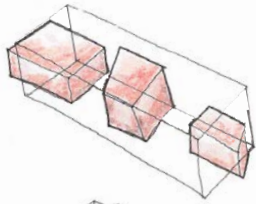




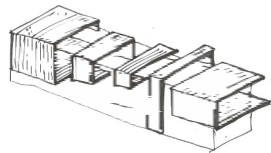
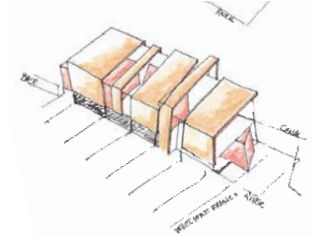
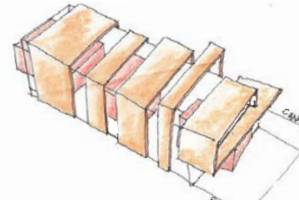
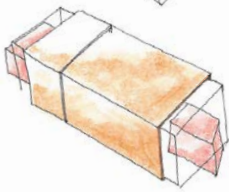
[Creativity Sustaining Community]

Georgetown, Washington D.C. | Graduate Submission | Studio Project

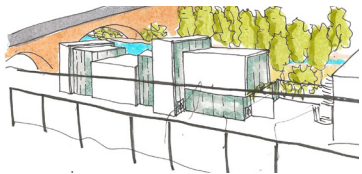
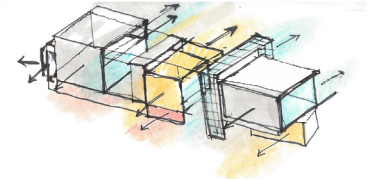
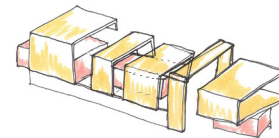
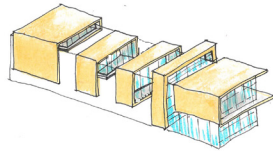
The project [Creativity Sustaining Community] focuses on meeting the program needs of Pigmental Studios with figural program solids surrounded by flexible work space. The solid program pieces acted as a core, wrapped in a parametric, interactive skin that brings life to the surrounding community, and to the Georgetown waterfront. A series of frames, mimicking the adjacent Whitehurst bridge, act as a shell that blocks views when needed and reaches to capture light and energy. These frames are regulated by the grid of the Whitehurst Bridge, while in between the frames, a glass curtain wall and green roof act as a datum to guide the frame's vertical and horizontal movement. Our site is located in Georgetown, Washington D.C. and is straddled by the Key Bridge to the West and the Whitehurst Bridge to the South. The steep topographic change allows for interesting design when handling the connection between M street, to the north, and the Potomac River, to the south. Pigmental Studios, an animation studio, worked to give guidance and advice as the client for a building that inspires artists and designers. Sustainable design fosters a healthier atmosphere for the artists and an interactive experience fosters a relationship between Pigmental and the community. This design creates a place for the community to come and experience the "story" of movie making. The design process of movie making is mirrored in this design process of architecture.



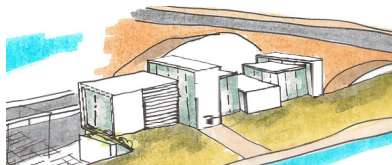
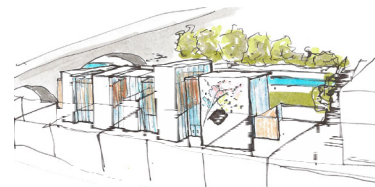
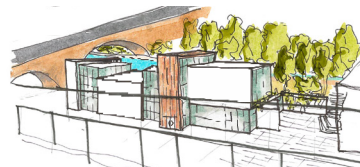
DESIGN CONCEPT



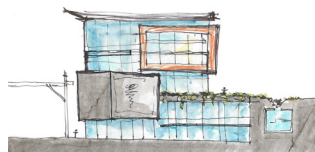
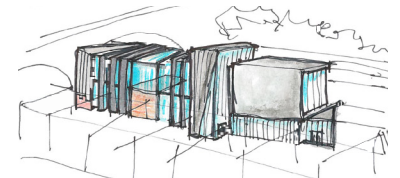
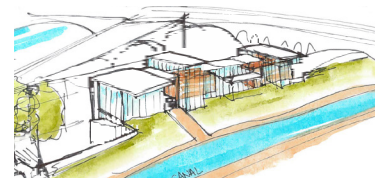
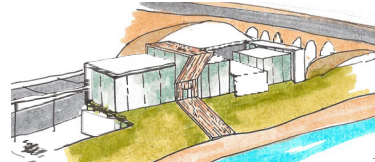
FRAMES



