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SUPER SOAK

The Coast Guard's big sponge

PERK PARK

Thomas Balsley in
downtown Cleveland

WETLANDS WHERE?

Success in unlikely places

PLANT PIRATES

Stamping out illegal ornamentals

THE WETTER, THE BETTER



**ON THE NEW U.S. COAST GUARD HEADQUARTERS
GROUNDS, ANDROPOGON AND HOK TURN
STORMWATER INTO LIFEBLOOD.**

BY BRADFORD MCKEE / PHOTOGRAPHY BY JUDY DAVIS/HOACHLANDER DAVIS PHOTOGRAPHY



Once you're on the grounds, enlisted or escorted under high security, there is almost too much happening to absorb. The Coast Guard has landed a prized piece of the old St. Elizabeths Hospital campus in the southeast part of the city, a river and a world away from downtown Washington. The campus is near the Anacostia neighborhood in Ward 8, one of the city's poorer wards. St. Eliza-

beths was a very large mental hospital complex, enclosed like a self-sufficient village (it once had greenhouses, a theater, and a piggery), and its relationship to the neighborhoods around it has long been one of emotional distance, though now in its new life, not to mention the era of unending threat, it might as well be a walled city. The Coast Guard project, which cost \$646 million, is the first big stage of a consolidation of the Department of Homeland Security (under which the Coast Guard operates) that is planned for 276 acres on the west side of the hospital campus. The east side, with 183



THE NEW NATIONAL HEADQUARTERS of the U.S. Coast Guard in Washington, D.C., has one of the most beautiful and progressive landscapes the federal government has ever commissioned. Up close, this office complex feels like the Grand Canyon of its genre. Nearly 12 acres of green roofs stretch out in several directions atop the 1.2-million-square-foot compound (it is said to be the country's third largest green roof), and 13 acres of brushy, wet native gardens cloister among the dark glass walls of its buildings, which fit together like a woodblock puzzle. All of it cascades several stories down a series of terraces from the top of a ridge that overlooks the Anacostia River and has amazing views of the city. When I visited in early June, the place had been well soaked by a spring of steady rains. The green roofs had coats of yellow blush where some of the *Sedum* was in bloom, and the trees in the gardens, adolescent but large, seemed to surge with energy. The only problem was the little heartache of knowing that, because it's a military reservation, it will always be off-limits to most people. In any case, it's the closest a government worker will get to Babylon.

ABOVE
The half-acre main entrance plaza is paved in variegated and banded granite.

OPPOSITE
At the third level down, Piedmont gardens are planted thickly on grade.

PREVIOUS SPREAD
Twelve acres of green roofs and 13 acres of courtyards and gardens overlook the mouth of the Anacostia River.

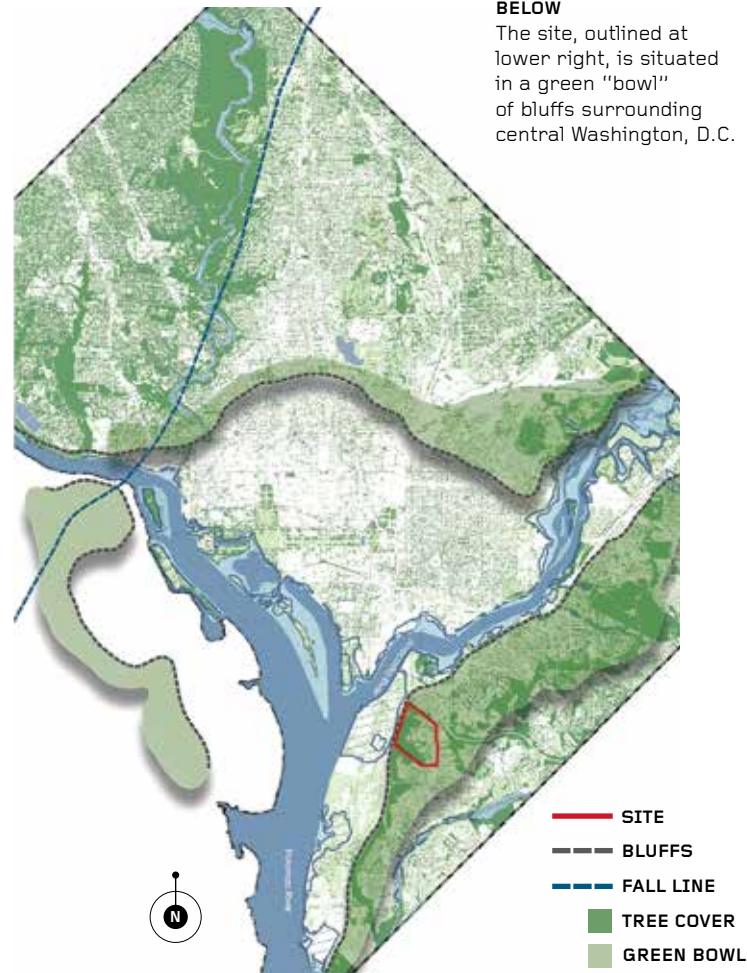
STORMWATER MANAGEMENT PLAN WITH BMP LOCATIONS



