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 I 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.

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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 COMINGLY REQUIRED FOR:

Building any detached structure larger than 10m²
Building any addition to your home
Rearranged porches or decks
Carports
Building Structural alterations
Demolishing
Partitioning
Raised porches or decks

PERMITS ARE NOT COMINGLY REQUIRED FOR:

Detached structures 10m² 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
Reairs 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
- Windows, 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. An inventory of standard construction details is available from your local municipal office, which can be used to augment your plans.
LOT 8
EXISTING SHED
LOT 9
LOT 10

EXISTING 2 STOREY BRICK & DWELLING NO. 36

PROPOSED DECK

EXISTING DRIVEWAY

MAINTAIN EXISTING DRAINAGE SHALE

EXISTING 1 STOREY BRICK & FRAME DWELLING NO. 36

PROPOSED

STORAGE

ADDITION

EXISTING 1 STOREY

FRAME DWELLING NO. 40

5500mm
12200mm

86.52m²
24.15m²
100.05m²
348.57m²

1 STOREY
1 STOREY
1 STOREY

4550mm
4550mm
4550mm

4050mm
4050mm
4050mm

17145mm
17145mm
17145mm

12200mm
12200mm
12200mm

0.0
0.0
0.0

1 STOREY
1 STOREY
1 STOREY

4050mm
4050mm
4050mm

3050mm
3050mm
3050mm

1220mm
1220mm
1220mm

1220mm
1220mm
1220mm

NOTE. ZONING RESTRICTIONS VARY IN EVERY MUNICIPALITY. CONTACT YOUR LOCAL MUNICIPAL OFFICE FOR SPECIFIC SETBACKS AND OTHER LIMITATIONS IN YOUR AREA.
EXISTING ROOF TO REMAIN

EXISTING WINDOWS TO REMAIN

EXISTING FACE BRICK

EXISTING FOND WALL & FOOTING

NEW WINDOWS

NEW CONCRETE BLOCK FOUNDATION WALL & POURING CONCRETE FOOTING

SELF- SEALING ASPHALT SHINGLES

PREPARED ALUM EAVESTROUGH RHL & FASCIA VENTED SOFFIT

WOOD DECK & STEPS W/ HANDRAIL & PICKETS

FACE BRICK TO MATCH EXISTING

POURED CONCRETE PIERS TYP.

TOP OF PLATE

FON. 1ST. FLOOR

FON. BSMT. SLAB

EAST ELEVATION

SCALE 1:50

UNPROTECTED OPENINGS

HALL AREA 42.36m²

LIMITING DISTANCE 3050mm @ 16.00%

MAX. ALLOWABLE OPENINGS 7.03m²

TOTAL OPENINGS PROVIDED 7.50m²
CONSTRUCTION SPECIFICATIONS

1. **BRICK VENEER WALL**
   - 28mm FACE BRICK 25mm AIR SPACE
   - 0.7mm THICK X 22mm VICE
   - 0.16mm POLY FLASHING

2. **FOUNDATION INSULATION**
   - 15mm FOamed Polyurethane

3. **FOUNDATION WALL**
   --bigumous DAMPROOFING ON MINIMUM 60mm PARING ON CONCRETE BLOCK FOUNDATION WALL
   - 90mm MINERAL FIBRE
   - provide drainage layer

4. **SILL PLATE**
   - 88x140 SILL PLATE FASTENED TO FOUNDATION WALL WITH MIN. 12.5mm DIA. ANCHOR BOLTS
   - Provide continuous air barrier between the foundation wall and floor frame construction

5. **FLOOR INSULATION**
   - Continuous header joint with 6mm-8mm Batt insulation extend VARIOUS / AIR BARRIER SEAL.

6. **FOUNDATION INSULATION**
   - 12.5mm INTERIOR DRYWALL FINISH
   - Provide 6mm-8mm Batt insulation extend VARIOUS / AIR BARRIER SEAL.

7. **BASEMENT SLAB**
   - 125mm Poured concrete slab

8. **DRAINAGE**
   - 150mm DIA. PERMANENT TILE

9. **ROOF CONSTRUCTION**
   - 20 YEAR ASPHALT SHINGLES
   - 15mm MINERAL FIBRE
   - Provide连续空气屏障

10. **OVERHANG CONSTRUCTION**
    - Provide Poured Concrete Slab MIN. 100mm Below Grade

11. **MECHANICAL VENTILATION**
    - Provide 5.0 m³/h IN KITCHENS AND BATHROOMS FOR MAIN EXHAUST FAN

12. **STAIRS INTERIOR/EXTERIOR**
    - Provide 5.0 m³/h IN KITCHENS AND BATHROOMS FOR MAIN EXHAUST FAN

13. **GUARDS**
    - Provide continuous header joint with 6mm-8mm Batt insulation extend VARIOUS / AIR BARRIER SEAL.

14. **ATTIC ACCESS**
    - PROV. ATTIC ACCESS

15. **PIERS**
    - 250mm DIA. SODIUM TUBE FOR Poured Concrete Slab MIN. 100mm Below Grade
## Room Finish Schedule

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## Window Schedule

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## Legend

- **DUPLEX OUTLET (WEATHERPROOF)**
- **DUPLEX OUTLET (NOT ABOVE FLR.)**
- **DUPLEX OUTLET (500mm above FLR.)**
- **HEAT EXHAUST**
- **SWITCH**
- **HOSE D/D**
- **SMOKE DETECTOR**
- **HEAVY DUTY OUTLET**
- **LIGHT FIXTURE (WALL MOUNTED)**
- **LIGHT FIXTURE (CEILING MOUNTED)**
- **POT LIGHT FIXTURE**
- **LIGHT FIXTURE (WATER RESISTANT)**
- **LIGHT FIXTURE (CAPPED)**
- **FLUORESCENT LIGHT FIXTURE**
- **SOLID WOOD BEARING**
- **FLOOR DRAIN**
- **TV CABLE OUTLET**
- **TELEPHONE OUTLET**
- **COMPUTER OUTLET**
- **DRYER EXHAUST**

### Notes

- One window per floor to have an unobstructed open portion of a N.A. area of 0.35m², no dimension less than 500mm & maximum sill height of 1.5m above floor.
GUT OPENING FOR NEW EXTERIOR TYPE DOOR & PROVIDE LINTEL SEE NOTE NO. 18.
TIE NEW CONCRETE TO EXISTING W 1-0.5M ROD 200mm LONG & MIN. 100mm INTO WALL EVERY OTHER COURSE

NEW GUARD SEE SECTION 'A'

FLOOR DRAIN

CONNECT NEW KEEPING TILES TO EXISTING

POURED CONCRETE SLAB & STEPS 52MPa W 5%-8% AIR ENTRAINMENT

SECTION 'A'

100mm KEEPING TILE IN 50mm CRUSHED STONE COVER CONNECT TO EXISTING

CONNECT DRAIN TO:
- STORM SEWER
- SUMP PIT OR SANITARY SEWER IN BUILDING IF A TRAP & CLEANOUT IS PROVIDED

SECTION 'B'

100mm KEEPING TILE IN 50mm CRUSHED STONE COVER CONNECT TO EXISTING

CONNECT DRAIN TO:
- STORM SEWER
- SUMP PIT OR SANITARY SEWER IN BUILDING IF A TRAP & CLEANOUT IS PROVIDED AND IS AUTHORIZED BY THE MUNICIPALITY

RSl 1.41 RIGID INSULATION TO MIN. 600mm BELOW GRADE

PROPOSED DOOR FLOOR TO MIN. 600mm BELOW GRADE

IN BUILDING IF A TRAP & CLEANOUT IS PROVIDED

TIE NEW CONCRETE TO EXISTING W 1-0.5M ROD 200mm LONG & MIN. 100mm INTO WALL EVERY OTHER COURSE

NEW GUARD SEE SECTION 'A'

FLOOR DRAIN

CONNECT NEW KEEPING TILES TO EXISTING

POURED CONCRETE SLAB & STEPS 52MPa W 5%-8% AIR ENTRAINMENT

SECTION 'A'

100mm KEEPING TILE IN 50mm CRUSHED STONE COVER CONNECT TO EXISTING

CONNECT DRAIN TO:
- STORM SEWER
- SUMP PIT OR SANITARY SEWER IN BUILDING IF A TRAP & CLEANOUT IS PROVIDED

SECTION 'B'

100mm KEEPING TILE IN 50mm CRUSHED STONE COVER CONNECT TO EXISTING

CONNECT DRAIN TO:
- STORM SEWER
- SUMP PIT OR SANITARY SEWER IN BUILDING IF A TRAP & CLEANOUT IS PROVIDED AND IS AUTHORIZED BY THE MUNICIPALITY

RSl 1.41 RIGID INSULATION TO MIN. 600mm BELOW GRADE

PROPOSED DOOR
EXISTING ADJACENT FOUNDATION WALL AND FOOTING

DO NOT DISTURB GLEANING U/S OF EXISTING FOOTING PRIOR TO POURING OF NEW CONCRETE

EXISTING FOOTING

SEE DETAIL SHEET B016

UNDERPINNING FROM INSIDE

MINIMUM 150mm

ANGLE OF REPPOSE DO NOT DISTURB GRADE IN THE AREA SEE NOTE 1 ON SHEET B016

SEE DETAIL SHEET B016

UNDERPINNING FROM OUTSIDE

UNDERPINNING

SECTIONS

TACBCC
STANDARD DETAIL

Dwg. No.

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 1:10 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

LOWERING OF BASEMENT FLOOR SLAB FROM INSIDE

TACBOC
BENCH-TYPE UNDERPINNING
STANDARD DETAIL

SECTIONS, NOTES

DWG. NO. BO1c
2007
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 300mm 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 5500psi at 28 days. All exterior concrete shall be 5200psi 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. Keep floor tile to drain to the storm sewer, ditch, drywell or install covered sump pit with an automatic pump.

7. Footings
   - 450mm/600mm poured concrete, footing all footings shall rest on natural undisturbed soil or compacted granular fill

8. Concrete
   - Minimum compressive strength of 5200 psi @ 28 days
   - 5% to 8% air entrainment

9. Exterior Stairs
   - 200mm Rise Max/Min
   - 125mm Minimum
   - 600mm Minimum
   - 225mm tread minimum
   - 900mm maximum

10. Insulation
    - Min. RSI 5.52 (R20) insulation & vapour barrier on the inside face of the exposed foundation wall.
    - Min. RSI 7.6 (R30) 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 2200mm provide 2M Vertical reinforcement @ 600mm O.C. and a bond beam containing at least one 1.5M reinforcement for backfill heights to a max. of 2400mm

12. Pre-Engineered Guards
    - 1070mm high handrail from grade to bottom of wall at exceeds 1000mm, 900mm for lesser heights. Maximum 100mm between vertical pickets.

