



2020 SIPA
BUILDING
EXCELLENCE
AWARDS
SUBMITTAL

**PERKS
RESIDENCE**
GARNER, NC



KEY "TEAM" PLAYERS
CONTRIBUTING COMPANIES FOR
A SUCCESSFUL ENVELOPE



Moonlight
DESIGN STUDIO
LEAD DESIGN PROFESSIONAL



**Structural Insulated
Panel Association**



Pinnacle Engineering, Inc.
S.I.P. ENGINEER



Superior Walls
Simply Superior
FOUNDATIONS



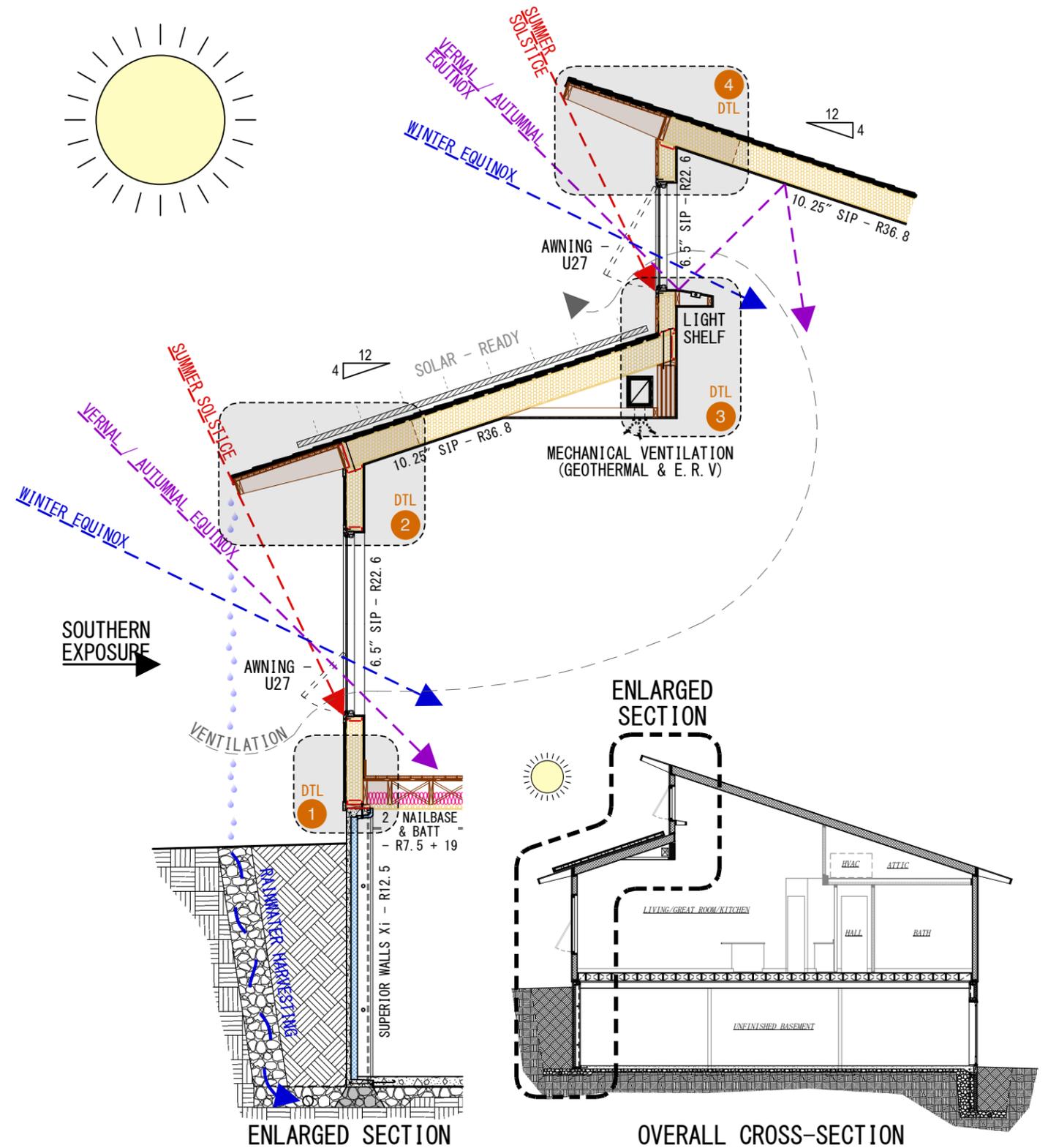
INSULSPAN
STRUCTURAL INSULATING PANEL SYSTEM
Better building ideas from PFB
S.I.P. MANUFACTURER



