Landscape Performance:
Climate Adaptive Design Strategies for LUMBERYARD Contemporary Performing Arts
The LUMBERYARD site is positioned near to the confluence of Catskill Creek and the Hudson River. This area is recognized as a significant coastal fish and wildlife habitat. The projected sea level rise over the course of the century has the potential to drastically alter these ecosystems.
SITE DESIGN

Formal Design
The main axis of the design are defined by Water Street, the new Clarke Street extension, and the angles of the existing buildings.

Performance Plaza
The performance plaza occupies the space between Catskill Creek, Water Street, and the two western buildings. The space created blends interior and exterior space, representative of the dynamic relationship between structure and landscape throughout the design.

Clarke Street Extension
The Clarke Street extension redefines the spatial organization of the site's immediate context. Reconnecting Clark Street, which currently ends at Main Street, to Water Street, would create a direct connection between the LUMBERYARD plaza at Water Street and Main Street.

KEY
1. Eastern Building
2. Southwestern Building
3. Northwestern Building
4. Performance Plaza
5. Water Street
6. Clarke Street Extension
7. Mixed Use Building
8. Southern Dock
9. Northern Dock
10. Ferry Dock
11. Planted Retaining Wall
WATER LEVELS

Sea Level Rise
With the proposed grading of the site, lower portions of the site will be inundated by 2050, with the area of inundation nearly doubling by 2100. The design is able to accommodate these projected sea levels through flexible structures and carefully selected plant species. By regrading the site, biodiversity along the shoreline increases as riparian zones increase in area.

Flooding
The lower portion of the site is also subject to frequent flooding as it sits in the 10 year flood plane. The upper bank just west of Water Street is designed with a series of stairs, seating, and planters that stabilize the slope. At the top of this slope is a series of seat-walls and deployable flood walls that provide additional protection for the upper portion of the site.
PEDESTRIAN CIRCULATION

Two circulation spines overlap to form the main structure of the design. These systems resolve the slightly shifted angles of the buildings on the creek-side portion of the site. These integrated systems also provide universal access to the site through a series of stairs and ramps originating from what will be the most prominent intersections on the site at Water Street and the new Clark Street Extension.
PERFORMANCE CIRCULATION

The main performance plaza, sitting in the lowest portion of the site, is constructed on a modular deck. This anticipates higher water levels and increased frequency and severity of flood events, it also allows for dynamic stage setups during performances. The large floating dock, intended primarily for the docking of a large ferry, can also be used for special performances.

The performers rehearsal space in the southwestern building can also serve as a staging area for performances, with the northern face opening up directly to the dock and ramp leading to the performance areas. The performers enter the main performance area via a ramp cutting through a seating area.

Seating and viewing areas surround the main performance platform, with the upper deck on the northwester building providing a unique vantage point.
DRY FLOOD-PROOFING

Planting + Ramp

Deployable Flood Wall + Seating

Berming
WET FLOOD-PROOFING

Reinforcing

Opening

Elevating
**MODULAR PERFORMANCE PLATFORM**
Axonometric detail of modular deck construction.

**BIO ENGINEERED REVETMENT**
Live stakes planted in between precast concrete blocks or large rocks typical of a rock armor revetment.

**DEPLOYABLE FLOOD WALL**
The flood wall is activated through the hydraulic pressure created by rising flood waters.
ACTIVATE THE SITE

View looking north-east from the dock on the south-west corner of the site during a high tide in 2020. The many woody plants introduced along the shoreline are just starting to mature, creating habitat and providing stability to the shoreline and to the wetland beginning to establish in the lower portion of the site.
EMBRACE SEA LEVEL RISE

View looking north-east from the dock on the south-west corner of the site during a high tide in 2100. The modular deck shown is removable and adjustable depending on sea level rise and seasonal flood events. The deck is both open-air and covered, as it extends under the northwest building, and is suitable for dance performances, events, and community gatherings.
ANTICIPATE FLOODING

View looking south-west from the north-east corner of the performance plaza during a normal day (furthest right) and a 10 year flood (left) in 2100. Seawalls indicate the transition between the street and the performance space and provide support for the deployable flood walls.