



VIRGINIA TECH

DESIGN-BUILD GROUP

New Student Housing Accommodation

Dublin, Ireland



Abby Sneska
Estimator

Executive Summary

- 142 Bed Purpose Built Student Accommodation (PBSA)
- BREEAM Excellent Rating
- A trendy neighborhood in Dublin
- Accommodate TU Dublin, Trinity College, and RCSI
- Innovative design and delivery methods
 - Pre-fabrication
 - Buildings systems based on passive sustainability
- RIAI Design & Build Lump Sum Contract



Nathan Herrick
Design-Build Project
Executive



Adrianna Mondello
Principal Architect



Sarayu Buchireddygari
Project Architect




Jamey Hogg
MEP Lead



Joseph Candiotti
Project Manager



Kathryn Harrell
Project Engineer




**Design Build
Project
Executive**



**Principal
Architect**




**Project
Manager**



**Project
Architect**



MEP Lead



**Project
Engineer**

Virginia Tech Design- Build Company Pillars

- Success driven by innovation and the pursuit of excellence
- Research partner with TU Dublin
- Net zero by 2050



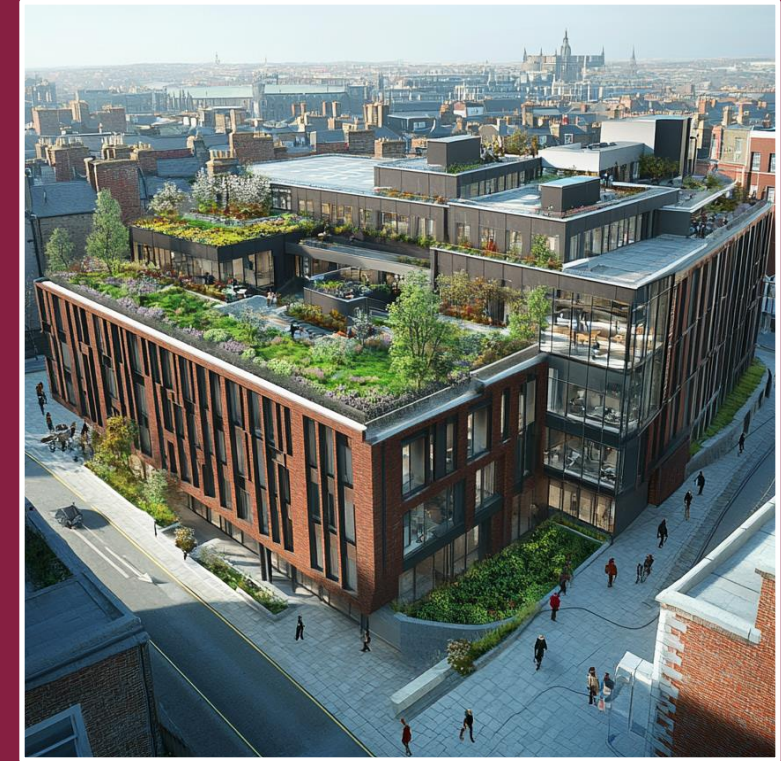
Past Projects



Campus Haven Student Living



Greenview Residences

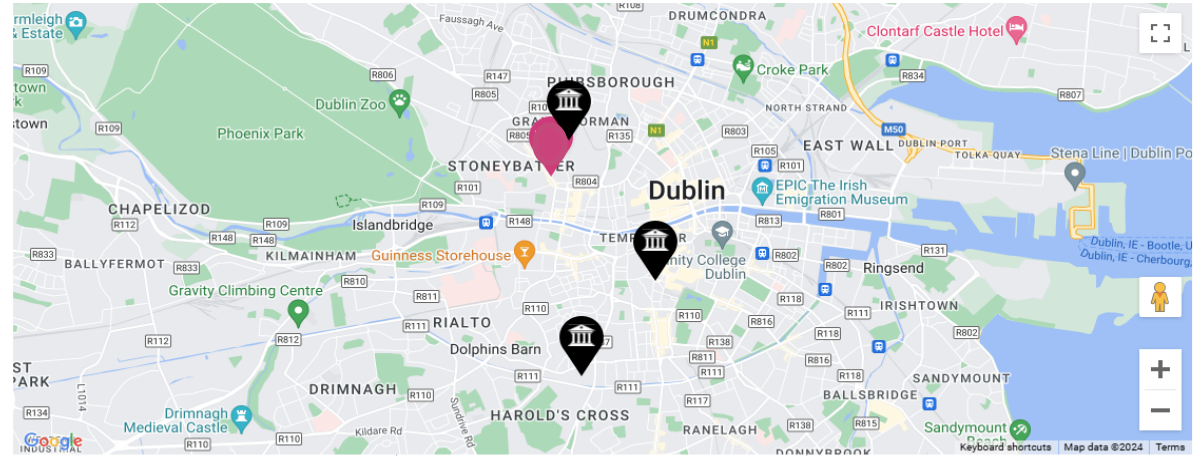


Urban Heights Student Housing



Neighborhood Analysis

- Emphasize on sustainable mobility
- Primary school adjacently located to the site
- Variety of mixed-use retail and many residential units within Stoneybatter
- Community interaction



By Foot

Bus Stop (39A to UCD)	2 mins
Law Society - Education Centre	3 mins
LIDL	3 mins
TU Dublin Grangegorman	6 mins
King's Inns	13 mins
IBAT College Dublin	21 mins
Mater Hospital	24 mins
American College Dublin	38 mins



By Bike

Heuston Train Station	5 mins
Portobello Institute	5 mins
NCAD	7 mins
ICD Business School	8 mins
Dublin Business School	10 mins
Dorset College	12 mins

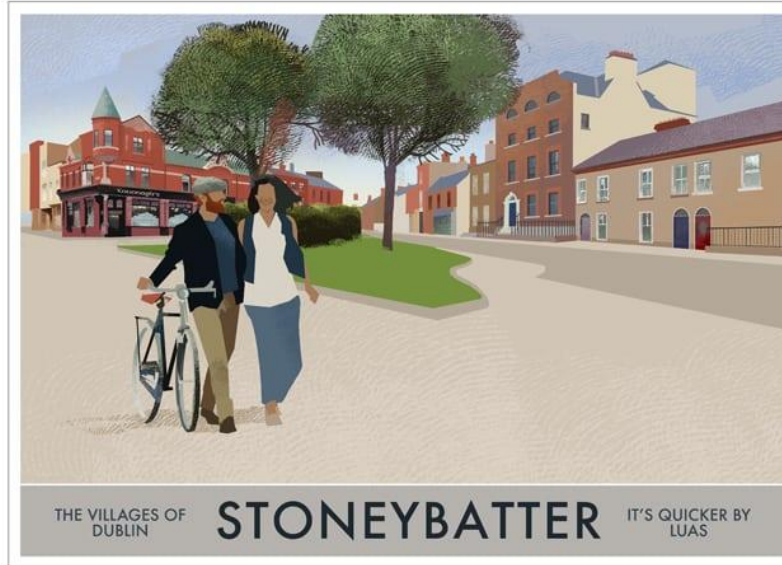


By LUAS

CCT College Dublin	16 mins
National College of Ireland	20 mins
Trinity College Dublin	21 mins
Dublin Design Institute	25 mins
RIAM	26 mins
Royal College of Surgeons Ireland	28 mins
Dublin Airport	41 mins
UCD	45 mins