**SUNRISE
WINDOWS**
The Difference is Clear!
WINDOWS



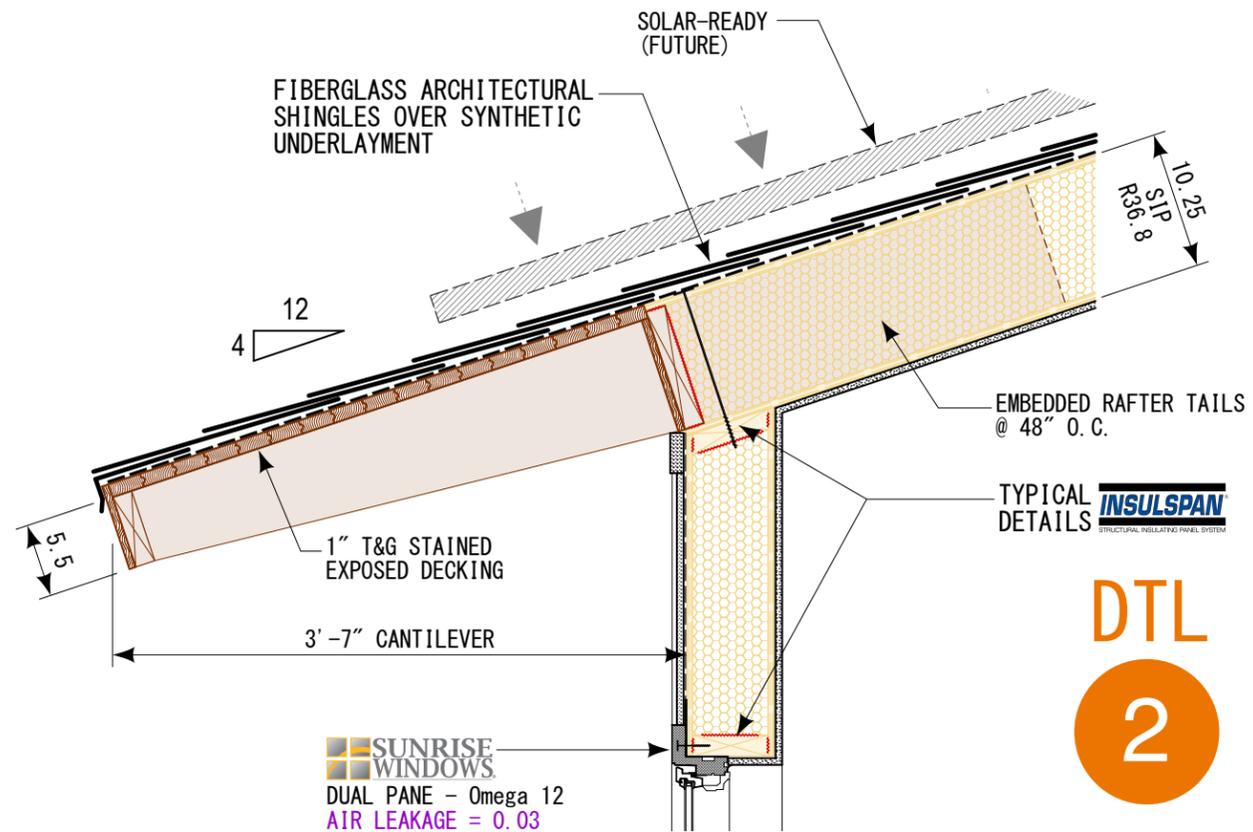
PANELWRIGHTS
S.I.P. INSTALLER




Moonlight
DESIGN STUDIO

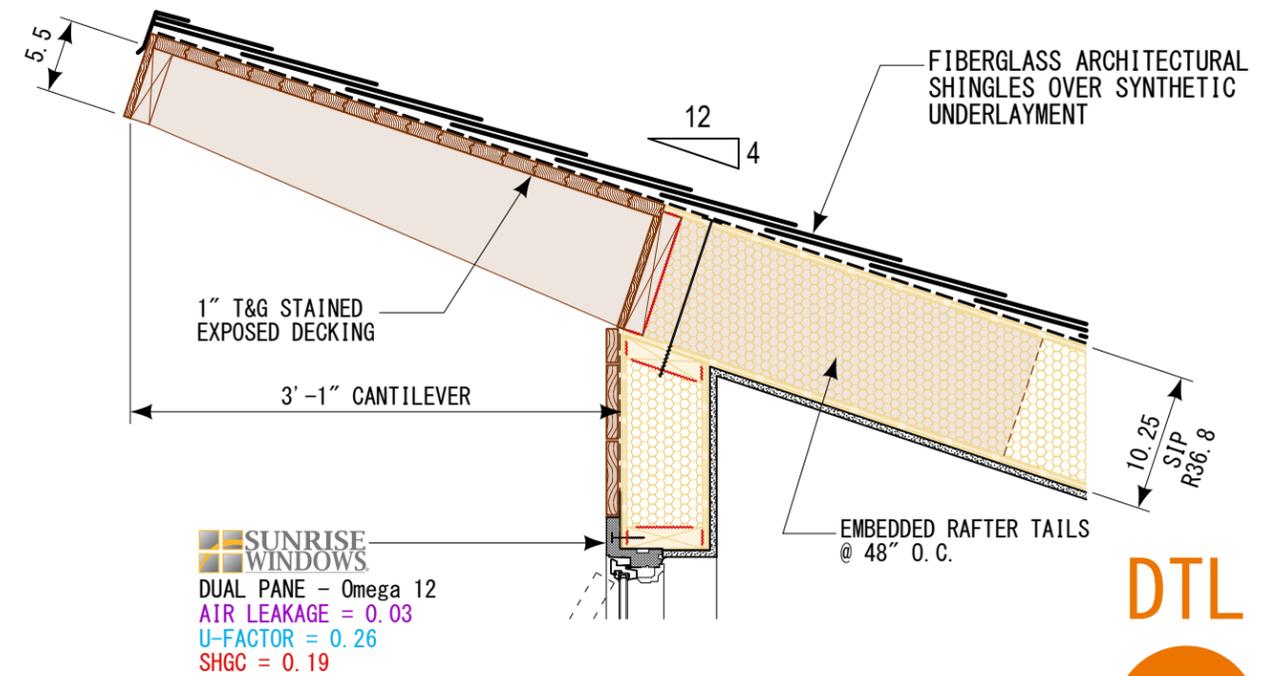
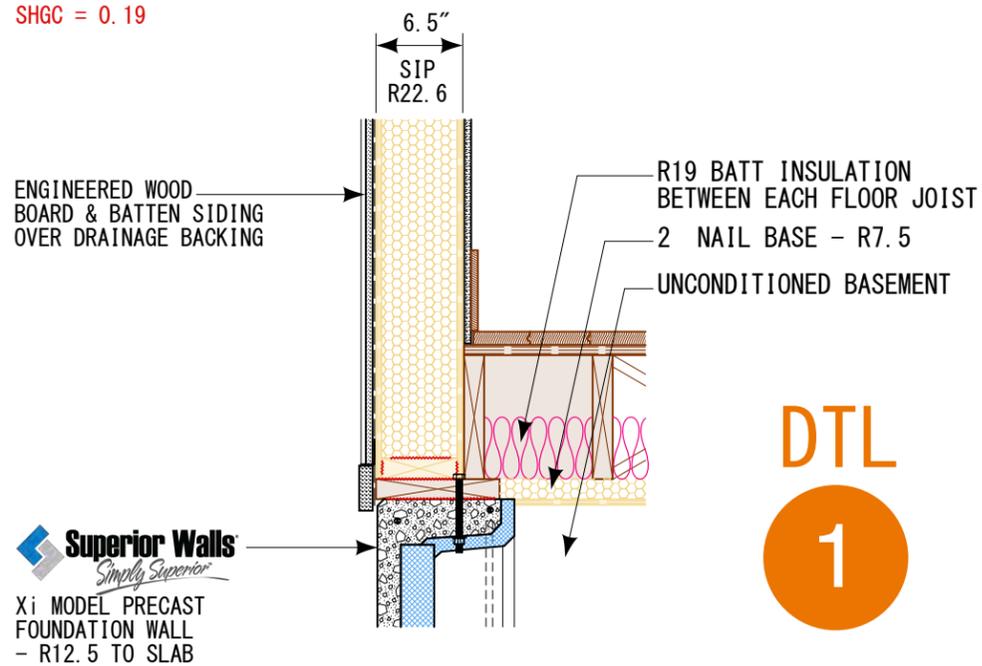
2020 SIPA BUILDING EXCELLENCE AWARDS SUBMITTAL
PERKS RESIDENCE