B. Intels. (for max. 200mm Openings)
   - 1. Solid masonry, 2. 40mmx40mmx40mm angles
   - 2. Brick veneer, 3. Metal L + 2-50x84
   - 3. Wood frame, bid no. 2-50x84
EXISTING BUILDING B02a

MINIMUM ROOM AREAS

APARTMENTS FOR ONE OR TWO PERSONS WHERE SPACE IS NOT PARTITIONED

REQUIRED SPACE

MINIMUM AREA

LIVING, DINING, KITCHEN & SLEEPING SPACE

18.5m² in TOTAL

LIVING AREA

3.5m²

1.0m² if living area is combined with dining & kitchen space

DINING AREA

1.2m²

KITCHEN

3.5m²

1.2m² if dining area is combined with another space

AT LEAST ONE BEDROOM

4.0m² if a built-in closet is provided

1.2m² if the bedroom area is combined with another space

OTHER BEDROOMS

6.0m² if a built-in closet is provided

3.5m² if the bedroom area is combined with another space

• Minimum ceiling height shall be not less than 2.5m

MINIMUM WINDOW AREAS FOR LIGHT

LOCATION

MINIMUM UNOBSTRUCTED GLASS AREA

LAUNDRY ROOMS, KITCHENS, WATER CLOSET ROOM

WINDOWS NOT REQUIRED

LIVING/DINING ROOMS

8% of floor area

BEDROOMS AND OTHER FINISHED ROOMS

2/4% of floor area

• 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 openable portion having a minimum area of 0.50m² with no dimension less than 0.50mm shall be provided. If this window opens into a window well, a clearance of not less than 500mm shall be provided in front of the operating sash

• No openings in exterior walls are not permitted if the distance from the wall to an adjacent lot line is less than 1200mm

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 OR A SEPARATE DOOR LEADING DIRECTLY TO THE EXTERIOR FROM THE ACCESSORY APARTMENT

AN EGRESS WINDOW MUST BE PROVIDED. INTERCONNECTED SMOKE ALARMS MUST BE INSTALLED IN BOTH UNITS AND ALL COMMON AREAS. THE ENTRANCE MUST BE SPRINKLERED, AND SMOKE ALARMS INSTALLED IN BOTH UNITS

Egress window

MINIMUM AREA OF UNOBSTRUCTED OPENING NOT LESS THAN 0.50m² (4.2 sq. ft.)

45mm (1 3/4") OR MORE FOR OPERABLE PORTION OF WINDOW

MINIMUM HEIGHT OF BEDROOM DOORS.

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. SMOKE ALARMS MUST BE LOCATED ON OR NEAR THE CEILINGS WITHIN 5% OF BEDROOM DOORS

REQUIRED CARBON MONOXIDE DETECTORS WITHIN EACH DWELLING UNIT ADJACENT TO EACH SLEEPING AREA

MUST CONFORM TO CAN/CSA-A122-2004. 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:

1) BOTH UNITS ARE EQUIPPED WITH SMOKE ALARMS, AND

2) A SMOKE DETECTOR IS INSTALLED IN THE SUPPLY OR RETURN AIR DUCT SYSTEM WHICH MIGHT 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 0.25m² (8.6 sq. ft.) PER ROOM OR COMBINATION OF ROOMS

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

• KITCHEN SINK

• LAUNDRY FACILITIES

• BATHROOM WITH LAVATORY, TOILET AND TUB OR SHOWER STALL

TACBOC

STANDARD DETAIL

BASEMENT ACCESSORY APARTMENT

BUILDING CODE REQUIREMENTS - EXISTING BUILDING

B02a

2007
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. Minimum 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. A smoke detector is installed in the supply or return air duct system which would shut 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 X 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.

Title: Basement Accessory Apartment
Sample Plans and Specifications

TacboC Standard Detail

Dwg. No.: B02b

2007
CARPORT PLAN (PROVIDE DIMENSIONS IN BOXES)
SEE COID FOR STRUCTURAL SIZES
### Roof Rafter
(Where no ceiling is installed)

<table>
<thead>
<tr>
<th>Rafter Size</th>
<th>Roof Snow Load 1.0 kPa</th>
<th>Roof Snow Load 1.5 kPa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rafter Spacing (mm) O.C.</td>
<td>Rafter Spacing (mm) O.C.</td>
</tr>
<tr>
<td>38x89</td>
<td>5.11 2.85 2.47</td>
<td>2.72 2.47 2.16</td>
</tr>
<tr>
<td>38x140</td>
<td>4.40 4.43 3.84</td>
<td>4.28 3.84 3.40</td>
</tr>
<tr>
<td>38x184</td>
<td>6.44 5.85 5.11</td>
<td>5.82 5.11 4.41</td>
</tr>
<tr>
<td>38x235</td>
<td>6.22 7.41 6.58</td>
<td>7.18 6.52 5.54</td>
</tr>
</tbody>
</table>

### Roof Joists
(Where ceiling is installed)

<table>
<thead>
<tr>
<th>Joist Size</th>
<th>Roof Snow Load 1.0 kPa</th>
<th>Roof Snow Load 1.5 kPa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Joist Spacing (mm) O.C.</td>
<td>Joist Spacing (mm) O.C.</td>
</tr>
<tr>
<td>38x89</td>
<td>2.41 2.24 1.96</td>
<td>2.16 1.96 1.71</td>
</tr>
<tr>
<td>38x140</td>
<td>5.84 5.55 3.06</td>
<td>3.40 3.06 2.64</td>
</tr>
<tr>
<td>38x184</td>
<td>5.11 4.64 4.05</td>
<td>4.46 4.05 3.54</td>
</tr>
<tr>
<td>38x235</td>
<td>6.52 5.43 5.18</td>
<td>5.70 5.18 4.52</td>
</tr>
</tbody>
</table>

### Roofing Beams

<table>
<thead>
<tr>
<th>Rafters @ 300</th>
<th>15mm Plywood w/ H-Clips or 17mm Lumber</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rafters @ 400</td>
<td></td>
</tr>
<tr>
<td>Rafters @ 600</td>
<td></td>
</tr>
</tbody>
</table>

### Piers

<table>
<thead>
<tr>
<th>Pier Size (mm)</th>
<th>Supported Roof Area (m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Allowable Bearing Capacity of Soil</td>
</tr>
<tr>
<td></td>
<td>Allowable Bearing Capacity of Soil</td>
</tr>
<tr>
<td>75kPa</td>
<td>120kPa</td>
</tr>
<tr>
<td>190kPa</td>
<td>175kPa</td>
</tr>
<tr>
<td>200 Dia.</td>
<td>1.45 3.25 5.46</td>
</tr>
<tr>
<td>250 Dia.</td>
<td>5.01 8.06 2.14</td>
</tr>
<tr>
<td>300 Dia.</td>
<td>4.51 11.17 3.16</td>
</tr>
<tr>
<td>350 Dia.</td>
<td>5.45 15.81 4.67</td>
</tr>
<tr>
<td>400 Dia.</td>
<td>7.62 20.72 5.48</td>
</tr>
</tbody>
</table>

### Posts

| Post Size (mm) | Max. Height (m) | Supported Roof Area (m²) |
|               |                | Roof Snow Load (kPa)     |
| 84x89         | 1.0 1.5 2.0 2.5 3.0 |                             |
| 140x140       | 2.0 2.65 16.35 13.15 10.96 9.43 |                             |
| 2.5 14.77 11.15 8.96 7.46 6.43 |                             |
| 5.0 10.06 7.60 6.10 5.10 4.58 |                             |
| 9.5 6.48 5.21 4.23 3.54 3.04 |                             |

### General Notes
1. All lumber to be No. 14 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 Fig.
4. Roof posts to be minimum 89mm x 89mm.
5. Bearing capacity of soil shall be confirmed prior to construction.

---

**Tacboc Standard Detail**

**Attached Carport**

Sloping or flat roofs, tables & notes.

**Drawing No.**
CO16

**Year**
2007
ATTACHED CARPORT
SLOPING ROOF DETAILS

FOR ROOF STRUCTURE SEE TABLES ON SHEET COib

HOOD BEAM FOR SIZES SEE TABLES ON SHEET COib

BEAM FIXED TO HOOD POST IN 38mm X 38mm METAL POST/BEAM CONNECTOR

RAOTORUHGH RHU & FACIA BOARD

FOR ROOF STRUCTURE SEE TABLES ON SHEET COib

METAL FLASHING MINIMUM 150MM BEHIND EXISTING PLUMBING RAWL & MINIMUM 150MM HORIZONTAL

HOOD BUM TO HOOD POST

LHNER VALLED TO EXISTING FRAME HALL CONSTRUCTION

JOINT HANGERS

EXISTING FRAME HALL CONSTRUCTION TO REMAIN

1. FRAME WALL

EXISTING BRICK VENEER CONSTRUCTION TO REMAIN

CENTRAL FLASHING MINIMUM 150MM ON WALL EMBEDDED IN 38MM X 38MM METAL JOINT CASING & SEAL

METAL FLASHING MINIMUM 150MM BEHIND CENTRAL FLASHING

REMOVE EXISTING MASONRY DOUBLE & EXTEND EVERY 4TH JOIST THRU TO FRAME HALL SUPPORT JOISTS ON 2 JACK STUDS EXTEND TO SOLE PLATE

DOUBLE HEADER TO FRAME STUDS ON 200MM OC

INTERMEDIATE JOISTS TO BE SUPPORTED ON JOIST HANGERS NAILed TO A HEADER WHICH IS ALSO SUPPORTED ON JOIST HANGERS NAILED TO THE THROU6H JOISTS

EXTEND JACK STUDS TO BOTTOM PLATE

2. BRICK VENEER WALL

EXISTING SOLID MASONRY CONSTRUCTION TO REMAIN

CENTRAL FLASHING MINIMUM 150MM ON WALL EMBEDDED 38MM X 38MM METAL JOINT CASING & SEAL

METAL FLASHING MINIMUM 150MM BEHIND CENTRAL FLASHING

ROOF JOISTS TO BE SUPPORTED ON JOIST HANGERS NAILED TO A HEADER WHICH IS ALSO SUPPORTED ON JOIST HANGERS NAILED TO THE THROU6H JOISTS

SUPPORT DETAIL

3. SOLID MASONRY WALL

SUPPORT DETAIL

4. SUPPORT DETAIL

TACB0C
STANDARD DETAIL

ATTACHED CARPORT
SLOPING ROOF DETAILS

DWG. NO.

COib

2007
CARPORT PLAN 'A' POST & BEAM (PROVIDE DIMENSIONS)
SEE CO10 FOR STRUCTURAL SIZES

CARPORT PLAN 'B' CONVENTIONAL FRAMING (PROVIDE DIMENSIONS)
SEE CO10 FOR STRUCTURAL SIZES

ATTACHED CARPORT
GABLE ROOF, PLAN & SECTION

TACB0C
STANDARD DETAIL

2007
SECTION B'

FREE STANDING DECKS GREATER THAN 600mm ABOVE GRADE SHALL RESIST LATERAL LOADING. ALL POSTS MUST BE BRACED WHERE THE SUPPORTED AREA EXCEEDS THOSE LISTED IN THE TABLE ON DO16.