Community Engagement

- Regular Opens Forums
- Informational sessions
- Collaboration with local businesses
- Apprenticeships and skill-building opportunities
- Partnerships with local academic institutions and trade schools



ESG and SDG Commitment

Environment

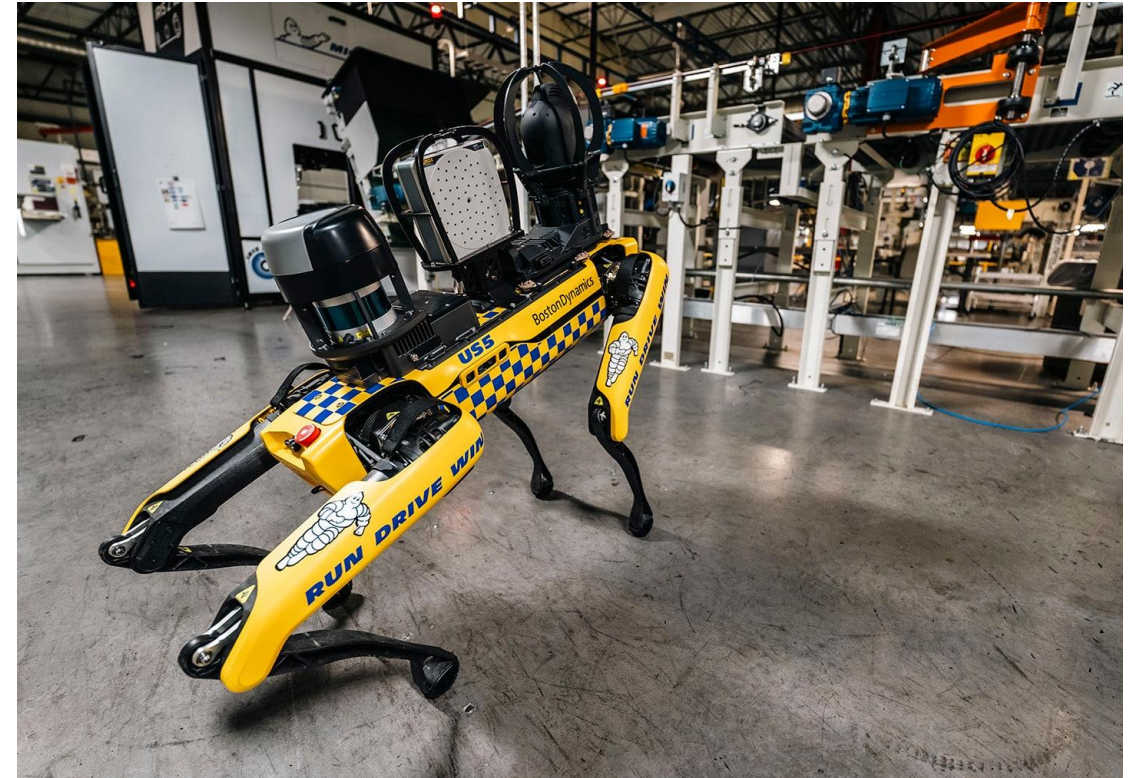
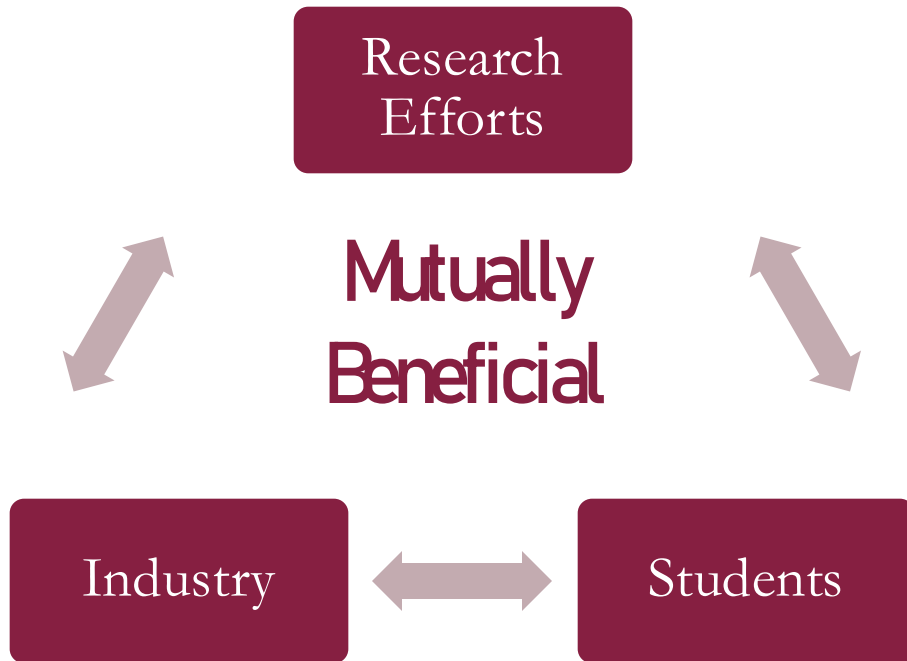
Social

