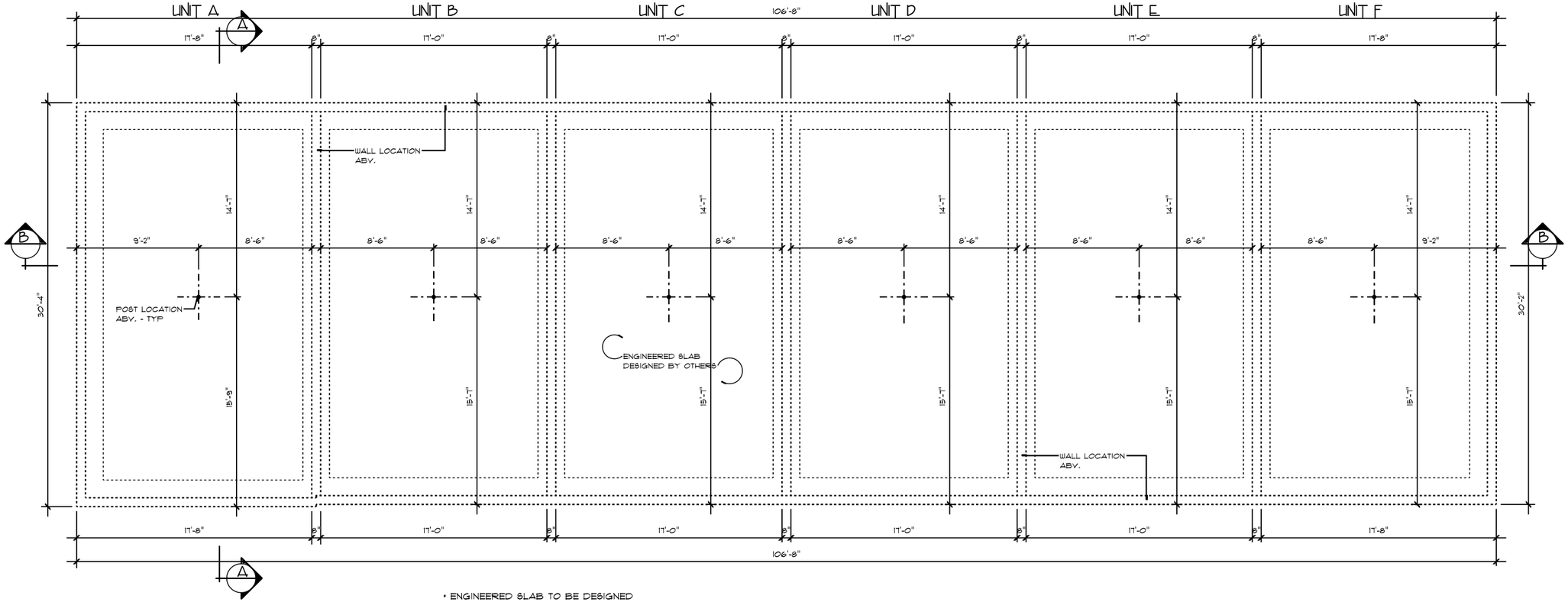


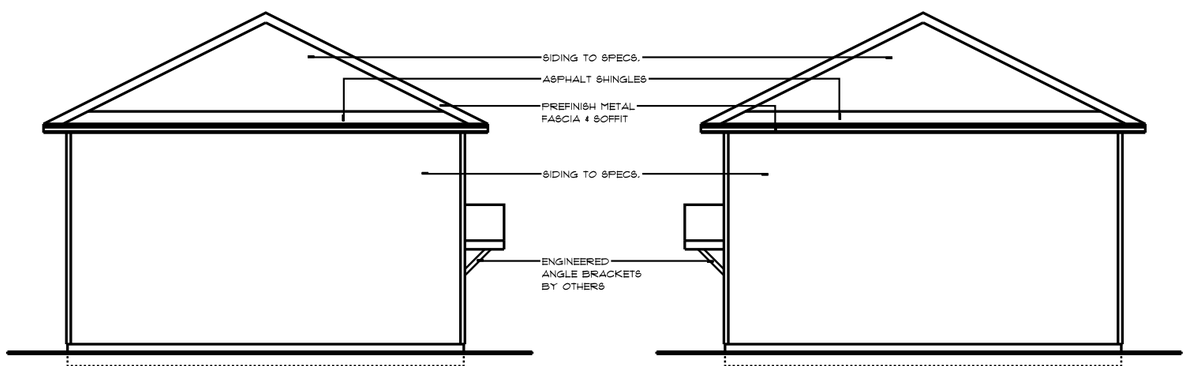
FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

* ENGINEERED SLAB TO BE DESIGNED BY A PROFESSIONAL ENGINEER REFER TO ENGINEER DWG FOR ACTUAL DETAILS REGARDING SLAB

GENERAL NOTES

1. This plan is the property of Residential Home Designs and shall not be reproduced by anyone by any method in whole or in part without written permission.
2. The owner/contractor shall be responsible for getting all required approval and permits prior to construction.
3. All materials, methods of constructions and workmanship shall be in compliance with CMHC requirements, the Ontario Building Code (latest edition - O.Reg. 332/12 & all subsequent amendments), the National Building Code and all local by-laws.
4. Prior to proceeding with construction, the owner/contractor shall check and verify all information, dimensions, and specifications of this plan. Any discrepancies shall be reported to Residential Home Designs at once.
5. Written dimensions always take precedence over scaled measurements. DO NOT SCALE DRAWING.
6. The owner/contractor shall be responsible for the correct siting of the house on the property. The owner/contractor shall confirm all required setbacks prior to construction. Any conflicts shall be reported to Residential Home Designs at once. Provide locate survey plan to building official upon their request.
7. Well systems shall be located and constructed in accordance with health authorities having jurisdiction. Sewage Systems shall be located and constructed in accordance with Part 8 - Ontario Building Code.
8. Any structural noted "Design by others" is the responsibility of the owner/contractor and shall supply the information while submitting the plans for permit. The structural information shall be designed by a structural engineer or a person deemed qualified by the local building official.
9. All truss shop drawings shall be submitted to the local building official upon his/her request.
10. Ground snow load: 2.8 kPa; Ground rain load: 0.4 kPa
11. All framing lumber shall be #2 grade spruce or better, unless otherwise specified, except for stud walls - use stud grade.
12. Wood framing spans are taken from the span tables provided by the Canadian Wood Council (2009 Edition - The Span Book) & are in accordance with CSA 086.1 "Engineering Design in Wood" (Limit States Design)", the Part 9 NBCC criteria, and the OBC 2012 Appendix.
13. All interior and exterior finishes to owner/contractor's specs.
14. For additional notes and details, see sheet D1 - D2.



LEFT ELEVATION

SCALE: 3/16" = 1'-0"

RIGHT ELEVATION

SCALE: 3/16" = 1'-0"

RESIDENTIAL HOME DESIGNS
NEW CONSTRUCTION
ADDITIONS & RENOVATIONS
CUSTOM STOCK PLANS
Mark Barnetson
Residential Design Consultant
705-328-1838

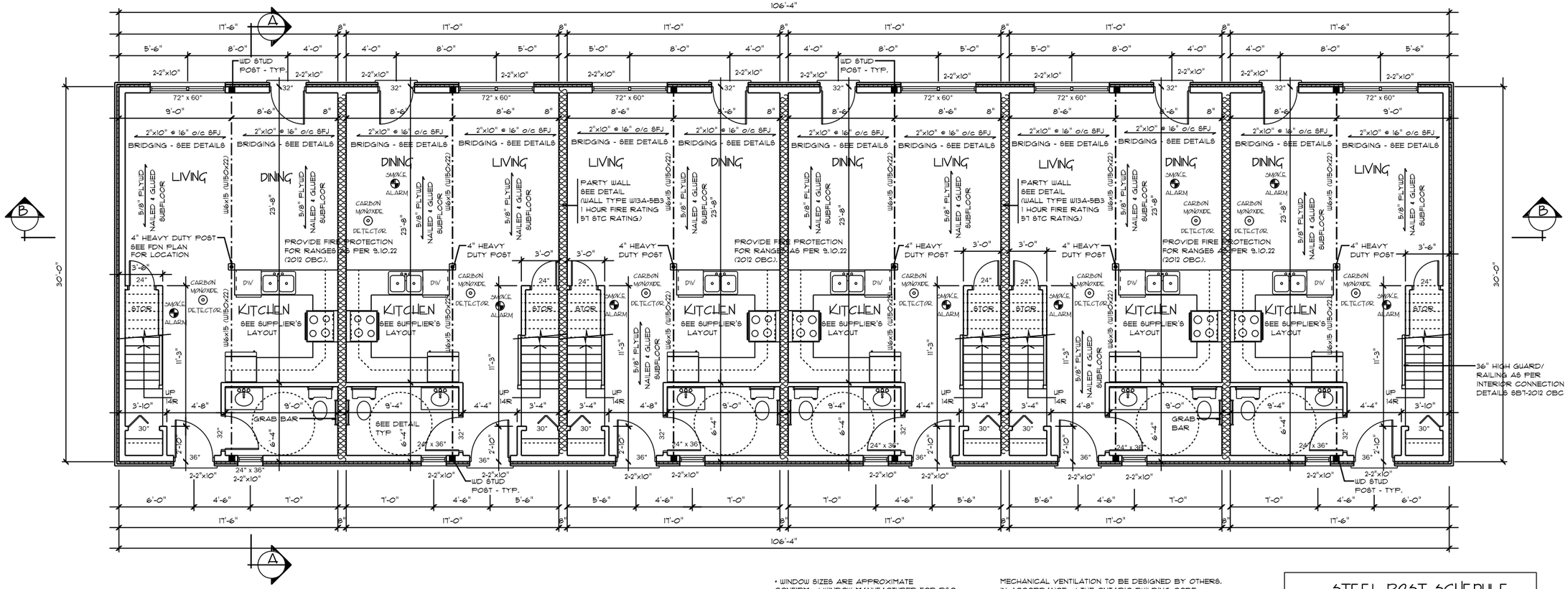
ONTARIO REGISTERED DESIGNER

MARK BARNETSON
BCI 21887

KNIGHT DEVELOPMENT

11 Ansley St., Parry Sound

SCALE: AS NOTED	DRAWN BY: MB
DATE ISSUED: OCT 2017 - FOR CONSTRUCTION	
6 PLEX (6380 sq ft TWO STOREY)	
JOB #: 16-D-06	DWG #: A1



FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"

- WINDOW SIZES ARE APPROXIMATE CONFIRM w/ WINDOW MANUFACTURER FOR R50.
- ALL DOORS TO HAVE 6'8" HT. UNLESS OTHERWISE NOTED

