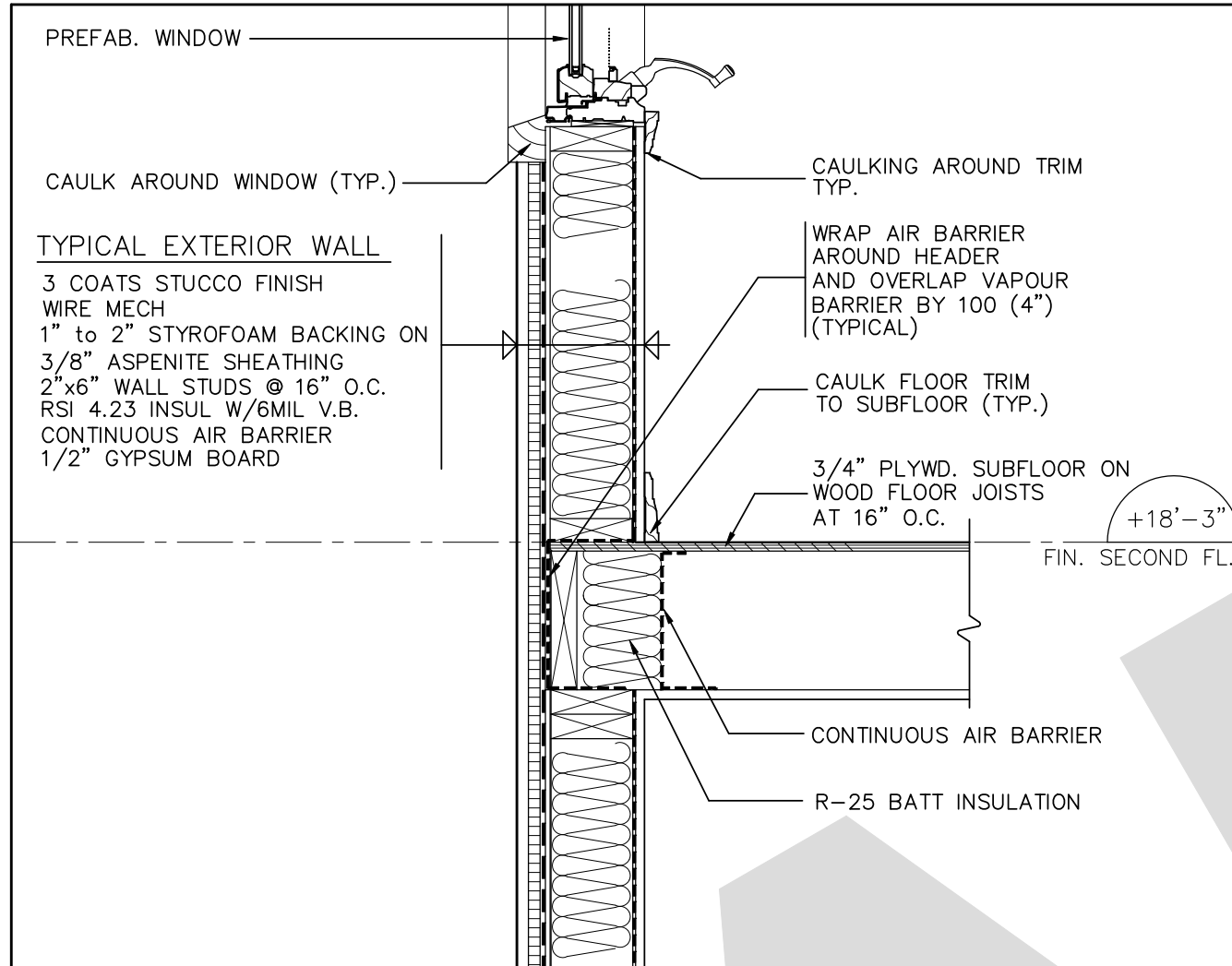
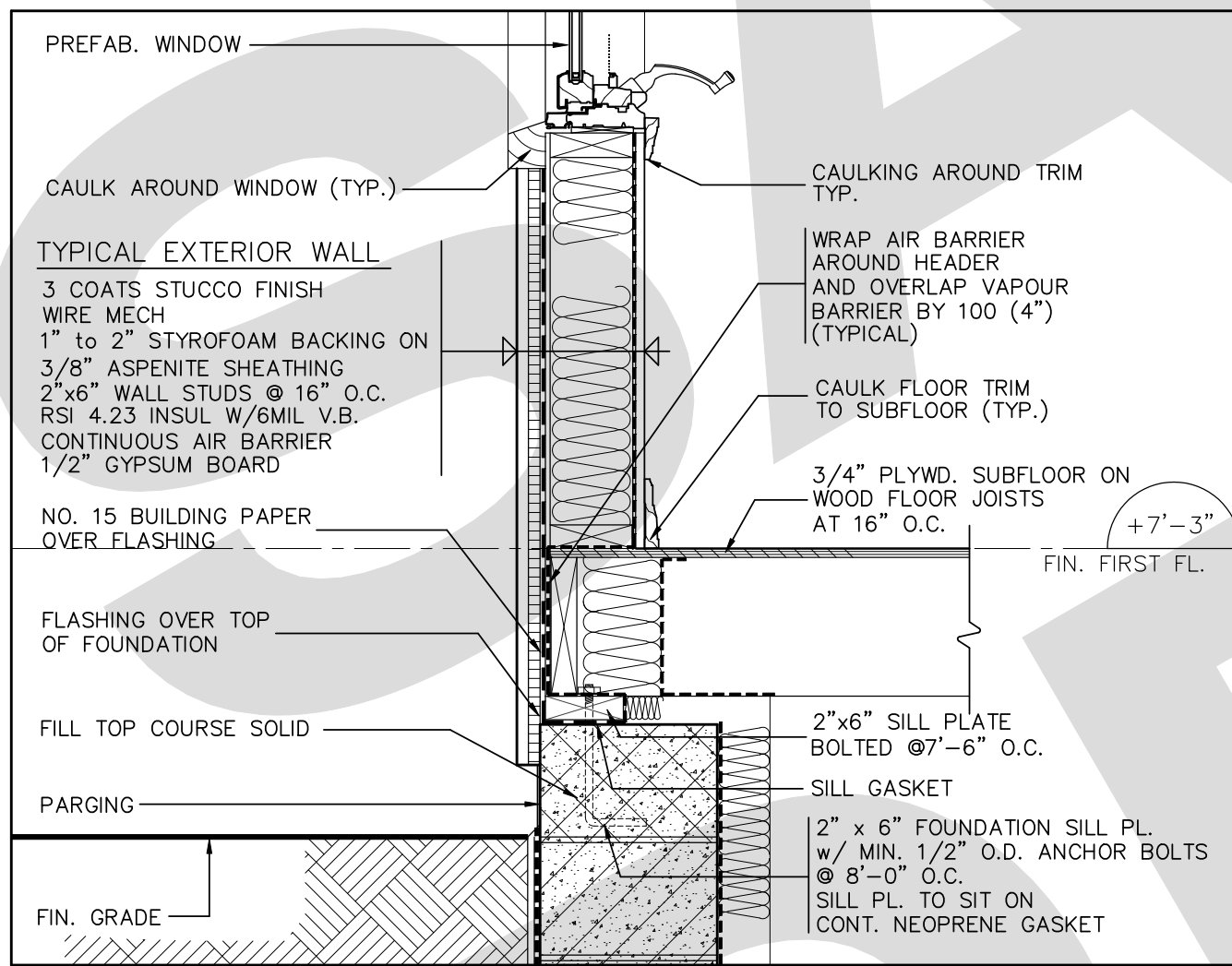