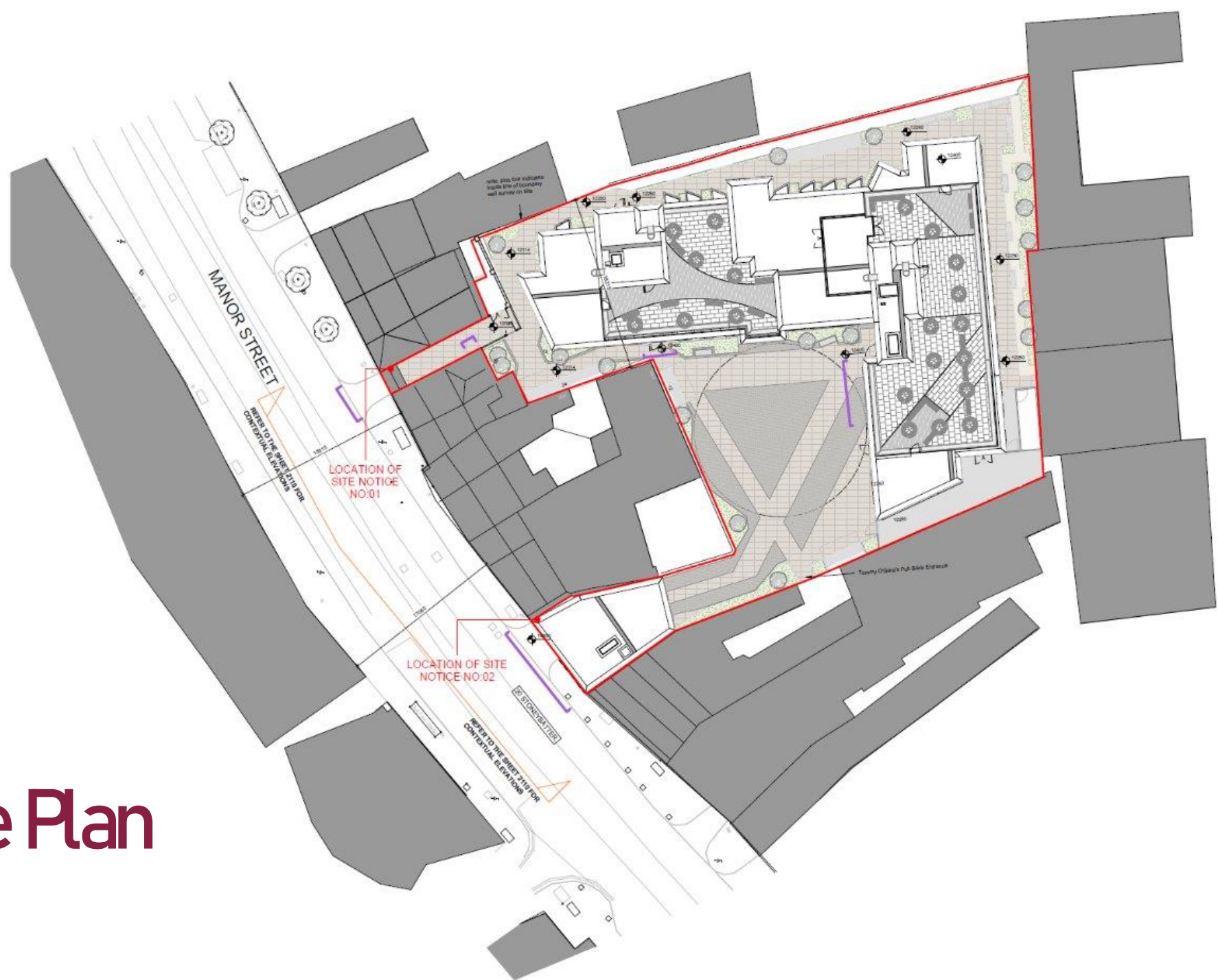
Governance



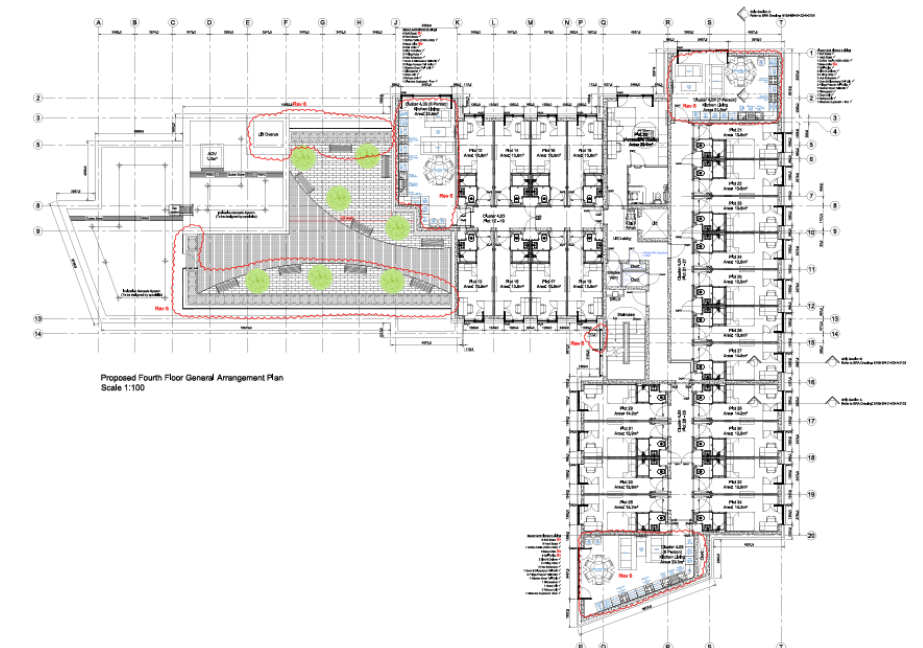
- Proper waste management
- Community Engagement
- Green Infrastructure
- Prioritizing health of residents and the community

Institutional Relations





Aerial Site Plan



Aerial Site Plan

Design Summary

Key Architectural Elements:

- Historic Courtyard Integration
- L-Shaped Layout
- Gatehouse Access
- External and Internal Design
- Innovative Construction Techniques



Continued Design Summary

Art and Culture:

- Artwork by local artists, including murals by Sorcha O'Higgins and pieces by Carolyn Walsh
- An art competition is sponsored by the property supports local art and culture.

Preservation of cobblestones from the previous structures shows our commitment to integrating historical features.



Communal Spaces



*designfolk
consultants

Design and Functionality:

- Equipped with tiered seating
 - This space serves multiple functions.
- These areas are designed to be comfortable and bright, encouraging both leisure and academic activities
- The layout includes a living room, study spaces, a presentation area, and a music area, catering to diverse student needs





- The gym is part of the Wellness Hub, which is designed to promote a healthy lifestyle among residents.
- The laundry rooms are strategically placed for easy accessibility



Communal Spaces

Student Rooms and Apartments

- 142 beds
- 4-8-bedroom cluster within the en-suite apartments
- 4 DAC student apartments
- Studio apartments
- All rooms have personal en-suite bathrooms



