

# sommers residence

5459 Lincoln Blvd. Hudson. Ohio 44236

# code summary & design criteria

2013 residential code of ohio (RCO)
2017 national electric code (NEC)
2017 ohio mechanical code (OMC) 2017 ohio plumbing code (OPC)
2009 international enegy conservation code (IECC)

Design Snow Load: section 301 design criteria figure 301.2(5) ground snow loads roof snow load = 20 psf

Framing Lumber (Minimum): E = 1,600,000 psi Fb = 1200 psi

Design Wind Load: table 301.2(2) component and cladding loads for a building with a mean roof height of 30 feet located in exposure b

#### baseline structural criteria & design information Live Loads:

Fv = 90 psi	Floor 40 psf (sleeping) Ceilings = 20 psf
Microlam (LVL): E = 2,000,000 psi Fb = 2800 psi Fv = 285 psi	Attic = 20 psf Decks = 40 psf Balconies (Exterior) = 40 psf
Steel: ASTM A-36 E = 29,000,000 psi	Dead Loads: Roof = 20 psf
Fb = 22 ksi	Ceilings = 10 psf
Fv = 14.5 ksi	Floor = 12 psf
W Shapes:	
Fy= 50,000 psi (astm A992)	Concrete:
Pines:	Footings: Fc= 3000 psi

Concrete: Footings: Fc=3000 psi, Slabs: Fc-4000 psi (with 6% Air Entrainment For Exterior Exposure) Concrete Block: Pipes: Fy=46,000 psi (astm A500 Grade B) Plates: Fy=36,000 psi (astm A36) Anchor Bolts: Astm A30f Fc= 1500 psi (may Use A36 Or A325)

Soil Bearing Capacity (Min.):

Allowable Deflection: Rafters = L/180 Ceilings = L/240 Floors = L/360 Floors with tile = L/600 Beams & Headers = L/360 Lintels for Masonry= L/600 (L = Span Length)

Truss Data (Min.): Top Chord: LL= 30 psf DL= 15 psf Bottom Chord: LL= 20 psf DL= 10 psf

Seismic Category Wind Speed (design) 90 MPH

# color & finish schedule

Siding	
Roof	
Brick	
Stone	
Trim	
Shutters	
Soffit	

#### structural notes

- The structural specifications are a suggested baseline and should be verified prior to the commencement of construction. The building contractor should adjust these values as required to meet local codes or building conditions.
- The drawings show the general details of construction. The contractor shall notify the designer where additional details are required, or where conditions are encountered that are not anticipated by the drawings.
- 3. The contractor is to verify all dimensions prior to fabrication and construction. Notify designer of any discrepancies.
- 4. The structure is designed to be self-supporting and stable after the building is fully completed. it is the contrastor's sole responsibility to determine erection procedure and sequence and ensure the safety of the building and its component parts during construction, this includes the addition of whatever shoring temporary bracing, underprinning earth retention, etc. that may be necessary.

### notice

A complete and careful review of these plans should be performed by the party responsible for executing the work prior to construction.

The building contractor should verify all site conditions and review all manufacturer's shop drawings for compliance prior to assembly, installation or construction.

All framing and structural elements must comply with all governing codes and be installed according to common practice and industry standards.

All federal, state and local codes, ordinances and regulations, etc. shall be considered a part of the specifications of this building; and are to be adhered to even if they are in variance with the

## building information

Owner's Name:	
Builder's Name:	
Builder's Phone:	
Building Location:	



4503 state road cleveland, ohio 44109 440-735-2600 sheet 1 over sheet sheet 2 elevations sheet 2 elevations sheet 3 elevations sheet 5 main floor plan sheet 5 main floor plan sheet 6 sections details sheet 7 details sheet 8 elec mech plans

notice:
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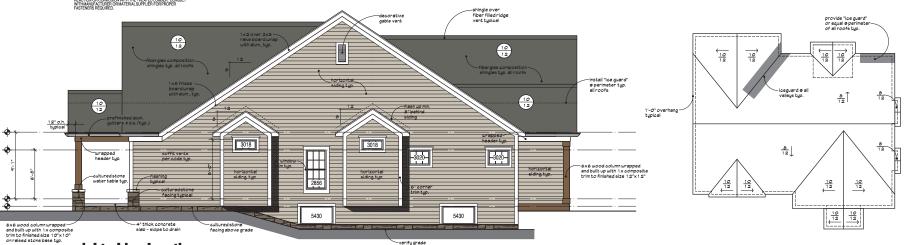
# front elevation

scale 1/4" = 1'-0"

1) BUILDING CONTRACTOR TO VERIFY ALL MATERIALS, FINISHES AND SIZES PRIOR TO CONSTRUCTION.

