



## Custom Home Design Plan #97 By SDS-CAD Specialized Design Systems

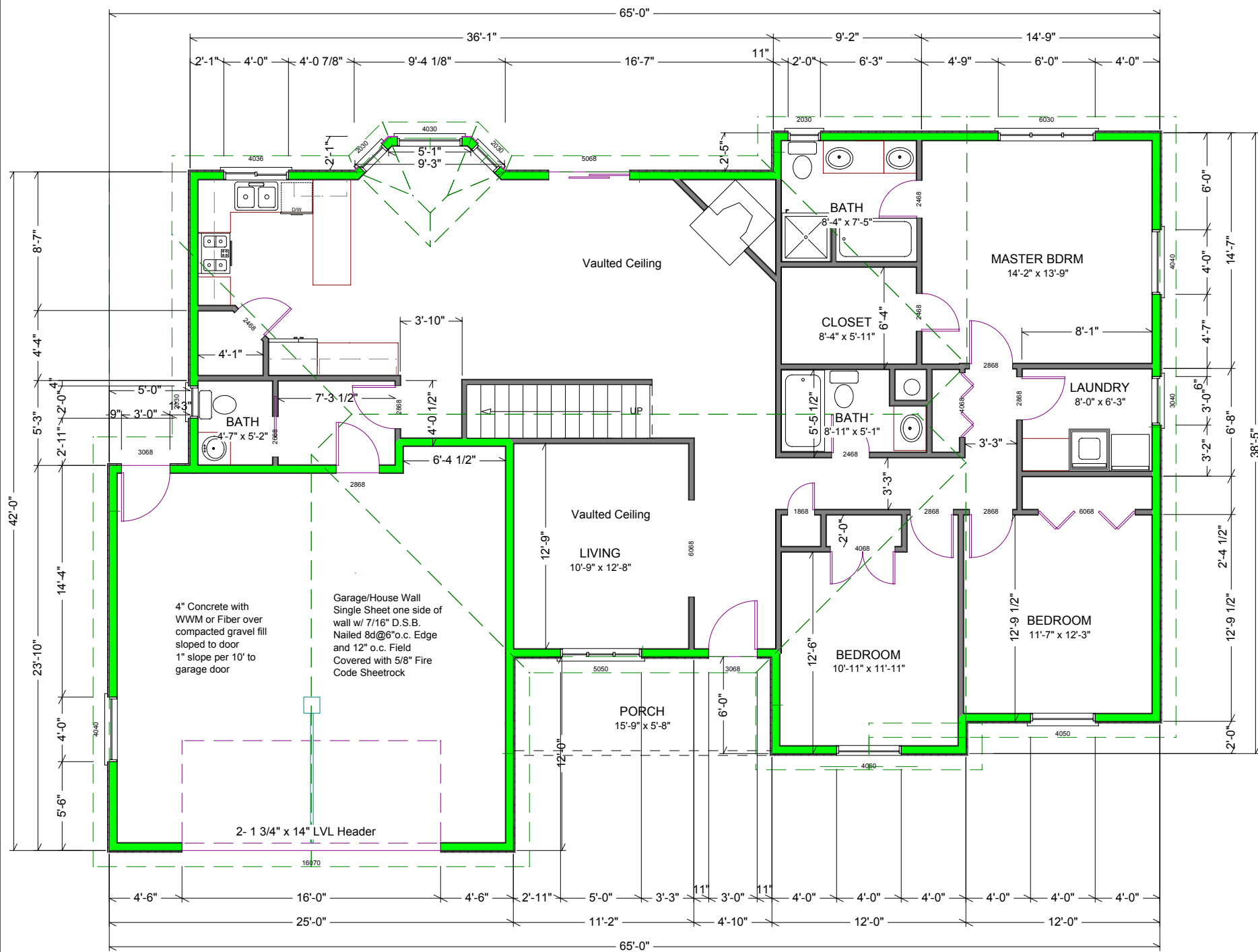
**BUILDING CONTRACTOR/HOME OWNER  
TO REVIEW AND VERIFY ALL DIMENSIONS,  
SPECS, AND CONNECTIONS BEFORE  
CONSTRUCTION BEGINS.**

**ELECTRICAL SYSTEM CODE: SEC.2701  
MECHANICAL SYSTEM CODE: SEC.2801  
PLUMBING SYSTEM CODE: SEC.2901**

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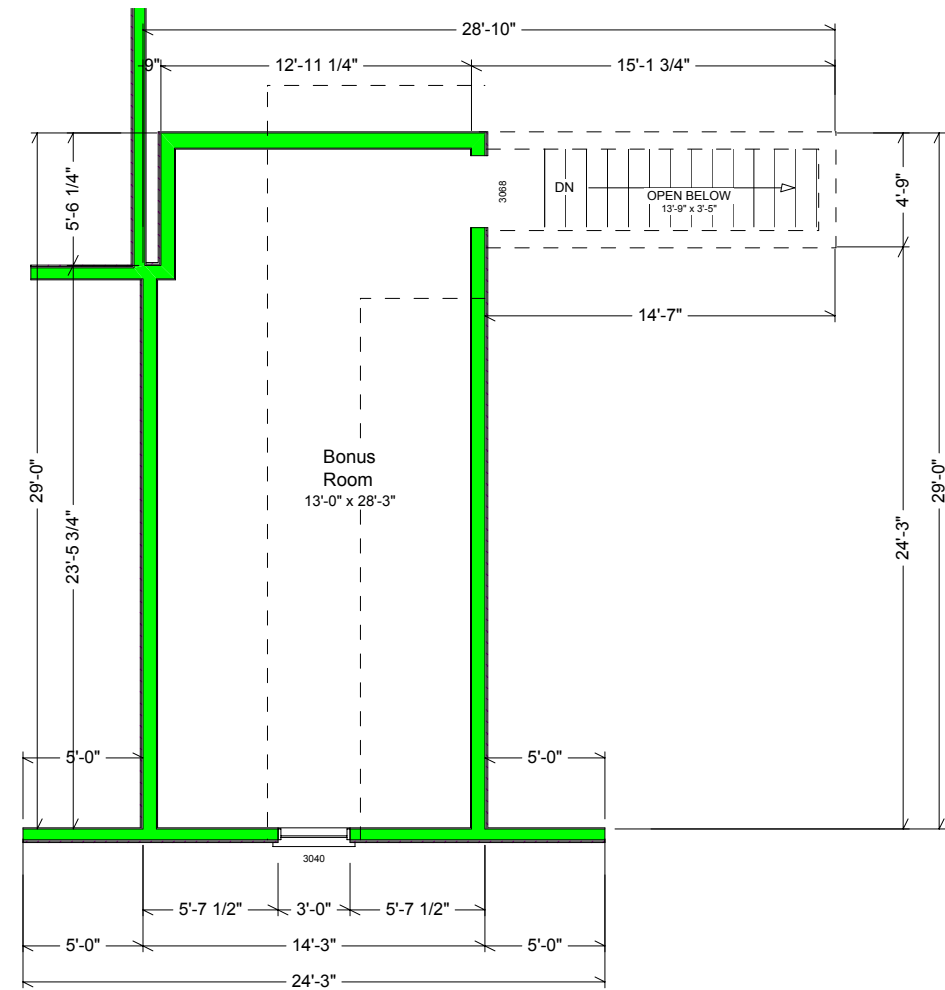
To the best of my knowledge these plans are drawn to comply with owner's and/ or builder's specifications and any changes made on them after prints are made will be done at the owner's and / or builder's expence and responsibility. The contractor shall verify all dimensions and enclosed drawing. SDSCAD is not liable for errors once construction has begun. While every affort has been made in the preparation of this plan to avoid mistakes, the maker can not guarantee against human error. The contractor of the job must check all dimensions and other details prior to construction and be solely responsible thereafter. All calculations and member sizing should be verified for your building by a certified building official.

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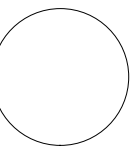


# MAIN FLOOR PLAN

SCALE 1/8"=1'



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CLIENT  
 DATE 04/20/2004

DRAWN BY John Davidson  
 CHECKED BY  
 DATE

REVISIONS

JOB NO.

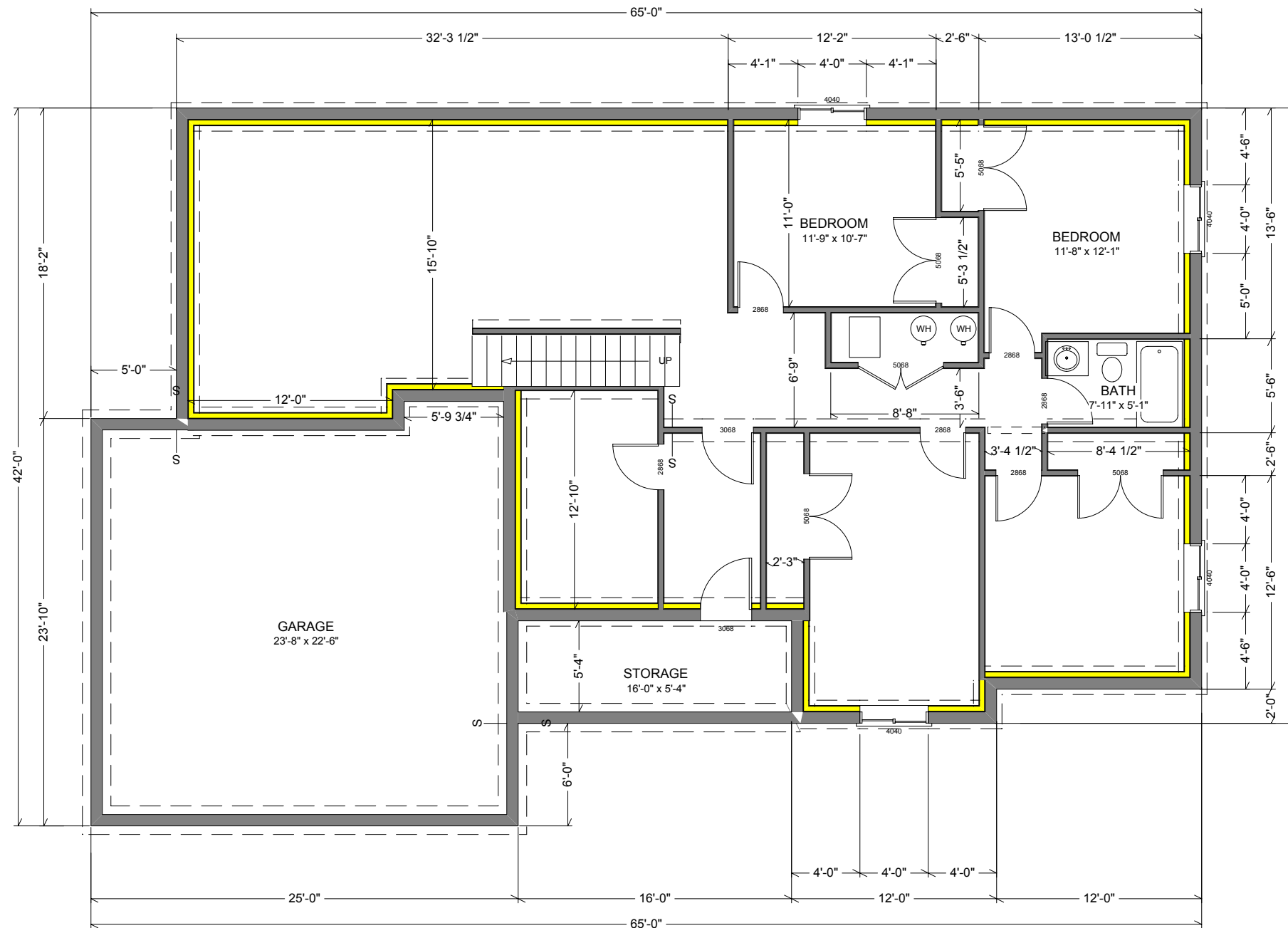
SHEET NO.  
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 11

Concrete:

1. All slabs are to be 4" concrete over 4" gravel unless otherwise noted on the plans.
2. Concrete to be ACI 301-66, Type II cement, 2500 psi at 28 days, 5" maximum slump.
3. Reinforcing to be ASTM A615-Bars with Fy=60 ksi lap 30 diameter minimum at splices or weld per ACI Std.
4. Concrete design based on Fc 2000 psf, Fc 2500 psi for quality only.
5. Anchor bolts shall be A-307 embedded 7" minimum into concrete or masonry grout.

