



SOUTH VIEW



NORTH VIEW



SITE PLAN

MULTI - UNIT RESIDENTIAL BUILDING

2026 BUILDING ENVELOPE DESIGN COMPETITION

The selected site for our fictional multi-unit residential building is within an established area at the corner of Riddle Avenue and Clifton Street, just off Portage Avenue. Situated near the city's only rapid transit route (BLUE), this transit-oriented development will reduce the number of required parking spaces and associated EV charging stations necessary for the inevitable transition away from fossil fuels. With multiple nearby amenities for dining, shopping, recreation, employment, and education, the increased residential development density brought by this 16-unit project will revitalize its established, walkable neighbourhood and allow for more shared outdoor amenity space.

The envelope concept was primarily informed by its contextual surroundings. The use of local materials, intentional building orientation, and a carefully curated palette of textures and colors were all selected to align with the character of the adjacent neighborhood and to integrate seamlessly within the predominantly single-family residential context.

A strong emphasis was placed on optimizing natural light. The south façade was designed to maximize high-quality daylight, while the east

and west elevations were composed to moderate solar exposure without limiting access to natural illumination for key spaces such as the laundry rooms. Fourth-floor kitchens now benefit from roof-mounted Solatube daylighting, and the introduction of small private patios at the basement level enhances both views and daylight access, allowing for larger living-room windows.

Tyndall stone—an established local material in Manitoba—was chosen for its timeless, grounded aesthetic and its ability to coexist harmoniously across varying architectural contexts. Complementing this, natural local red cedar paneling provides the warmth expected in a family-oriented residential environment. The horizontal orientation of the cedar panels reduces perceived verticality, supporting a scale more consistent with the surrounding streetscape.

The regenerative solar-panel cladding, roof-integrated solar shingles, and solar-panel guardrails collectively strengthen the building's resiliency while contributing to a unified architectural expression. These systems enable a thoughtful compartmentalization of openings and promote a cohesive visual relationship between the roof and exterior walls.

