Massachusetts ADU Design Challenge | Project Cover Sheet

1. Design Team

Lead Applicant: Giuseppe Puglisi
Additional Applicants:
Design Firm Name (If Applicable):
Contact Info: gpslhg@gmail.com

2. Design Information

EntryID (randomly assigned by HLC for tracking purposes): 3574
Design Name: Quaint Standard ADU
ADU Gross Floor Area (square footage): 857.71
Unit Layout: Two-Bedroom or more
ADU Height (feet): 20.5
Window/Wall Ratio: 24
Foundation Type: Concrete Frost Wall

3. Project Narrative

This proposal demonstrates how architectural dignity, livability, and sustainability can be achieved within a disciplined, ultra-compact footprint. Rather than maximizing Gross Floor Area to the allowable limit, the design prioritizes structural logic, proportional clarity, and repeatable construction methods. The final GFA complies with 760 CMR 71.00, measured to interior finished faces, but the geometry is intentionally resolved rather than stretched to meet a numerical ceiling. Organized, yet hidden, as a split-level ADU within a 20'-0"x 24'-0"primary footprint, selective 2'-0"cantilevers are utilized to create articulation without increasing foundation volume. This contained strategy keeps spans short, aligns with 4-foot framing modules, allows standard dimensional lumber construction, and utilizes continuous spread-footing bearing of interior walls to negate reliance on engineered beams that add coordination and cost complexity.

ADU DESIGN CHALLENGE

STANDARD ADU - MAX 900 FT^2

FLOOR AREA TOTALS

FINISHED = 762 FT^2
GFA = 857.71 FT^2
(OR 870.82 FT^2*)

PROJECT NARRATIVE

This proposal demonstrates how architectural dignity, livability, and sustainability can be achieved within a disciplined, ultra-compact footprint. Rather than maximizing Gross Floor Area to the allowable limit, the design prioritizes structural logic, proportional clarity, and repeatable construction methods. The final GFA complies with 760 CMR 71.00, measured to interior finished faces, but the geometry is intentionally resolved rather than stretched to meet a numerical ceiling.

Organized, yet hidden, as a split-level ADU within a 20'-0" x 24'-0" primary footprint, selective 2'-0" cantilevers are utilized to create articulation without increasing foundation volume. This contained strategy keeps spans short, aligns with 4-foot framing modules, allows standard dimensional lumber construction, and utilizes continuous spread-footing bearing of interior walls to negate reliance on engineered beams that add coordination and cost complexity.

The split-level configuration offers meaningful functional advantages. By partially embedding the stair landing within the foundation wall depth, vertical travel is distributed more efficiently, shortening individual flights and improving accessibility. Grade relationships at entries are easier to manage, reducing exterior stair height and simplifying site integration. The result is a layered interior experience within a disciplined and highly articulated envelope.

Despite being 762 square feet of finished space, the ADU provides the amenities expected of a full-sized residence and does so with surprisingly large dimensions and generous spaces in contrast to usual expectations. Each room is proportioned for real furnishings and everyday use, avoiding ineffective functionality and compressed compromises.

Constructibility informs every decision. Precut stud heights reduce waste and labor, short spans increase stiffness and minimize material demand, 6"/12" roof slopes are structurally efficient and well-suited for Massachusetts snow loads while providing ideal geometry for solar readiness. Roof planes are intentionally oriented for variable photovoltaic installation, allowing clean integration without visual or structural awkwardness.

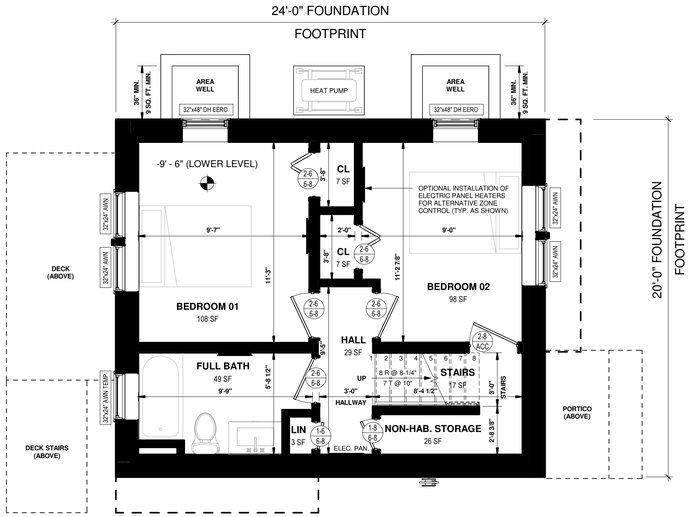
An all-electric heat pump system provides heating and cooling in a compact mechanical footprint. An "EV-Ready" charging location is positioned adjacent to parking and directly below the electrical service panel to reduce installation cost and future disruption. These electrification strategies align with the Commonwealth's long-term energy goals while remaining practical for builders and homeowners.

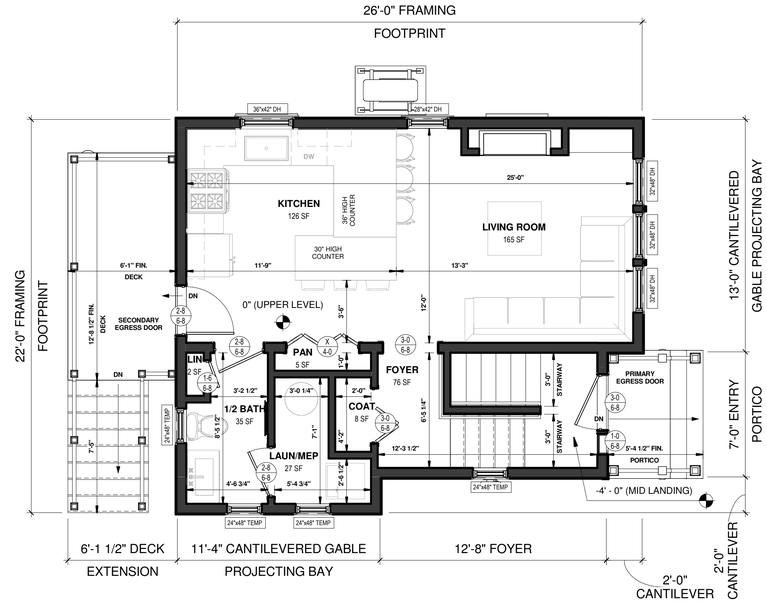
Durable, widely available materials are selected for longevity and affordability. fiber cement siding provides resilience with minimal maintenance, spray foam insulation enhances air sealing and envelope performance, enabling reduced mechanical system usage, while PVC trim is used sparingly and only where moisture exposure warrants its durability.

The site plan is calibrated to the smallest parcel criteria provided in the competition guidelines. Parking, setbacks, door landings, and separation distances are shown realistically without special exemptions and accommodating a variety of site compositions and general typologies. This approach emphasizes feasibility and by-right implementation rather than theoretical maximum build-out.

A core principle of the proposal is municipal empathy. By avoiding an exaggerated footprint and demonstrating clean, rational geometry, the design supports smoother local receptions and first-impressions by offering a replicable prototype that balances state objectives with neighborhood compatibility.

Ultimately, this ADU illustrates that compact does not mean compromised. Through disciplined form, efficient structure, short spans, reduced foundation volume, and integrated electrification, the design lowers embodied carbon while delivering the comfort and identity of a complete home; **contained by choice, efficient by design, and constructed to belong.**





FLOOR PLAN - LOWER LEVEL

FINISHED = 318 FT^2 // GFA = 376.25 FT^2

FLOOR PLAN - UPPER LEVEL

FINISHED = 444 FT^2 // GFA = 481.46 FT^2

CONTEXTUALIZED SITE VIEW

INTERIOR SPATIAL CONCEPT

(*) GFA FOUNDATION NOTE: WHERE PERMISSIBLE TO DO SO BASED ON GEOTECHNICAL CONDITIONS, INCLUDING BUT NOT LIMITED TO, LATERAL PRESSURE(S), SURCHARGE(S), AND BACKFILL BALANCING, FOUNDATION WALLS CAN BE REDUCED FROM 10" THK. (AS SHOWN) TO 8" THK. RESULTING IN A GFA OF 870.82 FT^2, REPRESENTING AN ADDITIONAL 13.11 FT^2 OF GFA.