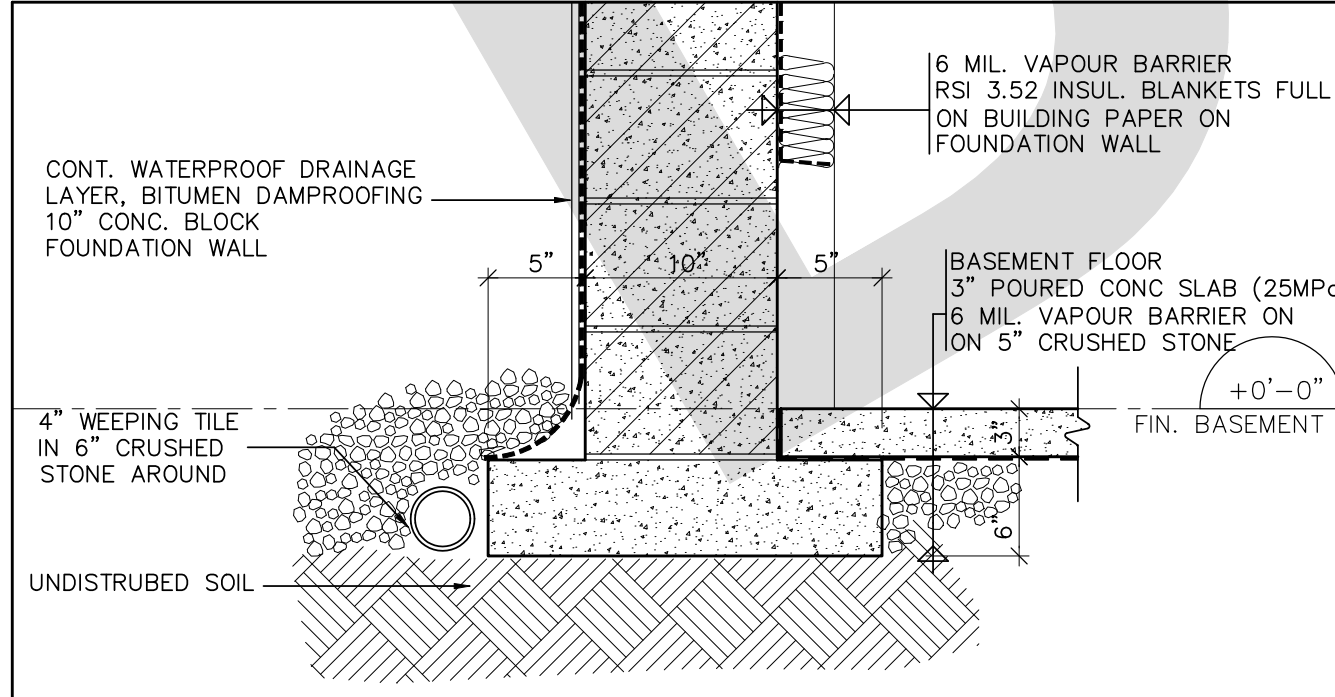
1 DETAIL
 A4 1"=1'-0"