MECHANICAL VENTILATION TO BE DESIGNED BY OTHERS. IN ACCORDANCE w/ THE ONTARIO BUILDING CODE & O.REG 332/12 & ANY SUBSEQUENT AMENDMENTS

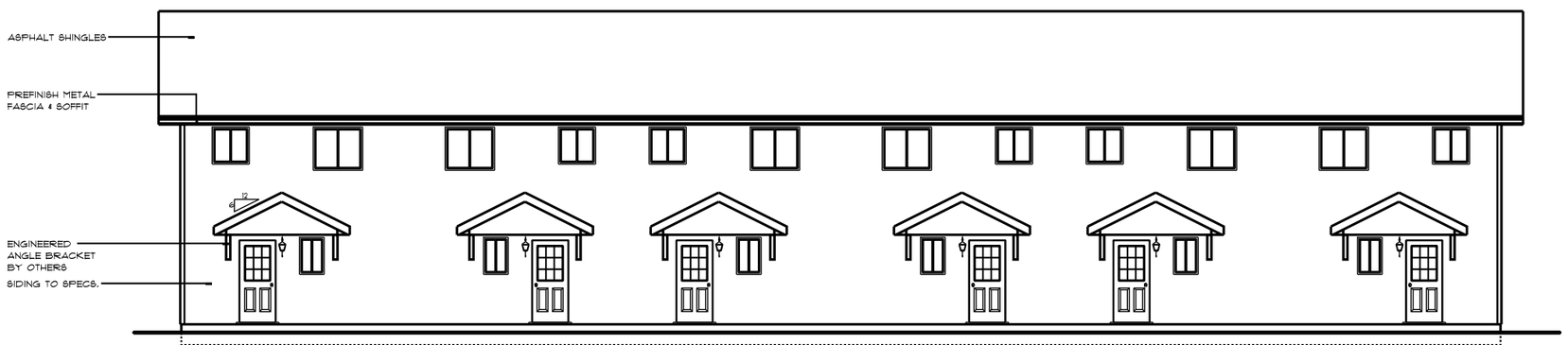
STEEL POST SCHEDULE

STEEL POST/COLUMN TO HAVE A LOAD RATING NOT EXCEEDING THE STATED SIZE.

3" ADJ. ST. POST	- 8000 LB
4" HEAVY DUTY ST. POST	- 20000 LB
4" STL COLUMN	- 30000 LB

STRUCT'L COLUMN - TO BE DESIGNED BY OTHERS

SIZE OF STEEL POST/COLUMNS MAY VARY, AS LONG AS LOAD RATING REQUIREMENTS ARE MET.



FRONT ELEVATION

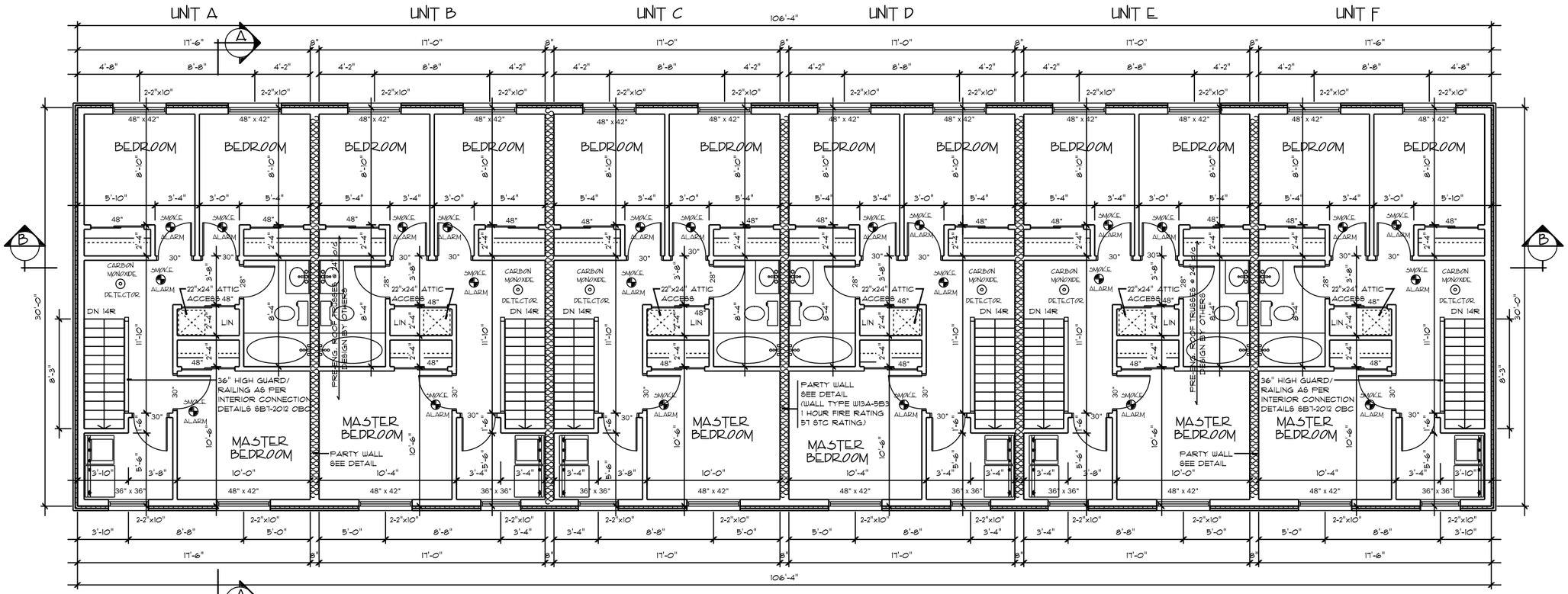
SCALE: 3/16" = 1'-0"

RESIDENTIAL HOME DESIGNS
New Construction
Additions & Renovations
Custom Home Plans
Mark Barnetson
Residential Design Consultant
705-328-1838

ONTARIO REGISTERED DESIGNER
MARK BARNETSON
BCI 21887

KNIGHT DEVELOPMENT
11 Ansley St., Parry Sound

SCALE: AS NOTED	DRAWN BY: MB
DATE ISSUED: OCT 2017 - FOR CONSTRUCTION	
6 PLEX (6380 sq ft TWO STOREY)	
JOB #: 16-D-06	DWG #: A2

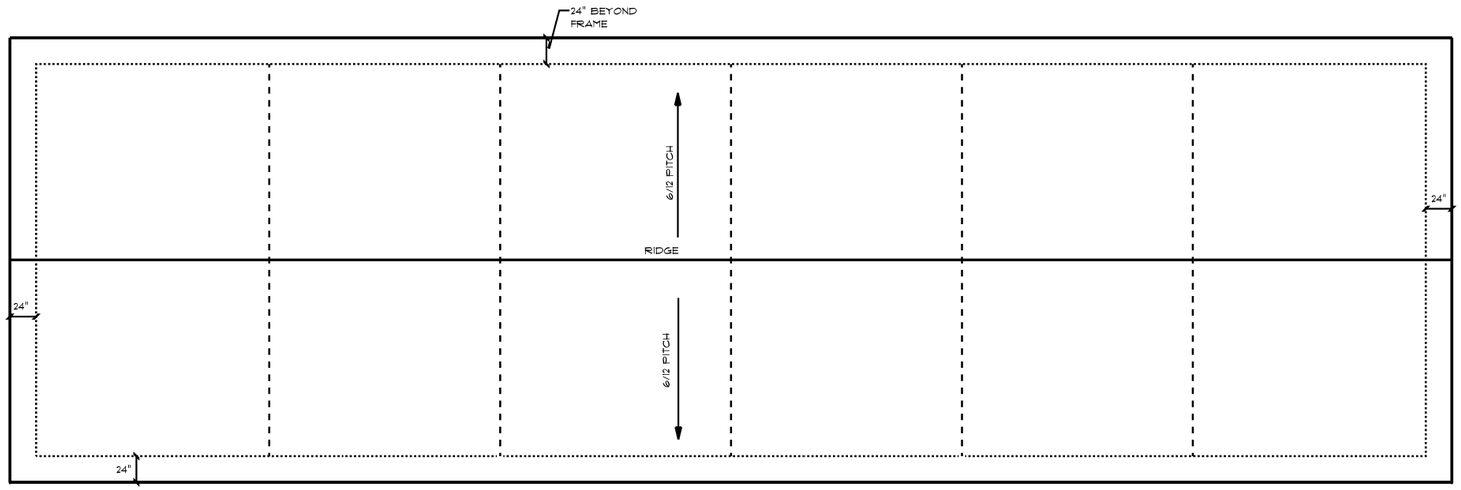


SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"

• WINDOW SIZES ARE APPROXIMATE CONFIRM w/ WINDOW MANUFACTURER FOR RSO.

• ALL DOORS TO HAVE 6'8" HT. UNLESS OTHERWISE NOTED



ROOF PLAN

SCALE: 3/16" = 1'-0"

ROOF VENT REQUIREMENTS

- PROVIDE UNOBSTRUCTED VENT AREA OF NOT LESS THAN 1/300 OF THE INSULATED CEILING AREA.
- VENTS TO BE ROOF TYPE, EAVE TYPE, GABLE END TYPE, OR ANY COMBINATION THEREOF, & SHALL BE DISTRIBUTED UNIFORMLY ON OPPOSITE SIDE OF THE BUILDING WITH NOT LESS THAN 25% OF THE REQUIRED OPENINGS LOCATED AT TOP & BOTTOM OF SPACE.

ENERGY EFFICIENCY DESIGN

THE ENERGY EFFICIENCY DESIGN IS BASED ON THE FOLLOWING:

SPACE HEATING UNIT TO BE ELECTRIC SPACE HEATING

MIN. RSI (R) VALUE.

CEILING w/ATTIC SPACE:	10.56+HH (R60+HH)
CEILING w/o ATTIC:	5.46 (R31)
EXPOSED FLOOR:	5.46 (R31)
WALLS ABV. GRADE	3.87+1.76c1 (R22+R10c1)
SLAB	1.76 (R10)
WINDOWS & DOORS	1.2 MAX. 'U' VALUE. or min. 34 ENERGY RATING
SKYLIGHTS	2.8 MAX. 'U' VALUE.

SPACE HTG EQUIPMENT MIN. AFUE: N/A
HRV MIN. EFFICIENCY: 75%

DOMESTIC HOT WATER HEATER MIN. EF: N/A

REFER TO COMPLIANCE PACKAGE 'C1' - TABLE 3.1.1.2.C - SB12, 2012 OBC.

