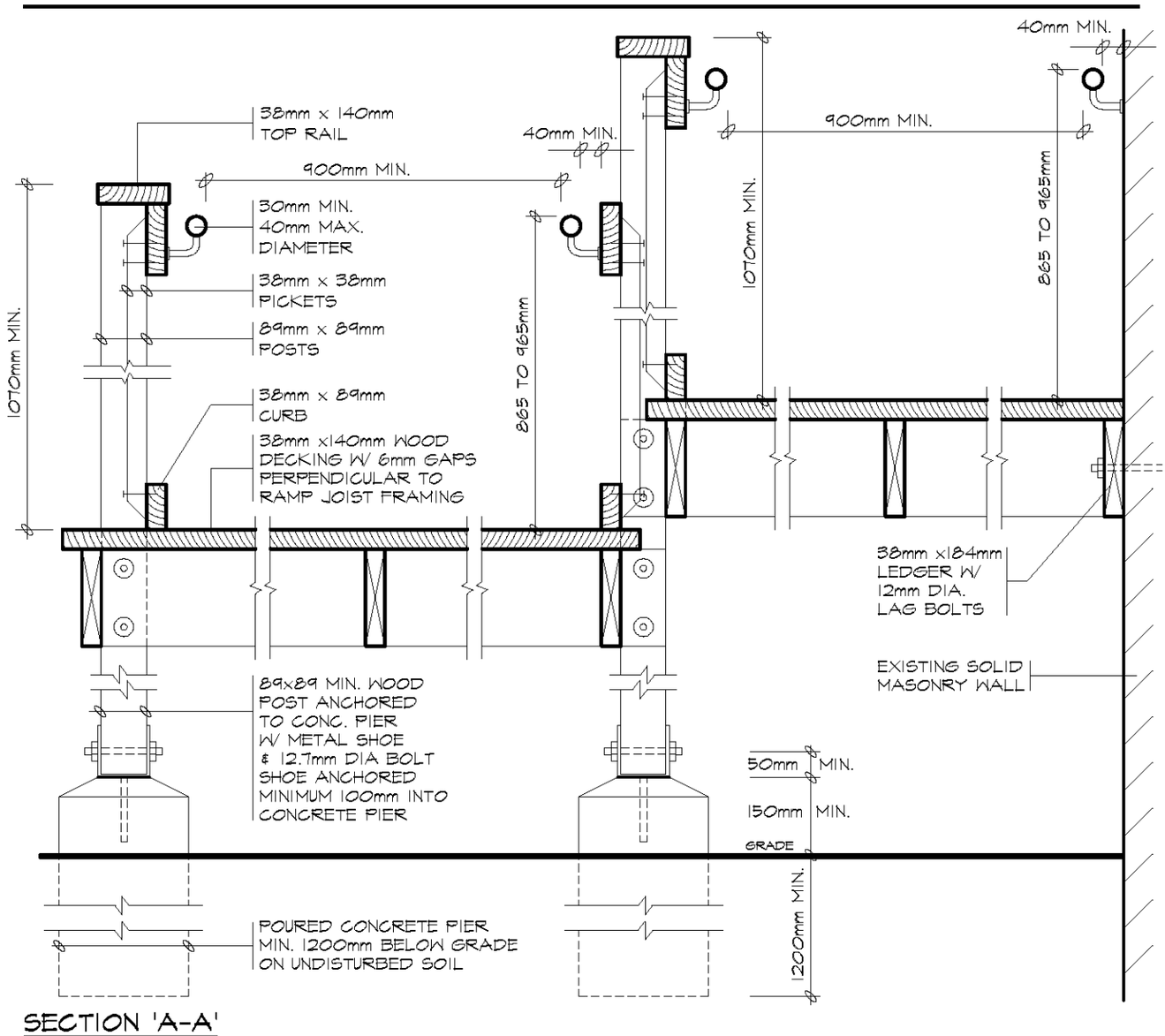



ELEVATION




SECTION 'A-A'

**TACBOC**
**STANDARD DETAIL**

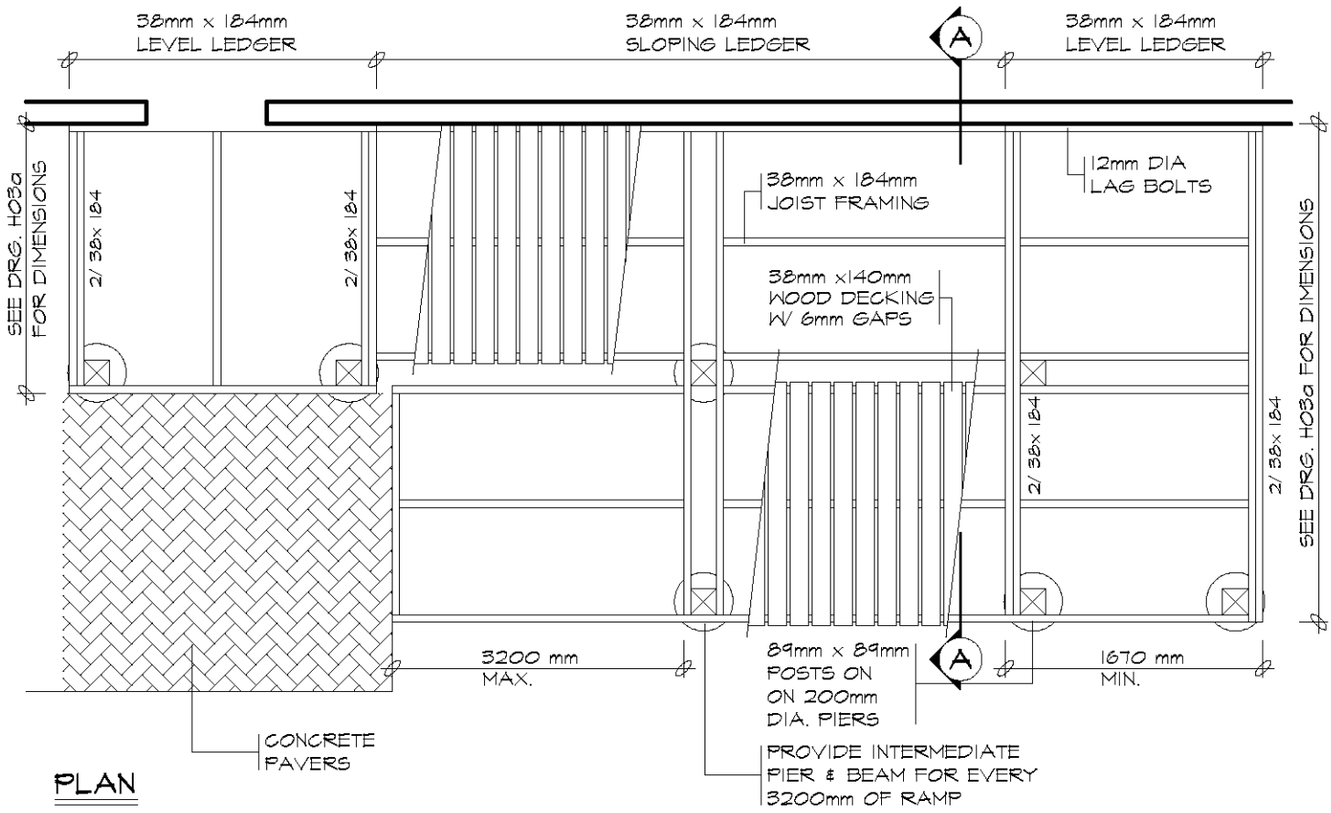
TITLE

# BARRIER FREE RAMP
## REQUIREMENTS & CONSTRUCTION.

DWG. NO.

H03a

2007




PLAN

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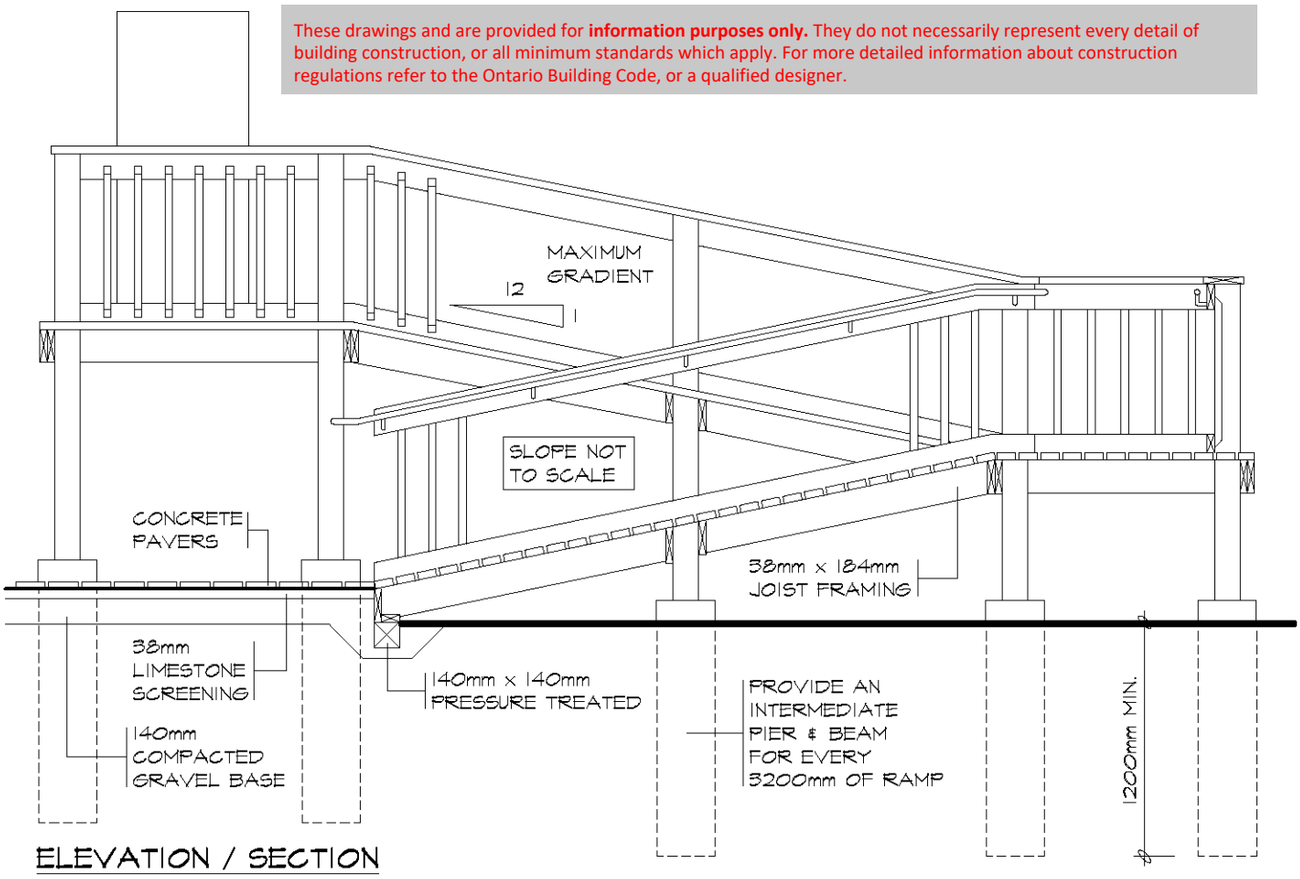



ELEVATION / SECTION

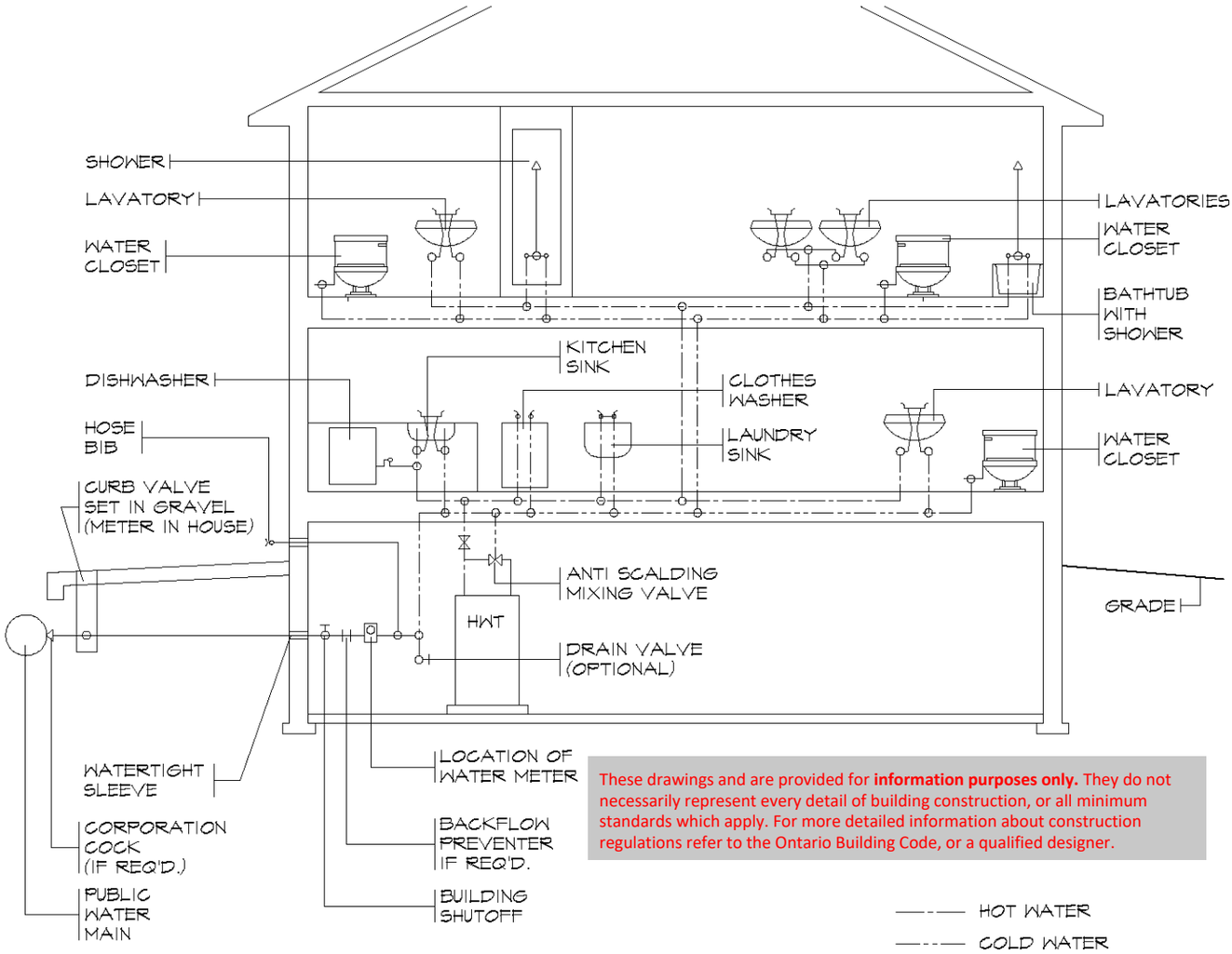
## GENERAL NOTES

1. A SITE PLAN OR SURVEY IS REQUIRED SHOWING ALL LOT LINES & DIMENSIONS, SIZE & LOCATION OF ALL BUILDINGS, LOCATION & SIZE OF RAMP & LANDING.
2. LUMBER NO. 2 SPF OR BETTER, WOOD POSTS MIN. 89x89 (SOLID). USE CORROSION RESISTANT SPIRAL NAILS OR SCREWS.
3. CONCRETE PIERS SHALL BEAR ON UNDISTURBED SOIL. THE BEARING CAPACITY OF THE SOIL SHALL BE A MINIMUM 75kPa.
4. HANDRAILS, ON BOTH SIDES, W/ 30-40mm CIRCULAR CROSS SECTION OR 100-155mm NON-CIRCULAR PERIMETER W/ MAX. 57mm CROSS SECTIONAL DIMENSION.
5. HANDRAILS MUST BE TERMINATED IN A MANNER THAT WILL NOT OBSTRUCT PEDESTRIAN TRAVEL OR CREATE A HAZARD.
6. PROVIDE A MIN. 40mm CLEARANCE BETWEEN THE HANDRAIL AND THE MOUNTING SURFACE.
7. HANDRAILS/GUARDS SHALL BE DESIGNED AND CONSTRUCTED SUCH THAT THEY WILL WITHSTAND 0.9kN POINT LOADS AND 0.7kN/m UNIFORM LOADS FROM ANY DIRECTION.

TACBOC
STANDARD DETAIL

TITLE
BARRIER FREE RAMP
CONSTRUCTION DETAILS.

DWG. NO.
H03b
2007

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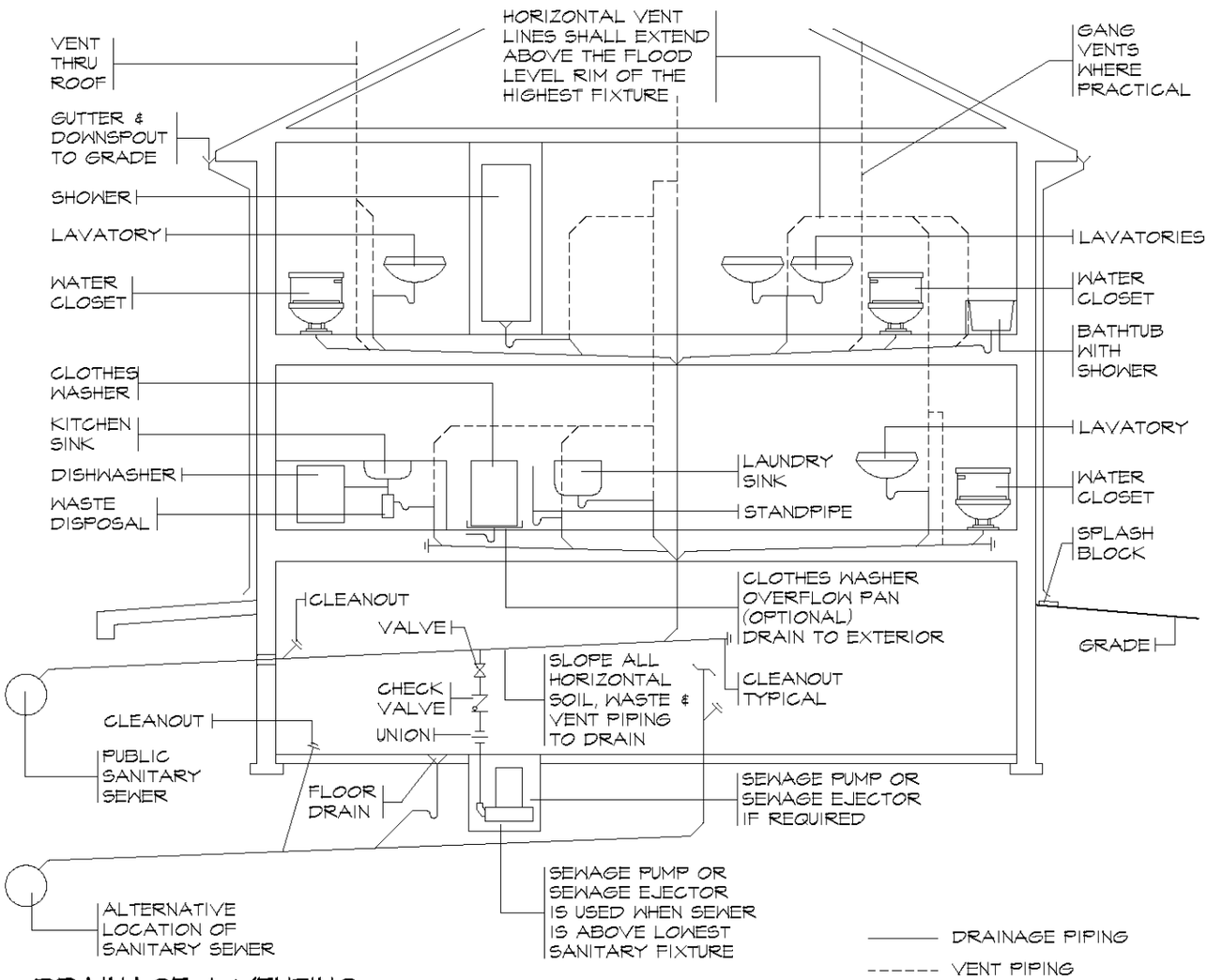
## WATER SUPPLY PIPING

