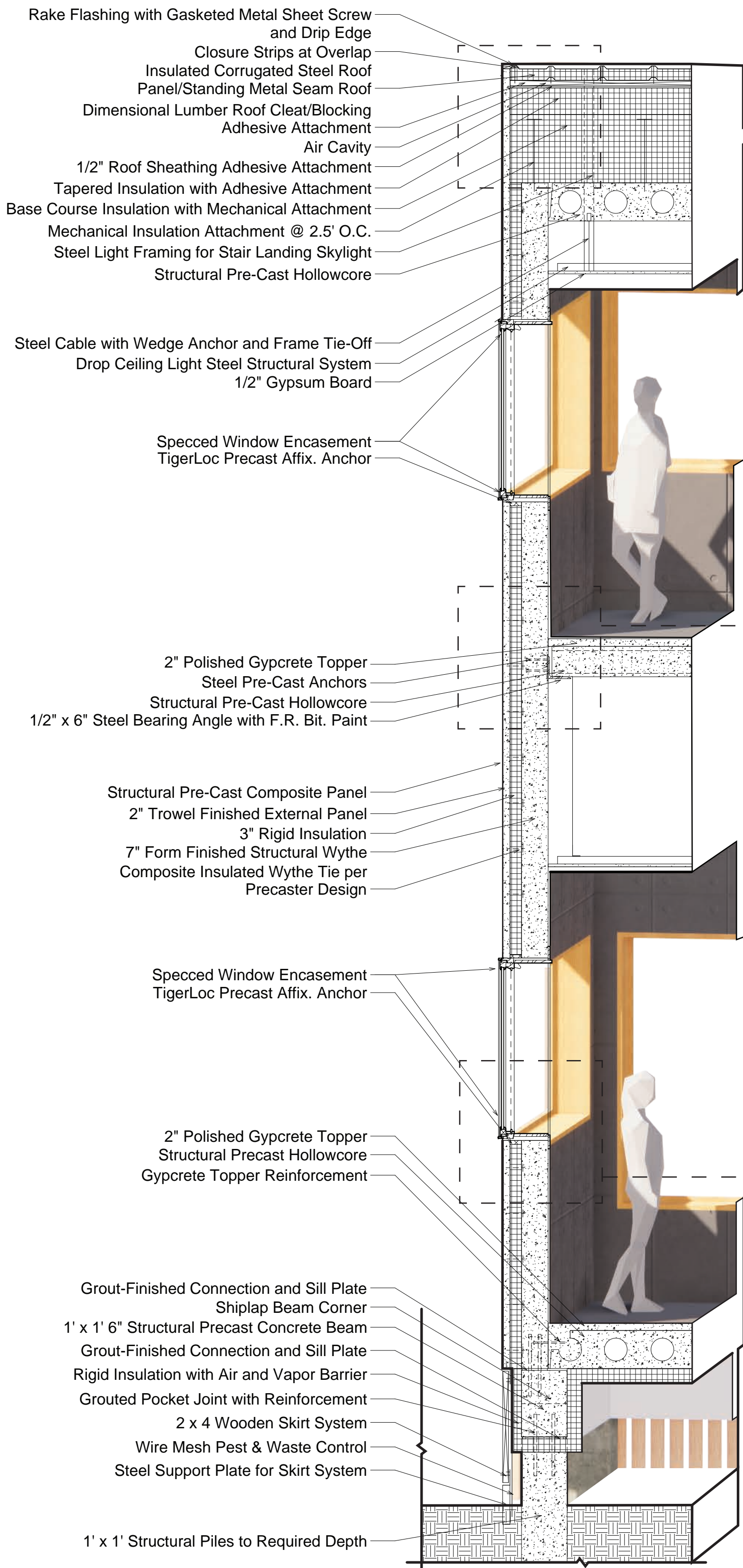


1717 Andry St

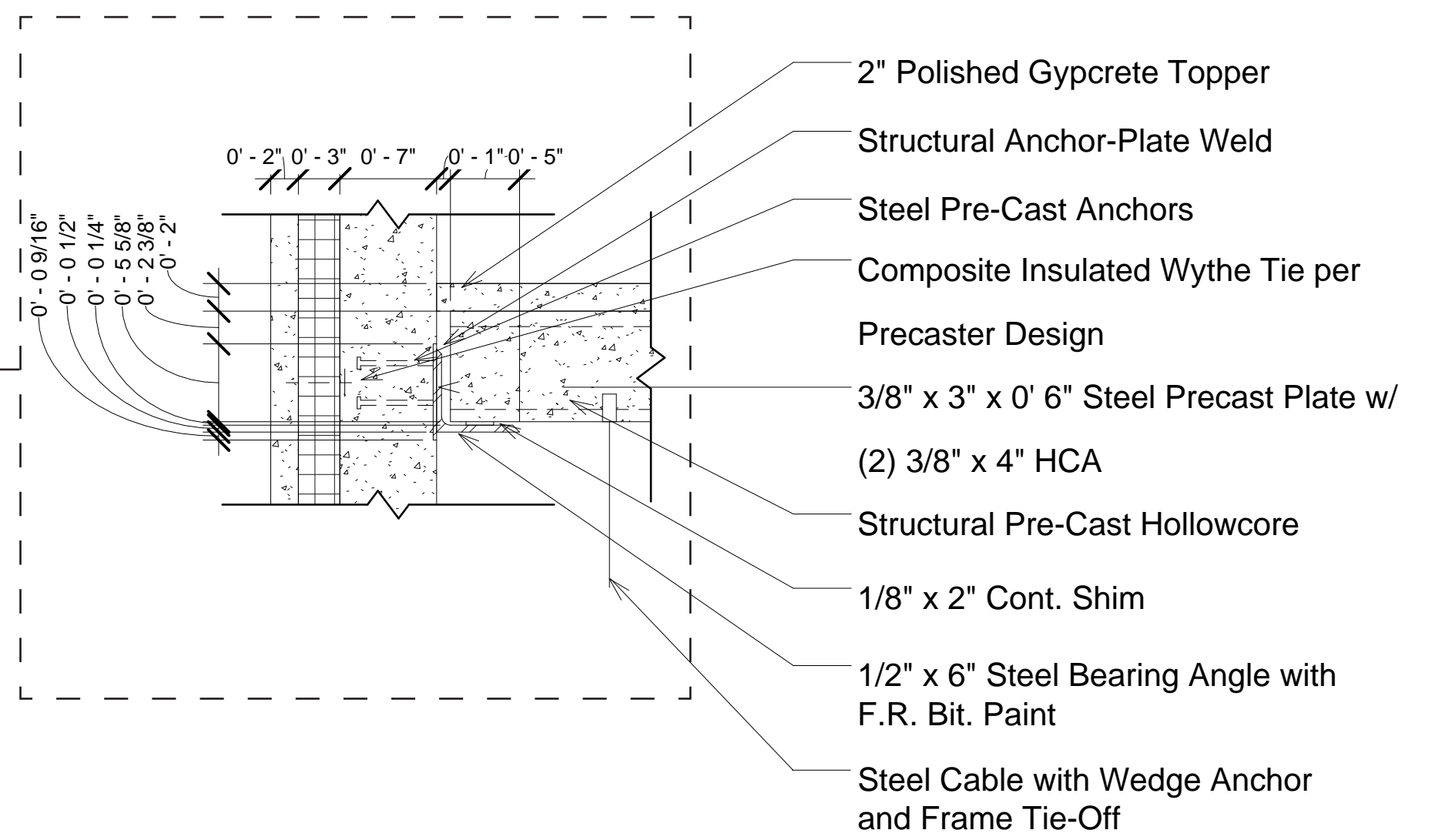
Precast Concrete Housing Prototype

New Orleans Lower 9th Ward, LA

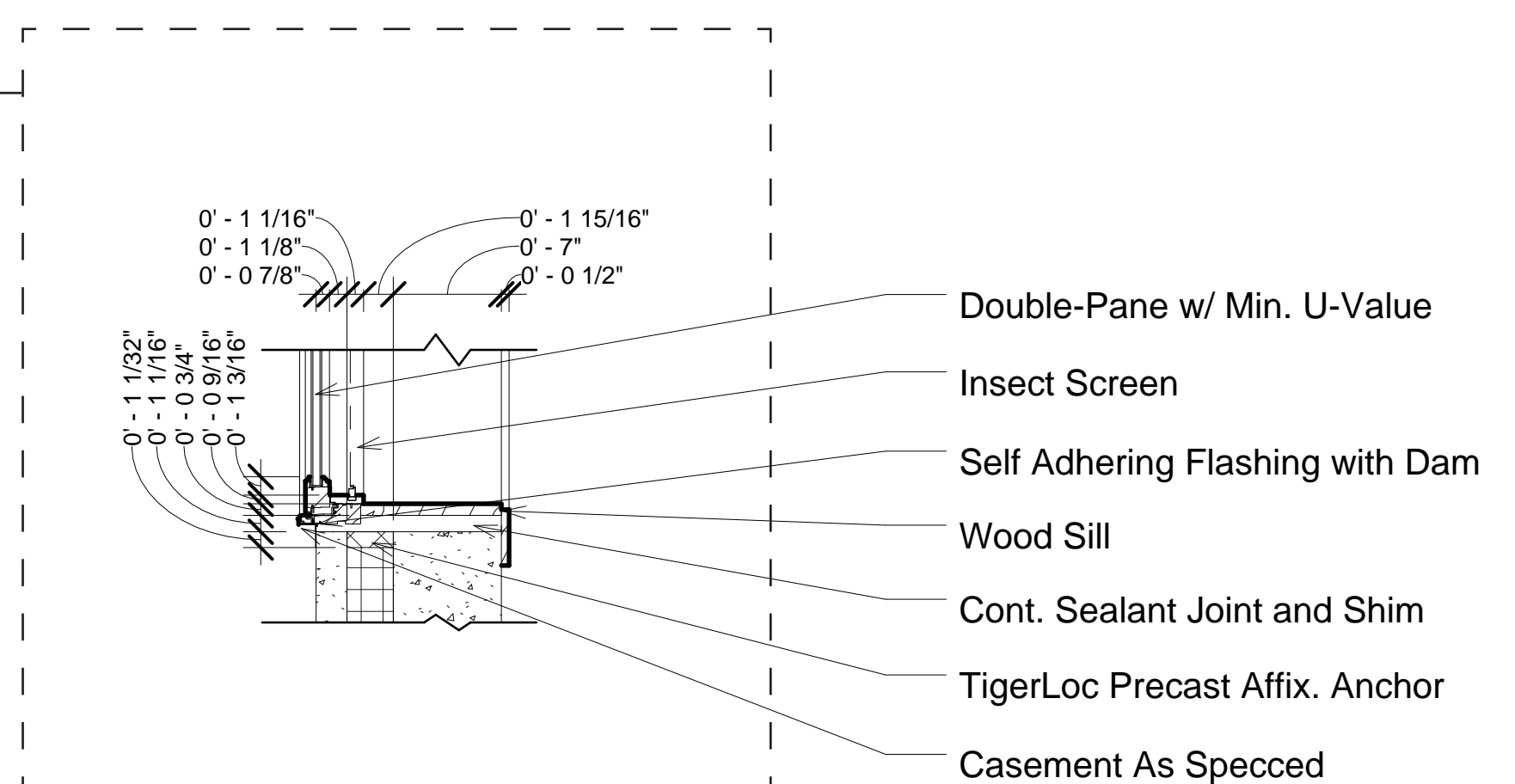
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Wall Assembly & Orthographic Section Detail 1/2" = 1'



Floor-to-Envelope Detail, 1" = 1'



Envelope-to-Window Sill & Header (Mirrored) Detail, 1" = 1'

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Precast Concrete Housing Prototype

