



P250 U.S. NAVAL RESEARCH LABORATORY (NRL) BIOMOLECULAR SCIENCE & SYNTHETIC BIOLOGY LABORATORY



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Site Location – Naval Research Laboratory



• Location

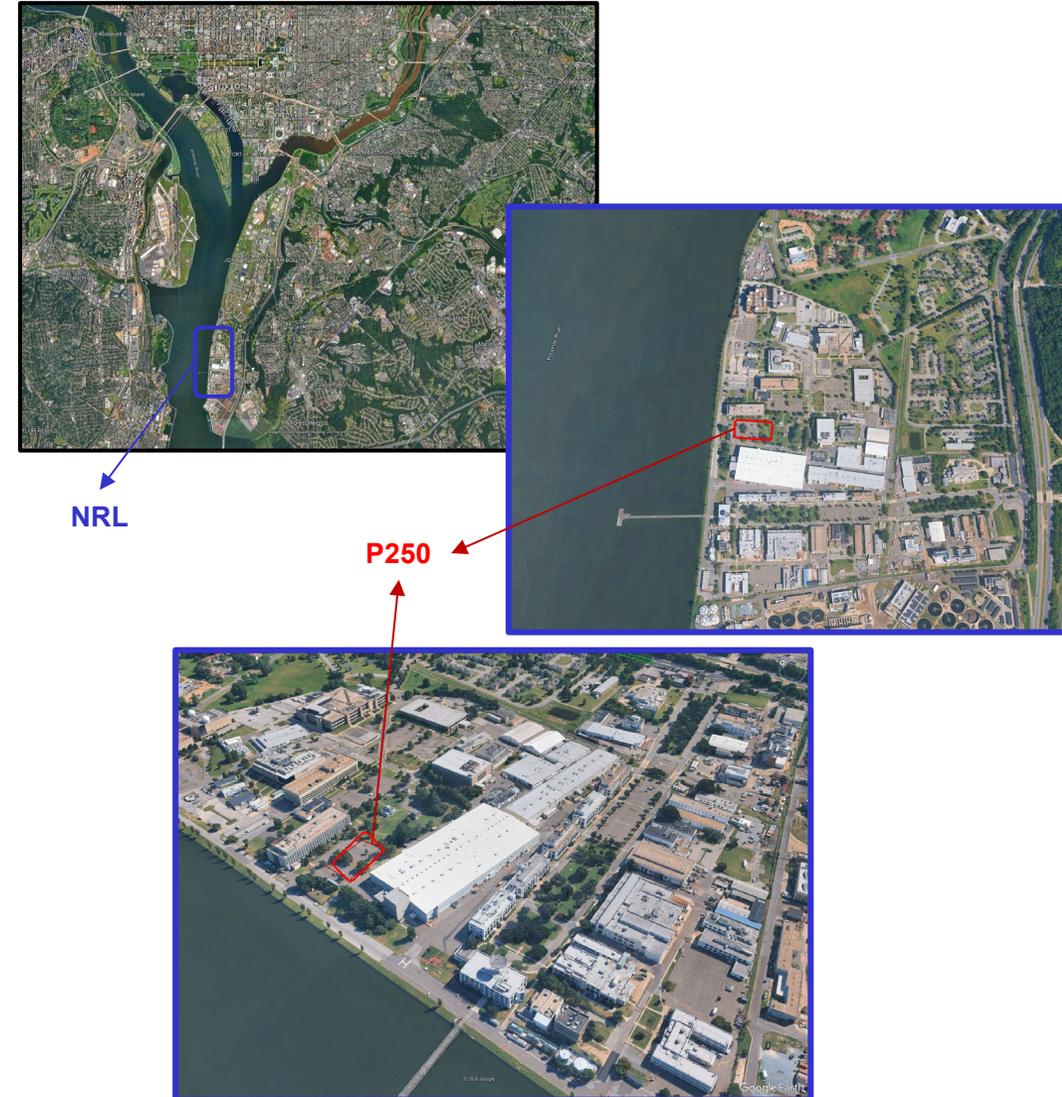
- The U.S. Naval Research Laboratory (NRL) is bordered by the Potomac River to the West, Joint Base Anacostia Bolling to the North, Interstate 295 to the East, and DC Water's Blue Plains Advanced Wastewater Treatment Plant to the South. No public engagement is planned for this project.