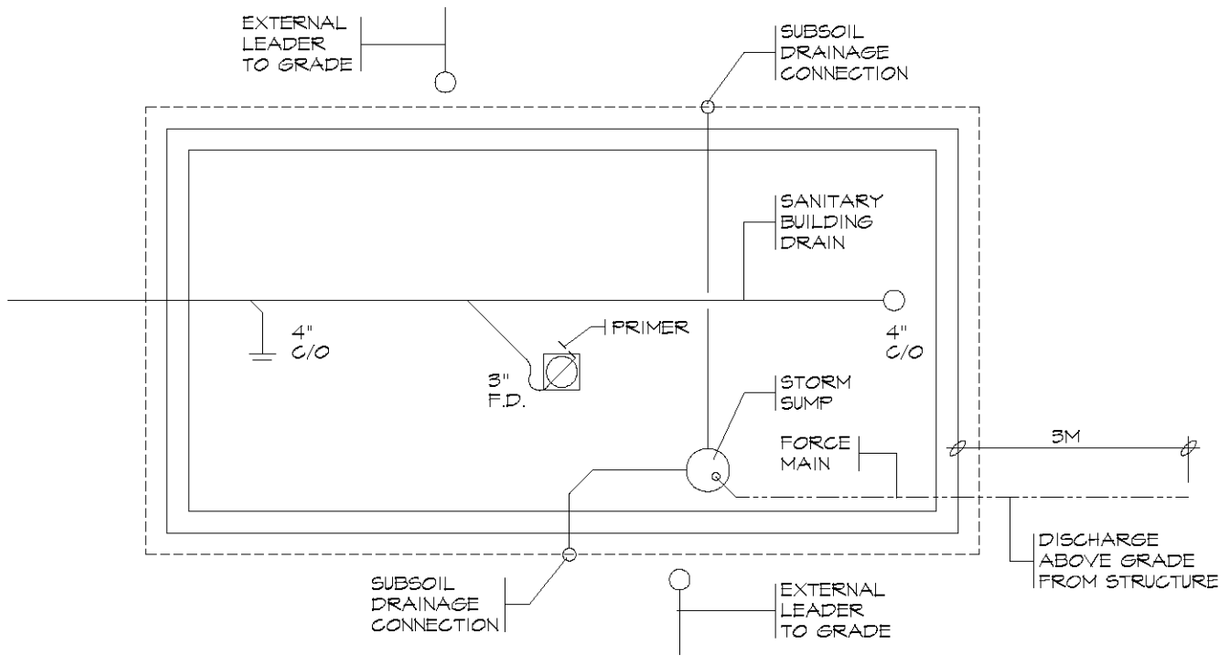



## DRAINAGE & VENTING

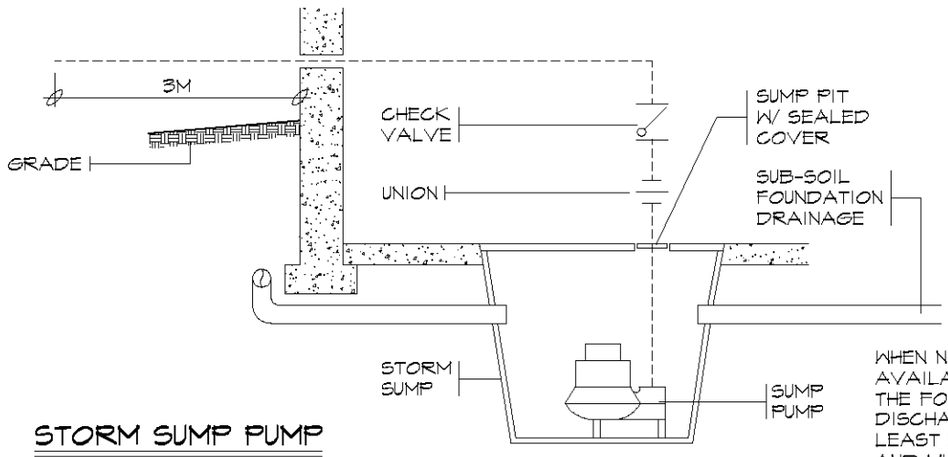
**TACBOC**
STANDARD DETAIL

TITLE
# RESIDENTIAL PLUMBING
SCHEMATIC PLANS

DWG. NO.
P01
2007

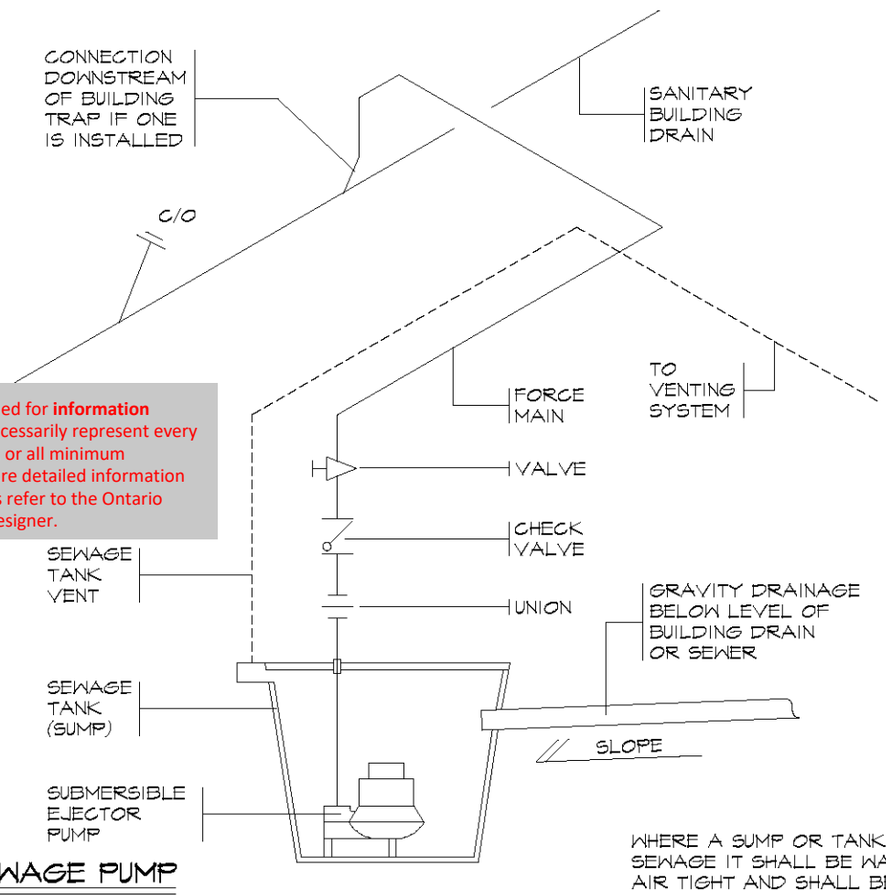



DISCHARGING SUBSOIL DRAINAGE ABOVE GRADE - SEPARATE SYSTEM




## STORM SUMP PUMP

WHEN NO STORM DRAIN IS AVAILABLE OR IT IS NOT ALLOWED, THE FOUNDATION DRAINAGE MUST DISCHARGE ABOVE GRADE AT LEAST 3M FROM THE BUILDING AND MUST NOT CREATE A HAZARD






## SANITARY SEWAGE PUMP

WHERE A SUMP OR TANK RECEIVES SEWAGE IT SHALL BE WATER TIGHT, AIR TIGHT AND SHALL BE VENTED.

TACBOC STANDARD DETAIL

TITLE

# STORM AND SANITARY SUMPS

SCHEMATIC PLANS

DWG. NO.

P02

03-2012

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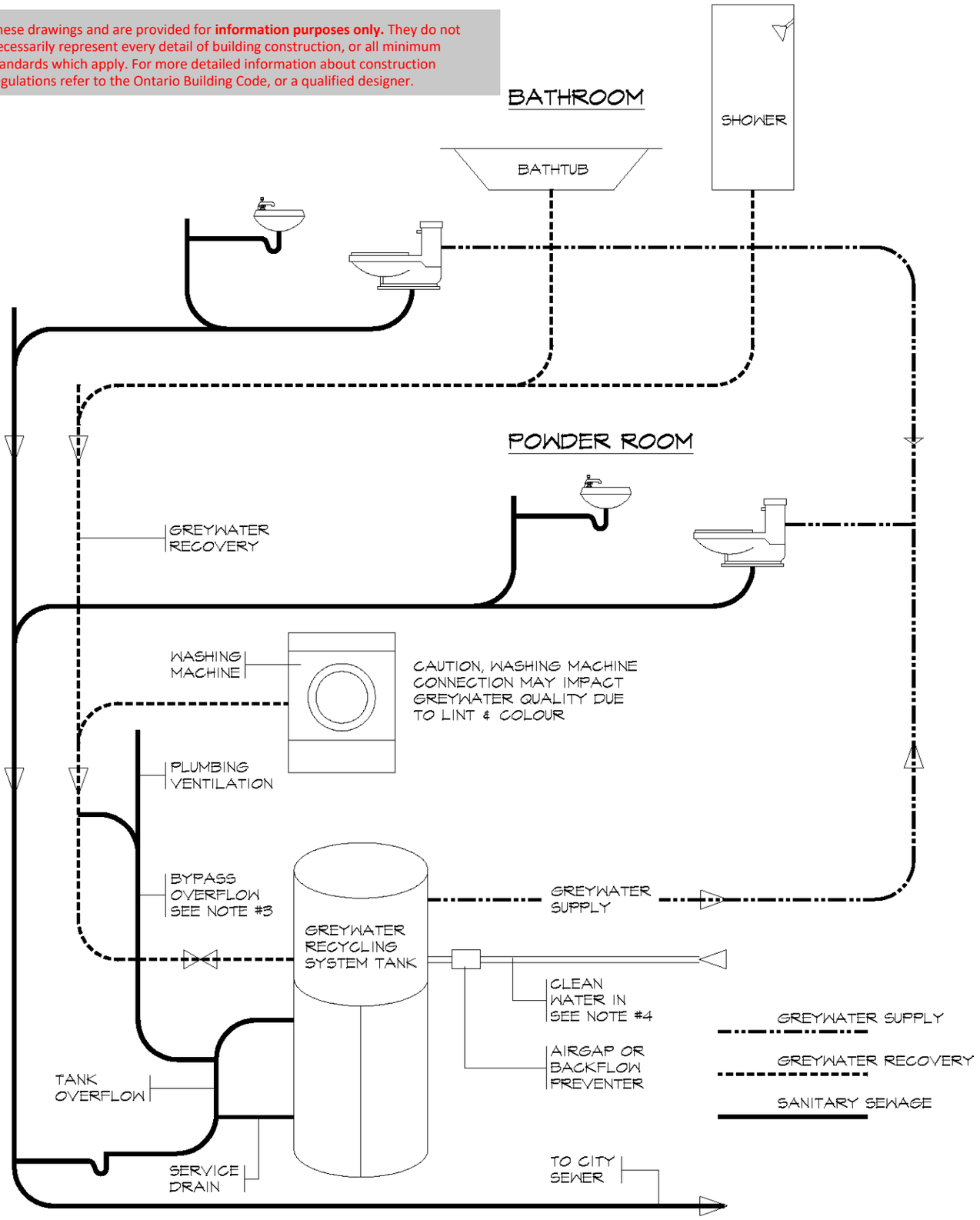



## NOTES:

1. THE BUILDING CODE PERMITS TOILETS, URINALS AND TRAP SEALS TO BE SUPPLIED BY RECYCLING GREYWATER RATHER THAN BY THE POTABLE WATER SUPPLY SYSTEM. GREYWATER IS THE DISCHARGE FROM FIXTURES OTHER THAN TOILETS, URINALS, BIDETS OR OTHER SANITARY UNITS.
2. THE GREYWATER SYSTEM MUST BE COMPLETELY SEPARATED FROM THE SANITARY DRAINAGE SYSTEM USING INDEPENDENT GREYWATER SUPPLY AND DRAINAGE PIPING, AS SHOWN ON THE SCHEMATIC DIAGRAM. ALL CONNECTED FIXTURES MUST BE CONNECTED AND VENTED ACCORDING TO THE BUILDING CODE.
3. AN OVERFLOW PIPE CONNECTED TO A SANITARY DRAIN MUST BE INSTALLED FROM THE GREYWATER SUPPLY TANK WHICH INCORPORATES AN AIR GAP OR CHECK VALVE TO PREVENT CONTAMINATION IN THE EVENT OF A SANITARY SEWAGE BACKUP.
4. BACKUP POTABLE WATER SUPPLY TO THE GREYWATER SUPPLY TANK IS REQUIRED TO MAINTAIN SUPPLY IN THE EVENT CONNECTED FIXTURE DEMAND EXCEEDS THE TANK SUPPLY CAPACITY. THE POTABLE WATER SUPPLY PIPE MUST BE PROTECTED WITH AN AIR GAP OR TESTABLE REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTOR.
5. A NON-POTABLE WATER SYSTEM SHALL NOT BE CONNECTED TO A POTABLE WATER SYSTEM
6. NON-POTABLE WATER SUPPLY PIPING SHALL BE IDENTIFIED BY MARKINGS THAT ARE PERMANENT, DISTINCT AND EASILY RECOGNIZED.
7. AN OUTLET FROM A NON-POTABLE WATER SYSTEM SHALL NOT BE LOCATED WHERE IT CAN DISCHARGE INTO A SINK OR LAVATORY, A FIXTURE INTO WHICH AN OUTLET FROM A POTABLE WATER SYSTEM IS DISCHARGED OR A FIXTURE THAT IS USED FOR A PURPOSE RELATED TO THE PREPARATION, HANDLING OR DISPENSING OF FOOD, DRINK OR PRODUCTS THAT ARE INTENDED FOR HUMAN CONSUMPTION.

TACBOC
STANDARD DETAIL

TITLE
GREYWATER RECYCLING
SCHEMATIC PLAN, NOTES

DWG. NO.
P03
2007

## 1. MATERIALS AND EQUIPMENT

- A 'T' FITTING SHALL NOT BE USED IN A DRAINAGE SYSTEM EXCEPT TO CONNECT A VENT PIPE.
- A CROSS FITTING SHALL NOT BE USED IN A DRAINAGE SYSTEM.
- NO 'Y', DOUBLE 'TY', DOUBLE 'T' OR DOUBLE WASTE FITTING SHALL BE INSTALLED IN A NOMINALLY HORIZONTAL SOIL OR WASTE PIPE.



## 2. DRAINAGE SYSTEM

- EVERY SANITARY DRAINAGE SYSTEM AND STORM DRAINAGE SYSTEM SHALL BE PROVIDED WITH CLEANOUTS THAT WILL PERMIT CLEANING OF THE ENTIRE SYSTEM.
- A CLEANOUT FITTING SHALL BE PROVIDED ON THE UPSTREAM SIDE AND DIRECTLY OVER EVERY RUNNING TRAP. HORIZONTAL SOIL OR WASTE PIPE.
- WHERE THERE IS A CHANGE OF DIRECTION GREATER THAN 45 DEGREES IN A SANITARY BUILDING DRAIN OR SANITARY BUILDING SEWER, A CLEANOUT SHALL BE INSTALLED AT EACH CHANGE IN DIRECTION.
- EVERY SANITARY BUILDING DRAIN OR STORM BUILDING DRAIN SHALL BE PROVIDED WITH A CLEANOUT FITTING THAT IS LOCATED AS CLOSE AS PRACTICAL TO THE PLACE WHERE THE DRAIN LEAVES THE BUILDING.
- EVERY SOIL OR WASTE STACK SHALL BE PROVIDED WITH A CLEANOUT FITTING AT THE BOTTOM OF THE STACK.
- A CLEANOUT SHALL BE INSTALLED ON A FIXTURE DRAIN SERVING A KITCHEN SINK.
- WHEN GRAVITY DRAINAGE TO A SANITARY DRAINAGE SYSTEM IS POSSIBLE, A FLOOR DRAIN SHALL BE INSTALLED IN A BASEMENT, FORMING PART OF A DWELLING UNIT.
- SANITARY UNITS, BATHTUBS AND SHOWER BATHS SHALL NOT BE INSTALLED ADJACENT TO WALL AND FLOOR SURFACES THAT ARE PERVIOUS TO WATER.
- EVERY FIXTURE SHALL BE PROTECTED BY A SEPARATE TRAP.
- PROVISION SHALL BE MADE FOR MAINTAINING THE TRAP SEAL OF A FLOOR DRAIN BY THE USE OF A TRAP SEAL PRIMER.
- EVERY DRAINAGE PIPE THAT HAS A SIZE OF 3 INCHES (75mm) OR LESS, AND EVERY FIXTURE DRAIN SHALL HAVE A DOWNWARD SLOPE IN THE DIRECTION OF FLOW OF AT LEAST 1 IN 50 ( 1/4 INCH PER FOOT ).
- WHERE IT IS NOT POSSIBLE TO COMPLY WITH 1 IN 50 SLOPE A LESSER SLOPE MAY BE USED IF IT WILL PROVIDE A GRAVITY FLOW OF NOT LESS THAN 0.60M PER SECOND.
- EVERY SANITARY BUILDING DRAIN AND EVERY SANITARY BUILDING SEWER SHALL BE AT LEAST 4 INCHES IN SIZE.
- EVERY STORM BUILDING DRAIN AND EVERY STORM BUILDING SEWER SHALL BE AT LEAST 4 INCHES IN SIZE.
- INDIRECT CONNECTIONS OR ANY TRAP THAT MAY OVERFLOW SHALL NOT BE LOCATED IN A CRAWL SPACE OR ANY OTHER UNFREQUENTED AREA.
- THERE SHALL BE NO UNUSED OPEN ENDS IN A DRAINAGE SYSTEM AND DEAD ENDS SHALL BE SO GRADED THAT WATER WILL NOT COLLECT IN THEM.
- ONLY PIPING THAT IS TOO LOW TO DRAIN INTO A BUILDING SEWER BY GRAVITY SHALL BE DRAINED TO A SUMP OR RECEIVING TANK.
- WHERE THE SUMP OR TANK RECEIVES SANITARY SEWAGE IT SHALL BE WATER AND AIR-TIGHT AND SHALL BE VENTED.
- THE DISCHARGE PIPE FROM EVERY PUMPED SANITARY SEWAGE PUMP SHALL BE EQUIPPED WITH A UNION, A CHECK VALVE AND A SHUT-OFF VALVE INSTALLED IN THAT SEQUENCE IN THE DIRECTION OF DISCHARGE.
- A SUBSOIL DRAINAGE PIPE THAT DRAINS INTO A SANITARY DRAINAGE SYSTEM THAT IS SUBJECT TO SURCHARGE SHALL BE CONNECTED IN SUCH A MANNER THAT SEWAGE CANNOT BACK UP INTO THE SUBSOIL DRAINAGE PIPE.
- THE DEVELOPED LENGTH OF EVERY FIXTURE OUTLET PIPE SHALL NOT EXCEED 1200mm.
- WHERE CLOTHES WASHERS DO NOT DRAIN TO A LAUNDRY TRAY, THE TRAP INLET SHALL BE FITTED WITH A VERTICAL STANDPIPE THAT IS NOT LESS THAN 600mm LONG MEASURED FROM THE TRAP WEIR AND THE TOP OF THE STANDPIPE SHALL TERMINATE ABOVE THE FLOOD LEVEL RIM OF THE CLOTHES WASHER IT SERVES.

## 3. VENTING SYSTEM

- EVERY TRAP SHALL BE VENTED.
- EVERY SANITARY BUILDING DRAIN SHALL TERMINATE AT ITS UPSTREAM END IN A STACK OF AT LEAST 3 INCHES IN SIZE.
- A STACK SHALL BE A SOIL STACK IF ONE IS AVAILABLE AND MAY BE A VENT STACK OR WASTE STACK THAT PROVIDES AT LEAST 3 INCHES STACK VENT AND THAT GOES TO OPEN AIR ABOVE THE ROOF, EITHER DIRECTLY OR THROUGH A HEADER.
- EVERY SUMP OR TANK THAT RECEIVES SANITARY SEWAGE SHALL BE PROVIDED WITH A VENT PIPE THAT IS CONNECTED TO THE TOP OF THE SUMP OR TANK.
- THE MINIMUM SIZE OF THE VENT PIPE FOR A SANITARY SEWAGE PUMP OR TANK, OR DILUTION TANK SHALL BE ONE SIZE SMALLER THAN THE SIZE OF THE LARGEST BRANCH OR FIXTURE DRAIN DRAINING TO THE SUMP OR TANK.
- AIR ADMITTANCE VALVES SHALL ONY BE USED IN BUILDINGS UNDERGOING RENOVATION AND INSTALLATIONS WHERE CONNECTION TO A VENT MAY NOT BE PRACTICAL.
- INSTALLED AIR ADMITTANCE VALVES SHALL BE ACCESSABLE AND LOCATED IN A SPACE THAT ALLOWS AIR TO ENTER THE VALVE.

## 4. POTABLE WATER

- EVERY POTABLE WATER SYSTEM SHALL BE CAPABLE OF WITHSTANDING WITHOUT LEAKAGE A WATER PRESSURE THAT IS AT LEAST 1000 kPa (145 PSI) FOR AT LEAST 1 HOUR OR WITHSTANDING FOR AT LEAST 2 HOURS WITHOUT A DROP IN PRESSURE, AN AIR PRESSURE THAT IS AT LEAST 700 kPa (102 PSI).
- EVERY FIXTURE SUPPLIED WITH SEPARATE HOT AND COLD WATER CONTROLS SHALL HAVE THE HOT WATER CONTROL ON THE LEFT AND THE COLD ON THE RIGHT.
- A BUILDING CONTROL VALVE SHALL BE PROVIDED ON EVERY WATER SERVICE PIPE AT THE LOCATION WHERE THE WATER SERVICE PIPE ENTERS THE BUILDING.
- EVERY WATER CLOSET SHALL BE PROVIDED WITH A SHUT-OFF VALVE ON ITS WATER SUPPLY PIPE.
- EVERY WATER PIPE THAT SUPPLIES A HOT WATER TANK, PRESSURE VESSEL, PLUMBING APPLIANCE OR WATER USING DEVICE SHALL BE PROVIDED WITH A SHUT OFF VALVE LOCATED CLOSE TO THE TANK, PRESSURE VESSEL, PLUMBING APPLIANCE OR WATER USING DEVICE.
- EVERY PIPE THAT PASSES THROUGH AN EXTERIOR WALL TO SUPPLY WATER TO THE EXTERIOR OF THE BUILDING SHALL BE PROVIDED WITH A FROST-PROOF HYDRANT WITH A SEPARATE SHUT-OFF VALVE OR A STOP-AND-WASTE COCK LOCATED INSIDE THE BUILDING AND CLOSE TO THE WALL.
- WHERE A HOSE BIB IS INSTALLED OUTSIDE A BUILDING, INSIDE A GARAGE OR WHERE THERE IS AN IDENTIFIABLE RISK OF CONTAMINATION, THE POTABLE WATER SYSTEM SHALL BE PROTECTED AGAINST BACKFLOW BY A BACKFLOW PREVENTER.
- NO WATER SYSTEM BETWEEN THE POINT OF CONNECTION WITH THE WATER SERVICE PIPE OR THE WATER METER AND THE FIRST BRANCH THAT SUPPLIES A WATER HEATER SHALL BE LESS THAN 3/4 INCH IN SIZE.
- EVERY WATER SERVICE PIPE SHALL NOT BE LESS THAN 3/4 INCH IN TRADE SIZE.
- A CHECK VALVE SHALL BE INSTALLED AT THE BUILDING END OF THE WATER SERVICE PIPE WHERE THE PIPE IS MADE OF PLASTIC THAT IS SUITABLE FOR COLD WATER USE ONLY.
- PROTECTION AGAINST THERMAL EXPANSION SHALL BE REQUIRED WHEN A CHECK VALVE, A BACKFLOW PREVENTER OR A PRESSURE REDUCING VALVE IS REQUIRED.

## 5. HOT WATER TEMPERATURE CONTROL

- SHOWER VALVES SHALL BE PRESSURE BALANCED OR THERMOSTATIC MIXING VALVES. A PRESSURE BALANCED OR THERMOSTATIC MIXING VALVE SHALL NOT BE REQUIRED FOR SHOWERS WHERE THE HOT WATER SUPPLY FOR SHOWERS, ARE CONTROLLED BY A MASTER THERMOSTATIC MIXING VALVE. PRESSURE BALANCED OR THERMOSTATIC MIXING VALVES SHALL BE DESIGNED SUCH THAT THE OUTLET TEMPERATURE DOES NOT EXCEED 49°C (120°F).