2 DETAIL
 A4 1"=1'-0"



3 DETAIL
 A4 1"=1'-0"



4 DETAIL
 A4 1"=1'-0"

Excavation and Backfill

- Excavation shall be undertaken in such a manner so as to prevent damage to existing structures, adjacent property and utilities
- The topsoil and vegetable matter in unexcavated areas under a building shall be removed. The bottom of excavations for foundations shall be free of all organic material
- If termite are known to exist, all stumps, roots and wood debris shall be removed to a minimum depth of 11 3/4" excavated areas under a building, and the clearance between untreated structural wood elements and the ground shall be no less than 17 3/4"
- Backfill within 23 5/8" of the foundation walls shall be free of deleterious debris and boulders over 9 7/8" diameter
- Dampproofing and Drainage
 - In normal soil conditions, the exterior surfaces of foundation walls enclosing basements and crawl spaces shall be dampproofed. Where hydrostatic pressure occurs, a waterproofing system is required
 - Masonry foundation walls shall be parged with 1/4" of mortar covered over the footing prior to dampproofing
 - 4" foundation drains shall be laid on level, undisturbed ground adjacent to the footings at or below the top of the basement slab or crawl space floor, and shall be covered with 6" of crushed stone. Foundation drains shall drain to a storm sewer, drainage ditch, dry well or sump
 - Window wells shall be drained to the footing
 - Downspouts not directly connected to a storm sewer shall have extensions to carry water away from the building, and provisions shall be made to prevent soil erosion
 - Concrete slabs in attached garages shall be sloped to drain to the exterior
 - The building site shall be graded so that surface, sump and roof drainage will not accumulate at or near the building and will not adversely affect adjacent properties