• Mission

- A scientific and engineering command dedicated to research that drives innovative advances for the U.S. Navy and the U.S. Marine Corps.
- Serves as the Department of the Navy's corporate laboratory and reports to the Chief of Naval Research.
- Is the principal in-house component in the Office of Naval Research's (ONR) effort to meet its science and technology responsibilities, including the Bio/Molecular Science and Engineering field.
- Requires modern, efficiently configured, and adequately sized laboratories to meet its mission.

• P250 Location

- The newly constructed building will be located within NRL fence line, on the western side of the installation with a roadway, parking area and tree line separating the building from the Potomac River.



Site Selection



• P250 site

- Located on an existing parking lot between buildings 208 (to the North) and A59 (to the South) with the Potomac River located to the west and a restricted development area to the east.

• Master Plan Alignment

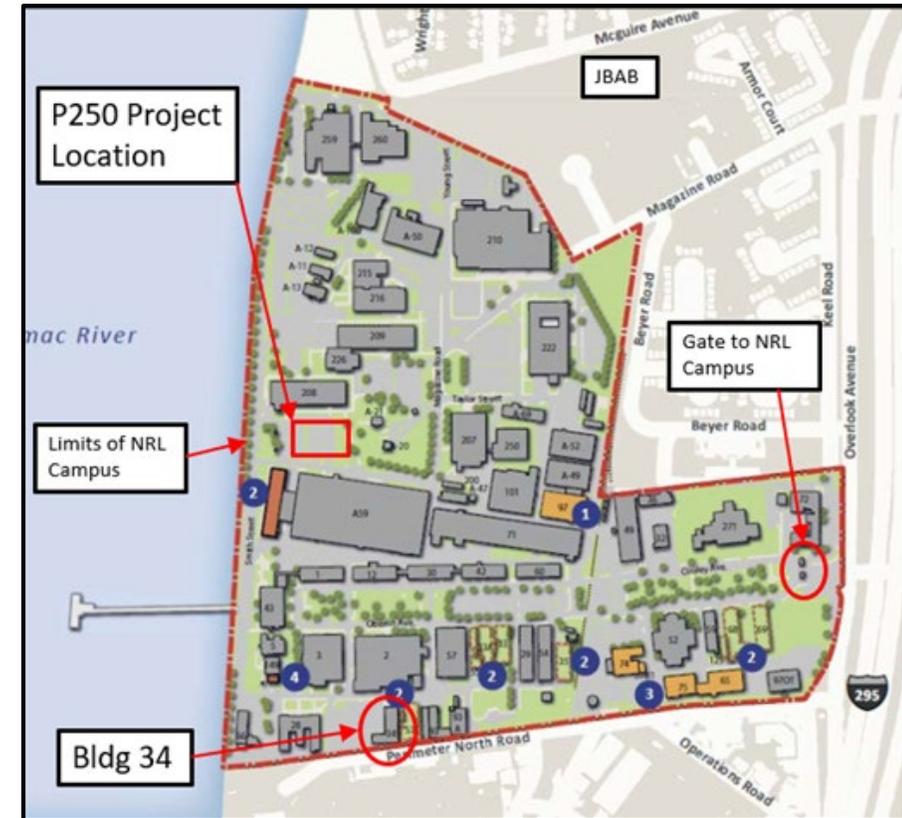
- Last Master Plan, 2014, does not specifically name P250, but it identified the need to either renovate an existing building or construct a new facility to meet the mission and space requirements of the Bio/Molecular Science and Engineering division. Today's mission needs cannot be met through renovation of an existing structure.
- Selected site was identified as a potential future development parcel in the 2014 Plan.
- Update to NRL Master Plan began in 2023. Submission to NCPC and CFA was delayed due to impacts to staffing and policy changes, which necessitated a revision of some sections. Revision is in process and the draft will be submitted to NCPC and CFA. Updated Master Plan includes P250.

