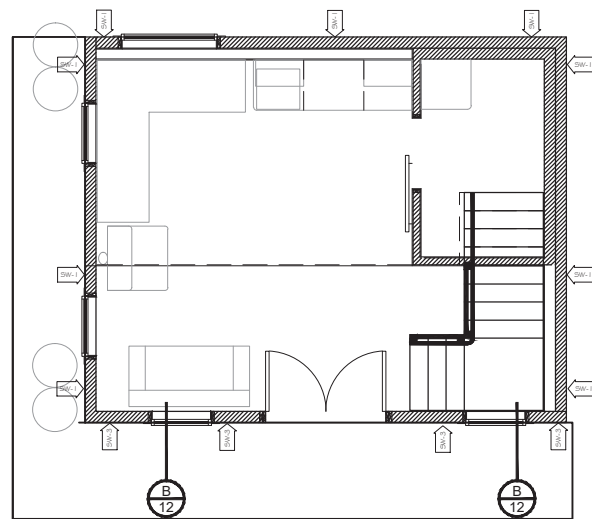
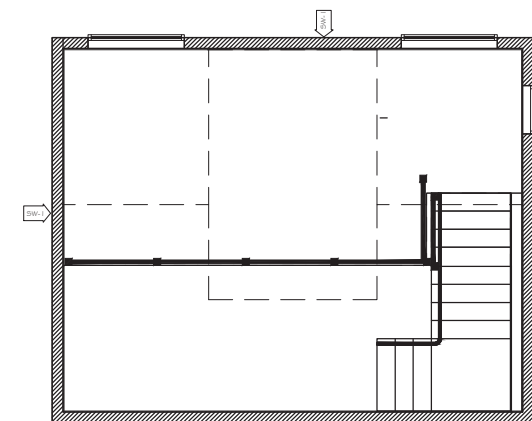


# 498 SQ. FT. NET ZERO DEMO HOME



MAIN LEVEL

1/26/2016



SECOND LEVEL

### LIST OF DRAWINGS:

- 01- COVER SHEET
- 02- SITE PLAN
- 03- GENERAL NOTES
- 04- FOUNDATION PLAN
- 05- FOUNDATION DETAILS
- 06- MAIN LEVEL FLOOR PLAN
- 07- SECOND FLOOR PLAN
- 08- FRONT & LEFT ELEVATIONS
- 09- RIGHT & REAR ELEVATIONS
- 10- FLOOR FRAMING
- 11- ROOF FRAMING PLAN
- 12- STAIR DETAIL & TYPICAL WALL DETAIL
- 13- FRAMING DETAILS
- 14- CROSS SECTIONS
- 15- ELECTRICAL PLANS

### PROJECT DESIGN GUIDELINES:

SEISMIC ZONES D  
 WIND 90 MPH (3 SECOND GUSTS)  
 EXPOSURE B  
 FROST DEPTH 30"  
 FLOOR LOAD 50 PSF (40 LIVE + 10 DEAD)  
 ROOF LOAD 55 PSF (40 LIVE + 15 DEAD)  
 ROOF SNOW LOAD (40 PSF LIVE)  
 GROUND SNOW LOAD (50 PSF LIVE)  
 ASSUMED SOIL BEARING CAPACITY 1,500 PSF

### PROJECT PERSONNEL DIRECTORY / CONTACT INFORMATION:

BEN BARTHOLOMEW	DOCUMENTATION MANAGER	BARTHOLOMEW.BEN@GMAIL.COM
ALEX SCHREYER	PURCHASER	ALEXSCHREYER5@GMAIL.COM
BURTON SCOFIELD	CAD MANAGER	SCOFIELDD@COMCAST.NET
DALE BRANDON	ELECTRICIAN	DJBRAND1@OUTLOOK.COM
DEWEY LAKEY	TREASURER / GRANT WRITER	DLLAKEY@GMAIL.COM
FOREST ALLEN	SUPERINTENDENT / ESTIMATOR	FALLEN.LYNN13@GMAIL.COM
JASON SYLVESTER	TEAM LEAD	JASONTRADES4X@GMAIL.COM
LEXY SHEFFIELD	SCHEDULER	LEXY SHEFFIELD@GMAIL.COM
SKYLAR PETERSON	ELECTRICIAN	SKYLARPETERSON74@HOTMAIL.COM



### GENERAL NOTES

### KEYNOTES

### NET ZERO STUDIO

1748 EAST 4600 SOUTH  
OGDEN, UTAH

MAIN LEVEL	320	Date	01/19/2016
LOFT LEVEL	178	Scale	NOTED
TOTAL FIN.	498	Drawn	AS, BS, DLL, FA
PORCH	141	Job	GREER-RICH
		Sheet	01
		of	15 Sheets



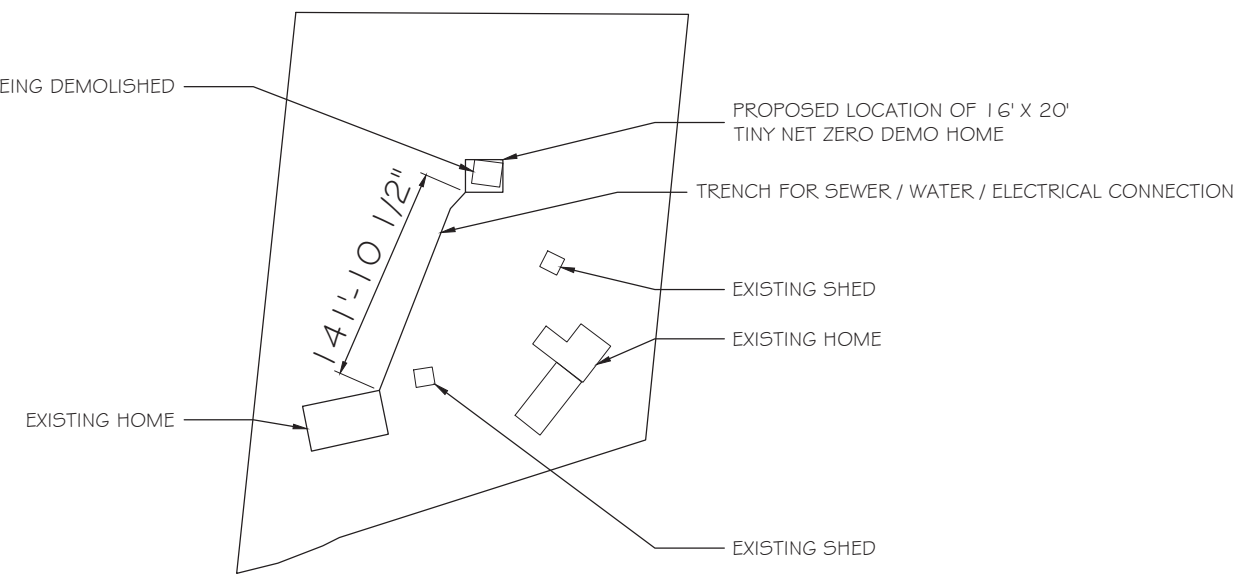
**SITE PLAN**  
SCALE: 1" = 76.8'



**GENERAL NOTES**

- TYPE "B" GRADING
- 5% GRADE 10'-0" AWAY FROM HOUSE
- SEWER TRENCH TO BE 4'-0" BELOW GRADE
- WATER TRENCH TO BE 4'-0" BELOW GRADE
- ELECTRICITY TRENCH TO BE 1'-6" BELOW GRADE
- 2" Ø SEWER PVC PIPE
- 1 1/2" Ø ELECTRICAL CONDUIT FOR 120V WIRE
- 1" Ø WATER PVC PIPE

**KEYNOTES**



**SITE PLAN**  
SCALE: 1" = 128'

**NET ZERO STUDIO**

1748 EAST 4600 SOUTH  
OGDEN, UTAH

MAIN LEVEL	320	Date	01/19/2016
LOFT LEVEL	178	Scale	NOTED
TOTAL FIN.	498	Drawn	AS, BS, DLL, FA
		Job	GREER-RICH
PORCH	141	Sheet	02
			of 15 Sheets



MAXIMUM WALL HEIGHT FROM T.O. FOOTING	TOP EDGE SUPPORT	MIN. WALL WIDTH	3,000 PSI CONCRETE						60,000 PSI STEEL								
			VERTICAL WALL REINF.		HORIZONTAL WALL REINF.		ADDITIONAL REINF. FOR OPENINGS										
			SIZE	SPACING	SIZE	SPACING	ABOVE	SIDES	BELOW	NO.	SIZE	NO.	SIZE	NO.	SIZE		
2'-0" TO 5'-0"	NONE	6"	#4	32" O.C.	#4	12" O.C.	2	#4	1	#4	1	#4	2'	6"	SEE FTG. SCHED.	1/2" X 10" @ 32" O.C.	
5'-1" TO 6'-0"	NONE	8"	#4	18" O.C.	#4	18" O.C.	2	#4	1	#4	1	#4	3'	6"	36"	4 #4 x CONT	1/2" X 10" @ 32" O.C.
6'-1" TO 7'-0"	NONE	8"	#4	12" O.C.	#4	18" O.C.	2	#4	1	#4	1	#4	4'	8"	42"	5 #4 x CONT	1/2" X 10" @ 32" O.C.
7'-10" TO 8'-0"	FLOOR	8"	#4	24" O.C.	#4	18" O.C.	2	#4	1	#4	1	#4	5'	10"	SEE FTG. SCHED.	1/2" X 10" @ 32" O.C.	
8'-1" TO 9'-0"	FLOOR	8"	#4	16" O.C.	#4	18" O.C.	2	#4	1	#4	1	#4	6'	12"	SEE FTG. SCHED.	1/2" X 10" @ 32" O.C.	
9'-1" TO 10'-0"	FLOOR	8"	#4	11" O.C.	#4	11" O.C.	2	#4	1	#4	1	#4	6'	12"	24"	2 #4 x CONT	5/8" X 10" @ 24" O.C.
> 10'-0"+	REQ. ENG.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	REQ. ENG.

NOTES:

- REBAR TO BE PLACED IN THE CENTER OF THE WALL AND EXTEND FROM THE FOOTING TO WITHIN 3" OF THE TOP OF THE WALL.
- #4 FOOTING DOWELS SHALL EXTEND 24" INTO THE FOUNDATION AND MATCH VERTICAL STEEL.
- ONE BAR SHALL BE LOCATED IN THE TOP 3" AND ONE BAR IN THE BOTTOM 3" OF THE FOUNDATION WALL. (THE REMAINING EQUALLY SPACED BETWEEN)
- BARs SHALL BE PLACED WITHIN 2" OF THE OPENING AND EXTEND 24" BEYOND THE EDGE OF THE OPENING.
- THIS TABLE ASSUMES A MINIMUM OF 1500 PSF BEARING CAPACITY, 38 PSF EQUIVALENT FLUID PRESSURE AND A GLOBALLY STABLE SITE
- ALL FOUNDATION STEPS SHALL BE 2'-0" MINIMUM.
- USE 3" X 3" X 1/4" WASHERS, IF SLOTTED WASHER IS USED, ADD CUT WASHER.
- J-BOLTS MAY BE REPLACED WITH #4 BARS @ 12" O.C. EXTENDING 24" OUT OF FND CAST INTO SUSPENDED SLAB
- LARGER FOOTINGS SPECIFIED ON 5'-1" TO 7'-0" WALLS MAY BE REDUCED TO SIZE SPECIFIED ON THE FOOTING SCHEDULE, AND VERTICAL REBAR SPACING OF 24" O.C. FOR FOUNDATION WALLS MAY BE USED PROVIDED THE FOLLOWING CONDITIONS EXIST. A. 5'-1" TO 7'-0" WALL LENGTH NOT TO EXCEED 10'-0". B. UNBALANCED BACKFILL DOES NOT EXCEED 4'
- MINIMUM STRENGTH REQUIRES 2,500 PSI CONCRETE; HOWEVER, AS PER IRC 402.2 3,000 PSI CONCRETE SHALL BE USED

MARK	WIDTH	LENGTH	THICK	REINFORCEMENT	
				NO.	LENGTH
F-1	20"	CONT.	10"	2	#4 CONT.
F-2	24"	CONT.	10"	2	#4 CONT.
F-3	30"	CONT.	10"	3	#4 CONT.
F-4	36"	CONT.	10"	3	#4 CONT.
F-5	24"	24"	10"	2	#4 EA. WAY
F-6	30"	30"	10"	3	#4 EA. WAY
F-7	36"	36"	10"	4	#4 EA. WAY
F-8	42"	42"	10"	4	#4 EA. WAY

NOTE: THIS ENGINEERING ASSUMES THAT THE CLEARANCE & SETBACK REQUIREMENTS LISTED IN IRC SECTION R403.1.7 ARE MET. IF THESE PROVISIONS ARE NOT MET, CONTACT THE ENGINEER FOR FURTHER DESIGN.

NOTE: THIS ENGINEERING ASSUMES THAT THE SITE IS STABLE HAVING NO GLOBAL STABILITY CONCERNS OR HAZARDS. IF THIS IS NOT TRUE THEN CONTACT ENGINEER FOR FURTHER ANALYSIS AND DESIGN.

### FOOTING, FOUNDATION AND CONCRETE

ALL FOOTINGS ARE BASED ON ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF. FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED GRANULAR FILL COMPACTED TO 95% OF MAXIMUM DENSITY. NO FOOTINGS SHALL BE PLACED IN WATER OR FROZEN GROUND. ALL FOOTINGS TO BE PLACED AT MIN. BELOW LOCAL FROST DEPTH, CONTINUOUS AND MONOLITHIC FOUR. CHANGES IN ELEV. SHALL BE STEPPED WITH STEP HEIGHT NOT HIGHER THAN 1/2 THE STEP LENGTH AND NOT GREATER THAN 5 FT. MIN. 6" THICKNESS ON VERT. STEP. FOOTINGS TO HAVE 2 #4 BAR CONTINUOUS. NOTIFY ENGINEER IF GRADE DROPS OVER 8 FEET IN 24 FEET (G.T. 1 TO 3 SLOPE) SO THAT APPROPRIATE DESIGN CHANGES MAY BE MADE TO FOUNDATION AND FOOTINGS.

ALL FOOTINGS, FOUNDATIONS, AND INTERIOR SLABS SHALL BE NORMAL WT. CONCRETE WITH A COMPRESSIVE STRENGTH EQUAL TO AT LEAST 2,500 PSI WITHIN 28 DAYS AFTER POURING. THE WATER/CEMENT RATIO SHALL BE NO GREATER THAN .50 WITH A MINIMUM CEMENT CONTENT OF 504 LBS. PER CUBIC YARD ALL CONC WORK SHALL BE PLACED, CURED, STRIPPED, AND PROTECTED AS DIRECTED BY THE SPECIFICATIONS AND ACI STANDARDS AND PRACTICES.