TACBOC
WOOD DECK
STANDARD DETAIL
STAIR SECTION
LATERAL SUPPORT FOR FREE STANDING DECKS

DWG. NO. DO16
2007
### BEAM SIZING TABLE

<table>
<thead>
<tr>
<th>Supported Joist Length (mm)</th>
<th>Live Load 1.4 kPa</th>
<th>Live Load 2.5 kPa</th>
<th>Live Load 5.0 kPa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PIER SPACING (mm)</td>
<td>PIER SPACING (mm)</td>
<td>PIER SPACING (mm)</td>
</tr>
<tr>
<td>2000</td>
<td>2/58 xl40</td>
<td>2/58 xl40</td>
<td>2/58 xl40</td>
</tr>
<tr>
<td>3000</td>
<td>2/58 xl40</td>
<td>2/58 xl40</td>
<td>2/58 xl40</td>
</tr>
<tr>
<td>4000</td>
<td>2/58 xl40</td>
<td>2/58 xl40</td>
<td>2/58 xl40</td>
</tr>
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<td>5500</td>
<td>2/58 xl40</td>
<td>2/58 xl40</td>
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<td>2/58 xl40</td>
<td>2/58 xl40</td>
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<tr>
<td>3000</td>
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<td>4000</td>
<td>2/58 xl84</td>
<td>2/58 xl84</td>
<td>2/58 xl84</td>
</tr>
</tbody>
</table>

### JOIST SIZING TABLE

<table>
<thead>
<tr>
<th>Joist Span (mm)</th>
<th>Live Load 1.4 kPa</th>
<th>Live Load 2.5 kPa</th>
<th>Live Load 5.0 kPa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Joist Spacing (mm)</td>
<td>Joist Spacing (mm)</td>
<td>Joist Spacing (mm)</td>
</tr>
<tr>
<td>300</td>
<td>58x25S</td>
<td>58x25S</td>
<td>58x25S</td>
</tr>
<tr>
<td>400</td>
<td>58x25S</td>
<td>58x25S</td>
<td>58x25S</td>
</tr>
<tr>
<td>600</td>
<td>58x25S</td>
<td>58x25S</td>
<td>58x25S</td>
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<td>2000</td>
<td>58x25S</td>
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<tr>
<td>4000</td>
<td>58x25S</td>
<td>58x25S</td>
<td>58x25S</td>
</tr>
</tbody>
</table>

### FOOTING SIZES

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>Bearing Pressure (kPa)</th>
<th>Diameter (mm)</th>
<th>M²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft Clay</td>
<td>40</td>
<td>200</td>
<td>0.05</td>
</tr>
<tr>
<td>Loose Sand or Gravel</td>
<td>50</td>
<td>250</td>
<td>0.05</td>
</tr>
<tr>
<td>Firm Clay</td>
<td>75</td>
<td>500</td>
<td>0.08</td>
</tr>
<tr>
<td>Dense or Silt Clay</td>
<td>100</td>
<td>500</td>
<td>0.08</td>
</tr>
<tr>
<td>STIFF CLAY</td>
<td>150</td>
<td>500</td>
<td>0.08</td>
</tr>
<tr>
<td>Dense Compact Sand or Gravel</td>
<td>150</td>
<td>500</td>
<td>0.08</td>
</tr>
<tr>
<td>Till</td>
<td>200</td>
<td>400</td>
<td>0.13</td>
</tr>
<tr>
<td>Clay Shale</td>
<td>500</td>
<td>600</td>
<td>0.50</td>
</tr>
<tr>
<td>Sound Rock</td>
<td>500</td>
<td>600</td>
<td>0.50</td>
</tr>
</tbody>
</table>

### PIER SIZES

<table>
<thead>
<tr>
<th>Pier Type</th>
<th>Supported Deck Area (M2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>2 x 17 x 8.4 M²</td>
</tr>
<tr>
<td>P2</td>
<td>2 x 26 x 5.2 M²</td>
</tr>
<tr>
<td>P3</td>
<td>2 x 17 x 8.4 M²</td>
</tr>
<tr>
<td>P4</td>
<td>14 x 17 x 3.4 M²</td>
</tr>
<tr>
<td>P5</td>
<td>14 x 26 x 3.6 M²</td>
</tr>
<tr>
<td>P6</td>
<td>14 x 17 x 3.4 M²</td>
</tr>
</tbody>
</table>

### EXAMPLE PLAN

#### TACBoc

**WOOD DECK**

**STRUCTURAL SIZING TABLES**

**Dwg. No. D010 2007**

---

**GENERAL NOTES**

1. A MINIMUM LIVE LOAD OF 1.4 kPa SHALL BE APPLIED IN ALL LOCATIONS.
2. THE PRESCRIBED SNOW LOAD FOR 2.5 SELECTED ONTARIO LOCALITIES IS INDICATED IN COLUMN 3 OF TABLE 1.3 IN SUPPLEMENTARY GUIDELINE 8.1 OF THE ONTARIO BUILDING CODE.
3. A SITE PLAN OR SURVEY IS REQUIRED SHOWNING ALL LOT LINES & DIMENSIONS OF ALL EXISTING BUILDINGS & DECKS.
4. LUMBER NO. 2 SPF OR BETTER WOOD POSTS MIN. 8 X 8 X 4 (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 1.5 TIMES THE HEIBERS LENGTH.

---

**TACBoc STANDARD DETAIL**

**Dwg. No. D010 2007**

---

**TACBoc STANDARD DETAIL**

**WOOD DECK**

**STRUCTURAL SIZING TABLES**

**Dwg. No. D010 2007**

---

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**TACBoc STANDARD DETAIL**

**WOOD DECK**

**STRUCTURAL SIZING TABLES**

**Dwg. No. D010 2007**

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6. CANTILEVERED JOISTS AND BEAMS ARE LIMITED TO 1.5 TIMES THE HEIBERS LENGTH.
GENERAL NOTES

1. EXTERIOR STAIRS
   a. 125mm - 200mm RISE
   b. 210mm - 255mm RUN
   c. 235mm - 355mm TREAD
   d. Steps are to be uniform throughout flight

2. HANDRAILS
   a. Guards are required where steps have more than 3 rises
   b. Handrail height 800mm - 900mm

3. GUARDS
   a. Guards are required around concrete slab if more than 600mm above grade & on both sides of stairs
   b. Minimum 400mm high for stairs
   c. Minimum 600mm high for porches
   d. Up to 1800mm above grade
   e. Minimum 1200mm high for greater heights
   f. No member designed to facilitate climbing between 1400mm & 4000mm

4. MASONRY TIES
   a. When brick facing is used above ground level provide
      i. 60mm thick @ 22mm sides
      ii. Corrosion resistant metal ties
      iii. 600mm horizontal & 500mm vertical

5. FOUNDATION WALLS
   a. Thickness of unreinforced foundation walls laterally supported at the top are dependent upon height of finish grade above basement floor
   i. Unit masonry thickness 150mm - Max. height 1200mm
   ii. Unit masonry thickness 240mm - Max. height 1800mm
   iii. Unit masonry thickness 290mm - Max. height 2200mm

6. CONCRETE
   a. Minimum concrete strength shall be
      i. 32.5pa @ 5%-8% air entrainment
   b. Concrete slab thickness 125mm
   c. Provide min. 30mm clear concrete cover to reinforcing bars

CONCRETE PORCH & CELLAR
PLANS, SECTIONS & NOTES

TACBOC STANDARD DETAIL

DO2
2007
MIN. 12mm CLEARANCE TO COMBUSTIBLE MATERIAL (50mm FOR INTERIOR CHIMNEY)

MIN. CLEARANCE FROM FIREPLACE OPENING TO COMBUSTIBLE MATERIAL SHALL BE 150mm OR 300mm IF COMBUSTIBLE MATERIAL PROJECTS MORE THAN 50mm OUT FROM FACE OF THE FIREPLACE

CORBELLED SMOKE CHAMBER / PARSING RECOMMENDED MAX. 45° SLOPE TO VERTICAL

FIRE BRICK TO BE SET IN FIRE CLAY OR HIGH TEMPERATURE MORTAR

FIREPLACE OPENING

FIRE CHAMBER PROVIDE MIN. 50mm CLEARANCE BETWEEN MASONRY & COMBUSTIBLE FRAMING (100mm FOR INTERIOR LOCATIONS)

JOIST HANGERS

HEARTH TO BE SUPPORTED 100mm CONG. SLAB REINFORCED W/ 7.5mm BARS & 300mm EACH WAY MIN. RS 2.11 INSULATION IN BASEMENT EXTERIOR WALL MIN. 200mm

BITUMINOUS DAMP PROOFING ON MINIMUM 6mm PARSING ON CONCRETE BLOCK FOUNDATION WALL IN PARSING COVERED OVER Poured Concrete Footings (SEE WALL SECTIONS FOR FURTHER REQUIREMENTS)

SECTION

FOOTING BELOW 50mm, BETWEEN MIN. FLUES

PLAN

FIREPLACE OPENING 150mm MIN.

100mm AIR SPACE BETWEEN LINER & MASONRY DO NOT FILL WITH MORTAR 90mm x 90mm x 6mm ANGLE FOR MASONRY SUPPORT

SMOKE CHAMBER MIN. 250mm CLEARANCE TO ANY COMBUSTIBLE MATERIAL

SMOKE CHAMBER WALLS MIN. 150mm SIDES, FRONT & BACK EXCEPT IF THE BACK IS EXPOSED TO THE OUTSIDE IT MAY BE 1400mm EVERY FIREPLACE SHALL HAVE A METAL DAMPER TO COVER THE FULL EXTENT OF THE THROAT OPENING

FIREBOX WALLS MIN. 150mm WHERE A METAL LINER OR 9mm THICK FIREBRICK IS USED INCLUDING THE THICKNESS OF THE MASONRY LINER STAGGER JOINTS BETWEEN KYNTHERS

100mm DIA. COMBUSTION AIR SUPPLY INSULATED NON-COMBUSTIBLE DUCT & OPERABLE DAMPER & INSECT SCREEN

MIN. 500mm FROM COMBUSTIBLES RECOMMENDED 450mm FOR CLEARANCE TO ALL SIGNS ACCUMULATION

BOLD BLOCK COURSE AT OR BELOW GRADE LEVEL

100mm DIA. KEEPING TILE OR 150mm CRUSHED STONE COVER

GENERAL NOTES

1. JOISTS OR BEAMS SUPPORTED ON CHIMNEY FLUE SHALL BE SEPARATED BY 250mm OF SOLID MASONRY

2. MAXIMUM ANGLE OF SLOPE FOR SMOKE CHAMBER IS 45° FROM VERTICAL

3. COMBUSTIBLE FLOORING, SUB FLOORING & CEILINGS MINIMALLY SHALL HAVE A MINIMUM 12mm CLEARANCE TO MASONRY CHIMNEY

4. EXCEPT AS REQUIRED IN SENTENCE (2) FIREPLACES SHALL HAVE A NON-COMBUSTIBLE HEARTH EXTENDING NOT LESS THAN 450mm IN FRONT OF THE FIREPLACE OPENING MEASURED FROM THE FACE & NOT LESS THAN 200mm BEYOND EACH SIDE OF THE FIREPLACE OPENING