New Orleans Lower 9th Ward, LA

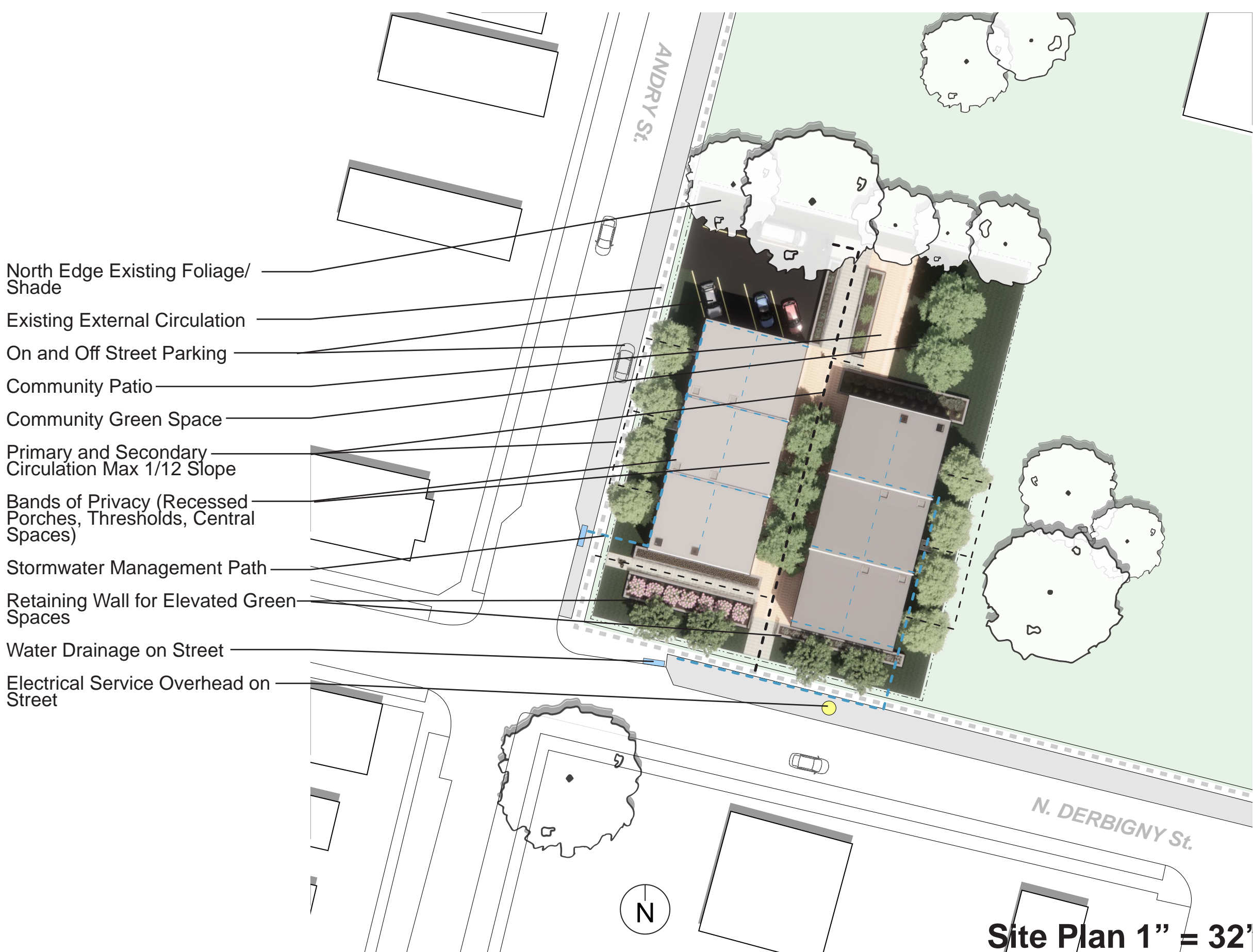
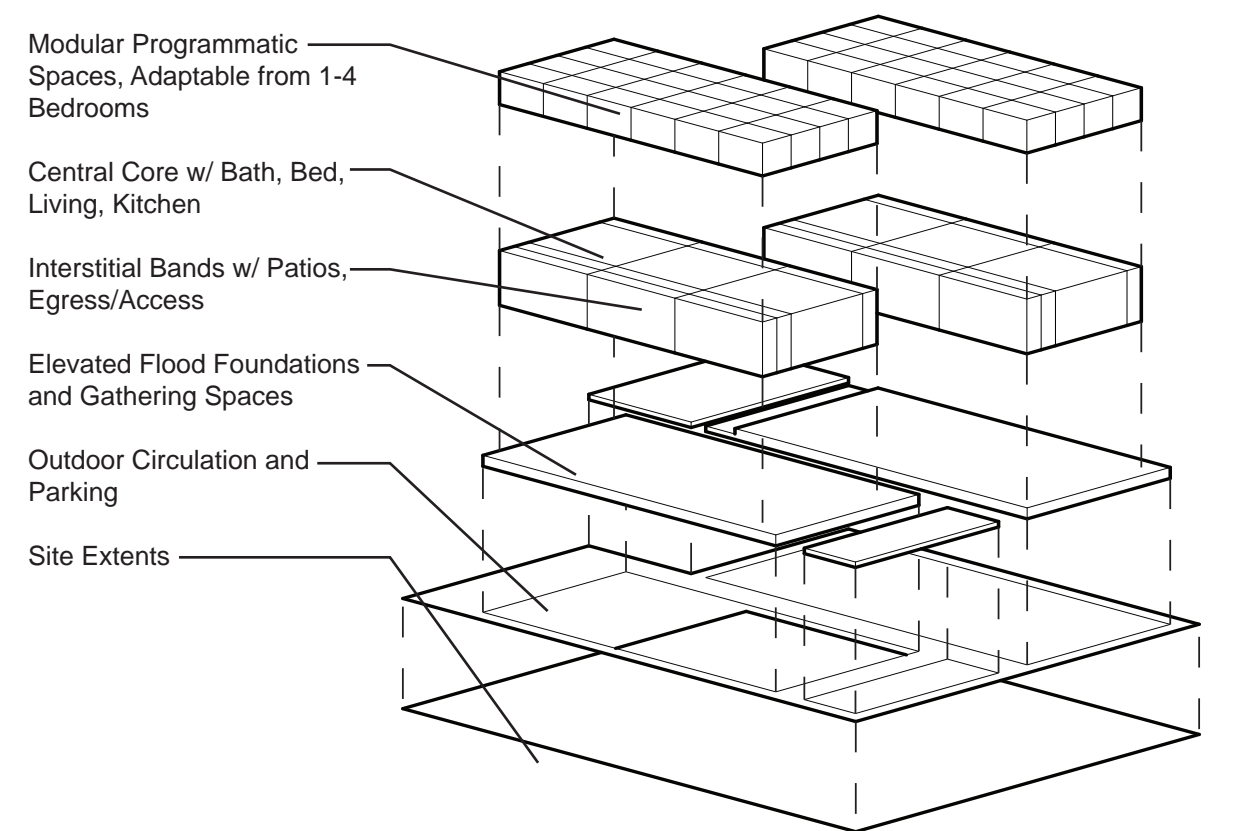
Nikolas Mäkelä and Ryan Bramlett