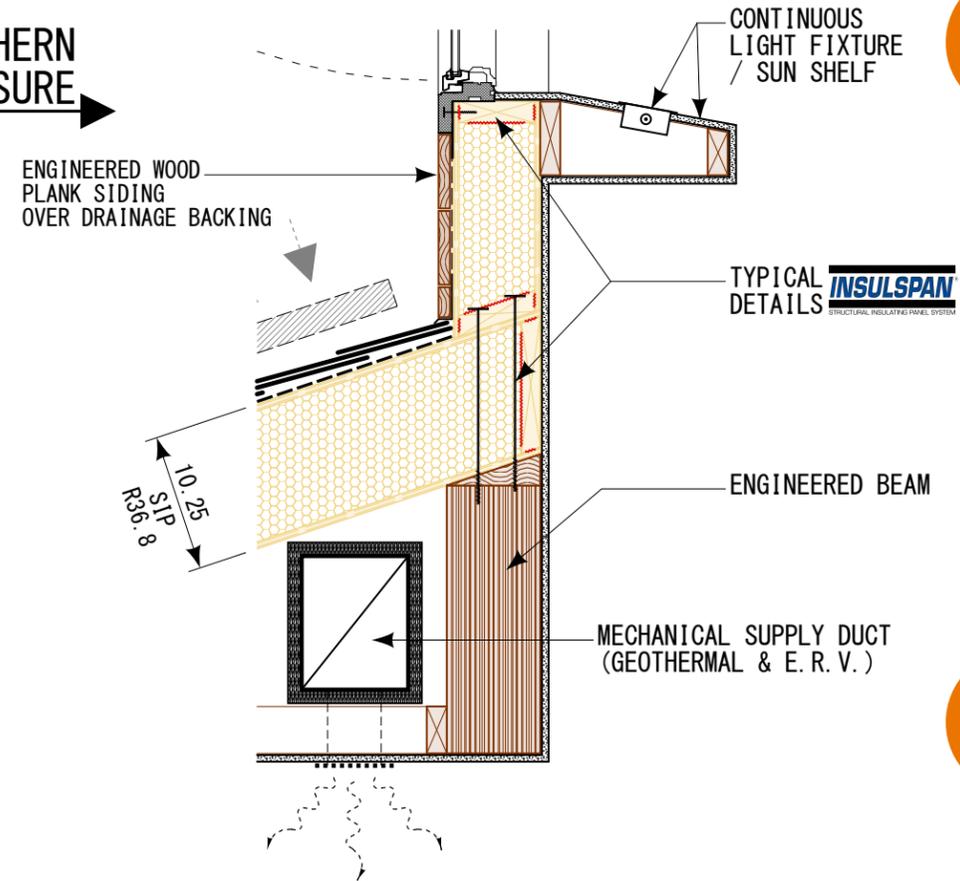


SUNRISE WINDOWS
 DUAL PANE - Omega 12
 AIR LEAKAGE = 0.03
 U-FACTOR = 0.26
 SHGC = 0.19

SOUTHERN EXPOSURE



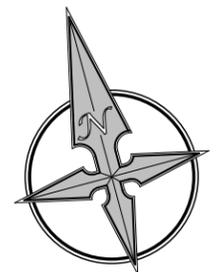
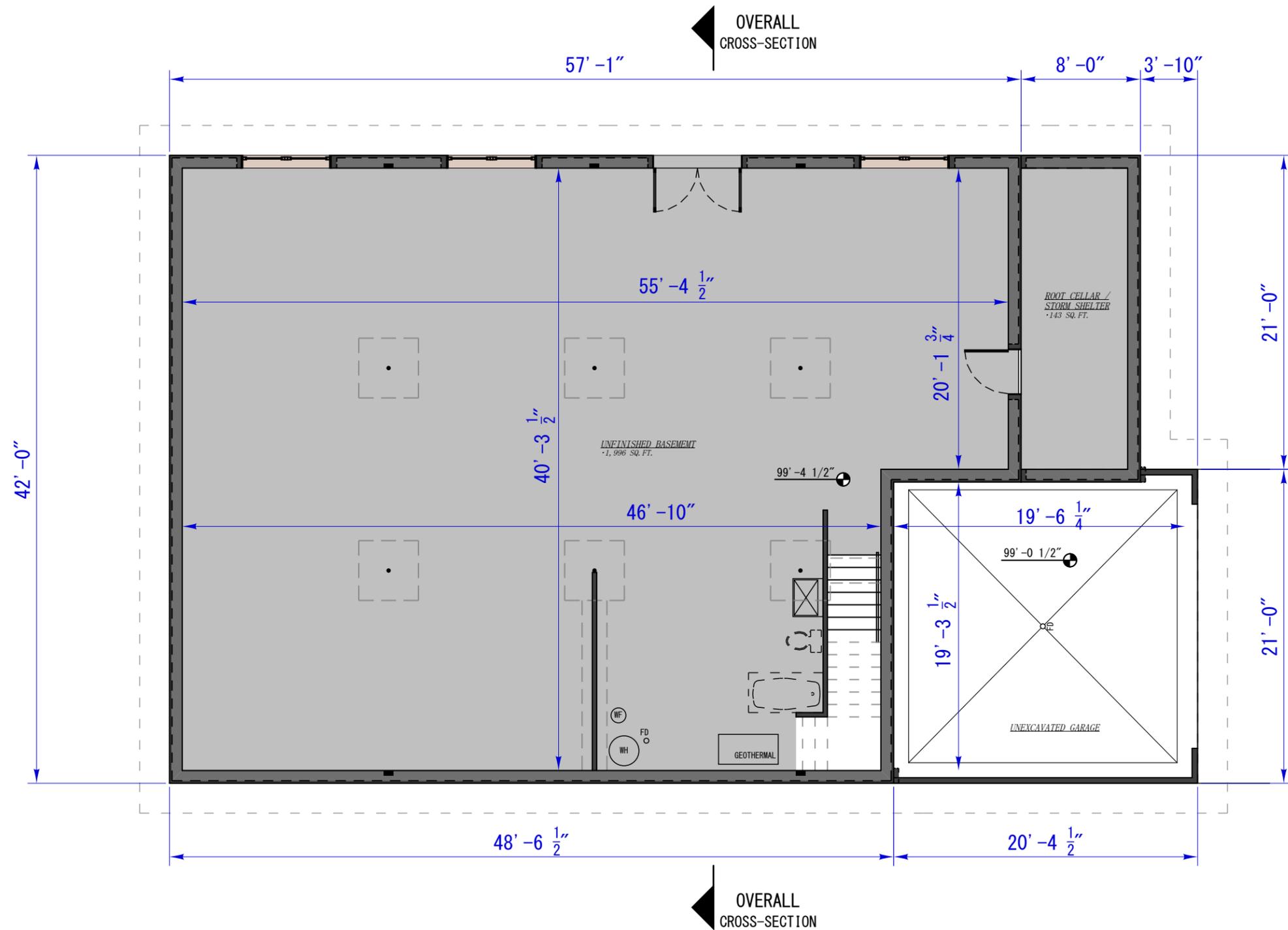
SOUTHERN EXPOSURE



BASEMENT

2,390 sq.ft.

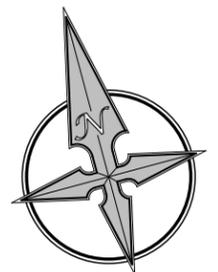
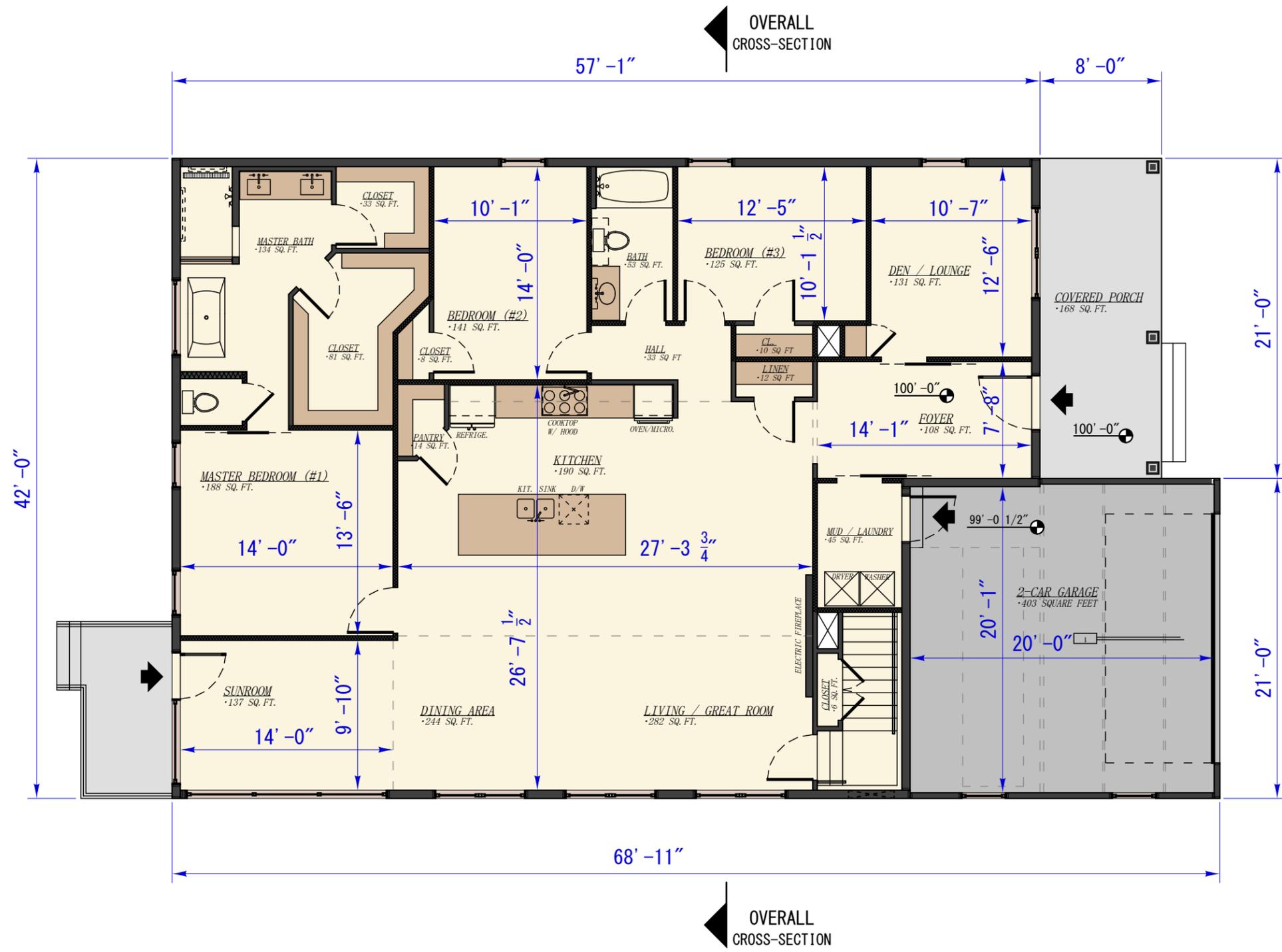
(SEPARATED FROM
MAIN LEVEL)



MAIN LEVEL

2,222 sq.ft.

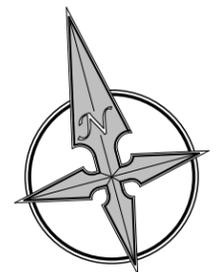
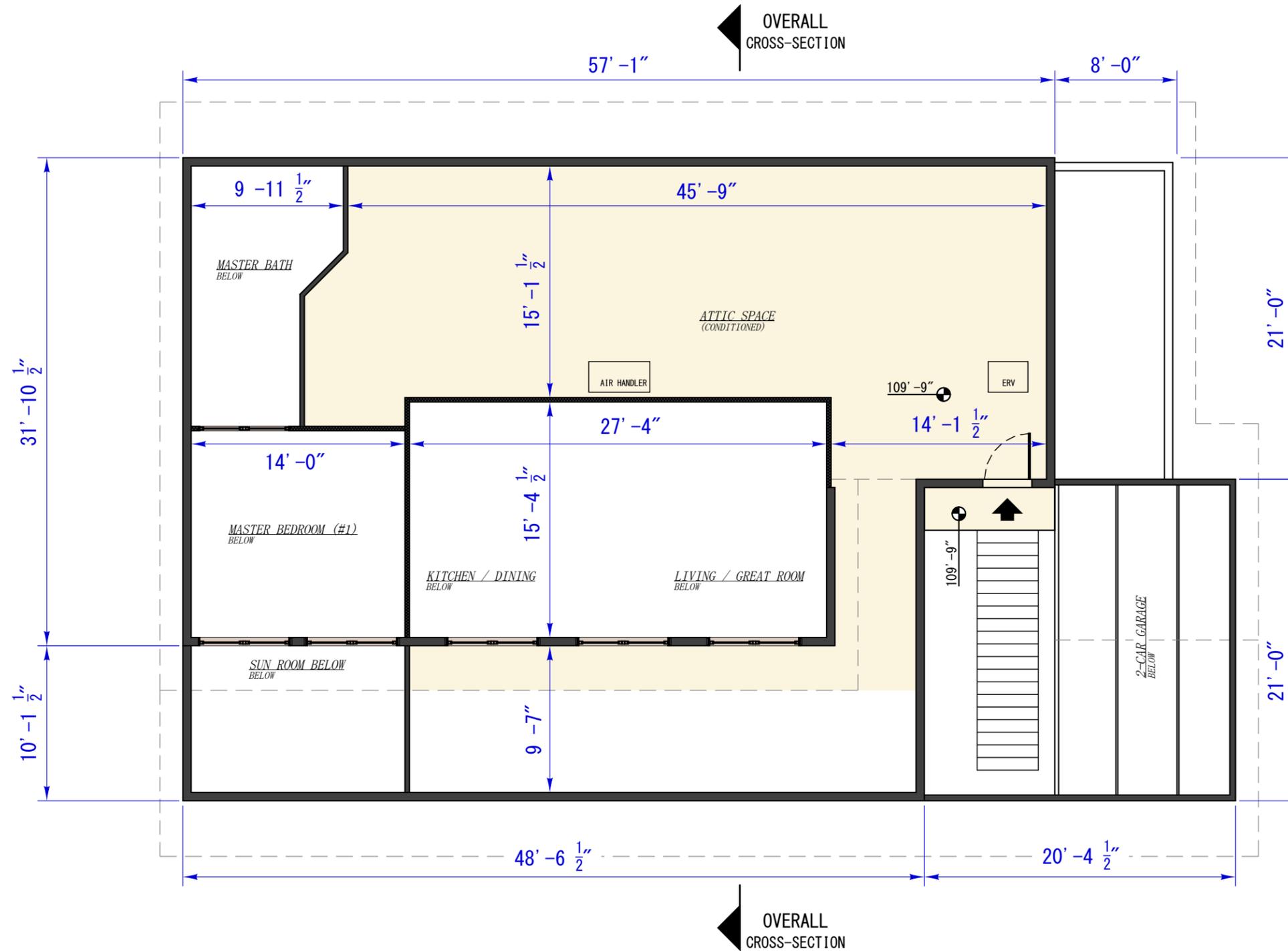
(SEPARATED FROM BASEMENT)