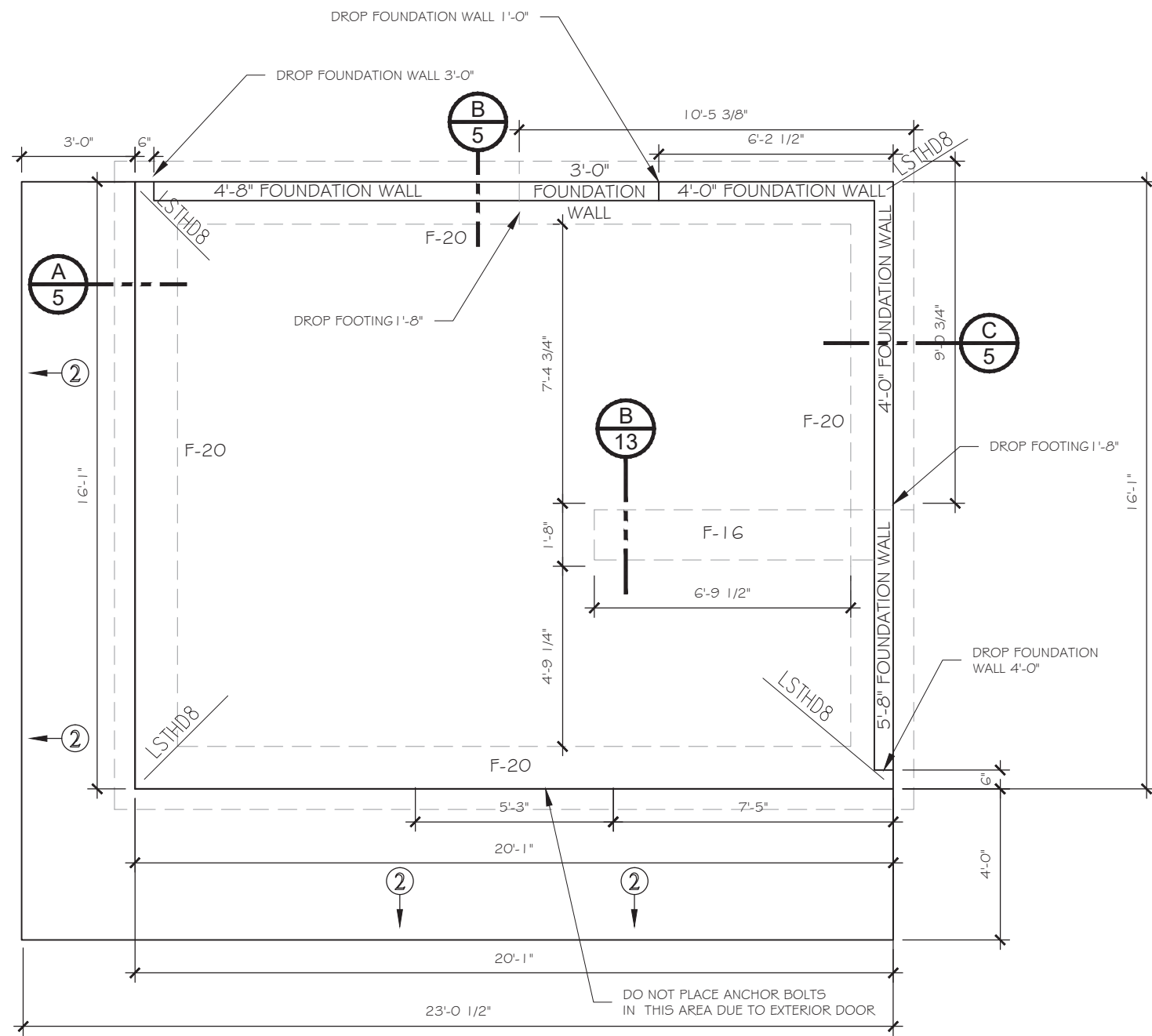
ALL REINFORCING SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI STANDARD 318. REINFORCEMENT SHALL BE FREE FROM MUD AND OIL AND OTHER NON-METALLIC COATINGS THAT HAMPER BONDING CAPACITY. ALL SPLICES IN CONTINUOUS REINFORCING SHALL LAP 30 BAR DIAMETERS.

VERT & HORZ. #4 BAR (GRADE 60) AS PER FND SCHEDULE. OPENINGS TO HAVE 1 VERT. #4 BAR EA. SIDE OF OPENING TIED TO HORZ. BAR. 2 #4 BAR ABOVE AND 1 #4 BELOW WINDOW OPENING EXTENDING 36" BEYOND OPENING. USE ANCHOR BOLTS AS PER FND SCHEDULE USE SIMPSON STHDX(RJ) STRAPS AS NOTED ON DRAWING. OWNER/CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS LISTED ON THE DRAWING. VERIFICATION OF ALL SITE CONDITIONS INCLUDING SITE STABILITY IS THE RESPONSIBILITY OF OTHERS

ALLOW 14 DAYS FOR CONCRETE TO CURE PRIOR TO BACKFILL.



MARK	WIDTH	LENGTH	THICK	REINFORCEMENT	
				NO.	LENGTH
F-1	20"	CONT.	10"	2	#4 CONT.
F-2	24"	CONT.	10"	2	#4 CONT.
F-3	30"	CONT.	10"	3	#4 CONT.
F-4	36"	CONT.	10"	3	#4 CONT.
F-5	24"	24"	10"	2	#4 EA. WAY
F-6	30"	30"	10"	3	#4 EA. WAY
F-7	36"	36"	10"	4	#4 EA. WAY
F-8	42"	42"	10"	4	#4 EA. WAY



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



### GENERAL NOTES

- ALL FOUNDATION WALLS 6" THICK UNLESS OTHERWISE NOTED
  - FOUNDATION TYPE - SLAB ON GRADE #
  - BOTTOM OF ALL FOOTINGS MUST BE 12" BELOW FINAL GRADE
- NOTE: THIS ENGINEERING ASSUMES THAT EITHER THE SETBACK REQUIREMENTS LISTED IN IRC SECTION R403.1.7 ARE MET, OR THAT A 20' DEEP LEVEL YARD (5% GRADE OR LESS) EXISTS ON ALL SIDES OF THE HOME. IF THIS IS NOT TRUE THEN CONTACT ENGINEER FOR FURTHER ANALYSIS AND DESIGN.
- NOTE: THIS ENGINEERING ASSUMES THAT THE SITE IS STABLE HAVING NO GLOBAL STABILITY CONCERNS OR HAZARDS. IF THIS IS NOT TRUE THEN CONTACT ENGINEER FOR FURTHER ANALYSIS AND DESIGN.

### KEYNOTES

- FLOOR DRAIN (SLOPE CONCRETE MIN 1/8" PER FOOT IN BATHROOM)
- SLOPE CONCRETE 1/8" PER FOOT THIS DIRECTION

### NET ZERO STUDIO

1748 EAST 4600 SOUTH  
OGDEN, UTAH

MAIN LEVEL	320	Date	01/19/2016
LOFT LEVEL	178	Scale	NOTED
TOTAL FIN.	498	Drawn	AS, BS, DLL, FA
		Job	GREER-RICH
		Sheet	04
PORCH	141		of 15 Sheets



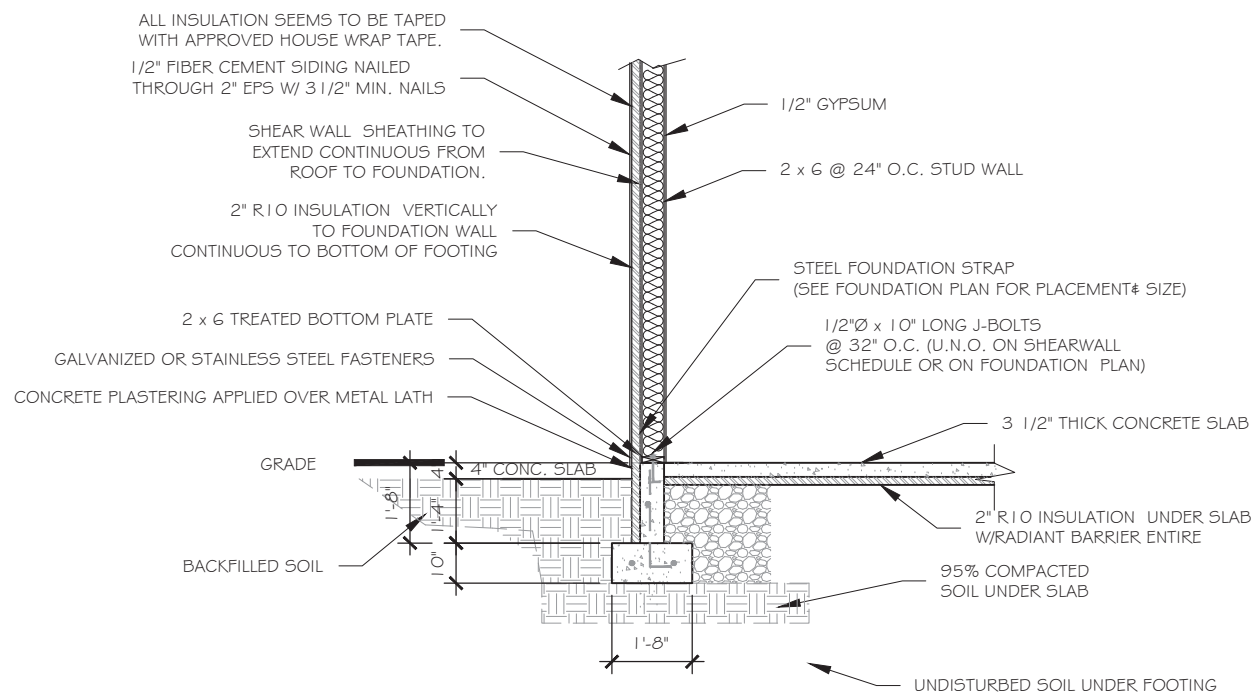
**GENERAL NOTES**

- ALL FOUNDATION WALLS 6" THICK UNLESS OTHERWISE NOTED
  - FOUNDATION TYPE - SLAB ON GRADE #
  - BOTTOM OF ALL FOOTINGS MUST BE 12" BELOW FINAL GRADE
- NOTE: THIS ENGINEERING ASSUMES THAT EITHER THE SETBACK REQUIREMENTS LISTED IN IRC SECTION R403.1.7 ARE MET, OR THAT A 20' DEEP LEVEL YARD (5% GRADE OR LESS) EXISTS ON ALL SIDES OF THE HOME. IF THIS IS NOT TRUE THEN CONTACT ENGINEER FOR FURTHER ANALYSIS AND DESIGN.
- NOTE: THIS ENGINEERING ASSUMES THAT THE SITE IS STABLE HAVING NO GLOBAL STABILITY CONCERNS OR HAZARDS. IF THIS IS NOT TRUE THEN CONTACT ENGINEER FOR FURTHER ANALYSIS AND DESIGN.

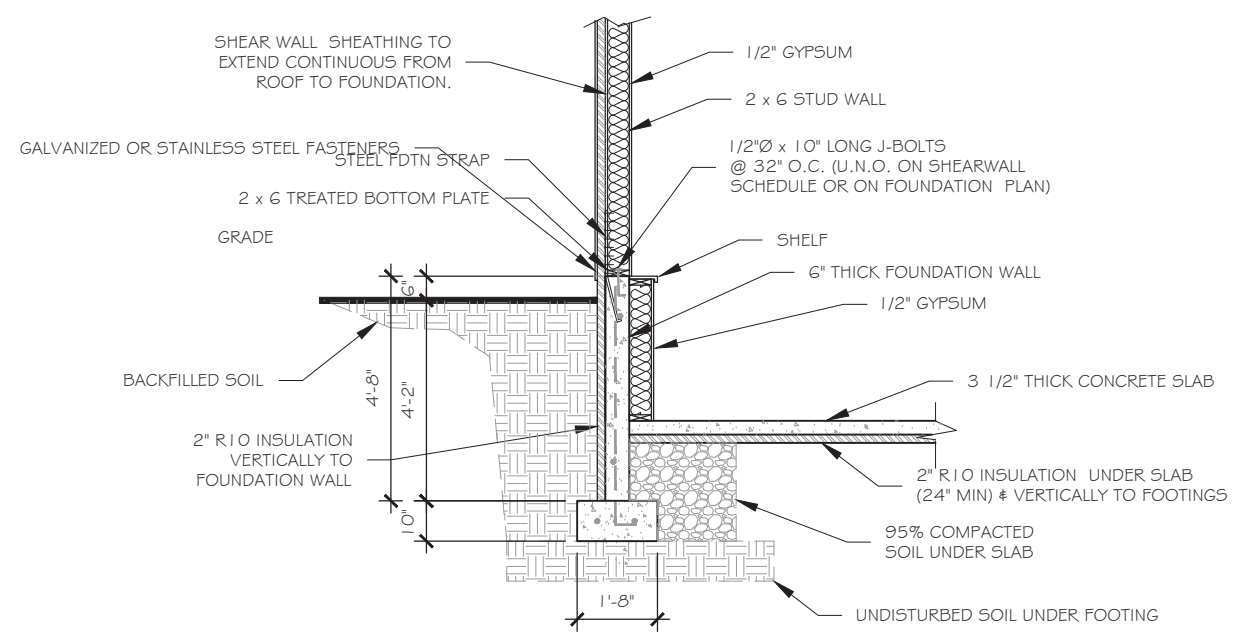
**KEYNOTES**

**NET ZERO STUDIO**  
 1748 EAST 4600 SOUTH  
 OGDEN, UTAH

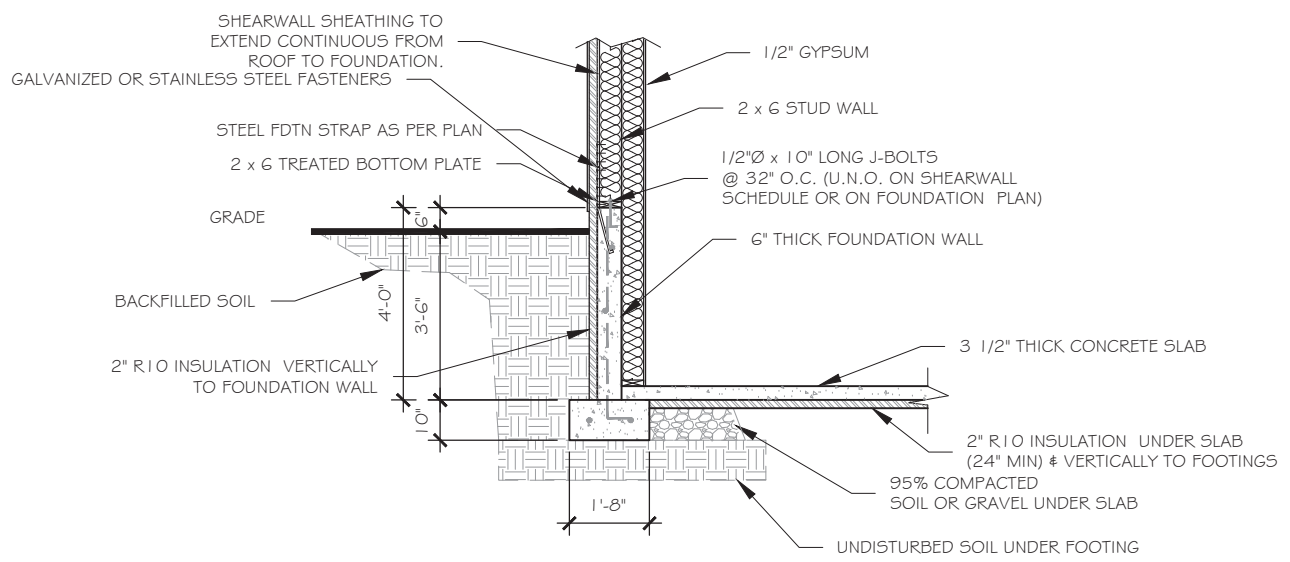
MAIN LEVEL	320	Date	01/19/2016
LOFT LEVEL	178	Scale	NOTED
TOTAL FIN.	498	Drawn	AS, BS, DLL, FA
		Job	GREER-RICH
PORCH	141	Sheet	05
			of 15 Sheets



**A** DETAIL  
 5 SCALE: 1/4" = 1'-0"



**B** DETAIL  
 5 SCALE: 1/4" = 1'-0"



**C** DETAIL  
 5 SCALE: 1/4" = 1'-0"



BEARING WALLS TO BE CONSTRUCTED AS FOLLOWS:

HEIGHT	STUD FRAMING
0' TO 10'	2x4's @ 16" o.c.
10' TO 12'	2x4's @ 12" o.c.
12' TO 14'	2x6's @ 16" o.c.
14' TO 16'	2x6's @ 12" o.c.
16' TO 20'	2x6 LSL's @ 12" o.c.