• Master Plan Goals

- Integrate modern facilities in a manner that respects the character of the historic district while ensuring the continuity of NRL's vital national security mission.
- Preserve NRL's green spaces, historic structures, and other cultural and archaeological resources to the extent practicable.

• Constraints

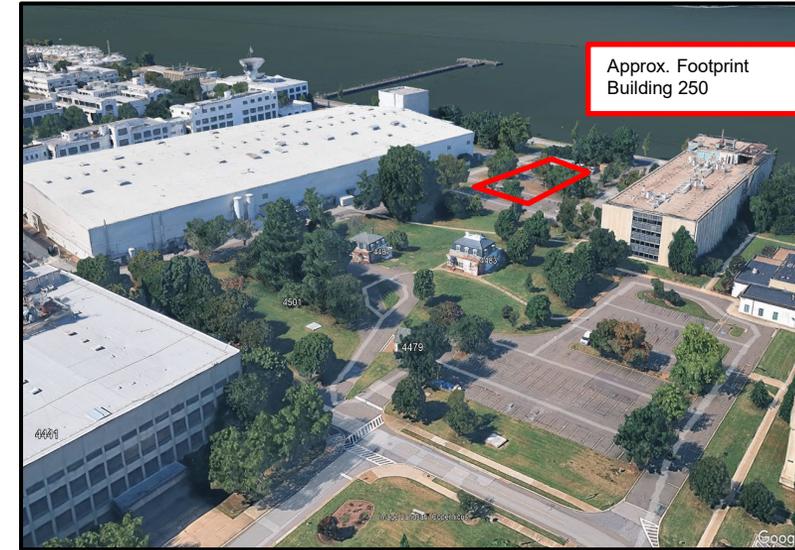
- Highly specialized nature of the laboratories at NRL makes renovating or replacing operational buildings unfeasible, as it would require a complete halt to mission critical research for multiple years.



Site Map & Project Location

Existing Conditions

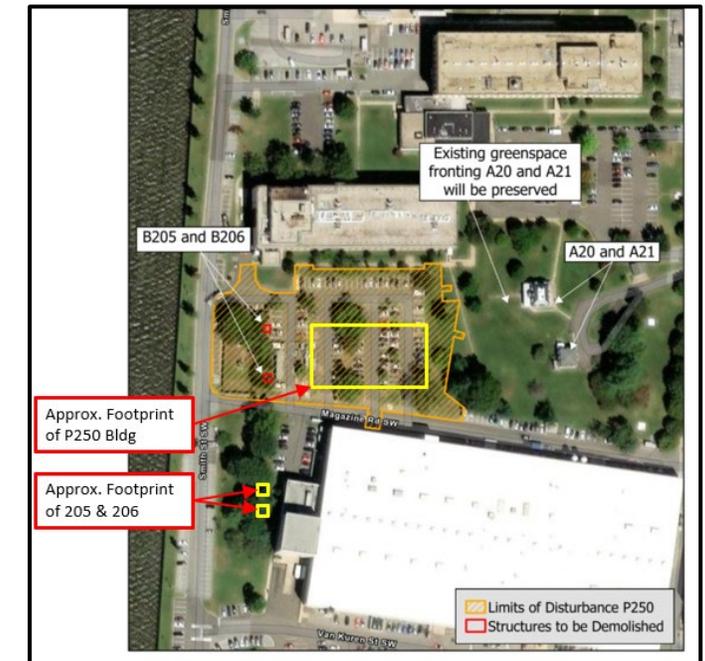
- Laboratory building will be constructed in an existing parking lot area
- Site location will require the relocation of several trees
 - replanting locations coordinated with base management
 - replacement will follow NCPC’s tree replacement policy
- Finish Floor Elevation will be designed to be above DoD Regional Sea Level (DRSL) Design Flood Elevation (DFE).
- Project will meet requirements of UFC 3-210-10 for stormwater management and will comply with Department of Energy and Environment (DOEE) minimum stormwater, erosion, and sediment control.
- Site photos are unavailable for public release