ANY CHANGE TO THE SPACE HTG EQUIPMENT, HRV &/OR DOMESTIC HOT WATER HEATER SHALL REQUIRE REDESIGN OF INSULATION 'R' VALUES.

DRAIN WATER HEAT RECOVERY (DWHR) SHALL BE INSTALLED TO RECEIVE DRAIN WATER FROM ALL SHOWERS. DWHR SHALL CONFORM TO CSA B55.2 "DRAIN WATER HEAT RECOVERY UNITS" AND HAVE A MINIMUM EFFICIENCY OF 42%. INSTALLATION OF DWHR UNITS SHALL CONFORM TO 3.1.1.12 (6) SB-12, 2012 OBC.

WINDOW/SKYLIGHT/GLASS DOORS

GROSS WALL AREA: 4635.2 sq. ft

GROSS WINDOW+ AREA: 594.0 sq. ft

TOTAL % OF WINDOWS+ : 12.9 %

RESIDENTIAL HOME DESIGNS
NEW CONSTRUCTION
ADDITIONS & RENOVATIONS
CUSTOMIZATION OF PLANS
Mark Barnetson
Residential Design Consultant
705-328-1838

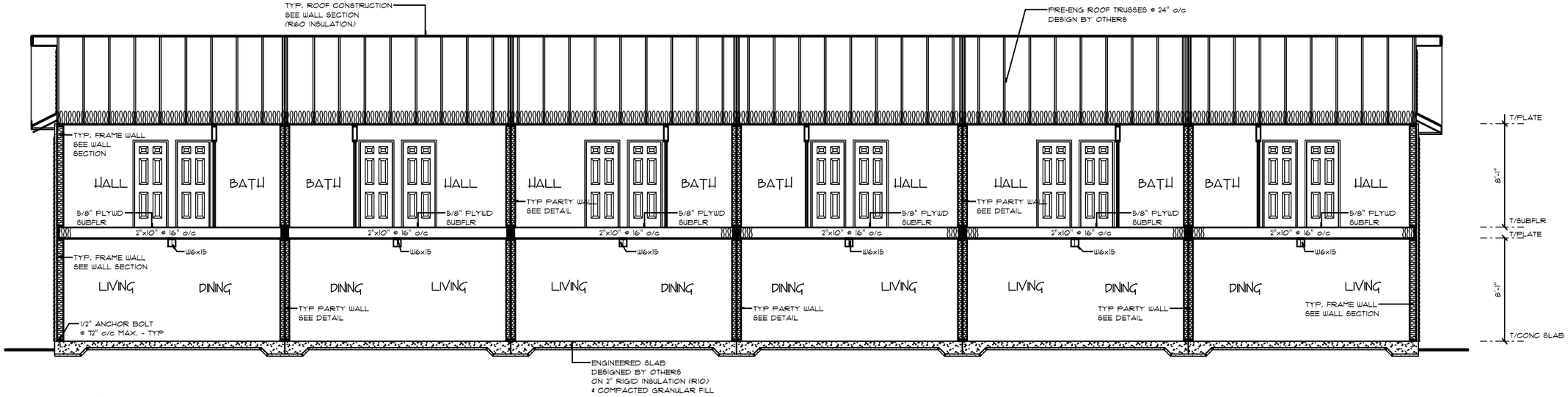
ONTARIO REGISTERED DESIGNER

MARK BARNETSON
BCI 21887

KNIGHT DEVELOPMENT

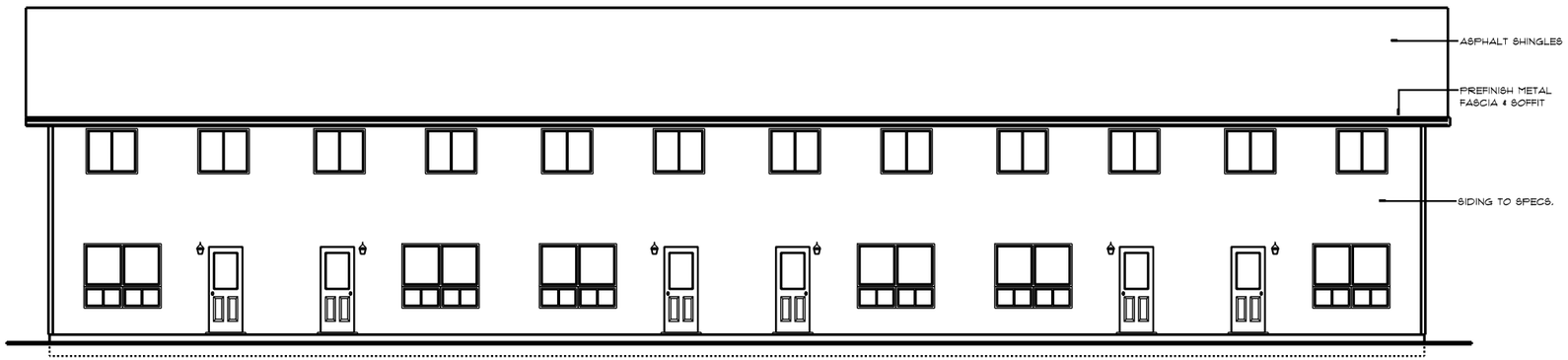
11 Ansley St., Parry Sound

SCALE: AS NOTED	DRAWN BY: MB
DATE ISSUED: OCT 2017 - FOR CONSTRUCTION	
6 PLEX (6380 sq ft TWO STOREY)	
JOB #: 16-D-06	DWG #: A3



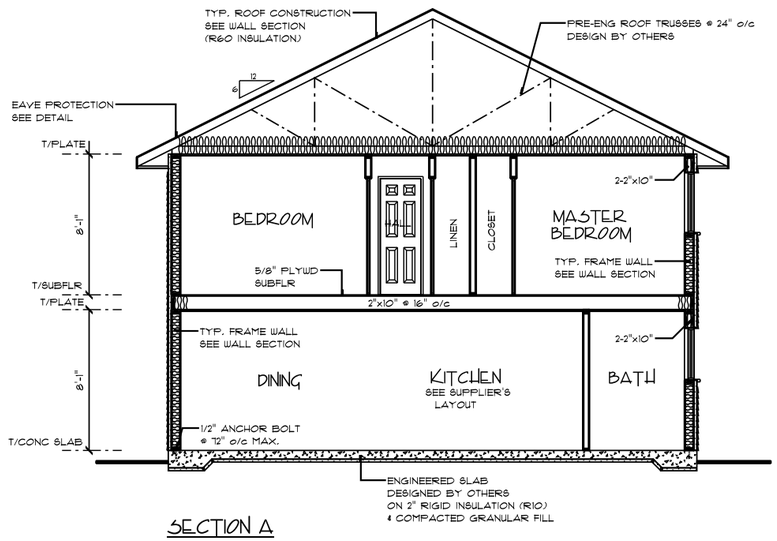
SECTION B

SCALE: 1/4" = 1'-0"



BACK ELEVATION

SCALE: 3/16" = 1'-0"



SECTION A

SCALE: 1/4" = 1'-0"

RESIDENTIAL HOME DESIGNS
NEW CONSTRUCTION
ADDITIONS & RENOVATIONS
CUSTOM & STOCK HOUSE PLANS

Mark Barnetson
Residential Design Consultant
705-328-1838

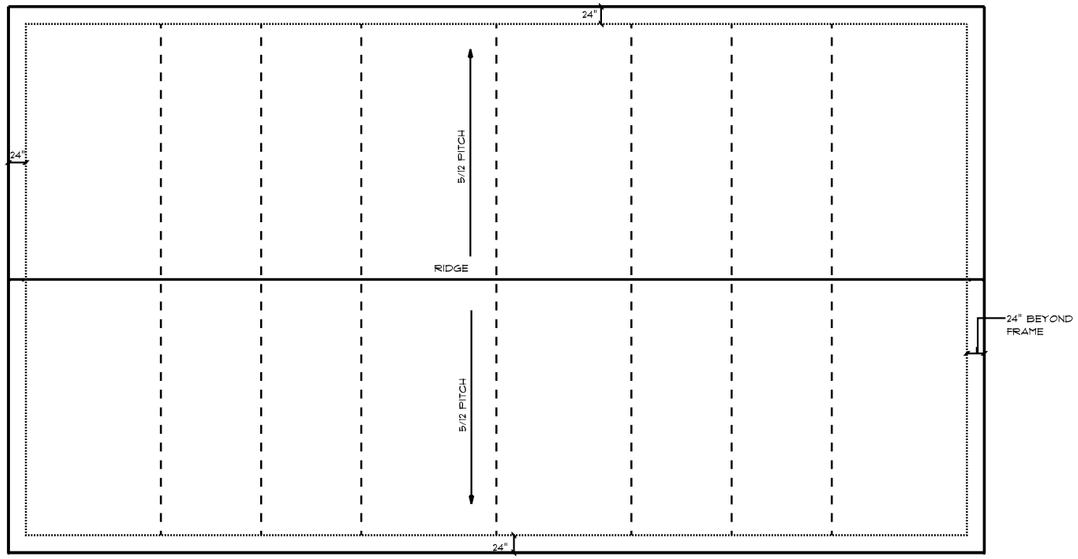
ONTARIO REGISTERED DESIGNER

MARK BARNETSON
BCI 21887

KNIGHT DEVELOPMENT

11 Ansley St., Parry Sound

SCALE: AS NOTED	DRAWN BY: MB
DATE ISSUED: OCT 2017 - FOR CONSTRUCTION	
6 PLEX (6380 sq ft TWO STOREY)	
JOB #: 16-D-06	DWG #: A4



ROOF PLAN

SCALE: 3/16" = 1'-0"

ROOF VENT REQUIREMENTS

- PROVIDE UNOBSTRUCTED VENT AREA OF NOT LESS THAN 1/300 OF THE INSULATED CEILING AREA.
- VENTS TO BE ROOF TYPE, EAVE TYPE, GABLE END TYPE, OR ANY COMBINATION THEREOF, & SHALL BE DISTRIBUTED UNIFORMLY ON OPPOSITE SIDE OF THE BUILDING WITH NOT LESS THAN 25% OF THE REQUIRED OPENINGS LOCATED AT TOP & BOTTOM OF SPACE.

ENERGY EFFICIENCY DESIGN

THE ENERGY EFFICIENCY DESIGN IS BASED ON THE FOLLOWING:

SPACE HEATING UNIT TO BE ELECTRIC SPACE HEATER

MIN. RSI (R) VALUE.