ADU DESIGN CHALLENGE

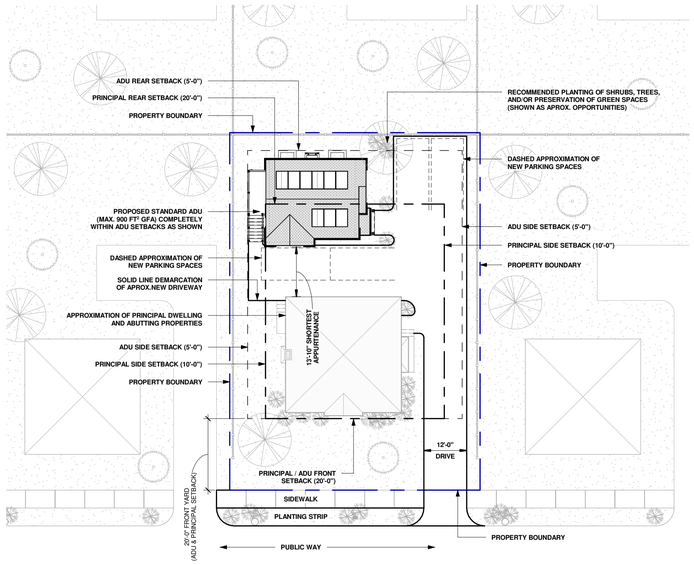
STANDARD ADU - MAX 900 FT²

FLOOR AREA TOTALS

FINISHED = 762 FT²
GFA = 857.71 FT²
(OR 870.82 FT²*)

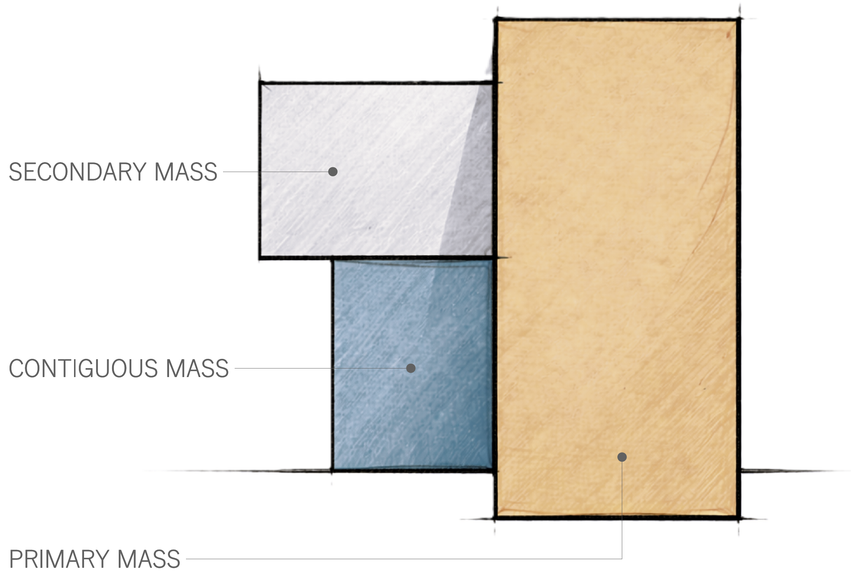
CONTEXTUALIZATION STUDY

SITE LOCATION



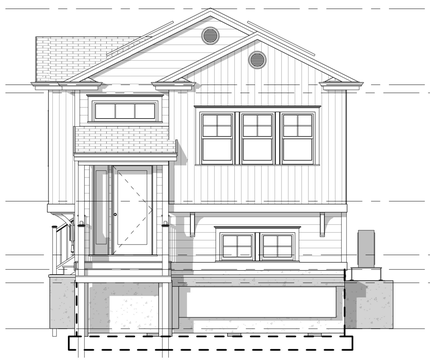
SITE PLAN CONTEXTUALIZATION

7,000 FT² PARCEL



PARTI PRIS DIAGRAM

TECTONIC CONTIGUITY



FRONT ELEVATION

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

LEFT ELEVATION

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

REAR ELEVATION

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

RIGHT ELEVATION

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

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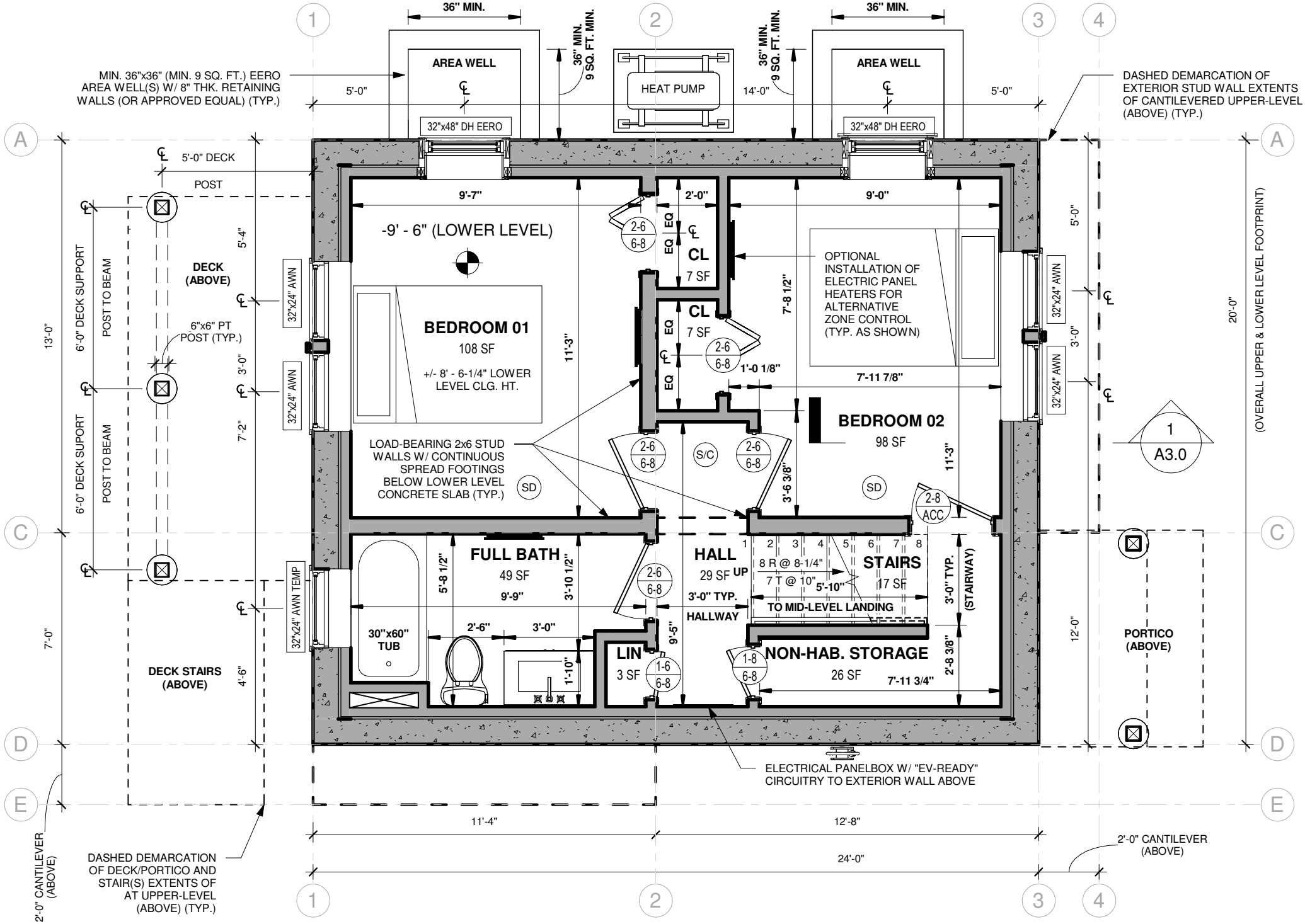