5. WHERE THE HEARTH IS ELEVATED MORE THAN 150mm ABOVE THE HEARTH EXTENSION THE HEIGHT OF THE HEARTH EXTENSION SHALL BE INCREASED BY:
   (A) 50mm FOR AN ELEVATION ABOVE 500mm & NOT MORE THAN 800mm &
   (B) AN ADDITIONAL 25mm FOR EVERY 50mm IN ELEVATION ABOVE 800mm

6. INSTALL A CARBON MONOXIDE DETECTOR CONFORMING TO CAN/CGA-B149 OR UL 2034

7. PROVIDE FIRESTOPPING BETWEEN FLOOR, CEILINGS LEVELS AND CHIMNEY

TACBOC STANDARD DETAIL

MASONRY FIREPLACE

PLAN & SECTION

FLUE SIZES (mm)

<table>
<thead>
<tr>
<th>F1</th>
<th>5.0 - 4.5</th>
<th>4.5 - 4.0</th>
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COLUMN 1: 1 2 3 4 5 6 7 8 9

DOE NO. 2007
FLUE EXTENSION
50mm MIN. 100mm MAX.
BRICK CAP W/ FLASHING OR METAL OR CONC. CHIMNEY CAP W/ WASH & DRIP
SOLID BRICK CHIMNEY MIN. 70mm THICK, NO MORTAR BETWEEN LINER & SURROUNDING MASONRY. WHEN THE CHIMNEY WALLS ARE LESS THAN 100mm THICK
15.9mm THICK CLAY CHIMNEY LINING MORTAR BUTT ENDS OF LINERS
MINIMUM 0.53mm GALVANIZED METAL FLASHING EMBEDDED MIN. 25mm INTO THE MASONRY. 150mm DOWN THE MASONRY & LAPP THE LOWER FLASHING MIN. 100mm ALONG THE ROOF
SADDLE LOCATION SEE NOTE NO.6

GENERAL NOTES
1. ALL STRUCTURAL STEEL SHALL BE 200-1/2 GRADE 1 1/4" MINIMUM TENSILE STRENGTH OF 414 MPa. ALL EXPOSED STEEL & FASTENERS SHALL BE GALVANIZED OR PAINTED WITH 2 COATS OF ZINC-RICH PAINT.
2. ALL TIMBER SHALL BE 15# P.S. #2 GRADE.
3. ROOF RATTERS TO BE 38mm NO. 2 SPR. @ 400mm O.C. W/ A MINIMUM SPAN OF 350mm. FOR OTHER ROOF RATTER 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 UN-FACTORED CHIMNEY BRACE LOAD OF 4.2KN
5. BASIC HOURLY WIND PRESSURE q = 0.32 kPa.
6. DESIGN ROOF SNOW LOAD = 1.5 kPa.
7. CHIMNEYS EXCEEDING 250mm 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 300mm UP THE ROOF SLOPE TO A POINT EQUAL IN HEIGHT TO THE FLASHING ON THE CHIMNEY. BUT NOT LESS THAN 1/2 TIMES THE SHINGLE EXPOSURE. PROVIDE COUNTERFLASHING AT THE CHIMNEY.

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

600mm MINIMUM ABOVE THE HIGHEST ROOF SURFACE OR STRUCTURE WITHIN 5000mm OF THE CHIMNEY A CHIMNEY FLUE SHALL BE MIN. 100mm ABOVE THE HIGHEST POINT & FINISH THE CHIMNEY COVERS IN CONTACT IN THE ROOF

DETAIL 'A'

TACBOC
STANDARD DETAIL
PDF
MASONRY FIREPLACE
DETAILS
DATE NO. 2007
EXISTING DWELLING WALL TO REMAIN FOR GASPROOFING

FOR GASPROOFING DOOR SEE NOTE '1' ON SHEET G016

GARAGE NEW

SLOPE TO EXTERIOR

LINE OF ROOF ABOVE

PROPERTY LINE

GARAGE PLAN (PROVIDE DIMENSIONS IN BOXES)

SEE DETAIL SHEETS G015 - G016

TOP OF PLATE

FRAME WALL

BRICK VENEER WALL

SOLID MASONRY WALL

MIN.

TOP OF PLATE

SEE DETAIL SHEETS G015 - G016

FRAME WALL

BRICK VENEER WALL

SOLID MASONRY WALL

MIN.

TOP OF PLATE

GARAGE NEW

GARAGE NEW

SLOPING ROOF

FLAT ROOF

GARAGE SECTIONS

TACBOC
ATTACHED GARAGE
PLAN & SECTIONS

2007
### Roof Rafter Specifications (Where No Ceiling is Installed)

<table>
<thead>
<tr>
<th>Rafter Size</th>
<th>Roof Snow Load 1.0kPa</th>
<th>Roof Snow Load 1.5kPa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rafter Spacing (mm) O.C.</td>
<td>Rafter Spacing (mm) O.C.</td>
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<tr>
<td>58x89</td>
<td>5.11 2.03 2.47 2.72 2.47 2.16</td>
<td></td>
</tr>
<tr>
<td>58x140</td>
<td>4.40 4.45 3.84 4.28 3.84 3.40</td>
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</tr>
<tr>
<td>58x184</td>
<td>6.44 5.82 5.11 5.62 5.11 4.41</td>
<td></td>
</tr>
<tr>
<td>58x235</td>
<td>8.22 7.47 6.35 7.16 6.52 5.39</td>
<td></td>
</tr>
</tbody>
</table>

### Roof Joist Specifications (Where Ceiling is Installed)

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</tr>
<tr>
<td>58x140</td>
<td>5.11 4.64 4.09 4.46 4.05 3.84</td>
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<tr>
<td>58x184</td>
<td>6.52 5.93 5.15 5.70 5.16 4.32</td>
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### Lintel Specifications (Maximum 1.5 kPa Roof Snow Load)

<table>
<thead>
<tr>
<th>Door Width</th>
<th>Lintel for Wood Framing</th>
<th>Lintel for Brick Veneer 40mm</th>
<th>Lintel for Solid Masonry 200mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 3000mm</td>
<td>2/8x6/4 2/8x286</td>
<td>2/8x6/4 + Angle 125x100x8</td>
<td>2/8x286 + Angle 125x100x8</td>
</tr>
<tr>
<td>Up to 4900mm</td>
<td>2/8x286 4/8x286 or 2-4x800 LVL</td>
<td>H20x87 + Plate 200x10</td>
<td>H20x87 + Plate 200x10</td>
</tr>
</tbody>
</table>

### General Notes

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 hall is less than 1200mm to the property line provide 15.5mm Type ‘B’ Drywall interior sheathing. No windows are permitted.
5. If garage hall is less than 600mm to the property line non-combustible gladding or vinyl siding w/ gypsum sheathing is required.
6. Garage halls adjoining dwelling must be completely sealed to prevent any infiltration of gases into the dwelling.
7. Caulk all penetrations such as hose bibs & 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. 52MPa + 5%–8% air entrainment.
11. All roof sheathing to be 9.5mm plywood or 11mm OSB. For roof rafter @ 3000mm or 4000mm O.C. use ‘W’ clips for roof rafters @ 6000mm O.C.
12. Stepped footings, if required, shall have a maximum rise of 800mm & a minimum run of 6000mm
13. Provide a light fixture in the garage.
14. Steel beams to be supported by solid masonry (140mm bearing on masonry or 15mm Dia. steel column).
15. Lintels and beams to be designed by a qualified person for spans greater than 4000mm

---

**TACBEC Standard Detail**

**Attached Garage**

**Tables & Notes**

**DWG. NO. 2007**
NOTE: THESE DETAILS ARE NOT TO BE USED FOR ADDITION OF LIVING SPACES
SLOPE GRADE

For roof construction see tables on sheet Go1:

Anchor: use top plate to minimum of 2 courses of brick. Top of anchor 12mm dia. Anchor bolts: 250mm G.C. Minimum embedded min. 40mm into the masonry wall.

Exterior alumni, fascia board & soffits finish as per elevations.

Solid masonry wall: 380mm concrete block or poured concrete. Continuous under existing doors.

140mm concrete block or poured concrete. Top plate continuous under existing doors.

For roof construction see tables on sheet Go1:

SLOPPING ROOF 4 SOLID MASONRY DETAILS

NOTE: These details are not to be used for addition of living spaces.

TACBOW STANDARD DETAIL

ATTACHED GARAGE SLOPPING ROOF & SOLID MASONRY DETAILS

DRAWN: G01 2007
ATTACHED GARAGE
FLAT ROOF & FRAME WALL DETAILS

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

DALGopol STANDARDS REPORT

1. FRAME WALL
   - Existing brick/veneer construction
   - Counter flashing: Masonry Bond Head
   - Minimum 25mm

2. BRICK VENEER WALL
   - 12thTorr Drywall Tape
   - Seal All Joists
   - On Furring as Required
   - Intermediate Joists to Be Supported
   - 12th Torr 150mm High
   - To Remain

3. SOLID MASONRY WALL
   - 12th Torr Drywall Tape
   - Masonry Joint seal
   - 12th Torr Anchor Bolts

4. WALL SECTION
   - Gravel stop flashing
   - For roof construction see tables on sheet 606
   - For roof construction see tables on sheet 606
   - No occupancy on roof
   - Foundation wall

Existing frame wall construction to remain

For roof construction see tables on sheet 606

No occupancy on roof

For roof construction see tables on sheet 606

No occupancy on roof

Placing to overlap wall over roof membrane

No occupancy on roof

For roof construction see tables on sheet 606

No occupancy on roof

For roof construction see tables on sheet 606

No occupancy on roof

Frame wall construction finished as per elevations.

Existing frame wall construction to remain.

Provide cant strip at intersection of wall & built up roof.

Frame wall construction finished as per elevations.

Existing frame wall construction to remain.

Provide cant strip at intersection of wall & built up roof.

Frame wall construction finished as per elevations.

Existing frame wall construction to remain.

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Frame wall construction finished as per elevations.

Existing frame wall construction to remain.

Provide cant strip at intersection of wall & built up roof.
ATTACHED GARAGE
FLAT ROOF & SOLID MASONRY DETAILS

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

TACBOC
STANDARD DETAIL

ATTACHED GARAGE GASPROOFING & INSULATION DETAILS

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 CALKING.

4. DOORS BETWEEN GARAGE & DWELLING SHALL BE TIGHT FITTING & WEATHERSTORMED & 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 CALKING.

7. UNIT MASONRY WALLS FORMING THE SEPARATION BETWEEN THE DWELLING & ATTACHED GARAGE SHALL BE PROVIDED W/ 2 COATS OF A SEALER OR COVERED W/ FLASHER OR GYPSUM BOARD ON THE GARAGE SIDE.

FLOOR FINISH
15.5mm T&G PLY, SUBFLOOR OR APPROVED EQUAL ON WOOD FLOOR JOISTS W/ VAPOUR BARRIER RSI 4.40 BATT INSULATION 12.7mm GYPSUM BD.

ISOCELLurate OR POLYURETHANE SPRAY FOAM INSULATION IS RECOMMENDED FOR INSULATING FLOORS ABOVE GARAGES.