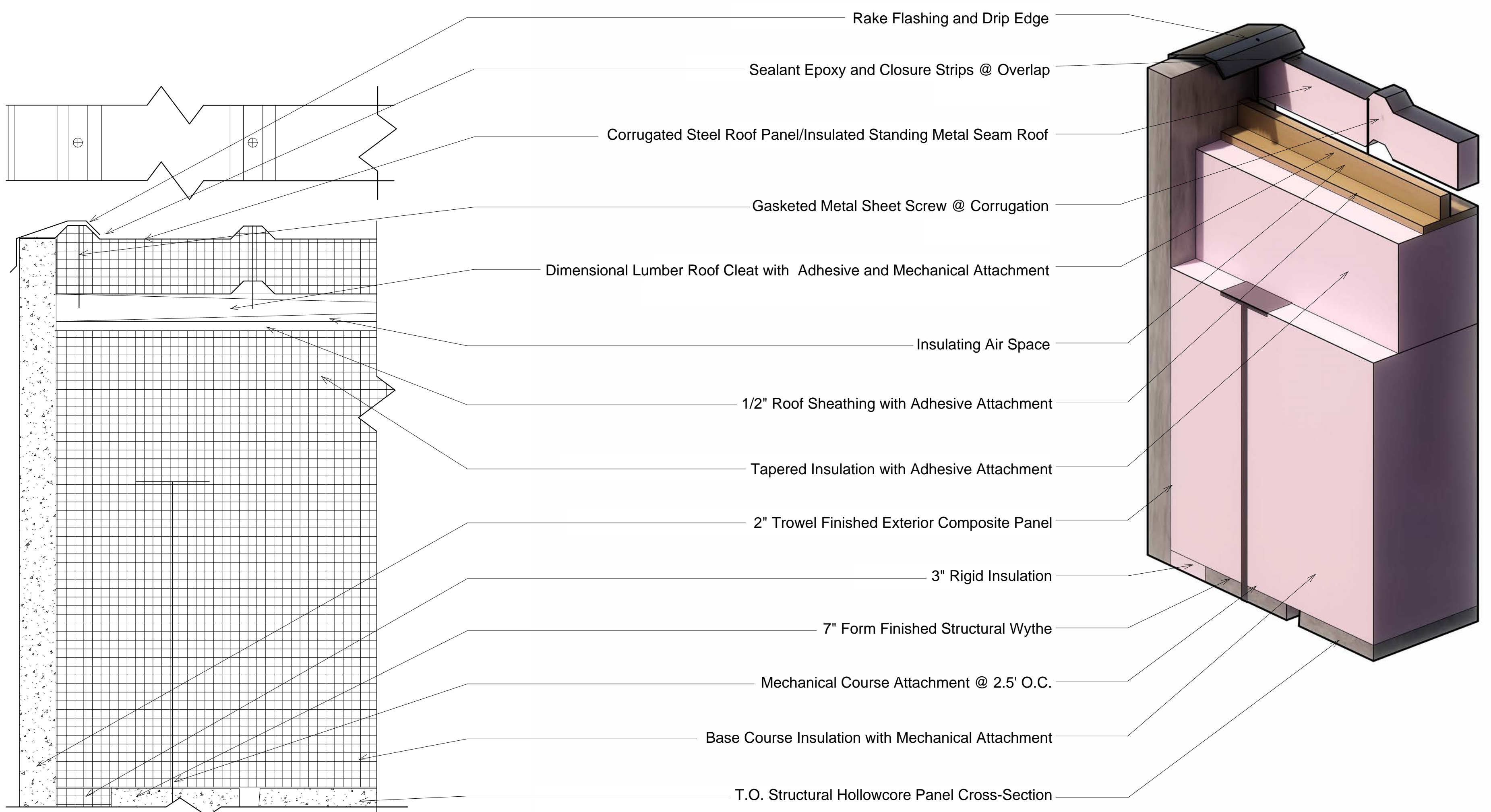
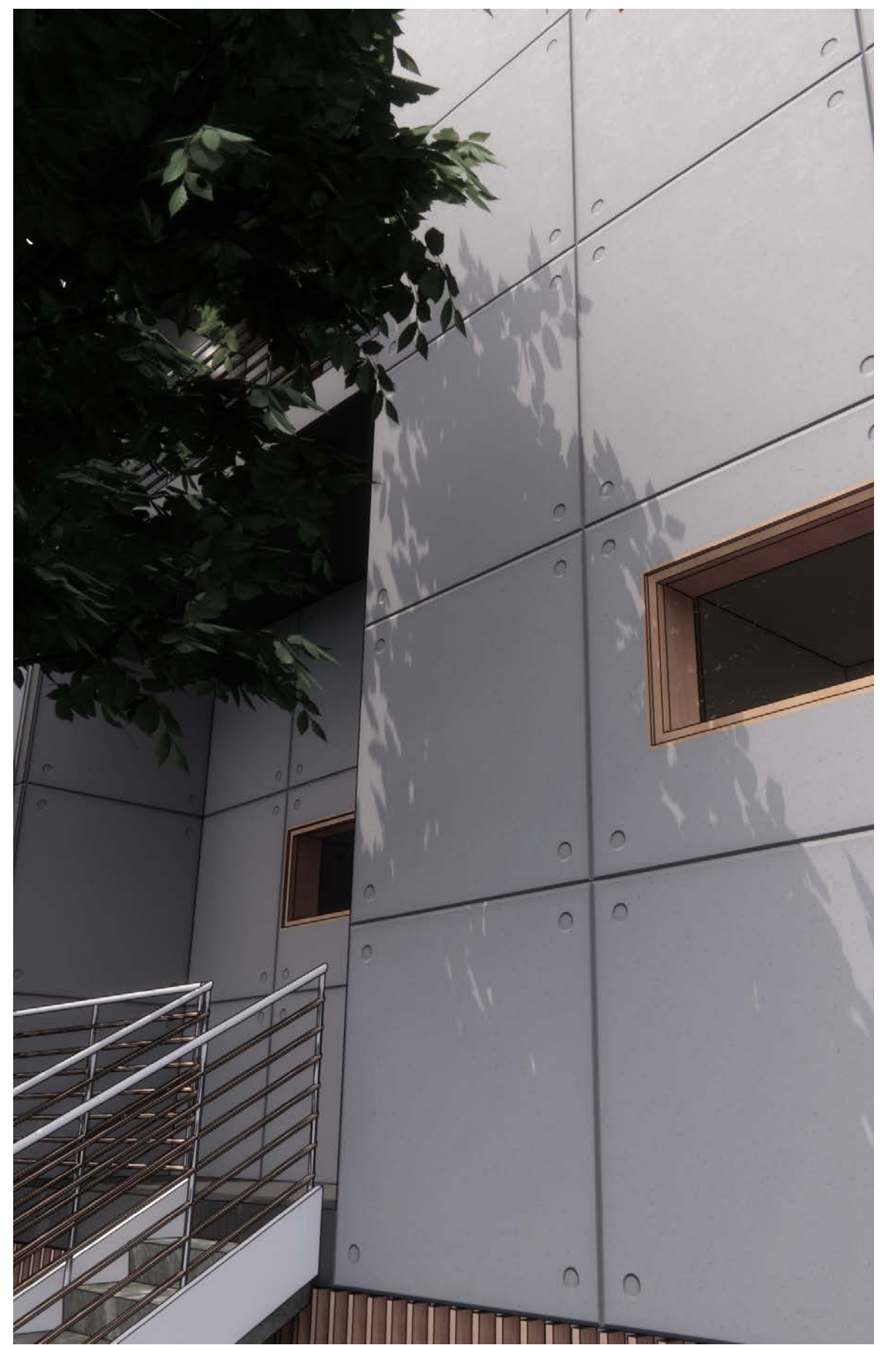
New Orleans and the Lower 9th Ward have a rich heritage of community and resiliency, but reconstruction has been limited since the devastation of Hurricane Katrina in 2005. Being a demographically black and lower income neighborhood, funding for rebuilding efforts poses a challenge. Additionally, much of the neighborhood sits at or below sea level, creating an imposing threat with climate change, increasing intensity and occurrences of storms, and rising sea levels. The neighborhood deserves affordable and resilient design interwoven with the cultural infrastructure of the neighborhood, New Orleans, and local vernacular.

Thus, design goals are threefold: **affordability, resiliency, and community integration.** Efficient and sustainable homes that can offer a level of protection against natural disaster lowers both initial and lifecycle costs for housing units in a historically disenfranchised community. Resiliency is reflected in layers of programmatic elevations which, alongside the longevity and inherent strength of precast concrete systems, creates a foundation to design homeplace resilient to the site's inherent threats. The site sits within two blocks of a multi-use/cultural center, an elementary school, and a library. Consequently, development of home spaces in conjunction with vernacular porch culture creates an opportunity to not just sit within, but to enhance the cultural infrastructure of the neighborhood.

Programming homes that utilize vertical elevation, daylighting, natural ventilation strategies, passive cooling, and thermal massing intrinsic to precast concrete systems allows for sustainable and affordable lifecycle homes. There is opportunity in precast systems to create buildings that can be raised in elevation, allowing for resiliency to storms and flooding. The strength of the system also allows for buildings that can, to an extent, survive natural disasters and the threat of climate change. Design can utilize porch spaces that incorporate layers of dynamic opacity, such that occupants can adapt liminal outdoor space to join local vernacular and community or create privacy when desired. Interlocking spaces within the housing units create opportunity for the community within the complex, while the projection of liminal spaces between public and private (e.g., the porch) to the exterior of the site integrates the context with immediate cultural infrastructure.