## Excavation and Backfill

- Excavation shall be undertaken in such a manner so as to prevent damage to existing structures, adjacent property and utilities
- The topsoil and vegetable matter in unexcavated areas under a building shall be removed. The bottom of excavations for foundations shall be free of all organic material
- If termites are known to exist, all stumps, roots and wood debris shall be removed to a minimum depth of **300mm** in excavated areas under a building, and the clearance between untreated structural wood elements and the ground shall be no less than **450mm**
- Backfill within **600mm** of the foundation walls shall be free of deleterious debris and boulders over **250mm** in diameter

## Dampproofing and Drainage

- In normal soil conditions, the exterior surfaces of foundation walls enclosing basements and crawl spaces shall be dampproofed. Where hydrostatic pressure occurs, a waterproofing system is required
- Masonry foundation walls shall be parged with **6mm** of mortar coved over the footing prior to dampproofing
- **100mm** dia. foundation drains shall be laid on level, undisturbed ground adjacent to the footings at or below the top of the basement slab or crawl space floor, and shall be covered with **150mm** of crushed stone. Foundation drains shall drain to a storm sewer, drainage ditch, dry well or sump
- Window wells shall be drained to the footing level or to a ditch or sump pump.
- Downspouts not directly connected to a storm sewer shall have extensions to carry water away from the building, and provisions shall be made to prevent soil erosion
- Concrete slabs in attached garages shall be sloped to drain to the exterior
- The building site shall be graded so that surface, sump and roof drainage will not accumulate at or near the building and will not adversely affect adjacent properties

## Footings

- minimum **15MPa** poured concrete
- minimum **1200mm** below finished grade
- Footings shall be founded on natural undisturbed soil, rock or compacted granular fill with minimum bearing capacity of **75kPa**
  **100kPa** for ICF

## Footing Size

| Floors Supported | Supporting Ext. Wall | Supporting Int. Wall | Column Area |
|---|---|---|---|
| 1 | **250mm** | **200mm** | **0.40m2** |
| 2 | **350mm** | **350mm** | **0.75m2** |
| 3 | **450mm** | **500mm** | **1.00m2** |

- Increase exterior footing width by **65mm** for each storey of brick veneer supported, by **130mm** for each storey of masonry and by **150mm** for ICF
- Increase interior footing width by **100mm** for each storey of masonry above footing, and by **100mm** for each **2700mm** of wall height above **5500mm**
- The projection of an unreinforced footing beyond the wall supported shall not be greater than its thickness

## Step Footings

- **600mm** max. rise
  **600mm** min. run

## Foundation Walls

- To be poured concrete, unit masonry, ICF or preserved wood (see drawings for type and thickness)
- Dampproofing shall be a heavy coat of bituminous material.
- Foundation wall to extend minimum **150mm** above finished grade.
- A drainage layer is required on the outside of a foundation wall where the interior insulation extends more than **900mm** below exterior grade. A drainage layer shall consist of
  - Min. **19mm** mineral fibre insulation with min. Density of **57 kg/m$^3$**
  - Min. **100mm** of free drainage granular material, or
  - An approved system which provides equivalent performance
- Foundation walls shall be braced or have the floor joists installed before backfilling

## Concrete Floor Slabs

- Garage, carport and exterior slabs and exterior steps shall be **32MPa** concrete with **5-8%** air entrainment
- Basement slab **25MPa** concrete, minimum **75mm** thick, placed on a minimum **100mm** of coarse, clean, granular material
- All fill other than coarse clean material placed beneath concrete slabs shall be compacted to provide uniform support

## Masonry Walls

- Where constructed of **90mm** brick, wall shall be bonded with a header course every **600mm** o/c vertically and horizontally and **900mm** o/c for block or tile.
- Provide **50mm** solid masonry, concrete filled top course or continuous **38x89** wood plate under all roof and floor framing members
- Provide **190mm** solid masonry under beams and columns
- Masonry wall to be tied to each tier of joists with **40mm x 4.76mm** corrosion resistant steel straps, keyed minimum **100mm** into masonry. When joists are parallel to wall, ties are to extend across at least 3 joists @ **2000mm o.c.**
- Inside of wall to be parged and covered with No. **15** breather-type asphalt paper
- For reduced foundation walls to allow a brick facing while maintaining lateral support, tie minimum **90mm** brick to minimum **90mm** back-up block with corrosion resistant ties at least **17.8mm$^2$** in cross sectional area, spaced **200mm** vertically and **900mm** horizontally, with joints completely filled with mortar
- Masonry over openings shall be supported on corrosion resistant or prime painted steel lintels with a minimum of **150mm** end bearing

## Masonry Veneer

- Minimum **70mm** thick if joints are not raked and **90mm** thick if joints are raked
- Minimum **25mm** air space to sheathing
- Provide weep holes @ **800mm o.c.** at the bottom of the cavity and over doors and windows
- Direct drainage through weep holes with **0.5mm** poly flashing extending minimum **150mm** up behind the sheathing paper
- Veneer ties minimum **0.76mm** thick x **22mm** wide corrosion resistant straps spaced @ **500mm** vertically and **600mm** horizontally
- Fasten ties with corrosion resistant **3.18mm** diameter screws or spiral nails which penetrate at least **30mm** into studs



TACBOC
STANDARD DETAIL

TITLE
SPECIFICATION - BUILDING CODE STANDARDS
EXCAVATION, CONCRETE & MASONRY

DWG. NO.
S01a
2007

## Wood Frame Construction

- All lumber shall be spruce-pine-fir No. 1 & 2, and shall be identified by a grade stamp
- Maximum moisture content 19% at time of installation
- Wood framing members which are supported on concrete in direct contact with soil shall be separated from the concrete with 0.05mm polyethylene or type 'S' roll roofing

## Walls

- Exterior walls shall consist of:
  - cladding
  - air barrier system lapped 100mm at joints
  - lumber, plywood, OSB or gypsum sheathing
  - 38x140 studs @ 400mm o.c.
  - RSI 3.34 insulation
  - 38x140 bottom plate
  - 38x140 double top plate
- Interior loadbearing walls shall consist of:
  - 38x89 studs @ 400mm o.c.
  - 38x98 bottom plate and double 38x89 top plate
  - 38x89 mid-girts if not sheathed
  - 12.7mm gypsum board sheathing

## Floors

- See SOId for floor joist size and spacing requirements
- Joists to have minimum 38mm of end bearing
- Joists shall bear on a sill plate fixed to foundation with 12.7mm anchor bolts @ 2400mm o.c
- Header joists between 1200mm and 3200mm in length shall be doubled. Header joists exceeding 3200mm shall be sized by calculations
- Trimmer joists shall be doubled when supported header is between 800mm and 2000mm. Trimmer joists shall be sized by calculations when supported header exceeds 2000mm
- 38x38 cross bridging required not more than 2100mm from each support and from other rows of bridging
- Joists shall be supported on joist hangers at all flush beams, trimmers, and headers.
- Non-loadbearing partitions shall be supported on a joist or on blocking between joists.
- See SOId for subflooring requirements

## Roof & Ceilings

- See SOId for rafter, roof joist and ceiling joist size and spacing requirements
- Hip and valley rafter shall be 38mm deeper than common rafters
- 38x89 collar ties @ rafter spacing with 19x89 continuous brace at mid span if collar tie exceeds 2400mm in length
- See SOId for roof sheathing requirements

## Notching & Drilling of Trusses, Joists, Rafters

- Holes in floor, roof and ceiling members to be not larger than 1/4 the actual depth of member and not less than 50mm from edges
- Notches in floor, roof and ceiling members to be located on top of the member within 1/2 the actual depth from the edge of bearing and not greater than 1/3 the joist depth
- Wall studs may be notched or drilled provided that no less than 2/3 the depth of the stud remains, if load bearing, and 40mm if non-load bearing
- Roof truss members shall not be notched, drilled or weakened unless accommodated in the design

## Roofing

- Fasteners for roofing shall be corrosion resistant. Roofing nails shall penetrate through or at least 12mm into roof sheathing
- Every asphalt shingle shall be fastened with at least 4 nails for 1000mm wide shingle (or 6 11mm staples)
- Eave protection shall extend 900mm up the roof slope from the edge, and at least 300mm from the inside face of the exterior wall, and shall consist of Type M or Type S Roll Roofing laid with minimum 100mm head and end laps cemented together, or glass Fibre or Polyester Fibre coated base sheets, or self sealing composite membranes consisting of modified bituminous coated material or NO.15 saturated felt lapped and cemented. Eave protection is not required for unheated buildings, for roofs exceeding a slope of 1 in 1.5, or where a low slope asphalt shingle application is provided
- Open valleys shall be flashed with 2 layers of roll roofing, or 1 layer of sheet metal min. 600mm wide
- Flashing shall be provided at the intersection of shingle roofs with exterior walls and chimneys
- Sheet metal flashing shall consist of not less than 1.73mm sheet lead, 0.33mm galvanized steel, 0.33mm copper, 0.35mm zinc, or 0.48mm aluminum

## Columns, Beams & Lintels

- Steel beams and columns shall be shop primed 350W steel.
- Minimum 89mm end bearing for wood and steel beams, with 190mm solid masonry beneath the beam.
- Steel columns to have minimum outside diameter of 73mm and minimum wall thickness of 4.76mm
- Wood columns for carports and garages shall be minimum 89mm x 89mm; in all other cases either 140mm x 140mm or 184mm round, unless calculations based on actual loads show lesser sizes are adequate. All columns shall be not less than the width of the supported member
- Masonry columns shall be a minimum of 290mm x 290mm or 240mm x 380mm
- Provide solid blocking the full width of the supported member under all concentrated loads

## Insulation & Weatherproofing

| | | |
|---|---|---|
| Ceiling with attic | | RSI 8.81 |
| Roof without attic | | RSI 5.46 |
| Exterior Wall | | RSI 4.23 |
| Foundation Wall | | RSI 3.52 |
| Foundation > 50% exposed | | RSI 4.23 |
| Exposed Floor | | RSI 5.46 |
| Slabs on Grade | (unheated) | RSI 1.76 |
| | (heated) | RSI 1.76 |

- Supply Ducts in unheated space RSI 2.11
  Insulation shall be protected with gypsum board or an equivalent interior finish, except for unfinished basements where 0.15mm poly is sufficient for fibreglass type insulations
- Ducts passing through unheated space shall be made airtight with tape or sealant
- Caulking shall be provided for all exterior doors and windows between the frame and the exterior cladding
- Weatherstripping shall be provided on all doors and access hatches to the exterior, except doors from a garage to the exterior
- Exterior walls, ceilings and floors shall be constructed so as to provide a continuous barrier to the passage of water vapour from the interior and to the leakage of air from the exterior

## Natural Ventilation

- Every roof space above an insulated ceiling shall be ventilated with unobstructed openings equal to not less than 1/300 of the insulated ceiling area
- Insulated roof spaces not incorporating an attic shall be ventilated with unobstructed openings equal to not less than 1/150 of the insulated ceiling area.
- Roof vents shall be uniformly distributed with min. 25% at top of the space and 25% at bottom of the space designed to prevent the entry of rain, snow or insects
- Unheated crawl spaces shall be provided with $0.1m^2$ of ventilation for each $50m^2$
- Minimum natural ventilation areas, where mechanical ventilation is not provided, are:
  Bathrooms: $0.09m^2$
  other rooms: $0.28m^2$
  Unfinished basement: 0.2% of floor area

## Doors and Windows

- Every floor level containing a bedroom and not served by an exterior door shall contain at least 1 window having an unobstructed open area of $0.35m^2$ and no dimension less than 380mm, which is openable from the inside without tools. Maximum sill height 1000mm for 1in. floors above grade.
- Exterior house doors and windows within 2000mm from grade shall be constructed to resist forced entry. Doors shall have a deadbolt lock
- The principal entry door shall have either a door viewer, transparent glazing or a sidelight
- Maximum U-value 1.8 for windows & sliding glass doors

## Exterior Walls

- No windows or other unprotected openings are permitted in exterior walls less than 1200mm from property lines
- 15.9mm type 'x' fire rated drywall shall be installed on the inside face of attached garage exterior walls and gable ends of roofs which are less than 1200mm and not less than 600mm from property lines
- Non combustible cladding shall be installed on all exterior walls less than 600mm from property lines

## Ceramic Tile

- When ceramic tile is applied to a mortar bed with adhesive, the bed shall be a minimum of 12.5mm thick & reinforced with galvanized diamond mesh lath, applied over polyethylene on subflooring on joists at no more than 400mm o.c. with at least 2 rows cross bridging

## Access to Attics and Crawl Spaces

- Access hatch minimum 545mmx 588mm to be provided to every roof space which is $10m^2$ or more in area and more than 600mm in height
- Access hatch minimum 500mmx 700mm to be provided to every crawl space

## Garage Gasproofing

- The walls and ceiling of an attached garage shall be constructed and sealed so as to provide an effective barrier to exhaust fumes
- All plumbing and other penetrations through the walls and ceiling shall be caulked
- Doors between the dwelling and attached garage may not open into a bedroom and shall be weatherstripped and have a self-closer

## Alarms and Detectors

- At least one smoke alarm shall be installed on or near the ceiling on each floor and basement level 900mm or more above an adjacent level
- Smoke alarms shall be interconnected and located such that one is within 5m of every bedroom door and no more than 15m travel distance from any point on a floor
- A carbon monoxide detector shall be installed adjacent to every sleeping area for dwellings with fuel burning fireplace or stove, or an attached garage

## Stairs

| | |
|---|---|
| Maximum Rise | 200mm |
| Minimum Run | 210mm |
| Minimum Tread | 235mm |
| Minimum Head Room | 1950mm |
| Minimum Width | 860mm |

- Curved stairs shall have a min. run of 150mm at any point and a minimum average run of 200mm
- Winders which converge to a point in stairs must turn through an angle of no more than 90°, with no less than 30° or more than 45° per tread. Sets of winders must be separated by 1200mm along the run of the stair
- A landing is required at the top of any stair leading to the principal entrance to a dwelling and other exterior entrances with more than 3 risers
- Exterior concrete stairs with more than 2 risers require foundations

## Handrails and Guards

- A handrail is required for interior stairs containing more than 2 risers and exterior stairs containing more than 3 risers
- Guards are required around every accessible surface which is more than 600mm above the adjacent level and where the adjacent surface has a slope more than 1:2
- Interior and exterior guards min. 900mm high. Exterior guards shall be 1070mm high where height above adjacent surface exceeds 1800mm
- Guards shall have openings smaller than 100mm and no member between 140mm and 900mm that will facilitate climbing

## Plumbing

- Every dwelling requires a kitchen sink, lavatory, water closet, bathtub or shower stall and the installation or availability of laundry facilities
- A floor drain shall be installed in the basement, and connected to the sanitary sewer where gravity drainage is possible. In other cases, it shall be connected to a sewage ejection pump.

## Electrical

- An exterior light controlled by an interior switch is required at every entrance
- A light controlled by a switch is required in every kitchen, bedroom, living room, utility room, laundry room, dining room, bathroom, vestibule, hallway, garage and carport. A switched receptacle may be provided instead of a light in bedrooms and living rooms
- Stairs shall be lighted, and except where serving an unfinished basement shall be controlled by a 3 way switch at the head and foot of the stairs
- Basements require a light for each $30m^2$, controlled by a switch at the head of the stairs

## Mechanical Ventilation

- A mechanical ventilation system is required with a total capacity at least equal to the sum of:
  - 10.0 L/S each for basement and master bedroom
  - 5.0 L/S for each other room
- A principal dwelling exhaust fan shall be installed and controlled by a centrally located switch identified as such
- Supplemental exhaust shall be installed so that the total capacity of all kitchen, bathroom and other exhausts , less the principal exhaust, is not less than the total required capacity
- A Heat Recovery Ventilator may be employed in lieu of exhaust to provide ventilation. An HRV is required if any solid fuel burning appliances are installed
- Supply air intakes shall be located so as to avoid contamination from exhaust outlets



TACBOC STANDARD DETAIL

TITLE

SPECIFICATION - BUILDING CODE STANDARDS

GENERAL INFORMATION, ELECTRICAL, MECHANICAL

DWG. NO. S01c

03-2012

## ROOF RAFTERS (WHERE NO CEILING IS INSTALLED)

| MAXIMUM CLEAR SPAN (M) | | | | | | |
|---|---|---|---|---|---|---|
| RAFTER SIZE | ROOF SNOW LOAD 1.0 kPa | | | ROOF SNOW LOAD 1.5 kPa | | |
| | RAFTER SPACING (mm) O.C. | | | RAFTER SPACING (mm) O.C. | | |
| | 300 | 400 | 600 | 300 | 400 | 600 |
| 38x89 | 3.11 | 2.83 | 2.47 | 2.72 | 2.47 | 2.16 |
| 38x140 | 4.90 | 4.45 | 3.89 | 4.28 | 3.89 | 3.40 |
| 38x184 | 6.44 | 5.85 | 5.11 | 5.62 | 5.11 | 4.41 |
| 38x235 | 8.22 | 7.47 | 6.38 | 7.18 | 6.52 | 5.39 |

## ROOF JOISTS (WHERE CEILING IS INSTALLED)

| MAXIMUM CLEAR SPAN (M) | | | | | | |
|---|---|---|---|---|---|---|
| JOIST SIZE | ROOF SNOW LOAD 1.0 kPa | | | ROOF SNOW LOAD 1.5 kPa | | |
| | JOIST SPACING (mm) O.C. | | | JOIST SPACING (mm) O.C. | | |
| | 300 | 400 | 600 | 300 | 400 | 600 |
| 38x89 | 2.47 | 2.24 | 1.96 | 2.16 | 1.96 | 1.71 |
| 38x140 | 3.89 | 3.53 | 3.08 | 3.40 | 3.08 | 2.69 |
| 38x184 | 5.11 | 4.64 | 4.05 | 4.46 | 4.05 | 3.54 |
| 38x235 | 6.52 | 5.93 | 5.18 | 5.70 | 5.18 | 4.52 |

## FLOOR JOISTS

| MAXIMUM CLEAR SPAN (M) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JOIST SIZE | 19x64mm STRAPPING OR DRYWALL CLG. | | | 38x38mm CROSS BRIDGING | | | BOTH STRAPPING & BRIDGING | | | 38-51mm CONCRETE TOPPING | | |
| | JOIST SPACING (mm) | | | JOIST SPACING (mm) | | | JOIST SPACING (mm) | | | JOIST SPACING (mm) | | |
| | 300 | 400 | 600 | 300 | 400 | 600 | 300 | 400 | 600 | 300 | 400 | 600 |
| 38x89 | 1.86 | 1.72 | 1.58 | 1.99 | 1.81 | 1.58 | 1.99 | 1.81 | 1.58 | 1.99 | 1.81 | 1.58 |
| 38x140 | 2.92 | 2.71 | 2.49 | 3.14 | 2.85 | 2.49 | 3.14 | 2.85 | 2.49 | 3.14 | 2.85 | 2.49 |
| 38x184 | 3.54 | 3.36 | 3.20 | 3.81 | 3.58 | 3.27 | 3.99 | 3.72 | 3.27 | 4.12 | 3.75 | 3.27 |
| 38x235 | 4.17 | 3.96 | 3.77 | 4.44 | 4.17 | 3.92 | 4.60 | 4.29 | 4.00 | 5.27 | 4.79 | 4.13 |
| 38x286 | 4.75 | 4.52 | 4.30 | 5.01 | 4.71 | 4.42 | 5.17 | 4.82 | 4.49 | 6.23 | 5.81 | 4.79 |

## CEILING JOISTS

| MAXIMUM CLEAR SPAN (M) | | | |
|---|---|---|---|
| JOIST SIZE | JOIST SPACING (mm) O.C. | | |
| | 300 | 400 | 600 |
| 38x89 | 3.11 | 2.83 | 2.47 |
| 38x140 | 4.90 | 4.45 | 3.89 |
| 38x184 | 6.44 | 5.85 | 5.11 |
| 38x235 | 8.22 | 7.47 | 6.52 |

## SUBFLOORING

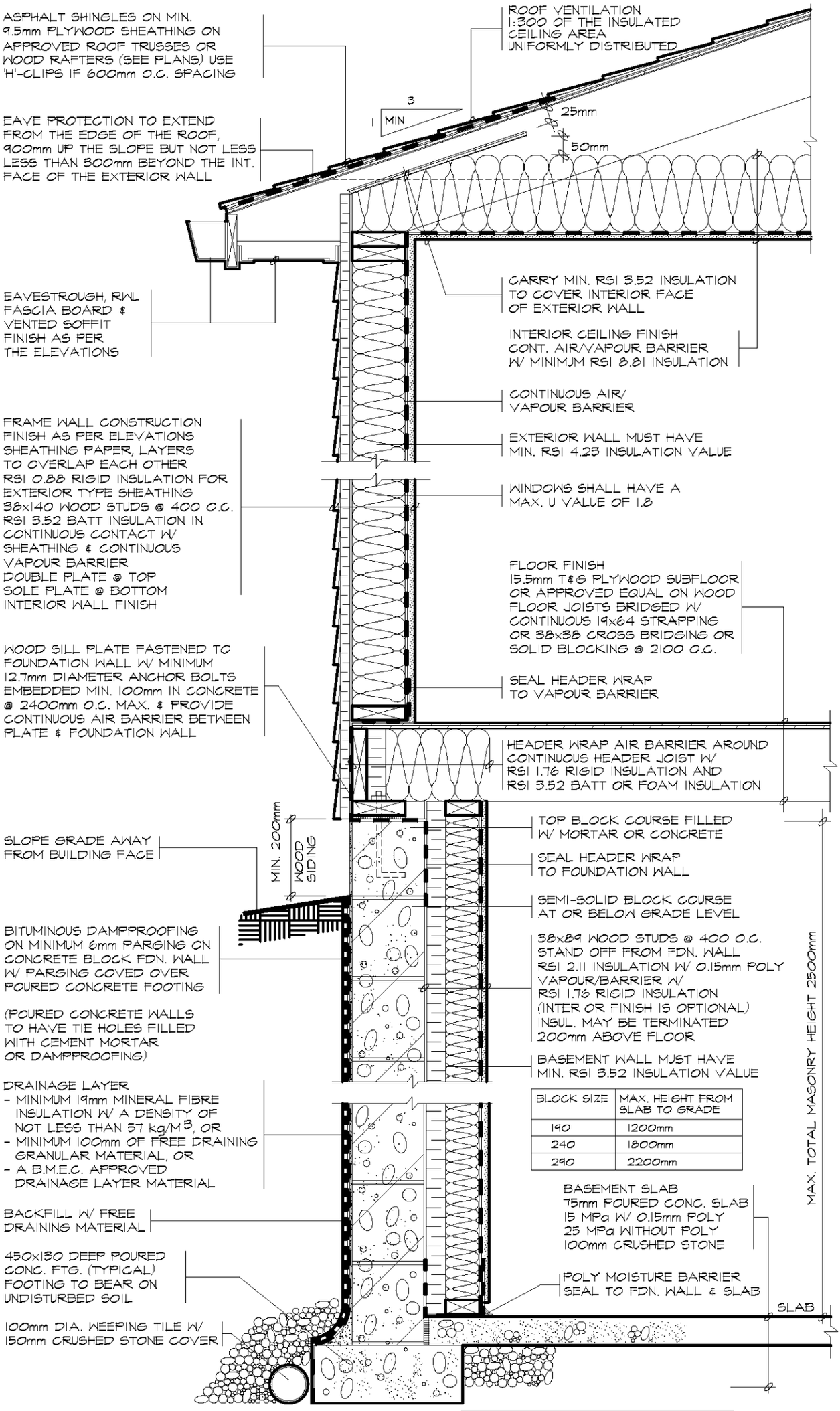
| FLOOR JOIST UP TO (mm) O.C. | SUBFLOORING MIN. THICKNESS (mm) | | |
|---|---|---|---|
| | PLYWOOD | WAFER BD. | LUMBER |
| 400 | 15.5 | 15.9 | 17.0 |
| 500 | 15.5 | 15.9 | 19.0 |
| 600 | 18.5 | 19.0 | 19.0 |