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DESIGN FLOOR PLAN: LOWER LEVEL

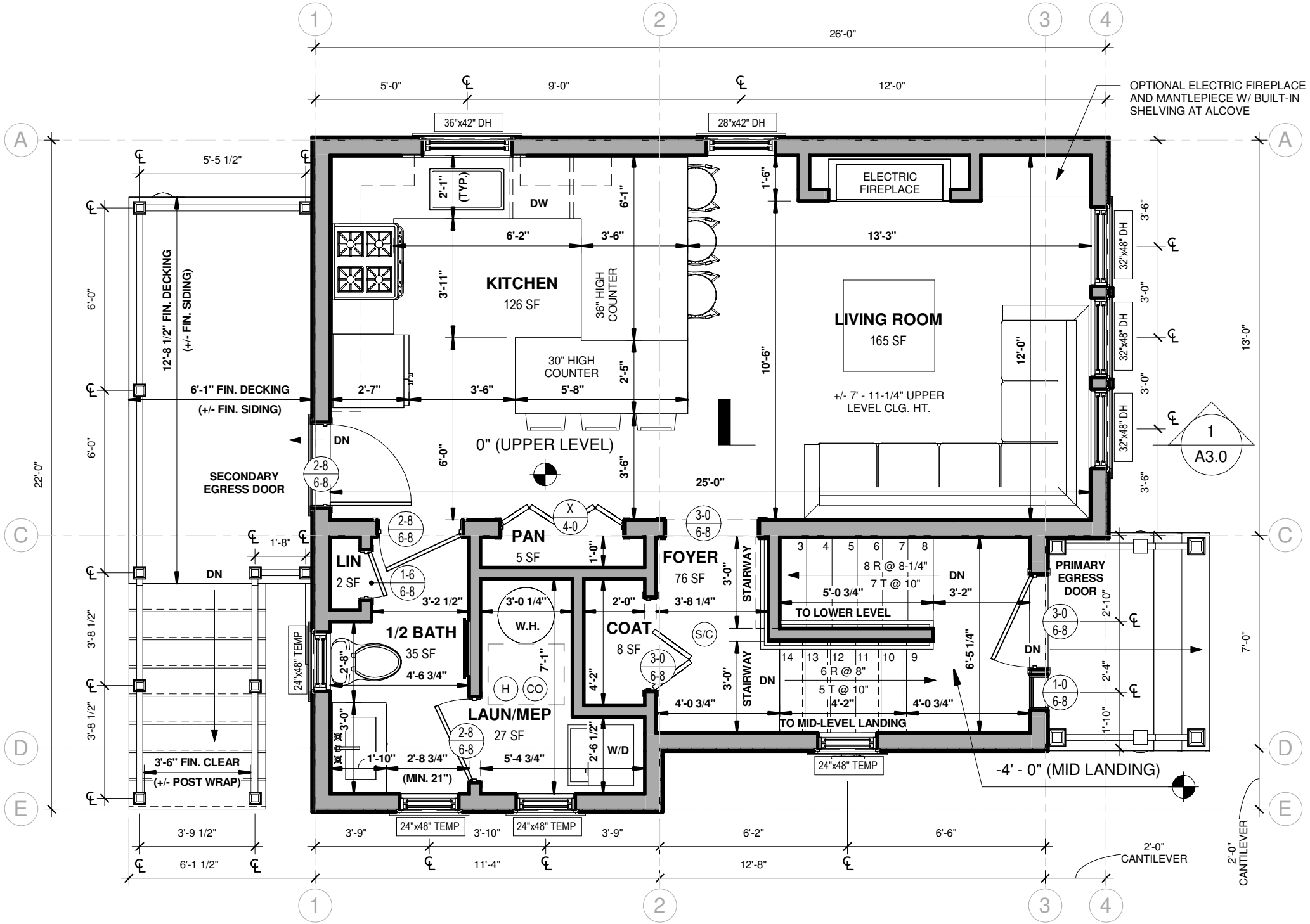
DESCRIPTION: PARTIALLY BELOW GRADE "LOWER LEVEL" FLOOR WITH TWO BEDROOMS, TWO CLOTHING CLOSETS, FULL BATH, LINEN CLOSET, CENTRALIZED HALLWAY WITH IMMEDIATE STAIRWAY ACCESS TO THE "MID-LEVEL LANDING" WHICH HOSTS THE PRIMARY EGRESS DOOR, AND UNDER-STAIRWAY STORAGE.

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

GFA: 376.25 FT²

FIN: 318 FT²

A1.0



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DESIGN FLOOR PLAN: UPPER LEVEL

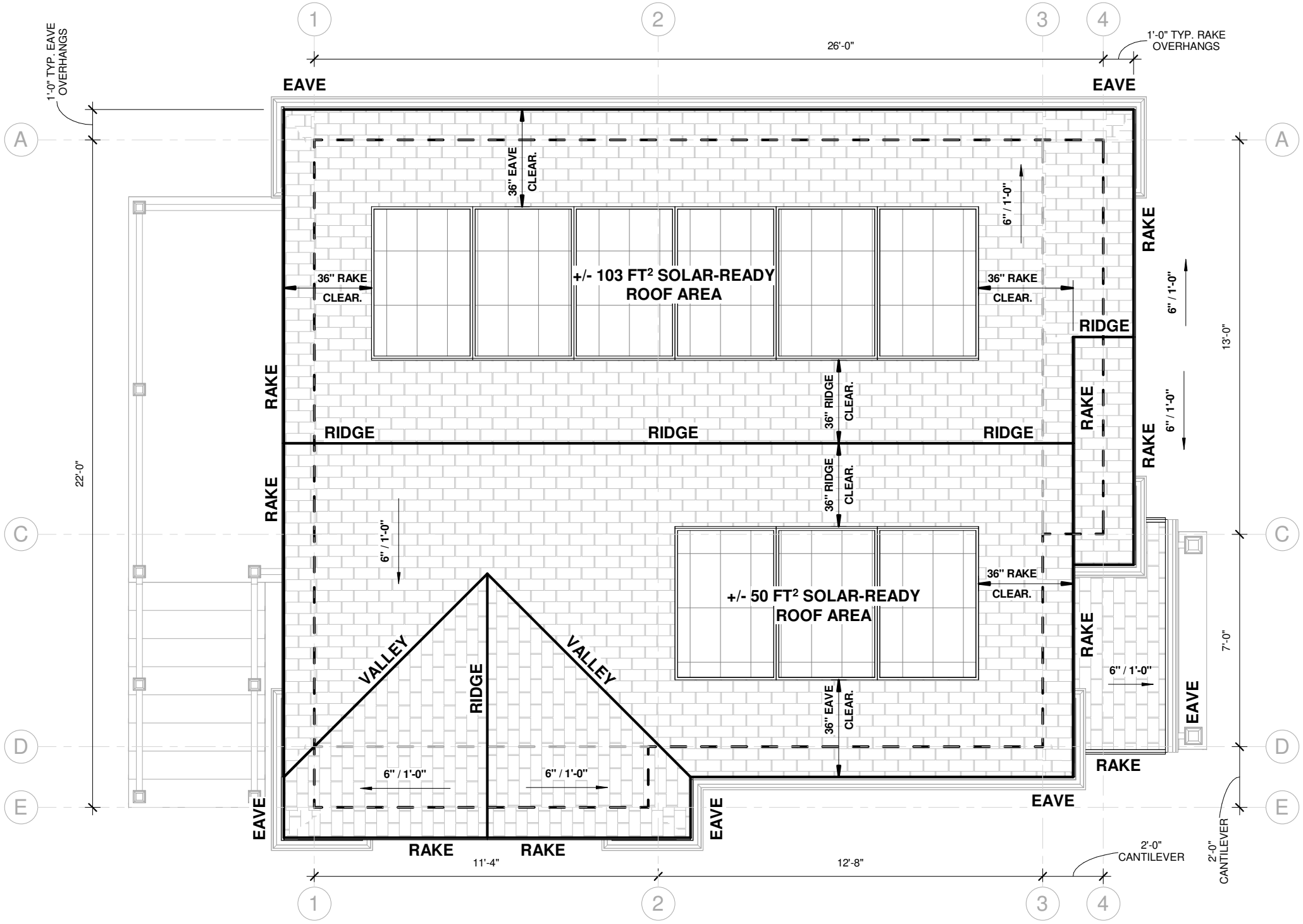
DESCRIPTION: ABOVE GRADE "UPPER LEVEL" FLOOR WITH A CLERESTORY FOYER, COAT CLOSET, SPACIOUS LIVING ROOM, FULL KITCHEN WITH A THREE-PERSON PENINSULA AND LOWER INTEGRATED TABLE, PANTRY, HALF-BATH W/ ACCESS TO A FINISHED LAUNDRY AND M.E.P. ROOM, AND A LINEN CLOSET