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Roofing Detail Plan and Section, 3" = 1'

Roofing Detail Recessed Isometric, 3" = 1'

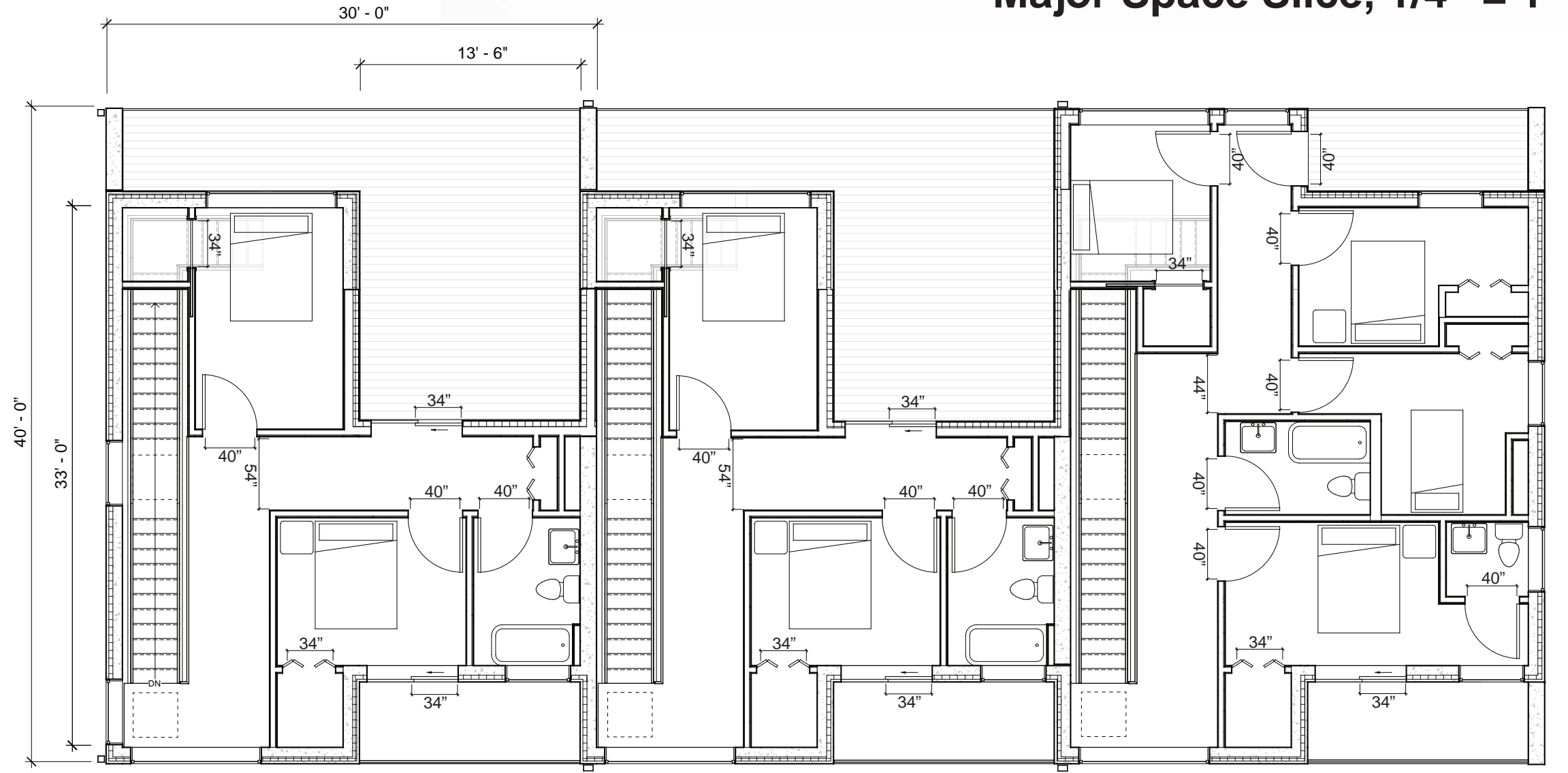
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Hollowcore Structural Spans
 Soffit/Plenum Mechanical Drop
 Precast Composite Panels



Major Space Slice, 1/4" = 1'



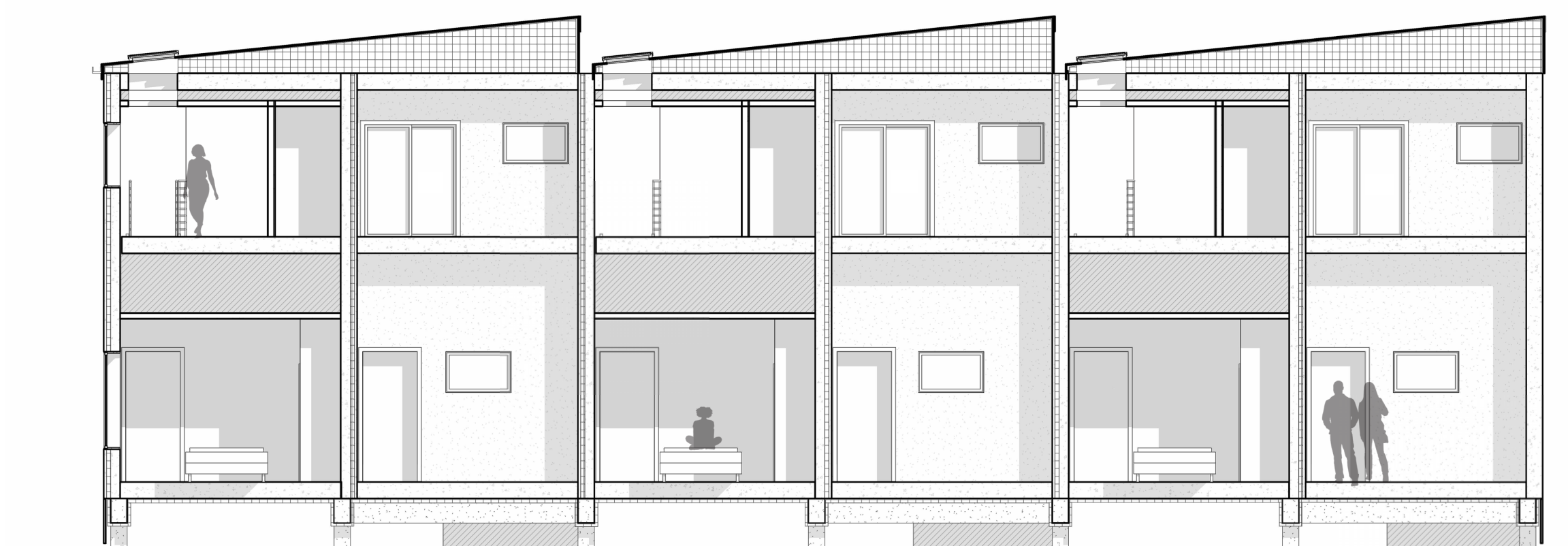
Second Floor Plan, 1/8" = 1'