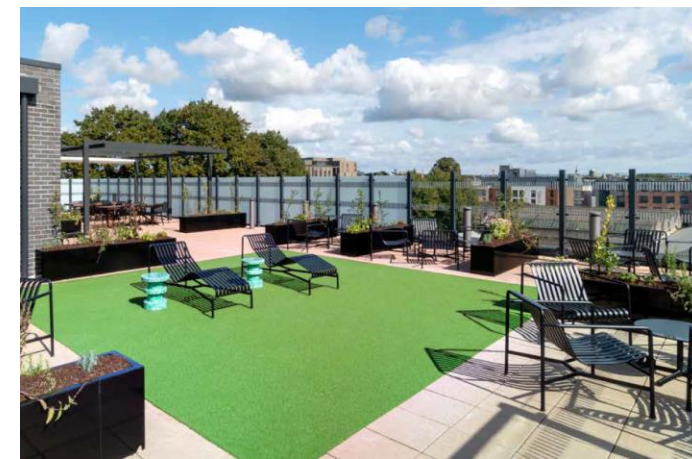


Design Inconsistencies

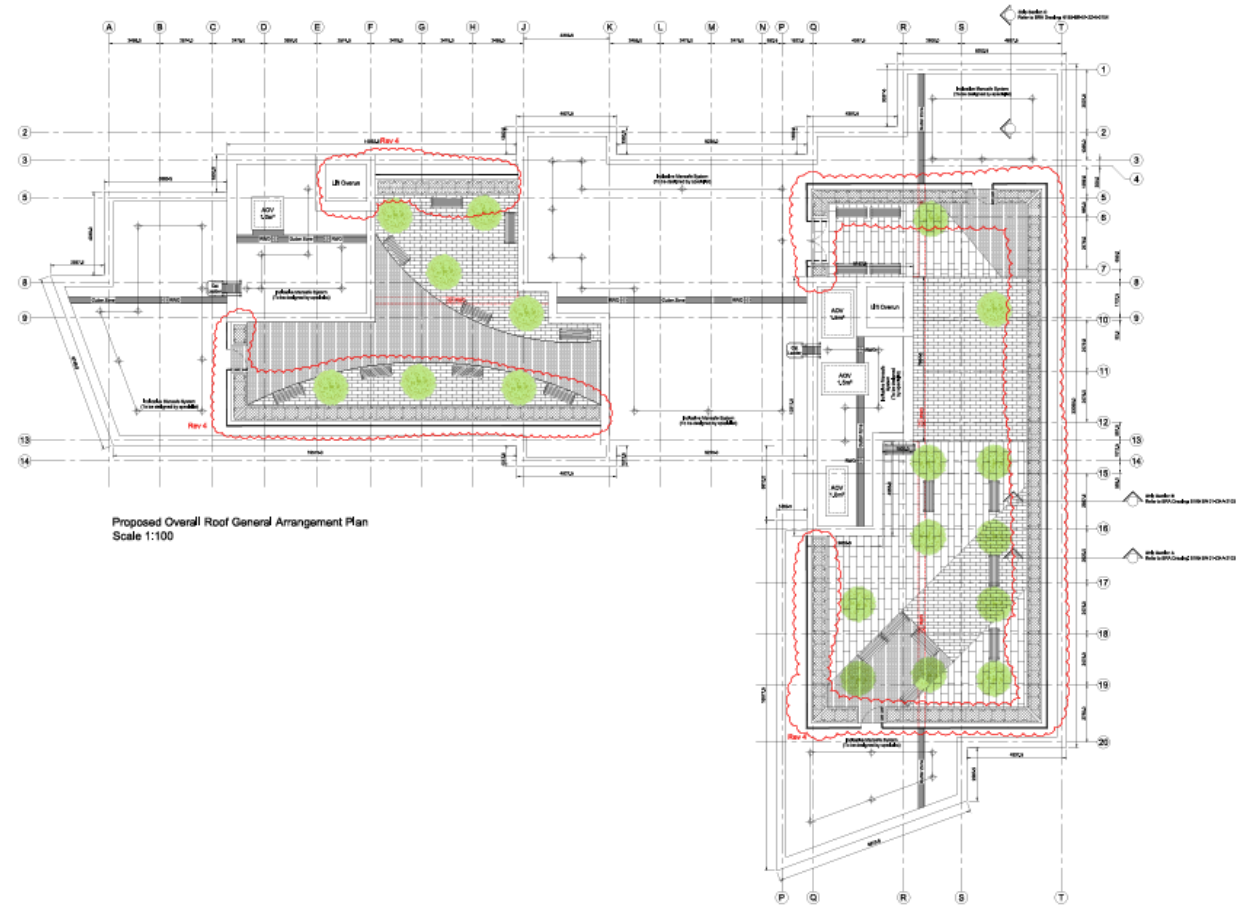
- Lack of innovative approach to biodiversity integration
- Minimal approach to tree planting and landscaping
- Limited vertical wall planter



Rooftop Garden Features



- Year-Round Enjoyment
- Host of Amenities Available
- Pergolas for Shelter
- Landscaped Greenspaces
- Panoramic Views of Dublin



Active Transport and Mobility

- On-site bike storage
- Zero energy building
- One of the most sustainable student living buildings in Ireland
- Landscaped Greenspaces
- First property in Ireland to achieve a 3-star Fitwel certification