## ROOF SHEATHING

| ROOF FRAMING (mm) O.C. | ROOF SHEATHING MIN. THICKNESS (mm) UNSUPPORTED EDGES | ROOF SHEATHING MIN. THICKNESS (mm) TONGUE & GROOVE, 'H'-CLIPS OR OTHER EDGE SUPPORT |
|---|---|---|
| 300 | 7.5 PLYWOOD, 9.5 WAFER BD. OR 17.0 LUMBER | 7.5 PLYWOOD, 9.5 WAFER BD. OR 17.0 LUMBER |
| 400 | 9.5 PLYWOOD, 11.1 WAFER BD. OR 17.0 LUMBER | 7.5 PLYWOOD, 9.5 WAFER BD. OR 17.0 LUMBER |
| 600 | 12.5 PLYWOOD OR 19.0 LUMBER | 9.5 PLYWOOD, 11.1 WAFER BD. OR 19.0 LUMBER |

## GENERAL NOTES

1. ALL LUMBER TO BE NO. 1&2 SPF OR BETTER
2. STRAPPING & CROSS BRIDGING MAXIMUM 2100mm FROM END SUPPORT & OTHER ROWS OF STRAPPING & BRIDGING.
3. CEILING JOIST TABLE MAY BE APPLIED ONLY WHERE ATTIC IS NOT ACCESSIBLE BY A STAIRWAY.
4. WHERE FINISHED FLOORING CONSISTS OF 19mm WOOD STRIPS, SUBFLOOR MAY BE REDUCED TO 12.7mm.




| BLOCK SIZE | MAX. HEIGHT FROM SLAB TO GRADE |
|---|---|
| 190 | 1200mm |
| 240 | 1800mm |
| 290 | 2200mm |

TACBOC
STANDARD DETAIL

TITLE

# FRAME WALL SECTION

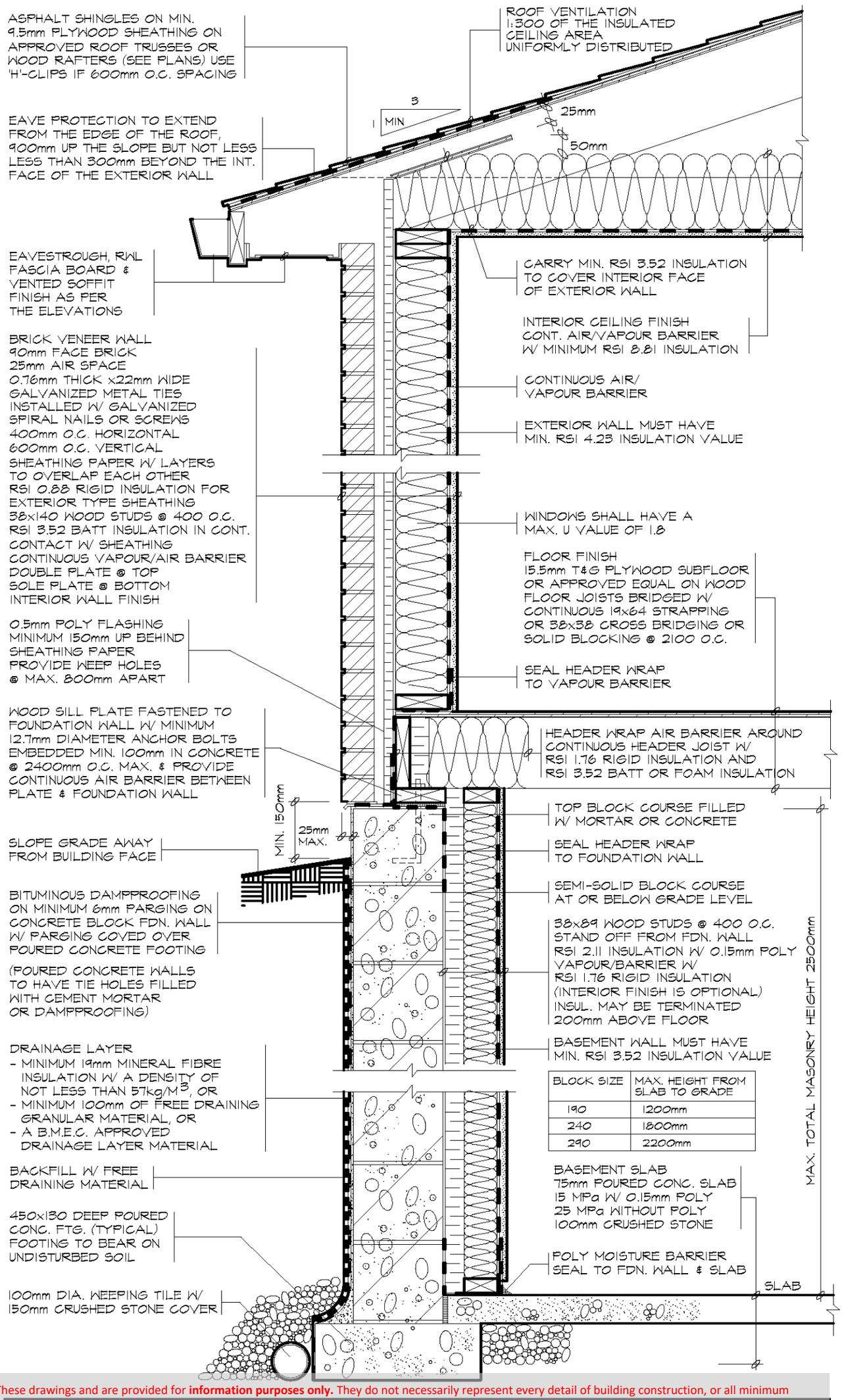
FULL BASEMENT



DWG. NO.

W01

03–2012




| BLOCK SIZE | MAX. HEIGHT FROM SLAB TO GRADE |
|---|---|
| 190 | 1200mm |
| 240 | 1800mm |
| 290 | 2200mm |



TACBOC
STANDARD DETAIL

TITLE

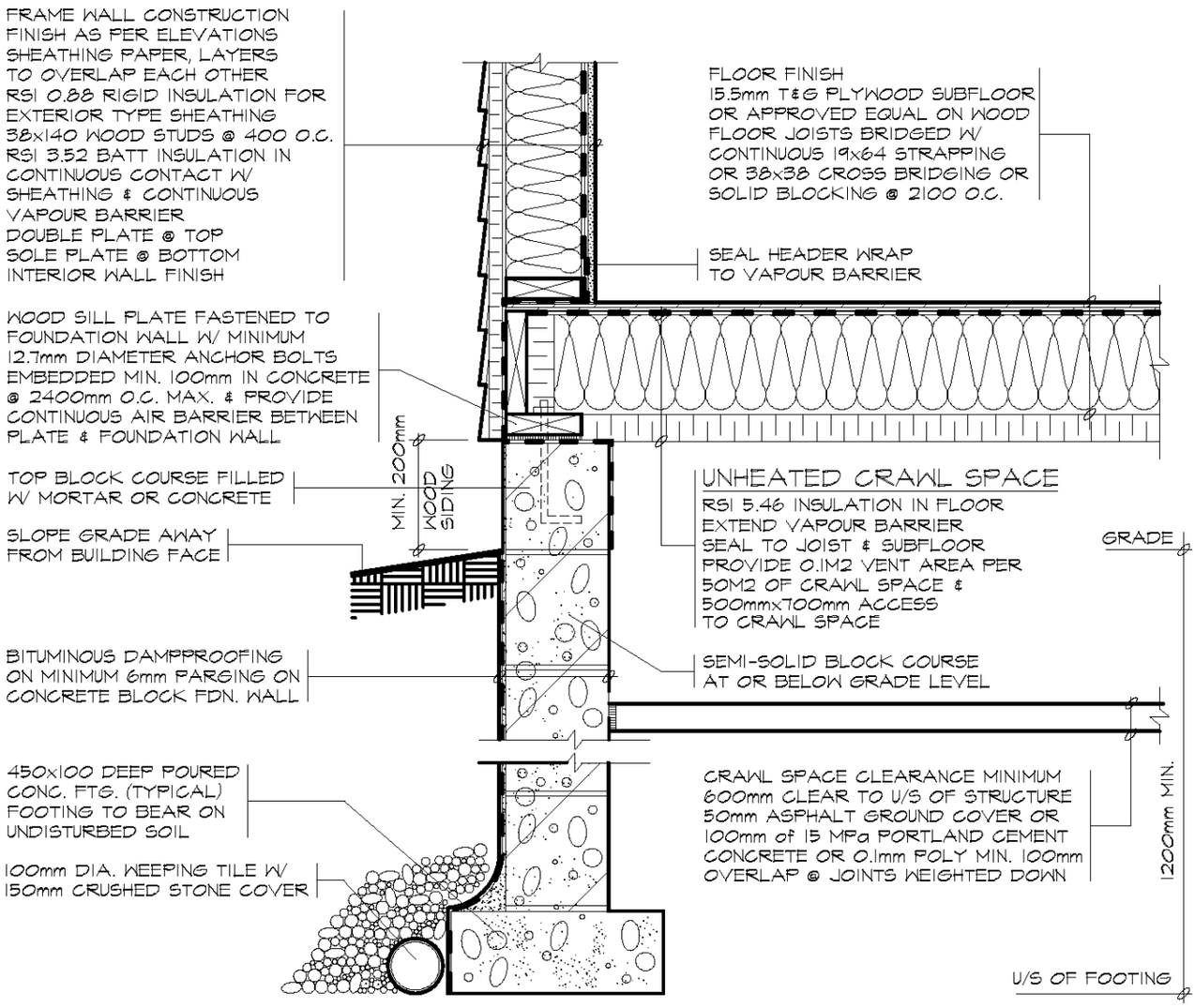
# BRICK VENEER WALL SECTION

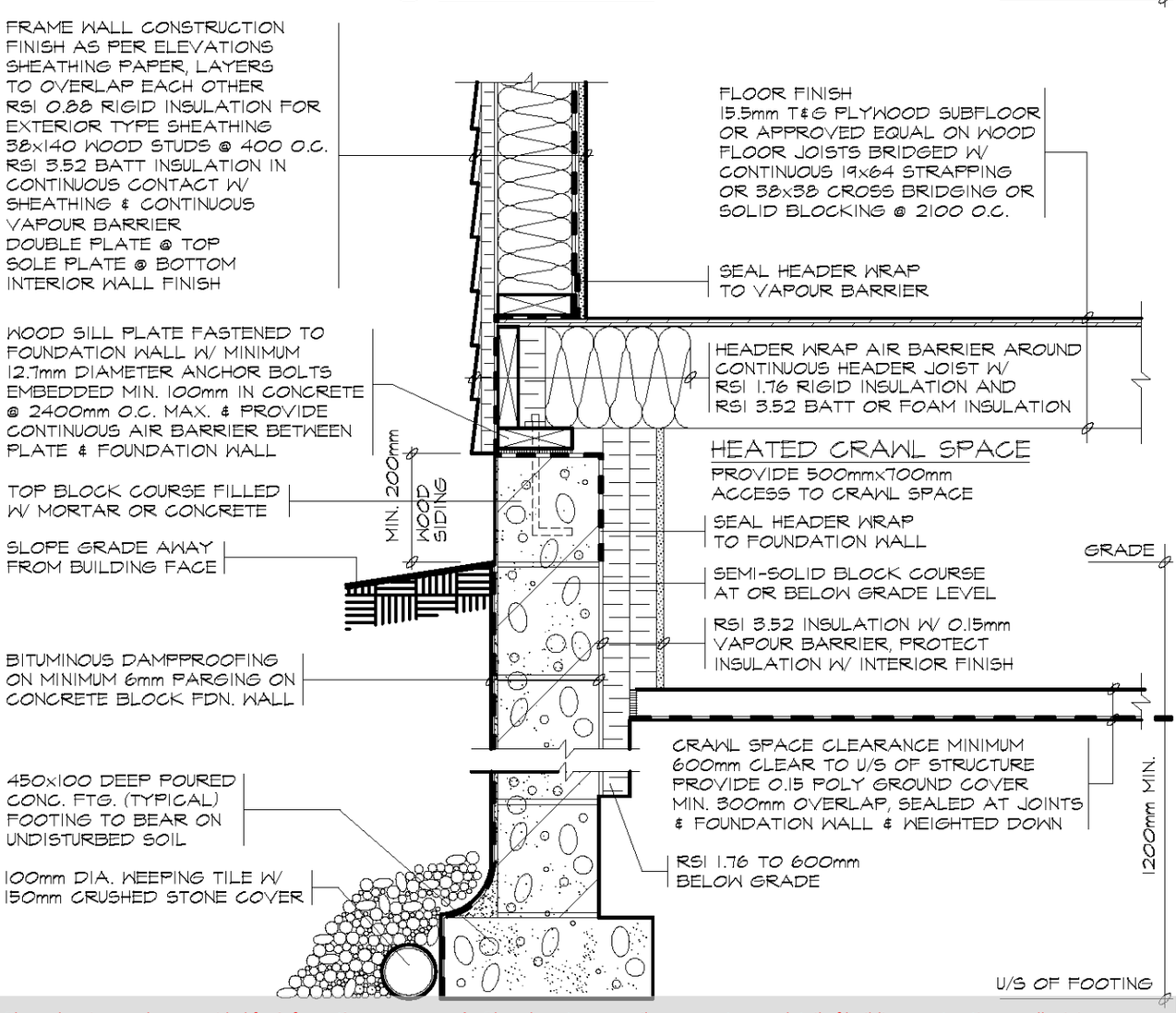
FULL BASEMENT

DWG. NO.

W02

03-2012






**TACBOC**
**STANDARD DETAIL**

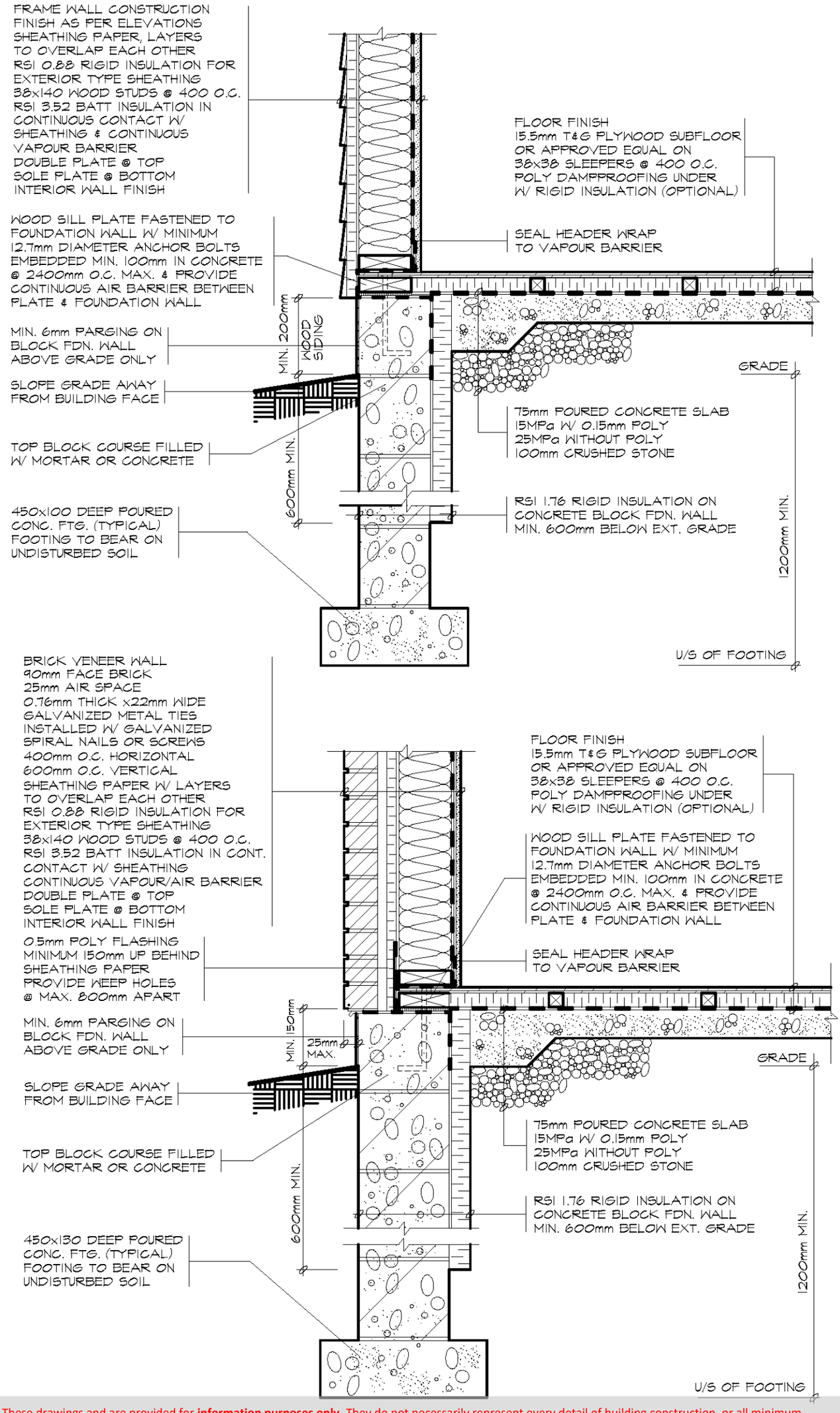
TITLE

# CRAWL SPACE
## HEATED & UNHEATED

DWG. NO.

W04

03-2012






TACBOC
STANDARD DETAIL

TITLE

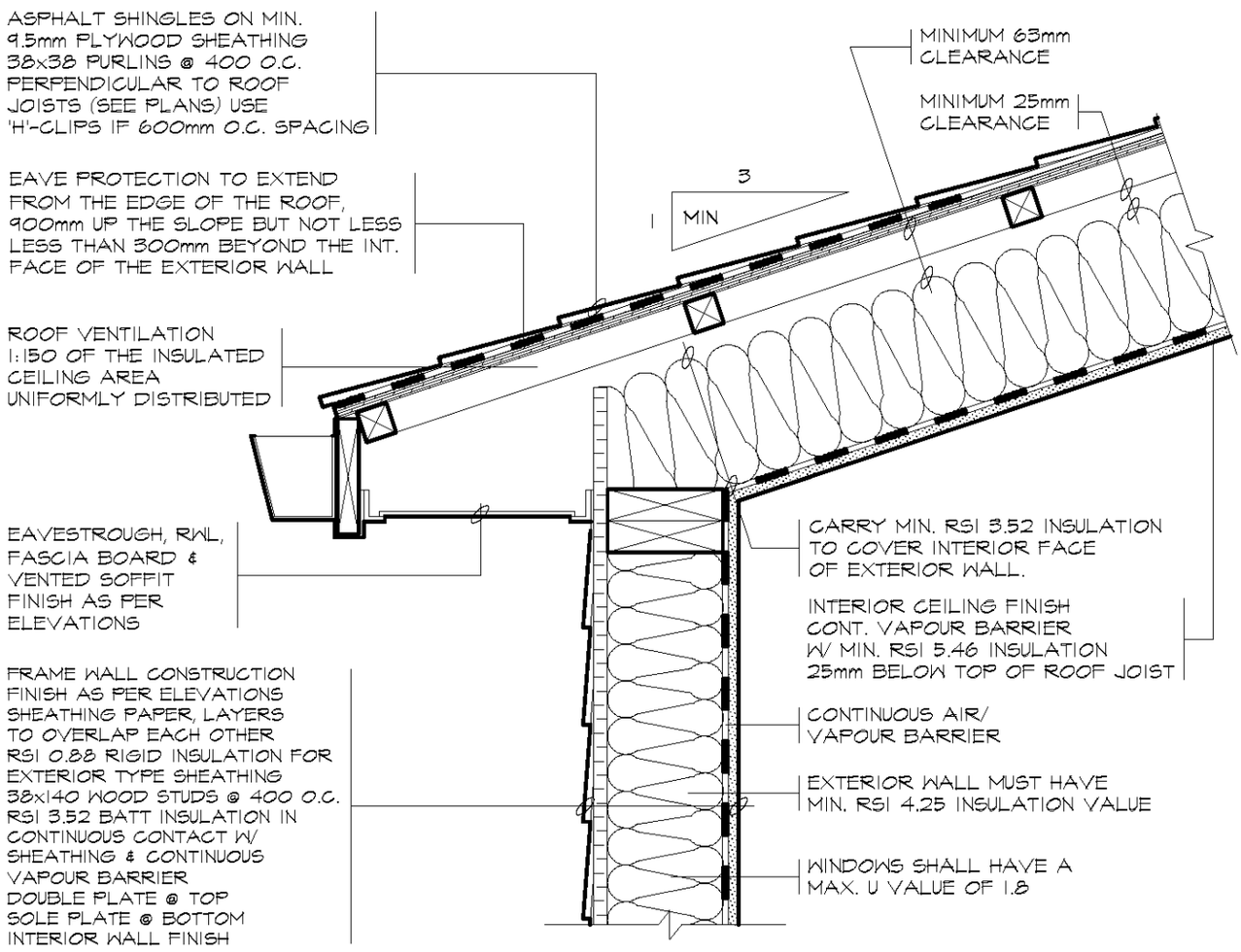
# SLAB ON GRADE

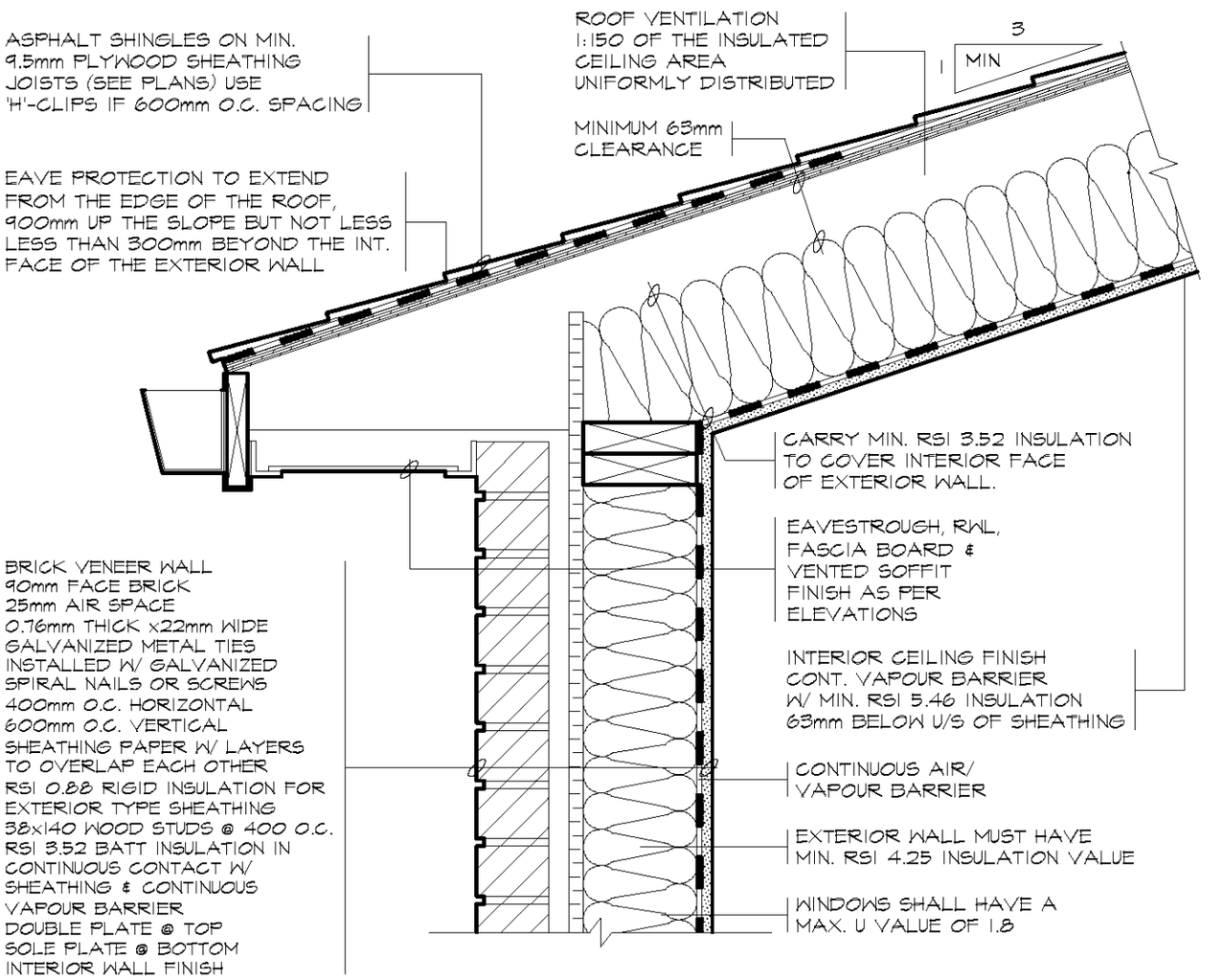
## FRAME & BRICK VENEER WALLS

DWG. NO.