GASPROOFING NOTES

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 CALKING.

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7. UNIT MASONRY WALLS FORMING THE SEPARATION BETWEEN THE DWELLING & ATTACHED GARAGE SHALL BE PROVIDED W/ 2 COATS OF A SEALER OR COVERED W/ FLASHER OR GYPSUM BOARD ON THE GARAGE SIDE.
GARAGE PLAN (PROVIDE DIMENSIONS IN BOXES)

- Property Line

- GARAGE NEV
- Slope to Exterior
- Line of Roof Above
- Gable Roof
- Flat Roof

**Minimum Requirements:**
- Ridge Board
  - 38x8
- Collar Ties
  - 1@ 1200 O.C.

**Materials:**
- Brick Veneer
- Solid Masonry
- Concrete Block
- Foundation

**Dimensions:**
- Top of Plate
- Fin Grade
- 1/2 of Footing

**Details:**
- See Details on Sheets 602b - 602e

**Code Reference:**
- TACB0C
- DETACHED GARAGE
- SLOPING OR FLAT ROOF PLAN & SECTIONS
- DWG. NO. 602a
- 2007
### Roof Rafter Load Table (Flat Roof - Where No Ceiling Is Installed)

<table>
<thead>
<tr>
<th>Rafter Size</th>
<th>Roof Snow Load 1.0kPa</th>
<th>Roof Snow Load 1.5kPa</th>
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<tr>
<td>58x89</td>
<td>5.11</td>
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<td>58x235</td>
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### Roof Joist Load Table (Flat Roof - Where Ceiling Is Installed)

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### Lintels Table

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<thead>
<tr>
<th>Door Width</th>
<th>Lintels for Wood Framing</th>
<th>Lintels for Brick Veneer 90mm</th>
<th>Lintels for Solid Masonry 200mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 5000mm</td>
<td>2/58x84</td>
<td>2/58x286</td>
<td>2/58x286 + ANGLE 125x100x8</td>
</tr>
<tr>
<td>Up to 4900mm</td>
<td>2/58x286</td>
<td>4/58x286 OR 2/ 45x300 L/E LVL</td>
<td>H200x27 + PLATE 200x10</td>
</tr>
</tbody>
</table>

### 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 hall is less than 600mm to the property line, provide 15.4mm 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 9.1m, 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. 1.5mm 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 (140mm bearing on masonry or 75mm dia. steel column).
11. Lintels and beams to be designed by a qualified person for spans greater than 4400mm.
For Flat Roof Structure, see tables on sheet 0000.

**EAVESTROUGH, RH Fastern Board.**

**SOFFIT, Finish as per Elevations.**

**BRICK VENEER WALL**

**HORIZ.** HORIZONTAL, 600mm O.C., VERTICAL, INSTALLED WITH GALVANIZED SPIRAL NAILS OR SCREWS.

**SHEATHING PAPER** TO OVERLAP EACH OTHER EXTERIOR TYPE SHEATHING.

**HOOD STUDS** 600mm O.C.

**DOUBLE PLATE** TOP SOLE PLATE & BOTTOM.

**FLAT ROOF**

**60.2% / 15.1mm Type X' Drywall** IF LESS THAN 600mm TO THE PROPERTY LINE.

**3.5mm Poly Flashing** 1/16th Inch High Up Behind Sheathing Paper.

**Provide Hipped Holes & Max. 60mm Apart.**

**Hood sill plate fastened to Foundation wall in Max. 12Thm Diameter Anchor Bolts Embedded Min. 600mm in Concrete & 200mm O.C. Max. Provide Caulking or Gasket Between Plate & Foundation Wall.**

**Top Block Course** Filled in Mortar or Concrete.

**15Thm Poured Concrete Slab** 325kg 8 to 10 Days. **5% - 8% air entrainment reinforcing in center of slab down compacted granular fill.**

**Foundation Block or Poured Concrete** Foundation wall continuous under garage doors.

**400mm/1500mm Deep Poured Concrete** Lined, Fil. Thermal. 

**Foundation on Undisturbed Soil.**

**WALL SECTION**

**DETACHED GARAGE STANDARD DETAIL**

**TACBOC**

**BRICK VENEER DETAILS**

**DWG. NO.**

**602d**

**2007**
ANCHOR BOLTS IN TOP PLATE TO MINIMUM OF 2 COURSES OF BRICK FOR SOLID BEARING
12.1mm DIA. ANCHOR BOLTS @ 2000mm O.C. INTO THE MASONRY HALL
SAVILESTROUGH, RV"-IL, FASCIA BOARD & SOFFIT, FINISH AS PER ELEVATIONS

SOLID MASONRY HALL
90mm CONCRETE BLOCK OR CONCRETE BACKUP PROVIDE HEADER COURSE EVERY 7TH COURSE OR 460mm GALV. BONDING RODS @ 460mm O.C. HORIZONTAL & 460mm O.C. VERTICAL

SLAB FLOOR CONCRETE BLOCK OR POURED CONCRETE FOUNDATION HALL CONTINUOUS UNDER GARAGE DOORS
140mm CONCRETE BLOCK OR POURED CONCRETE FOOTING TO BEAR ON UNDISTURBED SOIL
400mm x 500mm DEEP POURED CONCRETE FOOTING TYPICAL.

TEGRAL DETACH GARAGE STANDARD DETAIL SOLID MASONRY DETAILS

TACBOC

STANDARD DETAIL

 detention GARAGE

SOLID MASONRY DETAILS

SLOPE FOR DRAINAGE

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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 150mm LONG HORIZ. AND VERT. COMPONENTS MOUNTED
   HORIZ. COMPONENT 150mm TO 400mm A.F.F. AND THE VERTICAL COMPONENT 150mm IN FRONT OF TOILET BOWL.
   OPTION 2
   MIN. 150mm LONG GRAB BAR MOUNTED AT A 50° TO 60° ANGLE SLOPING UPWARDS AWAY FROM WATER CLOSET.

2. BEHIND WATER CLOSET

   MIN. 800mm 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 82mm INTO THE SOLID BLOCKING.
A MINIMUM 900mm DOOR IS REQUIRED WITH A MINIMUM UNOBSTRUCTED CLEAR WIDTH OF 880mm. THE DOOR MUST SWING OUT, UNLESS ENOUGH AREA IS PROVIDED WITHIN THE WASHERROOM 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 HANDLE. A DOOR CLOSER & A PAPER 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 GOAT 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 800mm ABOVE THE FLOOR.

DOORS
MUST BE NOT MORE THAN 640mm FROM THE TOP OF A BATH OR VANITY TO THE FLOOR. A 760mm WIDE AREA REQUIRED THE FOLLOWING CLEARANCES BENEATH THE LAVATORY. 155mm UNDER THE FRONT EDGE, 650mm AT A POINT 205mm BACK FROM THE FRONT EDGE, 280mm OVER THE DISTANCE FROM A POINT 280mm TO A POINT 400mm BACK FROM THE FRONT EDGE, INSULATED PLUMBING OR WATER SUPPLY TEMPERATURE LIMITED TO 48°C TO PREVENT BURNS. FAUCET HANDLES OF THE LEVER TYPE OR AUTOMATICALLY OPERABLE ARE REQUIRED, AND MUST NOT BE SPRING-LOADED OR LOCATED NO FURTHER THAN 400mm FROM THE CENTRE LINE TO THE FRONT EDGE OF THE BATH OR VANITY.

GRAB BARS
THIS 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 15KN APPLIED VERTICALLY OR HORIZONTALLY. GRAB BARS MUST BE ATTACHED WITH SCREWS WHICH PENETRATE AT LEAST 50mm INTO THE SOLID BLOCKING.

LAVATORIES

WATER CLOSET & GRAB BARS

LAUNDRY BATHROOM
ELEVATION

1/2 INCLINE

150mm

SECTION 'A-A'

POURED CONCRETE PIER
MIN. 1200mm BELOW GRADE ON UNDISTURBED SOIL

TACBOC
STANDARD DETAIL

BARRIER FREE RAMP
REQUIREMENTS & CONSTRUCTION.

DWG. NO. H03a
2007
GENERAL NOTES

1. A SITE PLAN OR SURVEY IS REQUIRED SHOWING ALL LOT LINES & DIMENSIONS, SIZE & LOCATION OF ALL BUILDINGS, LOCATION & SIZE OF RAMP & LANDINGS.

2. LUMBER NO. 2 SPF OR BETTER. HOOD POSTS MIN. 8x8 (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 15kPa.

4. HANDRAILS, ON BOTH SIDES, W 30-40mm CIRCULAR CROSS SECTION OR 60-150mm NON-CIRCULAR PERIMETER W MAX. 3mm 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 0.6kN POINT LOADS AND 0.1kN UNIFORM LOADS FROM ANY DIRECTION.
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.
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.
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 T", "DOUBLE T" OR DOUBLE HASTE FITTING SHALL BE INSTALLED IN A NOMINALLY HORIZONTAL SOIL OR HASTE PIPE.

2. DRAINAGE SYSTEM
   • EVERY SANITARY DRAINAGE SYSTEM AND STORM DRAINAGE SYSTEM SHALL BE PROVIDED WITH CLEANSOUTS THAT WILL PERMIT CLEANING OF THE ENTIRE SYSTEM.
   • A CLEANSOUT FITTING SHALL BE PROVIDED ON THE UPSTREAM SIDE AND DIRECTLY OVER EVERY RUNNING TRAP, EVERY SANITARY BUILDING DRAIN OR SANITARY BUILDING SEWER. A CLEANSOUT SHALL BE INSTALLED AT EACH CHANGE IN DIRECTION.
   • EVERY SANITARY BUILDING DRAIN OR STORM BUILDING DRAIN SHALL BE PROVIDED WITH A CLEANSOUT FITTING AT ITS LOWEST POINT AS PRACTICAL, TO THE PLACE WHERE THE DRAIN LEAVES THE BUILDING.
   • EVERY SOIL OR HASTE STACK SHALL BE PROVIDED WITH A CLEANSOUT FITTING AT THE BOTTOM OF THE STACK.
   • A CLEANSOUT 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 FERVIOUS TO WATER.
   • EVERY FIXTURE SHALL BE PROTECTED BY A SEPARATE TRAP.
   • A PROVISION SHALL BE MADE FOR MAINTAINING THE TRAP SEAL OF A FLOOR DRAIN BY THE USE OF A TRAP SEAL PRENER.
   • EVERY DRAINAGE PIPE THAT HAS A SIZE OF 5 INCHES (75mm) OR LESS, AND EVERY FIXTURE DRAIN SHALL HAVE A 30 DEGREE SLOPE IN THE DIRECTION OF FLOW OF AT LEAST 0.5 IN (1.4 IN PER FOOT). WHERE IT IS NOT POSSIBLE TO COMPLY WITH A 0.5 IN SLOPE THE VALVE MAY BE USED IF IT WILL PROVIDE A GRAVITY FLOW OF NOT LESS THAN 0.6 CPM 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 CONSTRUCTIONS OR ANY TRAP THAT MAY OVERFLOW SHALL NOT BE LOCATED IN A CRAWL SPACE OR ANY OTHER UNREFINED 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.
   • WHERE EVERY DRAINAGE PIPE PUMP SHALL BE EQUIPPED SANITARY A UNION, A CHECK VALVE AND A SHUT-OFF VALVE INSTALLED IN THAT SEQUENCE IN THE DIRECTION OF DISCHARGE.
   • A SANITARY DRAINAGE PIPE THAT DRAINS INTO A SANITARY DRAINAGE SYSTEM THAT IS SUBJECT TO SURCHARGE SHALT BE Fitted WITH 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 PLUMBING HOOKS DO NOT DRAIN TO A LAUNDRY TANK, THE TRAP INLET SHALL BE FITTED WITH A VERTICAL STANDPIPE THAT IS NOT LESS THAN 600MM LONG MEASURED FROM THE TRAP INLET AND THE TOP OF THE STANDPIPE SHALL TERMINATE ABOVE THE FLOOR LEVEL RIM OF THE PLUMBING HOOK IT SERVES.