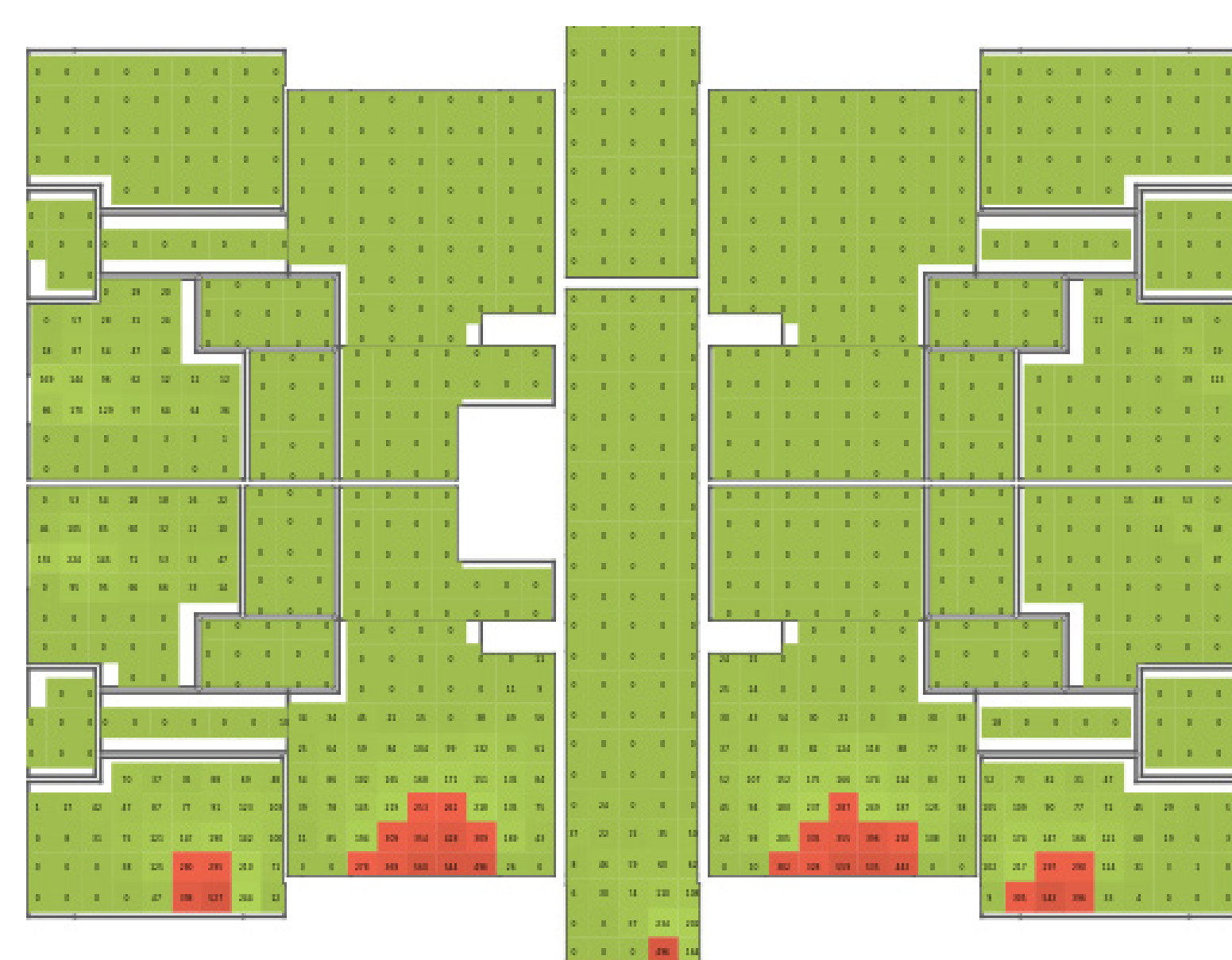


SOUTH ELEVATION

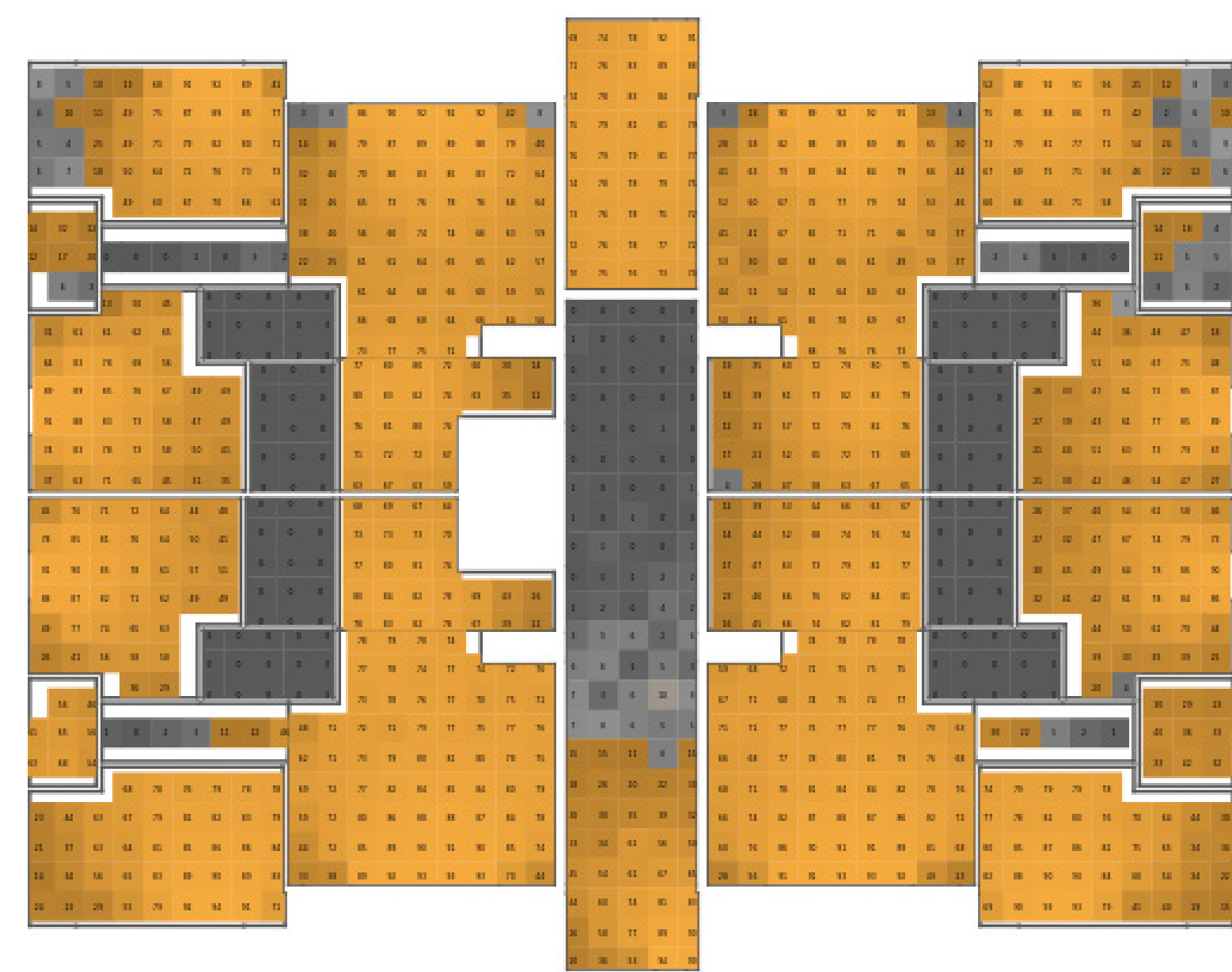