WALLS TALLER THAN 20' AND/OR OPENINGS GREATER THAN 8' WIDE TO BE SPECIFIED BY ENGINEER. USE DBL KING STUDS ON ALL WALLS 10' HIGH. USE 2X6 STUDS FOR ALL WALLS SUPPORTING OVER TWO LOADS.

**BRACED WALL PANELS**

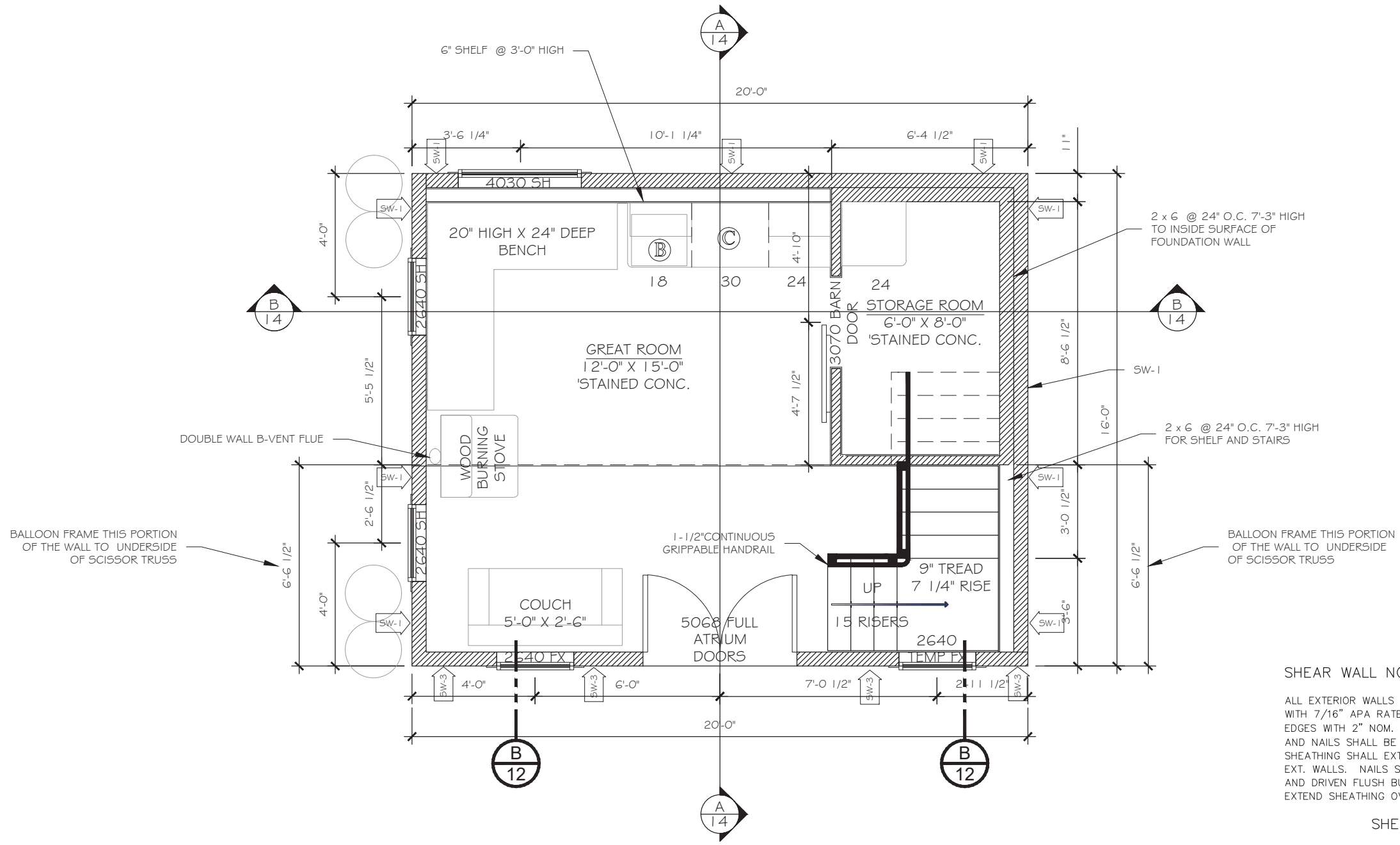
- ALL EXTERIOR WALLS AND VERTICAL SURFACES AT STEPS IN ROOF SHALL BE SHEATHED WITH 7/16" APA RATED 24/0 OR BETTER STRUCTURAL WOOD PANELS. BLOCK ALL HORIZONTAL EDGES WITH 2" NOMINAL OR WIDER STUDS.
- 2" OR WIDER FRAMING AT ADJOINING PANEL EDGES AND NAILS SHALL BE STAGGERED WHERE 10d NAILS ARE SPACED 3" O.C. OR LESS.
- SHEATHING SHALL EXTEND CONTINUOUS FROM FLOOR TO TOP PLATE FRAMING ON UPPER EXTERIOR WALLS.
- NAILS SHALL BE PLACED NOT LESS THAN 1/2" FROM EDGE OF PANEL AND DRIVEN FLUSH BUT SHALL NOT FRACTURE THE SURFACE OF THE SHEATHING.

**GENERAL NOTES**

- EXTERIOR WALLS FRAMED WITH 2 X 6 STUDS @ 24" O.C. UNLESS OTHERWISE NOTED
- INTERIOR WALLS FRAMED WITH 2 X 4 STUDS @ 16" O.C. UNLESS OTHERWISE NOTED
- DIMENSIONS ON FLOOR PLANS ARE TO ROUGH FRAMING
- ALL DOOR RETURNS ARE 4" UNLESS OTHERWISE NOTED
- ALL EXTERIOR WALLS SHALL BE SHEATHED WITH 7/16" OSB NAILED WITH 8d NAILS AT 6" O.C. EDGES AND 12" O.C. FIELD UNLESS OTHERWISE NOTED IN SHEAR WALL SCHEDULE.
- EXTEND SHEATHING TO SILL PLATE & BLOCK AT ALL JOINTS TO CREATE DIAPHRAM.
- 7'-3" FRAMED WALL HEIGHT
- ALL WINDOWS TOP @ 6'-8" A.F.F. UNLESS OTHERWISE NOTED

**KEYNOTES**

- A. COUNTERTOP 3/8" HIGH
- B. FRIDGE UNDER COUNTER



**SHEAR WALL NOTES**

ALL EXTERIOR WALLS AND VERTICAL SURFACES AT STEPS IN ROOF SHALL BE SHEATHED WITH 7/16" APA RATED 24/0 OR BETTER STRUCTURAL WOOD PANELS. BLOCK ALL HORIZ EDGES WITH 2" NOM. OR WIDER. 2" OR WIDER FRAMING AT ADJOINING PANEL EDGES AND NAILS SHALL BE STAGGERED WHERE 8d NAILS ARE SPACED 3" O.C. OR LESS. SHEATHING SHALL EXTEND CONTINUOUS FROM FLOOR TO TOP PLATE FRAMING ON UPPER EXT. WALLS. NAILS SHALL BE PLACED NOT LESS THAN 1/2" FROM EDGE OF PANEL AND DRIVEN FLUSH BUT SHALL NOT FRACTURE THE SURFACE OF THE SHEATHING. EXTEND SHEATHING OVER RIM AND NAIL TO RIM AND WALL PLATES 4" O.C.

**SHEAR WALL SCHEDULE**

TYPE	SHEATHING	NAIL	EDGE	FIELD	STAPLE EQ
TYPICAL	7/16" ONE SIDE	8d	6" O.C.	12" O.C.	16G @ 3" O.C.
SW-1	7/16" ONE SIDE	8d	4" O.C.	12" O.C.	16G @ 2" O.C.
SW-2	7/16" ONE SIDE	8d	3" O.C.	12" O.C.	NOT ALLOWED
SW-3	7/16" ONE SIDE	8d	2" O.C.	12" O.C.	NOT ALLOWED

NOTE: 16 GAUGE STAPLES MAY BE SUBSTITUTED FOR 8d NAILS AT 1/2 SPACING ON TYPICAL AND SW-1. SW-2 AND SW-3 REQUIRE 3X OR (2) 2X ON JOINING PANEL EDGES.

**FRAMING DETAILS**

- FORCE TRANSFER SHEAR WALL
- TOP PLATE NAILING

FRAMING AND SHEATHING NOTES  
--SEE PAGE 7



**MAIN FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

**NET ZERO STUDIO**  
1748 EAST 4600 SOUTH  
OGDEN, UTAH

MAIN LEVEL	320	Date	01/19/2016
LOFT LEVEL	178	Scale	NOTED
TOTAL FIN.	498	Drawn	AS, BS, DLL, FA
		Job	GREER-RICH
PORCH	141	Sheet	06
			of 15 Sheets

FRAMING AND SHEATHING

THE CONTRACTOR SHALL USE THE FOLLOWING LUMBER GRADES UNLESS OTHERWISE NOTED:

JOISTS	DOUG FIR #2 & BTR
PARALLAMS	PER MANUF. SPEC.
HEADERS	DOUG FIR #2 & BTR
PRE-FAB TRUSSES & JOIST	PER MANUF. SPEC.
BEARING WALL STUDS	DOUG FIR #2 & BTR
SILL PLATES	PRESSURE TREATED DOUG FIR #2 & BTR
POSTS	DOUG FIR #1 & BTR
EXT DECK JOIST & BEAMS	PRESSURE TREATED DOUG FIR #2 & BTR

EACH PIECE OF STRUCTURAL LUMBER, SHEATHING, AND TIMBER SHALL BE MARKED WITH A COMPETENT AND RELIABLE ORGANIZATION WHOSE REGULAR BUSINESS IS TO ESTABLISH LUMBER GRADES. THE ORGANIZATION, GRADING, AND GRADE MARKING SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.

THE SIZING AND SURFACING OF ALL LUMBER EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE SHALL BE MILL SIZED AND SURFACED ON 4 SIDES. ALL LUMBER SHALL BE STRAIGHT STOCK FREE FROM WARPS AND SINGLE LENGTH PIECES. SPLICING SHALL NOT BE PERMITTED EXCEPT WHERE NOTED OR APPROVED BY THE ENGINEER.

LUMBER SHALL BE AT LEAST OF THE GRADES NOTED ABOVE UNLESS OTHERWISE NOTED ON THE PLANS. ALL LUMBER SHALL BE SURFACED AND FREE OF HEART CENTER. LUMBER SHALL MEET SPECIES AND COMMERCIAL GRADE AS INDICATED ON THE PLANS AND THE DESIGN VALUES FOR VISUALLY GRADED LUMBER IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATION BY THE NATIONAL FOREST PRODUCTS ASSOCIATION, WHEREVER IS GREATER. BASE VALUES SHOWN MAY BE ADJUSTED IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATION. DF INDICATES DOUGLAS FIR, HF INDICATES HEM FIR, RD INDICATES REDWOOD, AND SDF INDICATES SPRUCE PINE FIR.

USE APPROPRIATE SIMPSON TIES/HARDWARE TO CONNECT ALL HEADERS TO POST OR TRIMMERS FOR ALL HEADERS 6' LONG AND LONGER. ALL MULTIPLE BEAMS AND HEADERS SHALL BE NAILED USING 16D @ 16" O.C. THREE ROWS.

ALL 2X4 STUDS TO BE MAX. 16" O.C. 2X6 STUDS TO BE MAX 24" O.C. FLOOR SHEATHING SHALL BE 3/4" T&G APA RATED 40/20 OSB SHEATHING NAILED WITH 8d NAILS 6" O.C. AT ALL PANEL EDGES, SUPPORTED EDGES. USE 8d NAILS 12" O.C. IN FIELD. NAILS SHALL BE MIN. 1/2" FROM EDGE OF PANEL. LAY SHEATHING LONG DIMENSIONS PERPENDICULAR TO JOISTS AND GLUE WITH GLUE CONFORMING TO APA SPEC. FLOOR JOISTS SHALL BE BLOCKED AT ALL BEARING POINTS. BLOCK ALL HORZ. EDGES OF WALL SHEATHING WITH 2 X 4 BLOCKING. EXTEND SHEATHING OVER RIM JOIST AND NAIL TO WALL PLATES ABOVE AND BELOW. OR BREAK UPPER AND LOWER SHEETING AT MID HEIGHT OF RIM BOARD. EXTEND SHEATHING DOWN TO SILL PLATE AND NAIL PER SHEAR WALL SCHEDULE.

TYPICAL ROOF SHEATHING SHALL BE 7/16" RATED OSB SHEATHING NAILED WITH 8d NAILS 6" O.C. AT PANEL EDGES, SUPPORTED EDGES, AND ALL BLOCKING WITH 8d NAILS, 12" O.C. ALONG INTERMEDIATE FRAMING MEMBERS. UNLESS OTHERWISE NOTED USE 2:2X10 WITH PLY FILLER FOR BEARING HEADER. NOTE: FOR ROOF SNOW LOADS OVER 40 PSF USE 5/8" OSB FRAMING AND SHEATHING CONTINUED

LAY SHEATHING WITH FACE GRAIN PERPENDICULAR TO FRAMING UNLESS SHOWN OTHERWISE ON THE PLANS. WHERE SHEATHING IS LAID WITH FACE GRAIN PARALLEL TO FRAMING, 5 PLY MINIMUM SHEATHING SHALL BE USED. SHEATHING SHALL CONFORM TO APA STANDARDS PS-1 AND NER-108 EXPOSURE. USE AS FOLLOWS UNLESS OTHERWISE NOTED IN PLANS.