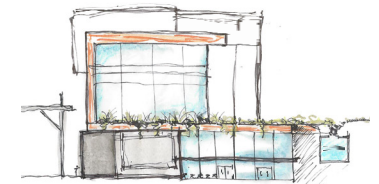
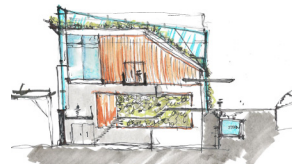
RIVER SIDE MASSING

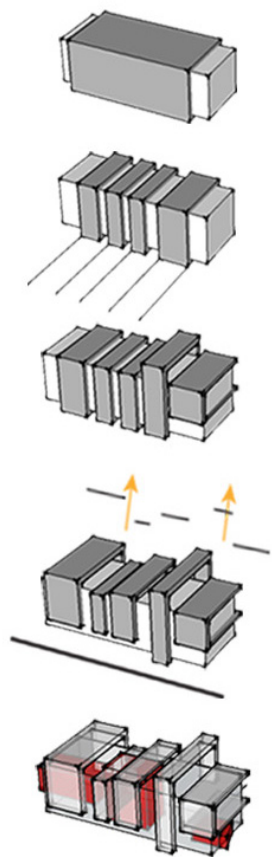


CANAL SIDE MASSING

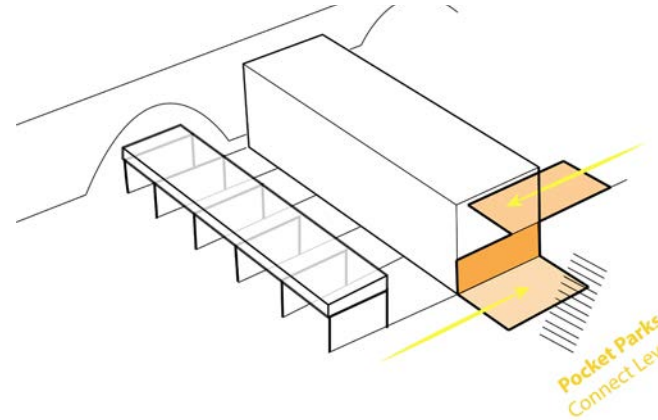
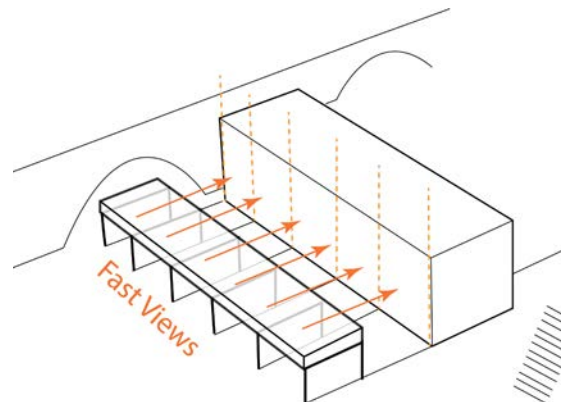


ELEVATION & SECTION STUDIES

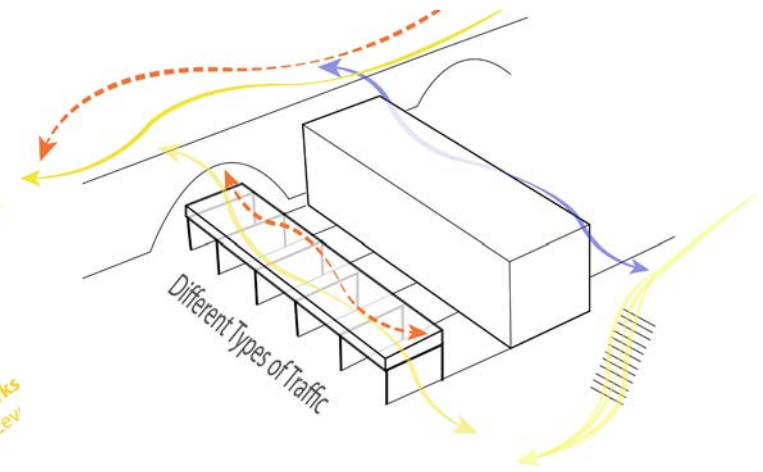
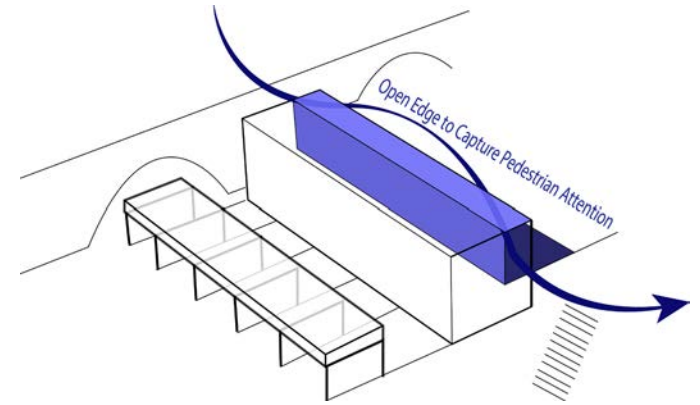