WINDOW SCHEDULE									
NUMBER	QTY	FLOOR	SIZE	DIMENSIONS	WIDTH	HEIGHT	R/O	DESCRIPTION	HEADER
W01	4	0	4040	48"X48"	48"	48"	49X49 1/2	RIGHT SLIDING	2X7X52 (2)
W02	2	1	2030	24"X36"	24"	36"	25X37 1/2	SINGLE HUNG	2X6X25 (2)
W03	2	1	2030	24"X36"	24"	36"	25X37 1/2	SINGLE HUNG	2X6X28 (2)
W04	1	1	3040	36"X48"	36"	48"	37X49 1/2	SINGLE HUNG	2X7X40 (2)
W05	1	1	4030	48"X36"	48"	36"	49X37 1/2	SINGLE HUNG	2X7X49 (2)
W06	1	1	4036	48"X42"	48"	42"	49X43 1/2	RIGHT SLIDING	2X7X52 (2)
W07	2	1	4040	48"X48"	48"	48"	49X49 1/2	SINGLE HUNG	2X7X52 (2)
W08	1	1	4050	48"X60"	48"	60"	49X61 1/2	SINGLE HUNG	2X7X52 (2)
W09	1	1	4060	48"X72"	48"	72"	49X73 1/2	FIXED GLASS-AT	2X5X52 1/4 (2)
W10	1	1	5050	60"X60"	60"	60"	61X61 1/2	TRIPLE CASEMNT-LHL/RHR	2X11X64 (2)
W11	1	1	6030	72"X36"	72"	36"	73X37 1/2	TRIPLE CASEMNT-LHL/RHR	2X11X76 (2)
W12	1	2	3040	36"X48"	36"	48"	37X49 1/2	SINGLE HUNG	2X7X40 (2)

DOOR SCHEDULE									
NUMBER	QTY	FLOOR	SIZE	DIMENSIONS	WIDTH	HEIGHT	R/O	DESCRIPTION	HEADER
D01	6	0	2868	32X80X1 3/8"	32"	80"	33X81 1/2	4-PANEL - WOODGRAIN CHERRY1-LIGHT-R	2X8X36 (2)
D02	1	0	3068	36X80X1 3/4"	36"	80"	37X81 1/2	EXT. 4-PANEL - WOODGRAIN CHERRY1-LIGHT-R	2X7X40 (2)
D03	1	0	3068	36X80X1 3/8"	36"	80"	37X81 1/2	4-PANEL - WOODGRAIN CHERRY1-LIGHT-R	2X8X40 (2)
D04	5	0	5068	30X80X1 3/8"	30"	80"	61X81 1/2	4-PANEL - WOODGRAIN CHERRY1-LIGHT-R	2X8X64 (2)
D05	1	1	16070	192X84"	192"	84"	193X85 1/2	GARAGE 2-PANEL GARGE DOOR	2X12X199 (2)
D06	1	1	1868	20X80X1 3/8"	20"	80"	21X81 1/2	4-PANEL	2X4X24 (2)
D07	3	1	2468	28X80X1 3/8"	28"	80"	29X81 1/2	4-PANEL	2X6X32 (2)
D08	1	1	2468	28X80X1 3/8"	28"	80"	29X81 1/2	4-PANEL - WOODGRAIN CHERRY1-LIGHT-R	2X6X32 (2)
D09	1	1	2668	30X80X1 3/8"	30"	80"	31X81 1/2	POCKET 4-PANEL	2X6X34 (2)
D10	1	1	2868	32X80X1 3/4"	32"	80"	33X81 1/2	EXT. SUNRISE PANEL	2X6X36 (2)
D11	5	1	2868	32X80X1 3/8"	32"	80"	33X81 1/2	4-PANEL	2X6X36 (2)
D12	1	1	6068	36X80"	36"	80"	73X81 1/2	BIFOLD 4-PANEL	2X11X76 (2)
D13	2	1	3068	36X80X1 3/4"	36"	80"	37X81 1/2	EXT. SUNRISE PANEL	2X7X40 (2)
D14	1	1	4068	24X80"	24"	80"	49X81 1/2	BIFOLD 4-PANEL	2X7X52 (2)
D15	1	1	4068	24X80X1 3/8"	24"	80"	49X81 1/2	4-PANEL	2X7X52 (2)
D16	1	1	5068	60X80"	60"	80"	61X81 1/2	EXT. SLIDER-GLASS	2X11X64 (2)



FOOTING SCHEDULE

HOUSE WALLS	20" x 9" Min
DECKS & PORCHES	18" x 9" Min
BEARING WALL	20" x 9" Min
GARAGE WALL	18" x 9" Min

Min 2 #4 Rebar Horizontal  
on undisturbed or compacted soil

VENTING SCHEDULE

Range Hoods	Vent Through Roof
All Bath Fans	Vent to Exterior
Dryer Vent	Vent to Exterior

ATTIC VENTILATION:  
AREA / 300

PROVIDE 1" MIN. AIR GAP AT  
EAVES WITH INSULATION  
BAFFELS TYP. AT ALL TRUSS  
BAYS.

PROVIDE GABLE VENTS ALL  
GABLE ENDS.

PROVIDE GALV. ROOF VENTS  
ON BACKSIDE OF ROOFLINE  
ABOVE CONDITIONED AREA.

INSULATION SCHEDULE

Ceilings	R-38 Min
Wall above grade	R-19 Min
Wall interior below grade	R-13 Min

BASEMENT PLAN

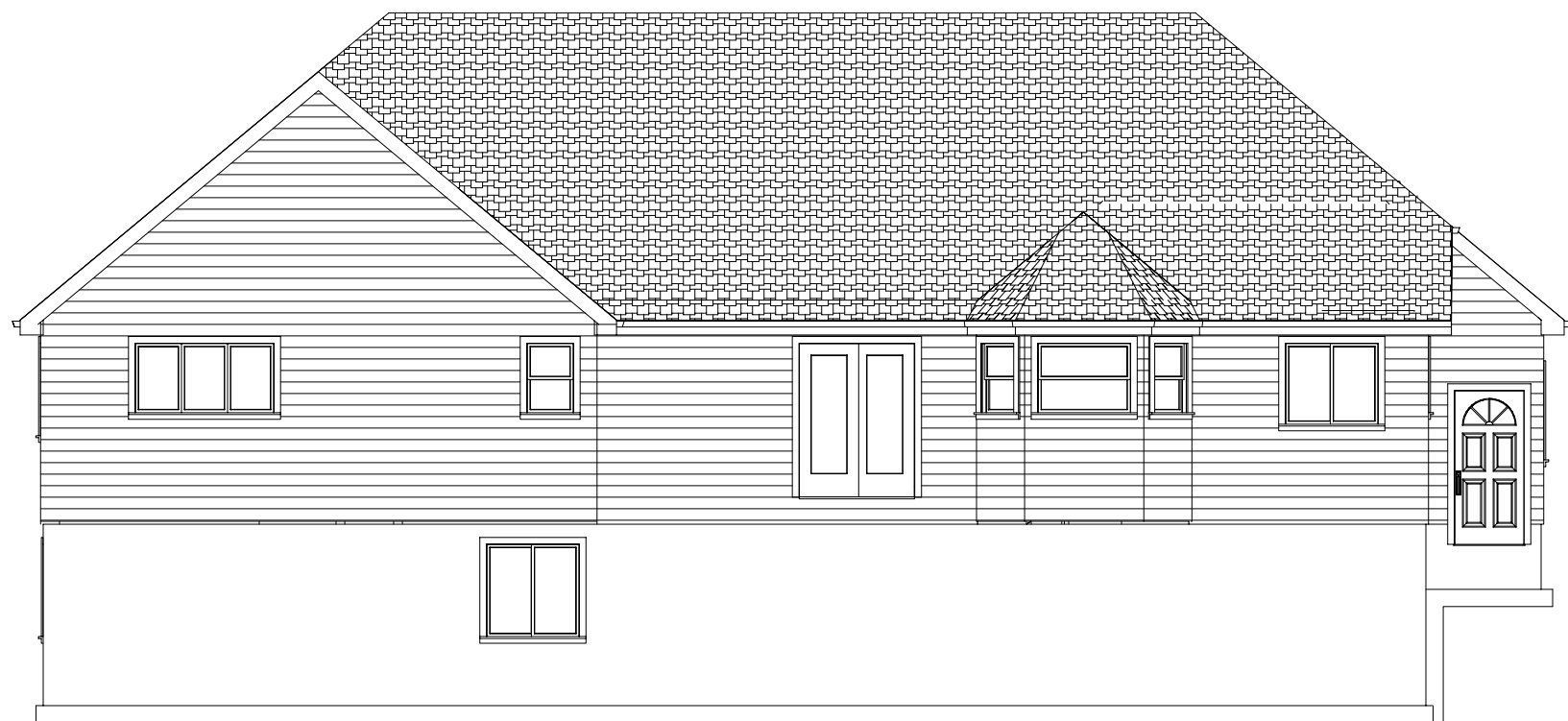
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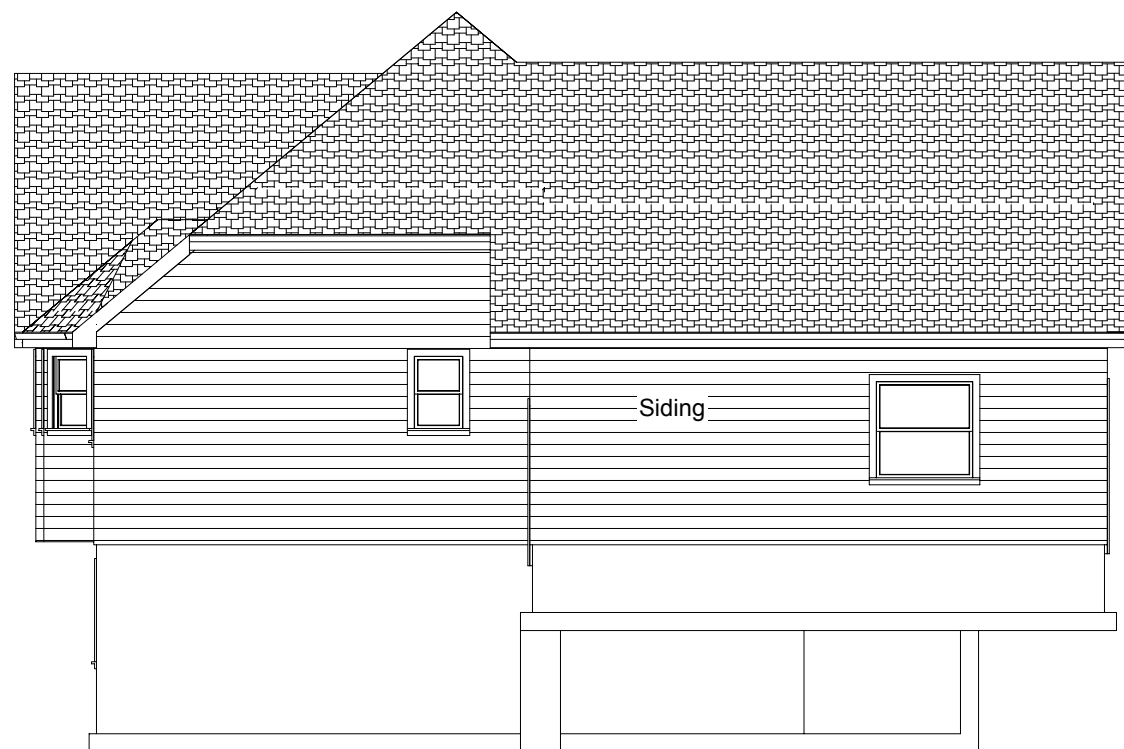
**RIGHT ELEVATION**