EAST ELEVATION

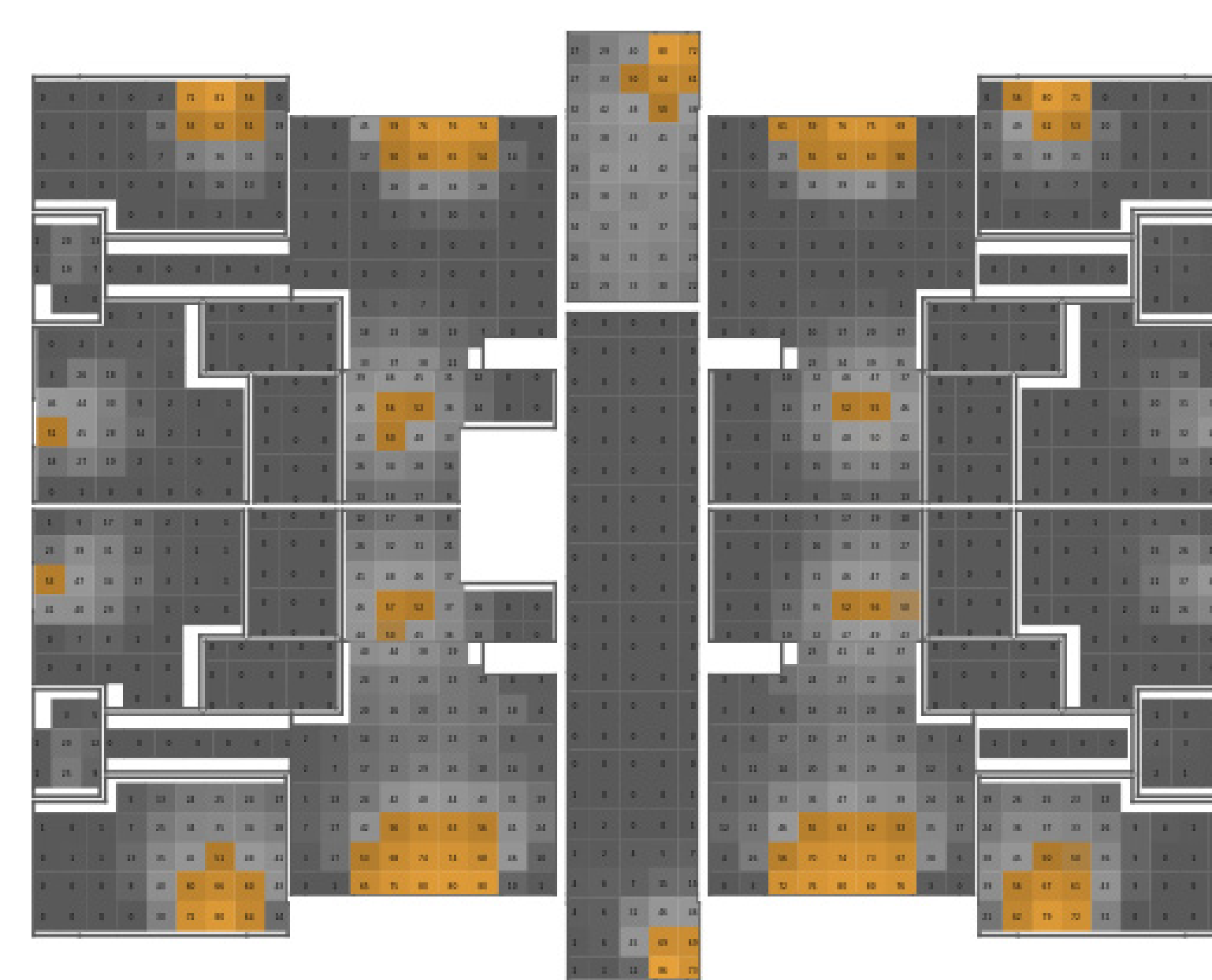
TEAM MEMBERS:
 ADAM DUBYNA, ZAHRA SHARIFI, BROOKE DE ROCQUIGNY,
 JENNIFER ATHERTON AND MARY TORREFALMA