Project Scope



- **Constructs a Biomolecular Science & Synthetic Biology laboratory within the U.S. Naval Research Laboratory (NRL) fence line**
 - **Total Estimated Area:** 89,000 square feet (SF)
 - **Total Estimated Area of Disturbance:** 171,000 SF
 - **Vertical Configuration** four stories and mechanical Penthouse
 - **Estimated Height:** four 18'-0" story (approximately 92.8 feet tall)
 - **Spaces configuration:** Facility will include laboratories, equipment spaces, offices and support spaces, storage spaces, receiving areas, and a mechanical equipment penthouse
- **Reconstructs storage facilities**
 - Demolition and reconstruction further south of two small storage facilities (approximately 144 SF each)
- **Demolishes approximately 12,550 SF**
 - Demolition of existing building (34) to slab-on-grade with infill construction of the adjacent building (53) at the locations where the two buildings were connected



Environmental Compliance



- **NEPA**

- The Navy will comply with NEPA.

- **Section 106 of NHPA**

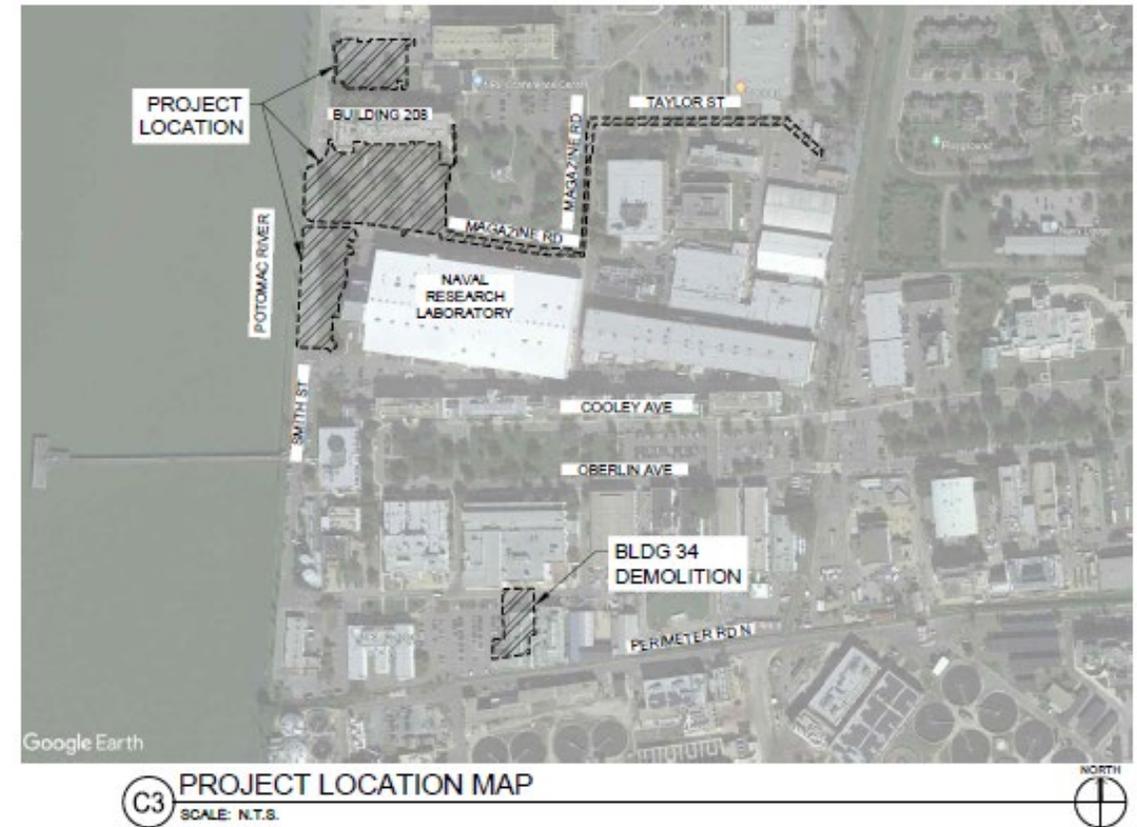
- The Area of Potential Effect (APE) is anticipated to include Bellevue Annex/Naval Research Laboratory District plus the view across the Potomac and Daingerfield Island.
- The Navy anticipates there may be adverse effects due to changes in the view shed from the historic Quarters toward the Potomac River.