SCALE 1/8"=1'



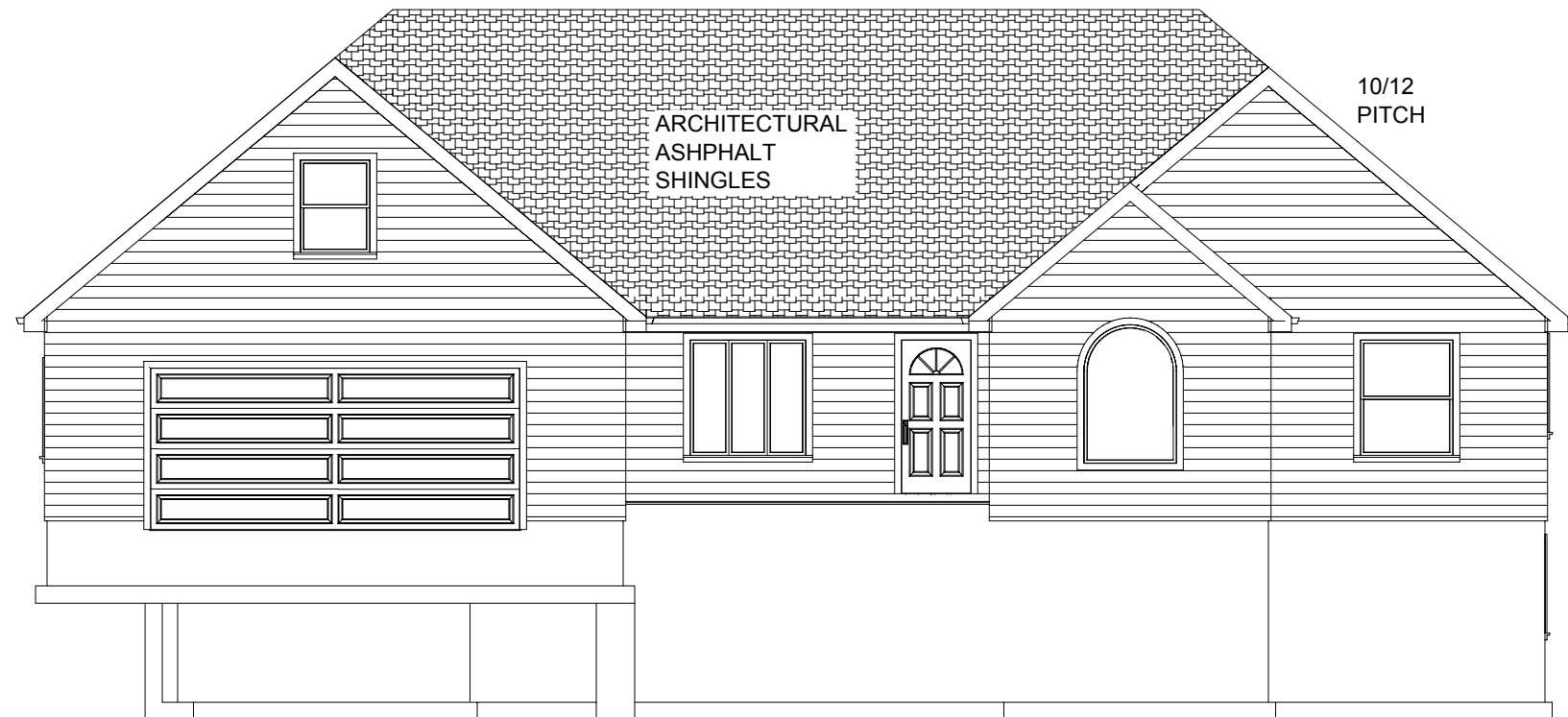
**REAR ELEVATION**

SCALE 1/8"=1'



**LEFT ELEVATION**

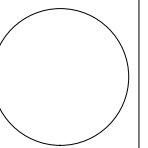
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**FRONT ELEVATION**

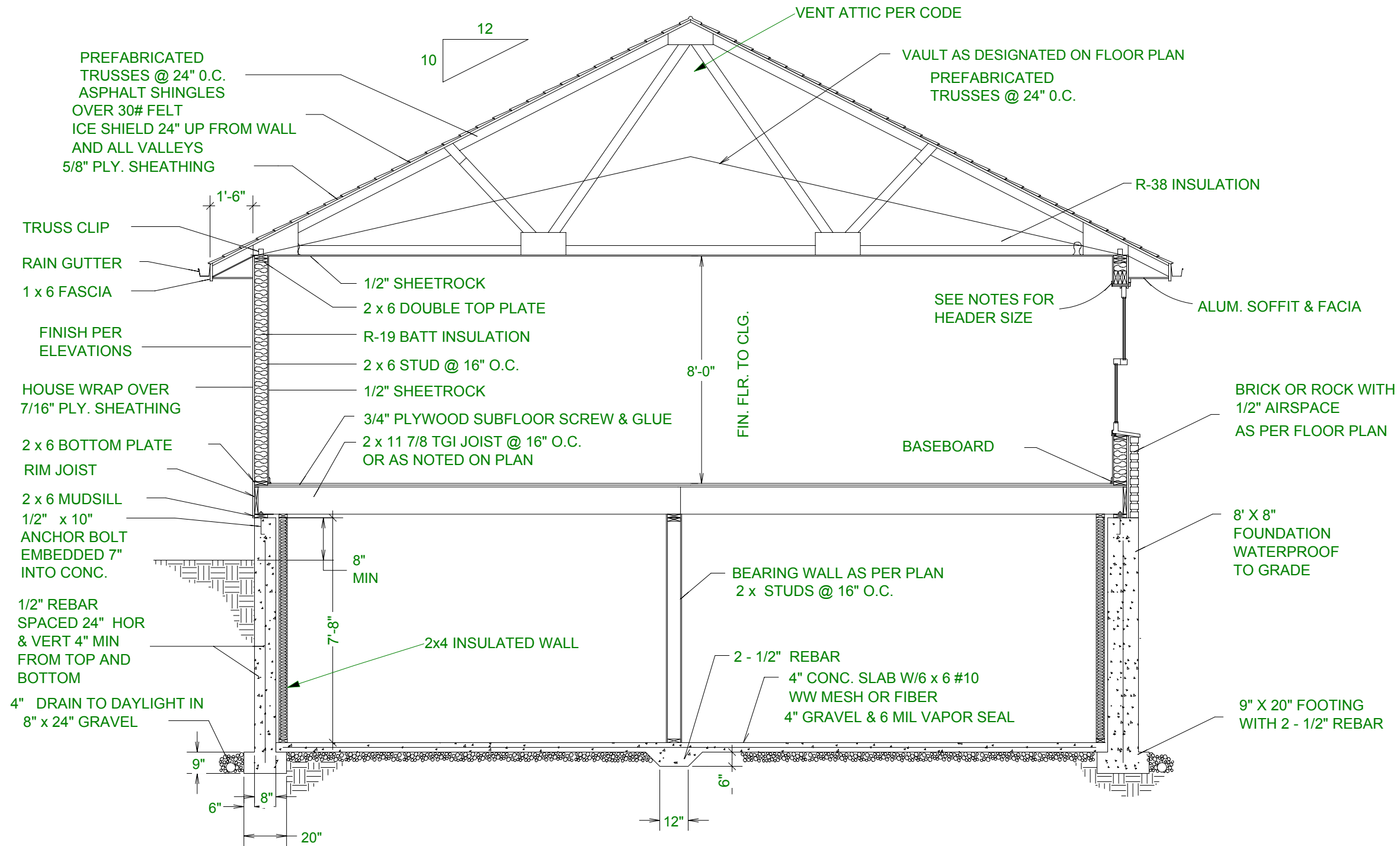
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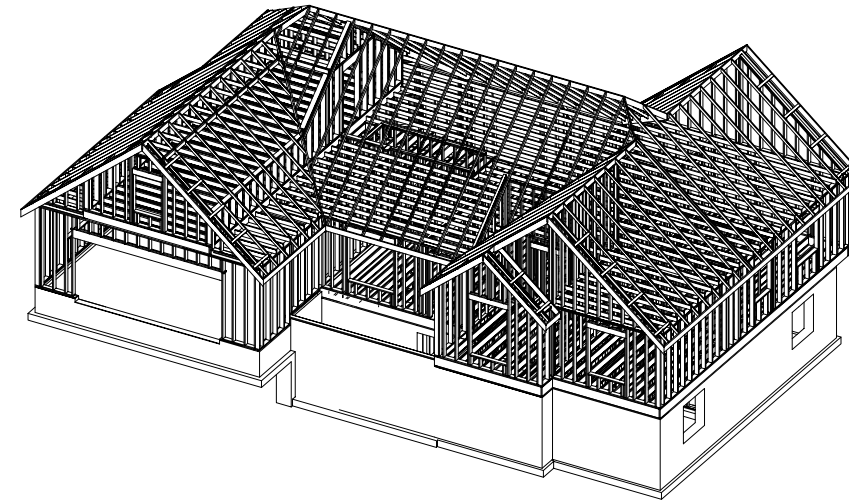