3. VENTING SYSTEM
   • EVERY TRAP SHALL BE VENTED.
   • EVERY SANITARY BUILDING DRAIN TERMINATES AT ITS UPSTREAM END IN A STACK IN SIZE 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 HASTE STACK THAT PREVAILS AT THE JUNCTION OF EVERY SANITARY DRAIN PIPE 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 SUMP OR TANK, OR DILUTION TANK SHALL BE ONE SIZE SMALLER THAN THE SIZE OF THE LARGEST DRAIN OR FIXTURE DRAIN DRAINED TO THE SUMP OR TANK.
   • AIR ADMITTANCE VALVES SHALL ONLY BE USED IN BUILDINGS UNDERGOING RENOVATION AND INSTALLATIONS WHERE CONNECTION TO A VENT MAY NOT BE PRACTICAL.
   • INSTALLED AIR ADMITTANCE VALVES SHALL BE ACCESSIBLE 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 HOURS OR WITHSTANDING FOR AT LEAST 2 HOURS WITHOUT TRIBUTARY AIR PRESSURE THAT IS AT LEAST 500 KPa (72 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 SUPPLIED 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 INTERIOR WALL TO SUPPLY WATER TO THE EXTERIOR OF THE BUILDING SHALL BE PROVIDED WITH A FROST-FROST VALVE OR A SEPARATE SHUT-OFF VALVE OR A STOP-AND-HASTE COCK LOCATED INSIDE THE BUILDING AND CLOSE TO THE WALL.
   • WHERE A HONE BID IS INSTALLED OUTSIDE A BUILDING INSIDE A GARAGE OR WHERE THERE IS AN IDENTIFABLE 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 0.6 INCH IN SIZE.
   • EVERY WATER PIPE SHALL NOT BE LESS THAN 0.6 INCH IN TRAFFIC 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).
Extraction and Backfill

- Excavation shall be undertaken in such manner 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 terraces are known to exist, all stumps, roots and woody 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 covered with a minimum of 6mm of mortar covered 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 crawlspace floor, and shall be covered with 150mm of crushed stone. Foundation drains shall drain to a storm sewer, drainage ditch, dry well or sump.
- Downtakes 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 shall not adversely affect adjacent properties.

Footings

- minimum 15MPa poured concrete
- minimum 200mm below finished grade
- Footings shall be founded on natural undisturbed soil, rock or compacted granular fill with minimum bearing capacity of 150kPa for ICF

Footings Size

<table>
<thead>
<tr>
<th>Floors</th>
<th>Supporting Ext. Wall</th>
<th>Supporting Int. Wall</th>
<th>Supporting Column</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>250mm</td>
<td>200mm</td>
<td>0.40m2</td>
</tr>
<tr>
<td>2</td>
<td>350mm</td>
<td>350mm</td>
<td>0.75m2</td>
</tr>
<tr>
<td>3</td>
<td>450mm</td>
<td>500mm</td>
<td>1.00m2</td>
</tr>
</tbody>
</table>

- Increase exterior footing width by 65mm for each story of brick veneer supported by 150mm for each story of masonry and by 150mm for ICF
- Increase interior footing width by 100mm for each story of masonry above footing, and by 150mm for each story of wall height above 350mm
- The projection of an un-reinforced 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. 4mm mineral fibre insulation with min. Density of 91 kg/m²
  - 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 25MPa 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 40mm brick, wall shall be bonded with a header course every 600mm o.c. vertically and horizontally and 400mm o.c. for block or tile.
- Provide 50mm solid masonry concrete filled top course or continuous 25mm wood plate over all roof and floor framing members.
- Provide 140mm solid masonry under beams and columns.
- Masonry wall to be tied to each tier of joists with 40mm x 4.76mm corrosion resistant steel ties, keyed minimum 150mm into masonry. When joists are not extended across at least 3 pairs, 2000mm o.c.
- Inside of wall to be parged and covered with No. 15 breathier-type asphalt paper.
- For reduced foundation walls to allow a brick facing while maintaining lateral support, tie minimum 90mm brick to minimum 100mm back-up block with corrosion resistant ties at least 17.8mm² in cross sectional area, spaced 200mm vertically and 100mm 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 180mm and bearing.

Masonry Veneer

- Minimum 70mm thick if joints are not raked and 40mm 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 0.16mm thick x 22mm wide corrosion resistant straps spaced @ 500mm vertically and 600mm horizontally.
- Fasten ties with corrosion resistant 3.18mm diameter screw or spiral nails which penetrate at least 30mm into studs.
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' tar paper.
- See SOL 3.54 insulating bridging required not less than 2/5 the joist size.
- See SOL 6.35 minimum design load per joist size.
- See SOL 7.36 framed bridging required not less than 2/5 the joist size.
- See SOL 8.45 every member should be bridged with at least 4-1/2 nails for 1000mm wide shingles (or 6 11mm staples).
- See SOL 9.25 For roofs exceeding 4000mm 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 Roofing laid with minimum 100mm head and end laps cemented together or glass Fibre or Polyester Fibre coated base sheets, or self-sealing composite membrane 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 15, or where a low slope asphalt shingle application is provided.
- See SOL 10.35 Flashing shall be provided at the intersection of shingle roofs with exterior walls and chimneys.
- See SOL 11.35 Sheet metal flashing shall consist of not less than 1.5mm sheet metal coated with 0.05mm OSB, 0.35mm osborne, or 0.46mm aluminium.

Walls

- Exterior walls shall consist of:
  - cladding
  - air barrier system lapped 100mm at joints
  - timber, plywood, OSB or gypsum sheathing.
- See SOL 13.45 stud spacing 8" on centre.
- See SOL 14.50 headers and steel columns shall be fixed at 2400mm centres.
- See SOL 15.65 truss members shall be supported on joist or on blocking between joists.
- See SOL 16.75 floor joist size and spacing requirements.

Floors

- See SOL 18.35 for floor joist size and spacing requirements.
- See SOL 19.45 to have minimum 38mm of end bearing.
- See SOL 20.50 joists shall bear on a sill plate fixed to the foundation with 12.1mm anchor bolts @ 2400mm o.c.
- See SOL 21.60 header joists between 1200mm and 3200mm in length shall be doubled. Header joists exceeding 3200mm shall be sized by calculations.
- See SOL 22.70 trimmer joists shall be doubled when supported header length between 800mm and 2000mm. Trimmer joists shall be sized by calculations when supported header exceeds 2000mm.
- See SOL 23.80 cross bridging required not more than 2100mm from each support and from other spans of bridging.
- See SOL 24.90 joists shall be supported on joist hangers at all flush beams, trimmers, and headers.
- See SOL 25.10 non-loadbearing partitions shall be supported on a joist or on blocking between joists.
- See SOL 26.11 for subflooring requirements.

Roof & Ceilings

- See SOL 27.12 for rafter, roof joist and ceiling joist size and spacing requirements.
- See SOL 28.22 hip and valley rafters shall be 38mm deeper than common rafters.
- See SOL 29.32 2400mm collar ties @ rafter spacing with 16x84 continuous brace at mid span if collar tie exceeds 2400mm in length.
- See SOL 30.42 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.
- Natches in floor, roof, and ceiling members shall be located at top of the member with 1/2 the actual depth from the edge of bearing and not greater than 1/3 the joist depth.
- Nail studs may be notched or drilled provided that no less than 2/5 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.
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.
- Uninsulated 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. 10% at the top of the space and 25% at the bottom of the space designed to prevent the entry of rain, snow, or insects.
- Unhinged crawl spaces shall be provided with 0.1 m$^2$ of ventilation for each 50 m$^2$.
- Minimum natural ventilation areas, where mechanical ventilation is not provided, are:
  - Bathrooms: 0.01m$^2$ per 10.0 m$^2$
  - Other rooms: 0.028m$^2$
- Unfinished basements: 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 580mm, which is operable from the inside without tools. Maximum sill height 1000mm for 1st 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 4 sliding glass doors.

Exterior Walls
- No windows or other unprotected openings are permitted in exterior walls less than 1200 mm from property lines.
- 15.4mm type X fire rated drywall shall be installed on the inside face of attached garage exterior walls and garage door ends at which exterior walls 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, 4 reinforced with galvanized diamond mesh laths, 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 545mm x 550mm to be provided to every roof space which is 10m$^2$ or more in area and more than 600mm in height.
- Access hatch minimum 300mm x 100mm to be provided to every crawl space.

Garage Gasproofing
- The walls and ceilings of an attached garage shall be constructed and sealed so as to provide an airtight 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 400mm or more above an adjacent level.
- Smoke alarms shall be interconnected and located to prevent the entry of rain, snow, or insects.
- 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
- Maximum Run: 210mm
- Minimum Tread: 225mm
- Minimum Head Room: 945mm
- Minimum Rail: 860mm
- Curved stairs shall have a min. run of 150mm at any point and a minimum average run of 200mm.
- Windows which converge to a point in stairs must turn through an angle of no more than 70° with no less than 30° of more than 45° per tread. Sets of windows 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 600mm and no member between 450mm and 900mm that will facilitate climbing.