2) WINDOWDESIGNATIONS ARE REFERENCED AS 'PELLA (ENCOMPASS) SERIES' WINDOWNUMBERS

3) PROVIDE SAFETY GLASS FOR WINDOW GLAZING < 18" A.F.F. OR ADJUST WINDOW SIZETYP.



verify grade

right side elevation

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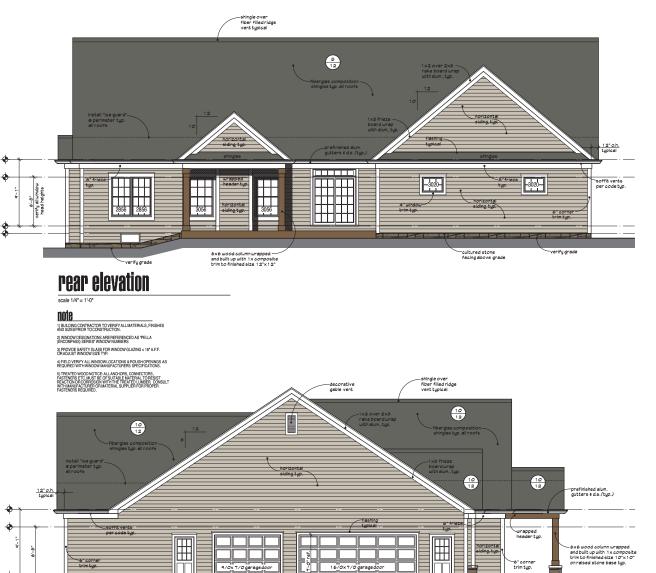
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schematic roof diagram

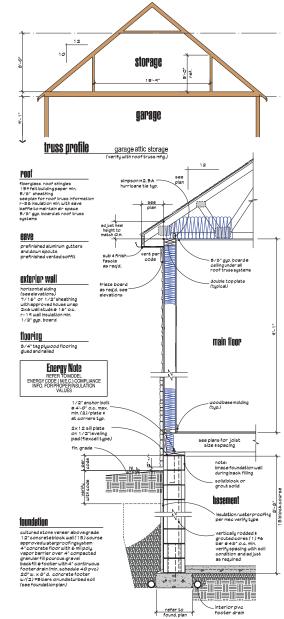


# left side elevation

-cultured stone facing above grade verifu arade

typical wall section

4" thick concrete slab - slope to drain



**1600**6

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cleveland, pho 44109
440-732-5800

sheet 1 cover sheet sheet 2 elevations sheet 3 elevations sheet 4 foundation plan sheet 5 main floor plan sheet 6 sections- details sheet 7 details sheet 8 elec. mechplans

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rough framed stairs

#### foundation notes

13 COURSE REINF, MAS. BLK. (12"W CMU) ON 8"H. X20" W. REINFORCED CONC. FOOTING

TYPICAL FOOTING - 8"H X 20"W CONTINUOUS CONCRETE FOR 12"W CMUWALLS WI (2) #S REBARS 8"H X 1-4"W CONTINUOUS CONCRETE FOOTING FOR B" W CMUWALLS WI (2) #S REBARS REINFORCING IS THE BUILDER'S OPTION

PROVIDE (1) #6 VERT. STEEL REINF. BAR (FULL HT.) 48" O.C. GROUTED SOLID FULL HT. TO FTG. (SEE: PLAN)

PROVIDE (2) #4 VERT, STEEL REINF, BARS (FULL HT.) @ ALL BEAM BEARING LOCATIONS (GRT. SOLID) PROVIDE DUR-A-WALL OR EQ. HORIZ, JOINT REINFORCING ® 2-0" O.C. VERTICALLY OR EVERY 3RD BLOCK COURSE ALLDIMENSIONS ARETAKEN FROM THE FACE OF MASONRY OR ROUGH FRAMING

STEPFOOTINGS AS REQ'D TO MAINTAIN 3'-6' MIN. FROST DEPTH

DOUBLEJOISTS UNDERPARALLEL WALLS ABOVE

PROVIDE SOLID BLOCKING BETWEEN JOISTS TO FOUND. WALL OR BEAMUNDER ALL POINTLOADS FROM ABOVE PROVIDE SIMPSON 'HW' OR EQUAL BEAM HANGERS @ ALL UPSET WOOD BEAMHANGER CONDITIONS