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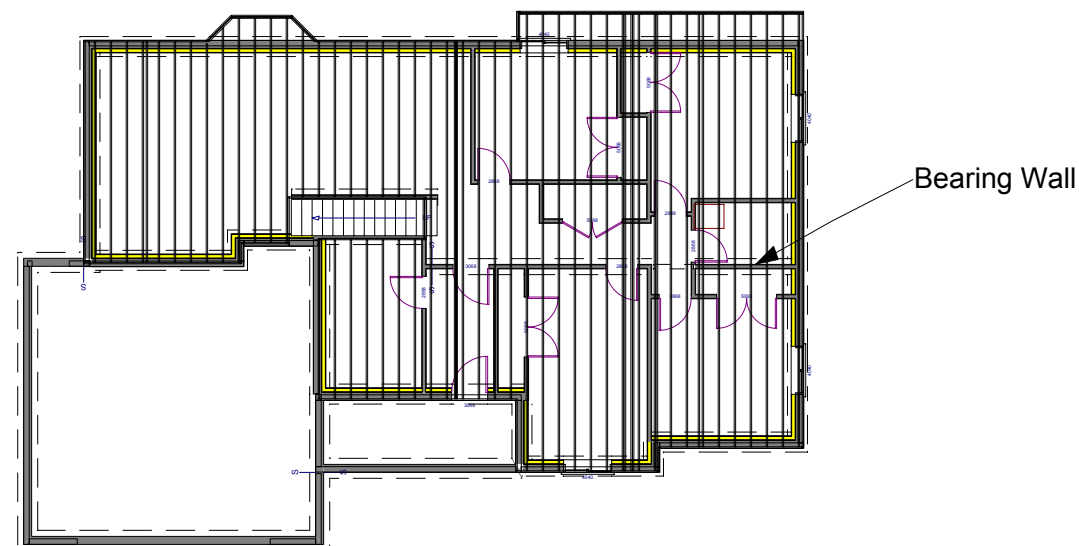
Roof Framing:

1. Fascia to be 2"x Douglas Fir.
2. For soffit size see details.
3. For spans and dimensions refer to floor plans.
4. Trusses are to be an approved truss design from the truss manufacture's engineer.  
Install as per engineers specs
5. Use Simpson H-1 hurricane anchors at each truss or rafter to wall connection.
6. Solid blocking required between joists, rafters, and trusses over all bearing walls.  
Such blocking shall be 1 1/2" minimum thickness and full depth of joists, rafters, or trusses.
7. Minimum header sizes shall be according to the header size table unless otherwise noted.
8. Basis of design roof live/snow load of 37 psf, and roof dead load of 15 psf.
9. Plywood roof decking to be Min 1/2" thick, 24/0, CDX or 5/8 wafer.



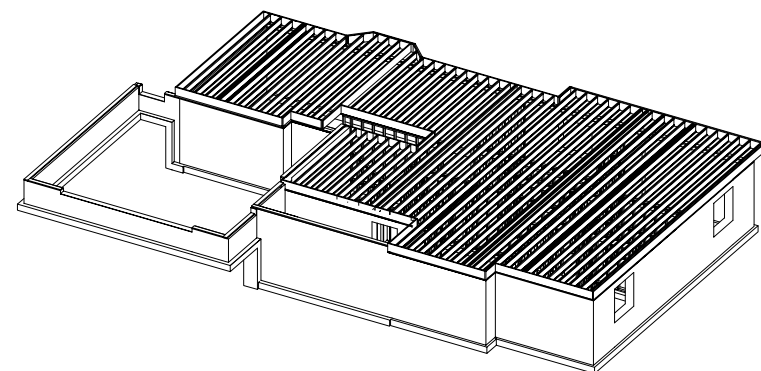
## MAIN FLOOR FRAMING

SCALE 1/16"=1'



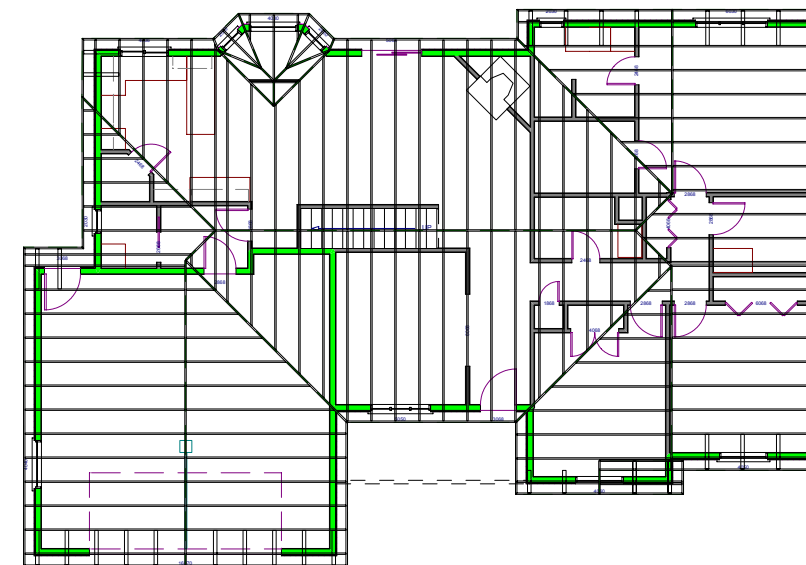
9 1/2" I-Joists 16" o.c Min  
Allowed 11 7/8" Recommended  
for stiffer Floor.

SEE GENERAL SPECS AND  
NOTES FOR FRAMING DETAILS



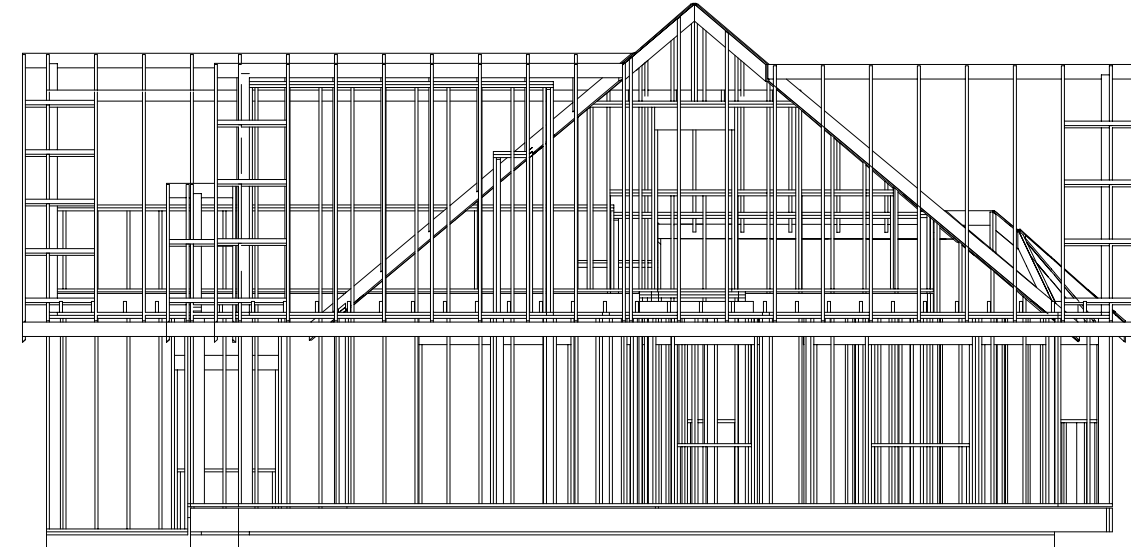
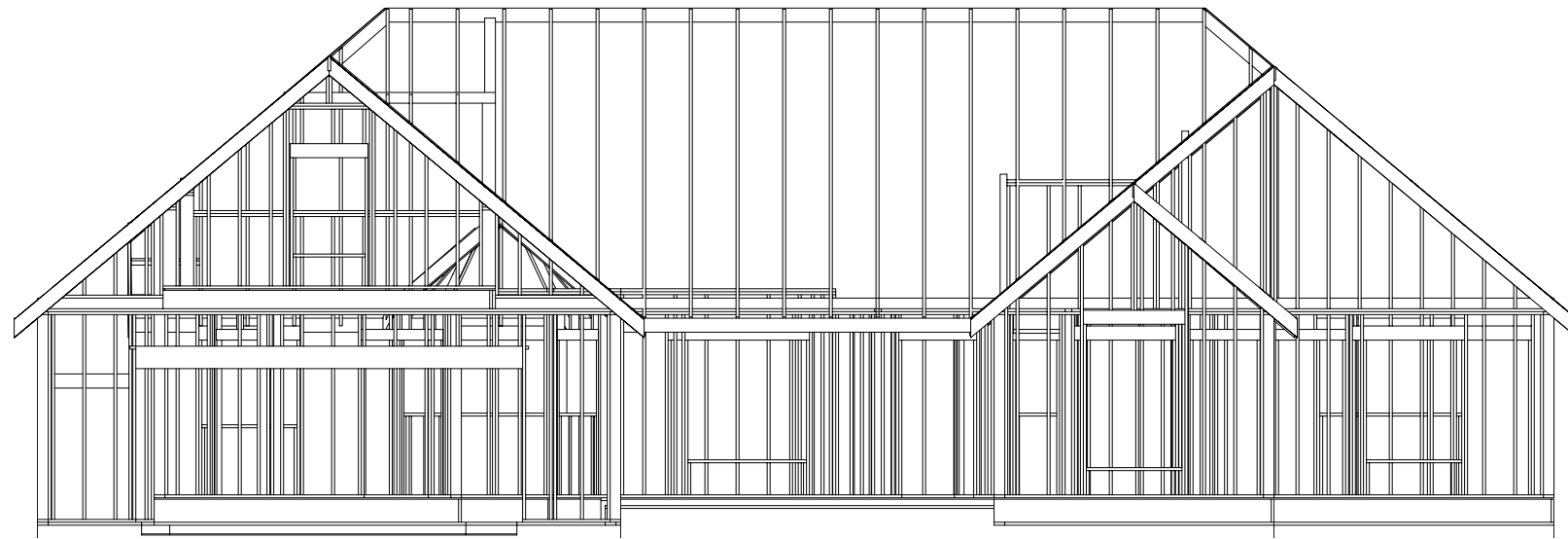
## ROOF FRAMING

SCALE 1/16"=1'



### PRE-ENGINEERED ENERGY TRUSSES AS SUPPLIED BY TRUSS MANUFACTURER

1. Trusses to be 24" O.C.
2. Attic access min 22 1/2" x 30" were most convenient. For all areas greater than 30"
3. Vaulted ceiling over family and living room area using vaulted scizzor trusses where possible.
4. Install all trusses as per truss manufacturer installation guidelines.
5. Attic Trusses over garage area for bonus room
6. 10/12 Pitch



General framing: (Douglas Fir)