CEILING W/ATTIC SPACE:	10.56+HH (R60+HH)
CEILING W/O ATTIC:	5.46 (R31)
EXPOSED FLOOR:	5.46 (R31)
WALLS ABV. GRADE	3.87+1.76ci (R22 +R10ci)
SLAB	1.76 (R10)
WINDOWS & DOORS	1.0 MAX. 'U' VALUE. or min. 38 ENERGY RATING
SKYLIGHTS	2.8 MAX. 'U' VALUE.

SPACE HTG EQUIPMENT MIN. AFUE: N/A
HRV MIN. EFFICIENCY: 75%

DOMESTIC HOT WATER HEATER MIN. EF: N/A

REFER TO COMPLIANCE PACKAGE 'C2' - TABLE 3.1.1.2.C - SB12, 2012 OBC.

ANY CHANGE TO THE SPACE HTG EQUIPMENT, HRV &/OR DOMESTIC HOT WATER HEATER SHALL REQUIRE REDESIGN OF INSULATION 'R' VALUES.

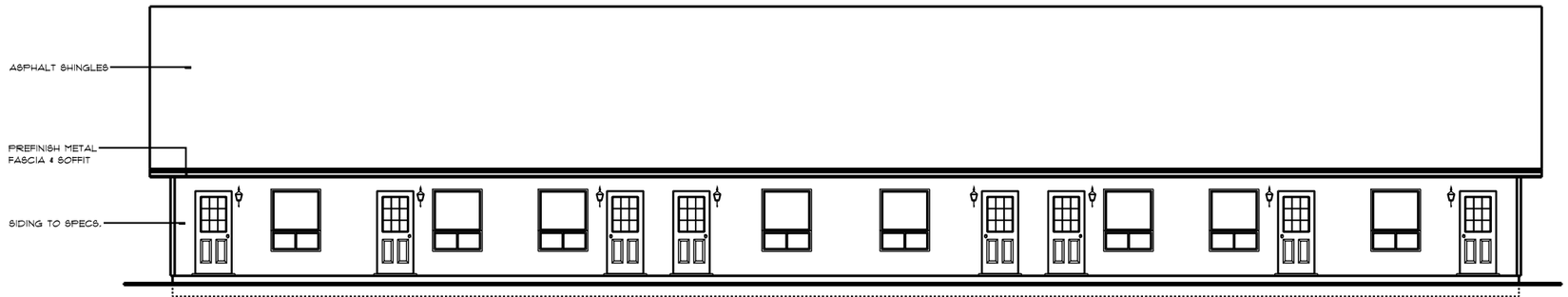
DRAIN WATER HEAT RECOVERY (DWHR) SHALL BE INSTALLED TO RECEIVE DRAIN WATER FROM ALL SHOWERS. DWHR SHALL CONFORM TO CSA B55.2 "DRAIN WATER HEAT RECOVERY UNITS" AND HAVE A MINIMUM EFFICIENCY OF 42%. INSTALLATION OF DWHR UNITS SHALL CONFORM TO 3.1.1.12 (6) SB-12, 2012 OBC.

WINDOW/SKYLIGHT/GLASS DOORS

GROSS WALL AREA: 2666.5 sq. ft

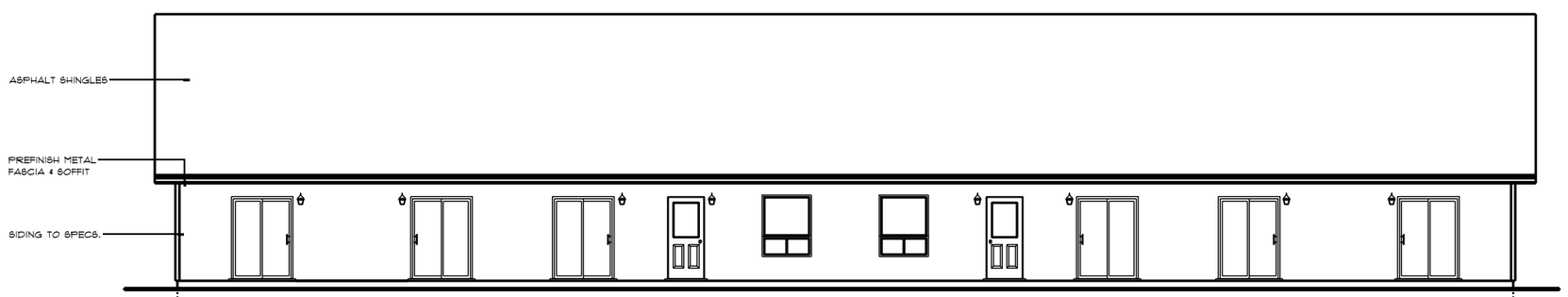
GROSS WINDOW+ AREA: 539.8 sq. ft

TOTAL % OF WINDOWS+ : 20.2 %



FRONT ELEVATION

SCALE: 3/16" = 1'-0"



BACK ELEVATION

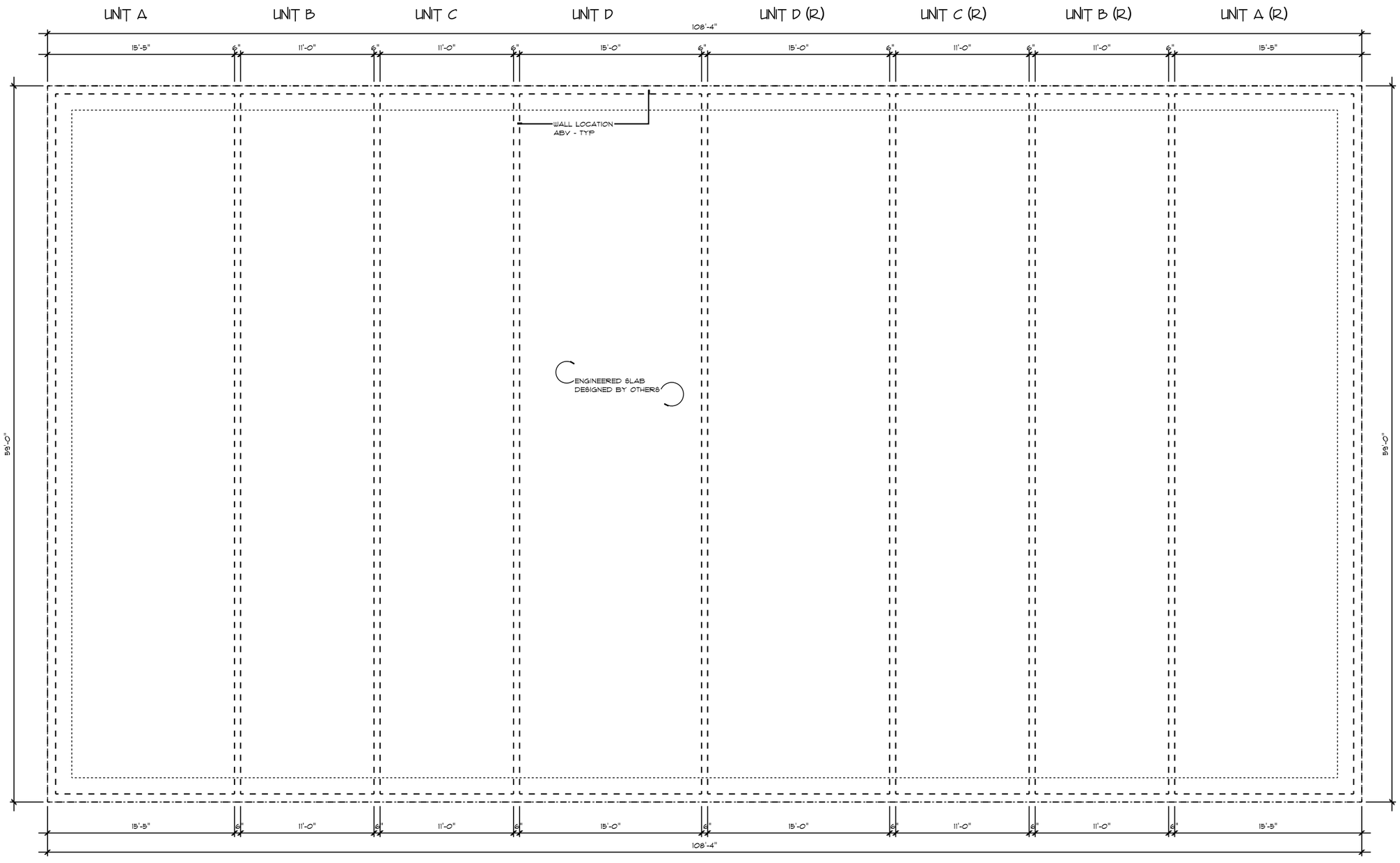
SCALE: 3/16" = 1'-0"

RESIDENTIAL HOME DESIGNS
NEW CONSTRUCTION
ADDITIONS & RENOVATIONS
CUSTOM HOME PLANS
Mark Barnetson
Residential Design Consultant
705-328-1838

ONTARIO REGISTERED DESIGNER
MARK BARNETSON
BCI 21887

KNIGHT DEVELOPMENT
11 Ansley St., Parry Sound

SCALE: AS NOTED	DRAWN BY: MB
DATE ISSUED: OCT 2017 - FOR CONSTRUCTION	
8 PLEX (6390sq ft BUNGALOW)	
JOB #: 16-D-06	DWG #: A5



FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

* ENGINEERED SLAB TO BE DESIGNED BY A PROFESSIONAL ENGINEER REFER TO ENGINEER DWG FOR ACTUAL DETAILS REGARDING SLAB

RESIDENTIAL HOME DESIGNS
NEW CONSTRUCTION
ADDITIONS & RENOVATIONS
CUSTOM STOCK PLANS
Mark Barnetson
Residential Design Consultant
705-328-1838