EXCEPT WHERE OTHERWISE NOTED, CONNECT ALL WOOD TO CONCRETE, WOOD TO STEEL AND WOOD TO WOOD (EXCEPT STUD TO PLATE) WITH SIMPSON METAL CONNECTORS. SOLID 2" NOMINAL BLOCKING SHALL BE PROVIDED AT ENDS OR POINTS OF SUPPORT OF ALL WOOD JOISTS AND TRUSSES. INSTALL JOIST, RAFTER, AND BEAM HANGERS & POST CAPS PER MANUFACTURERS SPECIFICATIONS.

MINIMUM NAILING SHALL BE AS PER SHEAR WALL SCHEDULE. STAPLES CAN BE SUBSTITUTED FOR NAILS AT HALF SPACING. PROVIDE SOLID BEARING THROUGH FLOOR SYSTEMS AND POSTS DOWN TO CONC. FTG.

THE CONTRACTOR SHALL FOLLOW THE MINIMUM NAILING SCHEDULE LISTED IN THE NDS TABLE 3.2.1. USE COMMON NAILS WHEREVER NAILS ARE SPECIFIED FOR SHEAR WALLS OR DIAPHRAGMS. SINKERS MAY BE USED IN ALL OTHER LOCATIONS.

PROVIDE DOUBLE FLOOR JOISTS UNDER ALL BEARING OR SHEAR WALLS PARALLEL TO DIRECTION OF FRAMING. PROVIDE DOUBLE FLOOR JOISTS UNDER WINDOW AND DOOR TRIMMERS AND AT OUTSIDE EDGES OF ALL CANTILEVERED FLOOR SECTIONS.

BOLTS SHALL BE INSTALLED IN HOLES BORED 1/8" LARGER THAN THE BOLT DIAMETER. BOLTS AND NUTS SEATING ON WOOD SHALL HAVE 3" X 3" X 1/2" CUT STEEL WASHERS UNDER ALL HEADS AND NUTS. NUTS SHALL BE SCREWED TIGHT. COUNTER BORE FOR HEADS AND NUTS ONLY WHERE NOTED ON THE DRAWINGS AND THEN ONLY TO SUFFICIENT DEPTH TO FLUSH NUT OR HEAD. CUT OFF EXCESSIVE BOLT LENGTH AS REQUIRED AND NICK THE BOLT THREADS TO PREVENT NUT MOVEMENT OR LOOSENING.

CONTRACTOR AND ALL SUB-CONTRACTORS SHALL FOLLOW ALL STANDARD BUILDING CODES, PRACTICES, AND REQUIREMENTS AS LISTED IN THE 2012 IRC.

USE BALLOON FRAMING METHOD TO CONNECT FLOOR SYSTEMS IN SPLIT LEVEL DESIGNS. USE DOUBLE FLOOR JOIST UNDER EA. END OF SHEAR WALLS OVER CANT. FLOOR SECTIONS.

INSTALL JOIST AND RAFTER HANGERS AS PER MANUFACTURERS SPECIFICATIONS. UNLESS OTHERWISE NOTED CONNECT ALL HEADER TO STUD/POST, POST TO FLOOR, BEAM TO BEAM, RAFTER TO WALL OR TRUSS, ETC. WITH APPROPRIATE METAL CONNECTORS. USE METAL HURRICANE CLIPS EACH END OF EACH TRUSS.

ALL ROUGH HARDWARE, JOIST HANGERS, STRAPS, POST CAPS ETC. SHALL BE MANUFACTURED BY SIMPSON COMPANY OR AN APPROVED EQUAL. THE MAXIMUM SIZE AND NUMBER OF FASTENERS SPECIFIED BY THE MANUFACTURER SHALL BE USED UNLESS NOTED OTHERWISE.

BEARING WALLS TO BE CONSTRUCTED AS FOLLOWS:

HEIGHT	STUD FRAMING
0' TO 10'	2x4's @ 16" o.c.
10' TO 12'	2x4's @ 12" o.c.
12' TO 14'	2x6's @ 16" o.c.
14' TO 16'	2x6's @ 12" o.c.
16' TO 20'	2x6 LSL's @ 12" o.c.

WALLS TALLER THAN 20' AND/OR OPENINGS GREATER THAN 8' WIDE TO BE SPECIFIED BY ENGINEER. USE DBL KING STUDS ON ALL WALLS 10' HIGH. USE 2X6 STUDS FOR ALL WALLS SUPPORTING OVER TWO LOADS.



GENERAL NOTES

- INTERIOR WALLS FRAMED WITH 2 X 4 STUDS @ 16" O.C. UNLESS OTHERWISE NOTED
- EXTERIOR WALLS FRAMED WITH 2 X 6 @ 24" O.C. UNLESS OTHERWISE NOTED
- BALLOON FRAMING ON EAST AND WEST WALLS OF LOFT (SECOND FLOOR)
- DIMENSIONS ON FLOOR PLANS ARE TO ROUGH FRAMING
- ALL DOOR RETURNS ARE 4" UNLESS OTHERWISE NOTED
- CEILING HEIGHT - 7'-3" A.F.F.
- ALL WINDOWS TOP @ 6'-8" A.F.F. UNLESS OTHERWISE NOTED

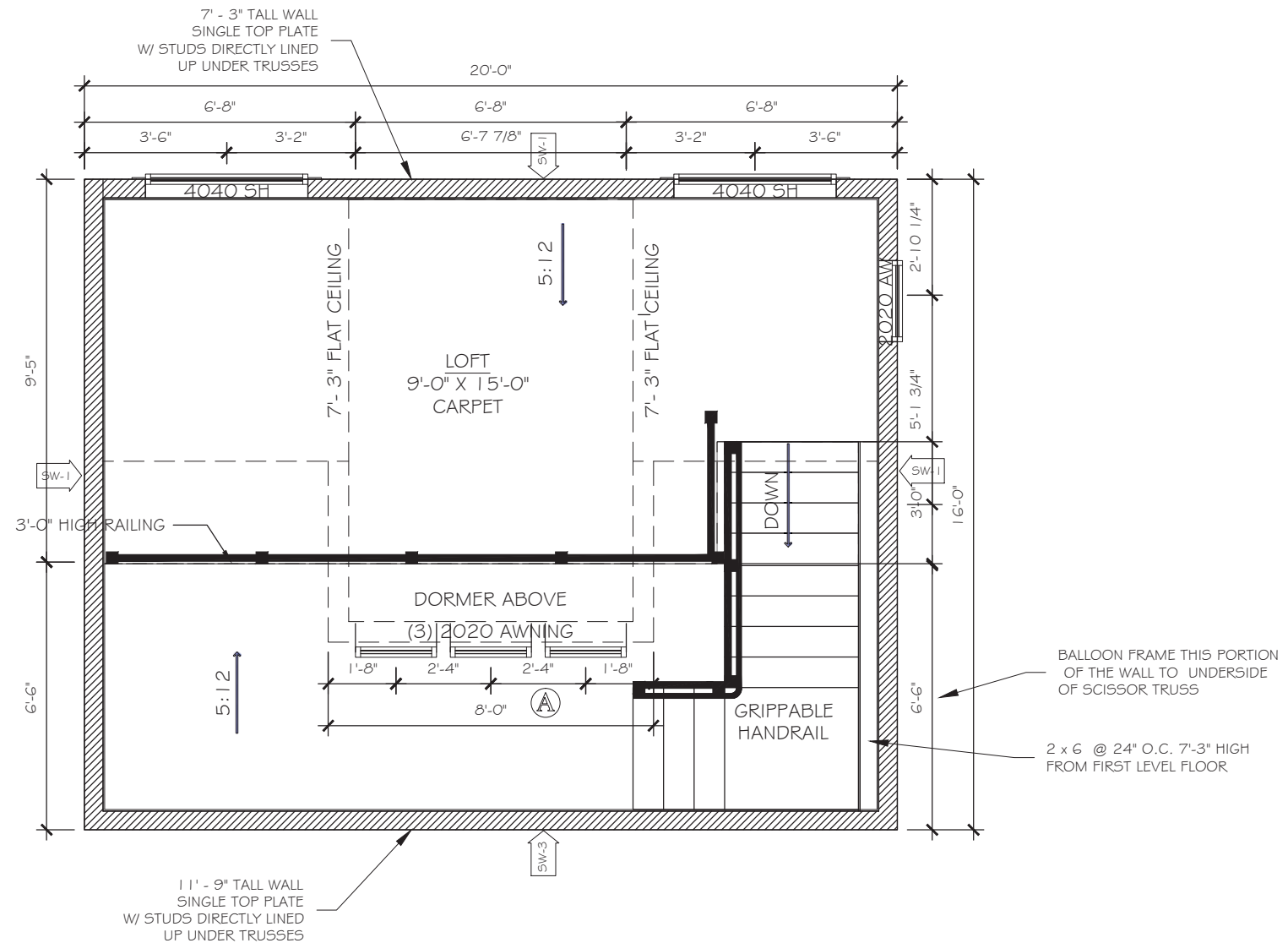
KEYNOTES

- A. DORMER WINDOWS (3 EACH ABOVE SECOND FLOOR)

FRAMING DETAILS



ALL DETAILS MAY NOT BE APPLICABLE TO YOUR PLANS



SECOND FLOOR LEVEL PLAN

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

NET ZERO STUDIO

1748 EAST 4600 SOUTH  
OGDEN, UTAH

MAIN LEVEL	320	Date	01/19/2016
LOFT LEVEL	178	Scale	NOTED
TOTAL FIN.	498	Drawn	AS, BS, DLL, FA
		Job	GREER-RICH
PORCH	141	Sheet	07

of 15 Sheets



**GENERAL NOTES**

- 4" TRIM AROUND ALL DOORS AND WINDOWS UNLESS OTHERWISE NOTED
- SMART BOARD SIDING - BOARD AND BATTEN PATTERN
- ATTIC VENTILATION TO MEET MINIMUM CODE REQUIREMENTS
- ROOF VENT ALONG TOP OF DORMER
- AWNING OVER WINDOWS ON WEST SIDE

**KEYNOTES**

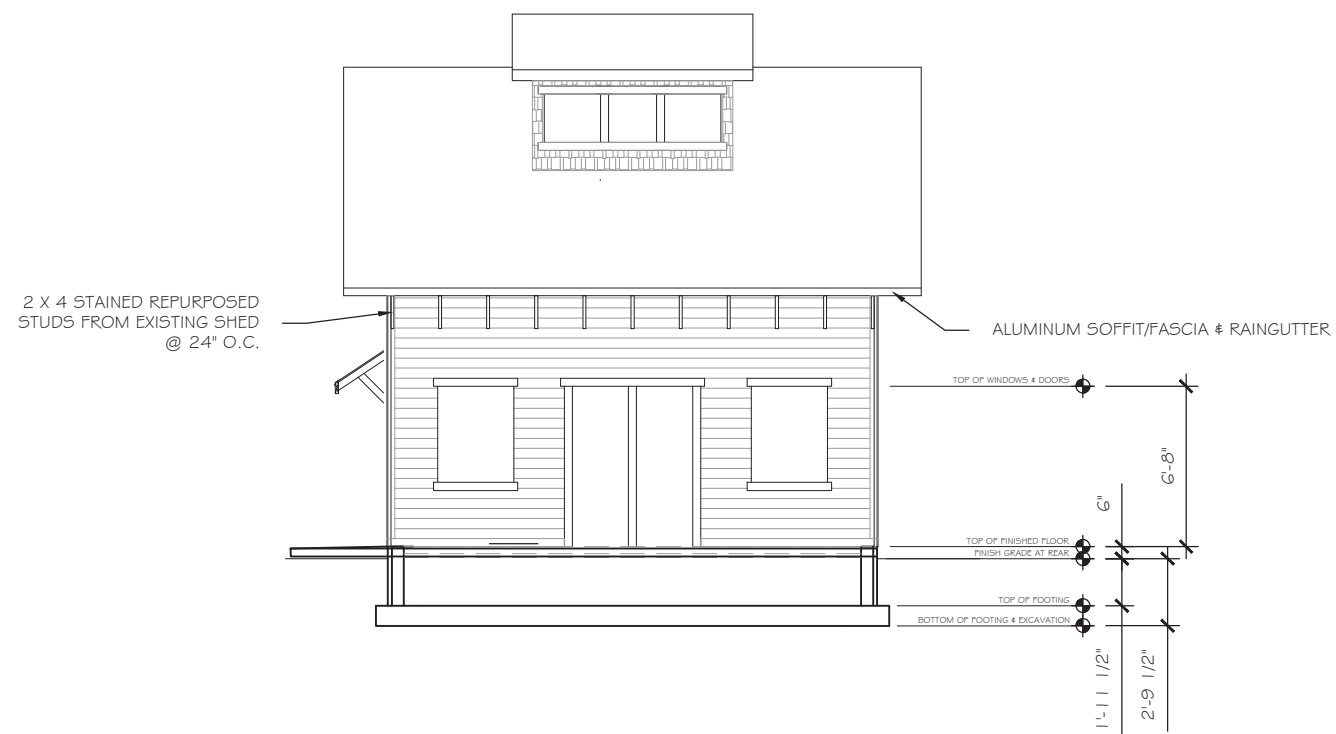
**NET ZERO STUDIO**

1748 EAST 4600 SOUTH  
OGDEN, UTAH

MAIN LEVEL	320	Date	01/19/2016
LOFT LEVEL	178	Scale	NOTED
TOTAL FIN.	498	Drawn	AS, BS, DLL, FA

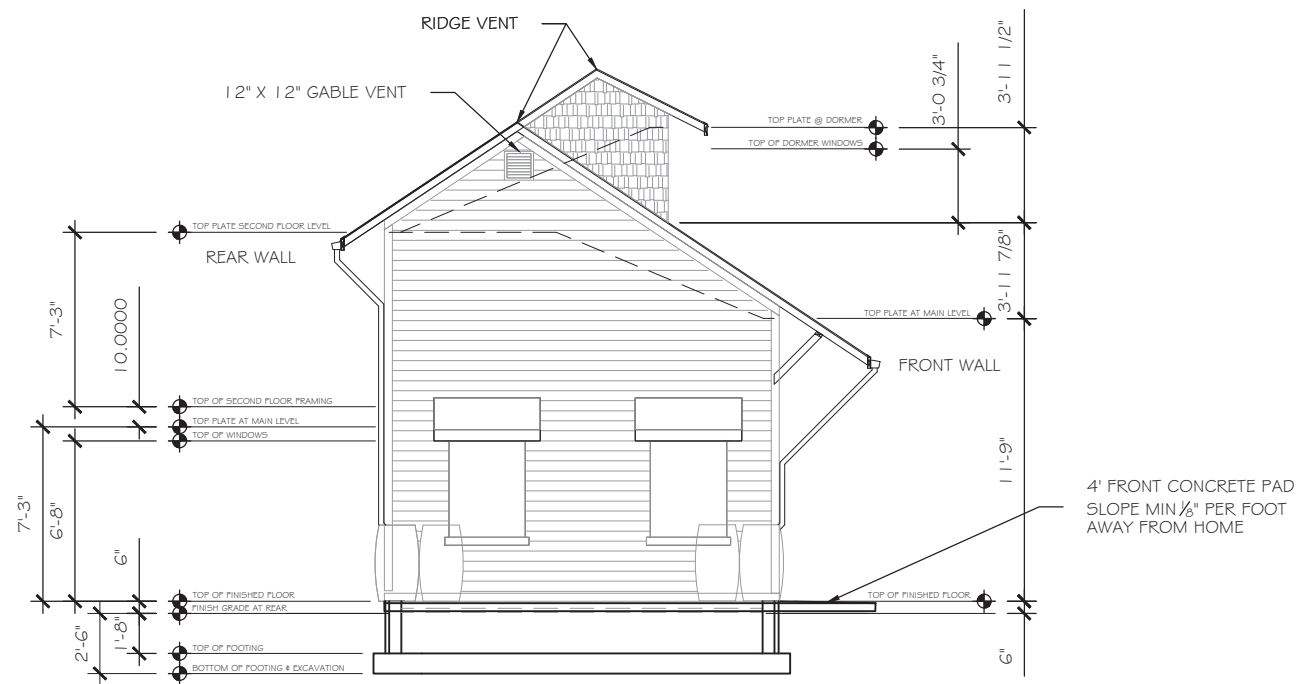
PORCH	141	Job	GREER-RICH
		Sheet	08

of 15 Sheets



**FRONT ELEVATION**

SCALE: 1/8" = 1'-0"