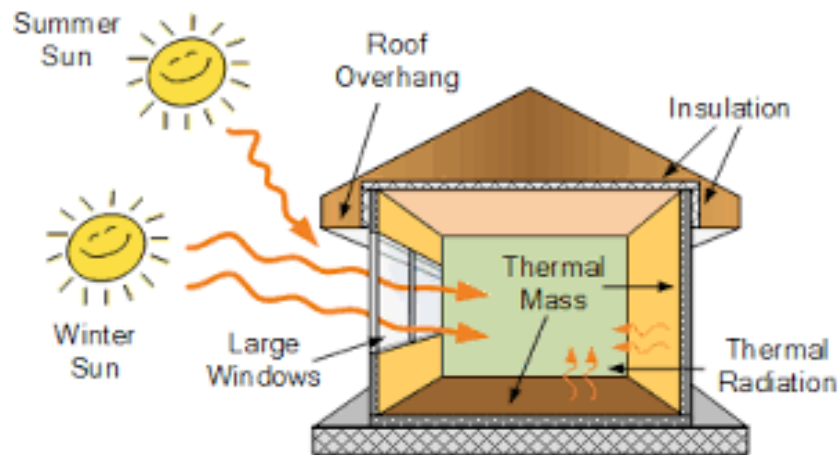


Passive Building Performance



Ventilation

- Operable windows allow for natural air flow into the building



Heating

- Maximize sunlight and minimize heat loss

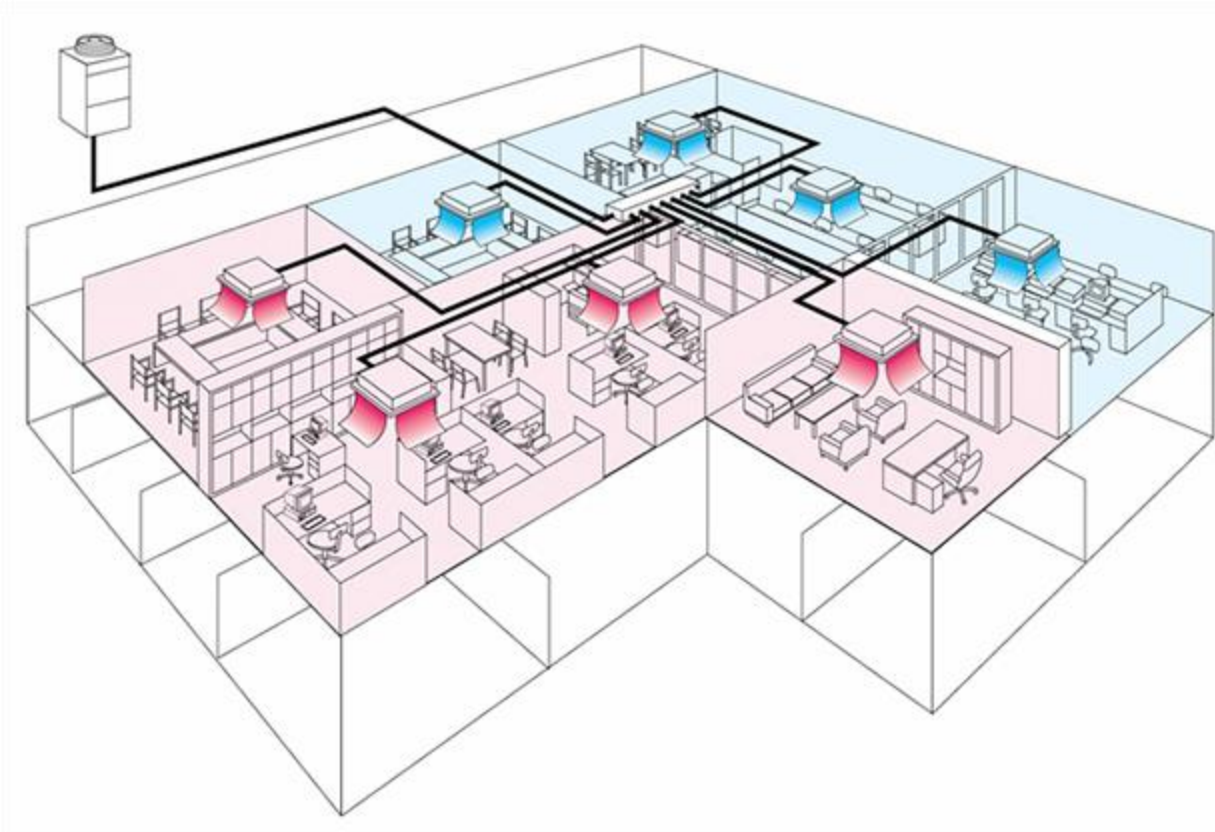
MEP Design

Energy Recovery Ventilation

- Energy efficient
- Reuse of heat
- Reduced usage because of passive ventilation



Technical Design - Heating



Variable Refrigerant Flow

- Energy efficient
- Humidity control
- Individual zoning control
- Heating or cooling

Pre-Fabrication

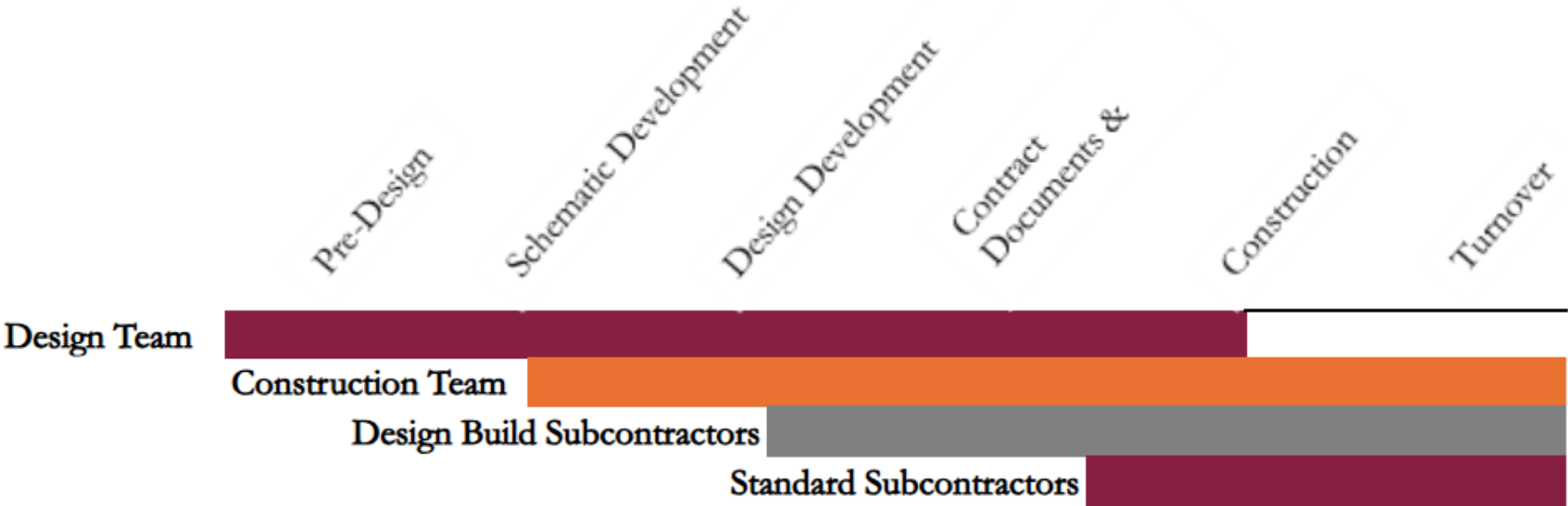
Bathroom Units- connections to fixtures/distribution

Flooring – preassembled SIP insulated panels

Precast Wall Panels- concrete with insulation, cutouts and reinforcement

Raft Foundation Reinforcement- blocks of reinforcement precut to size

Procurement Plan



Prime Contract

- RIAI Design Build Lump Sum Contract

Subcontracts

- Allows for some trades to be involved in design process
- Turnkey subcontractors

Subcontractor Selection

- History of similar project
- Project estimate, schedule, and approach
- Company history, reputation, diversity, sustainable practices, innovation

Cost Summary



Safety

Risks

- Falls
- Falling Objects
- Asbestos
- Entrapment during Excavations
- Vehicular Collisions