ATTIC LEVEL

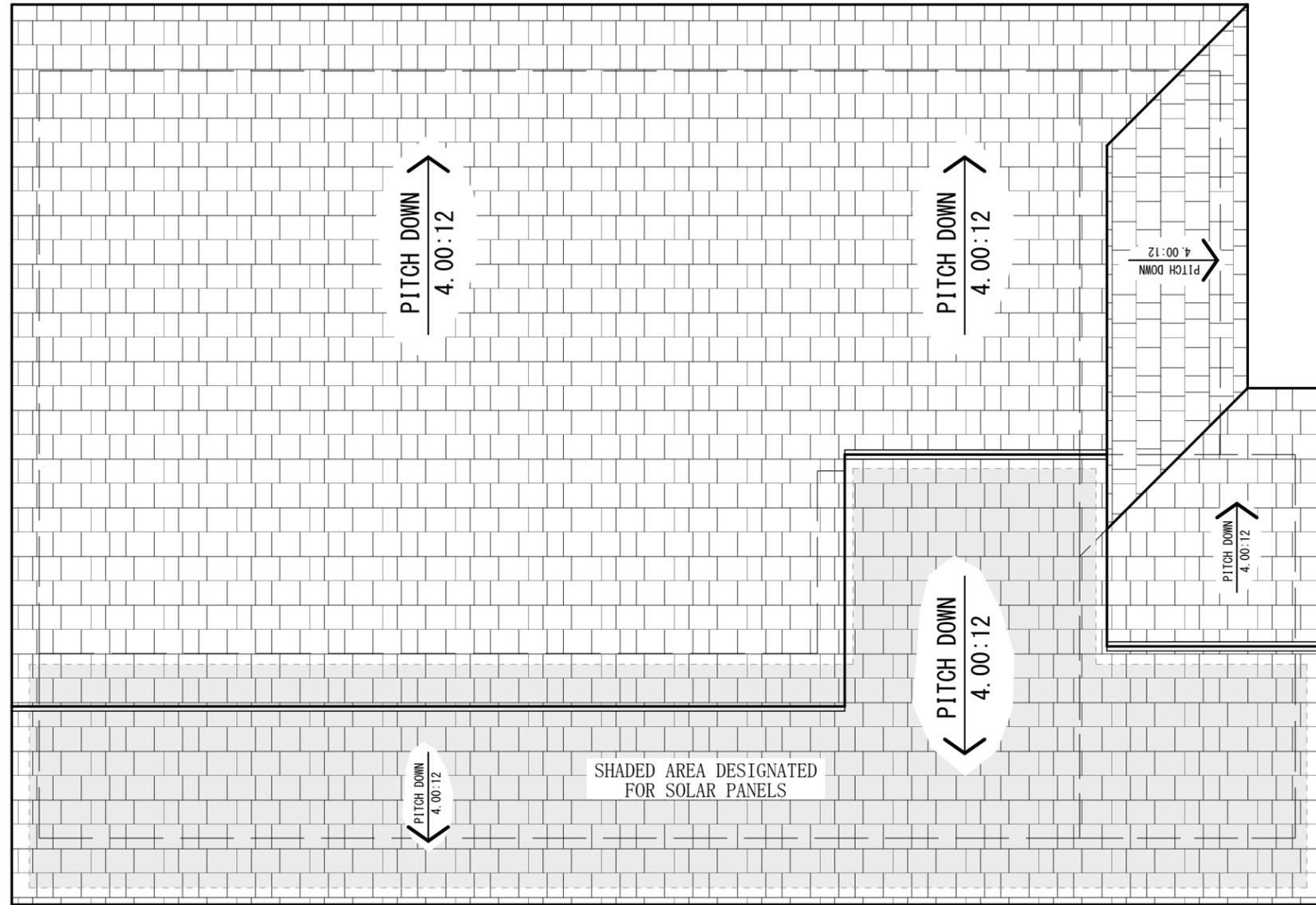
600 sq.ft.

(MECHANICAL)