Design Concept
Figure vs Frame



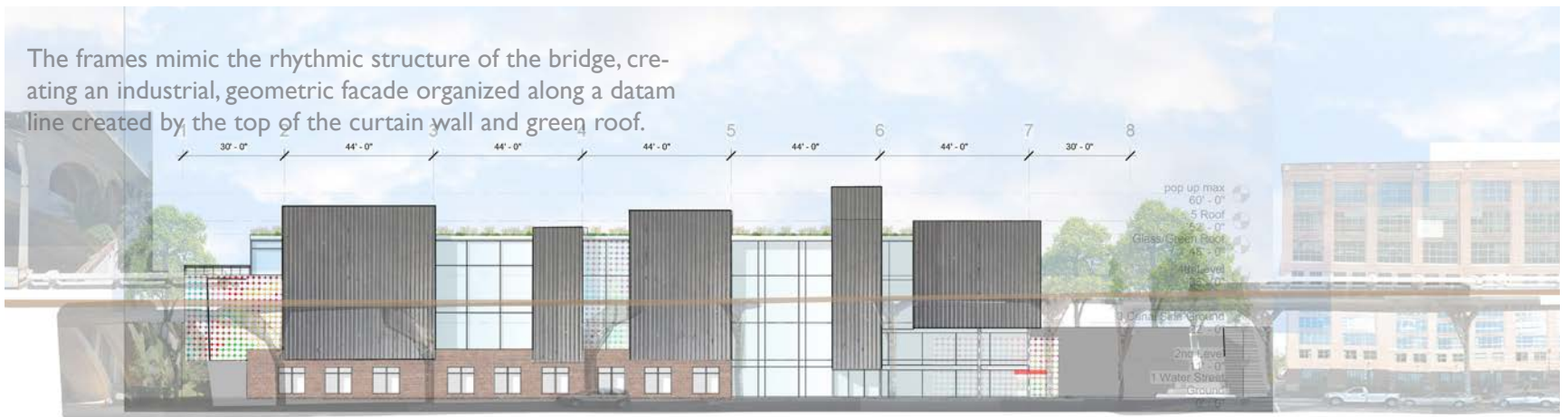
Development
Flows Translating onto Facade



The facade was designed for the fast views of the cars on the highway, giving a rhythmic, filtered view to the colorful figures through the glass.



The frames mimic the rhythmic structure of the bridge, creating an industrial, geometric facade organized along a datum line created by the top of the curtain wall and green roof.



South | Whitehurst Elevation

The building sits at the end of the **Georgetown waterfront**, opening up to M street to the north to **attract pedestrians**, and glowing as a jewel along the waterfront.



The frames **lift** on the canal side, allowing **pedestrian views** inside to see people at work.



North | Canal Elevation

Sitting adjacent to the Key Bridge, this building is the last building on the Georgetown Potomac Waterfront. On the north side of the site runs the C&O canal, and past that a steep slope up to the busy, retail focused M street. A small, pedestrian foot bridge crossing the canal allows heavy foot traffic down past the East side of the building. This dual approach comes together in an interactive pocket park, which brings relief to the hard waterfront edge and a sense of place to the highly trafficked area. On the canal side, the building gives an interesting layered effect to those who run and bike past on the heavily trafficked canal walkway. A priority for the client was to engage the community with this building, and for the community to experience their passion and art. The park holds outdoor screening for film festivals and an interactive motion sensor wall that engages the public. People can enter the triple story main lobby where there is a cafe and a layered effect of people working at their different crafts. As a community member you can see anything from artists drawing, to people acting on the motion capture stage, to people recording in the soundstage, to people learning in a hands on classroom.



Active Pocket Park



TERRACED STORMWATER MANAGEMENT

MITIGATE OVERFLOW FROM CANAL, USING LARGER SHRUBBERY TO STABILIZE THE STEEP SLOPE.



GREEN ROOF

NATIVE GRASSES USED, SUCH AS LITTLE BLUE STEM, TO REDUCE HEAT ISLAND EFFECT. GRASSES ARE TALL ENOUGH TO BE SEEN BY OCCUPANTS WITHIN BUILDING THROUGH CLEAR STORY WINDOWS, CREATING A HEALTHIER ENVIRONMENT.