Footings

- minimum 2000 psi poured concrete
- minimum 4" below finished grade
- Footings shall be founded on natural undisturbed soil, rock or compacted granular fill with minimum bearing capacity of 5700psf

Footing Size

| Floors Supported | Supporting Ext. Wall | Supporting Int. Wall | Column Area |
|------------------|----------------------|----------------------|----------------------|
| 1 | 9 7/8" | 9 7/8" | 4.3 ft ² |
| 2 | 13 3/4" | 13 3/4" | 8.1 ft ² |
| 3 | 17 3/4" | 19 3/4" | 10.9 ft ² |

- Increase footing width by 2 5/8" for each storey of brick veneer supported, and by 5 1/8" for each storey of masonry
- The projection of an unreinforced footing beyond the wall supported shall not be greater than its thickness
- Step Footings
 - Vertical Rise 23 5/8" Max. for firm soils
 - 15 3/4" Max. for sand or gravel
 - Horizontal Run = 23 5/8" Min.

Foundation Walls

- To be poured concrete, unit masonry or precast wood (see drawings for type and thickness)
- Dampproofing shall be a heavy coat of bituminous material
- Foundation wall to extend minimum 7/8" above finished grade
- A drainage layer is required on the outside of a foundation wall where the interior insulation extends more than 2"-below exterior grade. A drainage layer shall consist of
 - Min. 3/4" mineral fibre insulation with min. Density of 3.6 lb/ft³
 - Min. 4" 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 4600psi concrete with 5-850w entrainment
- Other slabs 3600psi concrete
- Minimum 3" thick, placed on a minimum 4" 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 3 1/2" brick, wall shall be bonded with header course every 6th course
- Provide 2" solid masonry or continuous 1 1/2" plate under all roof and framing members
- Provide 7 1/2" solid masonry under beams and columns
- Masonry wall to be tied to each tier of joists with 1 9/16" x 3/16" corrosion resistant steel strips, keyed minimum 4" into masonry. When joists are parallel to wall, ties are to extend across at least 3 joists @ 6'-7" o.c.
- Inside back of wall to be parged and covered with No.15 breather-type asphalt paper
- For reduced foundation walls to allow a brick facing while maintaining lateral support, tie minimum 1/2" brick to minimum 1 1/2" back-up block with corrosion resistant ties at least 0.026in x in cross sectional area, spaced 7 7/8" vertically and 2'-11" horizontally, with joints completely filled with mortar
- Masonry over openings shall be supported on corrosion resistant or galvanized steel lintels with a minimum 4/8" end bearing

Masonry Veneer

- Minimum 3/4" thick if joints are not raked and 3 1/2" thick if joints are raked
- Minimum 1" air space to sheathing
- Provide weep holes @ 31 1/2" o.c. at the bottom of the cavity and over doors and windows
- Direct drainage through weep holes with 20 mil poly flashing extending minimum 5 7/8" up behind the sheathing paper
- Veneer ties minimum 0.030" thick x 7/8" wide corrosion resistant straps spaced @ 23 5/8" vertically and 15 3/4" horizontally
- Fasten ties with corrosion resistant, 0.125" diameter screws or spiral nails which penetrate at least 1-3/16 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 6 mil polyethylene
- Walls
 - Exterior walls shall consist of:
 - cladding
 - sheathing paper lapped 4" at joints
 - 3/8" Fibergor or gypsum board or 1/4" plywood sheathing
 - 2x6 studs @ 6" o.c.
 - 2x6 bottom plate and double 2x6 top plate
 - 2x4 studs @ 6" o.c. can be utilized provided the combined R value of the batt insulation and exterior rigid insulation exceeds R-17.
 - Interior loadbearing walls shall consist of:
 - 2x4 studs @ 6" o.c.
 - 2x4 bottom plate and double 2x4 top plate
 - 2x4 mid-girts if not sheathed
 - 1/2" gypsum board sheathing