W05

03-2012






TACBOC
STANDARD DETAIL

TITLE

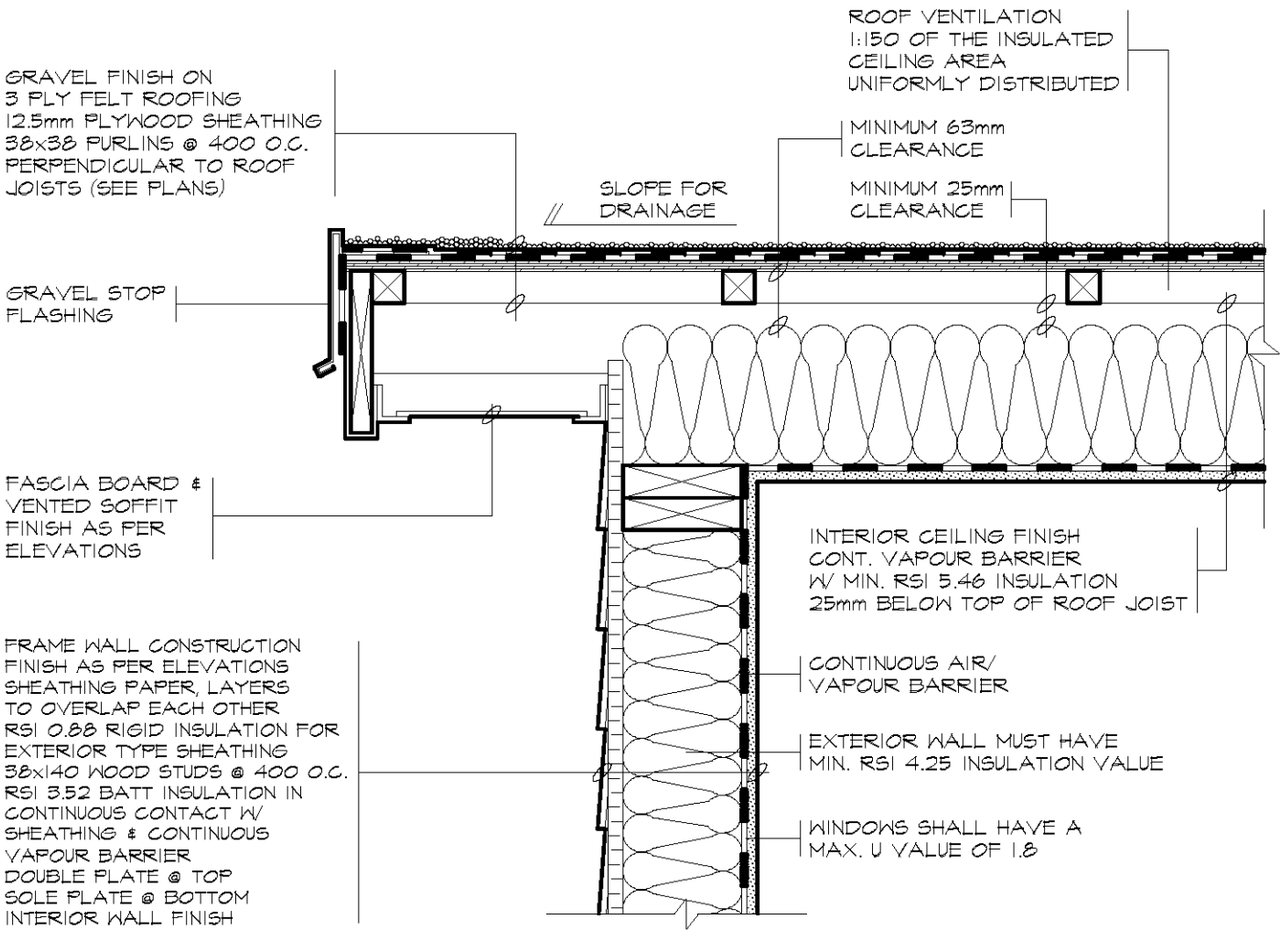
# SLOPING ROOF DETAIL

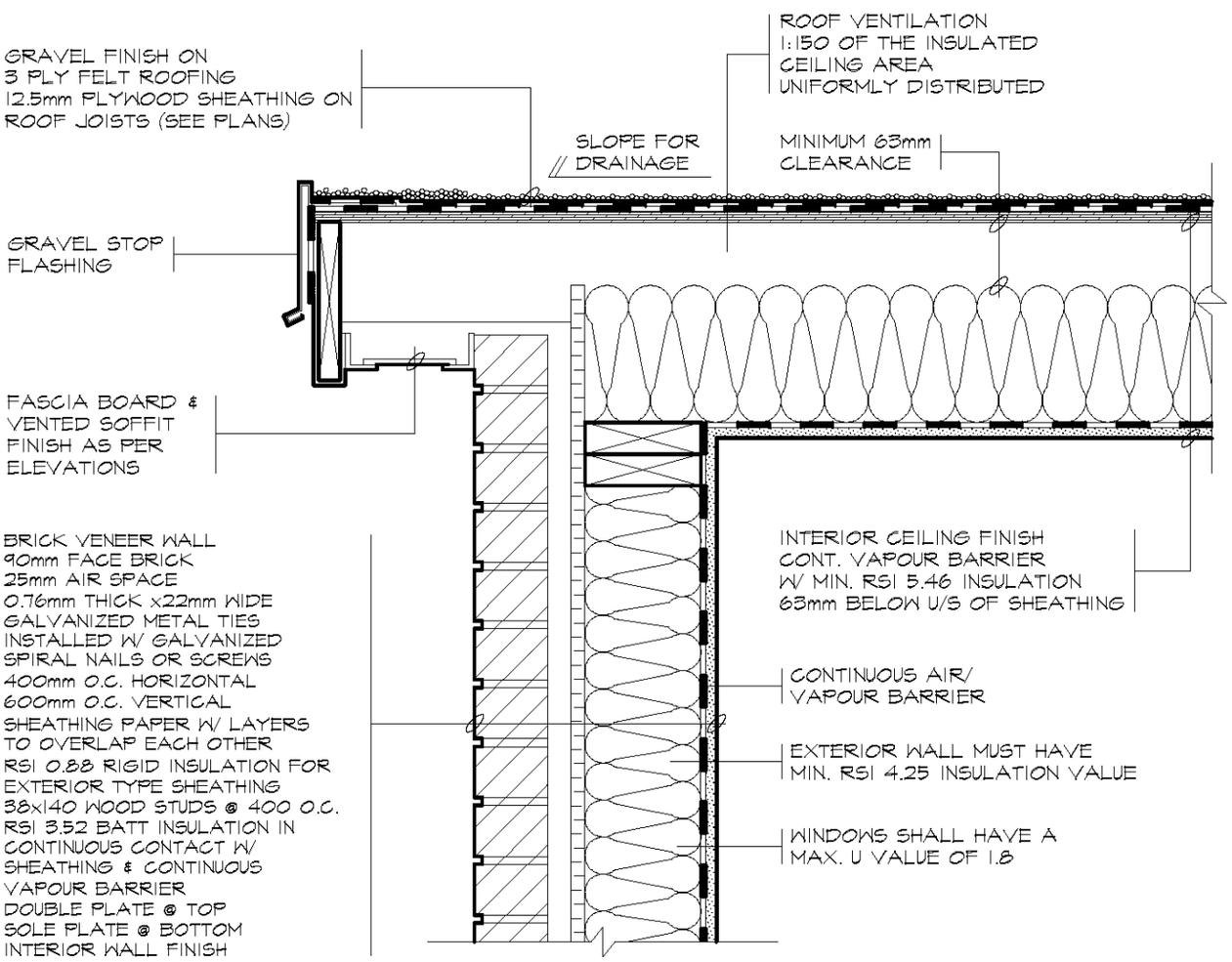
INSULATION & VENTILATION W/ ALTERNATIVE

DWG. NO.

W06a

03-2012






TACBOC
STANDARD DETAIL

TITLE

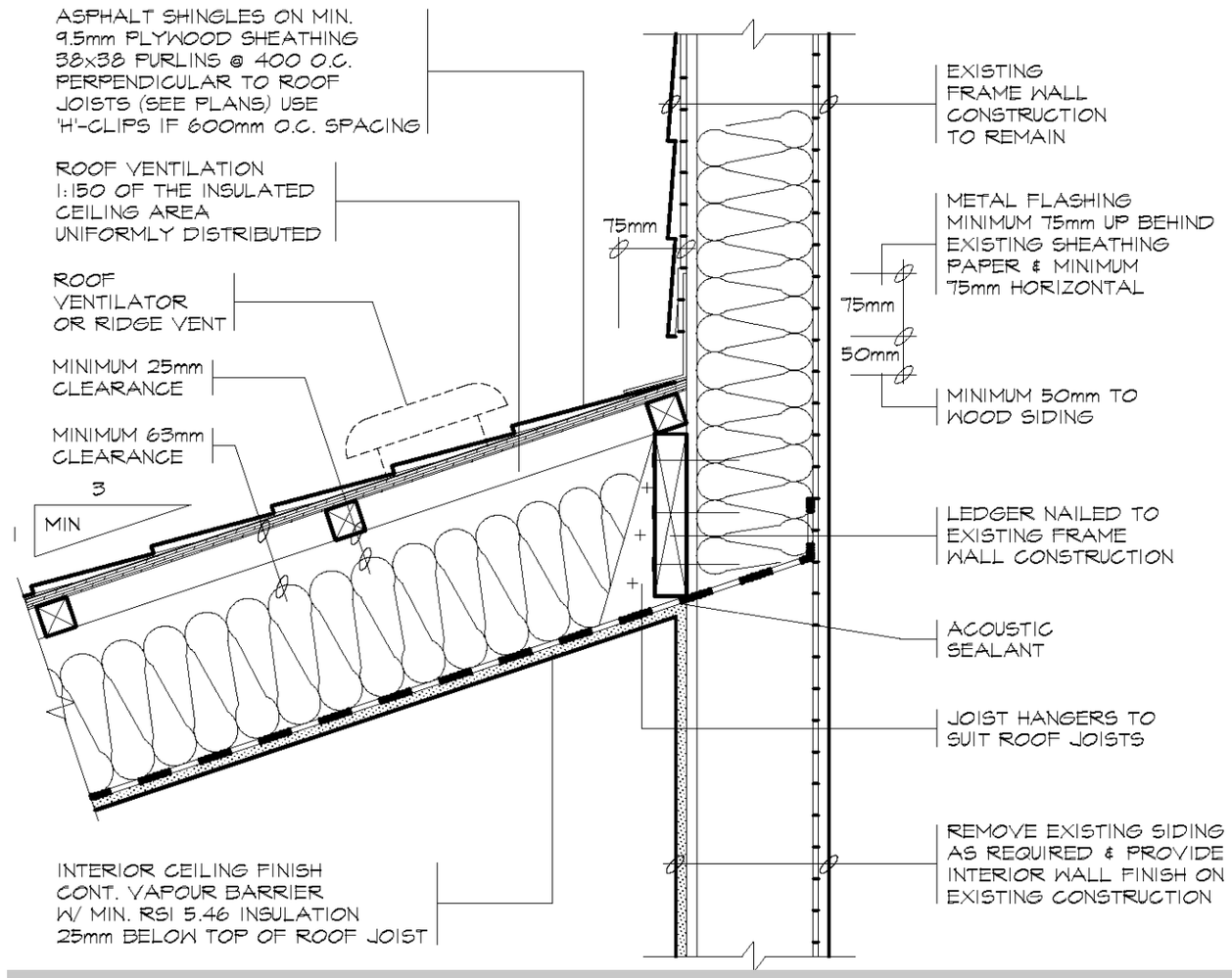
# FLAT ROOF DETAIL

INSULATION & VENTILATION W/ ALTERNATIVE

DWG. NO.

W06b

03-2012

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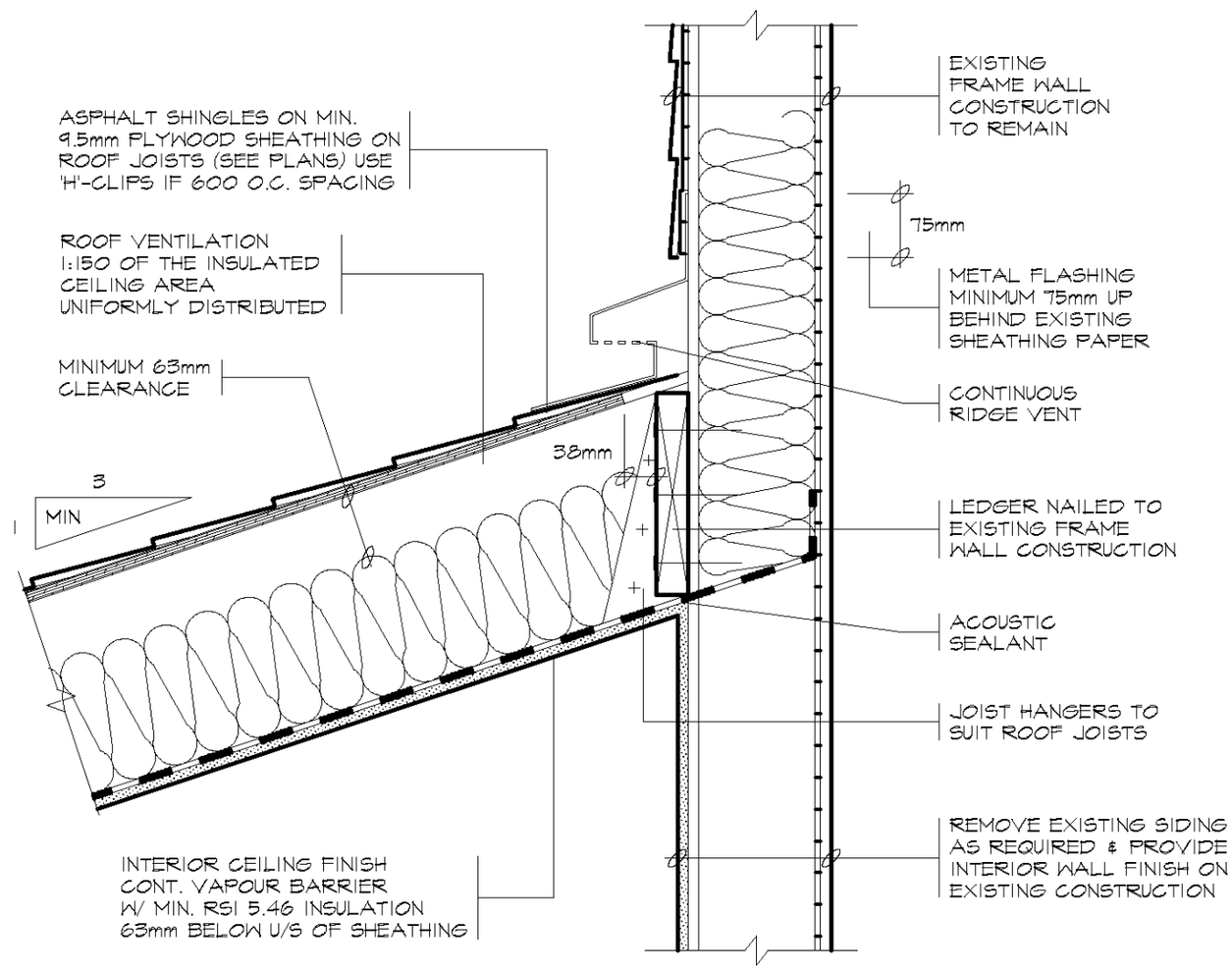
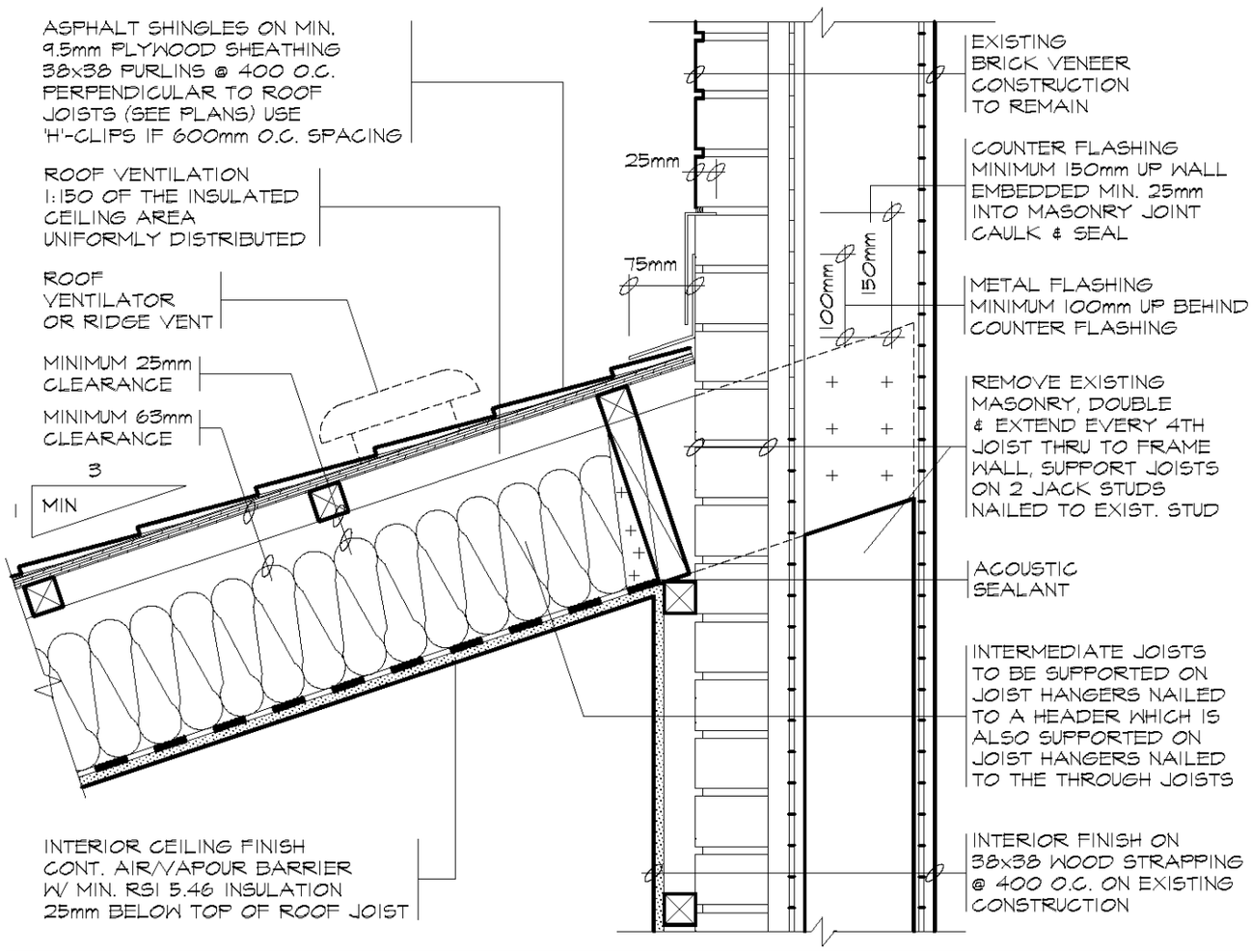