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

GFA: 481.53 FT²

FIN: 444 FT²

A1.1



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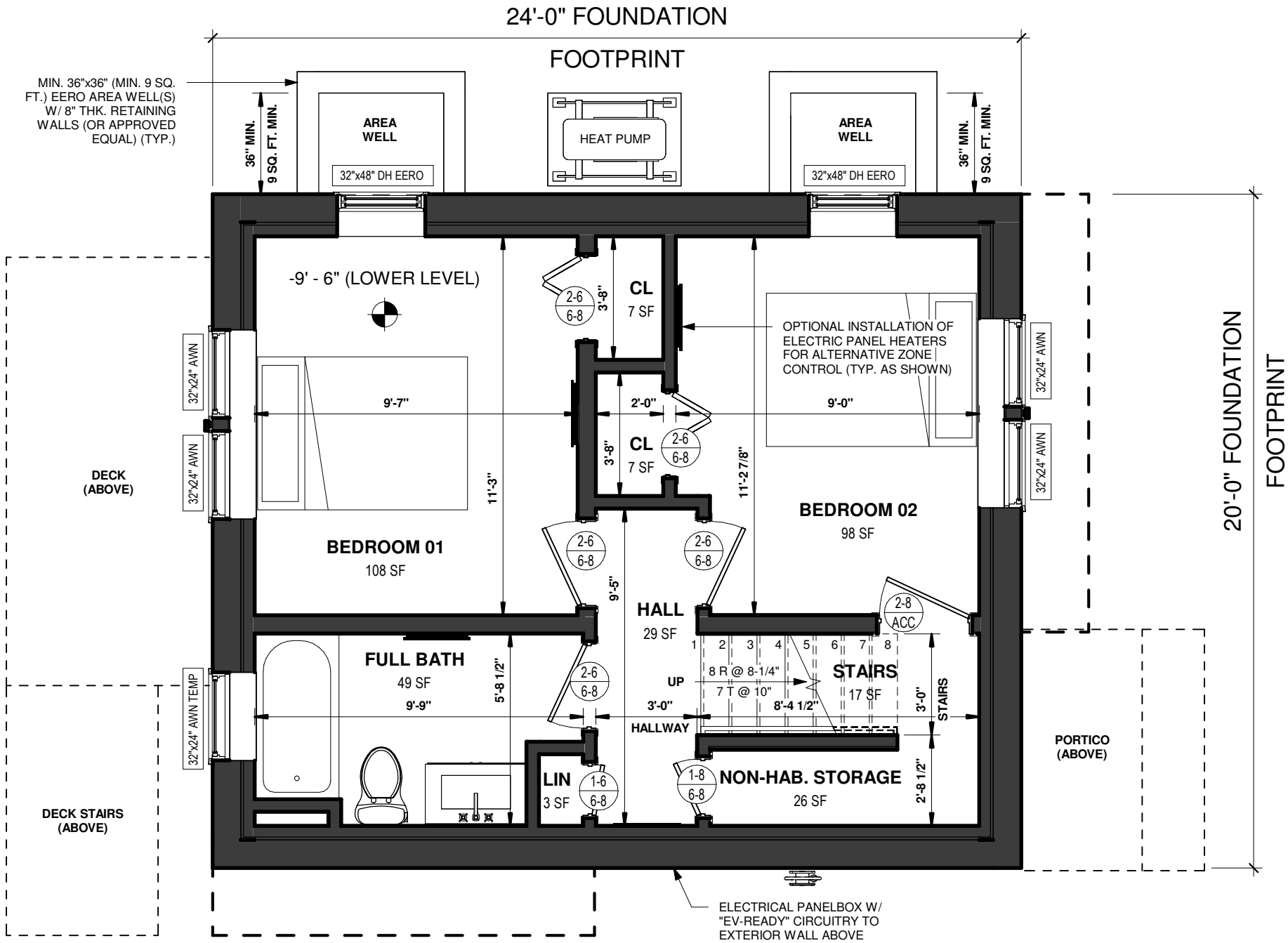
ROOF PLAN: ARCHITECTURAL ROOFING DESIGN | SCALE: 1/4" = 1'-0"

DESCRIPTION: ROOF PLAN ILLUSTRATING SIMPLE 6"/12" SLOPED GABLE FORMS AND PROFILES WITH CLEARLY DEFINED ROOFING ELEMENTS, DESIGNATED SOLAR-READY ROOF AREAS WITH REQUIRED CLEARANCES DENOTED, ROOFING BELOW THE MAIN ROOF LEVELS INCLUDING THE SHED PORTICO DEMARCATING THE PRIMARY EGRESS DOOR, ALONG WITH MODEST OVERHANGS.

A1.2



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MARKETING FLOOR PLAN: LOWER LEVEL