Floors

- See S04 for floor joist size and spacing requirements
- Joists to have minimum 1 1/2" of end bearing
- Joists shall bear on a sill plate fixed to foundation with 1/2" anchor bolts @ 7'-10" o.c
- Header joists between 3' 11" and 10' 6" in length shall be doubled. Header joists exceeding 10' 6" shall be sized by calculations
- Trimmer joists shall be doubled when supported header is between 2' 7" and 6' 7". Trimmer joists shall be sized by calculations when supported header exceeds 6' 7"
- 2x2 cross bridging required not more than 6' 11" from each support and from other rows of bridging
- Joists shall be supported on joist hangers at all flush beams, trimmers, and headers.
- Joists located under parallel non-loadbearing partitions shall be doubled
- See S04 for subflooring requirements

Roof & Ceilings

- See S04 for rafter, roof joist and ceiling joist size and spacing requirements
- Hip and valley rafter shall be 2" deeper than common rafters
- 2x4 collar ties @ rafter spacing with 1x4 continuous brace at mid span if collar tie exceeds 7' 10" in length
- See S04 for roof sheathing requirements

Notching & Drilling of Trusses, Joists, Rafter

- Holes in floor, roof and ceiling members to be maximum 1/4" actual depth of member and not less than 2" from edges
- Notches in floor, roof and ceiling members to be located on top of the member within 1/2 the actual depth from the edge of bearing and not greater than 1/3 joist depth
- Wall studs may be notched or drilled provided that not less than 2/3 the depth of the stud remains, if load bearing, and 1 9/16" non-load bearing
- Roof truss members shall not be notched, drilled or weakened unless accommodated in the design

Roofing

- Fasteners for roofing shall be corrosion resistant. Roofing nails shall penetrate through or at least 1/2" into roof sheathing
- Every asphalt shingle shall be fastened with at least 4 nails
- Eave protection shall extend 2" 11" up the roof slope from the edge, and at least 11 3/4" from the inside face of the exterior wall, and shall consist of Type M or Type S Roll Roofing laid with minimum 1/4" head and top cemented together, or glass fibre or Polyester fibre coated base sheets, or self sealing composite membranes consisting of modified bituminous coated material. Eave protection is not required for unheated buildings, for roofs exceeding a slope of 1 in 12 or where a low slope asphalt shingle application is provided
- Open valleys shall be flashed with 2 layers of roll roofing, or 1 layer of sheet metal min. 23 5/8" wide
- Flashing shall be provided at the intersection of shingle roofs with exterior walls and chimneys
- Sheet metal flashing shall consist of not less than 1/16" sheet lead, 0.015" galvanized steel, 0.018" copper, 0.018" zinc, or 0.019" aluminum

Columns, Beams & Lintels

- Steel beams and columns shall be shop primed.
- Minimum 3 1/2" end bearing for wood and steel beams, with 7 7/8" solid masonry beneath the beam.
- Steel columns to have minimum outside diameter of 2 7/8" and minimum wall thickness of 3/16"
- Wood columns for carports and garages shall be minimum 3 1/2" x 3 1/2" in all other cases either 5 1/2" x 5 1/8" 7 1/4" x 7 1/4", unless calculations based on actual loads show lesser sizes are adequate. All columns shall be not less than the width of the supported member
- Masonry columns shall be a minimum of 1 3/8" x 11 3/8" or 9 1/2" x 15"
- Provide solid blocking the full width of the supported member under all concentrated loads