#### steel column & footing schedule

- F1) 3"ø schedule 40 standard steel oc over 42"x42"x12" deep conc. footing with (4)#5 bars each way at bottom
- (F2) 3"s schedule 40 standard steel column over 48"x48"x12" deep conc. footing with (4)#5 bars each way at bottom

## steel lintel schedule

openings up to 4'-0"	L31/2X31/2X5/16
openings from 4'-1" to 5'-0"	L4 X 31/2 X5/16
openings from 5'-1" to 6'-0"	L5 X 31/2 X5/16
openings from 6'-1" to 7'-0"	L6 X 31/2 X5/16
openings from 7"-1" to 10"-0"	W 8 X 13 with 1/4 plats

note: all lintels shall have 1" of endbearing for each foot of span with a min. of 4" bearing @ each end

#### floor ioist schedule

- 2X10 floor joists @ 16" a.c. with 'x' bracing @ midspan or as required.
- J2 2X10 floor joists @ 16" a.c. double every other joist with 'x' bracing @ midspan or as required.
- J4 2X8 treated wood floor joists @ 16" o.c.

#### wood beam schedule

(B1)	(2) 2X10's	(B9)	(2) 1 3/4" X 11 7/8" LVL'S
®	(3) 2x10's	<u>@</u>	(3) 1 3/4" X 11 7/8" LVL'S
ß	(2) 1 3/4" x 9 1/4" LVL's	働	(2) 1 3/4" x 14" LVL's
₿4	(3) 1 3/4" x 9 1/4" LVL's	€	(3) 1 3/4" x 14" LVL's
(BS)	(2) 2x12's	(13)	(2) 1 3/4" x 16" LVL's
<b>B</b> 6	(3) 2x12's	(819)	(3) 1 3/4" x 16" LVL's
B7)	(2) 1 3/4" x 11 1/4" LVL's	619	(2) 1 3/4" x 18" LVL's
(B8)	(3) 1 3/4" x 11 1/4" LVL's	(B)	(2) 1 3/4" x 20" LVL's

# wood post & footing schedule

- PF1 4x4 treated wood post with 16" dia. x 8" conc. footing on undisturbed soil
- FE2 6x6 treated wood post with 20" dia. x 8" conc. footing on undisturbed soil

#### symbol legend

<del>=</del>	duplex receptacle	\$	single pole switch
_		ė.	three way switch

- e weather proof gli duplex recept. e floor mounted duplex recept.
- gfi duplex recept surface mounted flood light ceiling mounted light fixture
- smoke detector w/battery backupphotoelectric and innigation activated wall mounted light fixture smoke detector with CO detector combo w/ battery backup surface mounted light with pull chain
- telephone cutlet cable tvoutlet cellingmounted light fixture & fan
- return air supply air

recessed ceiling light fixture

recessed clg. light w/ vapor proof lens

2038

scale 1/4" = 1'-0"

#### general plan notes

1) INTERIOR WOOD FRAMED WALLS ARE DIMENSIONED AT 31/2 ROUGH AND ALL EXTERIOR WALLS ARE DIMENSIONED TO THE OUTSIDE OF 1/2\*SHEATHING UNLESS OTHERWISE NOTED.

2) BUILDING CONTRACTOR MUST VERIFY ALL SITE CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

3) ALL WALL ANGLES ARE 45 DEGREES UNLESS OTHERWISE NOTED

4) FIELD VERIFY ALL WINDOW LOCATIONS & ROUGHOPENINGS AS REQUIRED WITH WINDOW MANUFACTURERS SPECIFICATIONS. 5) PROVIDE SAFETY GLASS FOR WINDOW GLAZING < 18\* A.F.F. OR ADJUST WINDOW SIZE TYP.

6) STRUCTURAL AND FRAMING MEMBERS INDICATED ARE SIZED BASED ON SPECIES OF LUMBER THAT SATISFY THE SPAN.

# rafter/ceiling joist schedule

R1 2X10 rafters @ 16"o.c.

R2 2X8 rafters @ 16" o.c.

R3 2X6 rafters @ 16" o.c.

C1 2X10 ceiling joists @ 16" o.c. Douglas fir seclect structural

C2 2X10 ceiling joists @ 16" o.c.

C3 2X8 ceiling joists @ 16"o.c.

C4 2X6 ceiling joists @ 16"o.c.