**LEFT ELEVATION**

SCALE: 1/8" = 1'-0"





GENERAL NOTES

- 4" TRIM AROUND ALL DOORS AND WINDOWS UNLESS OTHERWISE NOTED
- SMART BOARD SIDING - BOARD AND BATTEN PATTERN
- ATTIC VENTILATION TO MEET MINIMUM CODE REQUIREMENTS
- ROOF VENT ALONG TOP OF DORMER
- AWNING OVER WINDOWS ON WEST SIDE

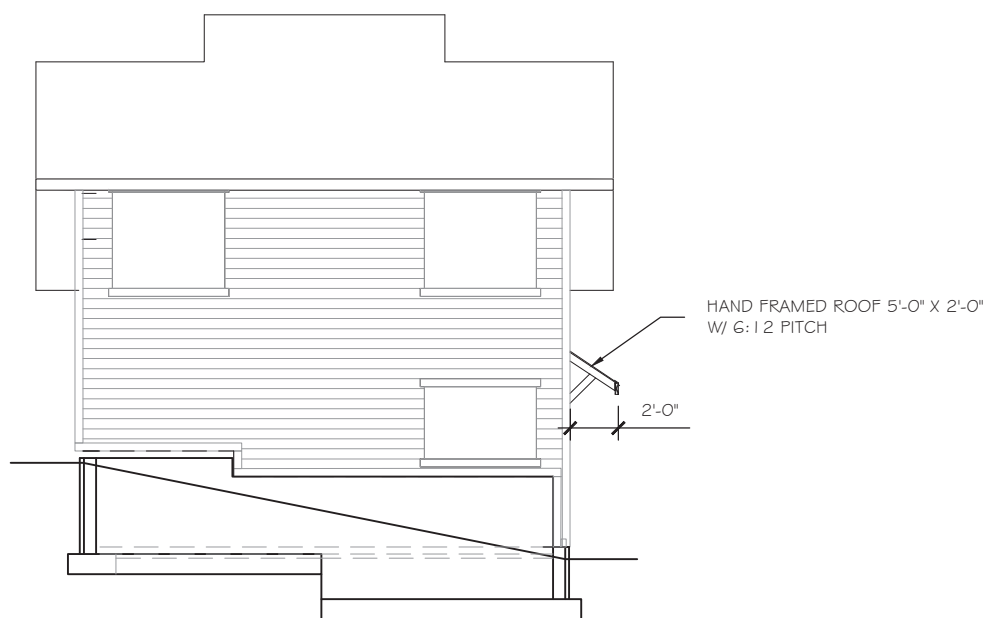
KEYNOTES

NET ZERO STUDIO

1748 EAST 4600 SOUTH  
OGDEN, UTAH

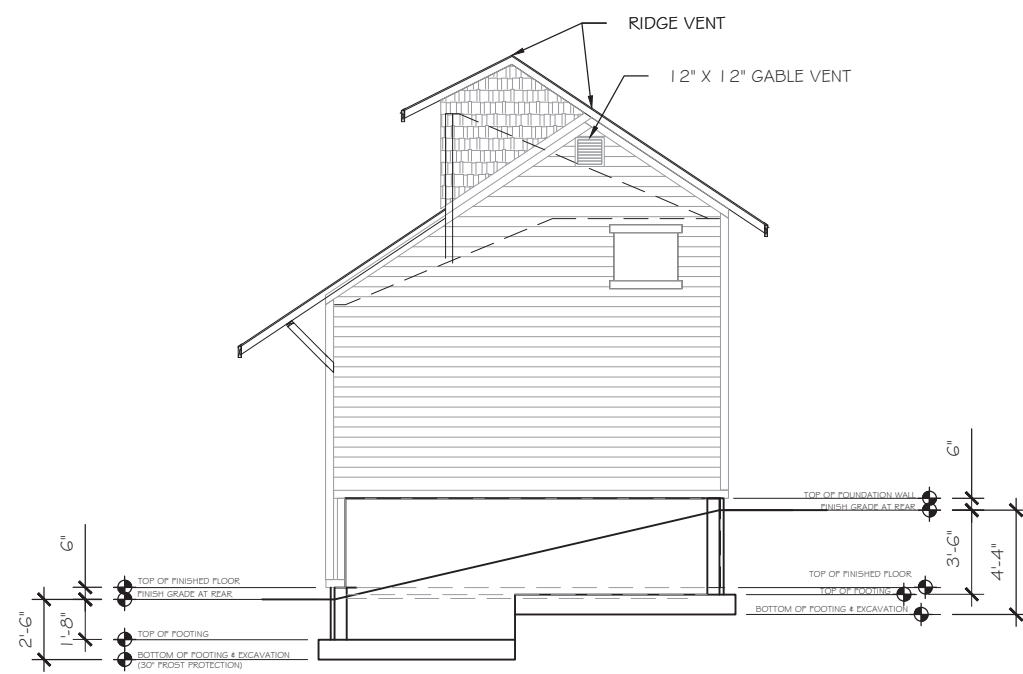
MAIN LEVEL	320	Date	01/19/2016
LOFT LEVEL	178	Scale	NOTED
TOTAL FIN.	498	Drawn	AS, BS, DLL, FA
		Job	GREER-RICH
PORCH	141	Sheet	

09  
of 15 Sheets



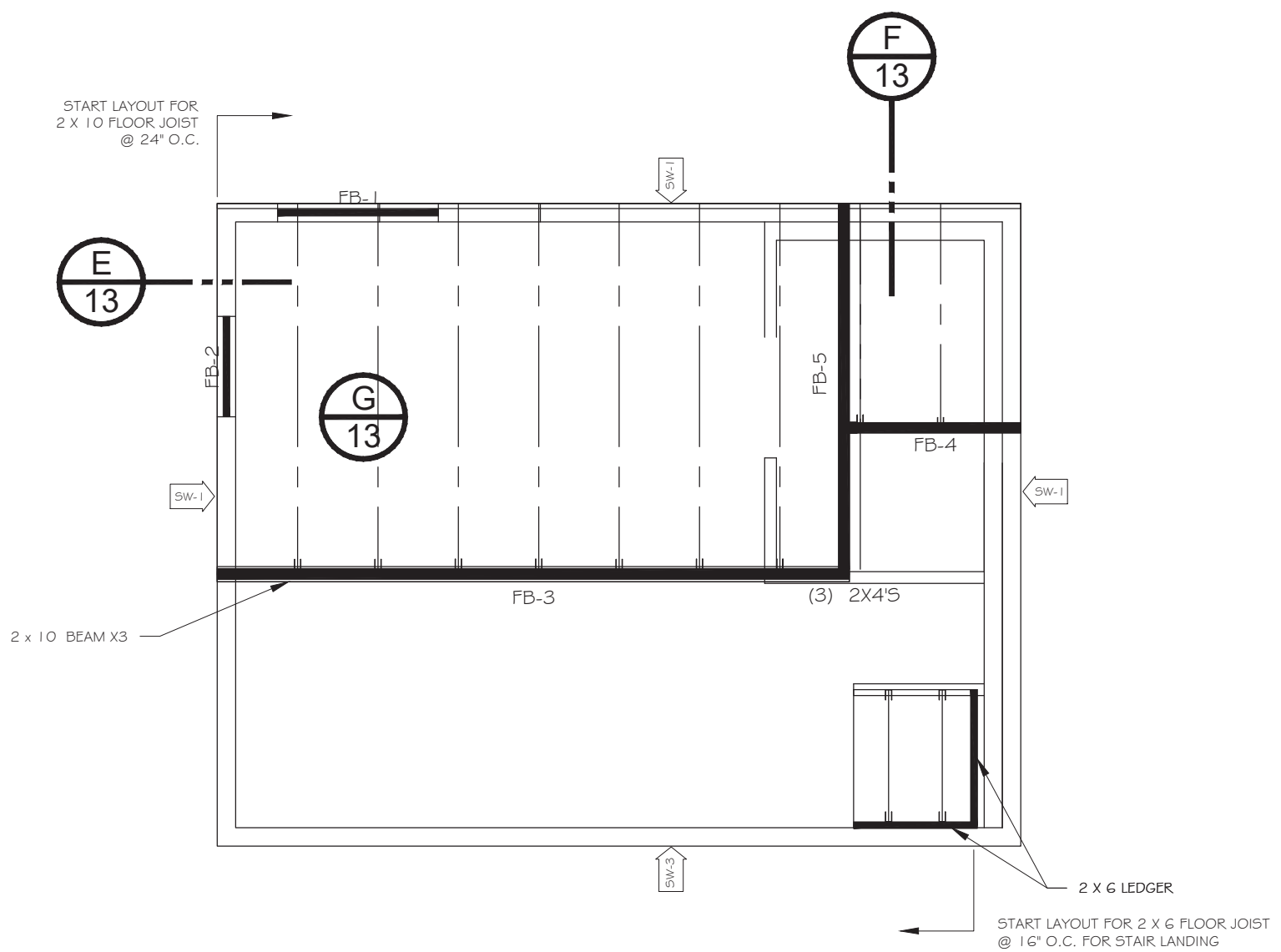
REAR ELEVATION

SCALE: 1/8" = 1'-0"



RIGHT ELEVATION

SCALE: 1/8" = 1'-0"



**FRAMING DETAILS**

-  LOW ROOF SHEAR WALL
-  HEADER DETAIL

FRAMING AND SHEATHING NOTES  
--SEE PAGE 7



**FRAMING & SHEATHING NOTES:**

- ALL 2 X 4 STUDS TO BE MAX 16" O.C., 2 X 6 STUDS @ 24" MAX O.C.
- FLOOR SHEATHING SHALL BE 3/4" T4G APA RATED 40/20 OSB SHEATHING NAILED WITH 8d NAILS 6" O.C. AT ALL PANEL EDGES, SUPPORTED EDGES AND ALL BLOCKING. USE 8d NAILS 12" O.C. IN FIELD. NAILS SHALL BE MIN 1/2" FROM EDGE OF PANEL.
- LAY SHEATHING LONG DIMENSION PERPENDICULAR WITH JOISTS AND GLUE WITH GLUE CONFORMING TO APA SPECS.
- FLOOR JOISTS SHALL BE BLOCKED AT ALL BEARING POINTS
- BLOCK ALL HORIZONTAL EDGES OF WALL SHEATHING WITH 2 X 4 BLOCKING.
- EXTEND SHEATHING OVER RIM JOIST AND NAIL TO WALL PLATES ABOVE AND BELOW OR BREAK UPPER & LOWER SHEATHING AT MID HEIGHT OF RIM BOARD.
- EXTEND SHEATHING DOWN TO SILL PLATE AND NAIL PER SHEAR WALL SCHEDULE.
- TYPICAL ROOF SHEATHING TO BE 7/16" RATED OSB SHEATHING NAILED WITH 8d NAILS 6" O.C. AT PANEL EDGES, SUPPORTED EDGES AND ALL BLOCKING WITH 8d NAILS, 12" O.C. ALONG INTERMEDIATE FRAMING MEMBERS.
- UNLESS OTHERWISE NOTED USE (2) 2 X 6 WITH PLY FILLER FOR BEARING HEADER.
- FOR ROOF SNOW LOADS OVER 40 PSF, USE 5/8" OSB SHEATHING
- EXCEPT WHERE OTHERWISE NOTED, CONNECT ALL WOOD TO CONCRETE, WOOD TO STEEL AND WOOD TO WOOD (EXCEPT STUD TO PLATE) WITH SIMPSON METAL CONNECTORS.
- SOLID 2" NOMINAL BLOCKING SHALL BE PROVIDED AT ENDS OR POINTS OF SUPPORT OF ALL WOOD JOISTS AND TRUSSES.
- INSTALL JOIST, RAFTER AND BEAM HANGERS & POST CAPS PER MANUFACTURER SPECIFICATIONS.
- MINIMUM NAILING SHALL BE AS PER SHEAR WALL SCHEDULE. STAPLES CAN BE SUBSTITUTED FOR NAILS AT HALF SPACING. PROVIDE SOLID BEARING THROUGH FLOOR SYSTEMS AND POST DOWN TO CONCRETE FOOTING.
- CONTRACTOR AND ALL SUB-CONTRACTORS SHALL FOLLOW ALL STANDARD BUILDING CODES, PRACTICES AND REQUIREMENTS LISTED IN THE 2012 IRC.
- USE BALLOON FRAMING METHOD TO CONNECT FLOOR SYSTEMS IN VAULTED CEILING APPLICATIONS.
- USE DOUBLE FLOOR JOISTS UNDER EACH END OF SHEAR WALLS OVER CANTILEVERED FLOOR SECTIONS.
- INSTALL JOIST AND RAFTER HANGERS AS PER MANUFACTURERS SPECIFICATIONS.
- UNLESS OTHERWISE NOTED, CONNECT ALL HEADER TO STUD/ POST, POST TO FLOOR, BEAM TO BEAM, RAFTER TO WALL OR TRUSS, ETC. WITH APPROPRIATE METAL CONNECTOR.