- **Cultural Resources**

- P250 has been strategically designed and positioned to minimize its impact on both above-ground and potential below-ground cultural resources.

- **Compliance Considerations**

- **Archeological Resources:** low potential
- **Natural Resources:** tree replacement will follow NCPC's tree replacement policy
- **Flood plain:** identified by DRSL, exact risk category still being assessed
- **Stormwater:** bioretention proposed



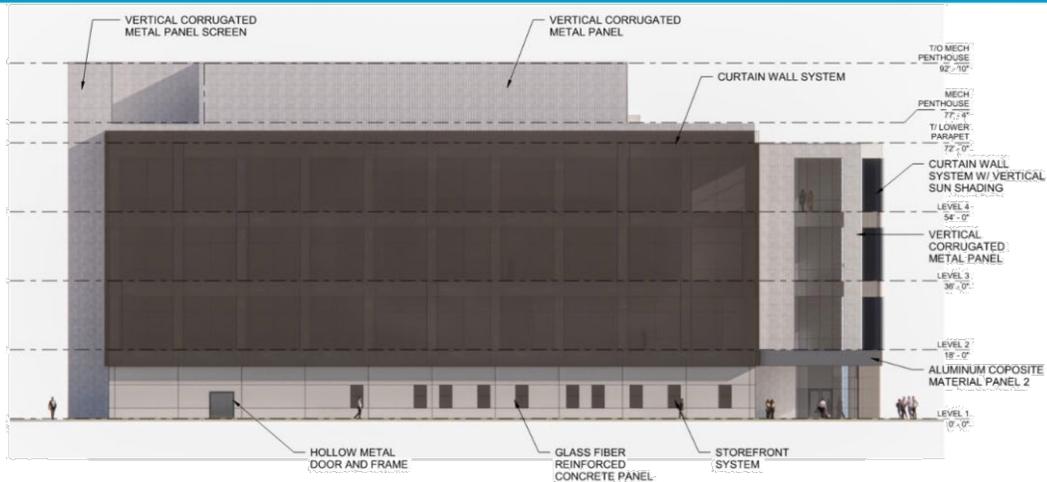
P250 – Main Design Elements



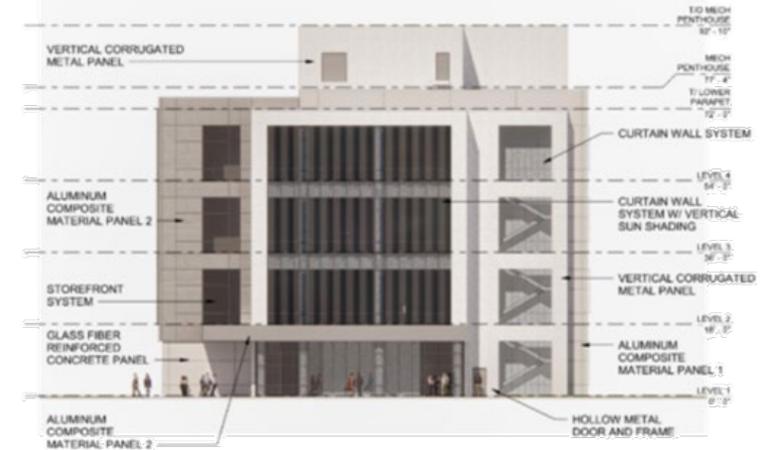
- **Description:** multi-story reinforced concrete structure with mechanical penthouse.
- **Approximate Area:** 89,000 SF
- **Estimated Height:** four 18'-0" stories (approx. 92'-10")
- **Exterior Materials:** primarily white single skin metal panel, light grey insulated metal panel, dark grey precast concrete, curtain wall and storefront window systems cold-formed steel walls with composite metal panel systems.
- **Exterior Envelope:** will be designed to optimize the building envelope and window requirements prescribed in ASHRAE 90.1-2019.
- **Mechanical Penthouse:** structural steel frame with a composite metal over lightweight concrete roof deck.
- **Architectural Landscape**
 - NRL's architectural landscape serves as a physical chronicle of the Naval Research Laboratory, marked by two significant eras: World War II with its utilitarian structures, and the Cold War with its formidable Brutalist buildings.
 - Modernization efforts that began in the 1960s introduced a new architectural chapter.
 - The building now under review continues this narrative, representing a thoughtful transition into the contemporary era. Its modern design is intentionally distinct, creating a respectful dialogue between past and present. Rather than mimicking historical styles, which would dilute the integrity of the existing buildings, the new facility establishes a clear and honest delineation of a new period of innovation.