acres, now belongs to the District of Columbia and holds a new hospital opened in 2010 by the city's Department of Mental Health. In time, the west campus, with a trove of historic architecture, will hold 3 million square feet of offices for 10,000 workers; 52 historic structures will be reused. At the moment the campus feels a little haunted, its vacant brick buildings secluded in a setting that is essentially an arboretum. (A superintendent of the grounds at the turn of the 20th century, Alvah Godding, collected trees from around the world and planted them at St. Elizabeths, and the streets of the campus are named for trees.)

The St. Elizabeths site is a National Historic Landmark, having opened in 1855 as the first federally operated psychiatric hospital during a wave of progress around the medical treatment of the insane. The U.S. General Services Administration (GSA) took control of the west campus in 2004, and in 2007, Homeland Security announced its intention to house several dozen of its subagencies on the site. The expected cost is now \$2.4 billion, according to a February report by the *Federal Times*.

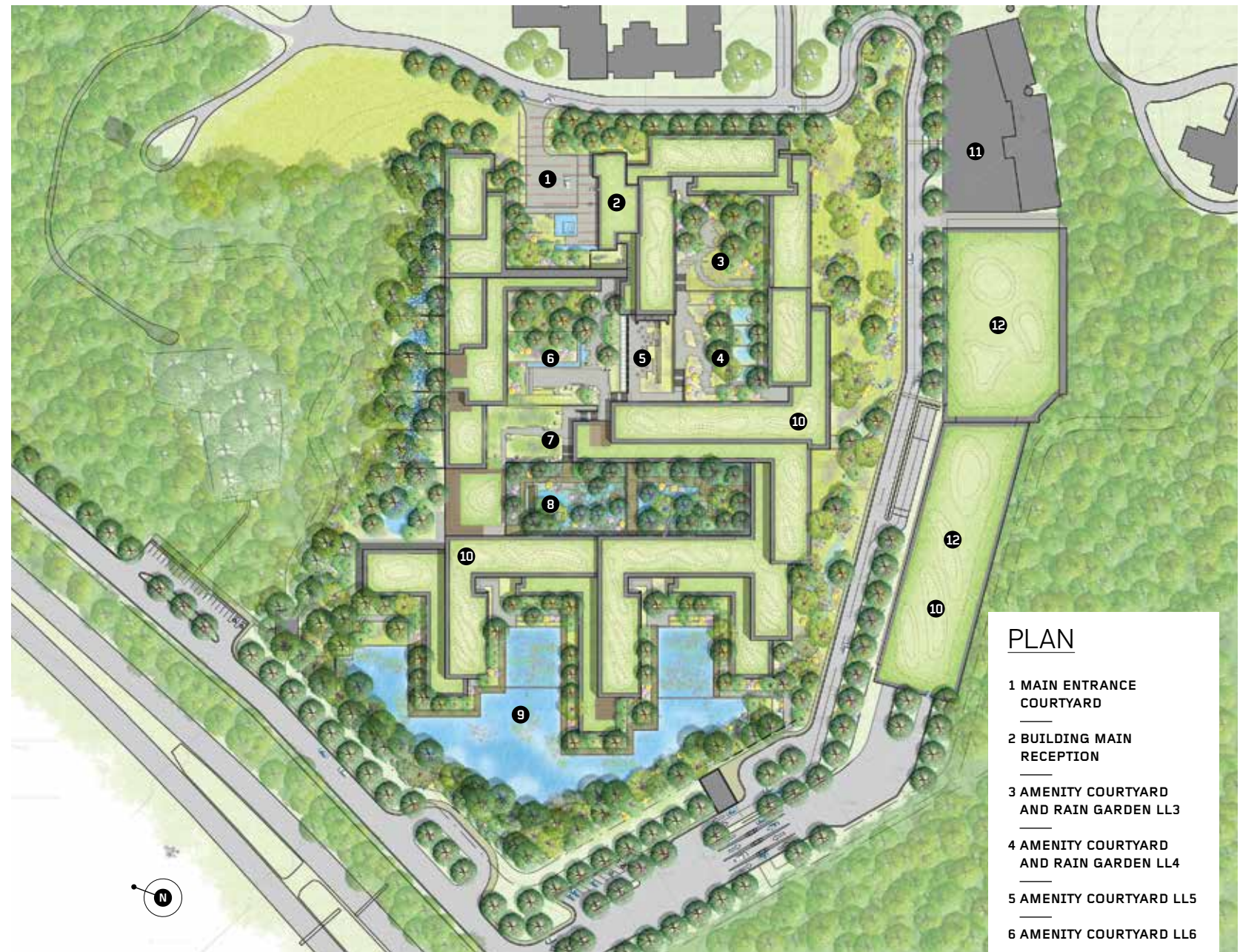
For some time before the Coast Guard headquarters opened in 2013, it was easy to spot from a distance by the cluster of tower cranes on the horizon. It is the government's biggest construction project since the Pentagon, and the GSA's largest ever, involving dozens of players. Smith-Group completed a west campus master plan for