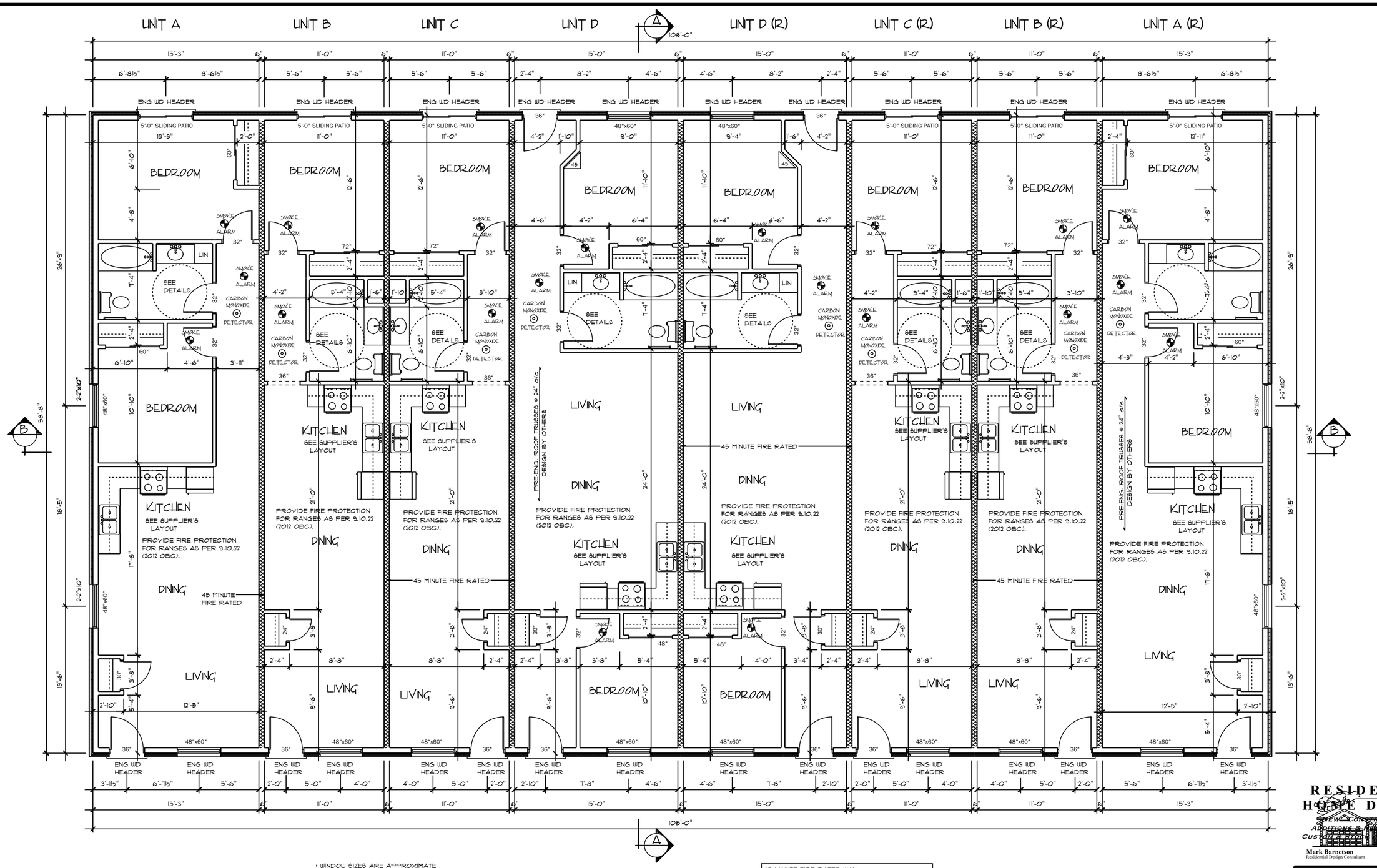
ONTARIO REGISTERED DESIGNER

MARK BARNETSON
BCI 21887

KNIGHT DEVELOPMENT

11 Ansley St., Parry Sound

SCALE: AS NOTED	DRAWN BY: MB
DATE ISSUED: OCT 2017 - FOR CONSTRUCTION	
8 PLEX (6390 sq ft BUNGALOW)	
JOB #: 16-D-06	DWG #: A6



FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"

- WINDOW SIZES ARE APPROXIMATE CONFIRM W/ WINDOW MANUFACTURER FOR R80.
- ALL DOORS TO HAVE 6'8" HT. UNLESS OTHERWISE NOTED

MECHANICAL VENTILATION TO BE DESIGNED BY OTHERS. IN ACCORDANCE W/ THE ONTARIO BUILDING CODE & O.REG 332/12 & ANY SUBSEQUENT AMENDMENTS

RESIDENTIAL HOME DESIGNS
NEW CONSTRUCTION
ADDITIONS & RENOVATIONS
CUSTOM & STOCK HOUSE PLANS
Mark Barnetson
Residential Design Consultant
705-328-1838

ONTARIO REGISTERED DESIGNER

MARK BARNETSON
BCI 21887

KNIGHT DEVELOPMENT

11 Ansley St., Parry Sound

SCALE: AS NOTED	DRAWN BY: MB
DATE ISSUED: OCT 2017 - FOR CONSTRUCTION	

8 PLEX (6390 sq ft BUNGALOW)

JOB #:	DWG #:
16-D-06	A8

5/8" TYPE "x" DRYWALL
PRE-ENG WD TRUSS
5/8" TYPE "x DRYWALL
SPACE
PRE-ENG WD TRUSS
5/8" TYPE "x" DRYWALL
(SIMILAR TO PARTY WALL DETAILS)

PRE-ENG ROOF TRUSSES @ 24" o/c
DESIGN BY OTHERS

EXTERIOR SIDING
SHEATHING MEMBRANE/ AIR BARRIER
2" RIGID INSULATION (R10)
1/2" PLYWD SHEATHING
2"x6" WD STUD @ 16" o/c
(R22) INSULATION
6 MIL POLY V.B.
1/2" DRYWALL

BEDROOM | HALL | KITCHEN SEE SUPPLIER'S LAYOUT | KITCHEN SEE SUPPLIER'S LAYOUT | LIVING/DINING | LIVING/DINING | KITCHEN SEE SUPPLIER'S LAYOUT | KITCHEN SEE SUPPLIER'S LAYOUT | HALL | BEDROOM

1/2" ANCHOR BOLT @ 72" o/c MAX. - TYP

45 MINUTE FIRE RATED

45 MINUTE FIRE RATED

1/2" ANCHOR BOLT @ 72" o/c MAX. - TYP

45 MINUTE FIRE RATED

T/PLATE

8'-1"

T/CONC SLAB

ENGINEERED SLAB
DESIGNED BY OTHERS
ON 2" RIGID INSULATION (R10)
& COMPACTED GRANULAR FILL

SECTION B

SCALE: 1/4" = 1'-0"

ASPHALT SHINGLES
1/2" PLYWD c/w 'H' CLIPS
PRE-ENG ROOF TRUSS @ 24" o/c
R60 BATT INSULATION
6 MIL POLY V.B.
1/3 STRAPPING @ 24" o/c
1/2" DRYWALL

5 12

EAVE PROTECTION SEE DETAILS

ENG WD HEADER

BEDROOM | CLOSET | BATH | LIVING/DINING | KITCHEN SEE SUPPLIER'S LAYOUT | CLOSET | BEDROOM

ENG WD HEADER

T/PLATE

8'-1"

T/CONC SLAB

EXTERIOR SIDING
SHEATHING MEMBRANE/ AIR BARRIER
2" RIGID INSULATION (R10)
1/2" PLYWD SHEATHING
2"x6" WD STUD @ 16" o/c
(R22) INSULATION
6 MIL POLY V.B.
1/2" DRYWALL

1/2" ANCHOR BOLT @ 72" o/c MAX.

ENGINEERED SLAB
DESIGNED BY OTHERS
ON 2" RIGID INSULATION (R10)
& COMPACTED GRANULAR FILL

SECTION A

SCALE: 1/4" = 1'-0"

PREFINISH METAL FASCIA & SOFFIT

SIDING TO SPECS.

LEFT ELEVATION

SCALE: 3/16" = 1'-0"

RIGHT ELEVATION

SCALE: 3/16" = 1'-0"

RESIDENTIAL HOME DESIGNS
NEW CONSTRUCTION
ADDITIONS & RENOVATIONS
Custom Home Plans
Mark Barnetson
Residential Design Consultant
705-328-1838