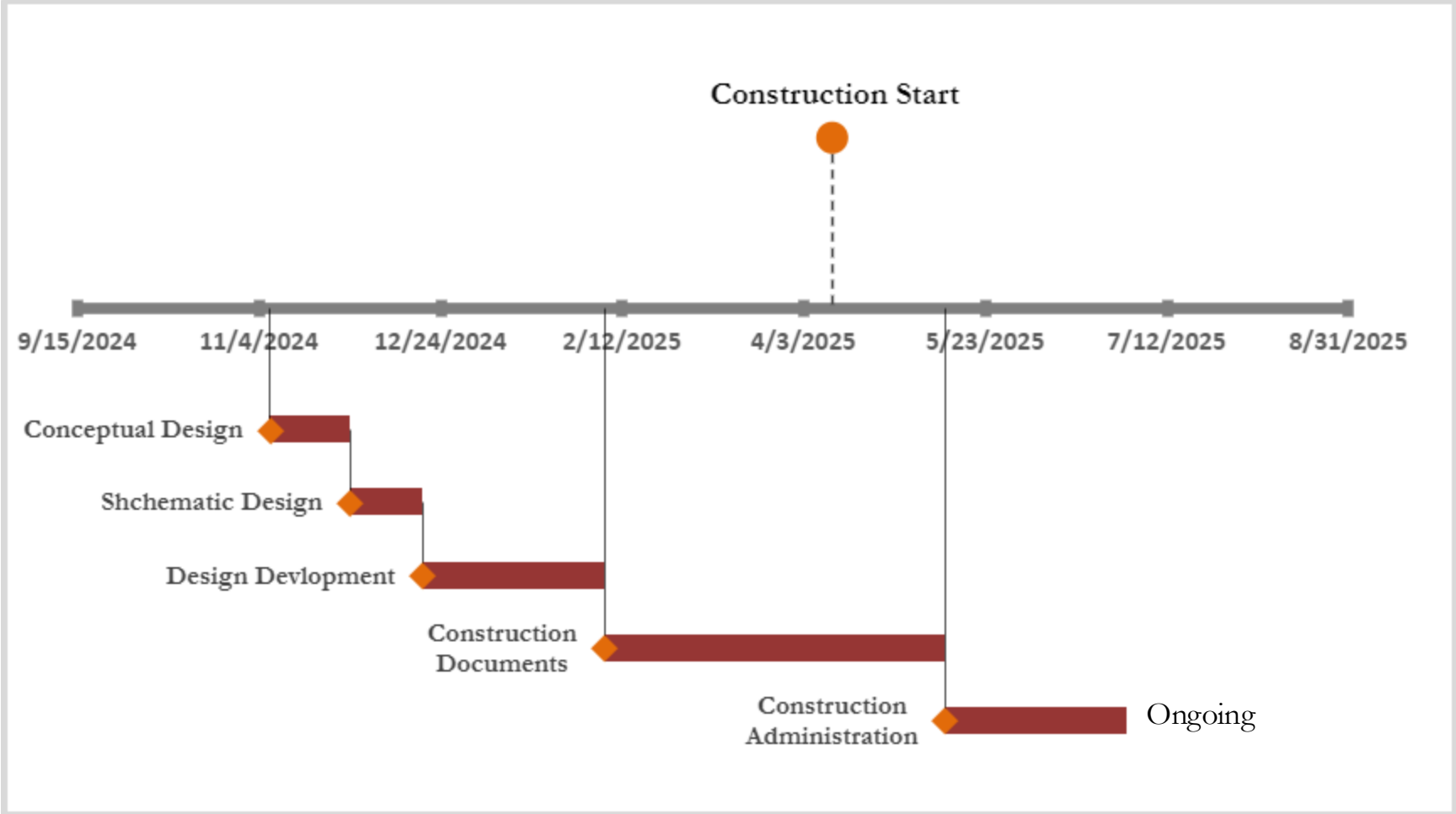
Required PPE

- Hard hat
- Reflective vest
- Boots
- Gloves
- Safety Glasses

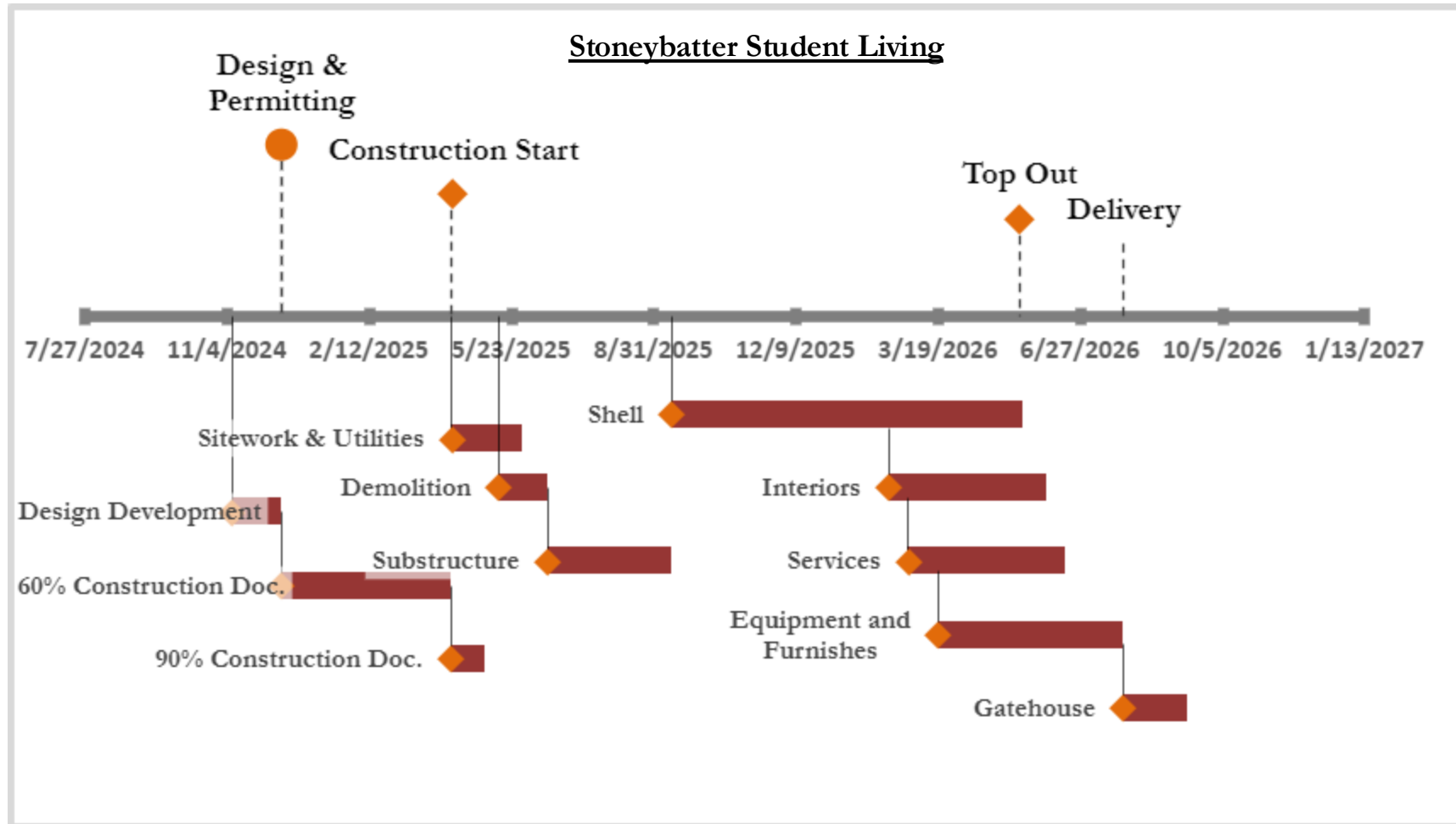
Site Specific Risks

- Potential buried gas supply
- Demolition damage to neighboring structure
- Working next to dense residential site
- Heavy traffic
- Work near subgrade utilities
- Noise and Vibration
- Dust and Water Pollution to neighbors
- Hazardous Substances