BUILDING-INTEGRATED PHOTOVOLTAICS

INTEGRATED INTO THE METAL PANELS THE SOLAR PANELS ACT TO OFFSET THE ENERGY COSTS OF THE BUILDING COMPLETELY.



INTERIOR ADJUSTABLE LOUVERS

LOUVERS ON THE INTERIOR CURTAIN WALL, ADJUSTABLE BY WORKERS IN OFFICE, SHADING FROM HARSH SOUTHERN LIGHT.



INTERACTIVE BACKLIT PANELING

THESE PANELS SERVE TO REPRESENT THE COMPANY THAT ANIMATES HERE. THESE LIGHT WEIGHT PANELS ARE BACKLIT AND INTERACTIVE, USING SENSORS TO LIGHT UP BY MOTION IN CERTAIN HIGH-TRAFFIC AREAS.



OPERABLE WINDOWS

OPERABLE WINDOWS ACT AS A PASSIVE COOLING DEVICE TO ALLOW FOR CROSS VENTILATION.



PERMEABLE PAVERS

ALL PAVERS USED ON SITE ARE PERMEABLE TO TAKE AWAY FROM HARD SURFACE RUN OFF.



BIKE RACKS

MANY BIKE RACKS AND INDOOR BIKE STORAGE ENCOURAGES EMPLOYEES TO TRAVEL TO WORK BY PUBLIC TRANSIT OR BIKE.

VENTILATION SHAFT

ACTS AS A DOUBLE FACADE, OR VENTILATION SHAFT, PUSHING THE HOT AIR UP AND OUT, BUT CIRCULATING AIR THROUGH THE BUILDING THROUGH OPERABLE WINDOWS, AS WELL AS ACTING AS AN INSULATOR.

OPERABLE WINDOWS

ALLOWS SUMMER WIND TO FLOW THROUGH THE BUILDING BY USING OPERABLE, AUTOMATIC WINDOWS ON EACH SIDE OF THE BUILDING.

POCKET PARK

WATER STREET CREATES A HARD EDGE ALONG THE POTOMAC WATER FRONT. THIS POCKET PARK CREATES A MOMENT ALONG THE WALK TO ENABLE INTERACTIVE PUBLIC SPACE, INCLUDING AN INTERACTIVE LIGHT WALL AND PUBLIC SCREENINGS OF PIGMENTAL'S RELEASED MOVIES.

Performance Diagram

Material Palette

facades



HISTORICAL



Georgetown Brick
Salvaged brick used as a base for the building, giving the building a character that gestures towards historical Georgetown

CONTEMPORARY



Metal Panels
Long strips of metal act as cladding for the shell of the building, conveying a modern and contemporary style

INNOVATIVE



Triple Glazed Curtain Wall
Three layers of glass allows high level of solar heat gain and thermal insulation properties. Large exterior mullions help to block sun.

pavement



VEGETATION



Little Blue Stem
One of the native grasses used on the green roof, enjoys full sun and grows to be 3' tall, easily seen through the clear story windows.



Maidenhair Fern
Native fern which thrives in shade and moist conditions, used in the terraced storm water management system, shaded by the Key Bridge.



Red Chokeberry
A native shrub to stabilize the steep slopes that prone to flooding. Thrives in shade or sun and attracts birds and manamals, creating a healthy ecosystem.