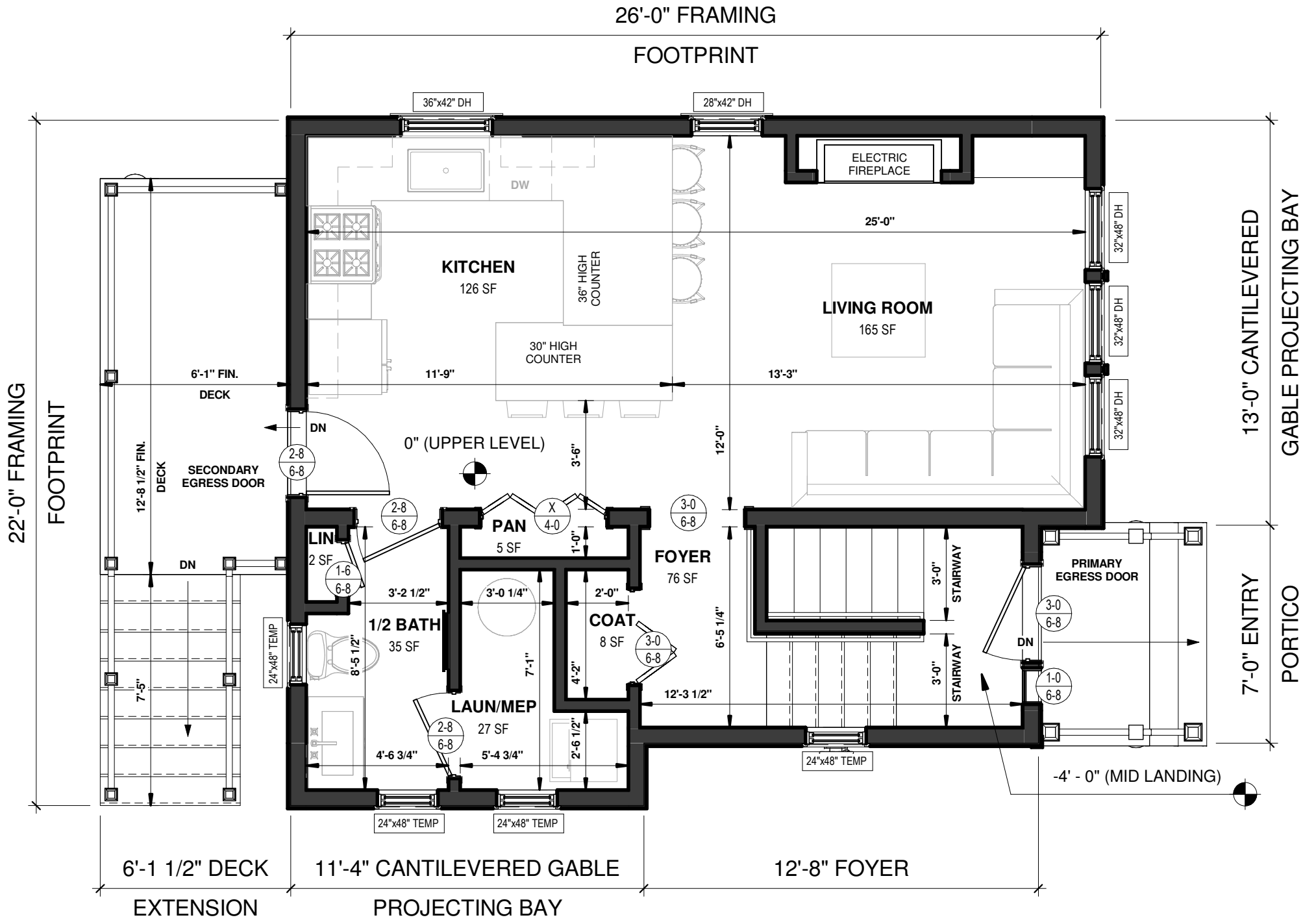
DESCRIPTION: PARTIALLY BELOW GRADE "LOWER LEVEL" FLOOR WITH TWO BEDROOMS, TWO CLOTHING CLOSETS, FULL BATH, LINEN CLOSET, CENTRALIZED HALLWAY WITH IMMEDIATE STAIRWAY ACCESS TO THE "MID-LEVEL LANDING" WHICH HOSTS THE PRIMARY EGRESS DOOR, AND UNDER-STAIRWAY STORAGE.

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

GFA: 376.25 FT²

FIN: 318 FT²

A1.3



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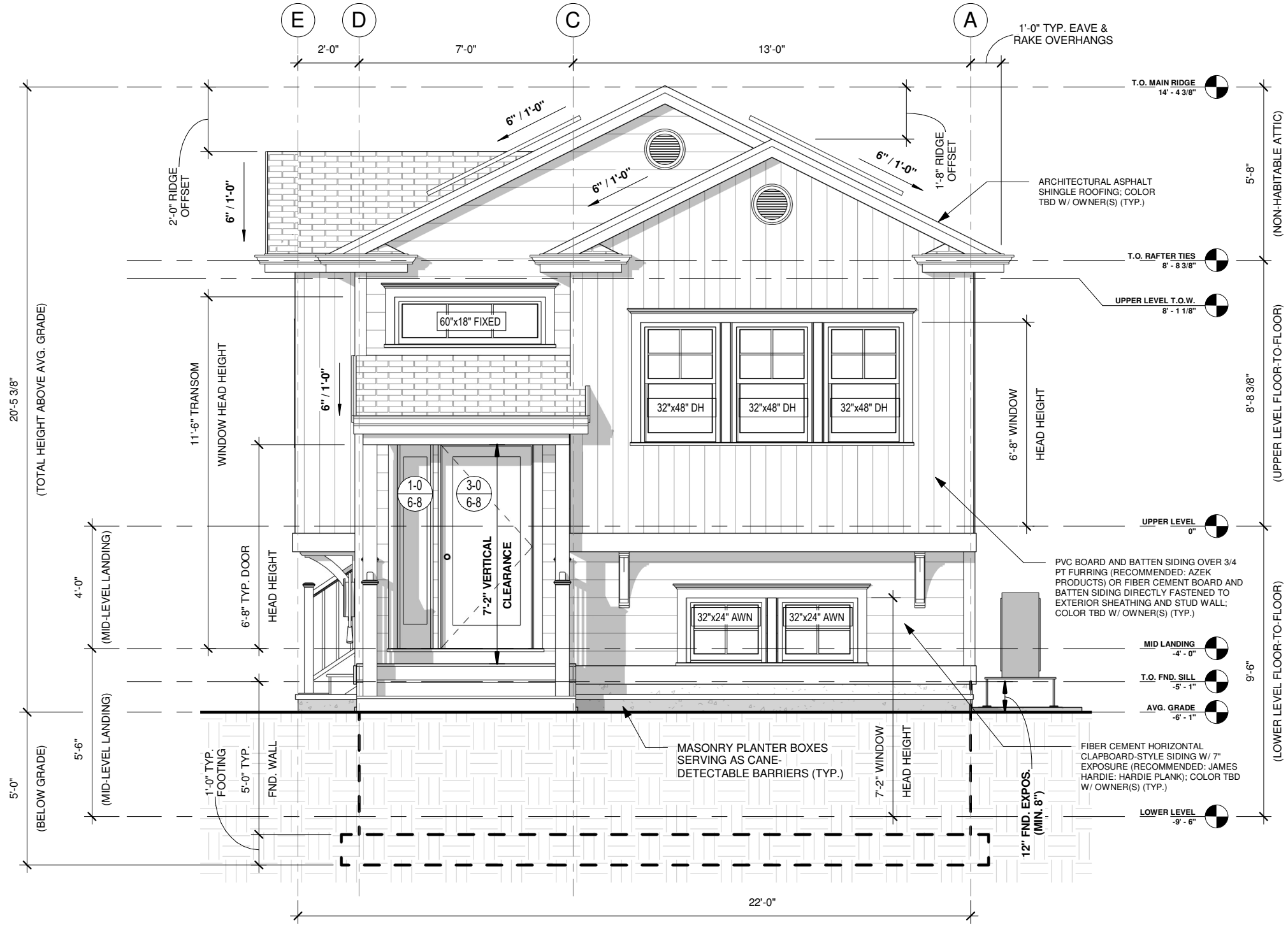
DESCRIPTION: ABOVE GRADE "UPPER LEVEL" FLOOR WITH A CLERESTORY FOYER, COAT CLOSET, SPACIOUS LIVING ROOM, FULL KITCHEN WITH A THREE-PERSON PENINSULA AND LOWER INTEGRATED TABLE, PANTRY, HALF-BATH W/ ACCESS TO A FINISHED LAUNDRY AND M.E.P. ROOM, AND A LINEN CLOSET