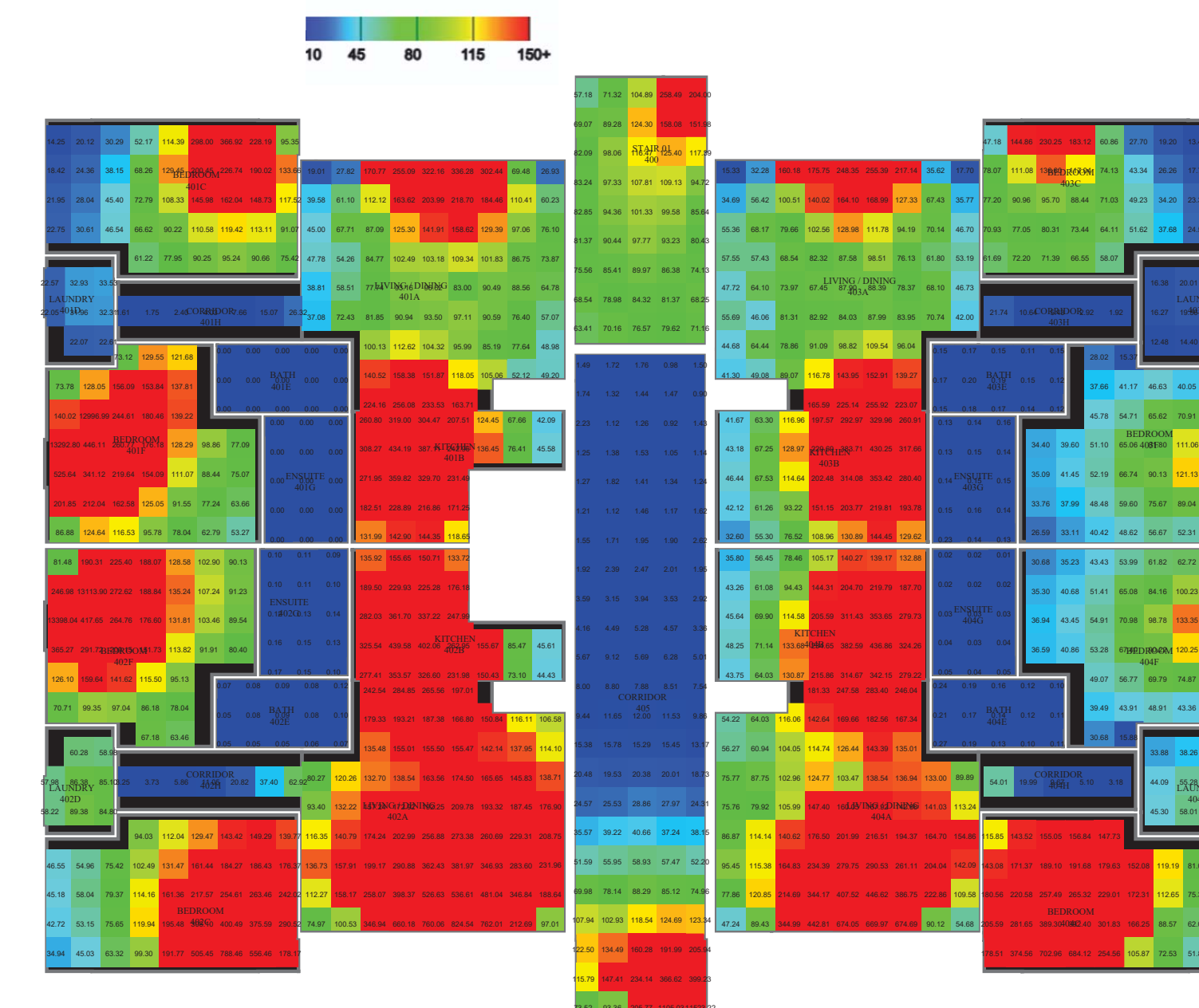
ANNUAL SUNLIGHT EXPOSURE ANALYSIS IN LIGHTSTANZA



