

P250 Biomolecular Science & Synthetic Biology Laboratory

U.S. Naval Research Laboratory

Washington, D.C.

Preliminary Submission
National Capital Planning Commission

01 October 2026



Concept: Architectural Heritage & Campus Continuity

Traditional, Regional Architecture

Draw from the NRL's World War II utilitarian industrial and Cold War Brutalist architectural legacy.

Strengthen the Campus Fabric

Reinforce the established building pattern and character, pedestrian connectivity, landscape and riverfront.

Reference, Don't Replicate

Interpret historic proportions, materials, colors, scale, and architectural language through a refined expression.

Enhance Performance & Durability

Improve long-term site and building quality, resilience, and aesthetic value.

Establish a Framework for Future Growth

Create an architectural precedent for future projects as the campus evolves.



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EXISTING SITE
+ CONTEXT

EXISTING SITE + CONTEXT

Complex site context

Fronting the Potomac River, this narrow site is flanked by existing buildings, a historic greenspace and floodplain accommodation.



EXISTING SITE
+ CONTEXT

SITE ACCESS

BUILDING
MASSING

BUILDING
ELEVATIONS
+ MATERIALS

SITE +
LANDSCAPE

STORAGE
BUILDINGS

EXISTING SITE + CONTEXT

Diverse architectural history

Two eras:

WWII utilitarian industrial architecture characterized by highly functional, simple uniform facades and streetscapes. Early buildings of concrete and later renovated facades in insulated lightweight materials.

Cold War Brutalist buildings characterized by a modern heavy mass and volumetric aesthetics, also with no expressive architectural ornament.



Site views
Top - view to the site northwest
Bottom - view to the site northeast



Context images
Top - NRL mall
Bottom - NRL mall

EXISTING SITE + CONTEXT

Campus Connectivity

Reinforces the identity and traditional industrial character while creating a thoughtful connection between past and present.

EXISTING SITE
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1 2 3 4 5 6

SITE ACCESS

SITE ACCESS

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Restricted Site Access

NRL is a controlled-access facility. Prior arrangements must be made with an NRL point of contact before visiting the Laboratory.

All primary vehicle and pedestrian access to the campus is controlled through the NRL Main Gate.

P250 site access from the south will primarily come through the central mall loop via Cooley Avenue. Primary access from the north campus loop will be via Smith Street and Magazine Road SW.



1 2 3 4 5 6

BUILDING
MASSING

BUILDING MASSING

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Buildings in Laboratory Districts

Science buildings in laboratory districts often require large-scale spatial planning to accommodate highly specialized research. High floor-to-floor and area requirements are often the result.

Strategic Planning

Careful campus planning can mitigate the perceived scale of larger lab building projects. P250 is setback from primary roads and waterways with added pedestrian sidewalks and greenspace to reduce comparative scale to other adjacent buildings. Landscape buffers are also used to screen views of P250 from the historic green.

BUILDING MASSING

P250 Design Study Rendering - View to Northeast

EXISTING SITE
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BUILDING MASSING

P250 Design Study Rendering - North Facade

EXISTING SITE
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BUILDING MASSING

P250 Design Study Rendering - View to Northeast

EXISTING SITE
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BUILDING MASSING

P250 Design Study Rendering - Site Section (N/S)

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BUILDING MASSING

P250 Design Study Rendering - Entry Plaza

EXISTING SITE
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BUILDING MASSING

P250 Design Study Rendering - View to Southeast

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BUILDING MASSING

P250 Design Study Rendering - South Facade

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BUILDING MASSING

P250 Design Study Rendering - Details

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BUILDING MASSING

P250 Design Study Rendering - East Facade

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BUILDING
ELEVATIONS
+ MATERIALS

BUILDING ELEVATIONS + MATERIALS

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P250 West Elevation



P250 North Elevation



Metal roof
screen wall

Precast
concrete
panels

Glazing

Precast
concrete
panels

Metal and
glass canopy

BUILDING ELEVATIONS + MATERIALS

EXISTING SITE
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P250 East Elevation



P250 South Elevation



Metal roof
screen wall

Precast
concrete
panels

Glazing

Precast
concrete
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BUILDING ELEVATIONS + MATERIALS

Precast Concrete Panel Option
reference images: 36-38 Berkeley Square, London, Piercy and Company Architects

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BUILDING ELEVATIONS + MATERIALS

Precast Concrete Panel Option
reference images: 260 Kent Ave., New York, COOkFox Architects

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Facade Materials Comparison

Generalized early-design comparison — actual performance depends on detailing, climate, substrate, and installation quality.