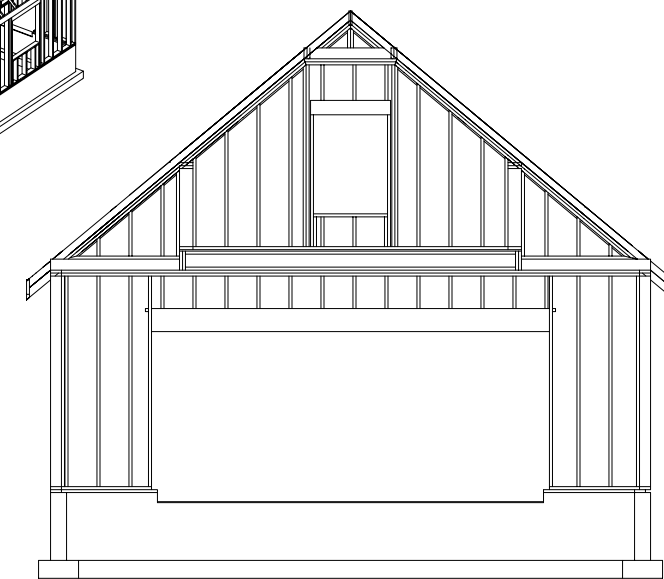
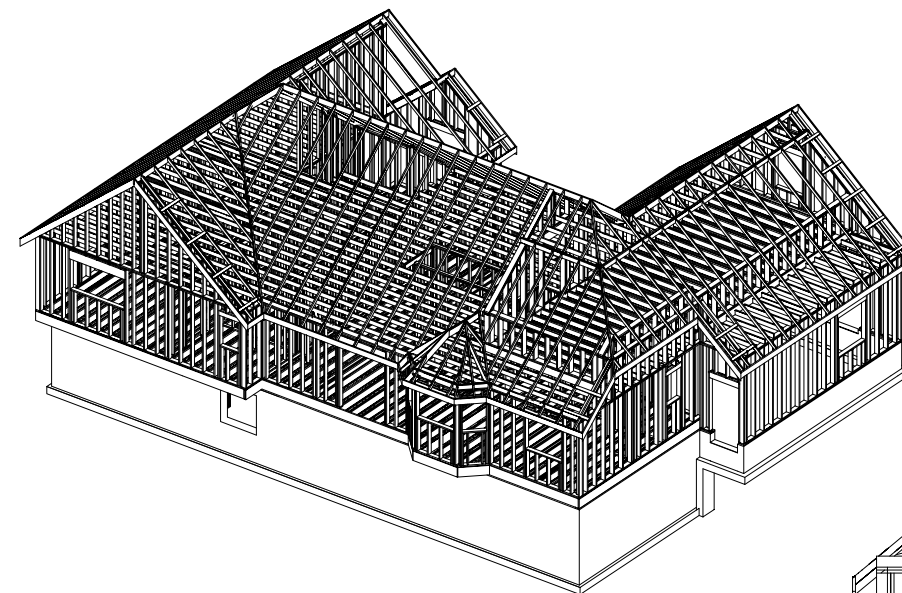
1. Minimum header sizes shall be according to the following table unless otherwise noted.  
 Header sizes (single story construction)  
 2'-0" to 4'-0" Span 2-2x4's  
 4' + to 6'-0" Span 2-2x6's  
 6' + to 8'-0" Span 2-2x8's  
 8' + to 10'-0" Span 2-2x10's  
 10' + to 12'-0" Span 2-2x12's  
 Header sizes (two story construction)  
 2'-0" to 3'-0" Span 2-2x4's  
 3' + to 5'-0" Span 2-2x6's  
 5' + to 7'-0" Span 2-2x8's  
 7' + to 8'-0" Span 2-2x10's
2. Brace all exterior walls and cross-stud partitions at each end of building and at least every 25' of length by one of the following:
  - a. Simpson WB 126 wall bracing with 3-16d nails at each end and 1-8d nails at each stud.
  - b. Plywood sheathing of a minimum thickness of 3/8 inch.
3. Fire stopping:
  - a. Fireblock stud spaces over 10' in height, furred spaces, soffits, drop ceilings, cove ceilings, stair stringers at top and bottom of run, bearing walls and ceiling joist lines, etc. Firestopping shall consist of 2" nominal lumber.
  - b. Firestop openings around vents, pipes, ducts, chimneys, and fireplaces at ceiling and floor levels with approved noncombustible materials.
4. CDX plywood is not approved where exposed to weather, i.e., roof overhangs.
5. Exterior wall framing to be 2"x6" studs at 16" o.c. Interior wall, framing at non-bearing walls to be 2"x4" studs at 24" o.c. and at bearing walls 2"x4" studs at 16" o.c. with double top plate.
6. Shear wall to be 3/8" CDX plywood applied horizontally.
7. All stress grade lumber shall comply with WCLA specs and bear approval stamp on all pieces in place.
8. Framing lumber shall be Douglas Fir construction grade Fb 1450 or better unless otherwise noted.
9. Nailing to be per current U.B.C. unless otherwise noted.
10. All bearing partitions shall have double top plates.
11. Structural glued laminated timbers to be stamped by an approved agency.
12. Use redwood or pressure treated sole plates at all exterior walls.

Floor Framing:

1. All floor joist to be Douglas Fir #2 or T.J.I. @ 16" o.c. unless otherwise noted.
2. For spans and dimensions refer to floor plans.
3. Use Simpson H 2.5 hurricane anchors at each floor joist to bearing wall connection.
4. Solid blocking between joists over all bearing walls, and midspans such blocking shall be 2" minimum thickness and full depth of joists.
5. Minimum header sizes shall be according to the header size table unless otherwise noted.
6. Basis of design: floor live load of 40 psf, and floor dead load of 15 psf.
7. Floor decking to be 3/4" thick T & G wafer board.
8. Joist hangers to be Simpson U210 or equal unless otherwise noted.
9. Double joists and or double blocking at all interior walls.

## FULL HOUSE FRAMING SECTION

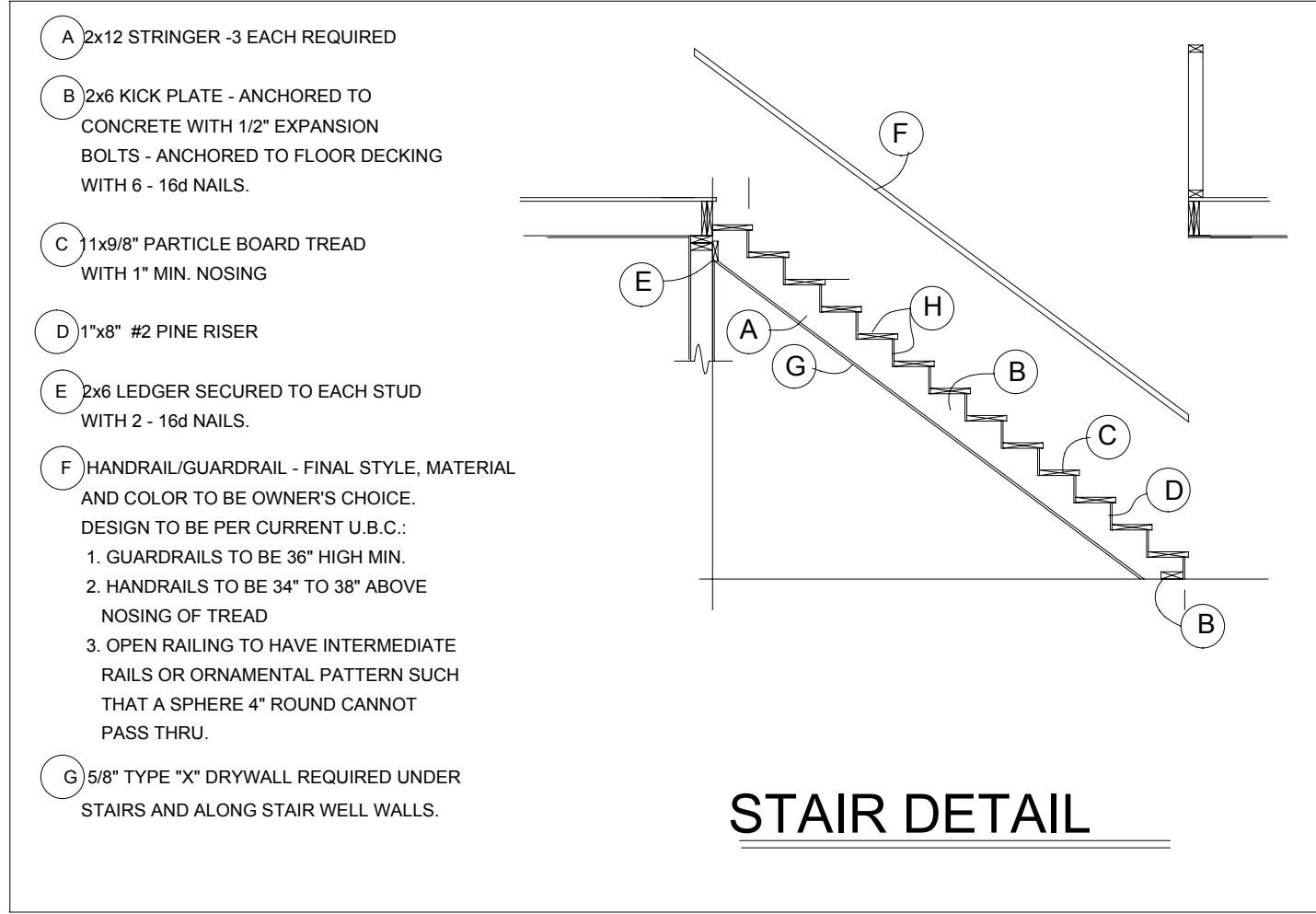
SCALE 1/8"=1'



## GARAGE FRAMING SECTION

SCALE 1/8"=1'

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- A 2x12 STRINGER - 3 EACH REQUIRED
- B 2x6 KICK PLATE - ANCHORED TO CONCRETE WITH 1/2" EXPANSION BOLTS - ANCHORED TO FLOOR DECKING WITH 6 - 16d NAILS.
- C 1x9/8" PARTICLE BOARD TREAD WITH 1" MIN. NOSING
- D 1"x8" #2 PINE RISER
- E 2x6 LEDGER SECURED TO EACH STUD WITH 2 - 16d NAILS.
- F HANDRAIL/GUARDRAIL - FINAL STYLE, MATERIAL AND COLOR TO BE OWNER'S CHOICE. DESIGN TO BE PER CURRENT U.B.C.:
  1. GUARDRAILS TO BE 36" HIGH MIN.
  2. HANDRAILS TO BE 34" TO 38" ABOVE NOSING OF TREAD
  3. OPEN RAILING TO HAVE INTERMEDIATE RAILS OR ORNAMENTAL PATTERN SUCH THAT A SPHERE 4" ROUND CANNOT PASS THRU.
- G 5/8" TYPE "X" DRYWALL REQUIRED UNDER STAIRS AND ALONG STAIR WELL WALLS.