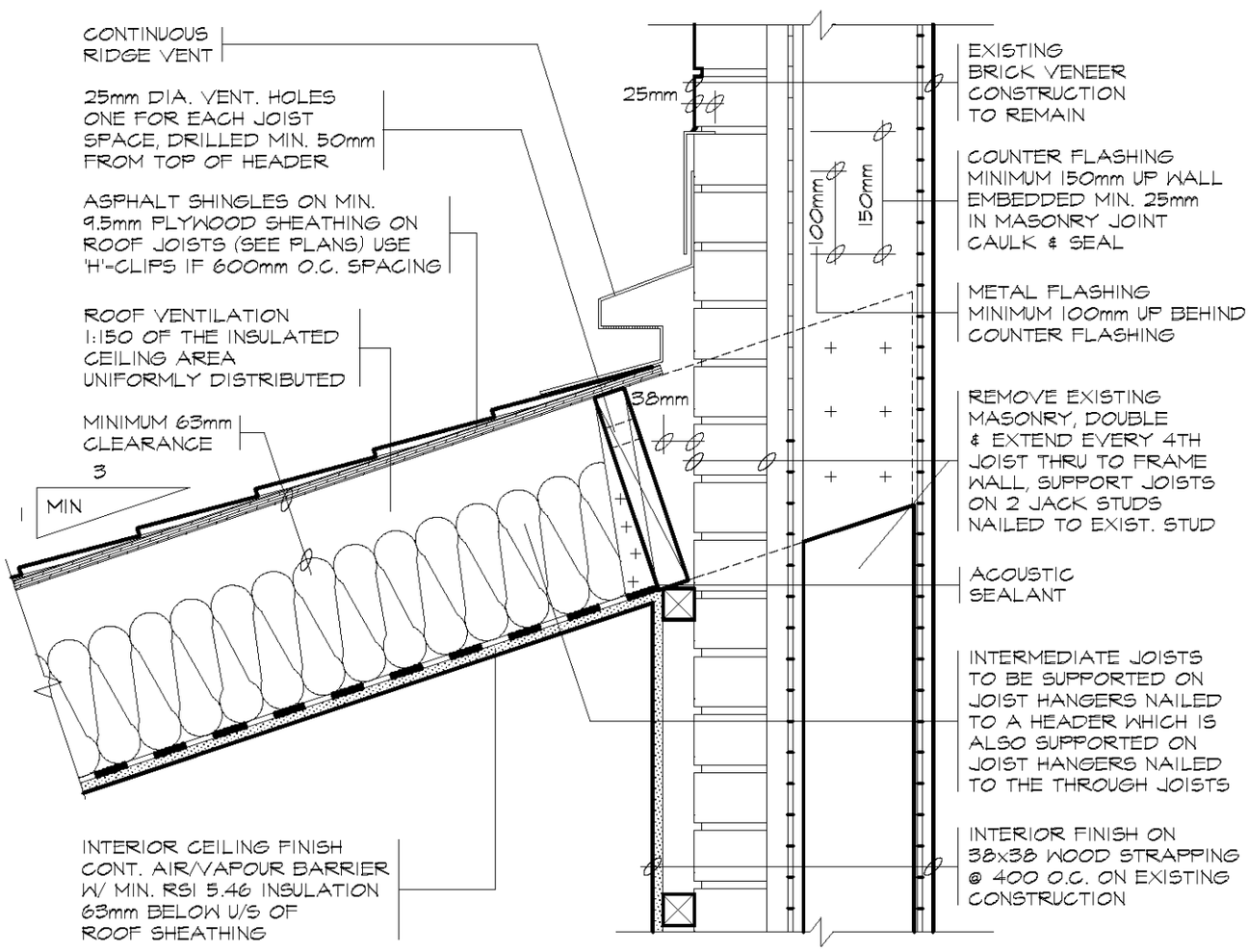

TACBOC
STANDARD DETAIL

TITLE
# NEW ROOF ATTACHED TO EXISTING FRAME WALL
SLOPING ROOF

DWG. NO.
W07a
03-2012



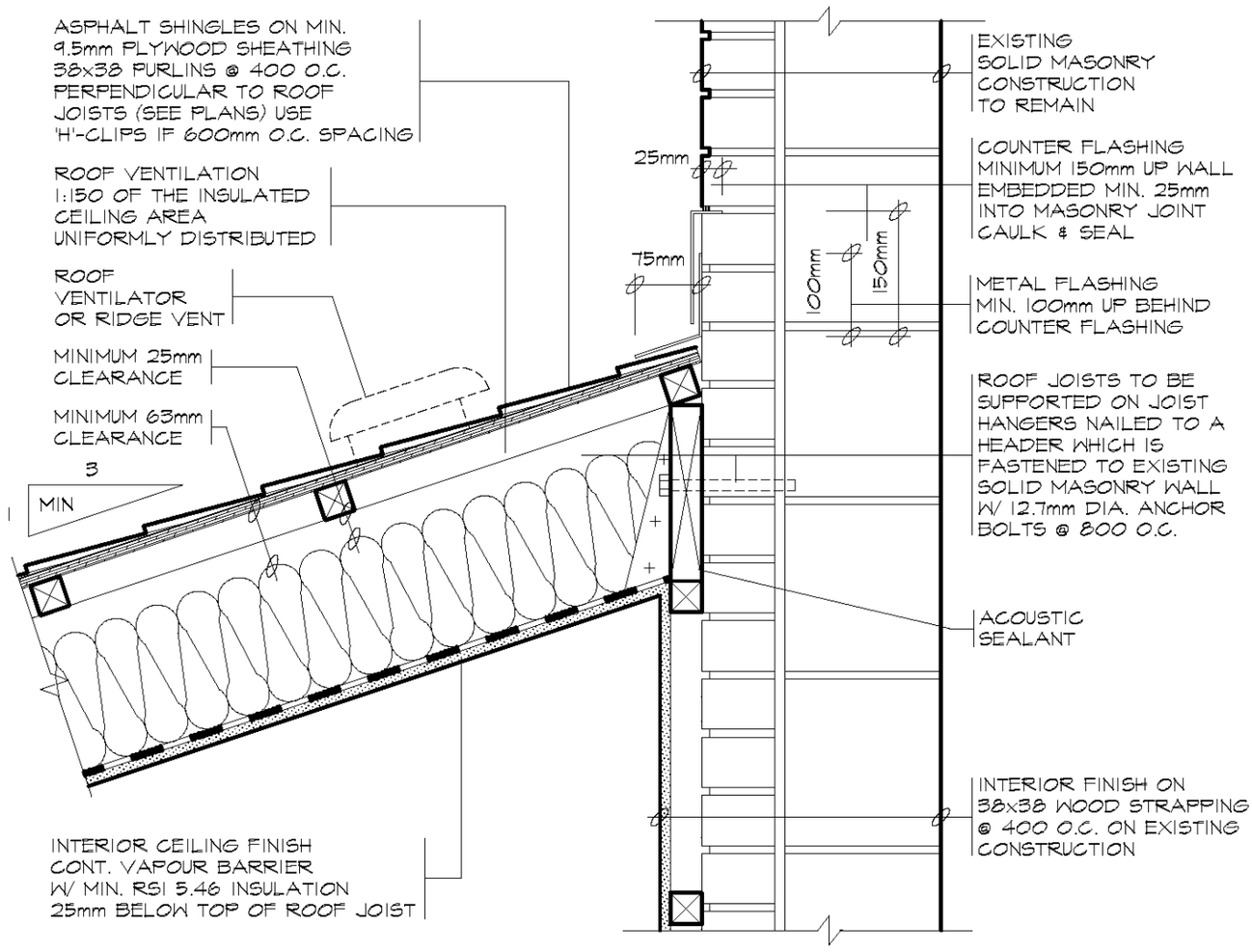



**TACBOC**
**STANDARD DETAIL**

TITLE
# NEW ROOF ATTACHED TO EXISTING BRICK VENEER WALL
SLOPING ROOF

DWG. NO.
W07b
03-2012

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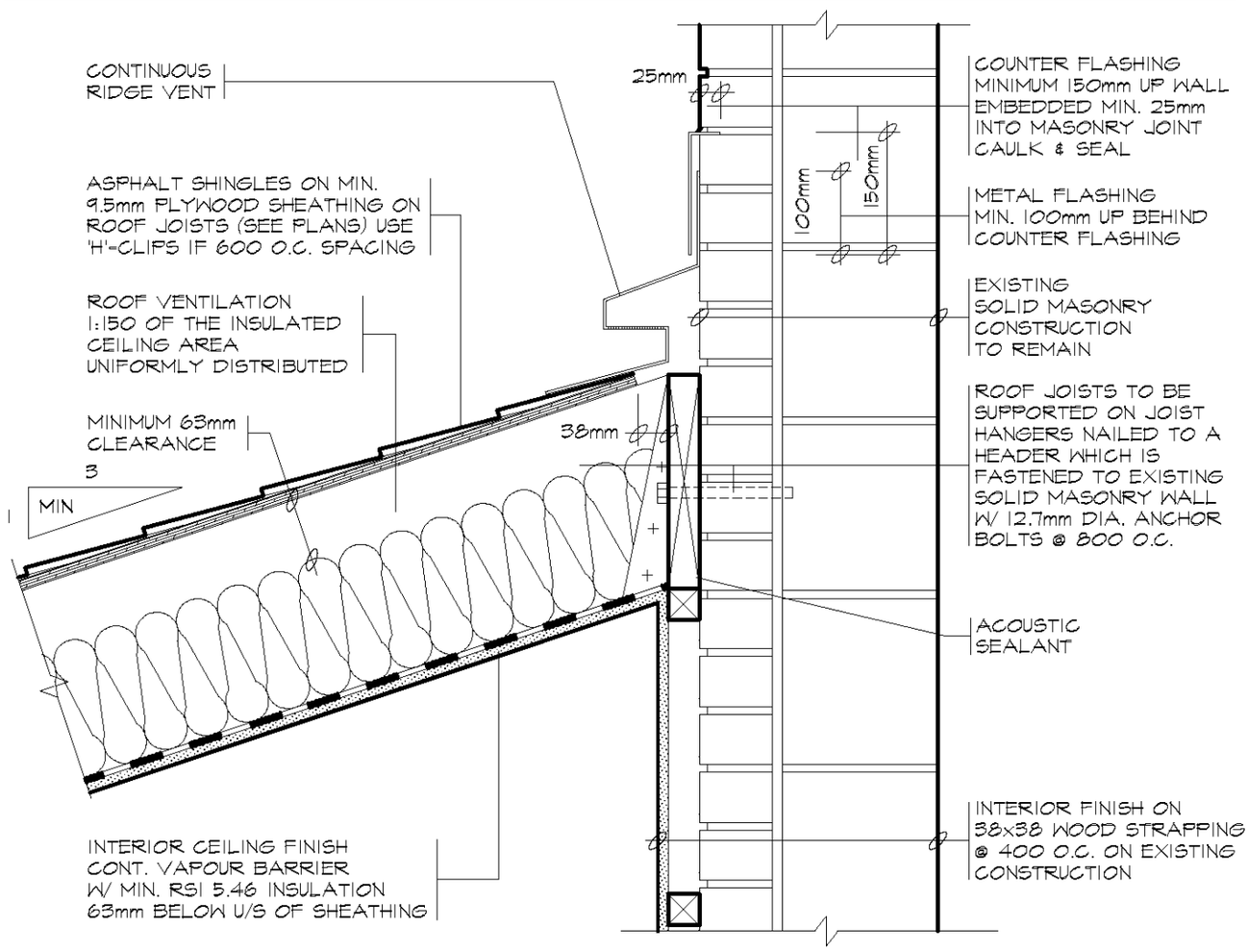
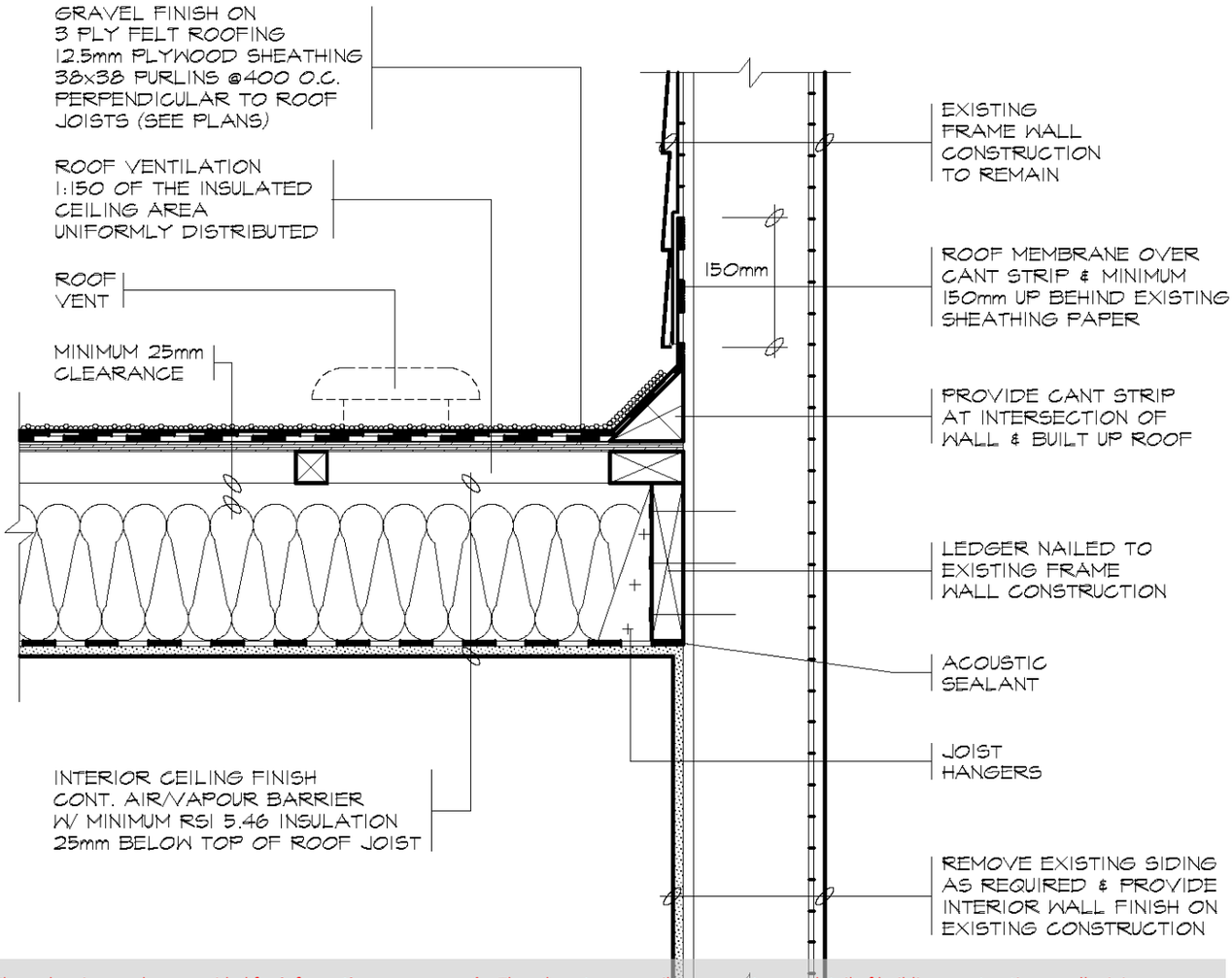