ground and through the Coast Guard site.

BELOW
The site, outlined at lower right, is situated in a green "bowl" of bluffs surrounding central Washington, D.C.

ANDROPOGON



PLAN

- 1 MAIN ENTRANCE COURTYARD
- 2 BUILDING MAIN RECEPTION
- 3 AMENITY COURTYARD AND RAIN GARDEN LL3
- 4 AMENITY COURTYARD AND RAIN GARDEN LL4
- 5 AMENITY COURTYARD LL5
- 6 AMENITY COURTYARD LL6
- 7 AMENITY COURTYARD LL7
- 8 RAIN GARDEN LL8
- 9 RETENTION POND LL9
- 10 GREEN ROOF
- 11 CENTRAL UTILITY PLANT
- 12 PARKING GARAGE

ANDROPOGON/HOK

GSA in 2006, and the agency awarded the building design to Ralph Johnson of Perkins+Will, with Thomas Amoroso, ASLA, and his firm, Andropogon, on Johnson's team to design the landscape. The GSA structured the project for design/build "bridging" delivery, which is hardly the stuff of designers' fantasies. Before design development had finished, Perkins+Will and Andropogon were turning over portions of the project to WDG Architecture (for the building) and to HOK (for the landscape) to detail and build. I visited the project with Amoroso and his counterpart at HOK, Brandon Hartz, ASLA, who was the lead landscape architect during construc-

tion. If Amoroso and Hartz don't quite finish each other's thoughts in conversation, they apparently did so in composing this project. One is as familiar with the landscape details as the other, and the quality of construction is quite high.