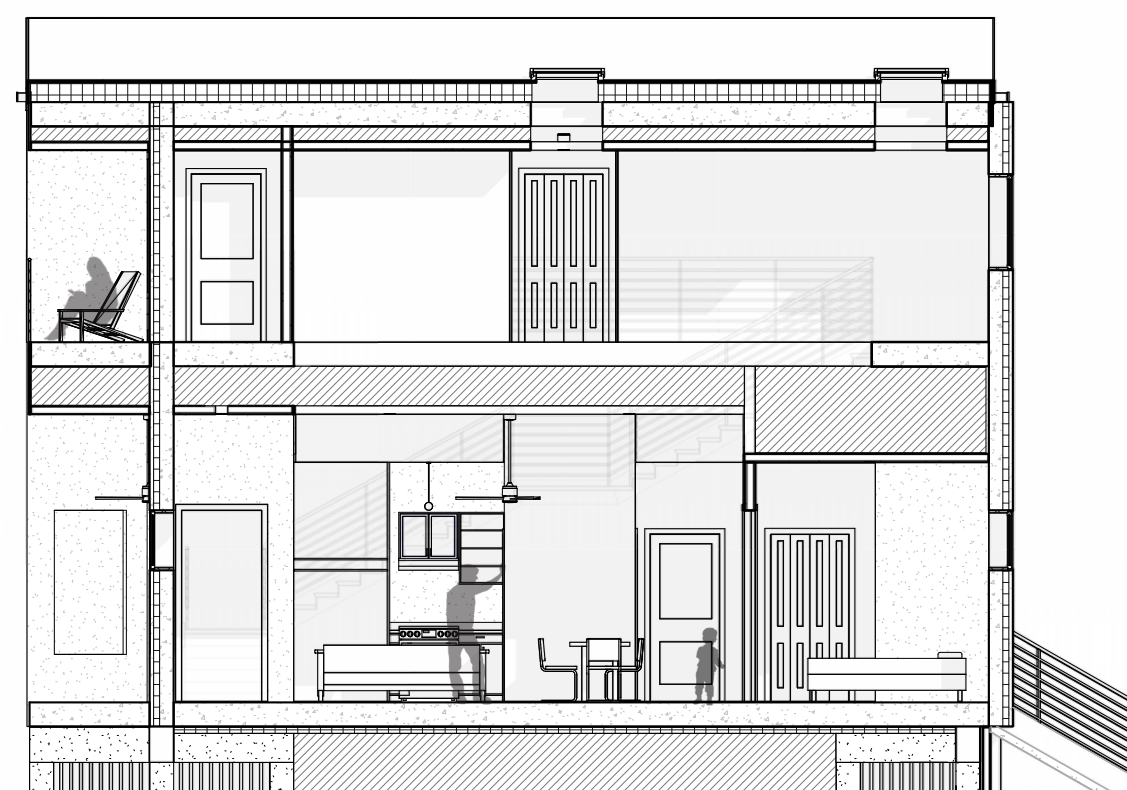
First Floor Plan, 1/8" = 1'



Primary Entrance; max. Egress Path of Travel 70'
 Secondary Entrance
 Tertiary Emergency Window Egress (All Fenestration)



Longitudinal N-S Section, 1/8" = 1'



Transverse W-E Section, 1/8" = 1'

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Developed Northern Elevation, 1/8" = 1'



Developed Eastern Elevation, 1/8" = 1'



Physical Model in Basswood, 1/16" = 1'