**HEADER TRIMMER CONNECTION**

- FOR HEADERS LESS THAN 5' LONG
  - NAIL TO KING STUD USING (6)16d NAILS
- FOR HEADERS 5'- 8'-6" LONG
  - INSTALL TWO ACE EA. END OR 12" LONG CS16 STRAP
  - USE (2) TRIMMERS
- FOR HEADERS 9'-18' LONG
  - INSTALL TWO ST18 EA. END
  - USE (2) TRIMMERS
  - INSTALL MST48 THROUGH FLOOR DIAPHRAGM IF APPLICABLE
  - INSTALL STHD8 OR HTT22 OR HDU TO CONCRETE OR NAIL POST TO WALL SHEATHING

**FLOOR FRAMING PLAN**

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



**GENERAL NOTES**

**FLOOR BEAM SCHEDULE**

FB-1	(2) 2 X 6 X 51"
FB-2	(2) 2 X 6 X 33"
FB-3	(2) 1 3/4" X 9 1/4" LVL
FB-4	(2) 2 X 10 X 51 1/4"
FB-5	(2) 2 X 10 X 107"

**HANGERS**

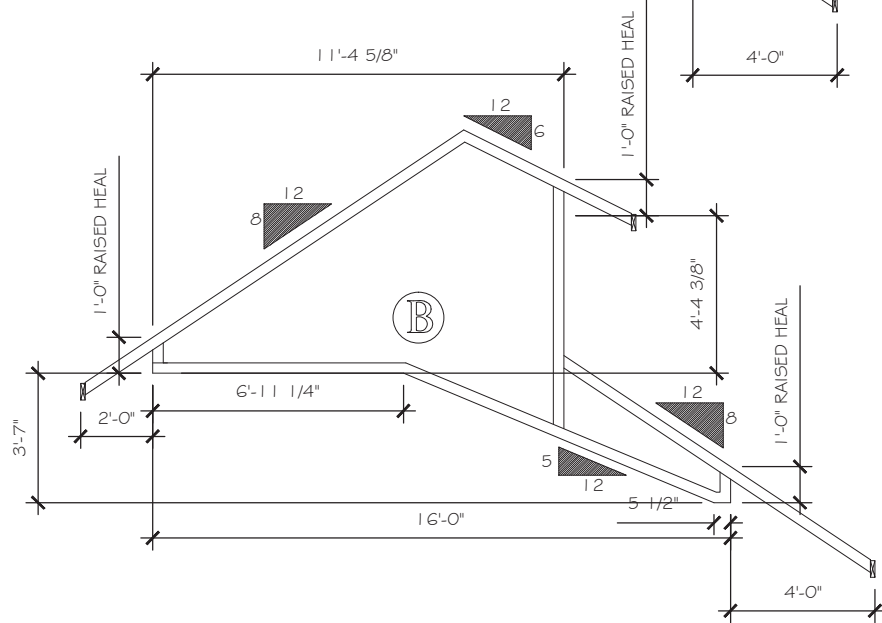
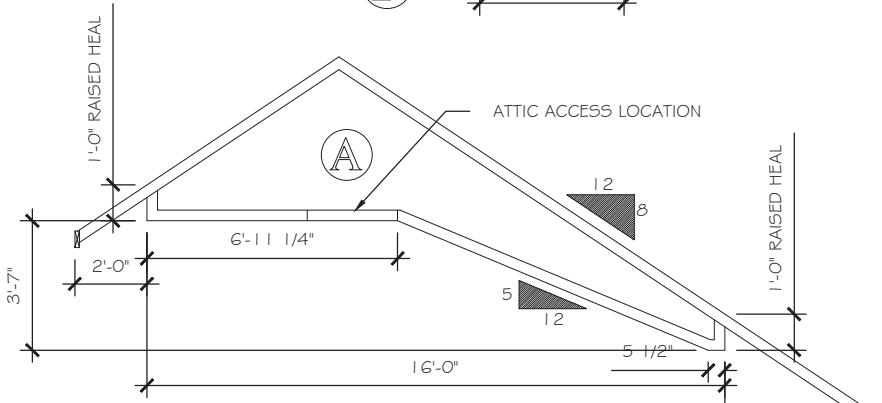
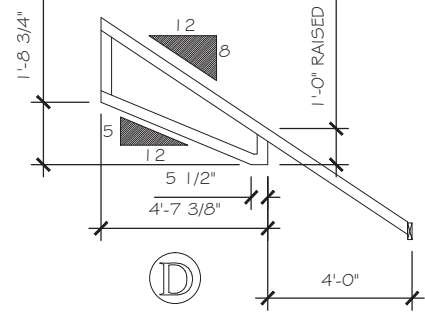
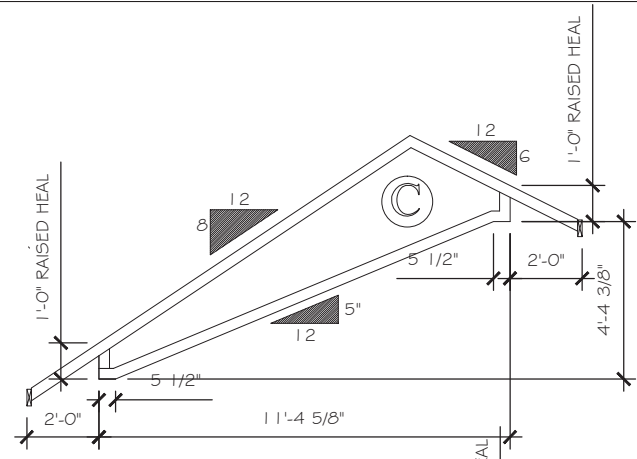
(1)	4 X 10
(1)	4 X 10 LUCZ
(9)	2 X 10
(3)	2 X 12 ANGLED FOR STRINGERS
(2)	2 X 6

**KEYNOTES**

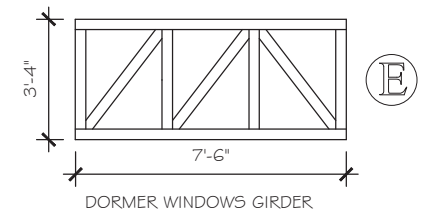
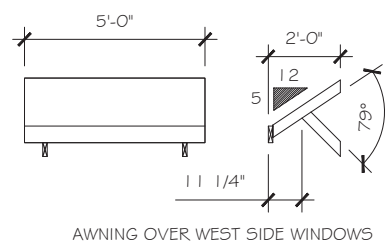
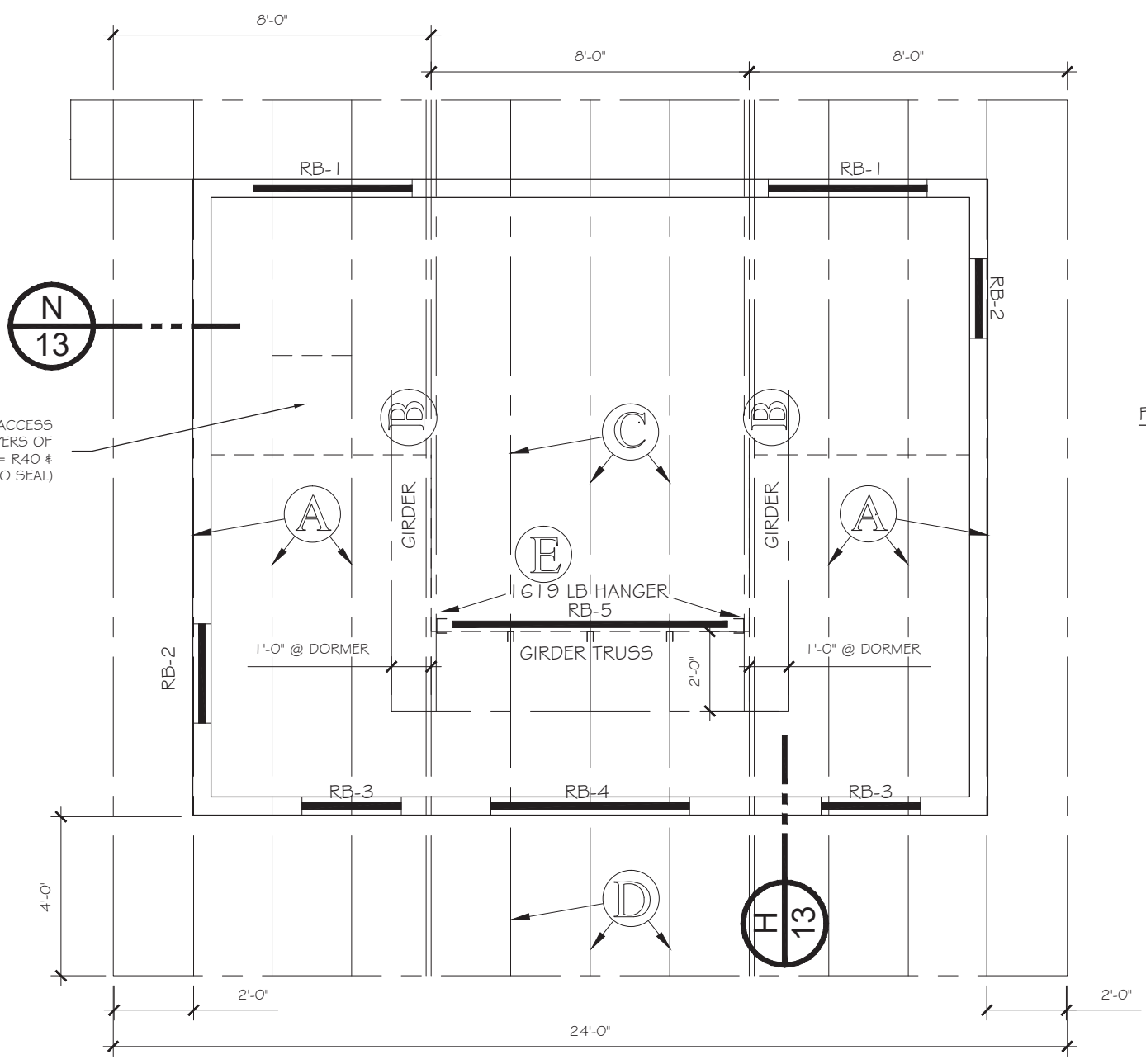
**NET ZERO STUDIO**

1748 EAST 4600 SOUTH  
OGDEN, UTAH

MAIN LEVEL	320	Date	01/19/2016
LOFT LEVEL	178	Scale	NOTED
TOTAL FIN.	498	Drawn	AS, BS, DLL, FA
		Job	GREER-RICH
PORCH	141	Sheet	10
			of 15 Sheets



22" X 30" ATTIC ACCESS  
(COVERED W/ 4 LAYERS OF  
2" EPS FOAM INSULATION = R40 #  
INSTALL GASKET ON LIP TO SEAL)



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

TRUSS/ GIRDER CONNECTION  
USE SIMPSON H1 OR EQUIV. TIES EACH END OF EA. TRUSS. INSTALL RAFTER HANGERS EA. END OF EA. RAFTER AS PER MANUFACTURE SPECS. INSTALL SOLID BLOCKING BETWEEN TRUSSES ALONG BEARING WALLS. INSTALL H16-2 OR EQUIV. STRAPS TO EA. END GIRDERS IF UPLIFT LESS THAN 1265 LBS. INSTALL VGT OR EQUIV. STRAPS TO EA. END GIRDERS IF UPLIFT LESS THAN 4940 LBS.

FRAMING DETAILS  
H 13 TRUSS BLOCK DETAIL  
K 13 TRUSS DEPTH BLOCKING  
N 13 GABLE BRACE DETAIL  
FRAMING AND SHEATHING NOTES  
--SEE PAGE 7



GENERAL NOTES

- ROOF SHEATHING SHALL BE 1/2" APA RATED W/ SPAN RATING OF 40/20 NAILED WITH 10d NAILS AT 6" O.C. AT ALL PANEL ENDS, SUPPORTED EDGES, TOP OF SHEAR WALLS AND ALL BLOCKING; 8d NAILS AT 12" O.C. ALONG INTERMEDIATE FRAMING MEMBERS. PROVIDE 1/8" GAP BETWEEN ALL PANELS.
- BLOCK JOISTS SOLID AT ALL BEARING POINTS.
- USE SIMPSON H1 TIES EACH END OF TRUSS RAFTER TO BEARING WALLS.
- INSTALL RAFTER HANGERS EACH END OF RAFTER AS PER MANUFACTURER SPECIFICATIONS.
- INSTALL SOLID BLOCKING BETWEEN TRUSSES ALONG BEARING WALLS.
- TRUSSES SHALL BE DESIGNED FOR 1.5 PSF DEAD LOAD AND APPLICABLE LIVE LOAD DEPENDING UPON LOCATION.
- POINT LOADS VALUES SPECIFIED ON ROOF FRAMING PLAN INDICATE LOADS TO BE SUPPORTED BY TRUSSES. ROOF TRUSSES SHALL BE DESIGNED ACCORDINGLY.
- CHECK DIMENSIONS WITH ARCHITECTURAL DRAWINGS. TRUSS MANUFACTURER IS RESPONSIBLE TO PROVIDE WEB AND CHORD MEMBERS TO SATISFY LOAD REQUIREMENTS.
- TRUSS MANUFACTURER SHALL SUBMIT CALCULATIONS AND SHOP DRAWINGS FOR APPROVAL BY ENGINEER.
- PROVIDE ADEQUATE VENTILATION FOR ATTIC USING GROSS SQUARE FOOTAGE OF ROOF AREA. 1/150 SQUARE FEET IF ABOVE MIDLINE OF ROOF HEIGHT, 1/300 IF BELOW MIDLINE OF ROOF HEIGHT.