The huge changes slated for St. Elizabeths created concerns, to say the least, about the effects on its historic grounds and buildings. A much larger landscape figured, too, in the green bowl of forested bluffs that encircle Washington; the preservation of views and horizons was important to the design review agencies the project had to please. The U.S. Commission of Fine Arts, the



National Capital Planning Commission, and the National Park Service, in particular, did not wish to see a high-profile structure from a distance jutting hard out of an otherwise soft silhouette of trees. The building doesn't surpass the height of the five-story Center Building (Homeland Security's future headquarters) on the plateau of the campus, one of its oldest buildings, which was designed by the fourth architect of the U.S. Capitol, Thomas U. Walter. Perkins+Will and Andropogon lowered the Coast Guard building into the 120-foot-deep slope and built outward from it, which meant clear-cutting a large skirt of forest that swept down toward the river. As forests go, this one was not a great loss, as it was low grade, had been cut numerous times over the years, and had poor soils, erosion problems, and contamination by fly ash, among other things. Some of the soils were removed, others capped.

The design is made to minimize the scarring of the land over time. The master plan's projection of the building's form showed a tighter footprint than was ultimately built, with courtyards between building volumes that were seen as too deep and dark, "like a waffle," as Tom Mozina, the senior project designer at Perkins+Will, described it. The building had to spread out, Amoroso said. "We expanded the footprint and pulled the

ABOVE
An interior view of the Piedmont garden. Trees include American hornbeam, eastern redbud, white fringe tree, sweet bay, and sassafras.

OPPOSITE
Black-pebbled pools encircle drifts of switchgrass, sage, sensitive fern, and woolly blue violet.



courtyards open to have half of them over grade and half over structure." This way, the spaces between buildings could be more expansive and larger trees could be planted on grade, which would more quickly form a canopy and soften the project's impact on the green bowl.

Patricia O'Donnell, FASLA, began studying the cultural landscape of the St. Elizabeths west campus for GSA in 2004 with her firm, Heritage Landscapes, LLC, in Charlotte, Vermont. At a point early on, O'Donnell said, the question became, "Are we going to have to de-list this place?" as a National Historic Landmark, an elite designa-

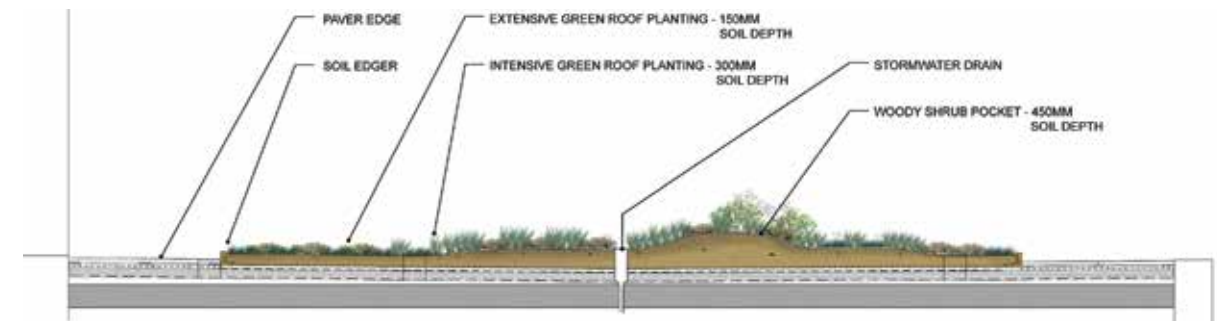
tion among properties that are listed on the National Register of Historic Places. Looking ahead at the Coast Guard's plans, she said, it seemed as though "the integrity would be compromised with the significant change required to fulfill the program for the new tenant." The prospect of utility lines alone was bracing. O'Donnell says her view is that history and contemporary use can be compatible. She worked with Andropogon to develop a landscape integration plan around the perimeter of the building and the 31-acre Coast Guard site to "do a good detailing of what were character-defining elements that can't be retained exactly" as they were found. "It's a balancing