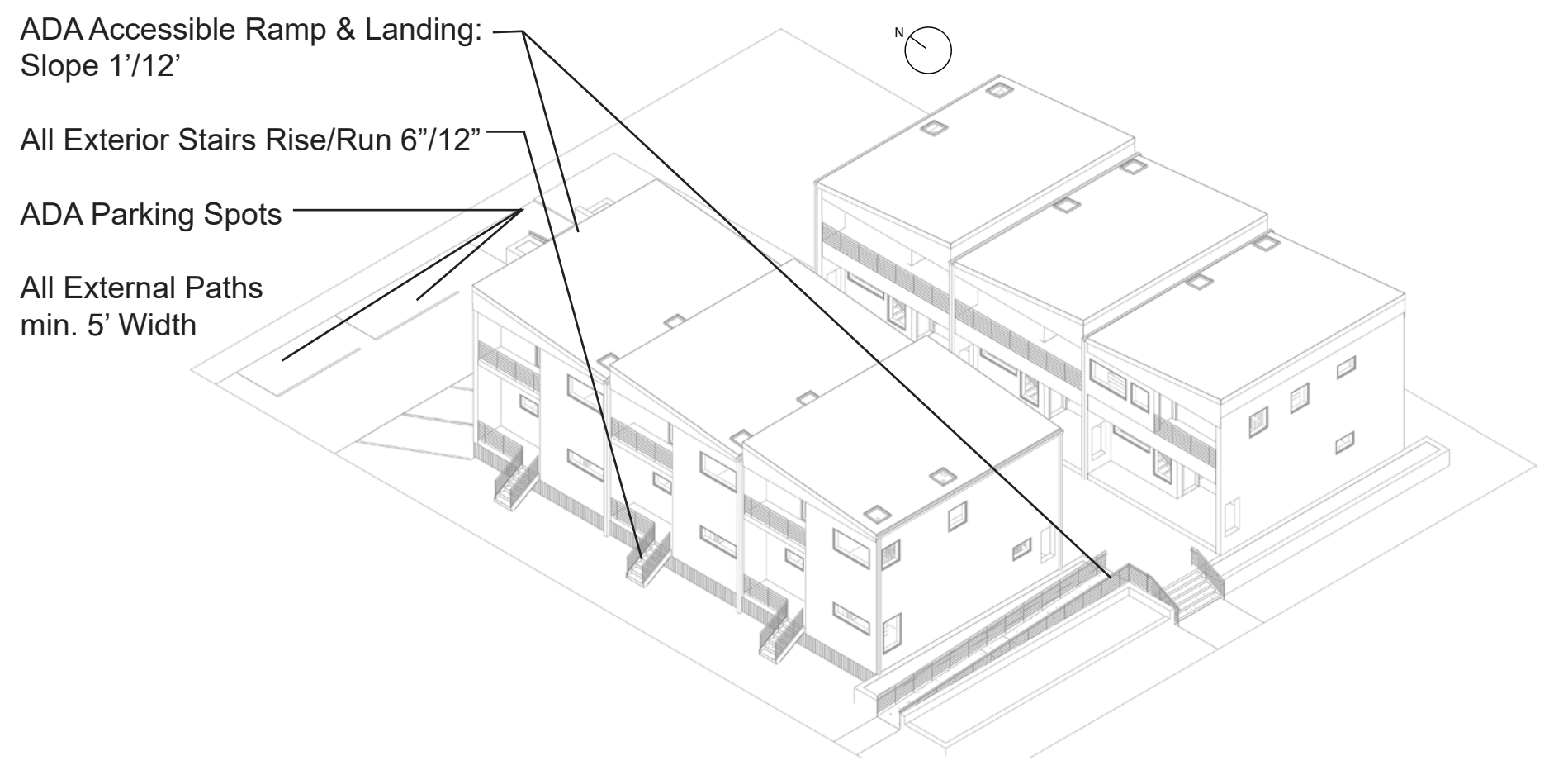


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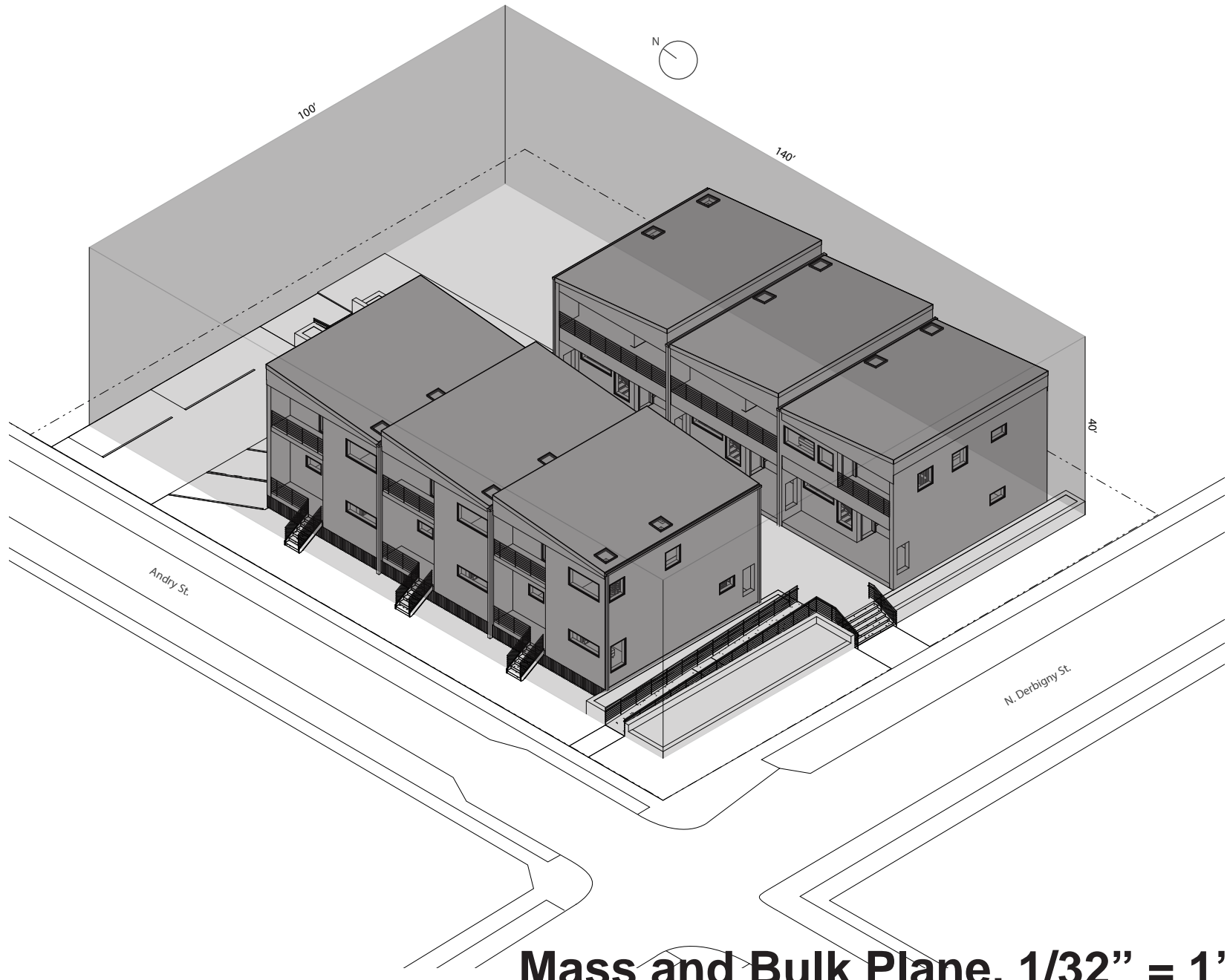
Precast Concrete Housing Prototype