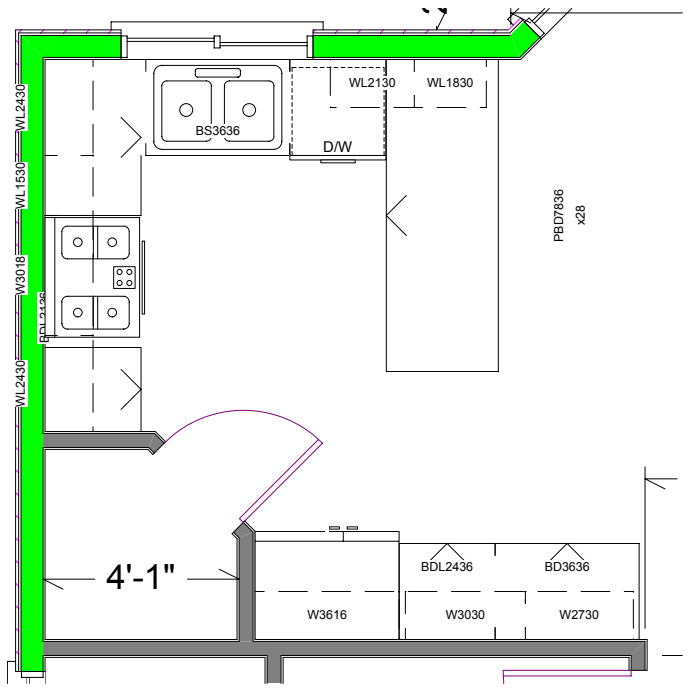
## STAIR DETAILS

### STAIR SPECIFICATIONS

1. Stairs to be constructed with the following materials:  
2x6 kick plate anchor to concrete with expansion type anchor bolts,  
2x12 treads nosing 1 1/8" minimum, 3-2x12 stringers required,  
2x12 blocking, 3/4" wafer board risers and 2x6 ledger.
2. Handrail/Guardrails final style, material and color to be owner's choice. Design to be per code.
3. Guardrails to be 42" high minimum from floor.
4. Handrails to be 34"-38" above tread nosing.
5. Open railing to have intermediate rails or ornamental pattern such that a sphere 4" round cannot pass through.
6. Minimum stair requirements: maximum 8" rise, minimum 42" width, minimum 9" run, minimum head clearance 6'-8".
7. Preferred stair requirements: rise 7" to 7 1/2", run 11" to 12", minimum head clearance 7'-0".
8. Garage entrance stairs may be concrete or wood as per contractor/homeowner

CABINET SCHEDULE							
NUMBER	QTY	FLOOR	DIMENSIONS	WIDTH	DEPTH	HEIGHT	DESCRIPTION
C01	1	1	78X28X36 "	78 "	28 "	36 "	PEN BASE CAB
C02	1	1	42X28X42 "	42 "	28 "	42 "	PEN UTIL CAB
C03	1	1	39X24X36 "	39 "	24 "	36 "	PEN BASE CAB
C04	1	1	39X24X36 "	39 "	24 "	36 "	BASE CAB
C05	2	1	36X24X36 "	36 "	24 "	36 "	BASE CAB
C06	1	1	36X12X16 "	36 "	12 "	16 "	WALL CAB
C07	1	1	33X24X36 "	33 "	24 "	36 "	PEN BASE CAB
C08	1	1	30X12X30 "	30 "	12 "	30 "	WALL CAB
C09	1	1	30X12X18 "	30 "	12 "	18 "	WALL CAB
C10	1	1	27X12X30 "	27 "	12 "	30 "	WALL CAB
C11	3	1	24X24X36 "	24 "	24 "	36 "	BATH BASE CAB
C12	2	1	24X24X36 "	24 "	24 "	36 "	BASE CAB
C13	2	1	24X12X30 "	24 "	12 "	30 "	WALL CAB
C14	1	1	21X24X36 "	21 "	24 "	36 "	PEN BASE CAB
C15	1	1	21X24X36 "	21 "	24 "	36 "	BASE CAB
C16	1	1	21X12X30 "	21 "	12 "	30 "	WALL CAB
C17	1	1	18X12X30 "	18 "	12 "	30 "	WALL CAB
C18	1	1	15X12X30 "	15 "	12 "	30 "	WALL CAB
C19	1	0	30X24X36 "	30 "	24 "	36 "	PEN BASE CAB

Kitchen layout and cabinets to be chosen by homeowner/Contractor basic layout for reference only. Measure after sheetrock is installed for correct sizing.



## Cabinet Detail

SCALE 1/4"=1'

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Residential Design

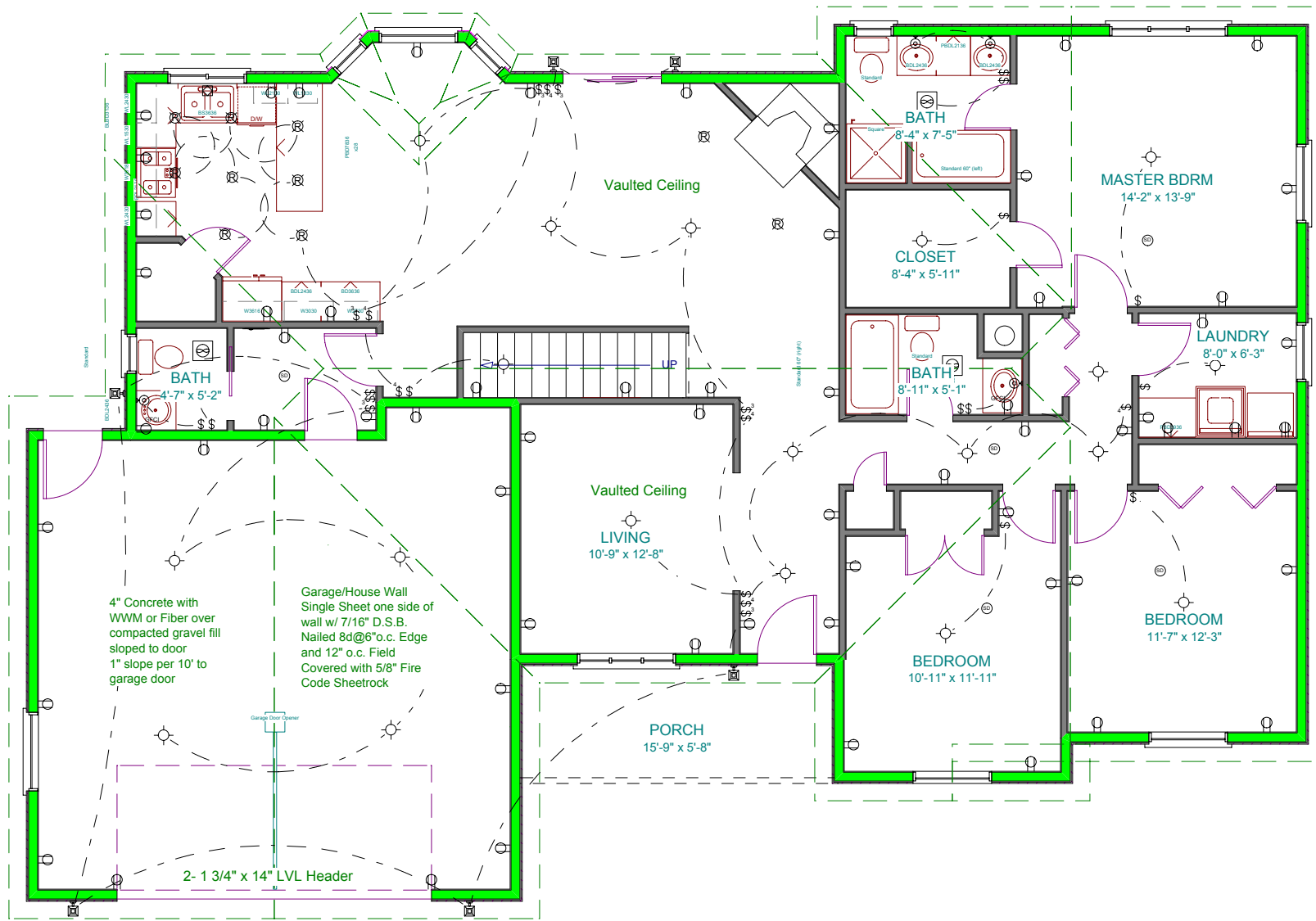
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Electrical Systems:

1. Inspection is required prior to backfill of lines.
2. Provide 20 ft. of No. 4 copper wire as ground electrode in foundation footing.
3. Bond interior piping system with #8 bare copper.
4. Provide main jumping bond with #4 bare copper.
5. Electrical service is to be 200 amp service, 120/240 volt, 1 phase raintight, underground.
6. Provide separate 20 amp circuits to washer.
7. Provide 20 amp circuits to family and dining room, and a minimum of two 20 amp circuits to kitchen.
8. Prewire for TV, telephone in kitchen, family room, living room, and in every bedroom.
9. Install ground fault current interrupter on exterior, garage, kitchen, and bathroom convenience outlets.
10. Bottom half of outlet controlled by switch when shown.
11. All outlets in kitchen are to be at +44" excluding those for the refrigerator, range, disposal, and dishwasher.
12. Maximum spacing of outlets shall not exceed 12 ft. along wall line and at any wall over 24" wide in all rooms except kitchen, bath, utility, and garage.
13. Install light in walk-in closet 18" minimum horizontal from any shelf.
14. Provide a ventilation fan capable of producing a change of air every 12 minutes for bath or utility.
15. Provide smoke detector alarm conforming to Section 1210(A) U.B.C. and local building codes in every bedroom and on each floor.
16. CO2 Detector on each floor.