KNIGHT DEVELOPMENT

11 Ansley St., Parry Sound

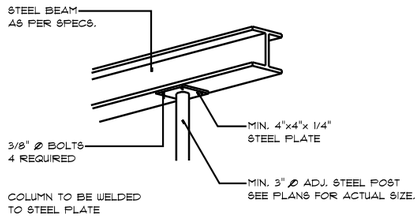
SCALE: AS NOTED | DRAWN BY: MB

DATE ISSUED: OCT 2017 - FOR CONSTRUCTION

8 PLEX (6390 sq ft BUNGALOW)

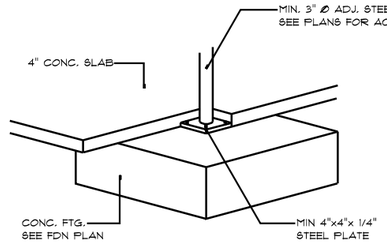
JOB #: 16-D-06 | DWG #: A8

ONTARIO REGISTERED DESIGNER
MARK BARNETSON
BCI 21887

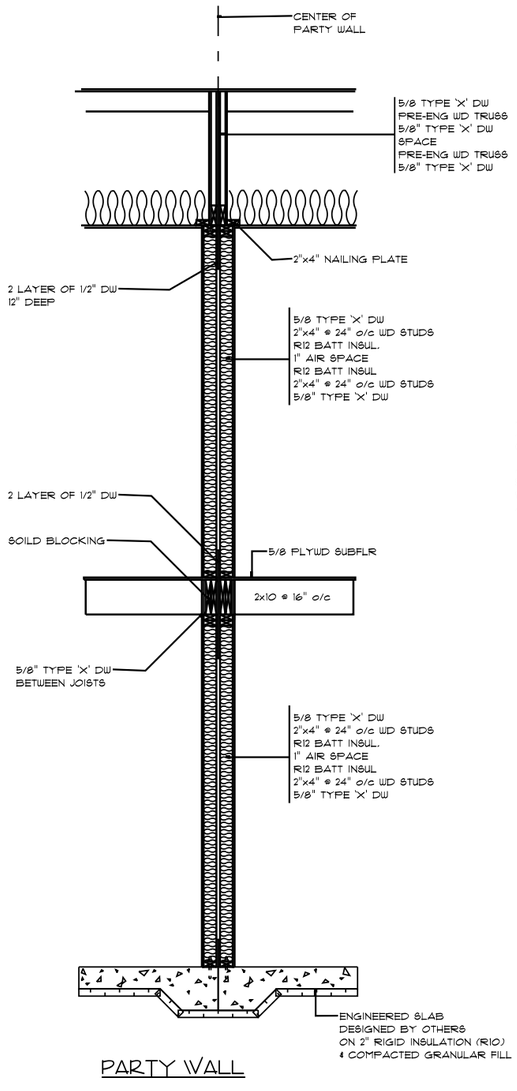


DETAIL 5

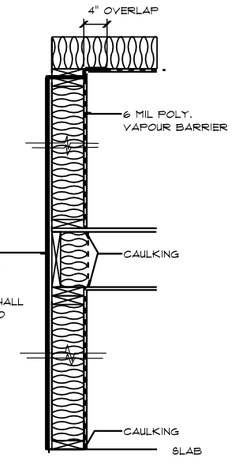
STEEL BEAM TO BE SHOP PRIMED



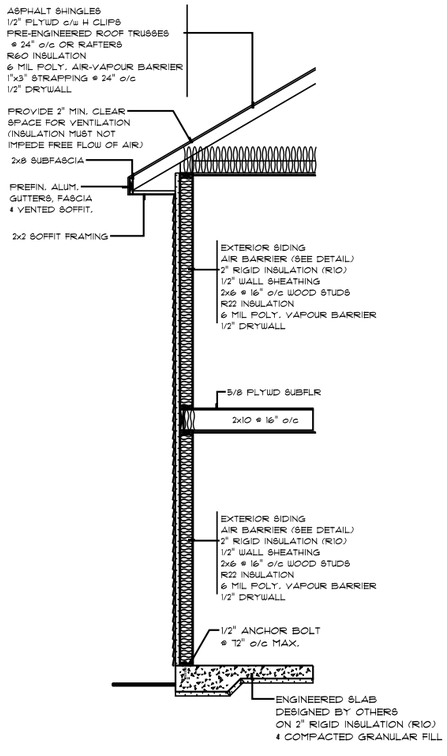
DETAIL 6



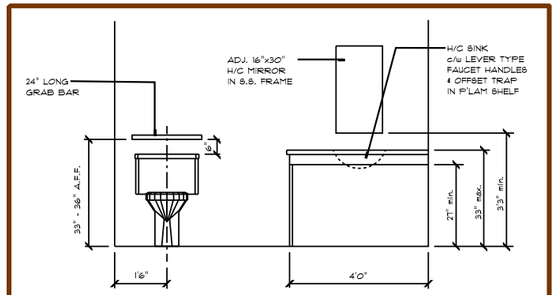
PARTY WALL



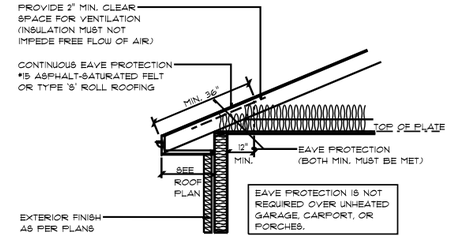
AIR/VAPOUR BARRIER



WALL SECTION



H/C - W/C DETAILS



EAVE PROTECTION DETAIL

RESIDENTIAL HOME DESIGNS

Mark Barnetson
Residential Design Consultant
705-328-1838

ONTARIO REGISTERED DESIGNER
MARK BARNETSON
BCI 21887

DETAILS

SCALE: N.T.S. | DRAWN BY: MB

DATE ISSUED: JANUARY 2017

DWG #: D1

DETAIL NOTES

1. THE BOTTOM OF ALL EXCAVATED AREA SHALL BE KEPT FREE OF ALL STANDING WATER & KEPT FROM FREEZING THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD.

2. BACKFILL SHALL BE GRADED TO PREVENT DRAINAGE TOWARD THE FOUNDATION AFTER SETTLING.

3. FOUNDATION WALL SHALL NOT BE BACKFILLED UNTIL CONCRETE or MASONRY GROUT HAS REACHED ITS SPECIFIED 28 DAYS STRENGTH & STRUCTURAL FLOOR FRAMING (INCLUDING PLYWD SUBFLOOR) REQUIRED TO STABILIZE THE WALL, ARE COMPLETE AND FULLY NAILED & ANCHORED or THE WALL HAS BEEN BRACED TO PROVIDE LATERAL SUPPORT.

4. FOUNDATION DRAINS SHALL DRAIN TO A SEWER, DRAINAGE DITCH or DRYWELL. WHERE GRAVITY DRAINAGE IS NOT PRACTICAL, A COVERED SUMP WITH AN AUTOMATIC PUMP SHALL BE INSTALLED TO DISCHARGE THE WATER INTO A SEWER, DRAINAGE DITCH, or DRYWELL.

5. PROVIDE FOUNDATION WALL DRAINAGE AS PER 9.14.2.1

6. WHEN STEP FOOTINGS ARE CONSTRUCTED, THE VERTICAL RISE BETWEEN HORIZONTAL PORTION SHALL NOT EXCEED 24" FOR FIRM SOIL AND 16" FOR SAND or GRAVEL. THE HORIZONTAL DISTANCE BETWEEN RISERS SHALL NOT BE LESS THAN 24".

7. MIN. 8" OF SOLID MASONRY SHALL BE PROVIDED BENEATH BEAM SUPPORTED ON MASONRY.

8. COLD JOINTS IN ICF FDN WALLS SHALL BE RE-INFORCED WITH min. 15M REBAR SPACED 24" max. APART & EMBEDDED min. 11 3/4" ON BOTH SIDES OF JOINT.

9. CONTROL JOINTS SHALL BE PROVIDED IN FOUNDATION WALLS MORE THAN 82'-0" LONG AT INTERVALS NOT MORE THAN 49'-3". JOINTS SHALL BE DESIGNED TO RESIST MOISTURE PENETRATION.

10. GARAGE & CARPORT CONCRETE SLABS & EXTERIOR STEPS SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 4650 Psi (32 MPa) AFTER 28 DAYS AND SHALL HAVE AIR ENTRAINMENT OF 5%-8%.

11. EXTERIOR CONCRETE STEPS WITH MORE THAN 2 RISERS SHALL HAVE A FOUNDATION DEPTH OF AT LEAST 48" (OR THE KNOWN DEPTH OF FROST PENETRATION, WHICHEVER IS GREATER). CONCRETE STEPS WITH 2 or LESS RISER MAY REST ON FINISH GROUND LEVEL.

12. GRADES SHOWN ON ELEVATIONS ARE APPROXIMATE. ADJUST ON SITE AS REQUIRED. ALL FINISHED GRADES TO SLOPE AWAY FROM BUILDINGS. SEE SITE GRADING PLAN BY OTHERS.

13. WHERE RUNOFF WATER FROM A DRIVEWAY IS LIKELY TO ACCUMULATE or ENTER A GARAGE, A CATCH BASIN SHALL BE INSTALLED TO PROVIDE ADEQUATE DRAINAGE.

14. WHERE DOWNSPOUTS ARE PROVIDED & ARE NOT CONNECTED TO A SEWER, PROVISION SHALL BE MADE TO PREVENT SOIL EROSION.

15. A FLOOR DRAIN SHALL BE INSTALLED IN THE BASEMENT, WITH THE FLOOR SLOPING SO THAT NO WATER CAN ACCUMULATE.

16. SUMP PUMP PIT COVERS SHALL BE SEALED.

17. BRIDGING SHALL CONSIST OF 1 1/2" x 1 1/2" CROSS BRIDGING LOCATED NOT MORE THAN 6'-11" FROM EACH SUPPORT or OTHER ROWS OF BRIDGING.

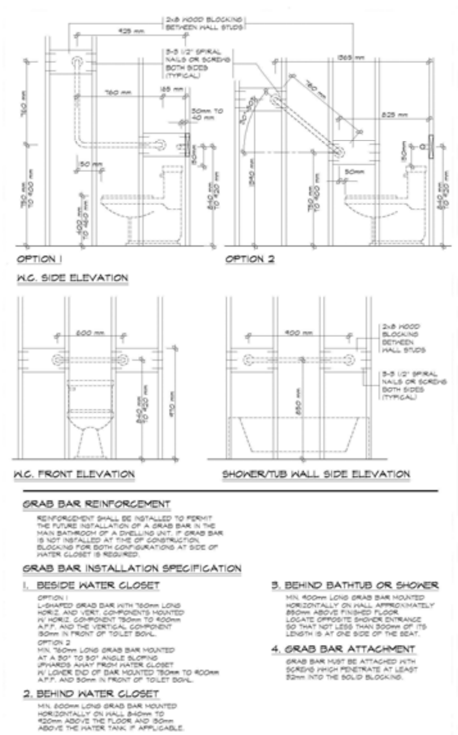
18. WHEN BRIDGING & STRAPPING ARE SPECIFIED, IT SHALL CONSIST OF NOTE 51, AND 3/4" x 2 1/2" NAILED TO THE UNDERSIDE OF FLOOR JOIST LOCATED NOT MORE THAN 6'-11" APART & FASTENED AT EACH END TO A SILL or HEADER.

19. HEADER JOIST AROUND FLOOR OPENINGS SHALL BE DOUBLED WHEN THEY EXCEED 47" IN LENGTH; OVER 10'-6" IN LENGTH - DESIGNED BY OTHERS

20. TRIMMER JOIST AROUND FLOOR OPENINGS SHALL BE DOUBLED WHEN THE HEADER EXCEEDS 31" IN LENGTH; WHEN THE HEADER JST EXCEEDS OVER 6'7" IN LENGTH, THE TRIMMER JST SHALL BE DESIGNED BY OTHERS

21. NON BEARING STUD PARTITION & ONE RISER IN BASEMENT TO BE PLACED ON 6 MIL POLY.

22. FLOOR JOISTS TO BE DOUBLED UNDER ALL PARALLEL NON-BEARING PARTITIONS ABOVE.



23. OPENINGS IN NON-LOADBEARING WALLS SHALL BE FRAMED WITH NOT LESS THAN 1 1/2" THICK MATERIAL THE SAME WIDTH AS THE STUD SECURELY NAILED TO ADJACENT STUDS.

24. OPENINGS IN NON-LOADBEARING WALLS REQUIRED TO BE FIRE-SEPARATED SHALL BE FRAMED WITH AT LEAST 2 - 1 1/2" THICK MEMBERS THAT ARE THE SAME WIDTH AS THE WALL PLATE.

25. ROOF AND CEILING FRAMING MEMBERS SHALL BE DOUBLED ON EACH SIDE OF AN OPENING GREATER THAN 2 RAFTERS OR JOISTS SPACING IN WIDTH.

26. RAFTERS SHALL BE LOCATED DIRECTLY OPPOSITE EACH OTHER & TIED TOGETHER AT THE PEAK, or MAY BE OFFSET BY THEIR OWN THICKNESS IF NAILED TO A RIDGEBOARD NOT LESS THAN 11/16" THICK.

27. FRAMING MEMBERS SHALL BE CONNECTED BY GUSSET PLATES or NAILING AT THE PEAK IN CONFORMANCE WITH TABLE 9.23.3.4.

28. 2"x4" COLLAR TIES MAY BE USED TO PROVIDE INTERMEDIATE SUPPORT TO REDUCE THE SPACE FOR RAFTERS & JOISTS WHERE THE ROOF SLOPE IS 1 IN 3 OR GREATER. SUCH COLLAR TIES MORE THAN 7'-10" IN LENGTH, SHALL BE LATERALLY SUPPORTED NEAR THEIR CENTRES BY NOT LESS THAN 1"x4" CONTINUOUS MEMBERS AT RIGHT ANGLES TO THE COLLAR TIES.