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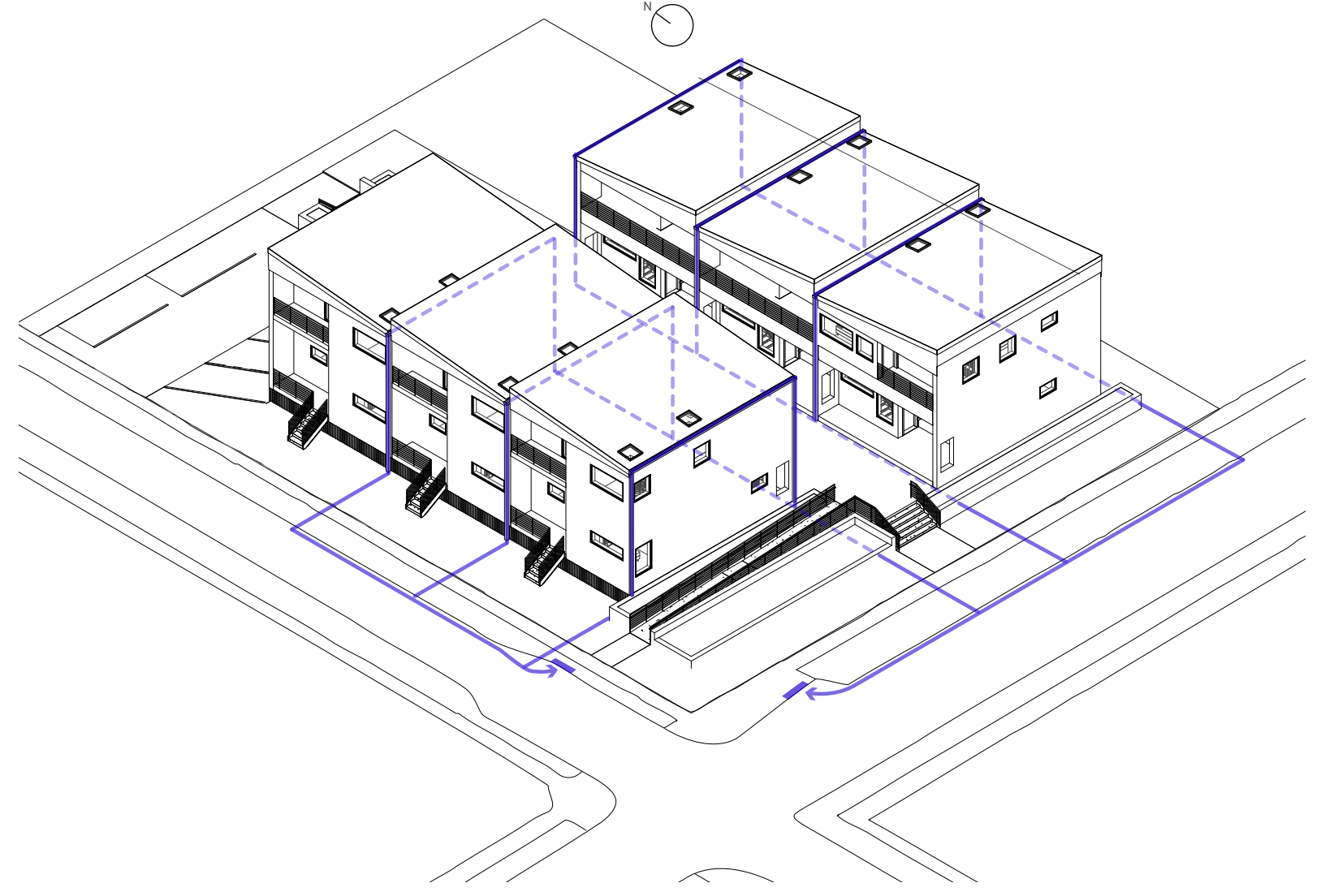
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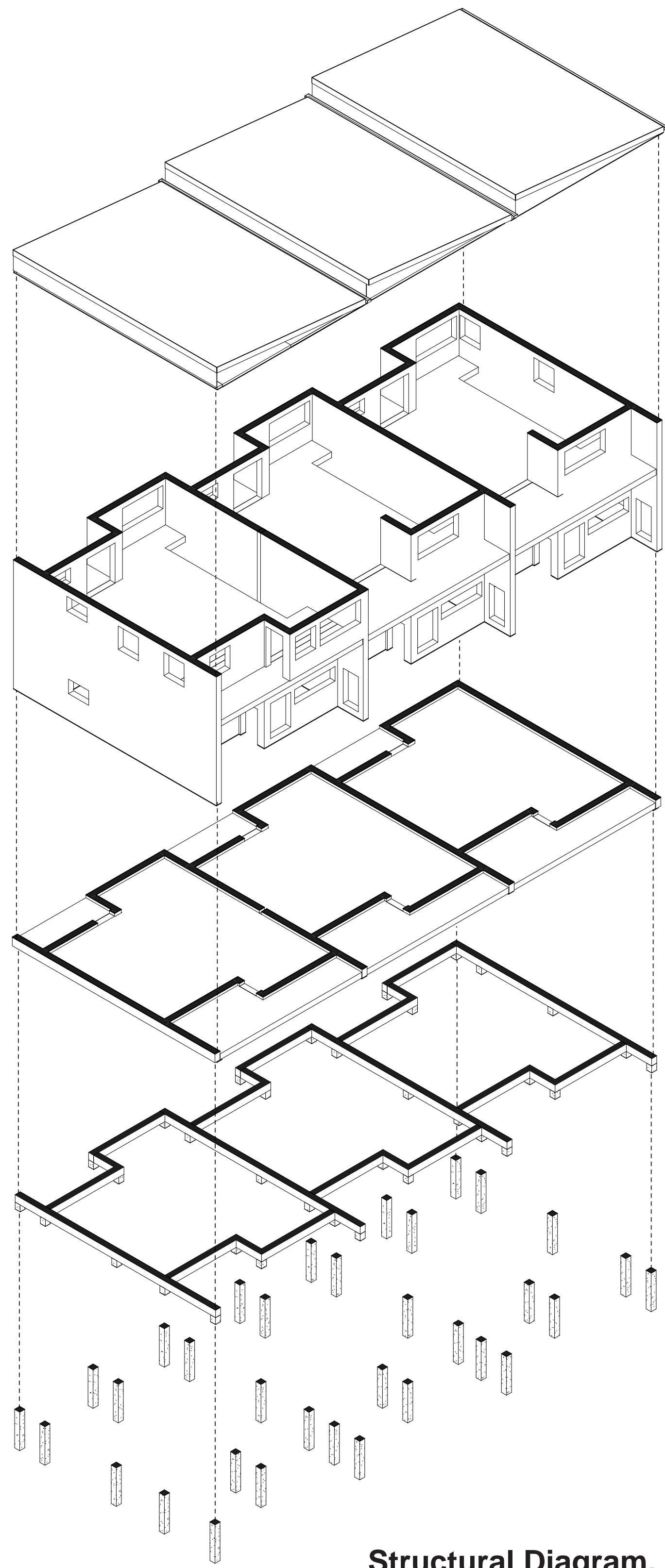
External Accessibility, 1/32" = 1'