# MAIN FLOOR ELECTRICAL PLAN

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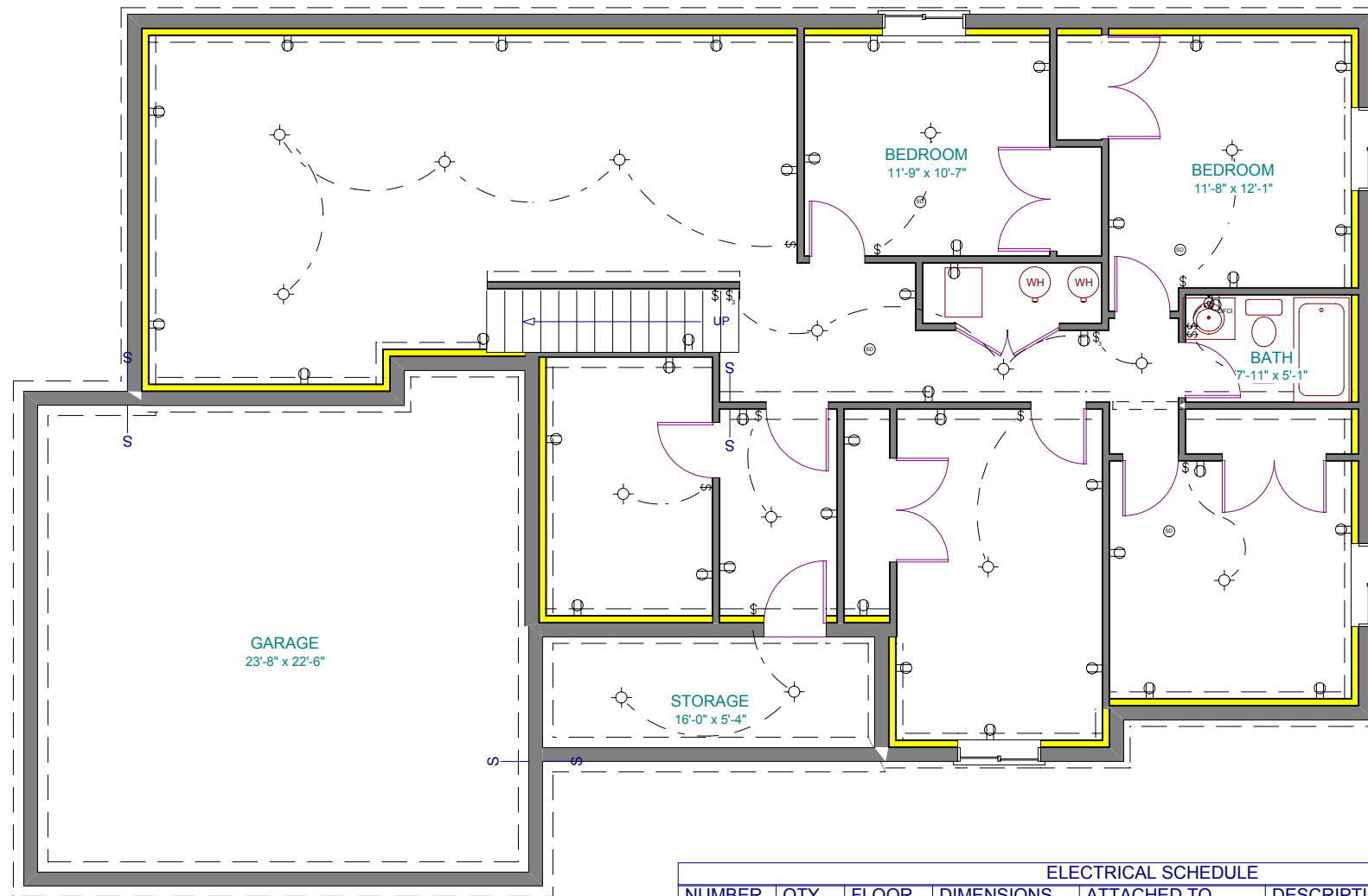
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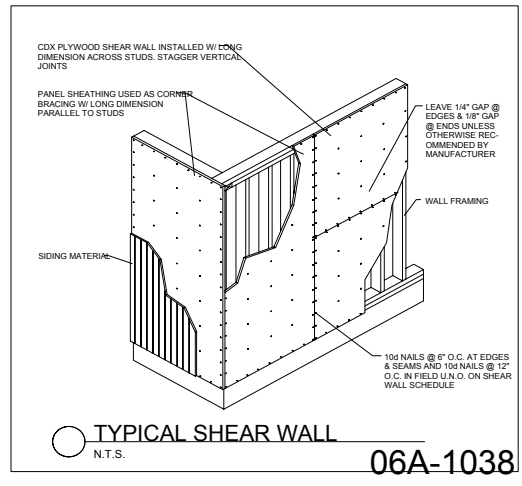
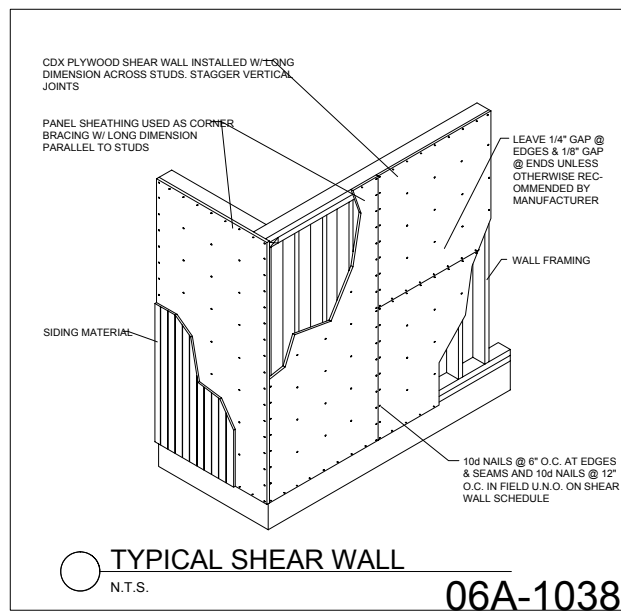
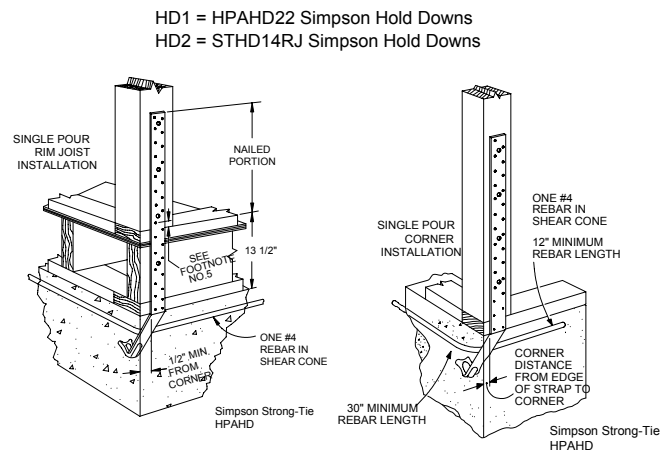
ELECTRICAL SCHEDULE					
NUMBER	QTY	FLOOR	DIMENSIONS	ATTACHED TO	DESCRIPTION
E01	1	2	6X6X2 "	CEILING MOUNT	SMOKE DETECTOR
E02	2	2	3X1X5 "	WALL MOUNT	SINGLE POLE
E03	5	2	16X16X4 "	CEILING MOUNT	HALF DOME LIGHT - LIGHTING GREY
E04	10	1	7X7X0 "	CEILING MOUNT	RECESSED VAPOR LIGHT
E05	6	1	6X9X13 "	WALL MOUNT	PORCH LANTERN
E06	4	1	6X8X6 "	WALL MOUNT	BOWL SCONCE - LIGHTING GREY
E07	5	1	6X6X2 "	CEILING MOUNT	SMOKE DETECTOR
E08	6	1	3X1X5 "	WALL MOUNT	THREE WAY
E09	15	1	3X1X5 "	WALL MOUNT	SINGLE POLE
E10	6	1	3X1X5 "	WALL MOUNT	FOUR WAY
E11	2	1	3X0X5 "	WALL MOUNT	GFCI
E12	60	1	3X0X5 "	WALL MOUNT	DUPLEX
E13	1	1	3X0X5 "	WALL MOUNT	220V
E14	1	1	16X4X26 "	WALL MOUNT	ELECTRICAL PANEL
E15	19	1	16X16X4 "	CEILING MOUNT	HALF DOME LIGHT - LIGHTING GREY
E16	3	1	12X12X1 "	CEILING MOUNT	EXHAUST
E17	1	1	0X0X0 "		
E18	1	0	6X8X6 "	WALL MOUNT	BOWL SCONCE - LIGHTING GREY
E19	4	0	6X6X2 "	CEILING MOUNT	SMOKE DETECTOR
E20	2	0	3X1X5 "	WALL MOUNT	THREE WAY
E21	11	0	3X1X5 "	WALL MOUNT	SINGLE POLE
E22	1	0	3X0X5 "	WALL MOUNT	GFCI
E23	41	0	3X0X5 "	WALL MOUNT	DUPLEX
E24	15	0	16X16X4 "	CEILING MOUNT	HALF DOME LIGHT - LIGHTING GREY
E25	1	0	12X12X1 "	CEILING MOUNT	EXHAUST

ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
	METER SOCKET
	PANEL BOX
	CEILING FAN W/ LIGHT
	FLUORESCENT LIGHT FIXTURE
	110V CEILING LIGHT FIXTURE
	110V RECESSED LIGHT FIXTURE
	110V EAVE LIGHT FIXTURE
	110V CHANDILIER LIGHT FIXTURE
	110V WALL LIGHT FIXTURE
	SINGLE POLE SWITCH
	THREE WAY SWITCH
	FOUR WAY SWITCH
	DIMMER SWITCH
	OUTDOOR SWITCH
	110V DUPLEX RECEPTACLE
	110V DUPLEX RECEPTACLE GROUND FAULT INTERRUPTED
	110V DUPLEX RECEPTACLE W/ WEATHERPROOF COVER
	110V FLOOR MOUNTED DUPLEX RECEPTACLE
	240V RECEPTACLE
	TELEPHONE JACKS
	TELEVISION JACKS
	DOOR BELL PUSH BUTTON
	THERMOSTAT
	SMOKE DETECTOR
	EXHAUST FAN
	DOOR CHIME
	FIRE ALARM PANEL
	COMPUTER POINT

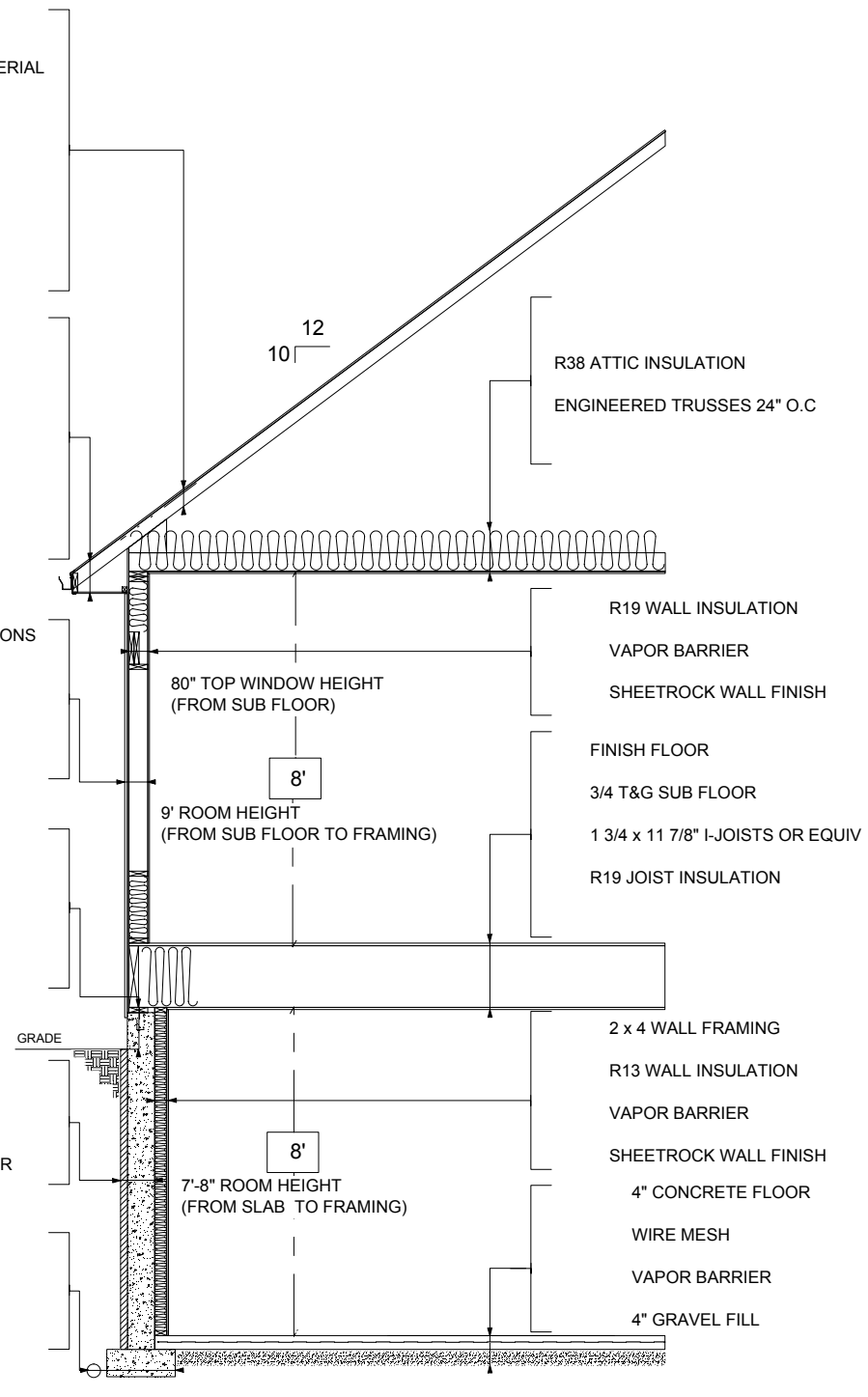
# BASEMENT ELECTRICAL PLAN

SCALE 1/8"=1'