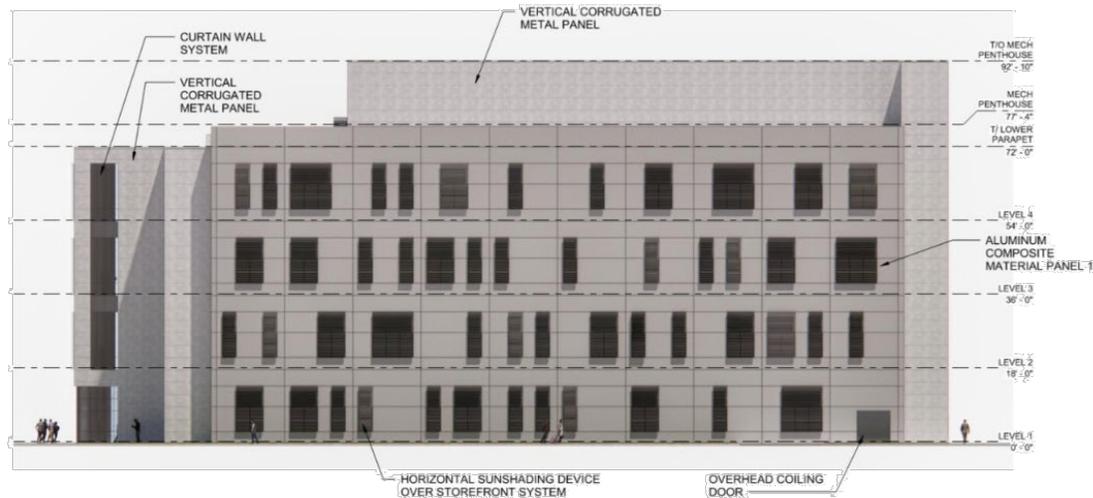
P250 – Elevations



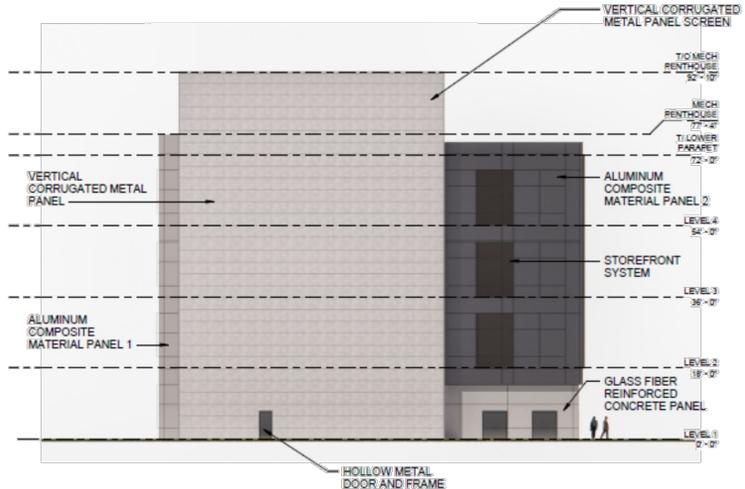
C1 NORTH ELEVATION
SCALE: 1/16" = 1'-0"



C4 WEST ELEVATION
SCALE: 1/16" = 1'-0"



A1 SOUTH ELEVATION
SCALE: 1/16" = 1'-0"



A4 EAST ELEVATION
SCALE: 1/16" = 1'-0"