Mass and Bulk Plane, 1/32" = 1'



Site Drainage, 1/32" = 1'



Structural Diagram, 1/16" = 1'

Structural Insulation Roof System

Insulated Precast Structural Wall Panels

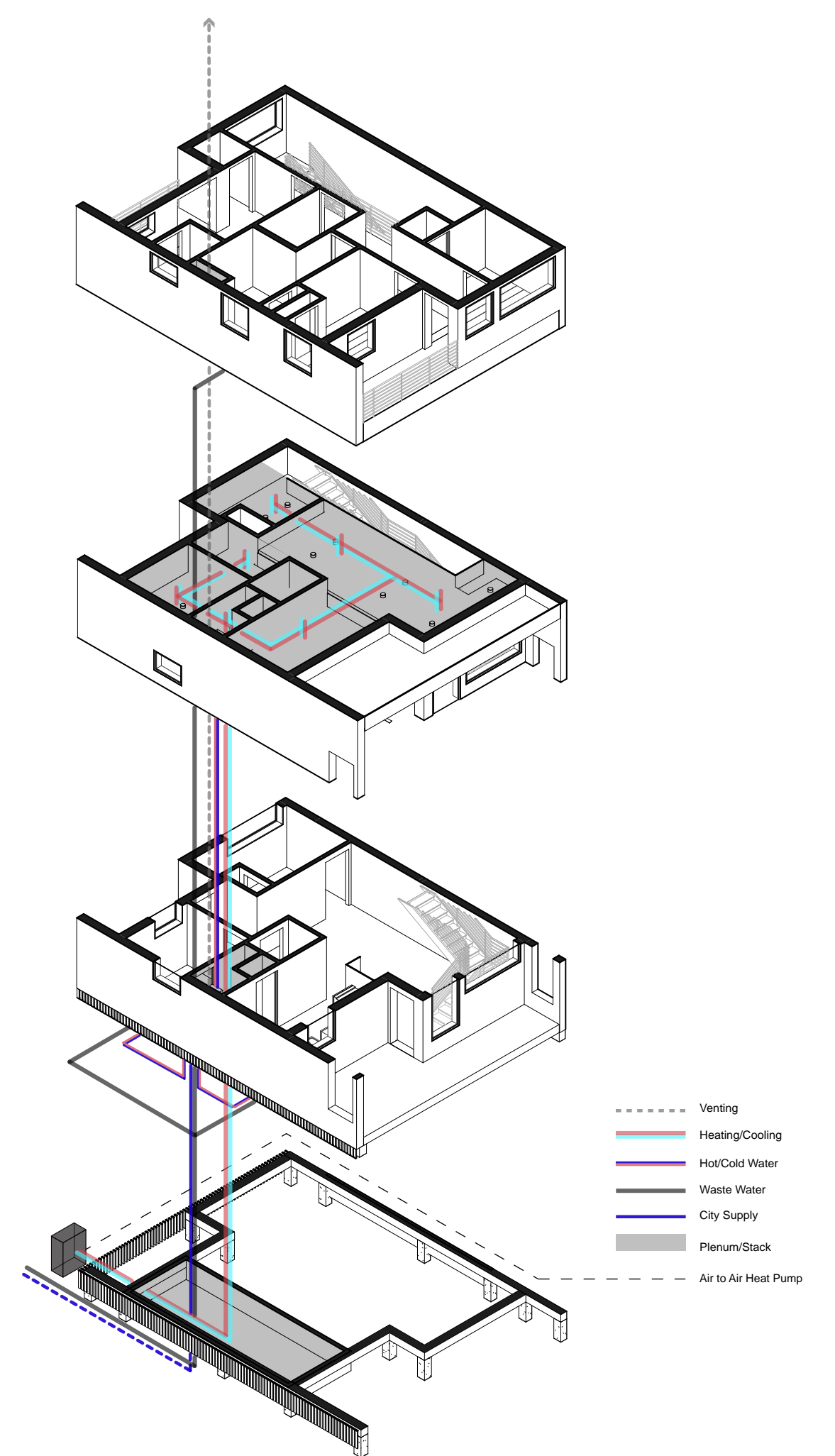
Hollowcore Spanning Elements, Floors and Ceilings

Structural Framing, Precast Beams

Driven Concrete Piles



Rear Porch/Secondary Entrance



Systems Diagram, 1/16" = 1'