T1 pre-engineered roof truss system refer to mfg. shopdrawings

T2 pre-engineered roof truss system attic type refer to mfg. shop drawings

T3 pre-engineered roof truss system scissor type OR modified refer to mfg. shopdrawings

all wood framed headers to be (2)2x10 min. unless noted otherwise

#### post & column schedule

P1 4x4 or (3)2x4 P6 3 1/2" x 5 1/4" PSL

(4)2x4 (7" PSL 31/2" x 7" PSL

P3 (3)2x6 P8 5 1/4" x 5 1/4" PSL

(P4) 6x6 or (4) 2x6 (P9) 5 1/4" x 7" PSL

P5 6x6 or (4) 2x6 (P1) 3\*dia. schd. 40 steelcol with 1/2" bearingplate bolted to sound bearing

all headerbearings to min (2)2x4unless noted otherwise all posts to be latterally braced full length

all posts to continue down to sound foundation or solid bearing on structure below

#### wood beam schedule

(2) 2X10's (2) 1 3/4" X 11 7/8"LVL'S (3)2x10's (3) 13/4" X 11 7/8" LVL'S (2) 13/4" x 9 1/4" LVL's (11) (2) 13/4" x 14" LVL's

(3) 13/4" x 91/4" LVL's (3) 13/4" x 14" LVL's (B) (2)2x12's (B) (3)2x12's (2) 1 3/4" x 16" LVL's (814) (3) 1 3/4" x 16" LVL's

B7 (2)13/4"x111/4"LVL's (619) (2)13/4"x18"LVL's

(3) 1 3/4" x 11 1/4" LVL's (16) (2) 1 3/4" x 20" LVL's

# shear wall schedule

WALL TYPE 1 - TYPICAL EXTERIOR SHEAR WALL CONSTRUCTION REQUIREMENTS:

ALL EXTERIOR WALLS SHALL HAVE CONTINUOUS APA SHEATHING 32/161/2" OR ALL EXTERIOR WALLS SHALL HAVE COMMOUS APA SHEATHING 3291812" OR SHORT SHEATHING SHEATHING SHEATHING SHEATHING 3291812" OR AT INTERMEDIATE SUPPORTS WITH INTERIOR DEFINAL FINISH COMPRISED OF AT INTERMEDIATE SUPPORTS WITH INTERIOR DEFINAL FINISH COMPRISED OF LOCATE SHEATHING SHEATHING

WALL TYPE 2 - TYPICAL INTERIOR SHEAR WALLCONSTRUCTION REQUIREMENTS

INTERIOR SHEAR WALLS AS INDICATED ON PLAN SHALL HAVE 12° GYPSUM BOAGOWITH DO X1 68° GALVANZED MALS ORNO, 6 X 114° LONG TYPEW ON S OCKRIS AT 4" CO. AT EDGES AND 12° CO. AT THE MEDICANT ES UPPOPUL ON SO GYPSUM ADD WITH DO X1. 12° CALVANZED MALS ON HO CO. 11 CLONG TYPE WO'N SOCREW AS A" 4" CO. AT EDGES AND 12° a.C. AT INTERMEDIATE SUPPOPULS



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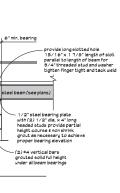


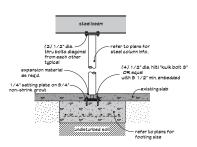








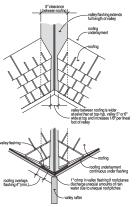




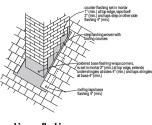


wrap beam end with building paper and build beam into cmu wall using grout and pieced cmu maintain 1/2" clearance between beam and grout

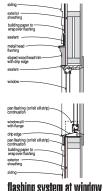
beam pocket detail





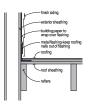






# flashing system at window

scale 1 1/2'=1'-0"

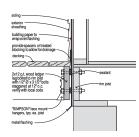


# sidewall flashing

scale 1 1/2"=1'-0"



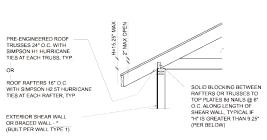
scale 1 1/2"=1'-0"



# flashing system at an exterior deck

scale 1 1/2"=1'-0"

#### DETAILS FOR FULLY CONTINUOUS SHEATHING PER 2013 RESIDENTIAL CODE OF OHIO



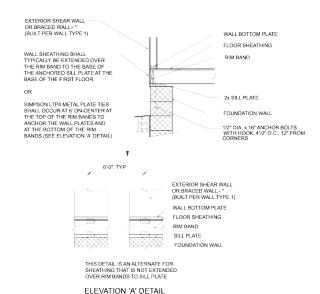
RULES FOR DIMENSION "H":

- FOR "H" LESS THAN 9 1/4", NO BLOCKING REQUIRED FOR "H" GREATER THAN 9 1/4" UP TO 15 1/4". INSTALL
- BLOCKING PER ABOVE.
- FOR "H" GREATER THAN 15 1/4", FURTHER ENGINEERING IS REQUIRED.