KEYNOTES

ROOF BEAM SCHEDULE

RB-1	(2) 2 X 6 X 5 1"
RB-2	(2) 2 X 6 X 27"
RB-3	(2) 2 X 6 X 33"
RB-4	(2) 2 X 6 X 63"
RB-5	(2) 1 3/4" X 7 1/4" LVL

TRUSS SCHEDULE

A	(6) COMMON TRUSSES
B	(2) GIRDERS
C	(3) COMMON DORMER TRUSSES
D	(3) COMMON JACKS
E	(1) DORMER GIRDER HANGERS

(2)	4 X 6
(14)	H1
(4)	H2

NET ZERO STUDIO  
1748 EAST 4600 SOUTH  
OGDEN, UTAH

MAIN LEVEL	320	Date	01/19/2016
LOFT LEVEL	178	Scale	NOTED
TOTAL FIN.	498	Drawn	AS, BS, DLL, FA
		Job	GREER-RICH
PORCH	141	Sheet	11
			of 15 Sheets

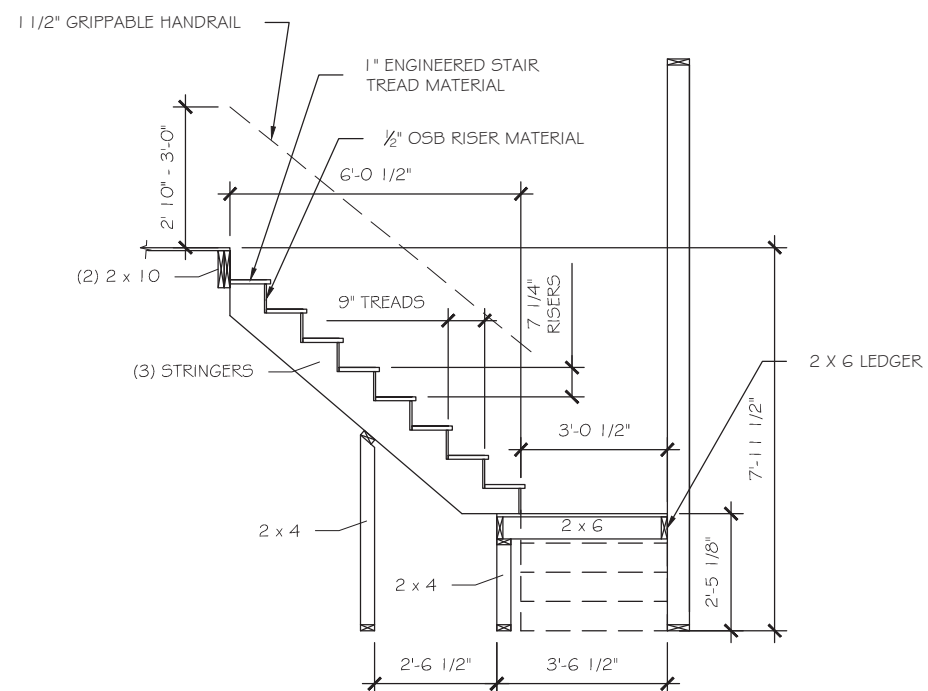
GENERAL NOTES

KEYNOTES

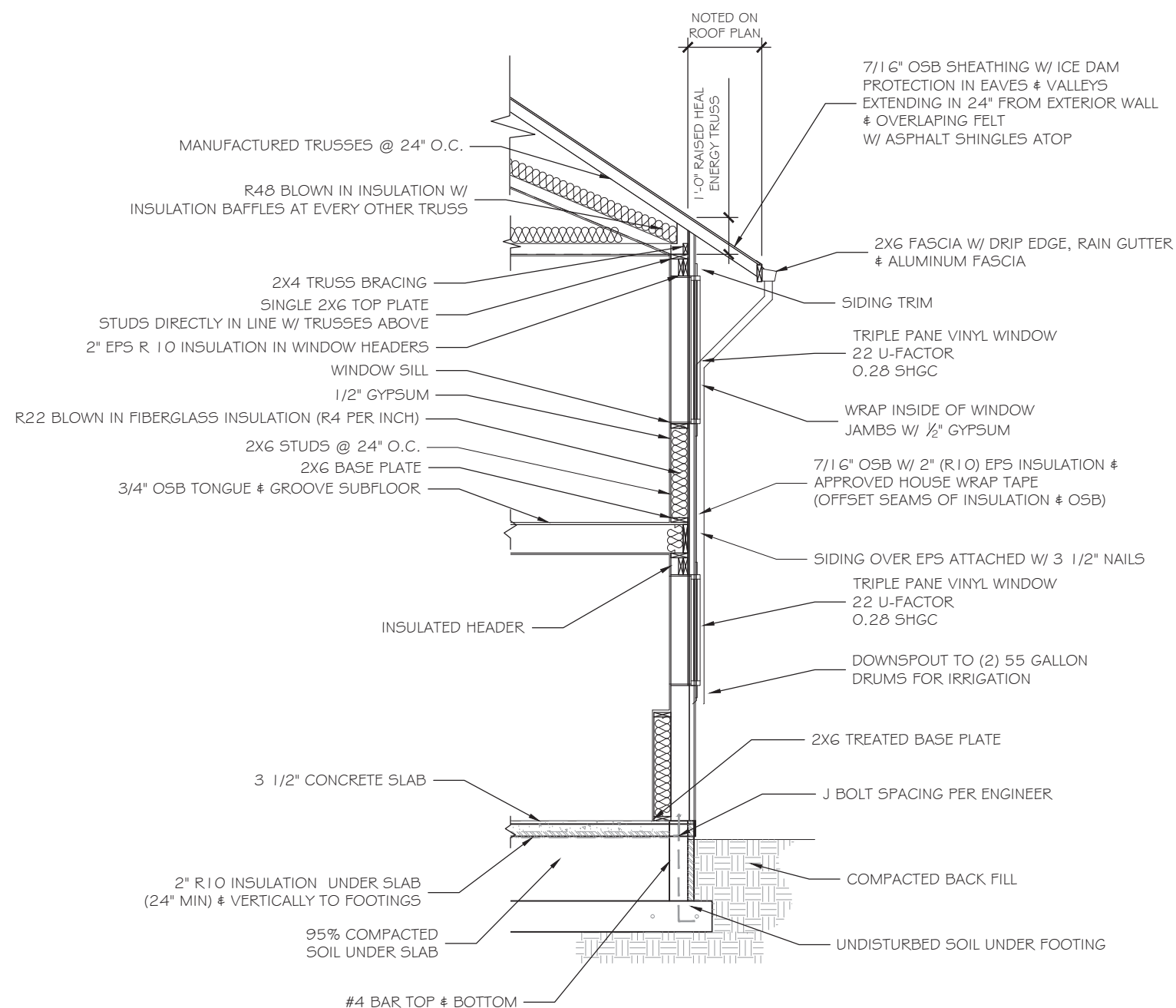
NET ZERO  
STUDIO  
1748 EAST 4600 SOUTH  
OGDEN, UTAH

MAIN LEVEL	320	Date	01/19/2016
LOFT LEVEL	178	Scale	NOTED
TOTAL FIN.	498	Drawn	AS, BS, DLL, FA
		Job	GREER-RICH
PORCH	141	Sheet	12

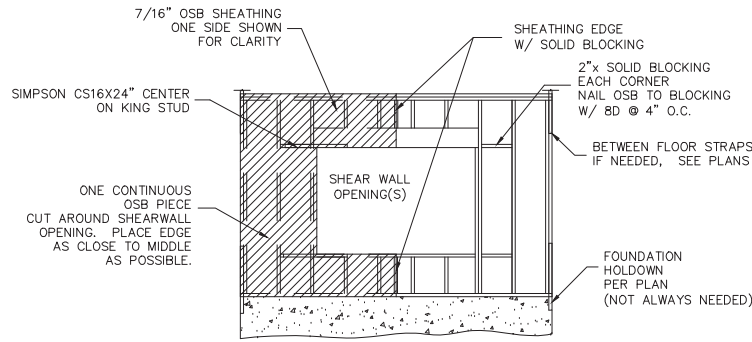
of 15 Sheets



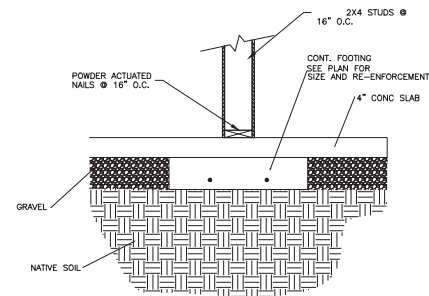
**B**  
12 STAIR DETAIL  
SCALE: 1/4"=1'-0"



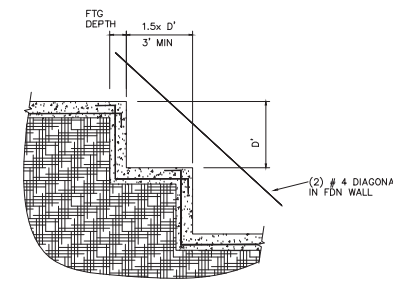
**B**  
5 TYPICAL WALL SECTION  
SCALE: 1/4"=1'-0"



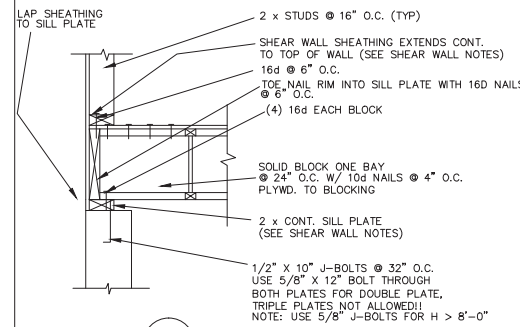
**A** FORCE TRANSFER SHEAR WALL  
NTS



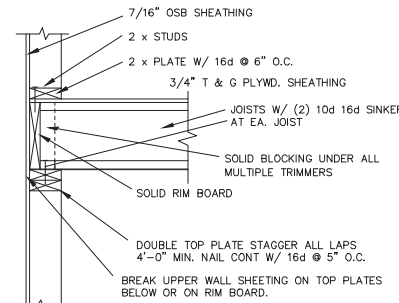
**B** INTERIOR BEARING WALL  
NTS



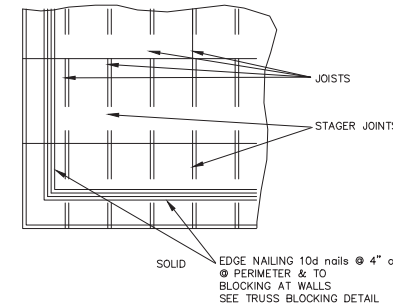
**C** FOOTING STEP DETAIL  
NTS



**E** WOOD JOIST FRAMING  
NTS



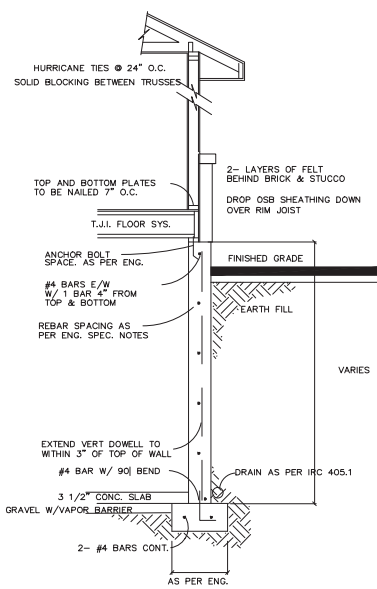
**F** WOOD JOIST FRAMING  
NTS



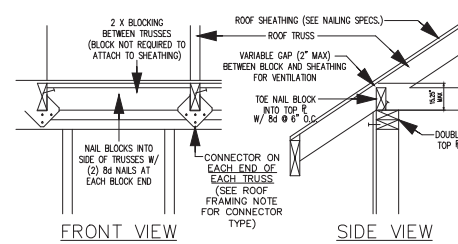
**G** HORIZ. SHEATHING LAYOUT  
NTS



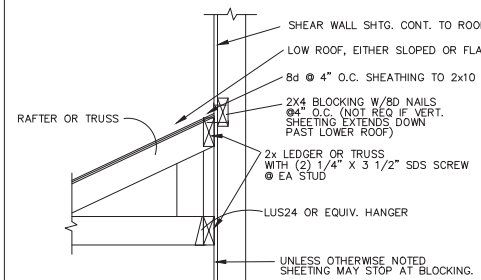
Structural Design and Analysis  
4883 Old Highway Rd Suite A  
Morgan, Utah 84050  
(801) 876-3501



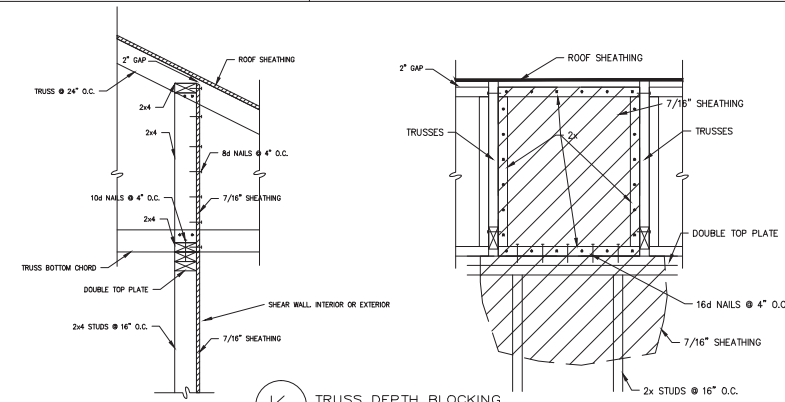
**L** TYP. WALL SECTION  
NTS



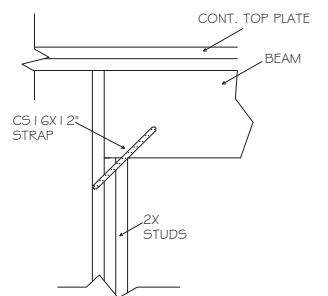
**H** TRUSS BLOCK DETAIL  
NTS



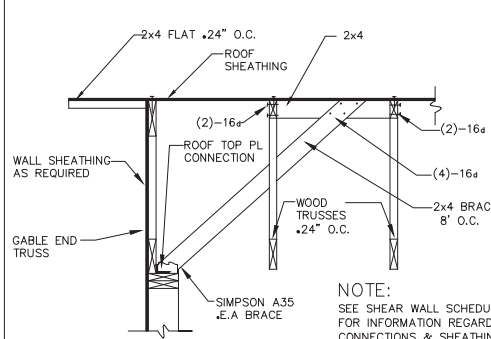
**J** LOW ROOF SHEAR WALL  
NTS



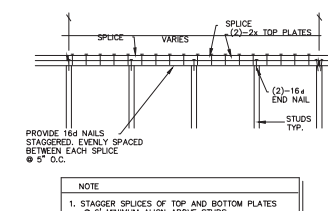
**K** TRUSS DEPTH BLOCKING  
NTS



**M** HEADER DETAIL  
NTS



**N** GABLE BRACE DETAIL  
NTS



**P** TYP. TOP PLATE NAILING  
NTS

ALL DETAILS MAY NOT BE APPLICABLE TO YOUR PLANS

**TYPICAL WALL SECTION**  
SCALE: 1/4" = 1'-0"



GENERAL NOTES

KEYNOTES

**NET ZERO STUDIO**  
1748 EAST 4600 SOUTH  
OGDEN, UTAH

MAIN LEVEL	320	Date	01/19/2016
LOFT LEVEL	178	Scale	NOTED
TOTAL FIN.	498	Drawn	AS, BS, DLL, FA
PORCH	141	Job	GREER-RICH
		Sheet	13
			of 15 Sheets