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

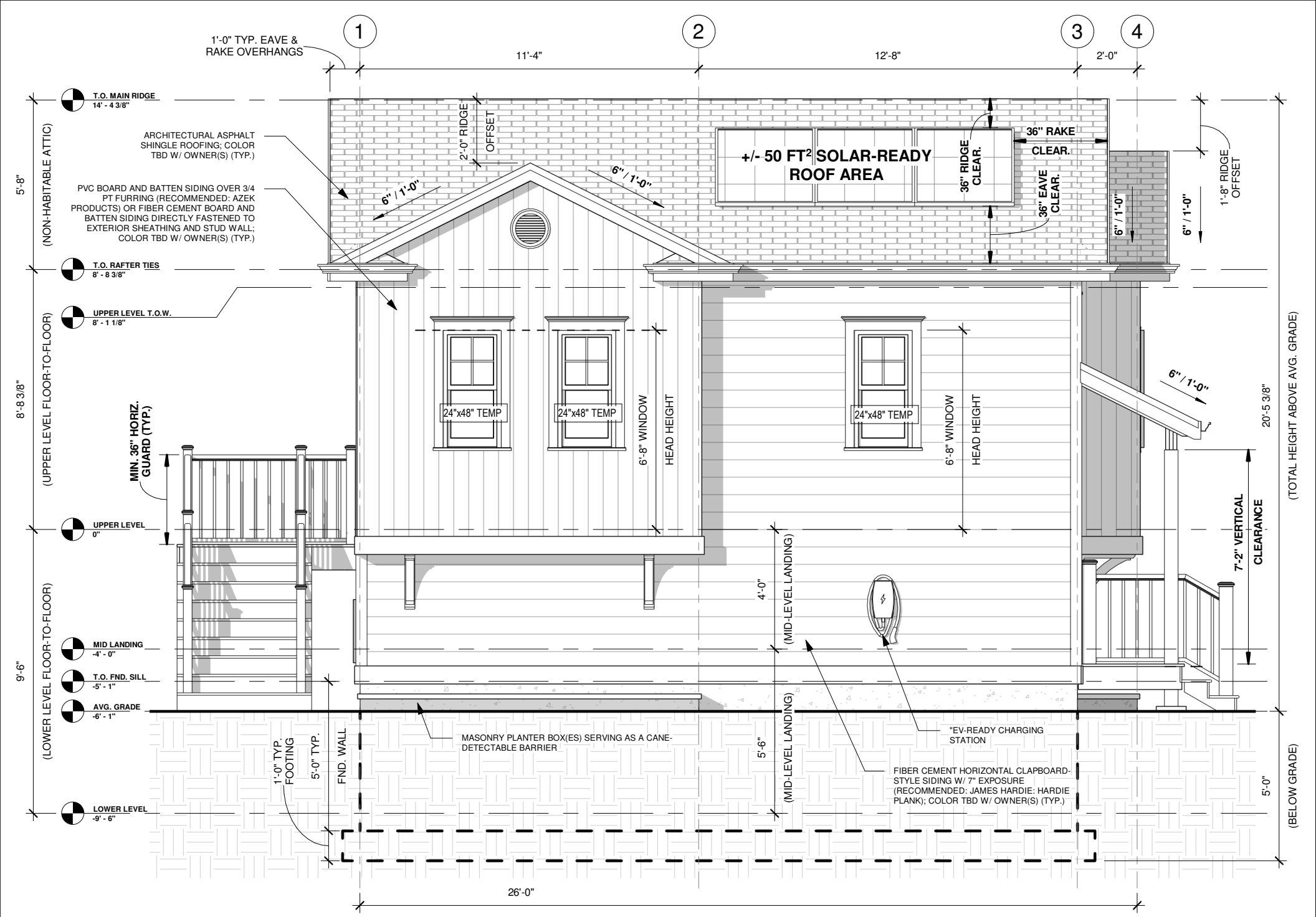
GFA: 481.53 FT²

FIN: 444 FT²

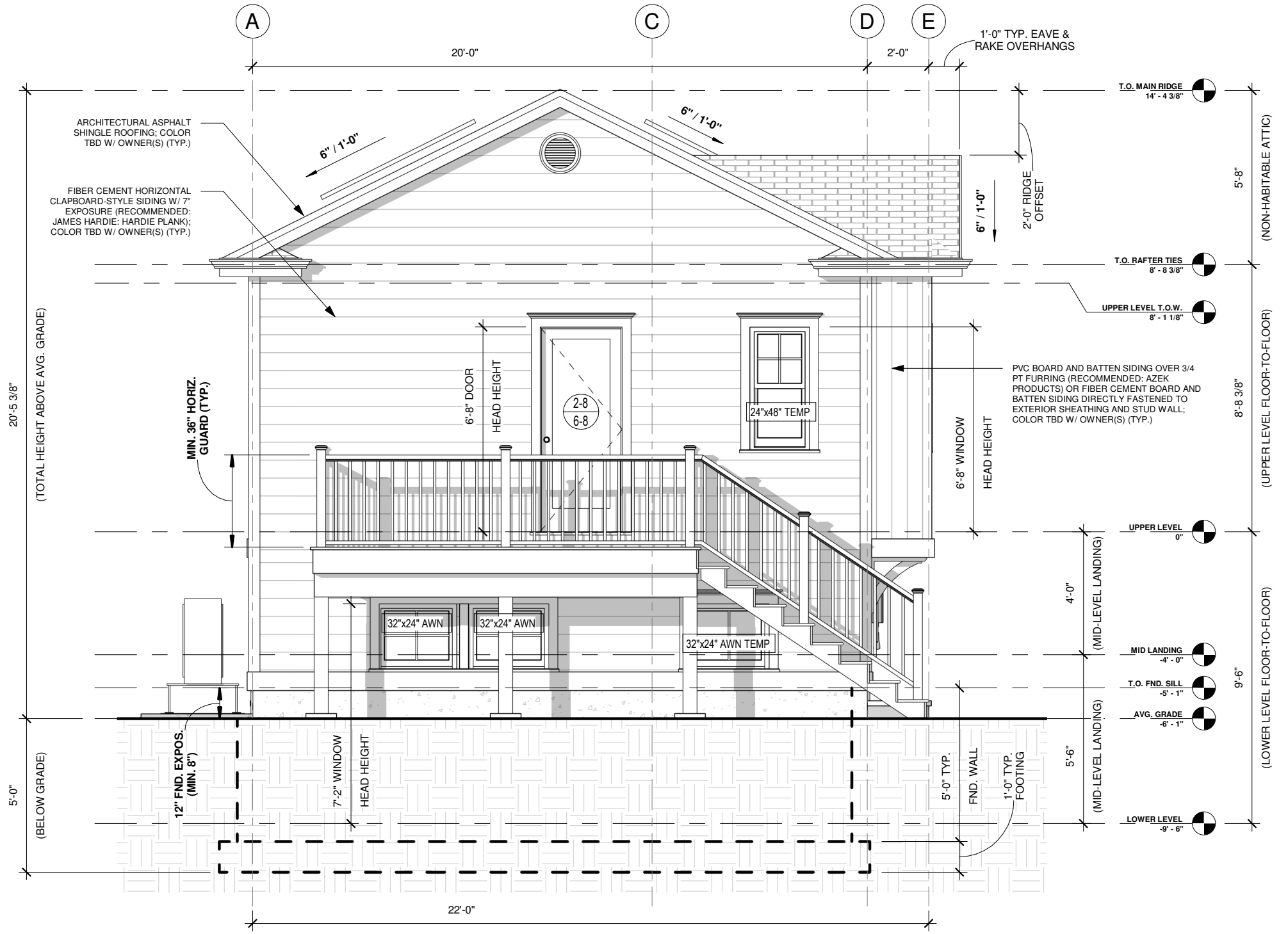
A1.4



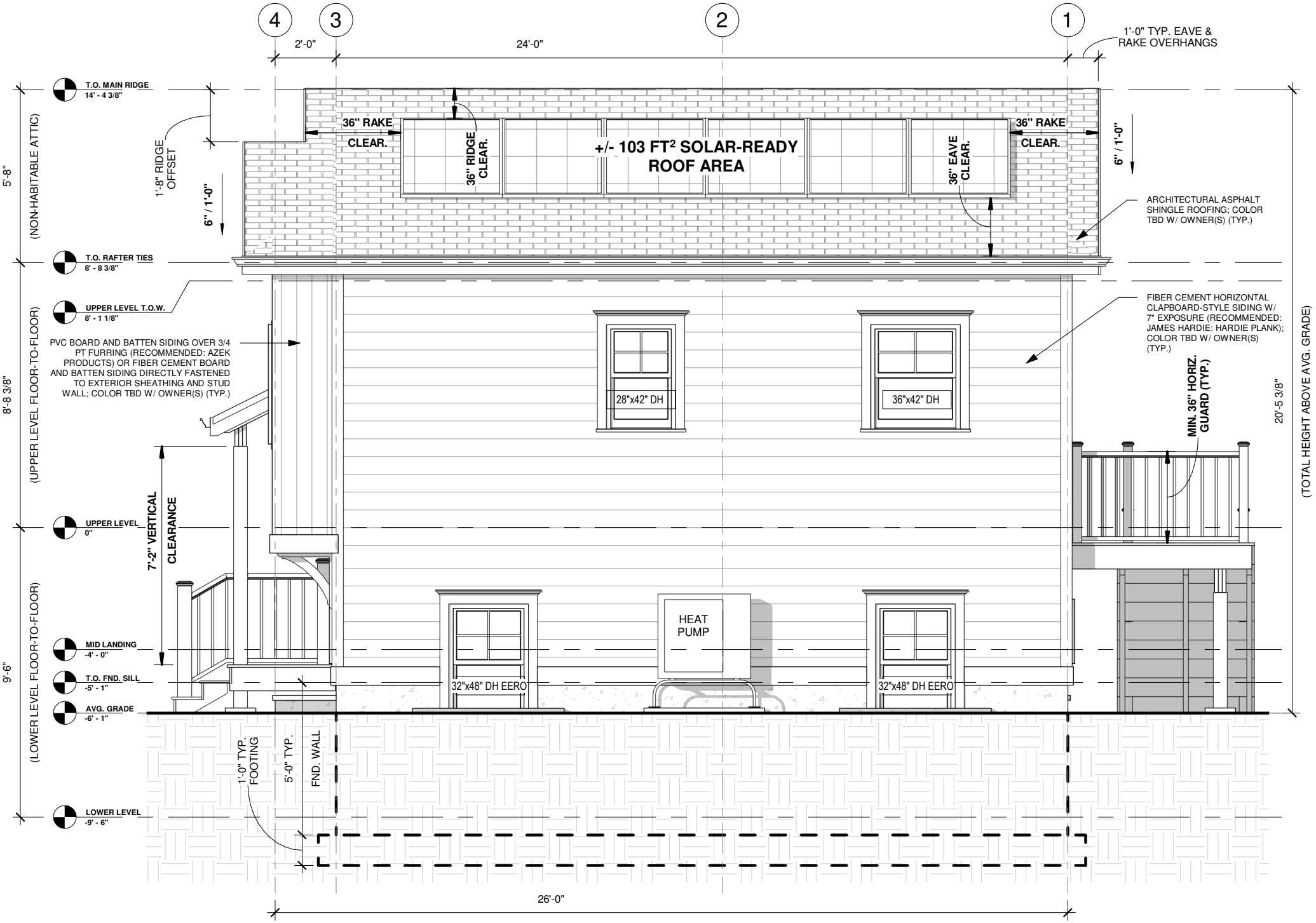
EXTERIOR ELEVATION: FRONT FACADE VIEW	SCALE: 1/4" = 1'-0"	A2.0
DESCRIPTION: DISGUISED SPLIT-LEVEL ADU WITH DUAL FRONT-FACING GABLES, VERTICAL SIDING AT THE CANTILEVERED GABLE PROJECTING BAYS, HORIZONTAL SIDING ALONG THE MAIN ENVELOPE, A SHED PORTICO/STOOP COVERING THE PRIMARY EGRESS DOOR, AND