Category	Precast Panel	Limestone	Cement Plaster
Design flexibility	High. Molded forms, textures, colors, and panel sizes.	Moderate. Natural variation; limited by quarry sizes and detailing.	High. Many colors, textures, and profiles.
Cost	Moderate. Efficient at scale; molds, engineering, and lifting add cost.	High. Material, fabrication, anchorage, and labor can be substantial.	Low–moderate. Economical and widely available.
Durability	High. Performs well when reinforced and properly detailed.	High. Long-lasting; sensitive to staining, cracking, and freeze-thaw.	Moderate. Can crack, absorb moisture, and need periodic recoating.
Ease of Installation	Moderate. Rapid field installation, but requires cranes and precision.	Low–moderate. Heavy and labor-intensive; skilled setting is needed.	High. Applied directly to prepared substrates with simple tools.
Strength-to-weight ratio	Moderate–high. Capacity can be optimized, but panels remain heavy.	Low–moderate. Dense and heavy relative to its structural contribution.	Moderate. Lightweight finish, but not a structural material.

Relative ratings: Low / Moderate / High. Cost rating reflects typical installed cost, not material cost alone.

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SITE +
LANDSCAPE

SITE + LANDSCAPE

Site and Landscape Plan - Overview

Waterfront & Pedestrian Connectivity

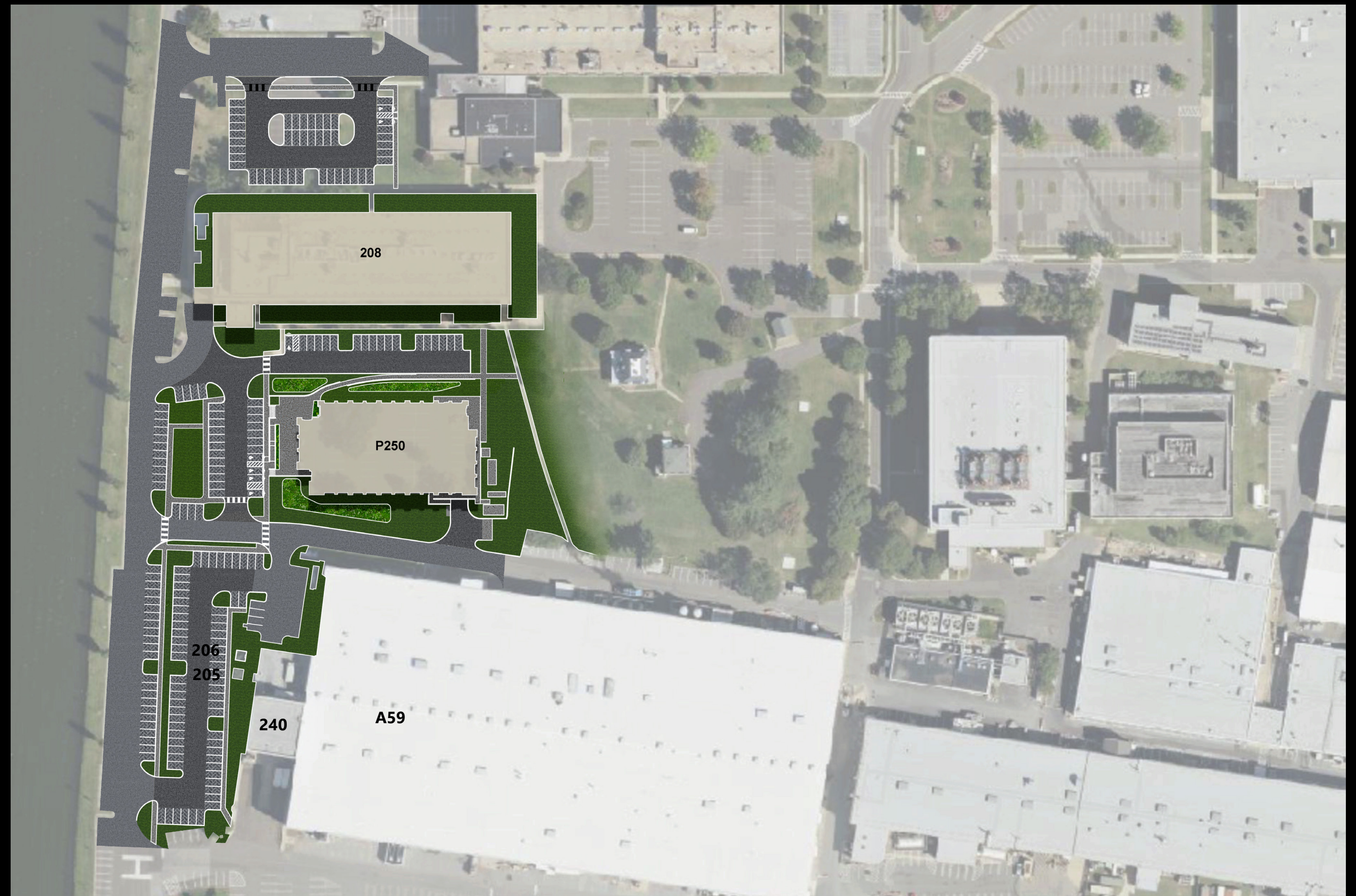
Extends the campus pedestrian network with safe, connected sidewalks and creates new opportunities to experience the Potomac and waterfront greenspace.