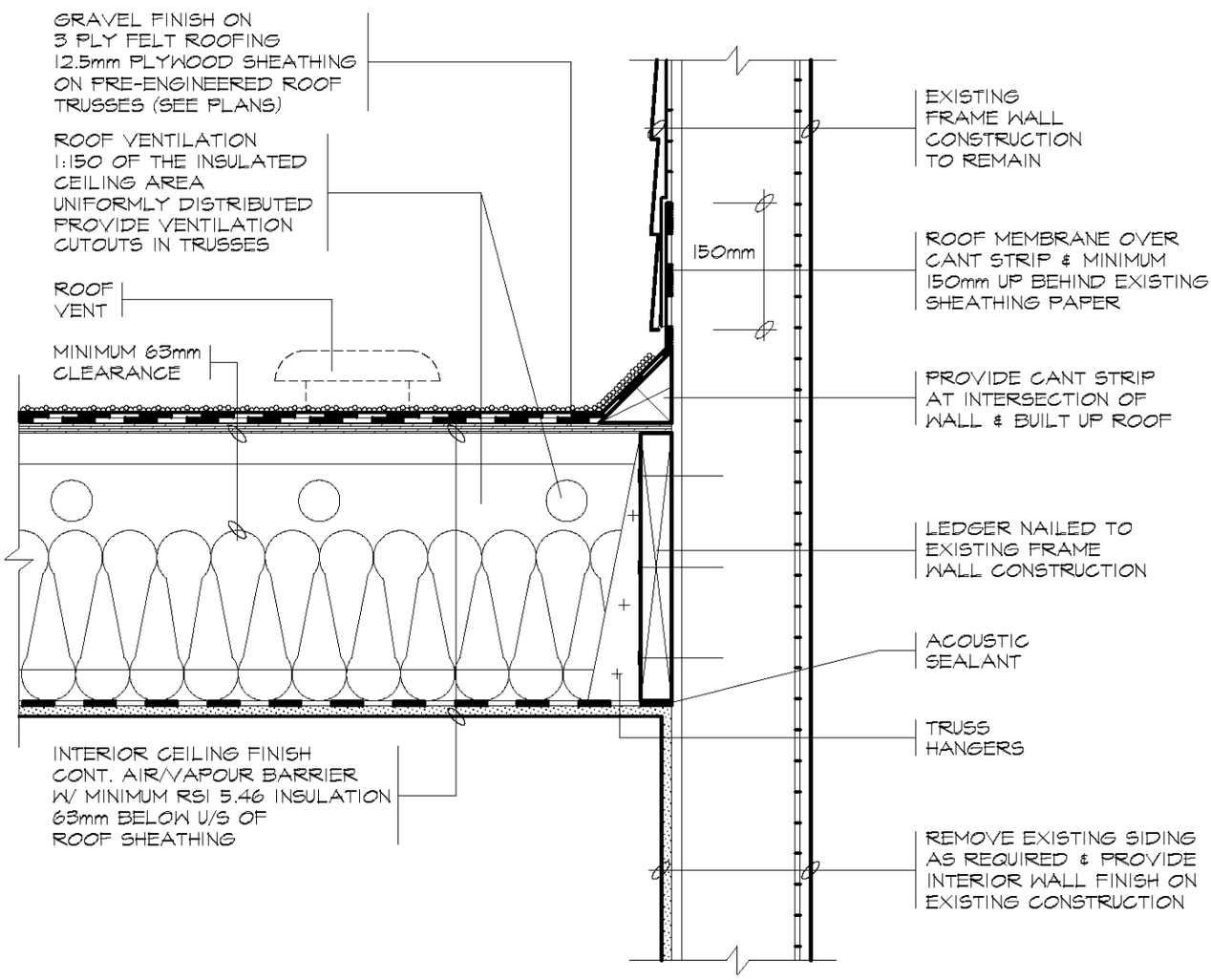

TACBOC
STANDARD DETAIL

TITLE
# NEW ROOF ATTACHED TO EXISTING SOLID MASONRY WALL
SLOPING ROOF

DWG. NO.
W07c
03-2012



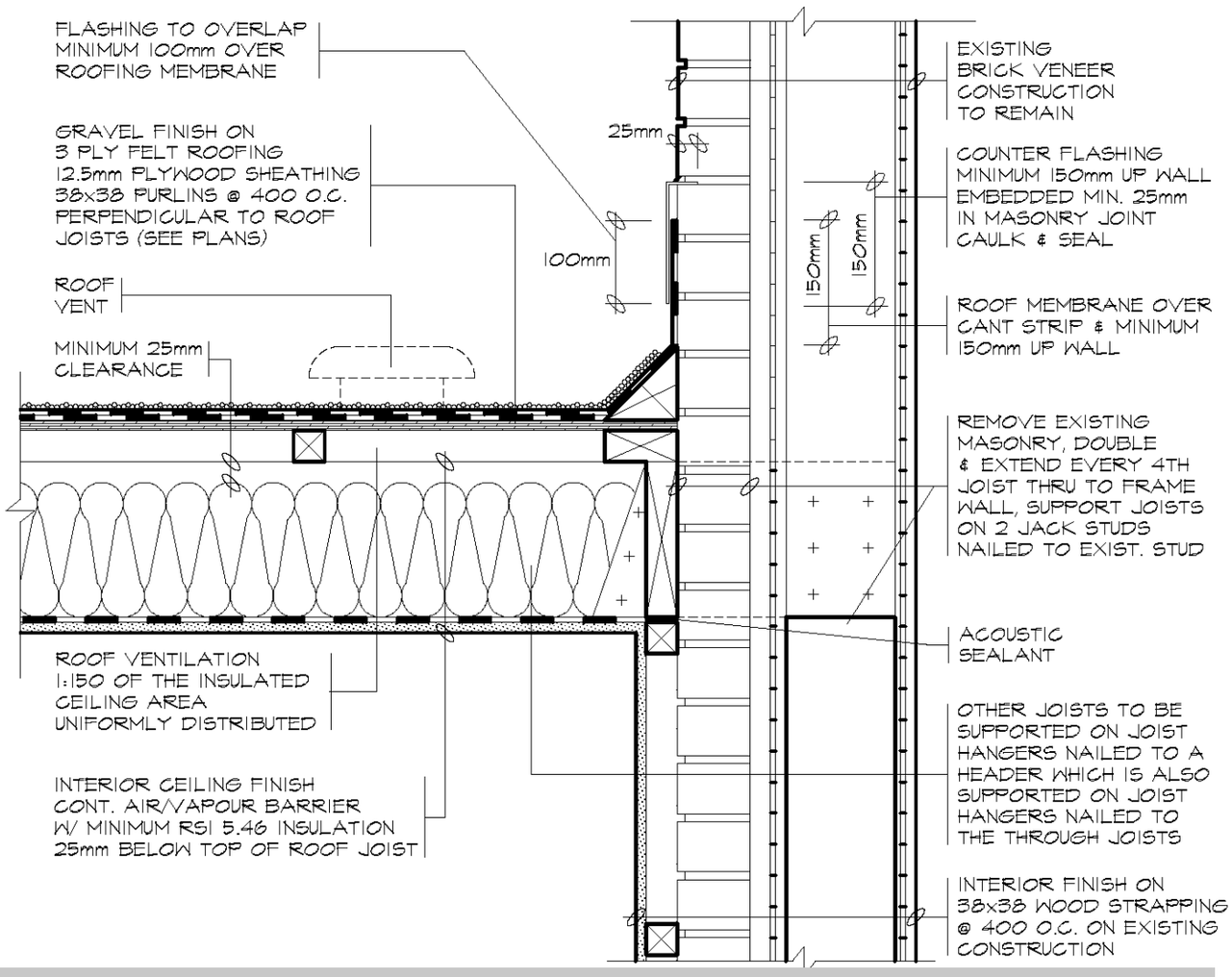


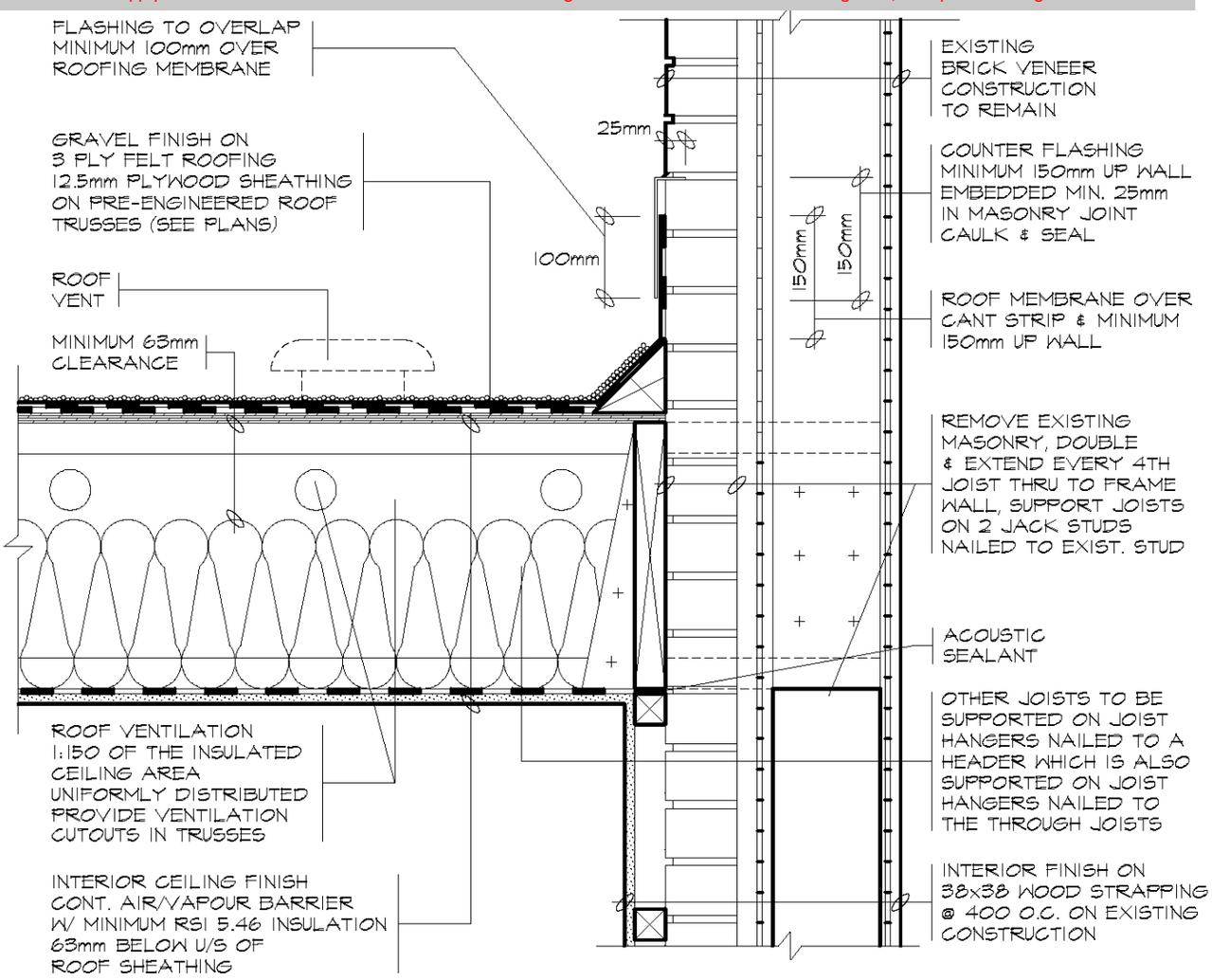

TACBOC
STANDARD DETAIL

TITLE
# NEW ROOF ATTACHED TO EXISTING FRAME WALL
FLAT ROOF

DWG. NO.
W08a
03-2012



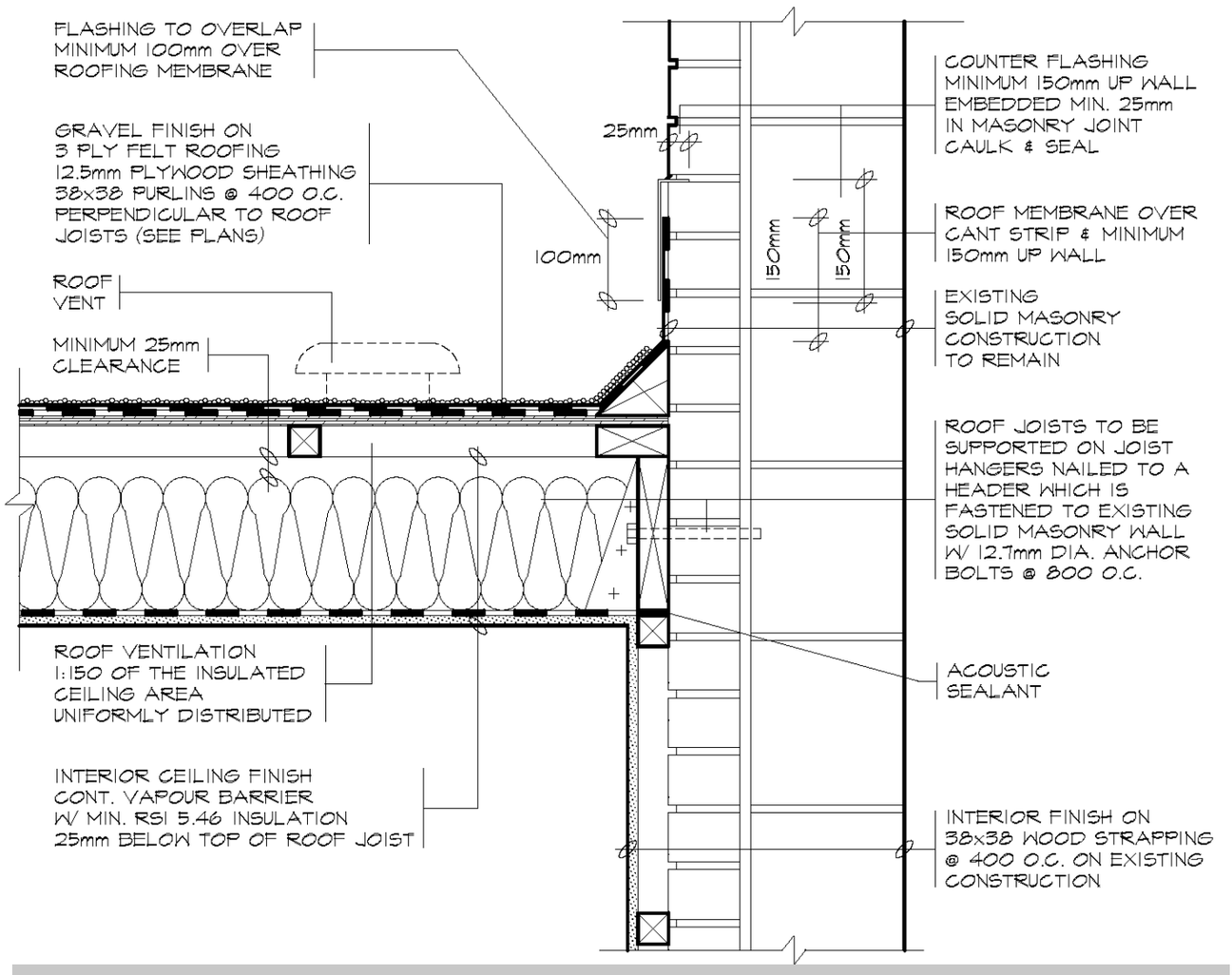



**TACBOC**
**STANDARD DETAIL**

TITLE
# NEW ROOF ATTACHED TO EXISTING BRICK VENEER WALL
FLAT ROOF

DWG. NO.
W08b
03-2012

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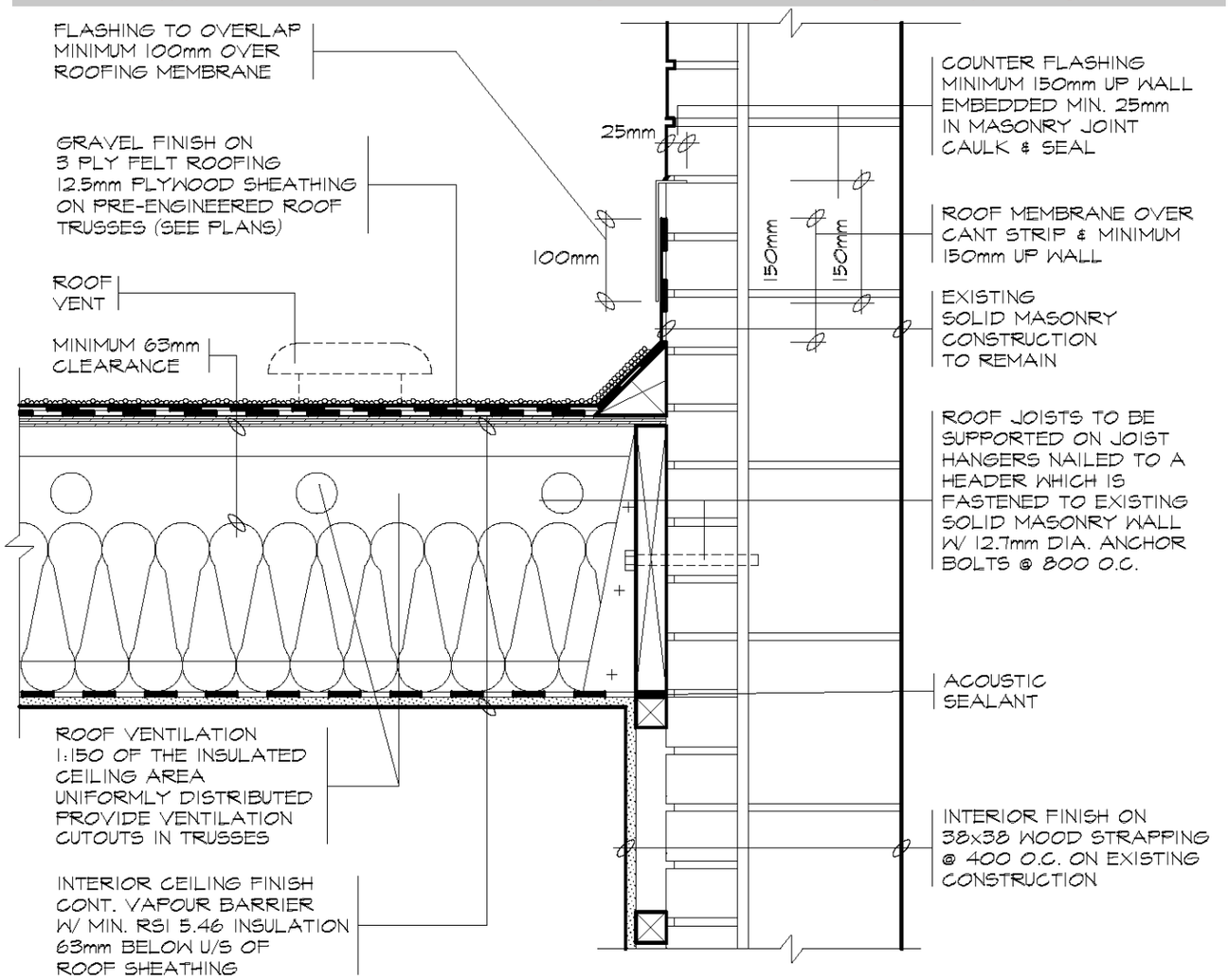
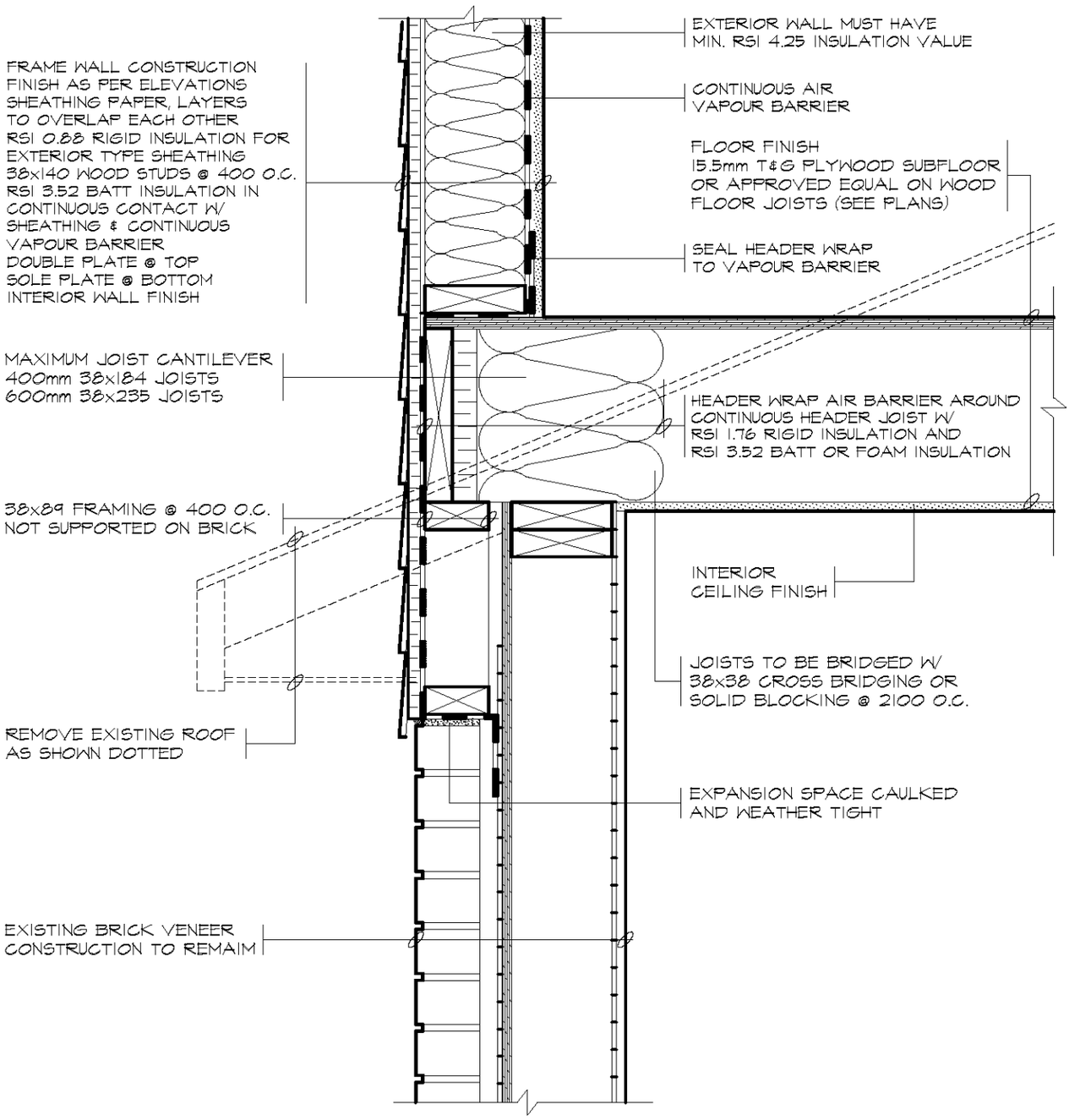



TACBOC
STANDARD DETAIL

TITLE
# NEW ROOF ATTACHED TO EXISTING SOLID MASONRY WALL
FLAT ROOF

DWG. NO.
W08c
03-2012






TACBOC
STANDARD DETAIL

TITLE

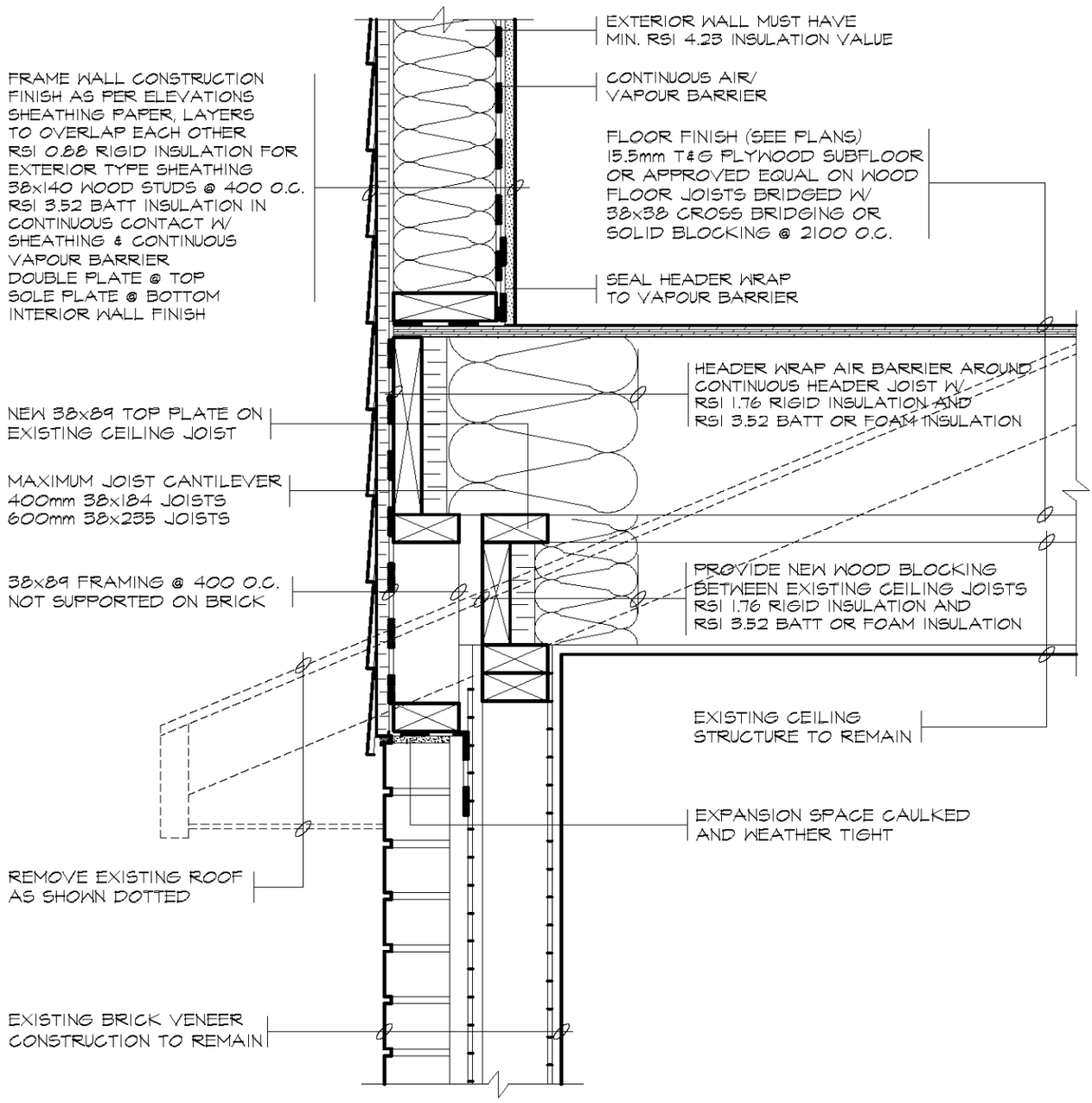
# SECOND STOREY ADDITION

## CEILING REPLACEMENT

DWG. NO.

W09a

03-2012






TACBOC
STANDARD DETAIL

TITLE

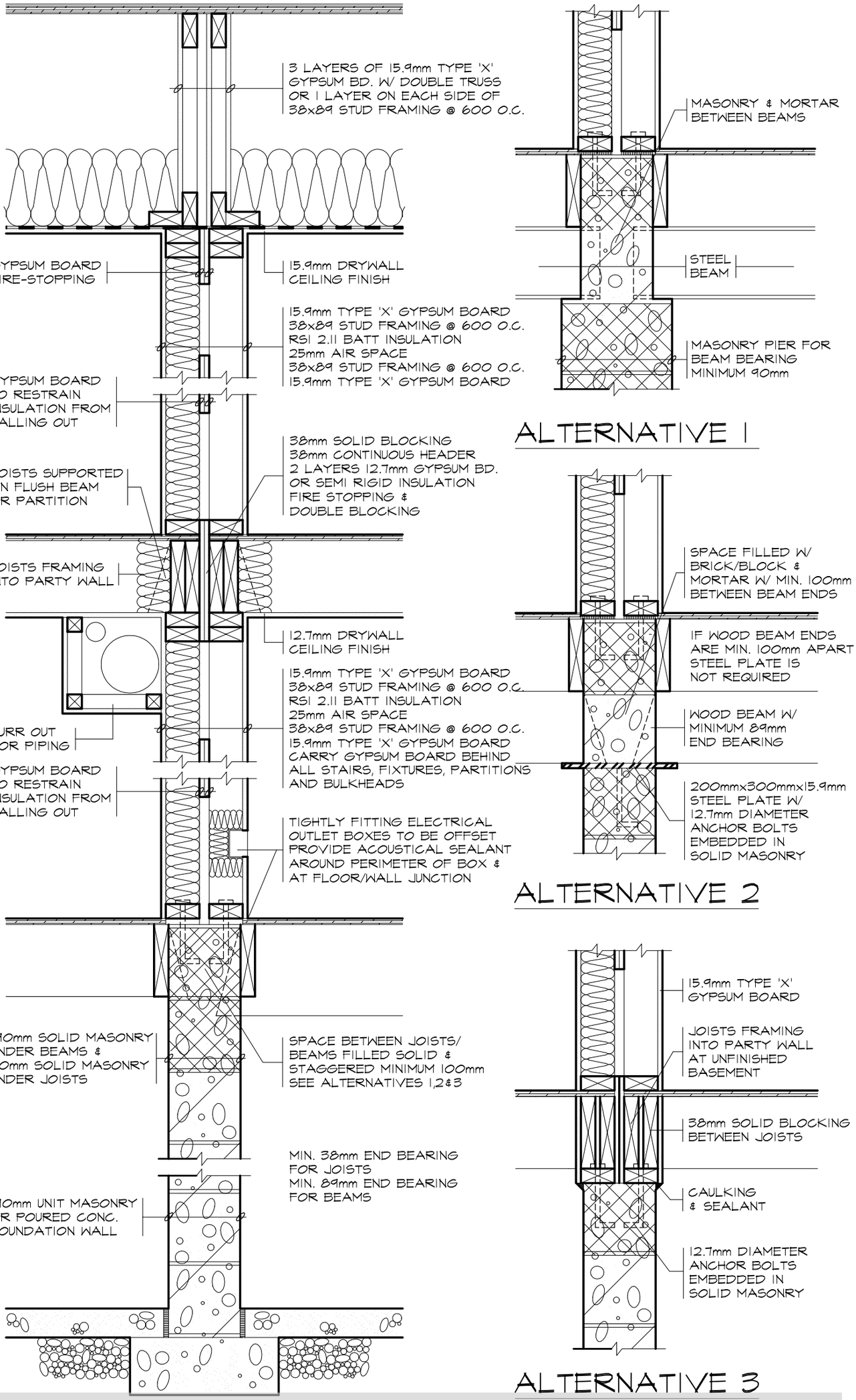
# SECOND STOREY ADDITION

## MAINTAIN EXISTING CEILING

DWG. NO.