Insulation & Weatherproofing

- Ceiling with attic: Roof without attic
- Exterior Wall Foundation
- Foundation - 50% exposed
- Exposed Floor Slabs on Grade

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

Access to Attics and Crawl Spaces

- Access hatch minimum 19 3/8" x 24" to be provided to every crawl space and every roof space which is 108 ft² or more in area and more than 23 5/8" in height

Garage Dampproofing

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

Alarms and Detectors

- At least one smoke alarm shall be installed on or near the ceiling on each floor and basement level 2' 11" or more above an adjacent level
- Smoke alarms shall be interconnected and located such that one is within 15' of every bedroom door and no more than 49' 3" travel distance from any point on a floor
- A carbon monoxide detector shall be installed on or near the ceiling in every room containing a solid fuel burning fireplace or stove

Natural Ventilation

- Every roof space above an insulated ceiling shall be ventilated with unobstructed openings equal to not less than 1/300 of insulated area
- Insulated roof spaces not incorporating an attic shall be ventilated with unobstructed openings equal to not less than 1/150 of insulated area
- Roof vents shall be uniformly distributed and designed to prevent the entry of rain, snow or insects
- Unheated crawl spaces shall be provided with 11.1 ft² of ventilation for each 538 ft²
- Minimum natural ventilation areas, where mechanical ventilation is not provided, are:
 - Bathrooms: 0.97 ft²
 - Other rooms: 3 ft²
 - 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 one window having an unobstructed open area of 3.8 ft² and no dimension less than 15" which is operable from the inside without tools
- Exterior house doors and windows within 6' 7" 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 sightline

Exterior Walls

- No windows or other unprotected openings are permitted in exterior walls less than 3' 11" from property lines
- 5/8" fire rated drywall shall be installed on the inside face of attached garage exterior walls and gable ends of roofs which are less than 3' 11" from property lines
- Non combustible cladding shall be installed on all exterior walls less than 23 5/8" from property lines

Ceramic Tile

- When ceramic tile applied to a mortar bed with adhesive, the bed shall be a minimum of 1/2" thick & reinforced with galvanized diamond mesh lath, applied over polyethylene on subflooring on joists at no more than 16" o.c. with at least 2 rows cross bridging