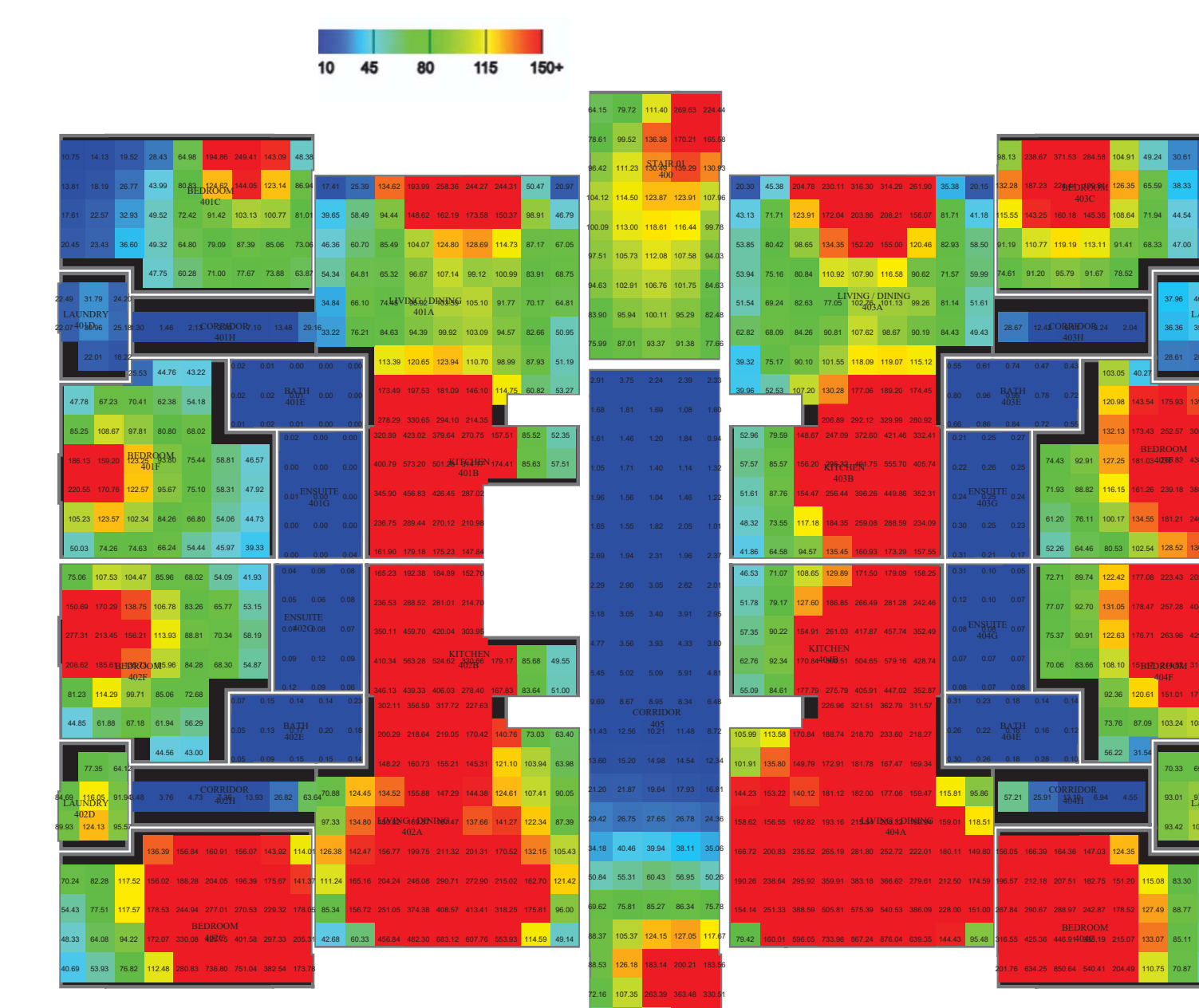
SPATIAL DAYLIGHT AUTONOMY (100/10%) ANALYSIS IN LIGHTSTANZA