29. WHERE NO RIDGE SUPPORT IS PROVIDED, THE LOWER ENDS OF THE RAFTERS SHALL BE ADEQUATELY TIED TO PREVENT OUTWARD MOVEMENT.

30. ROOF TRUSS MEMBERS SHALL NOT BE NOTCHED, DRILLED, or OTHERWISE WEAKENED UNLESS SUCH NOTCHING or DRILLING IS ALLOWED FOR IN THE DESIGN OF THE TRUSS.

31. EXTERIOR COLUMNS AND POSTS SHALL BE ANCHORED TO RESIST UPLIFTS & LATERAL MOVEMENTS.

32. PROVIDE SOLID WD BLOCKING IN THE MAIN BATHROOM @ WATER CLOSET & SHOWER/BATHTUB FOR FUTURE GRAB BARS AS PER 9.5.2.3. (2012 OBC).

33. GRAB BARS IN WASHROOMS SHALL BE CAPABLE OF RESISTING A LOAD OF NOT LESS THAN 300 lb (1.3 KN) APPLIED VERTICALLY & HORIZONTALLY.

34. INSULATION AROUND CONCRETE SLABS ON GROUND SHALL EXTEND NOT LESS THAN 24" BELOW EXTERIOR GROUND LEVEL.

35. INSULATION IN CONTACT WITH THE GROUND SHALL BE INERT TO THE ACTION OF THE SOIL AND WATER. THE INSULATION PROPERTIES SHALL NOT BE SIGNIFICANTLY REDUCED BY MOISTURE.

36. INSULATION SHALL BE INSTALLED SO THAT THERE IS A REASONABLY UNIFORM INSULATING VALUE OVER THE ENTIRE FACE OF THE INSULATED AREA.

37. INSULATION SHALL BE APPLIED TO THE FULL WIDTH & LENGTH OF THE SPACE BETWEEN FURRING & FRAMING.

38. WHERE INSULATION IS EXPOSED TO THE WEATHER & SUBJECT TO MECHANICAL DAMAGE, IT SHALL BE PROTECTED WITH NOT LESS THAN 1/4" PRESSURE TREATED PLYWOOD, 1/4" ASBESTOS CEMENT BOARD or 1/2" CEMENT PARGING ON WIRE LATH TO PROTECT EXTERIOR INSULATION FROM WEATHER & DAMAGE.

39. SLAB-ON GROUND - CONTAINING PIPES or HEATING DUCTS SHALL HAVE A MIN. R10 INSULATION.
- NOT CONTAINING PIPES or HEATING DUCTS SHALL HAVE A MIN. R8 INSULATION.

40. IN UNFINISHED BASEMENT, MINERAL FIBRE INSULATION SHALL BE COVERED WITH min. 6 MIL POLY. VAPOUR BARRIER.

41. AIR BARRIER SYSTEMS SHALL EXTEND THROUGHOUT THE BASEMENT.

42. THE CONTINUITY OF THE AIR BARRIER SYSTEM SHALL CONFIRM TO 9.25.3.3. - 2012 OBC.

43. WHERE RIGID INSULATION IS USED AS WALL SHEATHING, ALL JOINTS ARE TO BE SEALED.

44. GYPSUM SHEATHING, RIGID INSULATION, & FIBREBOARD SHALL NOT BE USED FOR THE ATTACHMENT OF SIDING MATERIAL.

45. ALL ROOFING SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION & CONFORMS TO SECTION 9.26 - 2012 OBC

46. CAULKING SHALL BE PROVIDED WHERE REQUIRED TO PREVENT THE ENTRY OF WATER INTO THE STRUCTURE.

47. FLASHING SHALL BE INSTALLED AT ALL JUNCTIONS BETWEEN ROOF & WALLS THAT RISE ABOVE THE ROOF or CHIMNEYS & CHIMNEY SADDLES.

48. INTERIOR STAIRS.
- MAX. 7 7/8" RISE
- MIN. 8 1/4" RUN
- MIN. 9 1/4" TREAD
- MIN 36" WIDTH UNLESS NOTED ON PLANS
- MIN. 6'-6" HEADROOM CLEARANCE
- MIN. ONE HANDRAIL ON ONE SIDE OF STAIRS LESS THAN 43" IN WIDTH.
- HANDRAILS SHALL HAVE - MIN. 34" HT. (865mm) - MAX. 38" HT. (965mm)
- ALL GUARDS IN DWELLING UNITS SHALL HAVE MIN. 35" HT.
- MIN. 1" NOSING BEYOND THE FACE OF RISER FOR ANY STAIRS (INTERIOR OR EXTERIOR) HAVING A RUN OF 10" OR LESS.

49. EXTERIOR STAIRS.
- MIN. 5" RISE
- MAX 7 7/8" RISE
- MIN. 9" RUN
- MAX. 14" RUN
- MIN. 10" TREAD
- ONE HANDRAIL ON STAIRS WITH MORE THAN 3 RISERS.
- ALL GUARDS - MIN. 42" HT.
- MIN. 35" HIGH GUARDS FOR PORCHES, DECKS, & LANDINGS LESS THAN 71" ABOVE THE FINISH GROUND LEVEL.
- GUARDS FOR STAIRS - MIN. 35" HT.
- GUARDS FOR LANDINGS - MIN. 42" HT.
- OPENINGS THROUGH GUARDS - MAX. 4".

50. EXTERIOR WOOD STEPS IN DIRECT CONTACT WITH THE GROUND SHALL BE CONSTRUCTED WITH PRESSURE TREATED WOOD.

51. GLASS IN GUARDS SHALL BE TEMPERED OR LAMINATED SAFETY GLASS AS PER CAN/CGSB-12.1 M or WIRED GLASS AS PER CAN/CGSB-12.11 M.

52. WHERE AN ATTACHED GARAGE IS PROVIDED, THE GARAGE FLOOR SHALL BE SLOPED TO DRAIN TO THE EXTERIOR.

53. ACCESS HATCHES INTO ATTICS SHALL BE WEATHERSTRIPPED AROUND THE PERIMETER OF THE HATCHES.

54. AN ACCESS OPENING OF NOT LESS THAN 20"x28" SHALL BE PROVIDED TO EACH CRAWL SPACE. THE ACCESS OPENING SHALL BE FITTED WITH A DOOR or HATCH, EXCEPT WHEN THE ACCESS OPENING INTO THE CRAWL SPACE IS FROM THE ADJACENT BASEMENT. WHERE SERVICE EQUIPMENT IS LOCATED IN THE CRAWL SPACE, THE ACCESS DOOR SHALL BE 24"x35".

55. CRAWL SPACE SHALL BE VENTILATED BY NATURAL OR MECHANICAL MEANS.

56. CRAWL SPACE VENTS SHALL PREVENT THE ENTRY OF SNOW, RAIN, AND INSECTS, AND SHALL HAVE A TIGHT FITTING COVER TO PREVENT AIR LEAKAGE IN WINTER IF THE CRAWL SPACE IS HEATED.

57. VENTS SHALL BE ROOF TYPE, EAVE TYPE, GABLE-END TYPE, or ANY COMBINATION THEREOF, & SHALL BE UNIFORMLY DISTRIBUTED ON OPPOSITE SIDES OF THE BUILDING.

58. ANY PENETRATION OF THE AIR BARRIER PROTECTION SHALL BE SEALED TO MAINTAIN THE INTEGRITY OF THE AIR BARRIER PROTECTION OVER THE ENTIRE SURFACE.

59. DUCTWORK PASSING THROUGH UNHEATED SPACES SHALL HAVE ALL JOINTS TAPED or BE OTHERWISE SEALED TO ENSURE THAT THE DUCTS ARE AIRTIGHT THROUGHOUT THEIR LENGTH AND INSULATED.

60. ALL EXTERIOR TYPE SWING DOORS INCLUDING DOOR TO ATTACHED GARAGES (EXCEPT THOSE EXTERIOR DOORS FROM THE GARAGE TO THE OUTSIDE) SHALL BE PROVIDED WITH A DEADBOLT LOCK AS DESCRIBED IN SUBSECTION 9.7.5.3, 9.7.5.4 & 9.7.5.9.

61. MAIN ENTRANCE DOOR SHALL BE PROVIDED WITH A DOOR VIEWER WITH A VIEWING ANGLE OF NOT LESS THAN 160 UNLESS TRANSPARENT GLAZING IS PROVIDED IN THE DOOR or IN A SIDELIGHT.

62. WINDOWS SHALL HAVE A MAX. SILL HEIGHT OF 3'3" ABOVE THE FLOOR EXCEPT IN THE BASEMENT AREAS.

63. THE ENERGY RATING & OVERALL COEFFICIENT OF HEAT TRANSFER REQUIRED FOR WINDOWS & SLIDING GLASS DOORS SHALL CONFORM TO CAN/CSA - A440.2.

64. ALL WINDOWS SHALL HAVE AN OVERALL COEFFICIENT OF HEAT TRANSFER OF NOT MORE THAN 2.0 W/m2.K or AN ENERGY RATING OF NOT LESS THAN 17.

65. BASEMENT WINDOWS HAVING A LOADBEARING STRUCTURE FRAME SHALL BE DOUBLE GLAZED WITH A LOW-E COATING.

66. ALL SLIDING GLASS DOORS SHALL HAVE AN OVERALL COEFFICIENT OF HEAT TRANSFER OF NOT MORE THAN 2.0 W/m2.K or AN ENERGY RATING OF NOT LESS THAN 17.

67. WHEN ELECTRIC SPACE HEATING IS PROVIDED THE FOLLOWING SHALL APPLY:
ALL SLIDING GLASS DOORS SHALL HAVE AN OVERALL COEFFICIENT OF HEAT TRANSFER OF NOT MORE THAN 1.6 W/m2.K or AN ENERGY RATING OF NOT LESS THAN 25.
ALL WINDOWS SHALL HAVE AN OVERALL COEFFICIENT OF HEAT TRANSFER OF NOT MORE THAN 1.6 W/m2.K or AN ENERGY RATING OF NOT LESS THAN 25 FOR OPERABLE and 35 FOR FIXED WINDOWS.

68. REINFORCING FOR CONC. SLABS OVER COLD ROOMS TO HAVE 10M REBAR @ 8" o/c IN BOTH DIRECTION w/ 1 1/4" CLEAR COVER. SLAB TO HAVE min.3" BEARING ON THE FOUNDATION WALL & BE ANCHORED TO THE WALL w/ 24"x24" - 10M BENT DOWELS & 24" o/c.