Tree Replacement Strategy

Preserves two larger existing trees while replacement and new trees will be placed throughout the site per NCPC replacement policy.

Historic Greenspace Screening

Enhances existing mature trees with layered, low landscape screening to frame the project and buffer views from the adjacent historic greenspace.



SITE + LANDSCAPE

Site and Landscape Plan

Waterfront & Pedestrian Connectivity

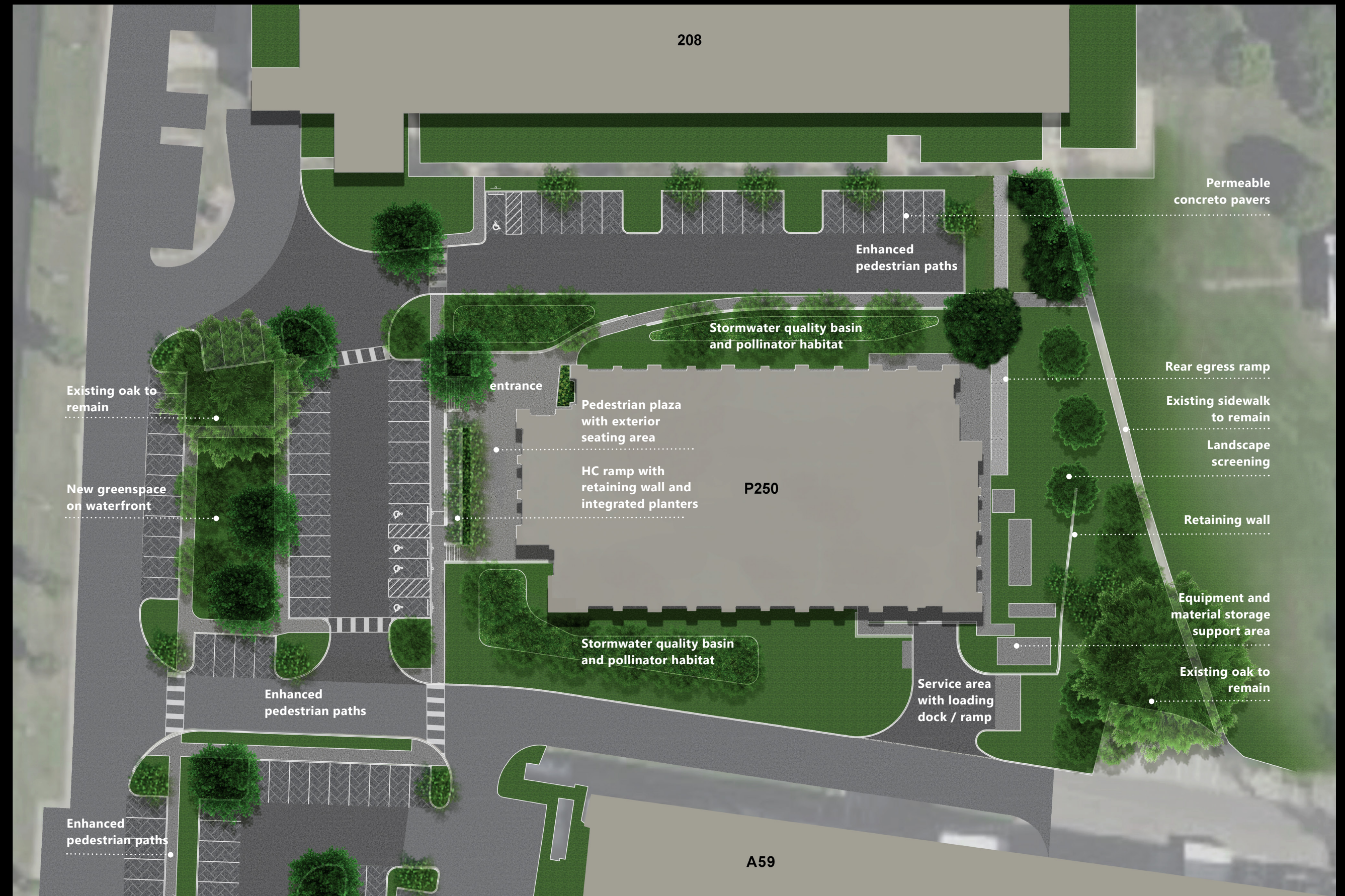
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SITE + LANDSCAPE