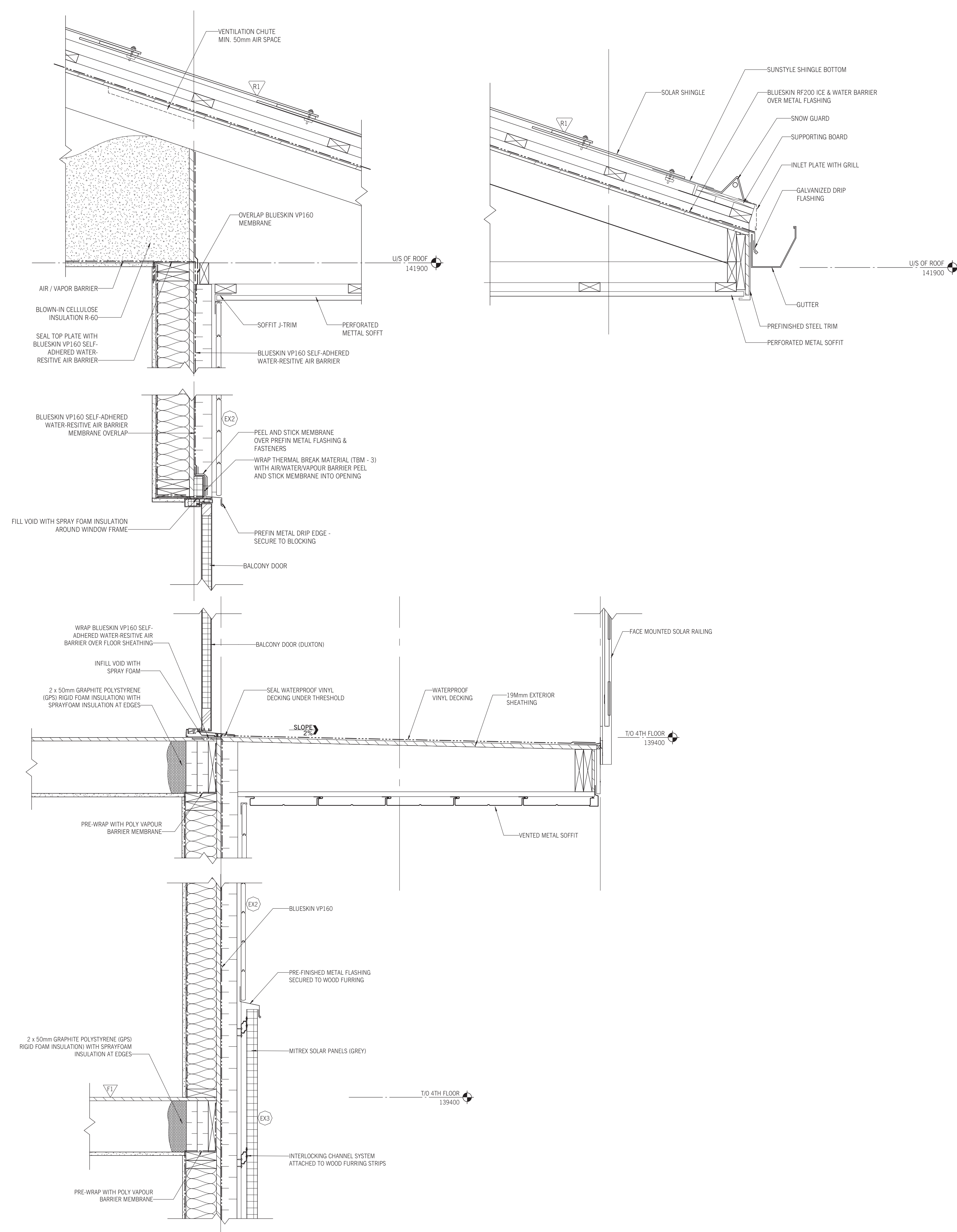
SPATIAL DAYLIGHT AUTONOMY (300/50%) ANALYSIS IN LIGHTSTANZA



ILLUMINANCE 3 PM, EQUINOX (LUX)



ILLUMINANCE 9 AM, EQUINOX (LUX)



BALCONY AND EXTERIOR SECTION DETAIL NOT TO SCALE

SOLATUBE: CLOSED CEILING: 330 DS-C SQUARE FIXTURE

ROCKWOOL COMFORTBOARD 80 & ROCKWOOL COMFORTBATT

SUN STYLE SOLAR ROOF SHINGLES: BLACK - RAL 9005

SAWN FINISH TYNDALL STONE GILLIS QUARRIES LTD. + FERRO THERMAL TIE

GUARD RAIL: MITREX PANELS SOLARAIL 2- BASE SHOE SYSTEM

WESTERN RED CEDAR, V JOINT SIDING (T&G)