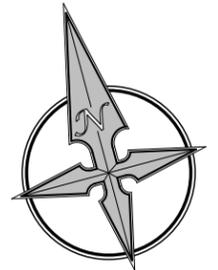


ROOF

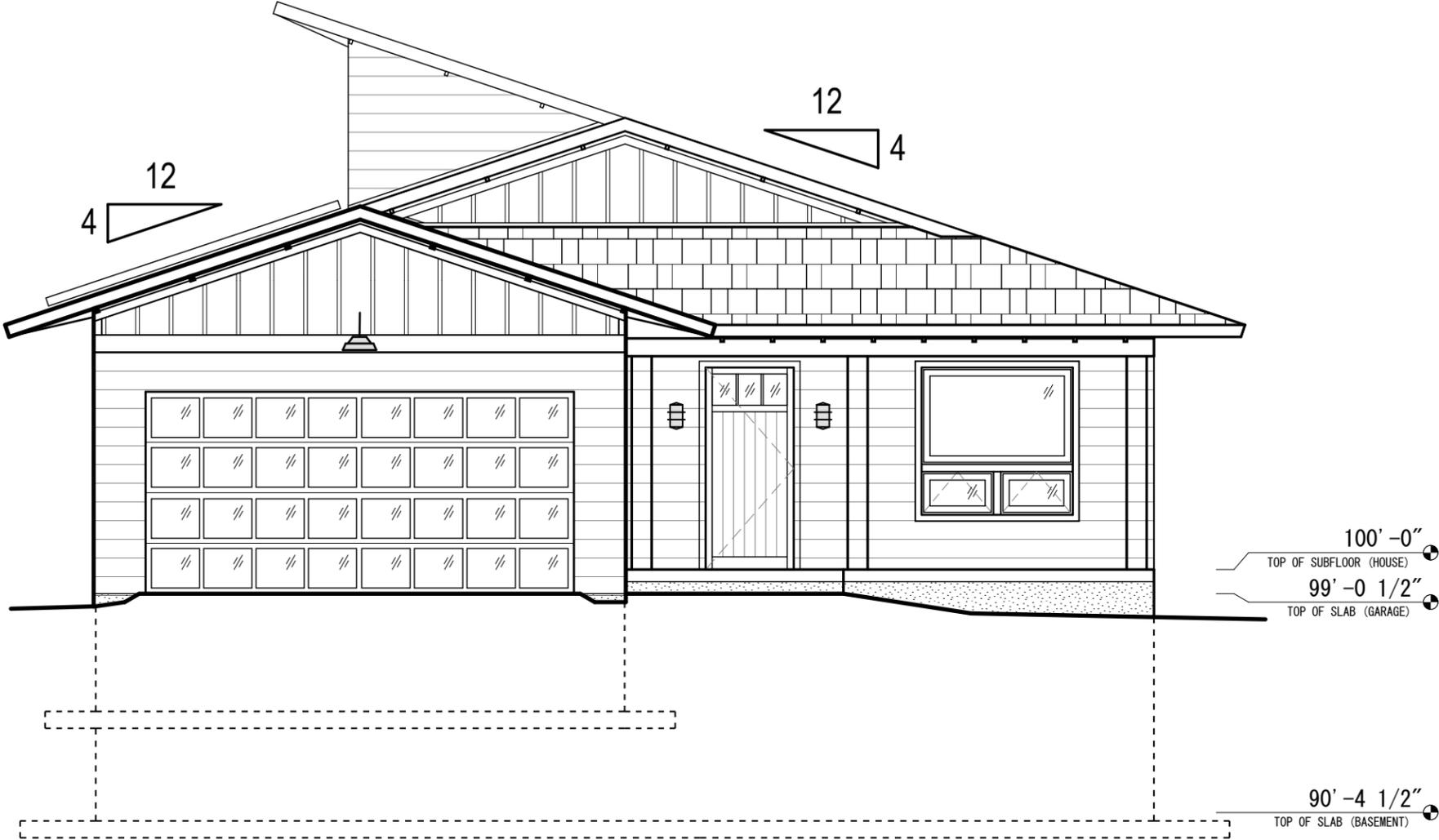
OVERALL
CROSS-SECTION



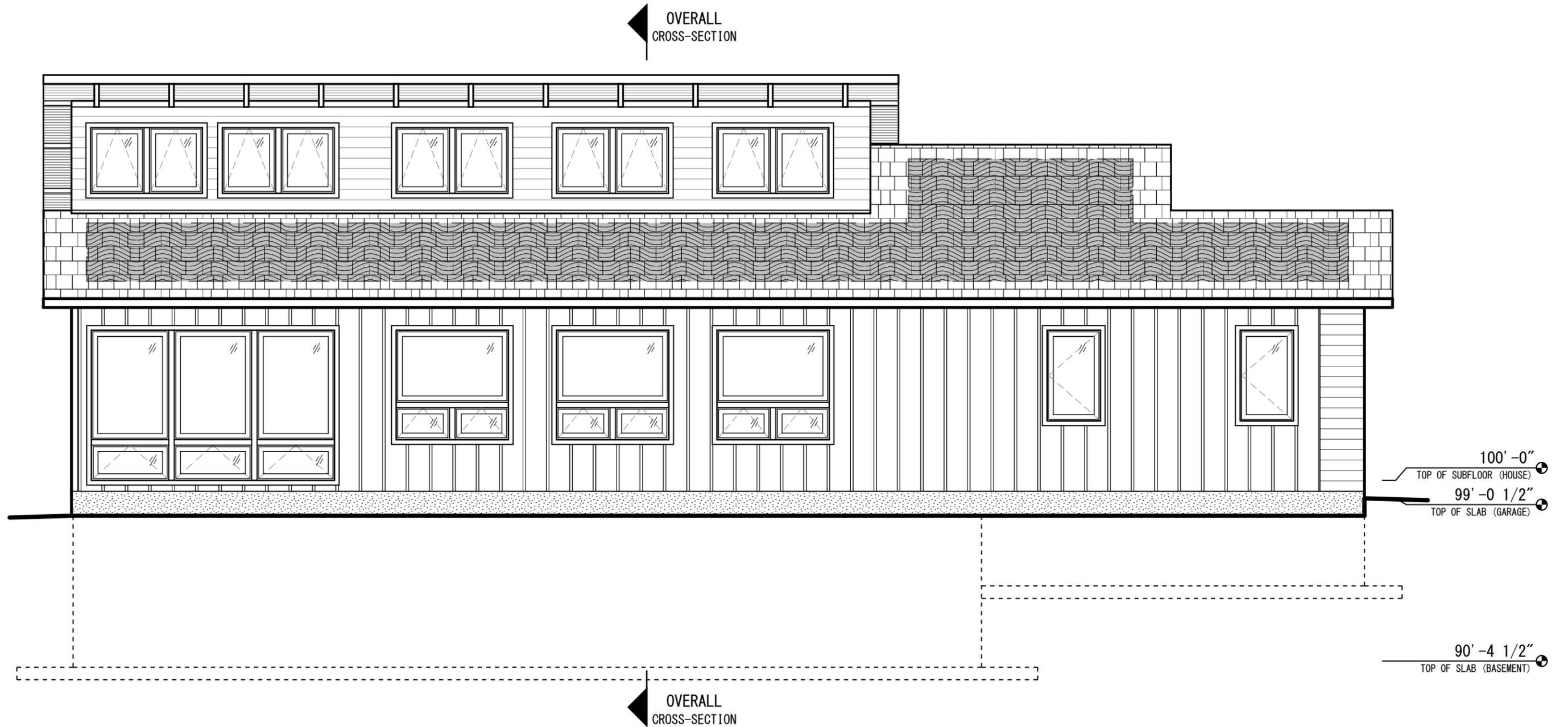
OVERALL
CROSS-SECTION



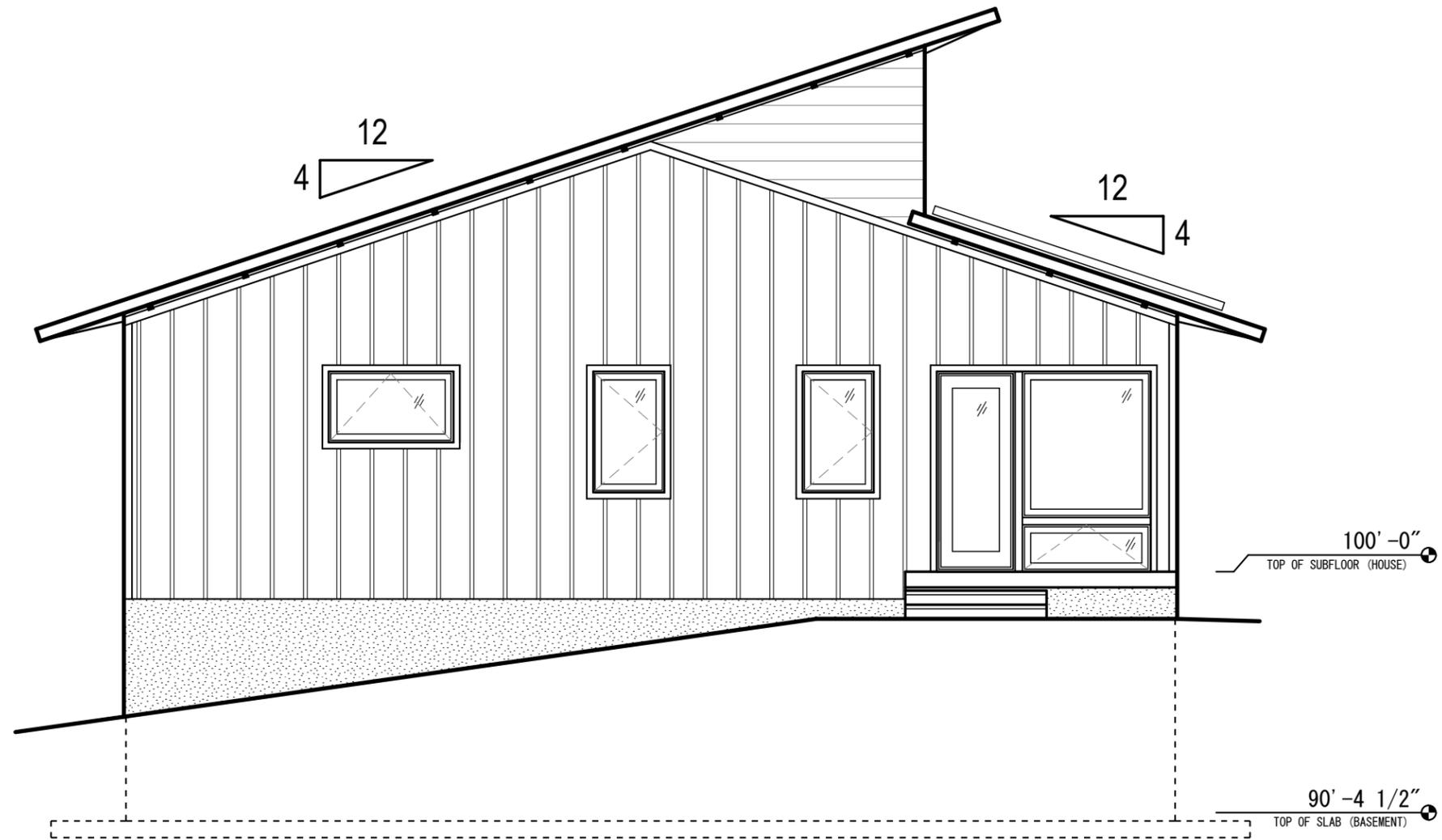
FRONT ELEVATION (EAST)