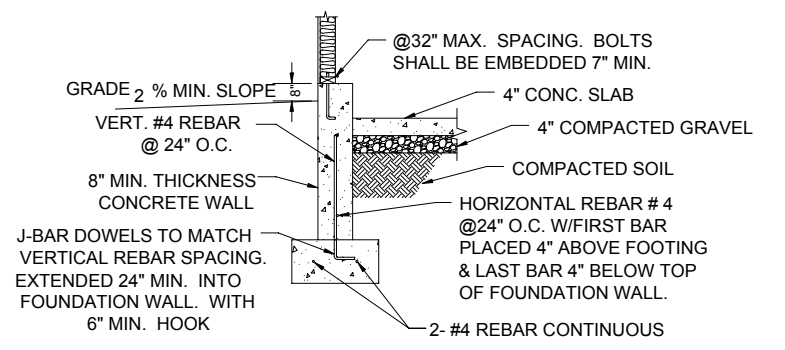
Note: Paper size B - 11 x 17 if printed on D - 22 x 34 scale is 2 X of stated scale  
 @COPYRIGHT SDSCAD Specialized Design Systems



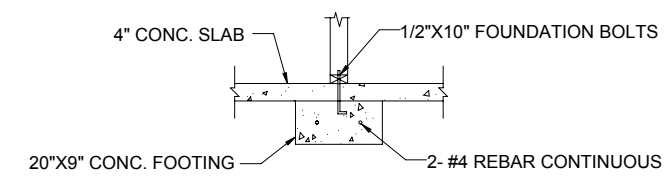
- ASPHALT SHINGLES ROOFING MATERIAL
- 30# ROOFING PAPER
- 5/8" Min ROOF DECKING
- ENGINEERED TRUSSES
- VENT PER CODE VENTILATION
- METAL DRIP EDGE
- RAIN GUTTERS
- 2 x 6 SUB FASCIA
- 12" METAL FASCIA
- 1 FT. OVERHANG
- METAL VENTED SOFFIT
- EXT. WALL FINISH AS PER ELEVATIONS
- TYVEK HOUSE WRAP
- 7/16 MIN WALL SHEATHING
- 2 x 6 FRAMING 16 O.C.
- A-307 ANCHOR BOLTS
- 2 x 6 TREATED SILL PLATE
- FOAM SILL SEAL
- 6" MIN TO GRADE HEIGHT
- WATERPROOFING TO GRADE
- 8" FOUNDATION WALL
- A-615 RE-BAR 24" OC VERT & HOR
- 4" DRAIN TILE
- 9" x 20" MIN CONCRETE FOOTING
- A-615 RE-BAR



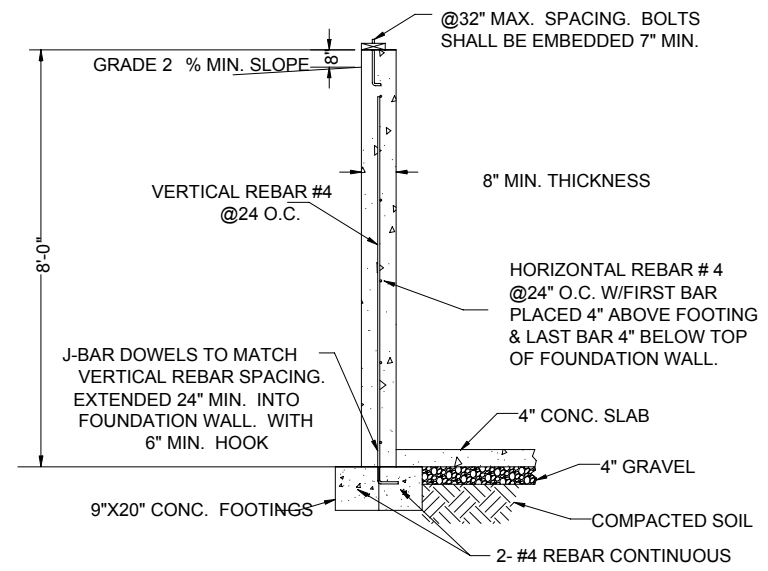
**ONE STORY WALL SECTION STANDARD PLATFORM FRAMING**  
SCALE:NO SCALE



**GARAGE WALL SECTION**



**BEARING WALL SECTION**



**BASEMENT WALL SECTION**

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Residential Design

**SDS-CAD**  
Specialized Design Systems

P.O. Box 374 Mendon, Utah www.sdscad.com email: sdscad@pcu.net

CLIENT	
DATE	04/20/2004
DRWN BY	John Davidson
CHKD BY	
DATE	
REVISIONS	
JOB NO.	
SHEET NO.	11
	OF
	11

Permit Number

## MECcheck Compliance Report 1995 MEC

MECcheck Software Version 3.3 Release 1b  
Data filename: G:\SDSCAD\craig smith\craig1.cck

TITLE: Craig Smith

Checked By/Date

CITY: Logan  
STATE: Utah  
HDD: 7389  
CONSTRUCTION TYPE: Single Family

DATE: 04/23/04  
DATE OF PLANS: April 16, 2004

COMPLIANCE: Passes

Maximum UA = 362  
Your Home = 361  
0.3% Better Than Code

	<u>Gross Area or Perimeter</u>	<u>Cavity R-Value</u>	<u>Cont. R-Value</u>	<u>Glazing or Door U-Factor</u>	<u>UA</u>
Ceiling 1: Flat Ceiling or Scissor Truss	1663	0.0	38.0		42
Wall 1: Wood Frame, 16" o.c.	1499	0.0	19.0		94
Window 1: Vinyl Frame, Double Pane with Low-E	202			0.350	71
Door 1: Solid	165			0.350	58
Basement Wall 1:					
Solid Concrete or Masonry, 8.0' ht/7.0' bg/8.0' insul	1499	0.0	13.0		73
Window 2: Vinyl Frame, Double Pane with Low-E	65			0.350	23
Furnace 1: Forced Hot Air, 90 AFUE					
Air Conditioner 2: Electric Central Air, 10 SEER					

COMPLIANCE STATEMENT: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 1995 MEC requirements in MECcheck Version 3.3 Release 1b and to comply with the mandatory requirements listed in the MECcheck Inspection Checklist.

Builder/Designer \_\_\_\_\_ Date \_\_\_\_\_

# MECcheck Inspection Checklist

## 1995 MEC

MECcheck Software Version 3.3 Release 1b

DATE: 04/23/04

TITLE: Craig Smith

Bldg.  
Dept.  
Use

### Ceilings:

- [ ] 1. Ceiling 1: Flat Ceiling or Scissor Truss, R-38.0 continuous insulation  
Comments: \_\_\_\_\_

### Above-Grade Walls:

- [ ] 1. Wall 1: Wood Frame, 16" o.c., R-19.0 continuous insulation  
Comments: \_\_\_\_\_

### Basement Walls:

- [ ] 1. Basement Wall 1: Solid Concrete or Masonry, 8.0' ht/7.0' bg/8.0' insul,  
R-13.0 continuous insulation  
Comments: \_\_\_\_\_

### Windows:

- [ ] 1. Window 1: Vinyl Frame, Double Pane with Low-E, U-factor: 0.350  
For windows without labeled U-factors, describe features:  
# Panes \_\_\_\_\_ Frame Type \_\_\_\_\_ Thermal Break? [ ] Yes [ ] No  
Comments: \_\_\_\_\_
- [ ] 2. Window 2: Vinyl Frame, Double Pane with Low-E, U-factor: 0.350  
For windows without labeled U-factors, describe features:  
# Panes \_\_\_\_\_ Frame Type \_\_\_\_\_ Thermal Break? [ ] Yes [ ] No  
Comments: \_\_\_\_\_

### Doors:

- [ ] 1. Door 1: Solid, U-factor: 0.350  
Comments: \_\_\_\_\_

### Heating and Cooling Equipment:

- [ ] 1. Furnace 1: Forced Hot Air, 90 AFUE or higher  
Make and Model Number \_\_\_\_\_
- [ ] 2. Air Conditioner 2: Electric Central Air, 10 SEER or higher  
Make and Model Number \_\_\_\_\_

### Air Leakage:

- [ ] Joints, penetrations, and all other such openings in the building envelope that are sources of air leakage must be sealed.
- [ ] Recessed lights must be Type IC rated and installed with no penetrations, or Type IC or non-IC rated installed inside an appropriate air-tight assembly with a 0.5" clearance from combustible materials and 3" clearance from insulation.

### Vapor Retarder:

- [ ] Required on the warm-in-winter side of all non-vented framed ceilings, walls, and floors.

### Materials Identification:

- [ ] Materials and equipment must be identified so that compliance can be determined.
- [ ] Manufacturer manuals for all installed heating and cooling equipment and service water heating equipment must be provided.
- [ ] Insulation R-values, glazing U-factors, and heating equipment efficiency must be clearly marked on the building plans or specifications.

### Duct Insulation:

- [ ] Ducts in unconditioned spaces must be insulated to R-5.  
Ducts outside the building must be insulated to R-8.0.

### Duct Construction:

- [ ] All ducts must be sealed with mastic and fibrous backing tape. Pressure-sensitive tape may be used for fibrous ducts. Duct tape is not permitted.
- [ ] The HVAC system must provide a means for balancing air and water systems.

### Temperature Controls:

- [ ] Thermostats are required for each separate HVAC system. A manual or automatic means to partially restrict or shut off the heating and/or cooling input to each zone or floor shall be provided.

### Circulating Hot Water Systems:

- [ ] Insulate circulating hot water pipes to the levels in Table 1.

### Swimming Pools:

- [ ] All heated swimming pools must have an on/off heater switch and require a cover unless over 20% of the heating energy is from non-depletable sources. Pool pumps require a time clock.

### Heating and Cooling Piping Insulation:

- [ ] HVAC piping conveying fluids above 120 °F or chilled fluids below 55 °F must be insulated to the levels in Table 2.

**Table 1: Minimum Insulation Thickness for Circulating Hot Water Pipes.**

Heated Water Temperature ( F)	Insulation Thickness in Inches by Pipe Sizes			
	Non-Circulating Runouts		Circulating Mains and Runouts	
	Up to 1"	Up to 1.25"	1.5" to 2.0"	Over 2"
170-180	0.5	1.0	1.5	2.0
140-160	0.5	0.5	1.0	1.5
100-130	0.5	0.5	0.5	1.0

**Table 2: Minimum Insulation Thickness for HVAC Pipes.**

Piping System Types	Fluid Temp. Range ( F)	Insulation Thickness in Inches by Pipe Sizes			
		2" Runouts	1" and Less	1.25" to 2"	2.5" to 4"
<b>Heating Systems</b>					
Low Pressure/Temperature	201-250	1.0	1.5	1.5	2.0
Low Temperature	120-200	0.5	1.0	1.0	1.5
Steam Condensate (for feed water)	Any	1.0	1.0	1.5	2.0
<b>Cooling Systems</b>					
Chilled Water, Refrigerant, and Brine	40-55	0.5	0.5	0.75	1.0
	Below 40	1.0	1.0	1.5	1.5

**NOTES TO FIELD (Building Department Use Only)**

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