W09b

03–2012

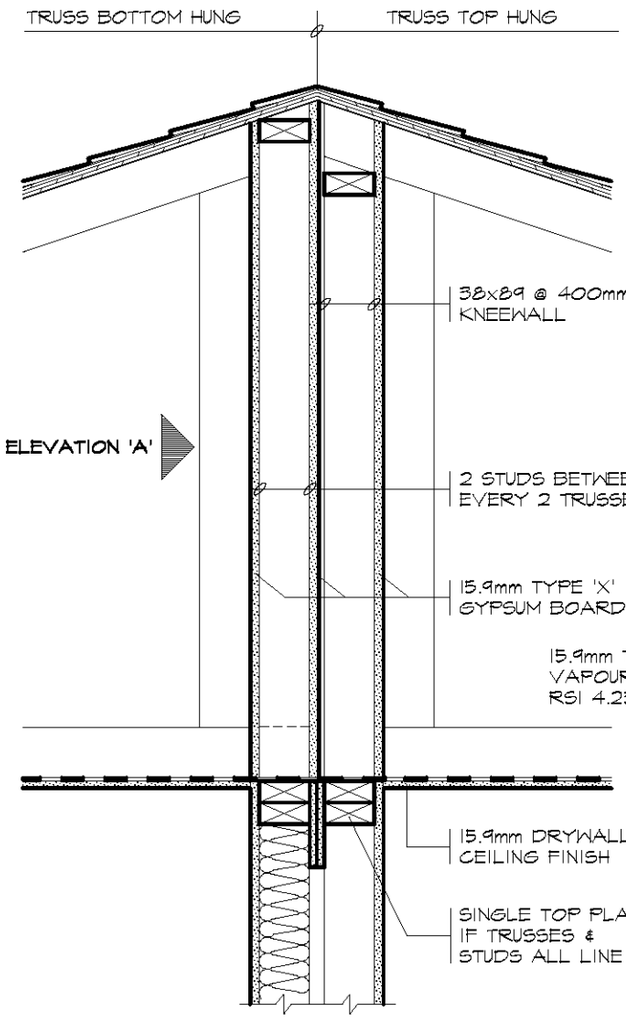




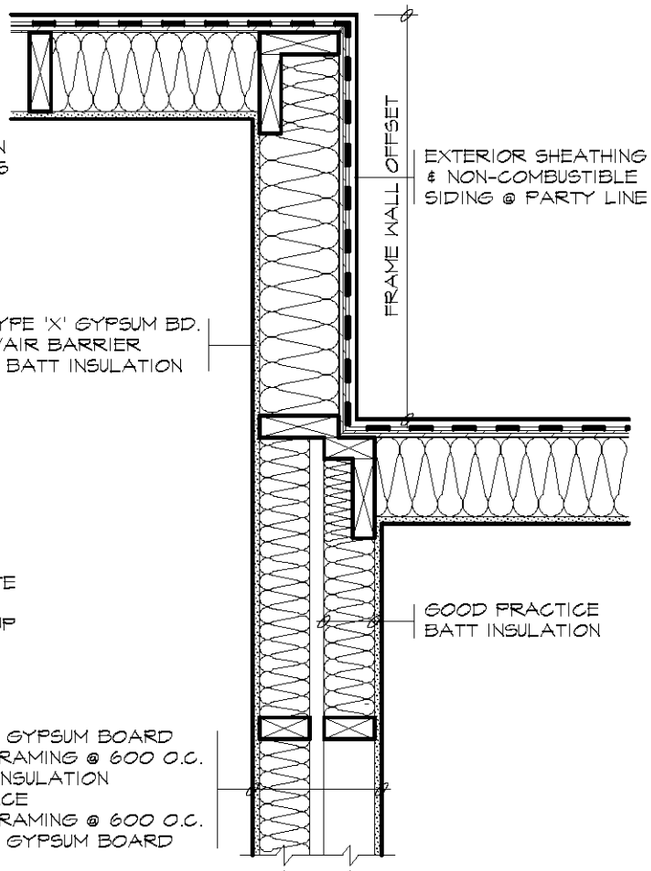

TACBOC
STANDARD DETAIL

TITLE
# FRAME PARTY WALL
VERTICAL SECTION

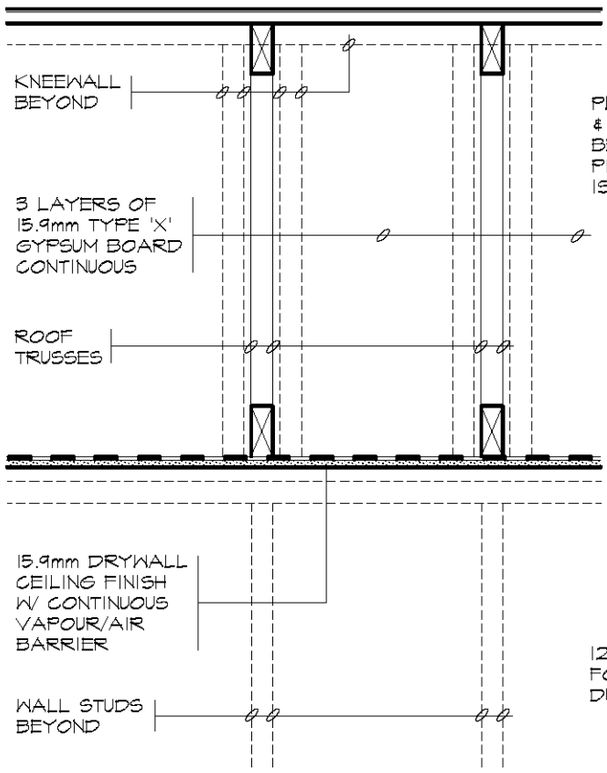
DWG. NO.
W10a
2007

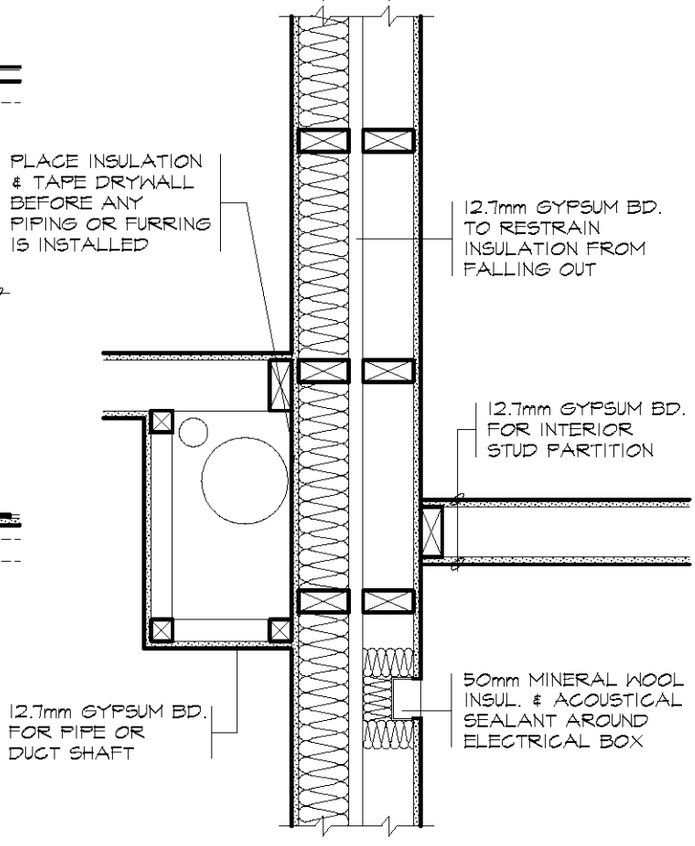



# VERTICAL SECTION TRUSSES NORMAL TO PARTY WALL




15.9mmTYPE 'X' GYPSUM BOARD
38x89 STUD FRAMING @ 600 O.C.
RSI 2.11 BATT INSULATION
25mm AIR SPACE
38x89 STUD FRAMING @ 600 O.C.
15.9mmTYPE 'X' GYPSUM BOARD




# ELEVATION 'A'

# HORIZONTAL SECTION



TACBOC
STANDARD DETAIL

TITLE
FRAME PARTY WALL
DETAILS

DWG. NO.
W10b
03-2012

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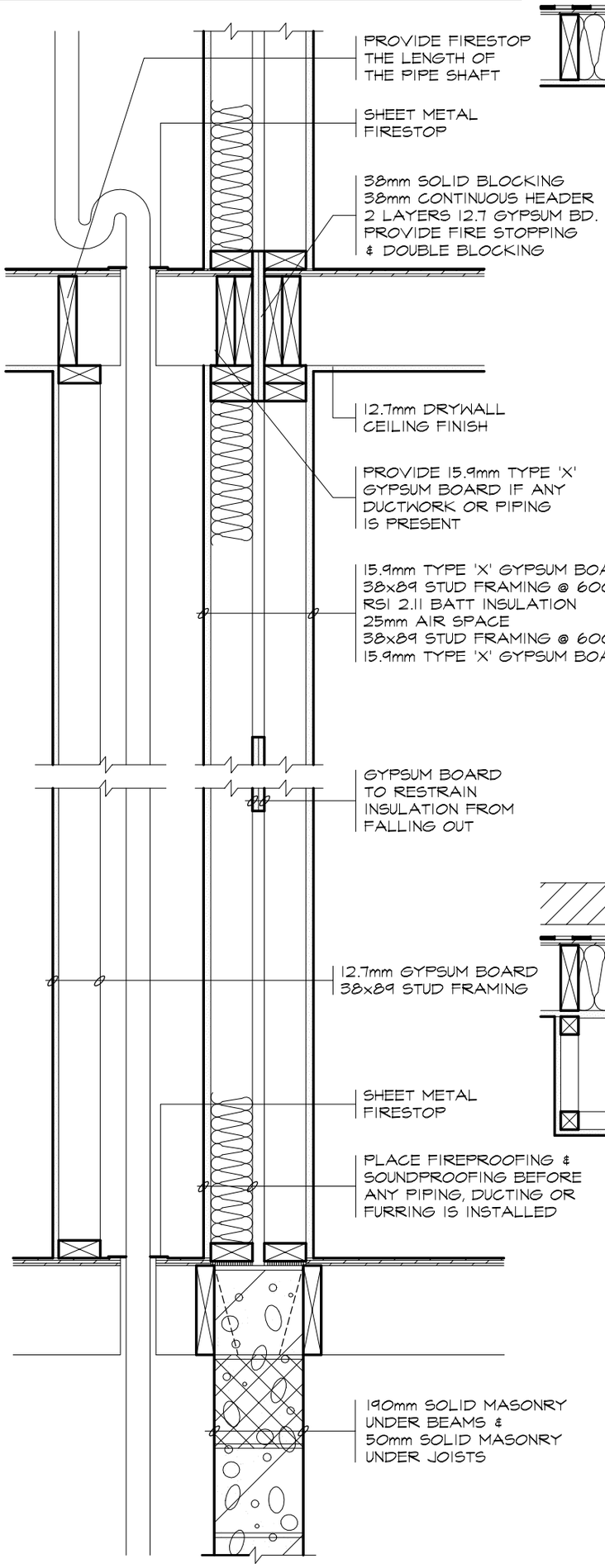
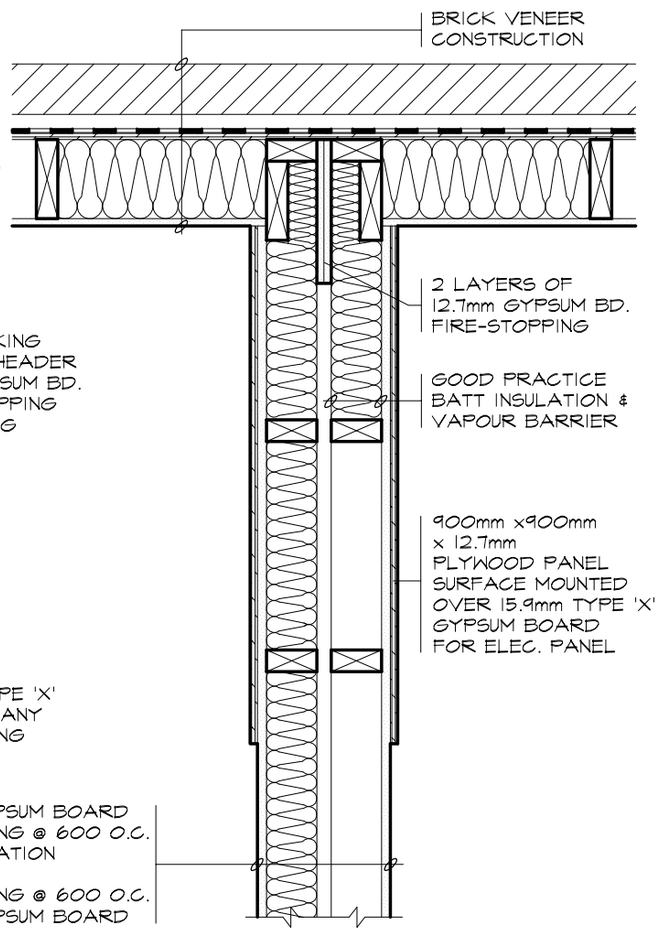
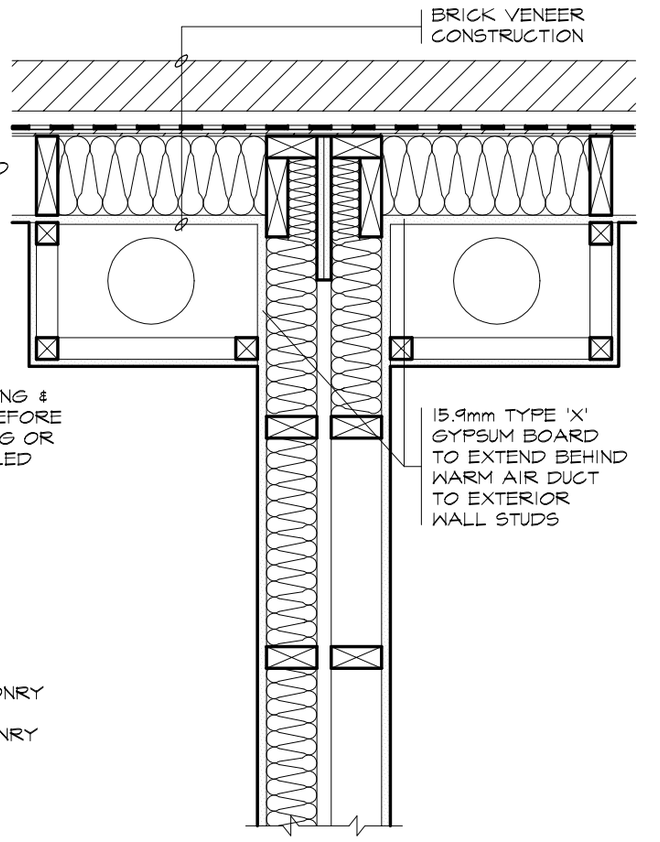



## VERTICAL SECTION




## HORIZONTAL SECTION MOUNTING OF ELEC. PANEL BOXES

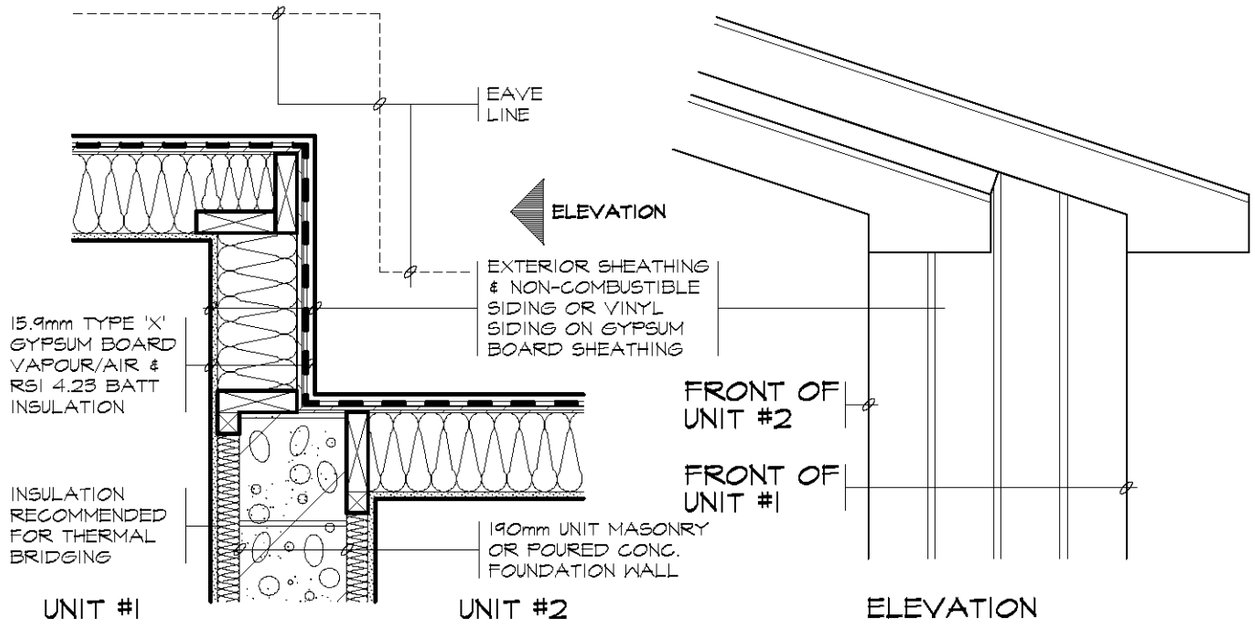



## PLAN VIEW OF PARTY WALL

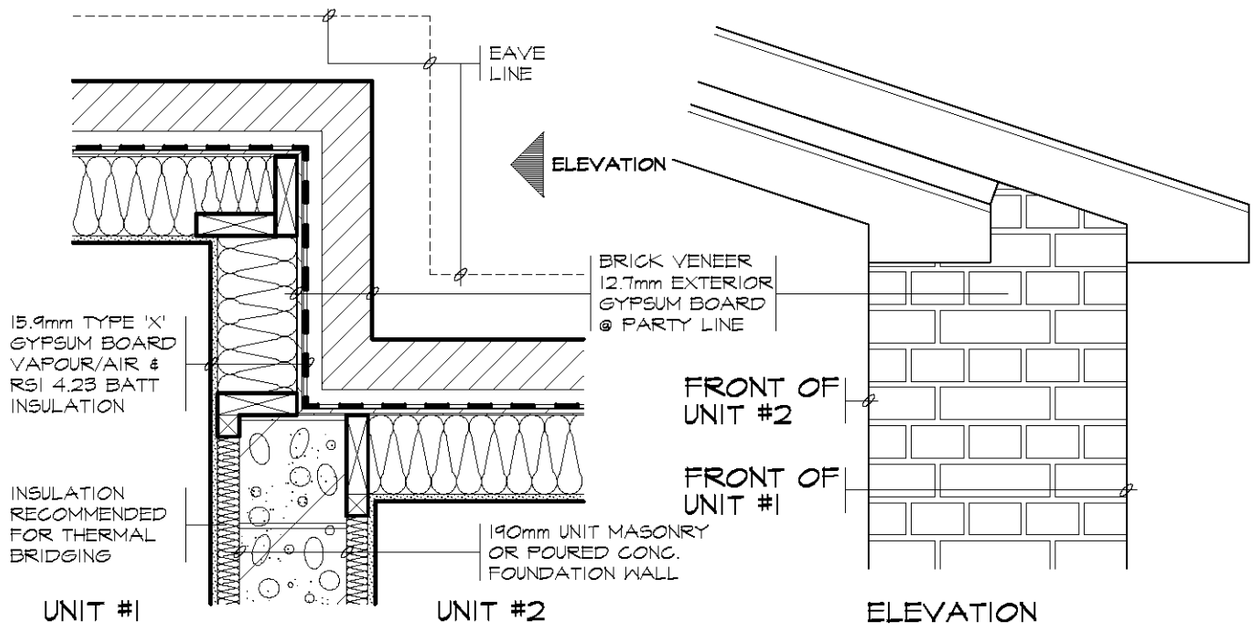
TACBOC
STANDARD DETAIL

TITLE
FRAME PARTY WALL
SERVICE DETAILS

DWG. NO.
W10c
2007

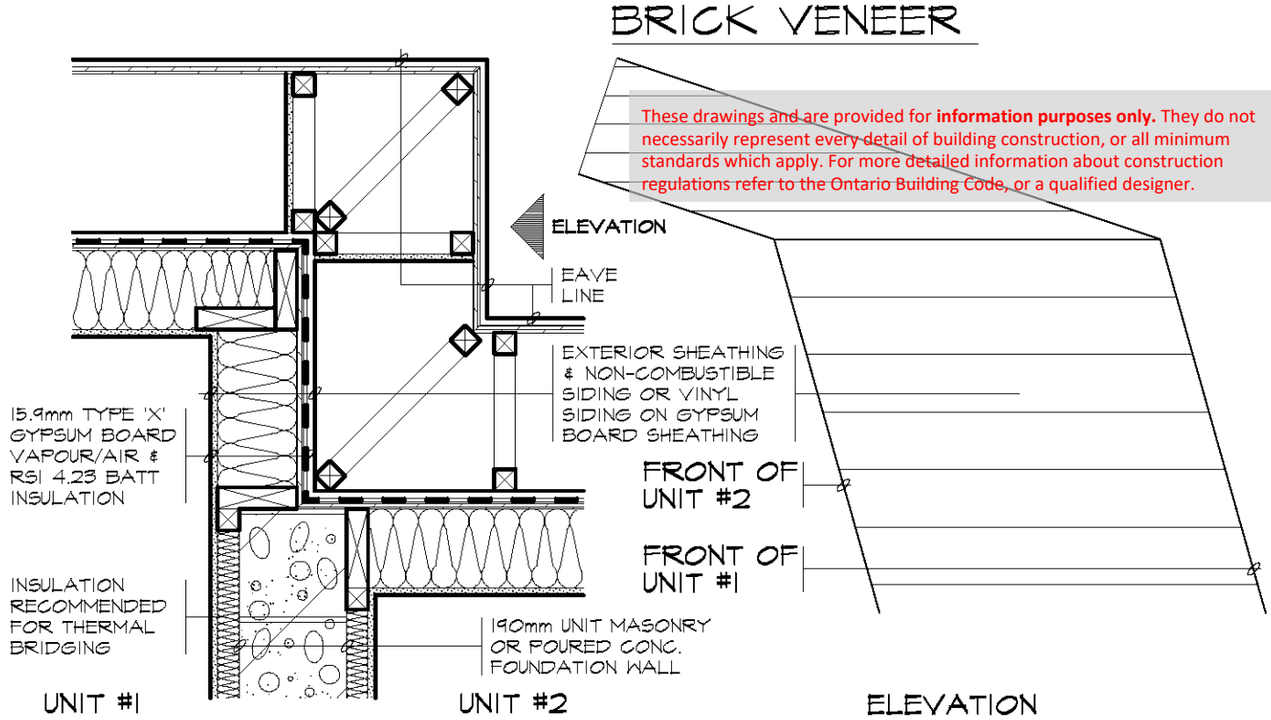



## NON-COMBUSTIBLE SIDING




## BRICK VENEER






## MANSARD

TACBOC
STANDARD DETAIL

TITLE
FRAME PARTY WALL
ELEVATIONS & PLAN DETAILS

DWG. NO.
W10d
03-2012