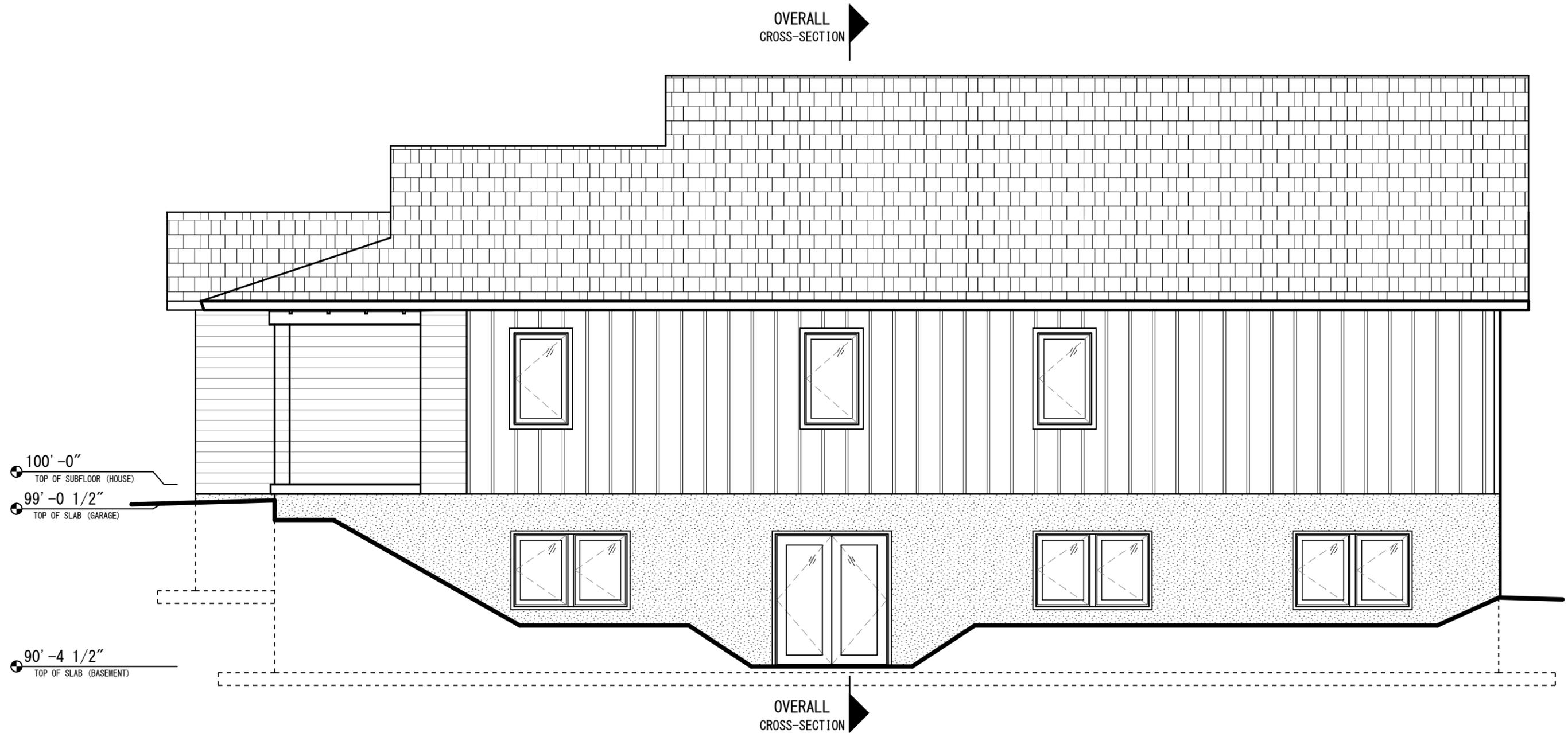
LEFT SIDE ELEVATION (SOUTH)



REAR ELEVATION (WEST)



RIGHT SIDE ELEVATION (NORTH)

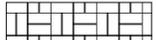


SITE PLAN

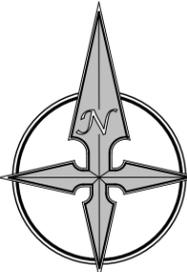
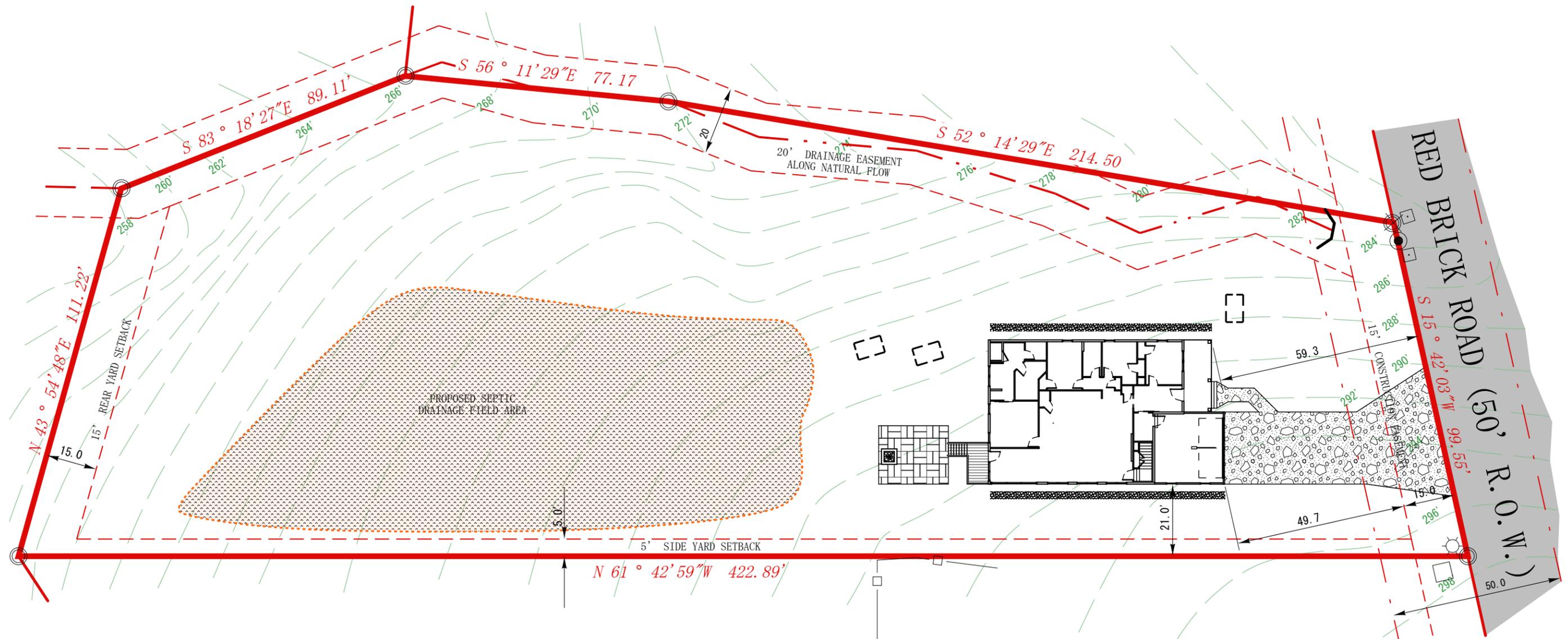
IMPERVIOUS SURFACE RATIOS		
AREA OF LOT:	100%	47,638 S. F.
AREA OF HOUSE/GARAGE/PORCH:	5.9%	2,814 S. F.
AREA OF DRIVEWAY/WALK:	3.4%	1,416 S. F.
AREA OF DECK/PATIO:	0.9%	443 S. F.

NOTE: HOUSE/GARAGE/PORCH COLLECTED BY RAINWATER HARVESTING SYSTEM FOR ON-SITE REUSE. UNUSED WATER OR SURPLUS SLOWLY PERCULATES BACK INTO SUBSOIL.