69. THE CONSTRUCTION BETWEEN THE GARAGE & THE DWELLING UNIT SHALL PROVIDE AN EFFECTIVE BARRIER TO GAS & EXHAUST FUMES BY USING 1/2" DRYWALL WITH ALL JOINTS TAPED & SEALED.

70. ULC APPROVED SMOKE ALARM SHALL BE INSTALLED AS PER THE PLANS. SMOKE ALARMS TO HAVE A VISUAL SIGNALLING COMPONENT AS PER 18.5.3. OF NFPA 72.

71. THE SMOKE ALARM SHALL BE INSTALLED BY PERMANENT CONNECTION TO AN ELECTRICAL CIRCUIT & SHALL HAVE NO DISCONNECTION SWITCH BETWEEN THE OVERCURRENT DEVICE & THE SMOKE ALARM.

72. WHERE MORE THAN ONE SMOKE ALARM IS REQUIRED, THE SMOKE ALARMS SHALL BE WIRED SO THAT THE ACTIVATION OF ONE ALARM WILL CAUSE ALL ALARMS TO SOUND.

73. THE MIN. SIZE OF A CHIMNEY FLUE SERVING A MASONRY FIREPLACE SHALL CONFIRM TO TABLE 9.21.2.5.A, or 9.21.2.5.B.

74. EVERY MASONRY or CONCRETE CHIMNEY SHALL HAVE A LINING OF CLAY, CONCRETE, FIREBRICK, or METAL.

75. A CHIMNEY FLUE SHALL EXTEND NOT LESS THAN :
- 35" ABOVE THE HIGHEST POINT AT WHICH THE CHIMNEY COMES IN CONTACT WITH THE ROOF.
- 24" ABOVE THE HIGHEST ROOF SURFACE or STRUCTURE WITHIN 9'-10" OF THE CHIMNEY.

76. CHIMNEYS SHALL BE BRACED WHEN NECESSARY TO PROVIDE LATERAL STABILITY.

77. ALL SPACES BETWEEN MASONRY or CONCRETE CHIMNEYS AND COMBUSTIBLE FRAMING SHALL BE SEALED TOP AND BOTTOM WITH NON-COMBUSTIBLE MATERIALS.

78. FLOORING SHALL HAVE MIN. 1/2" CLEARANCE FROM MASONRY OR CONCRETE CHIMNEY.

79. EVERY FIREPLACE SHALL HAVE A SUPPLY OF COMBUSTION AIR FROM OUTDOORS

80. FIREPLACES SHALL HAVE A NON-COMBUSTIBLE HEARTH EXTENDING NOT LESS THAN 16" IN FRONT OF THE FIREPLACE OPENING MEASURED FROM THE FACING, & NOT LESS THAN 8" BEYOND EACH SIDE OF THE FIREPLACE OPENING.

81. THE THROAT OF EVERY FIREPLACE SHALL BE EQUIPPED WITH A METAL DAMPER SUFFICIENTLY LARGE ENOUGH TO COVER THE FULL AREA OF THE THROAT OPENING.

82. COMBUSTIBLE MATERIALS SHALL NOT BE PLACED ON or NEAR THE FACE OF A FIREPLACE WITHIN 6" OF THE FIREPLACE OPENING EXCEPT THAT WHERE THE COMBUSTIBLE MATERIAL PROJECTS MORE THAN 1 1/2" OUT FROM THE FIREPLACE ABOVE THE OPENING. SUCH MATERIALS SHALL BE AT LEAST 12" ABOVE THE TOP OF THE OPENING.

83. CHIMNEY SADDLES SHALL BE:
- INSTALLED WHERE THE UPPER SIDE OF THE CHIMNEY ON A SLOPING ROOF IS MORE THAN 30"
- COVERED WITH SHEET METAL OR ROOFING MATERIALS OF EQUIVALENT WEIGHT AND QUALITY AS THE ROOF.

84. RESIDENTIAL BUILDINGS SHALL BE EQUIPPED WITH HEATING FACILITIES CAPABLE OF MAINTAINING AN INDOOR AIR TEMPERATURE OF 22 C (72 F).

85. PROVIDE AND INSTALL PLUMBING FIXTURES AS INDICATED ON PLAN ACCORDING TO PART 7, OBC & LOCAL PLUMBING CODES. FIXTURES TO OWNER/CONTRACTOR'S SPECS. PLUMBING DESIGN TO BE COMPLETED BY A QUALIFIED DESIGNER AS PER OBC. QUALIFIED DESIGNER TO HAVE A BCIN# IF REQUIRED BY LOCAL BUILDING OFFICIAL.

86. FOR MECHANICAL VENTILATION, DWELLING UNITS SHALL BE CATEGORIZATION AS TYPE 1,2,3,or 4, & DESIGNED BY A QUALIFIED DESIGNER AS PER OBC. QUALIFIED DESIGNER TO HAVE A BCIN# IF REQUIRED BY LOCAL BUILDING OFFICIAL.

87. A MECHANICAL VENTILATION SYSTEM THAT DOES NOT CONTAIN A FORCED AIR HEATING SYSTEM or CONTAINS ONE BUT IS NOT USED FOR CIRCULATION OF THE VENTILATED AIR SHALL INCLUDE A HRV & SHALL INTRODUCE AIR TO & CIRCULATE AIR THROUGHOUT THE DWELLING UNIT.

88. A CARBON MONOXIDE DETECTOR SHALL BE INSTALLED IN EVERY ROOM WHERE A FUEL-BURNING APPLIANCE HAS BEEN INSTALLED & ADJACENT TO EACH SLEEPING AREA IN A DWELLING UNIT WITH AN ATTACHED GARAGE. LOCATION OF DETECTOR AS PER QUALIFIED HVAC DESIGNER.

89. CARBON MONOXIDE DETECTORS SHALL BE:
- PERMANENTLY CONNECTED TO AN ELECTRICAL CIRCUIT WITH NO DISCONNECT SWITCH BETWEEN THE OVERCURRENT DEVICE & THE DETECTOR.
- WIRED DIRECT TO ACTIVATE ALL CARBON MONOXIDE DETECTORS WITHIN DWELLING UNIT.
- EQUIPPED WITH AN ALARM THAT IS AUDIBLE IN BEDROOM WHEN DOORS ARE CLOSED.

90. WHERE A SOLID FUEL-FIRED COMBUSTION APPLIANCE IS INSTALLED, THE VENTILATION SYSTEM SHALL INCLUDE A HRV.

91. VENTILATION EQUIPMENT SHALL BE ACCESSIBLE FOR INSPECTION, MAINTENANCE, REPAIR & CLEANING.

92. AIR INTAKES SHALL BE LOCATED SO AS TO AVOID CONTAMINATION FROM EXHAUST OUTLETS or OTHER SOURCES IN CONCENTRATION IN THE DUCT & CLEARLY LABELLED AS SUCH FROM LOCATIONS OUTSIDE.

93. EXHAUST DUCTS SHALL DISCHARGE DIRECTLY TO THE OUTDOORS.

94. MECHANICAL VENTILATION DEVICES SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTION & CONFIRM TO CSA-C22.2#113.

95. HRV SHALL BE INSTALLED AS PER 9.32.3.11

96. AN EXTERIOR LIGHT FIXTURE SHALL BE REQUIRED AT EVERY ENTRANCE TO DWELLING. LIGHT FIXTURES TO BE WALL MOUNTED OR RECESSED POT TYPE.

97. INTERIOR LIGHT FIXTURES TO BE LOCATED AS PER ELECTRICAL LAYOUT & OBC. LAYOUT TO BE COMPLETED BY OWNER/CONTRACTOR.

98. EVERY STAIRWAY SHALL HAVE A LIGHT FIXTURE CONTROLLED BY A 3-WAY SWITCH AT THE HEAD & FOOT OF EVERY STAIR EXCEPT FOR STAIRS TO UNFINISHED BASEMENT, OUTSIDE ENTRANCE, GARAGE ENTRY STAIR, THE LIGHT SWITCH MAY BE SINGLE SWITCH AT TOP OF STAIRS.

99. ALL ELECTRICAL FIXTURES TO OWNER/CONTRACTOR'S SPECS.

100. ALL ELECTRICAL WORK TO CONFIRM WITH OBC REQUIREMENTS & THE ONTARIO ELECTRICAL CODE.

STEEL LINTEL SCHEDULE

	MAX. SPAN	REQ'D ANGLE
L1	8'-1"	3 1/2" x 3 1/2" x 1/4"
L2	8'-9"	4" x 3 1/2" x 1/4"
L3	10'-10"	5" x 3 1/2" x 5/16"
L4	11'-5"	5" x 3 1/2" x 7/16"
L5	11'-9"	5" x 3 1/2" x 1/2"
L6	12'-7"	6" x 3 1/2" x 7/16"
L7	13'-5"	6" x 3 1/2" x 1/2"
L8	13'-6"	6" x 4" x 1/2"
L9	14'-1"	7" x 4" x 7/16"
L10	15'-1"	7" x 4" x 1/2"

NOTE: - FOR MASONRY VENEER CONSTRUCTION ONLY
- MIN. 6" BEARING REQ'D
- FOR USE WITH 3 1/2" BRICK; SEE TABLE 9.20.5.2.B (OBC) FOR OTHER VENEER TYPES.
- IF OPENINGS ARE LARGER THAN NOTED SPANS, STEEL LINTELS ARE DESIGNED BY OTHERS.

STEEL BEAM LINTEL SCHEDULE

MAX. SPAN	REQ'D BEAM
13'-5"	W6x15 (W150x22)
14'-10"	W6x20 (W150x30)
16'-8"	W8x18 (W200x27)
17'-7"	W8x21 (W200x31)
18'-0"	W8x24 (W200x36)

NOTE: - FOR MASONRY VENEER CONSTRUCTION ONLY
- BEAM SUPPORTS VENEER, A WOOD STUD WALL & A MAX SPECIFIED ROOF LOVE LOAD 2.3 KN/m (156 lb/ft)
- BEAMS TO BE SUPPORTED BY A STEEL COLUMN AT EACH END & TO HAVE A 6mm (1/4") PLATE WELDED TO FLANGE FOR MASONRY SUPPORT.

RESIDENTIAL HOME DESIGNS
Mark Barnetson
Residential Design Consultant
705-328-1838

ONTARIO REGISTERED DESIGNER
MARK BARNETSON
BCI 21887

DETAIL NOTES

SCALE: AS NOTED	DRAWN BY: MB
DATE ISSUED: MAY 2015	
DWG #: D2	