Plumbing
- Every dwelling requires a kitchen sink, lavatory, water closet, bathtub or shower stall and the installation of availability of laundry facilities.
- Every floor 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 ejector 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 lit, and except where serving an unfinished basement shall be controlled by a 3-way switch at the head of foot of the stairs.
- Basements require a light for each 50m$^2$ 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 in 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.
- basement 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.
## Roof Rafters (Where No Ceiling is Installed)

<table>
<thead>
<tr>
<th>Rafters Size</th>
<th>Maximum Clear Span (m)</th>
<th>Rafter Spacing (mm) O.C.</th>
<th>Rafter Spacing (mm) O.C.</th>
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<tbody>
<tr>
<td>38x89</td>
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<td>5.00 4.00 6.00</td>
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<td>8.22 7.47 6.36</td>
<td>7.10 6.52 5.94</td>
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## Roof Joists (Where Ceiling is Installed)

<table>
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<th>Joist Size</th>
<th>Maximum Clear Span (m)</th>
<th>Joist Spacing (mm) O.C.</th>
<th>Joist Spacing (mm) O.C.</th>
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<td>6.82 5.93 5.18</td>
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## Floor Joists

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<th>Joist Spacing (mm) O.C.</th>
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<td>2.15 2.15 2.15</td>
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<td>4.32 4.00 3.54</td>
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## Subflooring

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<tr>
<th>Joist Size</th>
<th>Maximum Clear Span (m)</th>
<th>Joist Spacing (mm) O.C.</th>
<th>FLOOR JOIST</th>
<th>SUBFLOORING MIN. THICKNESS (mm)</th>
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</thead>
<tbody>
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<td>15.0, 115</td>
<td>Plywood, 43 Hafner Bd. or lumber</td>
</tr>
<tr>
<td>38x140</td>
<td>4.40 4.45 3.89</td>
<td>4.28 3.84 3.40</td>
<td>15.0, 115</td>
<td>Plywood, 43 Hafner Bd. or lumber</td>
</tr>
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<td>5.11 5.58 5.11</td>
<td>4.92 4.41 4.06</td>
<td>15.0, 115</td>
<td>Plywood, 43 Hafner Bd. or lumber</td>
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<td>6.82 7.47 6.36</td>
<td>5.70 6.18 5.94</td>
<td>15.0, 115</td>
<td>Plywood, 43 Hafner Bd. or lumber</td>
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## Roof Sheathing

<table>
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<tr>
<th>Framing (mm) O.C.</th>
<th>Roof Sheathing Min. Thickness (mm)</th>
<th>Roof Sheathing Min. Thickness (mm)</th>
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<tbody>
<tr>
<td>38x89</td>
<td>15 Plywood, 43 Hafner Bd. on 17G Lumber</td>
<td>15 Plywood, 43 Hafner Bd. on 17G Lumber</td>
</tr>
<tr>
<td>38x140</td>
<td>15 Plywood, 43 Hafner Bd. on 17G Lumber</td>
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</tr>
</tbody>
</table>

## General Notes

1. All lumber to be No. 1 or 2 SPF or better.
2. Strapping & Cross Bridging maximum 2500mm 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 plywood strips, subfloor may be reduced to 12mm.

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**TacBoc Standard Detail**

**Specification - Building Code Standards**

**Structural Span Tables & Notes**

**2007**
FLOOR FINISH: 9.0mm T&G PLYWOOD SUBFLOOR OR APPROVED EQUAL ON 38x38 SLEEPERS & 400 O.C. POLY DAMP PROOFING UNDER Rigid Insulation (Optional)

HOOD SILL PLATE FASTENED TO FOUNDATION HALL @ MINIMUM 12.7mm DIAMETER ANCHOR BOLTS EMBEDDED MIN. 100mm IN CONCRETE @ 2400mm O.C. MAX. & PROVIDE CONTINUOUS AIR BARRIER BETWEEN PLATE & FOUNDATION HALL

MIN. 6mm FACING ON BLOCK FDN. HALL ABOVE GRADE ONLY

SLOPE GRADE AWAY FROM BUILDING FACE

TOP BLOCK COURSE FILLED W/MORTAR OR CONCRETE

450x100 DEEP POURED CONCRETE FOOTING (TYPICAL) FOOTING TO BEAR ON UNDISTURBED SOIL

FLOOR FINISH: 15.5mm T&G PLYWOOD SUBFLOOR OR APPROVED EQUAL ON 58x58 SLEEPERS & 400 O.C. POLY DAMP PROOFING UNDER Rigid Insulation (Optional)

HOOD SILL PLATE FASTENED TO FOUNDATION HALL @ MINIMUM 12.7mm DIAMETER ANCHOR BOLTS EMBEDDED MIN. 100mm IN CONCRETE @ 2400mm O.C. MAX. & PROVIDE CONTINUOUS AIR BARRIER BETWEEN PLATE & FOUNDATION HALL

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FRAME & BRICK VENEER WALLS

SLAB ON GRADE

Title: Slab on Grade

Drawing No.: W05

Date: 03-2012
ASPHALT SHINGLES ON MIN. 9.5mm Plywood Sheathing

MIN. 28-38 Purlins @ 400 O.C.
Perpendicular to Roof Joists (See Plans) Use 'H'-Clips @ 600mm O.C. Spacing.

Eave Protection to Extend from the Edge of the Roof, 900mm up the Slope but Not Less Than 500mm Beyond the Int. Face of the Exterior Wall.

ROOF VENTILATION 1/10 OF THE INSULATED CEILING AREA UNIFORMLY DISTRIBUTED

FRAME WALL CONSTRUCTION FINISH AS PER ELEVATIONS SHEATHING PAPER, LAYERS TO OVERLAP EACH OTHER RSI 0.88 RIGID INSULATION FOR EXTERIOR TYPE SHEATHING SB 140 WOOD STUDS @ 400 O.C. RSI 0.52 BATT INSULATION IN CONTINUOUS CONTACT W/ SHEATHING & CONTINUOUS VAPOUR BARRIER DOUBLE PLATE @ TOP SOLE PLATE @ BOTTOM INTERIOR HALL FINISH

ASPHALT SHINGLES ON MIN. 9.5mm Plywood Sheathing JOISTS (See Plans) USE 'H'-Clips @ 600mm O.C. Spacing.

Eave Protection to Extend from the Edge of the Roof, 900mm up the Slope but Not Less Than 500mm Beyond the Int. Face of the Exterior Wall

CARRY MIN. RSI 0.52 INSULATION TO COVER INTERIOR FACE OF EXTERIOR WALL.

INTERIOR CEILING FINISH CONT. VAPOUR BARRIER MIN. RSI 1.06 INSULATION

CONTINUOUS AIR/ VAPOUR BARRIER

EXTERIOR WALL MUST HAVE MIN. RSI 1.28 INSULATION VALUE

WINDOW SHALL HAVE A MAX. U VALUE OF 1.8

CARRY MIN. RSI 0.52 INSULATION TO COVER INTERIOR FACE OF EXTERIOR WALL.

INTERIOR CEILING FINISH CONT. VAPOUR BARRIER MIN. RSI 1.06 INSULATION

CONTINUOUS AIR/ VAPOUR BARRIER

EXTERIOR WALL MUST HAVE MIN. RSI 1.28 INSULATION VALUE

WINDOW SHALL HAVE A MAX. U VALUE OF 1.8

EAVESTROUGH, RYL, FASCIA BOARD & VENTED SOFFIT FINISH AS PER ELEVATIONS

ROOF VENTILATION 1/10 OF THE INSULATED CEILING AREA UNIFORMLY DISTRIBUTED

MINIMUM 63mm CLEARANCE

MINIMUM 25mm CLEARANCE

BRICK VENER WALL

90mm FACE BRICK
20mm AIR SPACE
0.16mm THICK 125mm WIDE GALVANIZED METAL TIES INSTALLED IN GALVANIZED SPIRAL NAILS OR SCREWS
400mm O.C. HORIZONTAL
600mm O.C. VERTICAL SHEATHING PAPER & LAYERS TO OVERLAP EACH OTHER RSI 0.88 RIGID INSULATION FOR EXTERIOR TYPE SHEATHING SB 140 WOOD STUDS @ 400 O.C. RSI 0.52 BATT INSULATION IN CONTINUOUS CONTACT W/ SHEATHING & CONTINUOUS VAPOUR BARRIER DOUBLE PLATE @ TOP SOLE PLATE @ BOTTOM INTERIOR HALL FINISH

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TACBOC STANDARD DETAIL
SLOPING ROOF DETAIL
INSULATION & VENTILATION W/ ALTERNATIVE

05-2012

03-2012

Dwg. No. W06a
ASPHALT SHINGLES ON MIN. 9.5mm PLYWOOD SHEATHING
35x38 PURLINS @ 400 O.C.
PERPENDICULAR TO ROOF JOISTS (SEE PLANS) USE 'H'-CLIPS IF 600mm O.C. SPACING

ROOF VENTILATION
1:150 OF THE INSULATED CEILING AREA
UNIFORMLY DISTRIBUTED

ROOF VENTILATOR
OR RIDGE VENT

MINIMUM 15mm CLEARANCE

MINIMUM 60mm CLEARANCE

INTERIOR CEILING FINISH
CONT. VAPOUR BARRIER
W. MIN. RSI 5.46 INSULATION
25mm BELOW TOP OF ROOF JOIST

EXISTING FRAME WALL CONSTRUCTION
TO REMAIN

METAL FLASHING
MINIMUM 15mm UP BEHIND EXISTING SHEATHING
PAPER & MINIMUM 15mm HORIZONTAL

MINIMUM 50mm TO WOOD SIDING

LEDGER NAILED TO EXISTING FRAME WALL CONSTRUCTION

ACOUSTIC SEALANT

JOIST HANGERS TO SUIT ROOF JOISTS

REMOVE EXISTING SIDING AS REQUIRED & PROVIDE INTERIOR WALL FINISH ON EXISTING CONSTRUCTION

ASPHALT SHINGLES ON MIN. 9.5mm PLYWOOD SHEATHING ON ROOF JOISTS (SEE PLANS) USE 'H'-CLIPS IF 600 O.C. SPACING

ROOF VENTILATION
1:150 OF THE INSULATED CEILING AREA
UNIFORMLY DISTRIBUTED

MINIMUM 80mm CLEARANCE

INTERIOR CEILING FINISH
CONT. VAPOUR BARRIER
W. MIN. RSI 5.46 INSULATION
60mm BELOW 1/2 OF SHEATHING
NEW ROOF ATTACHED TO EXISTING BRICK VENEER WALL SLOPING ROOF

ASPHALT SHINGLES ON MIN. 9.5mm FLYHOOD SHEATHING 36x36 FURNING & 400 O.C. PERPENDICULAR TO ROOF JOISTS (SEE PLANS) USE H-CLIPS IF 600mm O.C. SPACING

ROOF VENTILATION 1/50 OF THE INSULATED CEILING AREA UNIFORMLY DISTRIBUTED

MINIMUM 25mm CLEARANCE

MINIMUM 65mm CLEARANCE

MIN

INTERIOR CEILING FINISH CONT. AIR/VAPOUR BARRIER W/ MIN. RSI 5.46 INSULATION 25mm BELOW TOP OF ROOF JOIST

CONTINUOUS RIDGE VENT

25mm DIA VENT HOLES ONE FOR EACH JOIST SPACE DRILLED MIN. 50mm FROM TOP OF HEADER

ASPHALT SHINGLES ON MIN. 9.5mm FLYHOOD SHEATHING ON ROOF JOISTS (SEE PLANS) USE H-CLIPS IF 600mm O.C. SPACING

ROOF VENTILATION 1/50 OF THE INSULATED CEILING AREA UNIFORMLY DISTRIBUTED

MINIMUM 65mm CLEARANCE

MIN

INTERIOR CEILING FINISH CONT. AIR/VAPOUR BARRIER W/ MIN. RSI 5.46 INSULATION 65mm BELOW U/E OF ROOF SHEATHING

EXISTING BRICK VENEER CONSTRUCTION TO REMAIN

COUNTER FLASHING MINIMUM 150mm UP HALL EMBEDDED MIN. 25mm INTO MASONRY JOINT CAULK & SEAL

METAL FLASHING MINIMUM 100mm UP BEHIND COUNTER FLASHING

REMOVE EXISTING MASONRY, DOUBLE & EXTEND EVERY 4TH JOIST THRU TO FRAME HALL SUPPORT JOISTS ON 2 JACK STUDS NAILED TO EXIST. STUD