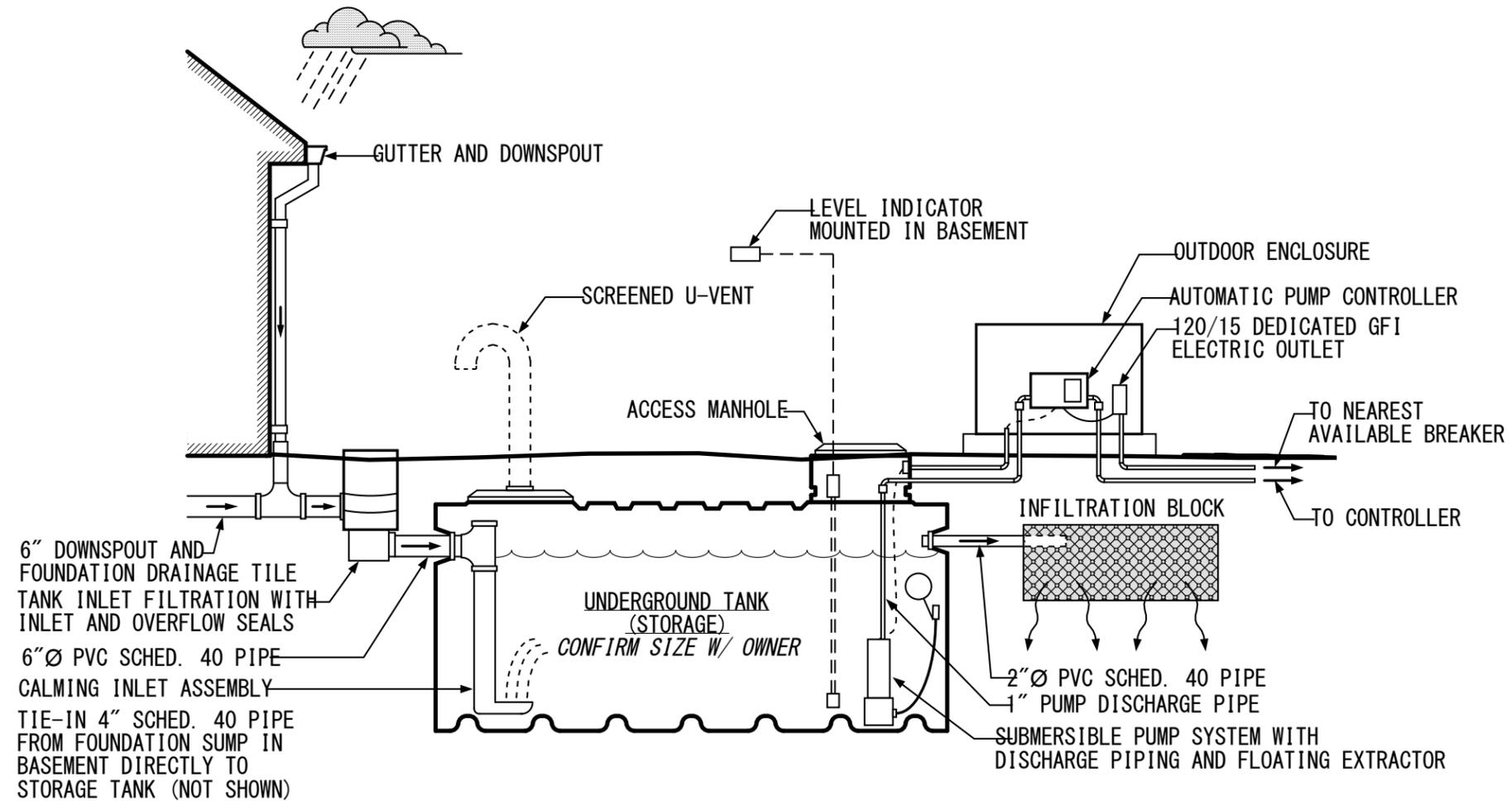
SITE PLAN LEGEND:

-  EXISTING ASPHALT PAVEMENT TO REMAIN - VERIFY IN FIELD. PROTECT FROM DAMAGE DURING CONSTRUCTION AND MAINTAIN CLEANLINESS FROM DIRT AND DEBRIS.
-  NEW CONCRETE PAVEMENT
-  NEW STAMPED CONCRETE PATIO

30 10 0 30

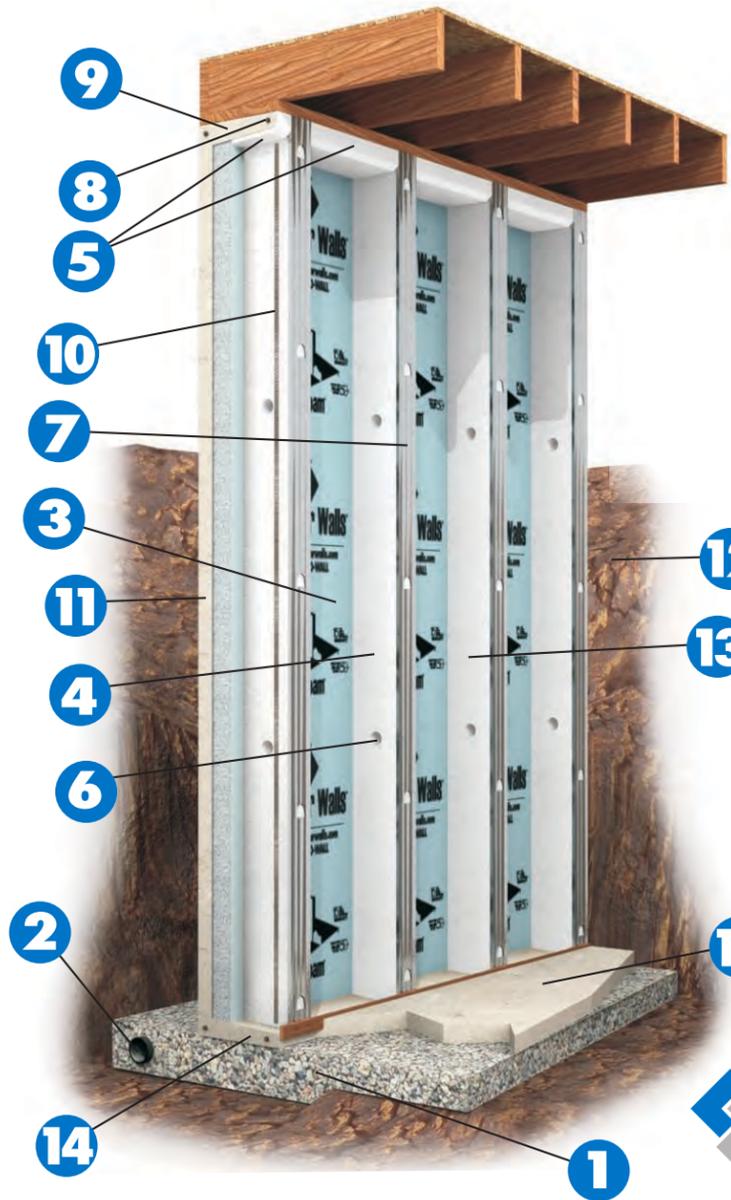
RAINWATER HARVESTING SYSTEM SCHEMATICS



THE BEST SOLUTION



SUPERIOR WALLS Xi FOUNDATION SYSTEM



DRY

Your permanent barrier against sidewall water penetration

- 1 Clean Crushed Stone Footing
- 2 Auxiliary Drain Pipe
- 3 Superior Sealant[®] Applied in All Joints for Permanent Moisture Barrier

WARM

Warmer in winter, cooler in summer... reduces your home's energy loss

- 3 2-1/2" Dow[®] Extruded Polystyrene Insulation
- 4 1" Foam Insulated Concrete Studs
- 5 1" Foam Insulation on Bond Beam

SMART

Ready to finish...with pre-engineered access built-in

- 6 Access Holes for Ease in Wiring and Plumbing
- 7 Galvanized Steel Stud Facing Ready for Drywall Finishing
- 8 CAD Custom-Designed to Virtually Any Home Style
- 9 Laser-Leveled to be Plumb, Level, Square
- 10 Installs on Your Site in Just Hours for Time and Money Savings

SUPERIOR

Created in a controlled factory environment to ensure that your new home's foundation will be built to the industry's highest standards...

- 11 5,000+ PSI Concrete for Superior Strength
- 12 Horizontal Steel Rebar Inside Top and Bottom Beams
- 13 Steel Reinforced Top Bond Beam
- 14 Vertical Steel Rebar (Inside Each Stud)
- 15 1-3/4" Concrete Face Shell
- 16 10-1/4" Overall Wall Thickness
- 17 Steel Reinforced Concrete Studs
- 18 Steel Reinforced Footer Beam
- 19 Concrete Floor

Special Note: Items #1,2,&15 as well as the joist/flooring system are provided on site per Superior Walls specifications by builder and contractors as an integral part of the Superior Walls foundation system.



ENERGY FRIENDLY

Our foundations feature a continuous layer of insulation bonded directly to the concrete, resulting in a tight thermal envelope to increase comfort and to reduce energy costs. We feature R-21.3 (US Markets) and R-23 (Canadian Markets) insulation in the Xi Plus wall system and R-12.5 insulation in the Xi wall system, while both systems provide room for additional insulation if desired.



REDUCES ENERGY LOSS

Building with Superior Walls insulated precast concrete wall panels provides your home with an excellent thermal envelope, minimizing the potential for energy loss. The combination of built-in insulation and high strength concrete is a great foundation for energy conservation.

LOWERS ENERGY COSTS

Built-in insulation helps lower energy loss through the basement walls. The R-21.3 (US Markets) or R-23 (Canadian Markets) insulation throughout the wall panels (Xi Plus wall system) minimizes thermal transfer. The pre-studded wall panels include extra cavity space that makes it easy to add additional insulation to maximize R-value up to R-42+.

SAVES VALUABLE NATURAL RESOURCES

Since the foundation wall panels are engineered and manufactured with insulated concrete studs, Superior Walls reduces the amount of materials used to build your new home, including wood and concrete, and reduces the carbon footprint of your new homes construction process!