interactive wall



Pigmental Studios

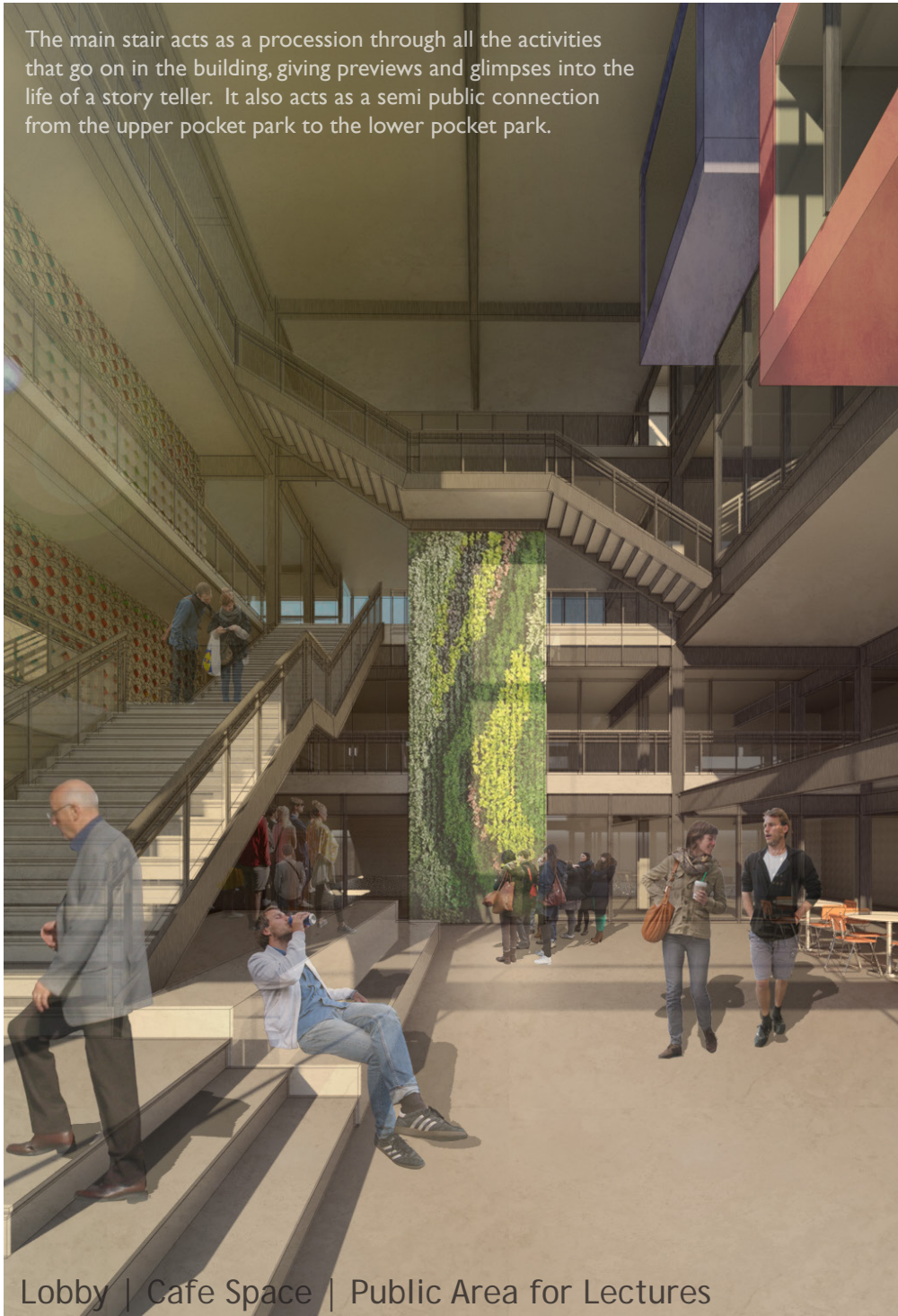
The interactive walls were inspired by the animation studio company the building was designed for. Their slogan is "Unlock the Colors of Your Imagination".

time

East Elevation | Pocket Park



The main stair acts as a procession through all the activities that go on in the building, giving previews and glimpses into the life of a story teller. It also acts as a semi public connection from the upper pocket park to the lower pocket park.