A MIX OF LOWER LEVEL AWNING WINDOWS AND UPPER LEVEL DOUBLE HUNG WINDOWS.		



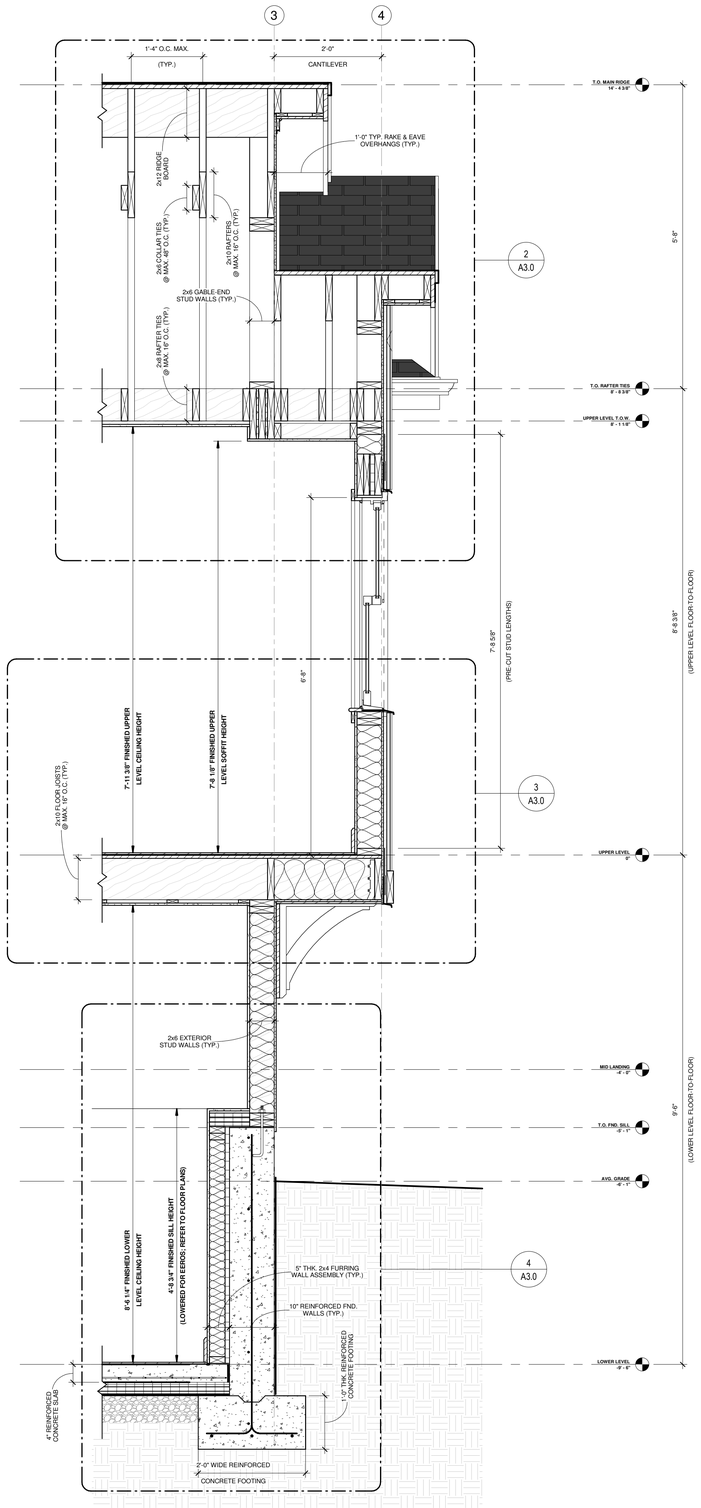
EXTERIOR ELEVATION: LEFT FACADE VIEW	SCALE: 1/4" = 1'-0"	A2.1
DESCRIPTION: DISGUISED SPLIT-LEVEL ADU WITH INTERSECTING PRIMARY AND SECONDARY GABLES W/ SOLAR-READY ROOF AREAS, VERTICAL SIDING AT THE CANTILEVERED GABLE PROJECTING BAYS, HORIZONTAL SIDING ALONG THE MAIN ENVELOPE, A SHED PORTICO/STOOP COVERING THE PRIMARY EGRESS DOOR AND A REAR DECK FOR THE SECONDARY EGRESS DOOR.		