IMPROVES INDOOR AIR QUALITY

Superior Walls 5000 psi concrete, with a lower water-to-cement ratio, ensures durability and helps prevent the transfer of moisture through the wall. A dry basement will improve air quality by minimizing the possibility of mold that can be found in traditional basements.

NO ON-SITE SOIL CONTAMINATION

Your Superior Walls foundation will be built in an indoor production facility, eliminating any on-site soil contamination from such as the form oil used for poured walls. And because dampproofing is built into our walls (US Markets; see ESR-1662), no on-site sprays or bituminous coatings are required to make the walls dampproof.

REDUCES JOBSITE WASTE

Our efficient, factory controlled production process ensures that your Superior Walls foundation arrives at your home site ready to install, producing virtually no on-site waste, with the least environmental site impact of any foundation system!

ENERGY STAR

Energy Star is an above code program that is sponsored by the Environmental Protection Agency (EPA). Often included as part of a green building program, Energy Star is used to rate the efficiency of a one or two-family house or town home.



Energy Star labeled homes are estimated by some to be about 15% more efficient than homes built according to the International Energy Conservation Code (IECC) or the International Residential Code (IRC) and they can be from 20 to 30% more energy efficient than standard homes. Homes built according to Energy Star guidelines must be verified by an independent Home Energy Rater to earn the Energy Star label.

Superior Walls can help you build an Energy Star qualified home. As a custom wall assembly, Superior Walls products contribute to the overall home insulation value and reduce air infiltration into the home, thereby making a huge impact on the overall energy efficiency rating of the home.

For more information on Energy Star products and programs, go to www.energystar.gov.

FOUNDATIONS



2020 SIPA BUILDING EXCELLENCE AWARDS SUBMITTAL
PERKS RESIDENCE



NFRC Performance Specifications

Our windows are tested and certified to National Fenestration Rating Council (NFRC) standards. Product testing data can be viewed by going to NFRC's web site, www.nfrc.org, and entering the appropriate Certified Product Directory (CPD) number.



* Argon (unless noted) - No-grids

Air Infiltration Rate			Double Hung	Slider	Tilt-In Slider	Standard Picture	Casement	Awning	Casement Picture	Sliding Door			
Dual Pane Glass Package Options	Glass Package	Order Code	% UV Blocked	0.02	0.11	0.09	0.04	0.01	0.03	0.01	0.02		
			Clear Glass (air)	2000 Glass (air)	NFRC CPD No.	SUW-K-1-01659	SUW-K-2-01449	SUW-K-6-01433	SUW-K-7-00547	SUW-K-14-00361	SUW-K-15-00361	SUW-K-16-00356	SUW-K-5-00279
					U-Factor	0.45	0.46	0.45	0.45	0.42	0.42	0.44	0.45
	SHGC	0.59			0.60	0.59	0.63	0.53	0.53	0.61	0.56		
	VT	0.63			0.63	0.62	0.66	0.57	0.57	0.65	0.59		
	CR	44	44	44	45	45	45	46	46				
	Passive U	P2100a	NFRC CPD No.	SUW-K-1-01662	SUW-K-2-01452	SUW-K-6-01436	SUW-K-7-00550	SUW-K-14-00364	SUW-K-15-00364	SUW-K-16-00359	SUW-K-5-00477		
			U-Factor	0.30	0.30	0.30	0.28	0.27	0.28	0.28	0.31		
			SHGC	0.49	0.49	0.49	0.52	0.45	0.45	0.52	0.47		
			VT	0.60	0.60	0.60	0.63	0.55	0.55	0.63	0.57		
	CR	56	58	58	60	60	56	57	60				
	Passive U ²	P2210a	NFRC CPD No.	SUW-K-1-01663	SUW-K-2-01453	SUW-K-6-01437	SUW-K-7-00551	SUW-K-14-00365	SUW-K-15-00365	SUW-K-16-00360	SUW-K-5-00460		
U-Factor			0.25	0.25	0.25	0.23	0.23	0.24	0.23	0.26			
SHGC			0.48	0.48	0.47	0.50	0.44	0.44	0.51	0.45			
VT			0.59	0.59	0.58	0.62	0.54	0.54	0.62	0.55			
CR	46	46	46	47	47	44	44	48					
Ultra-U Plus	N2100a	NFRC CPD No.	SUW-K-1-01996	SUW-K-2-01456	SUW-K-6-01440	SUW-K-7-00554	SUW-K-14-00368	SUW-K-15-00368	SUW-K-16-00363	SUW-K-5-00461			
		U-Factor	0.29	0.29	0.29	0.27	0.27	0.27	0.27	0.30			
		SHGC	0.28	0.28	0.28	0.30	0.26	0.26	0.30	0.27			
		VT	0.53	0.53	0.53	0.56	0.49	0.49	0.56	0.50			
CR	57	59	59	61	61	57	57	61					
Ultra-U Plus ²	N2210a	NFRC CPD No.	SUW-K-1-01667	SUW-K-2-01457	SUW-K-6-01441	SUW-K-7-00555	SUW-K-14-00369	SUW-K-15-00369	SUW-K-16-00364	SUW-K-5-00462			
		U-Factor	0.25	0.25	0.25	0.23	0.23	0.23	0.23	0.25			
		SHGC	0.28	0.28	0.27	0.29	0.26	0.26	0.29	0.26			
		VT	0.52	0.52	0.52	0.55	0.48	0.48	0.55	0.49			
CR	47	47	47	49	48	45	44	49					
Omega 12	S2100a	NFRC CPD No.	SUW-K-1-01995	SUW-K-2-01926	SUW-K-6-01444	SUW-K-7-00558	SUW-K-14-00372	SUW-K-15-00372	SUW-K-16-00367	SUW-K-5-00463			
		U-Factor	0.28	0.28	0.28	0.27	0.26	0.26	0.26	0.29			
		SHGC	0.21	0.21	0.21	0.22	0.19	0.19	0.22	0.20			
		VT	0.49	0.49	0.49	0.52	0.45	0.45	0.52	0.46			
CR	57	59	59	62	61	57	57	61					
Omega 12 ²	S2210a	NFRC CPD No.	SUW-K-1-01671	SUW-K-2-01461	SUW-K-6-01445	SUW-K-7-00559	SUW-K-14-00373	SUW-K-15-00373	SUW-K-16-00368	SUW-K-5-00464			
		U-Factor	0.24	0.25	0.24	0.22	0.22	0.23	0.22	0.25			
		SHGC	0.21	0.21	0.20	0.22	0.19	0.19	0.22	0.19			
		VT	0.48	0.48	0.48	0.50	0.44	0.44	0.51	0.45			
CR	47	48	48	49	48	45	44	49					

GOOD

BETTER

BEST

DUAL PANE GLASS

Passive U

A 7/8" overall dual glazed insulated glass unit featuring our exclusive Passive U glass, the MAXEdge™ spacer system, and an air space filled with high density argon gas. The Passive U coating structure is composed of six layers of high performance reflective metallic shields. With Interior Low-E Option: Passive U²

Ultra U Plus

A 7/8" overall dual glazed insulated glass unit featuring our exclusive Ultra U Plus glass, the MAXEdge™ spacer system, and an air space filled with high density argon gas. The Ultra U Plus coating structure is composed of eight layers of high performance reflective metallic shields. With Interior Low-E Option: Ultra U Plus²

Omega 12

A 7/8" overall dual glazed insulated glass unit featuring our exclusive Omega 12 glass, the MAXEdge™ spacer system, and an air space filled with high density argon gas. The Omega 12 coating structure is composed of twelve layers of high performance reflective metallic shields. With Interior Low-E Option: Omega 12²

	Passive U (P2100a)	
	U-FACTOR	SHGC
Double Hung	0.30	0.49
Casement	0.27	0.45

	Ultra U Plus (N2100a)	
	U-FACTOR	SHGC
Double Hung	0.29	0.28
Casement	0.27	0.26

	Omega 12 (S2100a)	
	U-FACTOR	SHGC
Double Hung	0.28	0.21
Casement	0.26	0.19

	Passive U ² (P2210a)	
	U-FACTOR	SHGC
Double Hung	0.25	0.48
Casement	0.23	0.44

	Ultra U Plus ² (N2210a)	
	U-FACTOR	SHGC
Double Hung	0.25	0.28
Casement	0.23	0.26

	Omega 12 ² (S2210a)	
	U-FACTOR	SHGC
Double Hung	0.24	0.21
Casement	0.22	0.19

Dual Pane IGU System

- Polyisobutylene (PIB) Seal Barrier** is the first layer of the dual-seal system. Prevents moisture from penetrating the insulated glass unit, and also retains argon gas in the airspace.
- Desiccant beads** fill the MAXEdge™ spacer for an additional layer of vapor protection to further protect the window against moisture getting between the panes.
- Secondary Silicone Barrier** is the second layer in the dual-seal system. Creates a weatherable, structural bond that adheres the glass to the spacer, and retains its strength during expansion and contraction cycles.

WINDOWS



Front view - from Northeast



Front and side view - from Southeast