EXTERIOR SHEAR WALL
CONNECTION TO ROOF FRAMING

1/2"=1'-0"

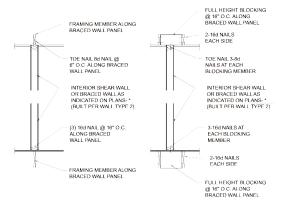
\* NOTE: "SHEAR WALL" AND "BRACED WALL" TERMINOLOGIES ARE EQUAL AND INTERCHANGEABLE ON THIS DRAWING



EXTERIOR SHEAR WALL CONNECTION TO SILL PLATE ON FOUNDATION

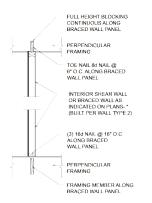
1/2\*=1'-0

1/2"=1'-0"



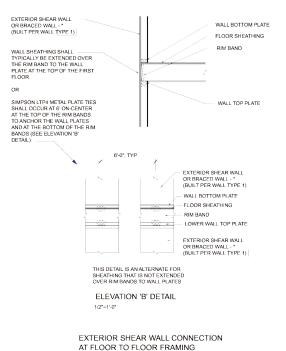
INTERIOR SHEAR WALL CONNECTIONS AT PARALLEL FLOOR/CEILING FRAMING

1/2"=1"-0"



INTERIOR SHEAR WALL CONNECTIONS AT PERPENDICULAR FLOOR/CEILING FRAMING

1/2"=1"-0"



### BRACED WALL CONSTRUCTION SPECIFICATIONS:

1/2"=1'-0"

WALL TYPE 1 TYPICAL EXTERIOR SHEAR WALL CONSTRUCTION REQUIREMENTS:

ALL EXTERIOR WALLS SHALL HAVE CONTINUOUS APA SHEATHING 32/16 1/2° OR 1632° EXPOSURE 1 WITH BG COMMON NAILS AT 6° O.C. AT EDGES AND 12° O.C. AT INTERMEDIATE SUPPORTS WITH INTERIOR DRYWALL FINISH COMPRISED OF 12° MINIMUM GYPSUM BOARD WITH 11/2° CAUAUNIZED ROCPION ANILS, 11/2° LONG STAPLES GALVANIZED, OR 11/4° LONG TYPE W OR S SCREWS AT 7° O.C. AT EDGES AND 12° O.C. AT INTERMEDIATE SUPPORTS

- WALL TYPE 2 TYPICAL INTERIOR SHEAR WALL CONSTRUCTION REQUIREMENTS:

INTERIOR SHEAR WALLS AS INDICATED ON PLAN SHALL HAVE 127 GYPSUM BOADD WITH 50 X 159° GALVANIFED MAIL SO NO 6 X 1 144° LONG TYDF WORS SCREWS AT 4° O.C. AT EDGES AND 12° O.C. AT INTERMEDIATE SUPPORTS OR 83° GYPSIM BOADD WITH 50 X 178° GALVANIZED MAIL SO, 6 X 1.04° LONG TYPE W OR S SCREWS AT 4° O.C. AT EDGES AND 12° O.C. AT INTERMEDIATE SUPPORTS.

#### DESIGN LOADING FOR BRACED WALLS:





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# wet-vent plumbing diagram

no scale
CONTRACTOR TO VERIFYALL SIZES AND MAXIMUM NUMBER OF FIXTURES PER BRANCH IN ACCORDANCE WITH THE GOVERNING CODE.

#### symbol legend

ecepatole 220v

recessed ceiling light fixture

recessed clg. light w/vapor proof lens

floor mounted duplex recept.

surface mounted light with pull chain

ceilingmounted light fixture & fan

# electrical notes

The electrical plans shown here are suggested only! Electrical layouts can be altered as required for builder's standards, owner's preference or superceded by any governing code. The local governing codes take precedence over this layout.





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