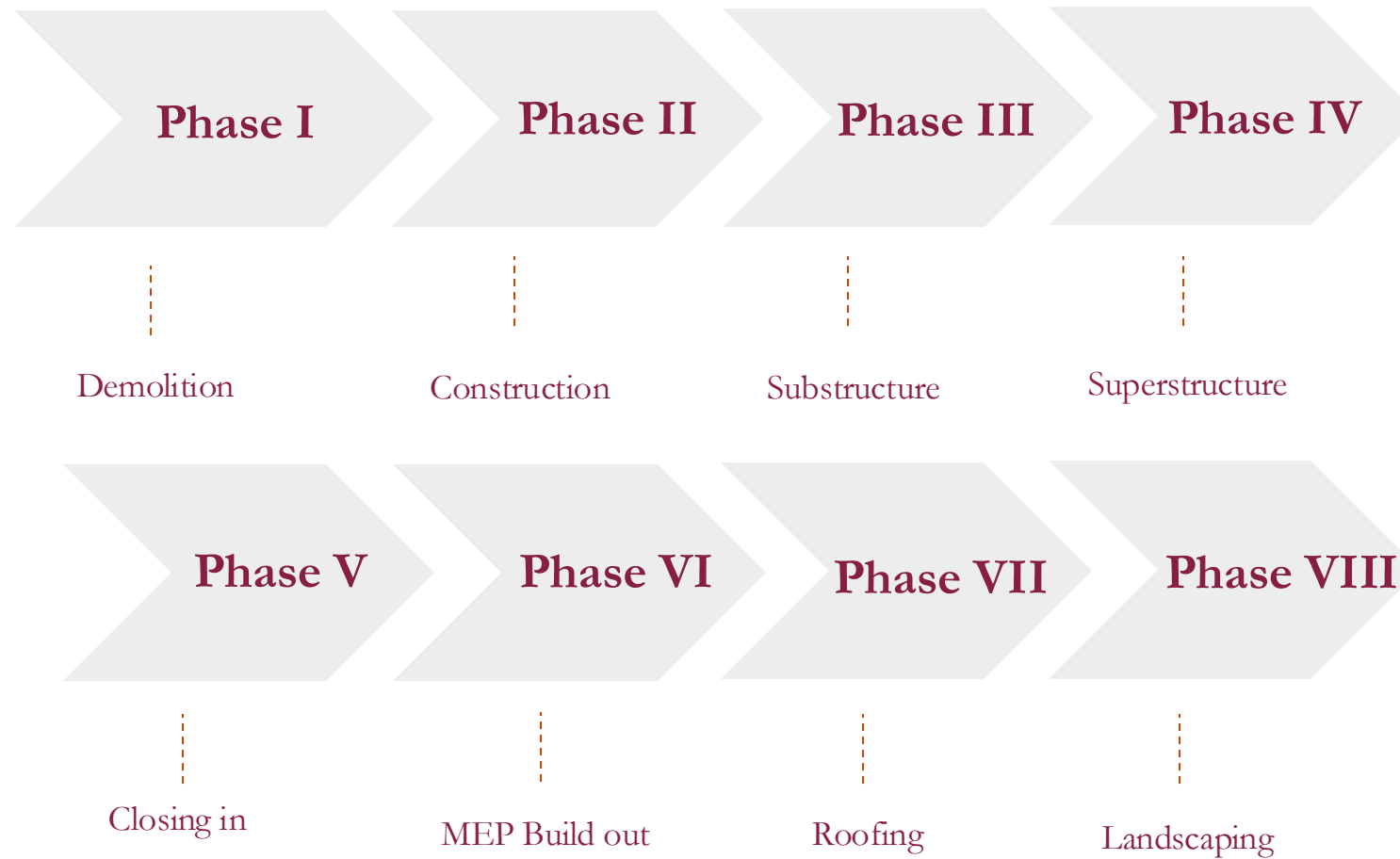
Design Release Schedule



Schedule



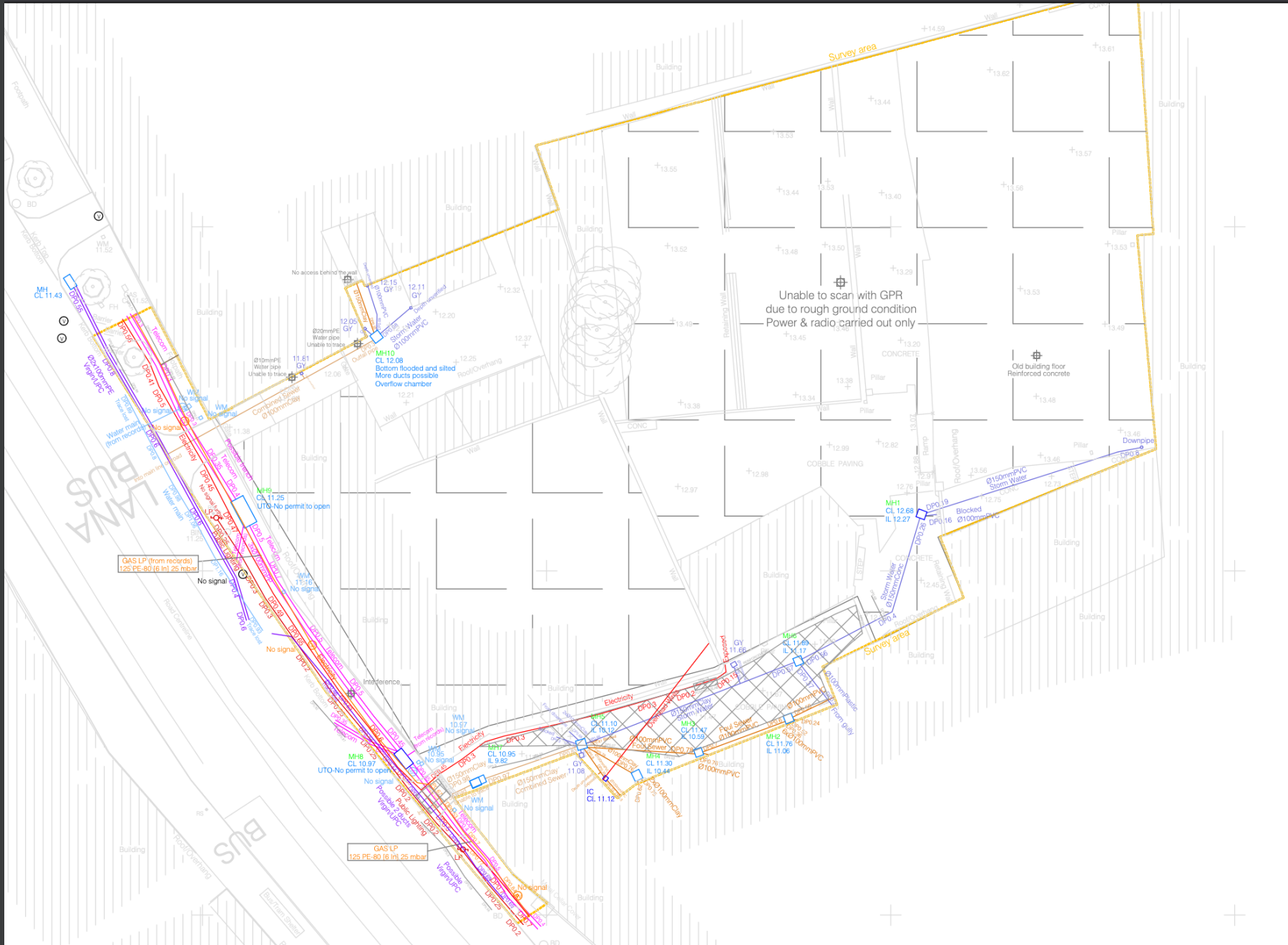
Site Logistics



Key Challenges:

- Tight Space's
- Surrounding buildings
- Vehicular movement
- Pedestrians

Underground Utility Plan



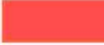
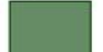














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Demolition

Phase 2

Legend

	Job Trailer		Crane Base
	Bathrooms		Flaggers
	Dumpsters Space		Pedestrian Entrance
	Concrete Washout		Pedestrian Worker Path
	Truck Delivery Space		Delivery Lay-down Area
	Truck Delivery Path		Mustertpoint
	Eyewash station/ First aid		