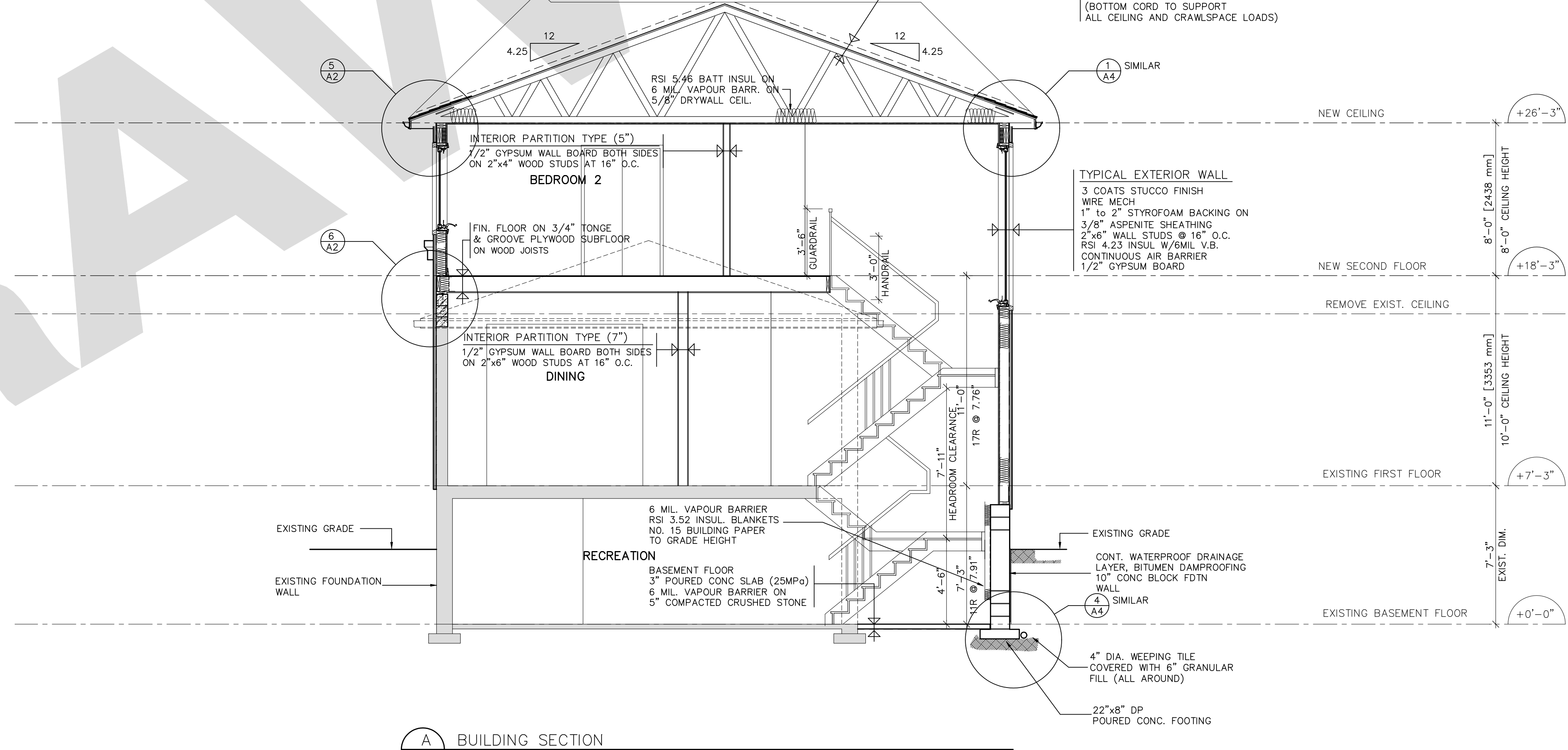
Electrical

- An exterior light controlled by an interior switch is required of every entrance
- A light controlled by a switch is required in every kitchen, bedroom, living room, utility room, laundry room, dining room, bathroom, vestibule, hallway, garage and carport.
- A switched receptacle may be provided instead of a light in bedrooms and living rooms
- Stairs shall be lighted, and except where serving an unfinished basement shall be controlled by a 3 way switch at the head and foot of the stairs
- Basements require a light for each 325 ft² controlled by a switch at the head of the stairs

Mechanical Ventilation

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

GENERAL NOTES



A BUILDING SECTION
 A4 1/4"=1'-0"

| REVISIONS | | | | |
|-----------|------|--------|----|-----|
| NO. | DATE | ISSUED | BY | Q/D |
| | | | | |
| | | | | |

THIS DRAWING SHALL NOT BE COPIED, REPRODUCED OR DISTRIBUTED IN ANY MANNER WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE DESIGNER.

THE CONTRACTORS SHALL VERIFY ALL DIMENSIONS ON THE JOB AND REPORT ANY DISCREPANCY TO THE DESIGNER PRIOR TO PROCEEDING WITH THE WORK.

ALL DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF THE DESIGNER AND SHALL BE RETURNED UPON COMPLETION OF THE CONSTRUCTION WORK.



PROJECT
PROPOSED SECOND STOREY ADDITION FOR

TORONTO ONTARIO

SHEET TITLE
BUILDING SECTION, WALL SECTION AND GEN. NOTES

| | | |
|-----------------------------|-------------------------|--------------|
| DATE JULY 21 2014 | DATE PRINTED CHECKED | PROJECT FILE |
| DRAWN S.J.P. | | |
| SCALE 1/4"=1'-0" | | |
| SHEET NO. A4 of 4 | | |