P250 – Exterior Materials



Vertical Corrugated Metal Panel Screen



Aluminum Composite Material Panel 1



Aluminum Composite Material Panel 2



Glazing



Spandrel



Misc Metal



Storefront Doors



Glass Fiber Reinforced Concrete (GFRC) Panel



Modified Bitumen Roof System



Curtain Wall System



Storefront System



Vertical Fins

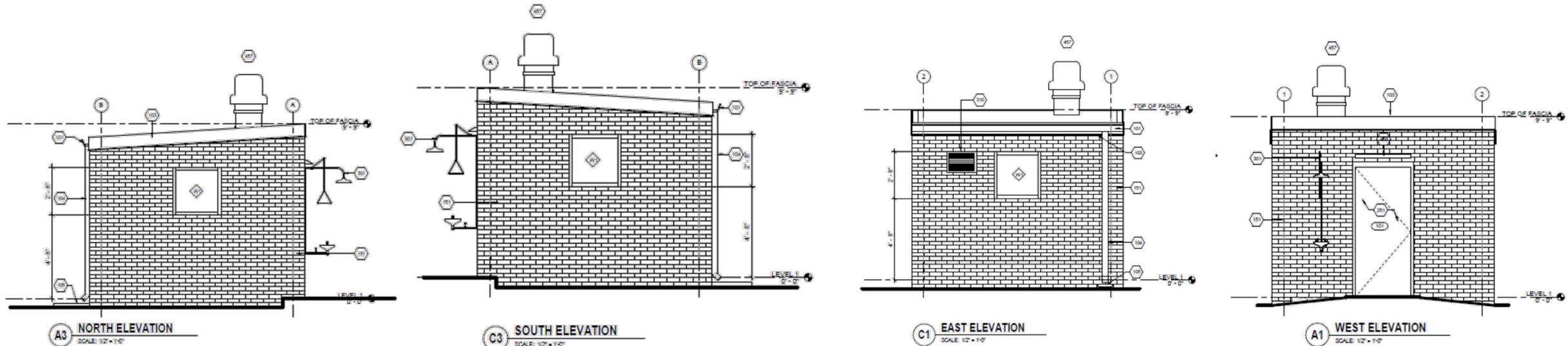


Horizontal Sunshades



Buildings 205 & 206 – Design & Elevations

- **Description:** two storage facilities
- **Approximate Area:** 144 SF each
- **Estimated Height:** single story, 9' – 9"
- **Exterior Materials:** metal roof deck over cold formed steel framing bearing on load bearing CMU walls with a brick veneer
- **Exterior Envelope:** will be designed to match existing design



Landscape – Architecture



- **Existing site:** parking lot bordered by building 208 to the North, Magazine Rd SW and building A59 to the south and Smith St SW to the west
- **Surrounding areas:** existing landscape around sidewalks and islands will be removed and relocated when possible
- **Lighting:** new lighting on the exterior of the building, as well as the new parking areas
- **Perimeter security:** fence will not be necessary as building will reside inside the NRL fence line
- **Signage:** will be added to the exterior of the building to designate the building number
- **Evaluation of existing trees for removal:** approximately 44 trees to be removed based on current site plan
- **Tree recompence:**
 - Will likely require planting on approved areas throughout NRL
 - Initial calculations require 133 tree to satisfy NCPC requirements
- **Regulation Compliance:** landscape requirements will be designed to meet UFC's.



Landscape – Proposed Palette

- **Planting selection:** will include a range of native species, in accordance with the NCPC Pollinators Best practices Guide where applicable
- **Tree loss mitigation requirement:** will be accomplished through replacement plantings throughout the NRL site utilizing existing tree survey data
- **Location:** will be determined in conjunction with site managers
- **Example of proposed plants**



Cockspur Hawthorn
Crataegus crus-galli 'Crusader'



Serviceberry
Amelanchier canadensis



Blackgum/Tupelo
Nyssa sylvatica 'Wildfire'



Overcup Oak
Quercus lyrata



Bald Cypress
Taxodium distichum 'Autumn Gold'



Bearberry 'Massachusetts'
Arctostaphylos uva-ursi
'Massachusetts'



Creek Sedge
Carex amphibola

Questions/Comments