Lobby | Cafe Space | Public Area for Lectures



Third Floor Plan



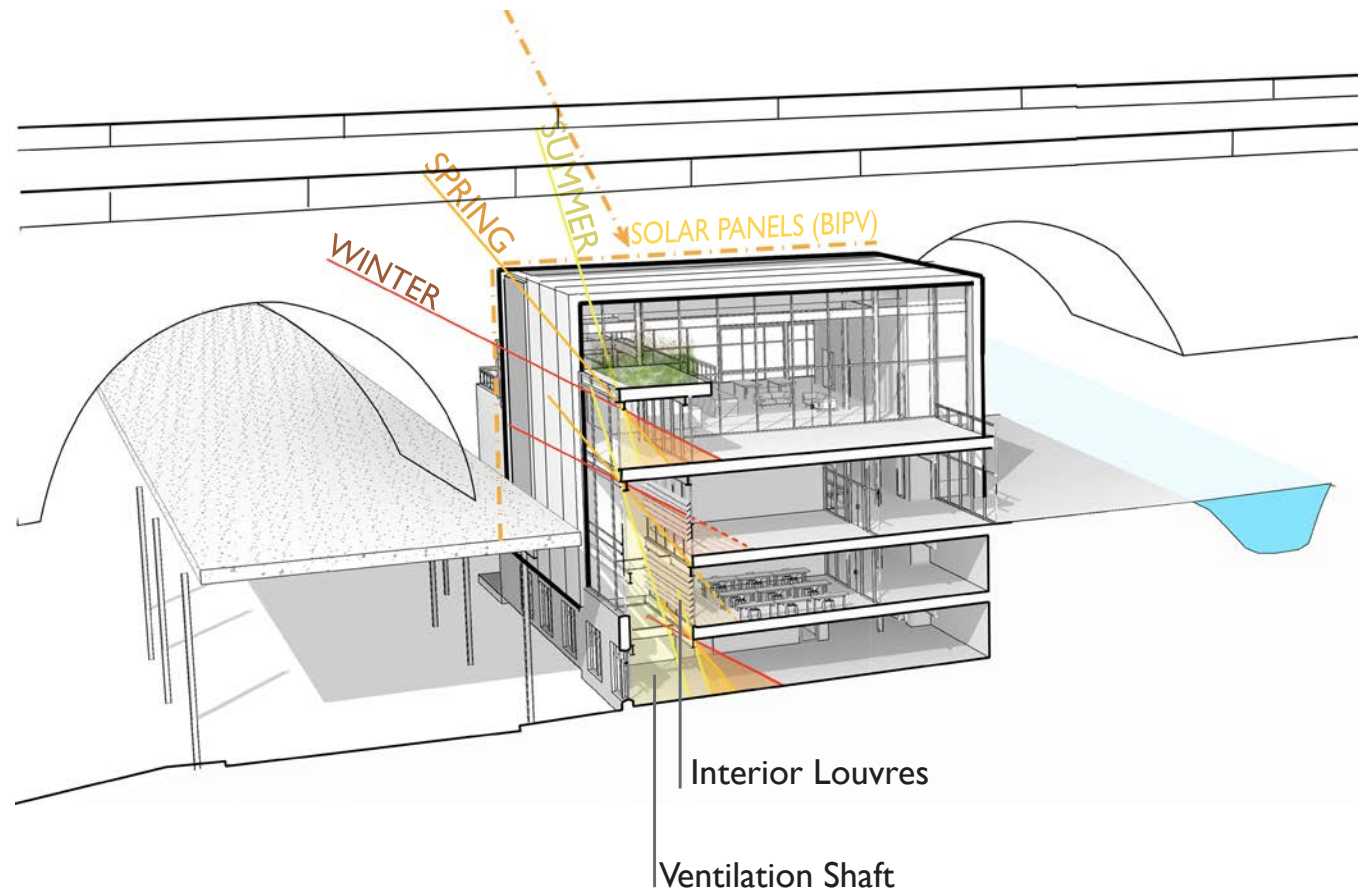
Second Floor Plan

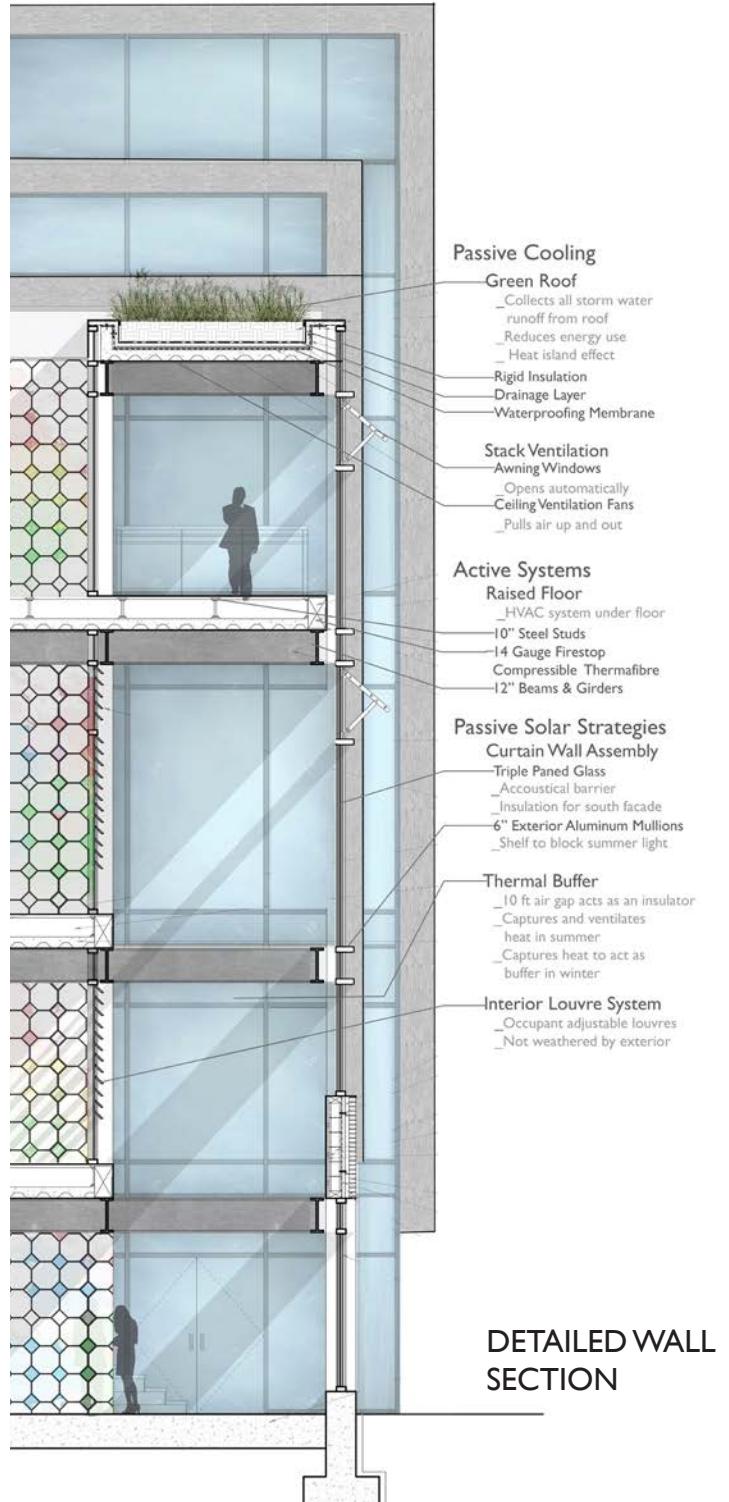


First Floor Plan

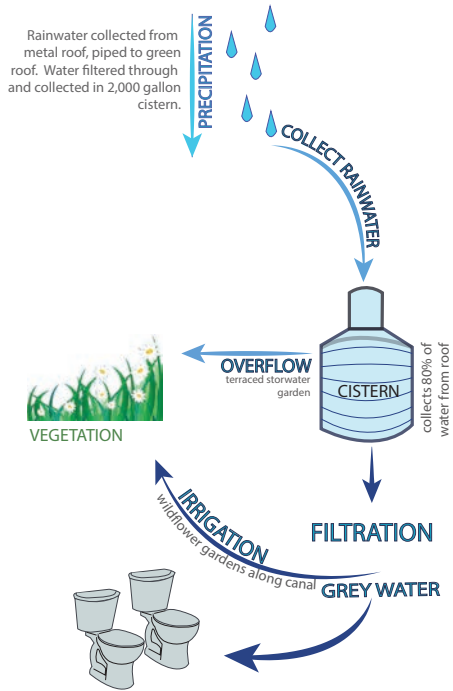
4,200 sqft
Building Integrated Photovoltaics
needed to offset the energy costs of the
building