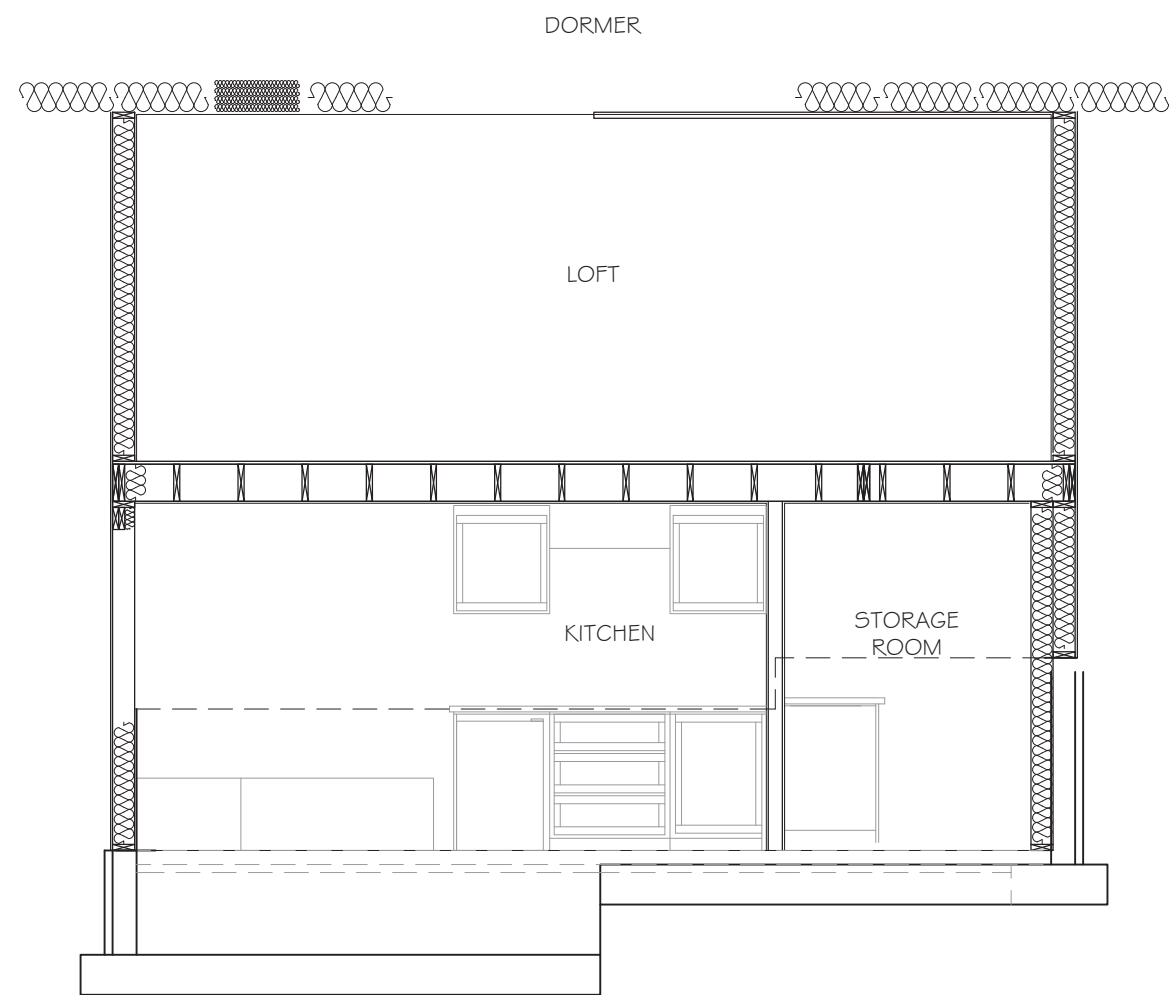


GENERAL NOTES

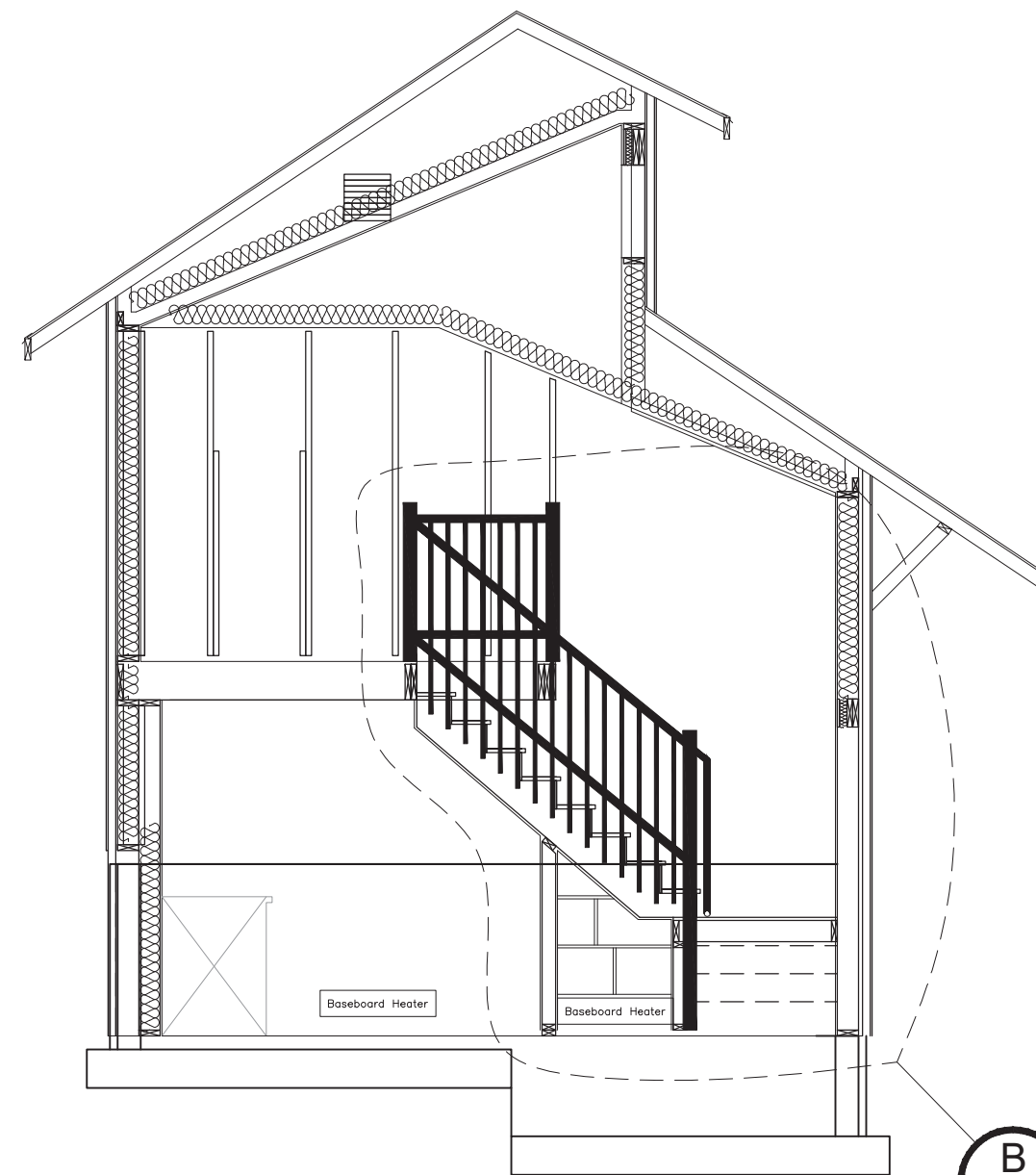
KEYNOTES

NET ZERO  
STUDIO  
1748 EAST 4600 SOUTH  
OGDEN, UTAH

MAIN LEVEL	320	Date	01/19/2016
LOFT LEVEL	178	Scale	NOTED
TOTAL FIN.	498	Drawn	AS, BS, DLL, FA
		Job	GREER-RICH
PORCH	141	Sheet	14
			of 15 Sheets



BB LONGITUDINAL CROSS SECTION  
SCALE: 1/4" = 1'-0"



AA TRANSVERSE CROSS SECTION  
SCALE: 1/4" = 1'-0"

B  
11



**GENERAL NOTES**

- LOCATION OF ALL ELECTRICAL & HVAC COMPONENTS ARE NOT EXACT UNLESS OTHERWISE NOTED.
- LOCATION OF ALL ELECTRICAL & HVAC COMPONENTS TO BE INSTALLED PER CODE.
- OUTLETS TO BE PLACED WITH ELECTRICIAN AT ROUGH ELECTRICAL WALK-THROUGH STAGE.
- ALL OUTLETS IN WET LOCATIONS TO BE PROTECTED BY GFCI (BATH, KITCHEN, EXTERIOR).
- SEE GENERAL NOTES PAGE FOR ELECTRICAL AND HVAC CODE REQUIREMENTS.
- ALL EXITS TO HAVE GFCI OUTLET WITHIN 36" OF DOOR.

**KEYNOTES**

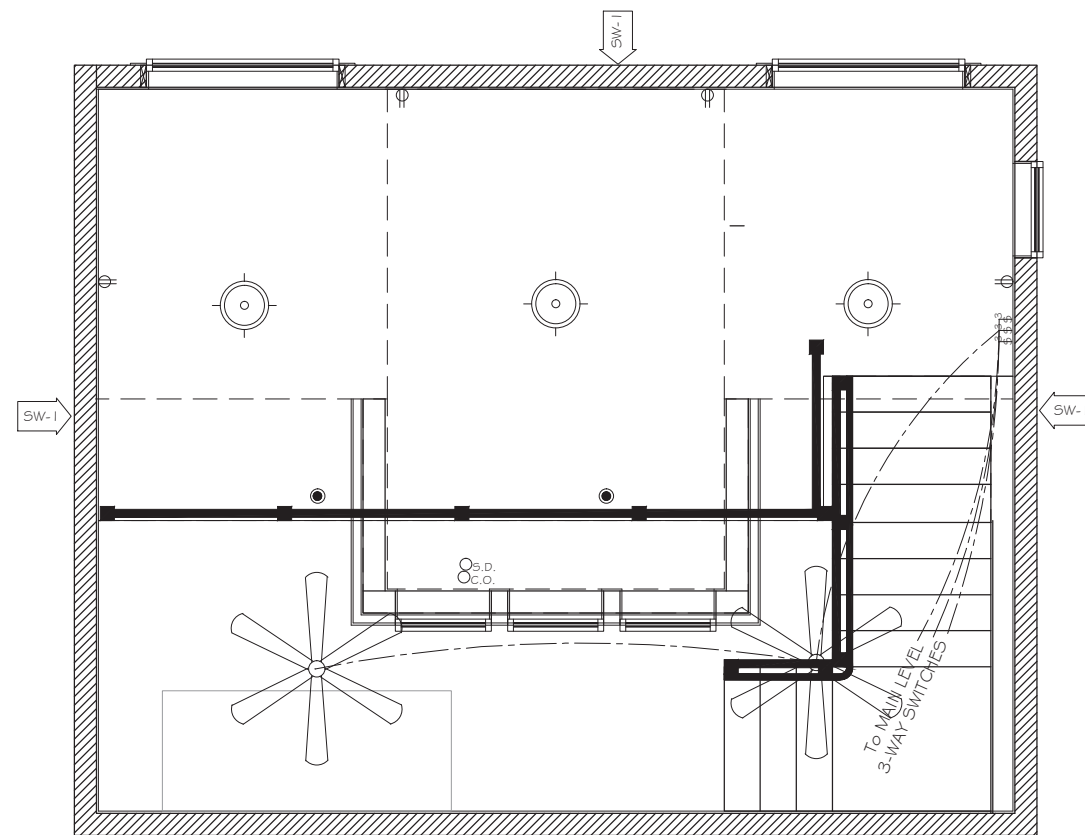
- BASEBOARD HEATER
- SMOKE DETECTOR
- CO DETECTOR
- ELECTRICAL PANEL
- EXHAUST FAN
- SWITCHED LIGHT
- CAN LIGHT
- PULL CHAIN LIGHT
- 4 PLEX OUTLET
- 110 VOLT OUTLET
- 220 VOLT OUTLET
- FLOOR OUTLET
- SWITCHED OUTLET
- PHONE JACK
- SWITCH W/ POLE #
- DIMMER SWITCH
- THERMOSTAT
- FAN LIGHT

**NET ZERO STUDIO**

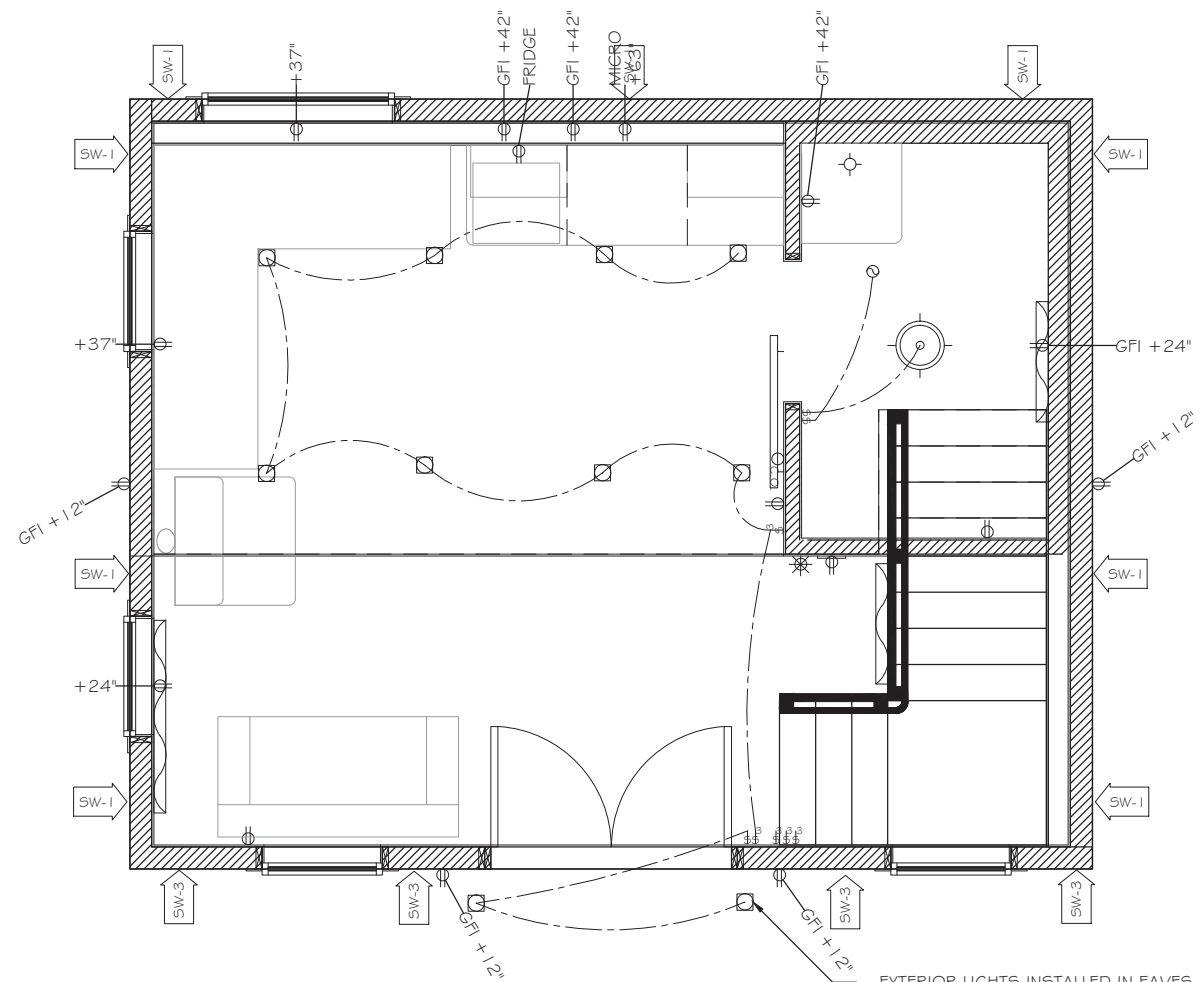
1748 EAST 4600 SOUTH  
OGDEN, UTAH

MAIN LEVEL	320	Date	01/19/2016
LOFT LEVEL	178	Scale	NOTED
TOTAL FIN.	498	Drawn	AS, BS, DLL, FA
		Job	GREER-RICH
		Sheet	15

PORCH 141  
of 15 Sheets



SECOND FLOOR



MAIN FLOOR

EXTERIOR LIGHTS INSTALLED IN EAVES



**ELECTRICAL PLANS**

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