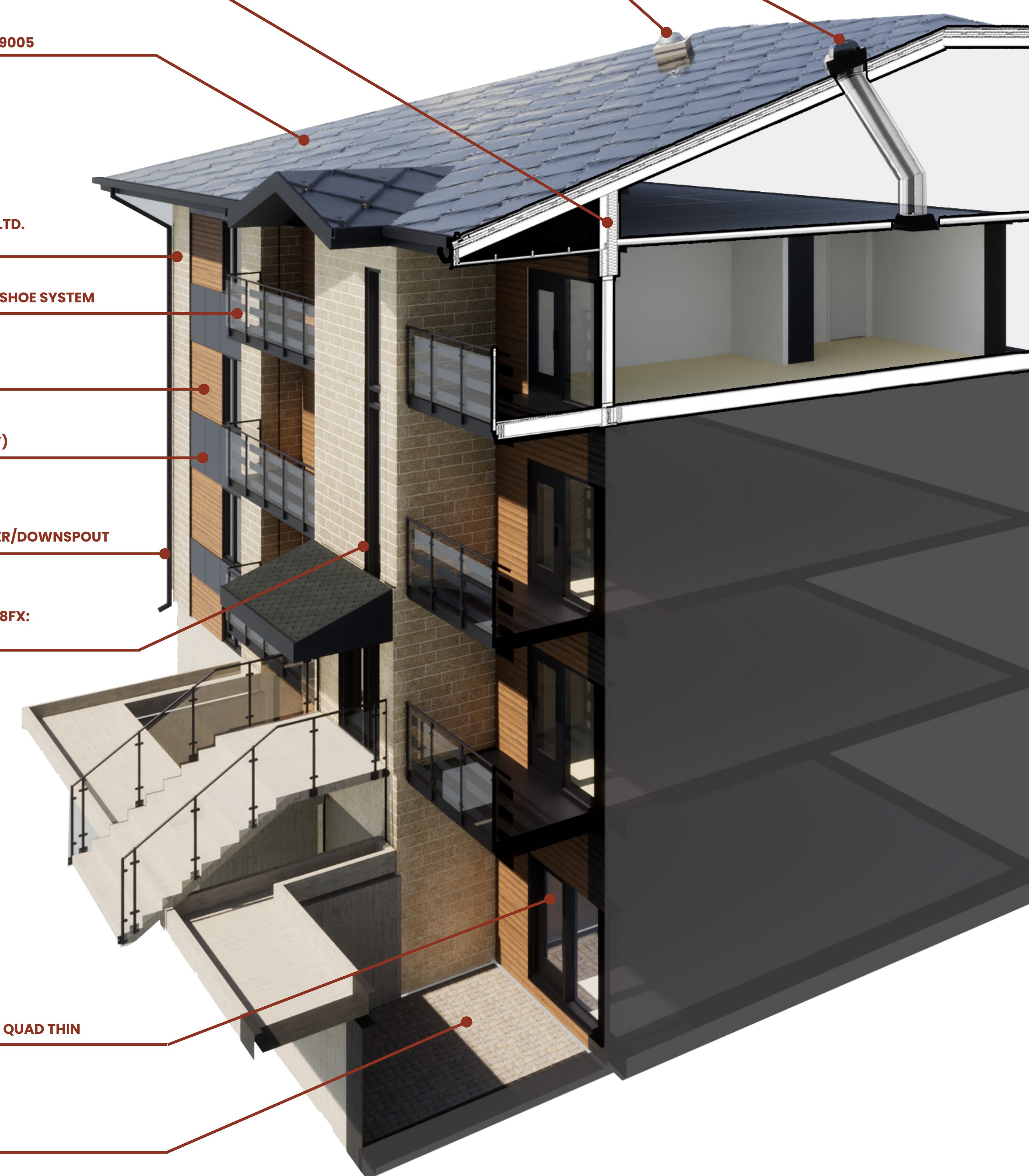
MITREX PANELS: EFACADE PRO+ (NATURAL GREY)

STORM WATER MANAGEMENT: GUTTER/ SCUPPER/DOWNSPOUT

FIXED WINDOW/FIBERWALL: DUXTON SERIES 458FX: W/ 4.38 LITEZONE

OPERABLE WINDOW: DUXTON SERIES 458OP: W/ QUAD THIN

BASEMENT PATIO TO PROVIDE NATURAL LIGHT



3D SECTION