65%
Building daylit during oc-
cupied hours

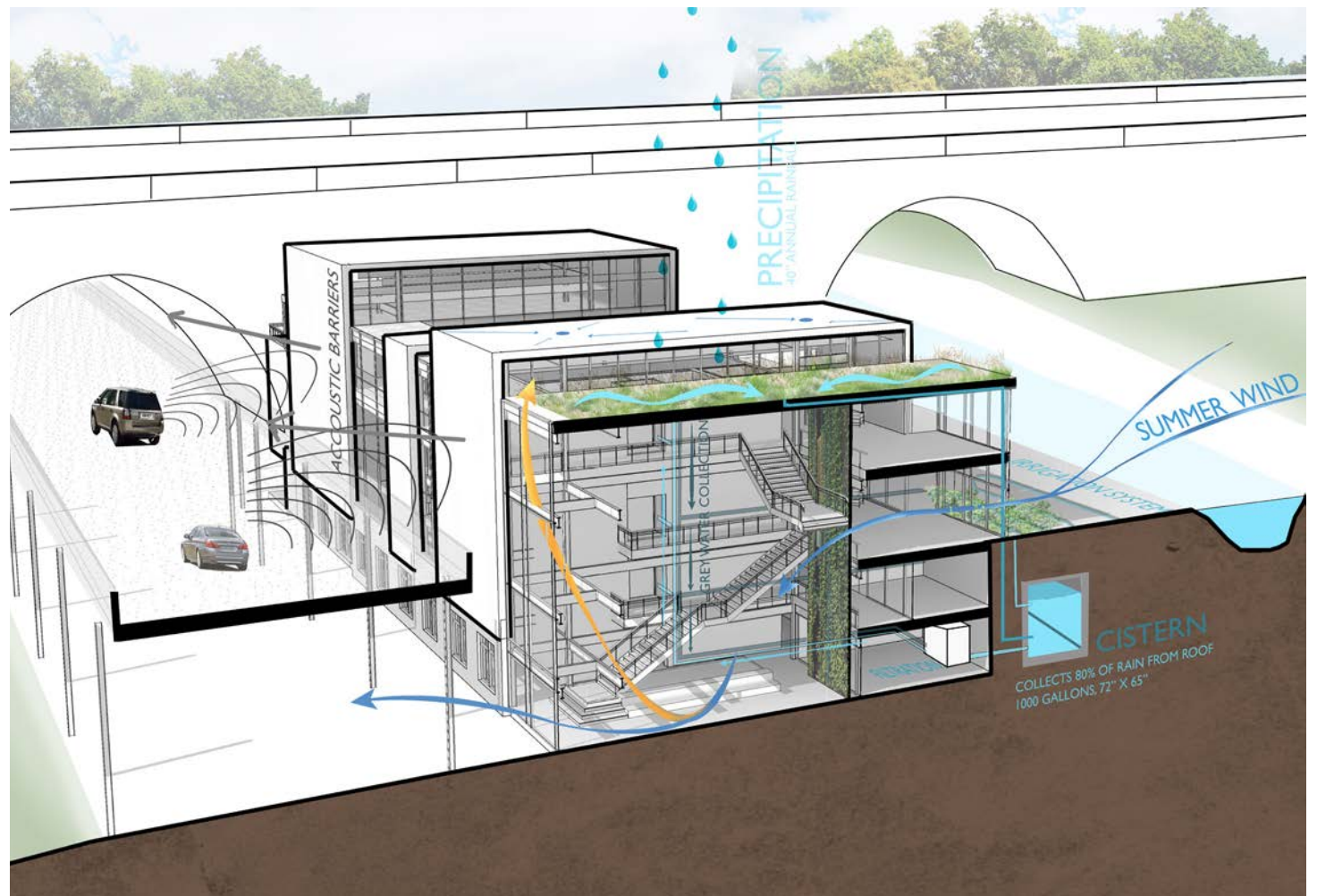


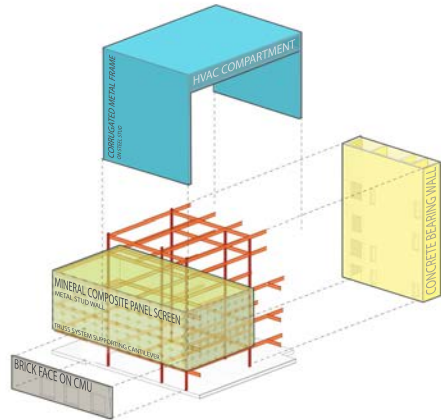


180% Stormwater Managed Onsite



346,739
Gallons Harvested Annually

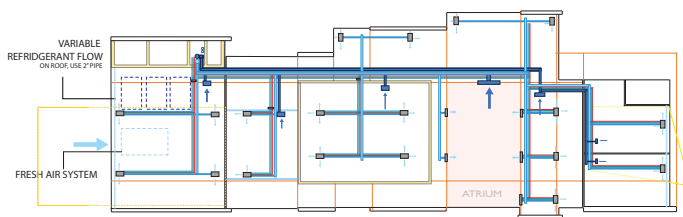




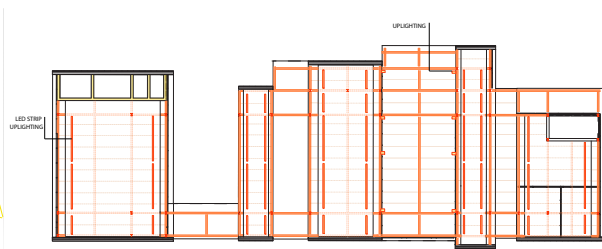
Under each frame, the drop gypsum board ceiling is pulled back two feet on each side of the frame, revealing the steel structure behind it. LED strip lighting then sits on top of that drop ceiling, up lighting the room and creating a “halo” effect.

The HVAC and air ventilation is a unique and modern design, using a variable refrigerant system. It uses small pipes to carry hot and cold water, which quickly activates the temperature settings in any given zone, allowing for custom settings in all rooms, quickly creating a comfortable atmosphere.

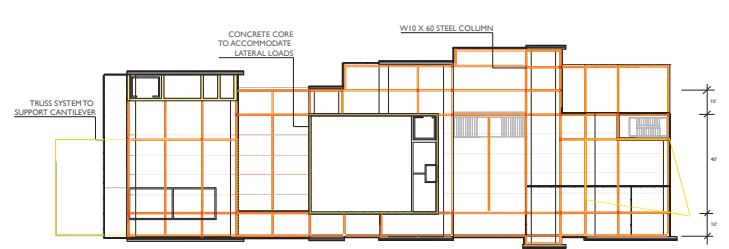
The small units can be placed under the wrapping shell along with the fresh air system, using the shell to completely incorporate it's systems.



HVAC PLANS



RCP | DROP CEILING



STRUCTURAL PLANS