Hardscape / Landscape Palette

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Crusador Cockspur Hawthorn



Wildfire Tupelo



Sweetbay Magnolia



Bald Cypress



American Holly



Overcup Oak



Claudia Wannamaker Magnolia



Swamp White Oak



Lowfast Bearberry Cotoneaster



Creek Sedge



Common Milkweed



Swamp Milkweed



Butterfly Milkweed



New England Aster



Wingstem



Culver's Root



Purple Love Grass



Purple Coneflower



Hardscape
Top - Seatwall
Middle - Exposed aggregate
Bottom - Permeable pavers

SITE + LANDSCAPE

Entry Plaza

Employee Wellness

Integrates nature, restorative spaces, and opportunities for informal collaboration to support employee wellness, productivity, and workplace satisfaction.

Waterfront & Lawn Views

Responds to floodplain requirements by elevating the site and creating a new plaza with enhanced views toward the waterfront and new greenspace.

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STORAGE
BUILDINGS

STORAGE BUILDINGS

Location and Materials - Buildings 205, 206

EXISTING SITE
+ CONTEXT

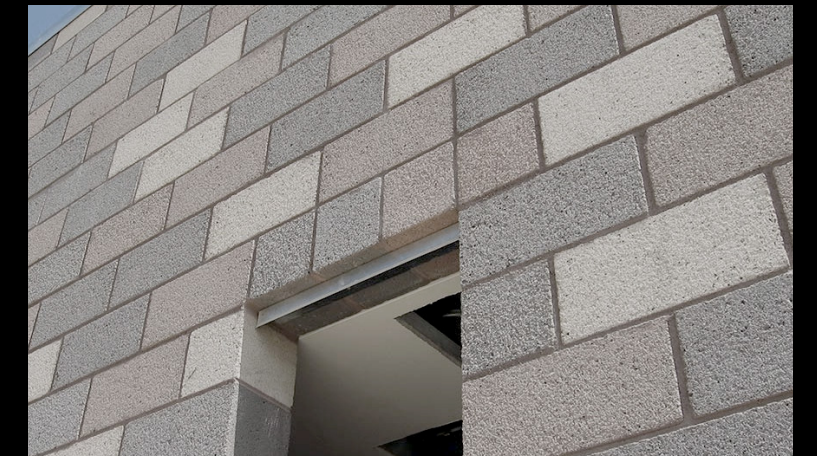
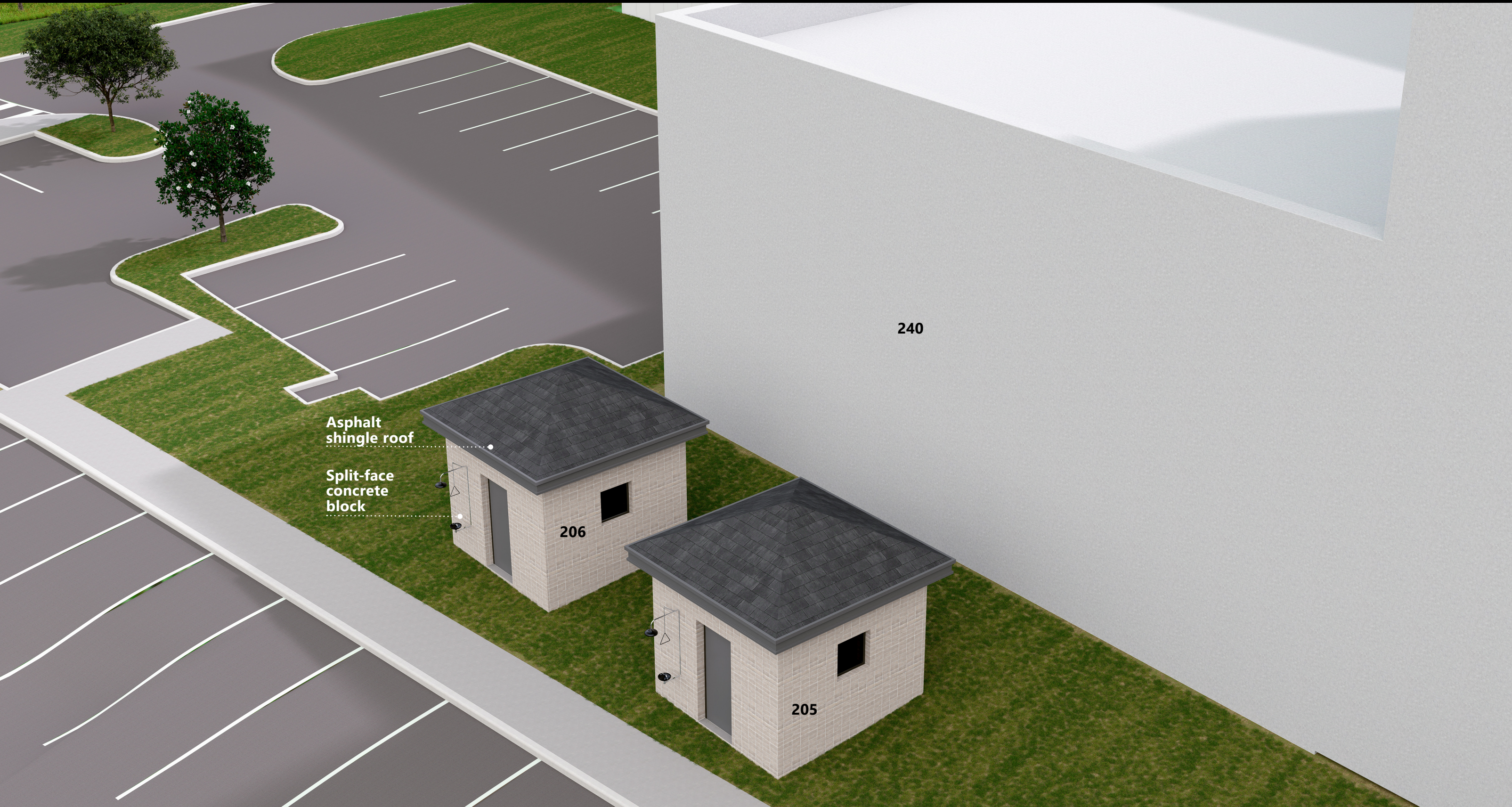
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Storage buildings

Top - Building 240 (adjacent existing facade)

Bottom: New storage building - split-face block - ref. image