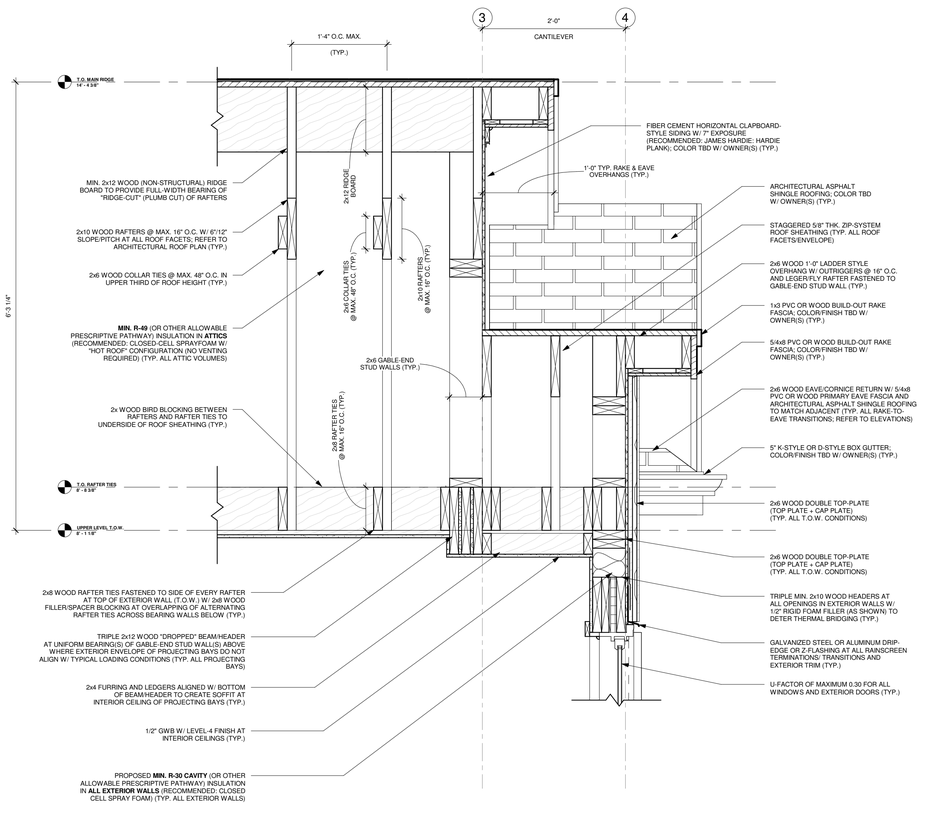
EXTERIOR ELEVATION: FRONT FACADE VIEW	SCALE: 1/4" = 1'-0"	A2.2
DESCRIPTION: DISGUISED SPLIT-LEVEL ADU WITH DUAL INTERSECTING GABLES, VERTICAL SIDING AT THE CANTILEVERED GABLE PROJECTING BAYS, HORIZONTAL SIDING ALONG THE MAIN ENVELOPE, A REAR DECK FOR THE SECONDARY EGRESS DOOR, AND DIRECT CONNECTION TO THE ANTICIPATED LOCATION OF A DRIVEWAY.		



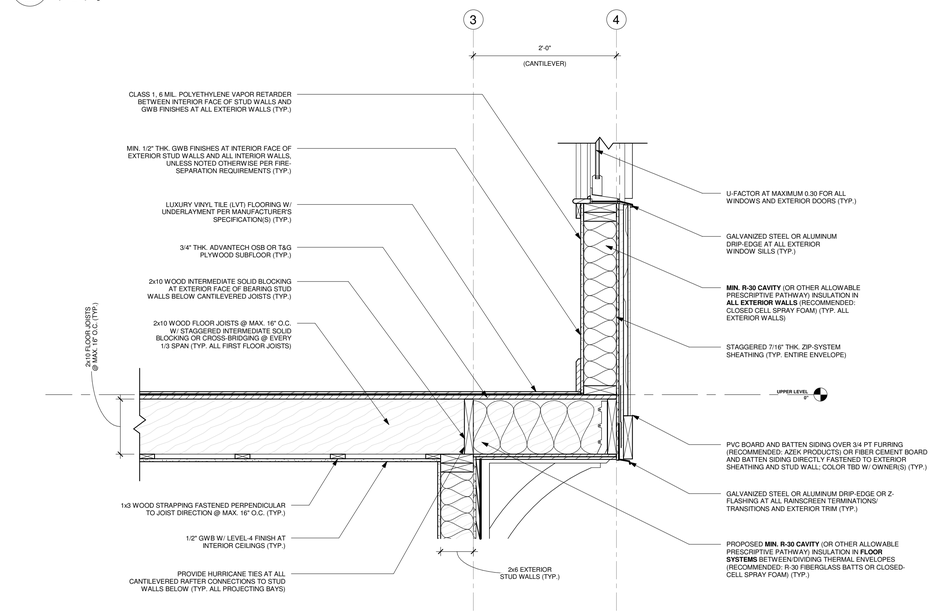
EXTERIOR ELEVATION: RIGHT FACADE VIEW	SCALE: 1/4" = 1'-0"	A2.3
DESCRIPTION: DISGUISED SPLIT-LEVEL ADU WITH SIMPLE GABLE ROOF W/ SOLAR-READY ROOF AREAS, VERTICAL SIDING AT THE CANTILEVERED GABLE PROJECTING BAYS, HORIZONTAL SIDING ALONG THE MAIN ENVELOPE, A SHED PORTICO/STOOP COVERING THE PRIMARY EGRESS DOOR AND A REAR DECK FOR THE SECONDARY EGRESS DOOR.		



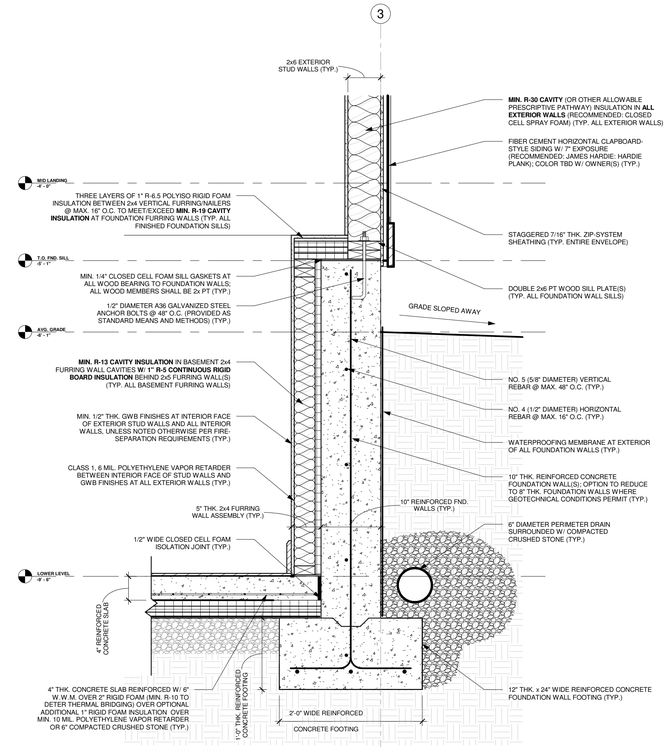
1 A3.0 WALL SECTION - FULL HEIGHT ASSEMBLY
3/4" = 1'-0"



2 A3.0 WALL SECTION - ROOFING ASSEMBLY
1" = 1'-0"



3 A3.0 WALL SECTION - CANTILEVER DETAIL
1" = 1'-0"



4 A3.0 WALL SECTION - FOUNDATION DETAIL
1" = 1'-0"

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WALL SECTION: FULL-HEIGHT ASSEMBLY AND DETAILS | SCALE: AS NOTED

DESCRIPTION: COMPREHENSIVE WALL SECTION AND ENLARGED CONSTITUENT DETAILS ILLUSTRATING THE FULL SCOPE OF THE BUILDING, THERMAL, AND STRUCTURAL ENVELOPE OF THE FULL-HEIGHT OF THE ADU THROUGH FOUNDATION, FLOOR, WALL, AND ROOF ASSEMBLIES WITH EMPHASIS ON CRITICAL TRANSITIONS.

A3.0