	Delivery Entrance		

















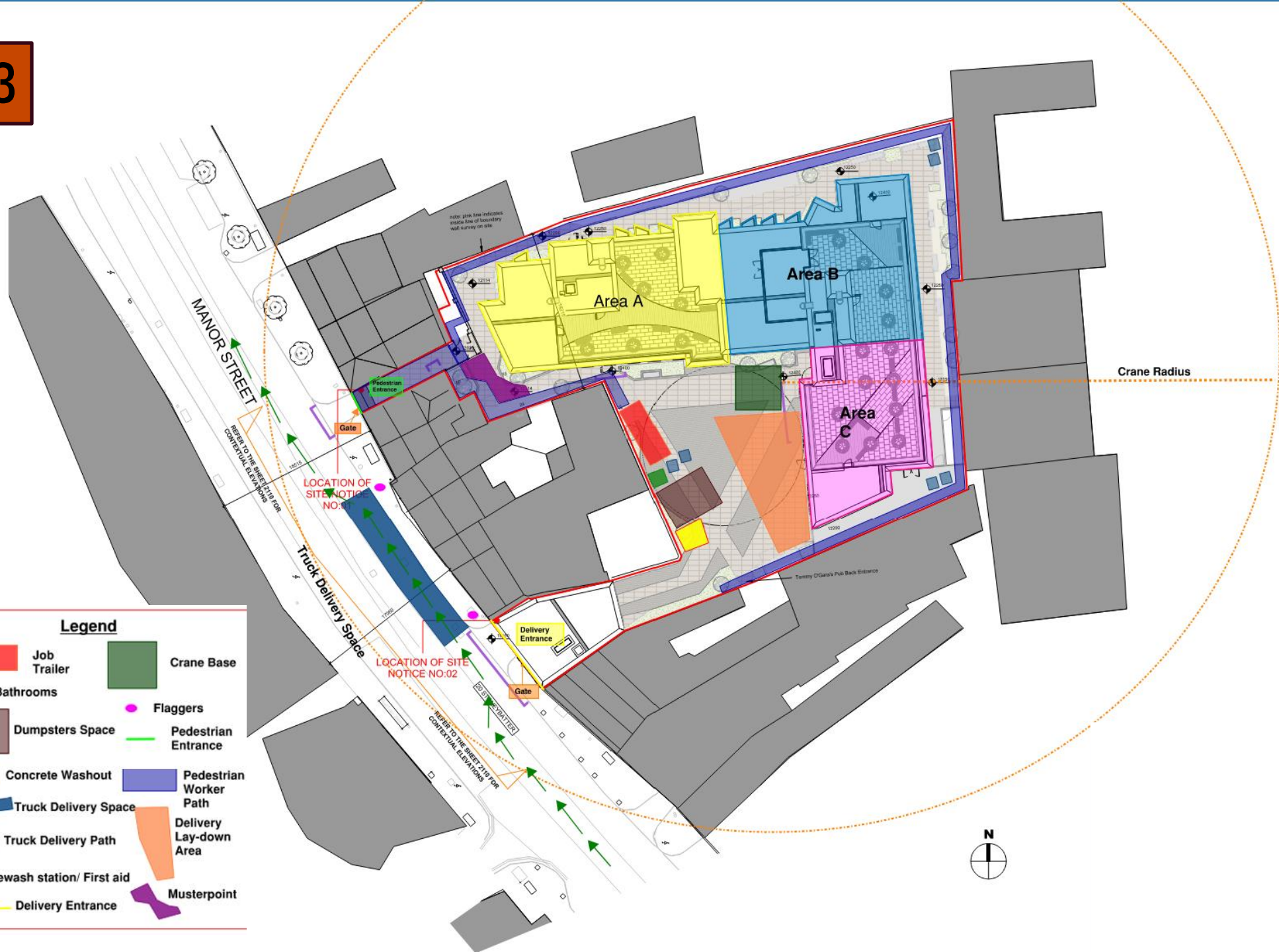


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Phase 3

Legend

	Job Trailer		Crane Base
	Bathrooms		Flaggers
	Dumpsters Space		Pedestrian Entrance
	Concrete Washout		Pedestrian Worker Path
	Truck Delivery Space		Delivery Lay-down Area
	Truck Delivery Path		Eyewash station/ First aid
	Delivery Entrance		Mustertpoint





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Stakeholder Communication

- Bi-weekly OAC meetings
- Community newsletters
- Weekly subcontractor meetings
- Monthly schedule and cashflow updates

Conclusion



Pursuit of Innovation



Community Engagement



Trusted Partner