ACOUSTIC SEALANT

INTERMEDIATE JOISTS TO BE SUPPORTED ON JOIST HANGERS NAILED TO A HEADER WHICH IS ALSO SUPPORTED ON JOIST HANGERS NAILED TO THE THROUGH JOISTS

INTERIOR FINISH ON 25x38 WOOD STRAPPING 8 400 O.C. ON EXISTING CONSTRUCTION

EXISTING BRICK VENEER CONSTRUCTION TO REMAIN

COUNTER FLASHING MINIMUM 150mm UP HALL EMBEDDED MIN. 25mm INTO MASONRY JOINT CAULK & SEAL

METAL FLASHING MINIMUM 100mm UP BEHIND COUNTER FLASHING

REMOVE EXISTING MASONRY, DOUBLE & EXTEND EVERY 4TH JOIST THRU TO FRAME HALL SUPPORT JOISTS ON 2 JACK STUDS NAILED TO EXIST. STUD

ACOUSTIC SEALANT

INTERMEDIATE JOISTS TO BE SUPPORTED ON JOIST HANGERS NAILED TO A HEADER WHICH IS ALSO SUPPORTED ON JOIST HANGERS NAILED TO THE THROUGH JOISTS

INTERIOR FINISH ON 25x38 WOOD STRAPPING 8 400 O.C. ON EXISTING CONSTRUCTION

TACBEC
STANDARD DETAIL

DWG. NO. W076
03-2012
ASPHALT SHINGLES ON MIN. 0.5mm PLYWOOD SHEATHING
38x38 PURLINS @ 400 O.C. PERPENDICULAR TO ROOF JOISTS (SEE PLANS) USE H-CLIPS IF 600mm O.C. SPACING

ROOF VENTILATION
1/30 OF THE INSULATED CEILING AREA UNIFORMLY DISTRIBUTED

MINIMUM CLEARANCE

INTERIOR CEILING FINISH
CONT. VAPOUR BARRIER 25mm BELOW TOP OF ROOF JOIST

NEW ROOF ATTACHED TO EXISTING SOLID MASONRY WALL
SLOPING ROOF

EXISTING SOLID MASONRY CONSTRUCTION TO REMAIN

COUNTER FLASHING MINIMUM 38mm UP WALL EMBEDDED MIN. 25mm INTO MASONRY JOINT CAULK & SEAL

METAL FLASHINGS MIN. 1000mm UP BEHIND COUNTER FLASHING

ROOF JOISTS TO BE SUPPORTED ON JOIST HANGERS NAILED TO A HEADER WHICH IS FASTENED TO EXISTING SOLID MASONRY WALL 12mm DIA ANCHOR BOLTS @ 800 O.C.

ACOUSTIC SEALANT

INTERIOR FINISH ON 38x38 WOOD STRAPPING @ 400 O.C. ON EXISTING CONSTRUCTION

ACOUSTIC SEALANT
GRAVEL FINISH ON 3 FLY FELT ROOFING 12.5mm PLYWOOD SHEATHING
38x38 PURLING 8-400 O.C. PERPENDICULAR TO ROOF JOISTS (SEE PLANS)

ROOF VENTILATION 1:50 OF THE INSULATED CEILING AREA
UNIFORMLY DISTRIBUTED

MINIMUM 25mm CLEARANCE

INTERIOR CEILING FINISH CONT. AIR/VAPOUR BARRIER W/ MINIMUM RSI 5.46 INSULATION
25mm BELOW TOP OF ROOF JOIST

EXISTING FRAME WALL CONSTRUCTION TO REMAIN

ROOF MEMBRANE OVER CANT STRIP & MINIMUM 150mm UP BEHIND EXISTING SHEATHING PAPER

PROVIDE CANT STRIP AT INTERSECTION OF WALL & BUILT UP ROOF

LEDGER NAILED TO EXISTING FRAME WALL CONSTRUCTION

ACOUSTIC SEALANT

JOIST HANGERS

REMOVE EXISTING SIDING AS REQUIRED & PROVIDE INTERIOR WALL FINISH ON EXISTING CONSTRUCTION

TACBoc
STANDARD DETAIL

NEW ROOF ATTACHED TO EXISTING FRAME WALL
FLAT ROOF

DwG. NO. W089

03-2012
FLASHING TO OVERLAP MINIMUM 100mm OVER ROOFING MEMBRANE

GRAVEL FINISH ON 3 PLY FELT ROOFING 12.5mm PLYNOOD SHEATHING 55x38 PURLIN & 400 O.C. PERPENDICULAR TO ROOF JOISTS (SEE PLANS)

EXISTING BRICK VENEER CONSTRUCTION TO REMAIN

COUNTER FLASHING MINIMUM 150mm UP WALL EMBEDDED MIN. 25mm IN MASONRY JOINT CALL & SEAL

ROOF MEMBRANE OVER CANT STRIP & MINIMUM 150mm UP WALL

REMOVE EXISTING MASONRY, DOUBLE 4 EXTEND EVERY 4TH JOIST THRU TO FRAME WALL SUPPORT JOISTS ON 2 JACK STUDS NAILED TO EXIST. STUD

ACOUSTIC SEALANT

INTERIOR FINISH ON 2X8X56 WOOD STRAPPING & 400 O.C. ON EXISTING CONSTRUCTION

TITLE

EXISTING BRICK VENEER CONSTRUCTION TO REMAIN

COUNTER FLASHING MINIMUM 150mm UP WALL EMBEDDED MIN. 25mm IN MASONRY JOINT CALL & SEAL

ROOF MEMBRANE OVER CANT STRIP & MINIMUM 150mm UP WALL

REMOVE EXISTING MASONRY, DOUBLE 4 EXTEND EVERY 4TH JOIST THRU TO FRAME WALL SUPPORT JOISTS ON 2 JACK STUDS NAILED TO EXIST. STUD

ACOUSTIC SEALANT

OTHER JOISTS TO BE SUPPORTED ON JOIST HANGERS NAILED TO A HEADER WHICH IS ALSO SUPPORTED ON JOIST HANGERS NAILED TO THE THROUGH JOISTS

INTERIOR FINISH ON 2X8X56 WOOD STRAPPING & 400 O.C. ON EXISTING CONSTRUCTION

NEW ROOF ATTACHED TO EXISTING BRICK VENEER WALL

Dwg. No. W086

03-2012
New Roof Attached to Existing Solid Masonry Wall

Flat Roof

1. Flashing to overlap minimum 150mm over roofing membrane.
2. Gravel finish on 3-ply felt roofing, 12.5mm plywood sheathing, 3Bx3B purlins @ 400 O.C. parallel to roof joists (see plans).
3. Roof ventilation: 1.5% of the insulated ceiling area uniformly distributed.
4. Interior ceiling finish: continuous vapour barrier, R-value 8.46 insulation, 23mm below top of roof joist.
5. Counter flashing minimum 150mm up wall embedded min. 25mm in masonry joint caulk & seal.
6. Roof membrane over cant strip & minimum 150mm up wall.
7. Existing solid masonry construction to remain.
8. Roof joists to be supported on joist hangers nailed to a header which is fastened to existing solid masonry wall w/ 12.7mm dia. anchor bolts @ 800 O.C.
9. ACOUSTIC SEALANT

Interior Finish on 3Bx3B wood strapping @ 400 O.C. on existing construction.

Details:
- 25mm plasterboard
- 63mm below U/S of roof sheathing
- 12.1mm dia. anchor bolts
- ACOUSTIC SEALANT
- INTERIOR FINISH ON 3Bx5B HOOD STRAPPING @ 400 O.C. ON EXISTING CONSTRUCTION

New Roof Attached to Existing Solid Masonry Wall

DWS: NO. W08c

03-2012
FRAME WALL CONSTRUCTION FINISH AS PER ELEVATIONS sheathing paper, layers to overlap each other RSI: 0.69 RIGID INSULATION FOR EXTERIOR TYPE SHEATHING CONTOUR WOOD STUDS > 400 O.C. RSI: 3.52 BATT INSULATION IN CONTINUOUS CONTACT W SHEATHING & CONTINUOUS VAPOUR BARRIER DOUBLE PLATE TO TOP SOLE PLATE & BOTTOM INTERIOR WALL FINISH

MAXIMUM JOIST CANTILEVER 400mm 36x184 JOISTS 600mm 36x226 JOISTS

55x54 FRAMING & 400 O.C. NOT SUPPORTED ON BRICK

REMOVE EXISTING ROOF AS SHOWN DOTTED

EXISTING BRICK VENEER CONSTRUCTION TO REMAIN

INTERIOR CEILING FINISH

JOISTS TO BE BRIDGED w 38x38 CROSS BRIDGING OR SOLID BLOCKING & 250 O.C.

EXPANSION SPACE CAULKED AND WEATHER TIGHT

EXTERIOR WALL MUST HAVE MIN. RSI: 4.28 INSULATION VALUE

CONTINUOUS AIR VAPOUR BARRIER

FLOOR FINISH 15.5mm T&G PLYWOOD SUBFLOOR OR APPROVED EQUAL ON HOOD FLOOR JOISTS (SEE PLANS)

SEAL HEADER WRAP TO VAPOUR BARRIER

HEADER WRAP AIR BARRIER AROUND CONTINUOUS HEADER JOIST W RSI: 1.76 RIGID INSULATION AND RSI: 3.52 BATT OR FOAM INSULATION

TACBOC
STANDARD DETAIL
SECOND STOREY ADDITION
CEILING REPLACEMENT

Dwg. No.
03-2012
ELEVATION 'A'

VERTICAL SECTION
TRUSSES NORMAL TO PARTY WALL

15.4mm TYPE 'X' GYPSUM BOARD
58x8'1 STUD FRAMING @ 600 O.C.
RSI 4.25 BATT INSULATION

15.4mm TYPE 'X' GYPSUM BOARD
58x8'1 STUD FRAMING @ 600 O.C.
RSI 2.11 BATT INSULATION
25mm AIR SPACE
58x8'1 STUD FRAMING @ 600 O.C.
15.4mm TYPE 'X' GYPSUM BOARD

PLACE INSULATION & TAPE DRYWALL BEFORE ANY PIPING OR FURRING IS INSTALLED

12.1mm GYPSUM BD. TO RESTRAIN INSULATION FROM FALLING OUT

12.7mm GYPSUM BD. FOR INTERIOR STUD PARTITION

50mm MINERAL WOOL INSUL. & ACOUSTICAL SEALANT AROUND ELECTRICAL BOX

ELEVATION 'A'

HORIZONTAL SECTION

TACBOC
FRAME PARTY WALL
STANDARD DETAIL
DETAILS

03-2012