TAYLOR LEDNUM/GSA, TOP LEFT

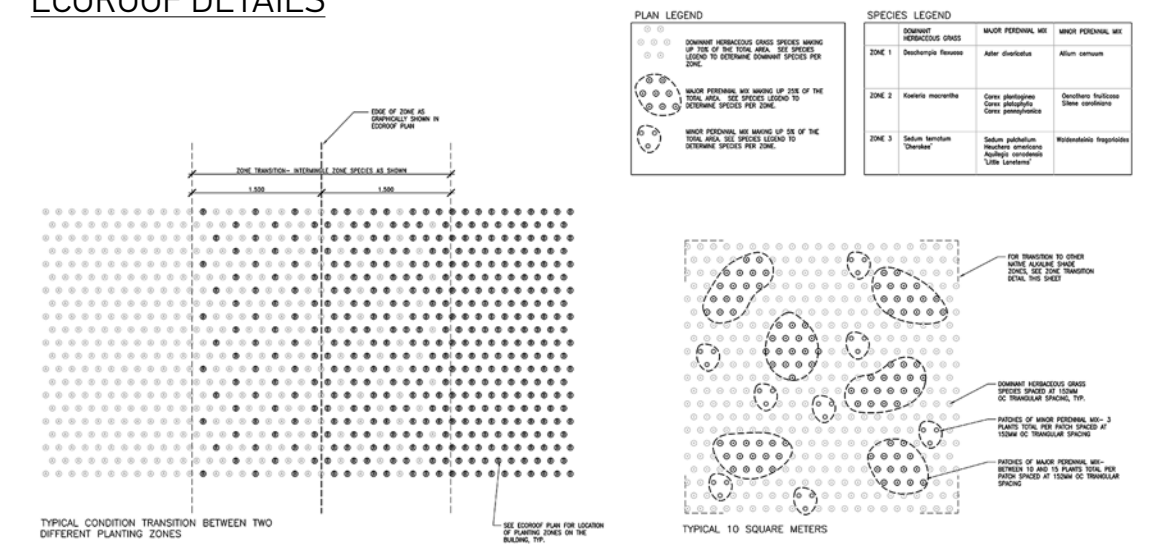
JAMES STEINKAMP PHOTOGRAPHY



TYPICAL ECOROOF CROSS SECTION (NON-COURTYARD)



ECOROOF DETAILS



PLAN LEGEND		SPECIES LEGEND			
○	Dominant herbaceous grass species making up 70% of the total area. See species legend to determine dominant species per zone.	Dominant herbaceous grasses		MAJOR PERENNIAL MIX	MINOR PERENNIAL MIX
○	MAJOR PERENNIAL MIX MAKING UP 25% OF THE TOTAL AREA. SEE SPECIES LEGEND TO DETERMINE SPECIES PER ZONE.	ZONE 1	<i>Desmodium illinoense</i>	<i>Aster divaricatus</i>	<i>Alum. canum</i>
○	MINOR PERENNIAL MIX MAKING UP 5% OF THE TOTAL AREA. SEE SPECIES LEGEND TO DETERMINE SPECIES PER ZONE.	ZONE 2	<i>Hieracium maculatum</i>	<i>Carex plantaginifolia</i>	<i>Desmodium illinoense</i> <i>Shim. canadense</i>
○		ZONE 3	<i>Sedum ternatum</i> <i>Thalictrum</i>	<i>Salix pyramidalis</i> <i>Rhus typhina</i> <i>Aquilegia canadensis</i> <i>Urtica dioica</i>	<i>Wormwood virginiana</i>

thing,” she said, but “we wanted our green bowl, to drape the slopes as the project grew in.”

Johnson, whose firm won the project in a GSA Design Excellence selection, said, “It was clearly going to be about forming spaces as opposed to plunking an object on the hill.”

The bulk of the building was being pushed down below the top of the slope, but about 25 feet below its high point was a perpendicular pressure in the form of an aquifer that seeped out in several places, including ravines on either side of the site. The deep construction on the slope was going to cut well below the groundwater elevation, and a standard dewatering process would not work. “We would bleed that perched aquifer over several years and have existing vegetation deteriorate,” Amoroso said, and of course the regulatory

groundwork for the project involved an extensive tree analysis by Bartlett Tree Experts and an elaborate protection plan, so that idea would never fly.

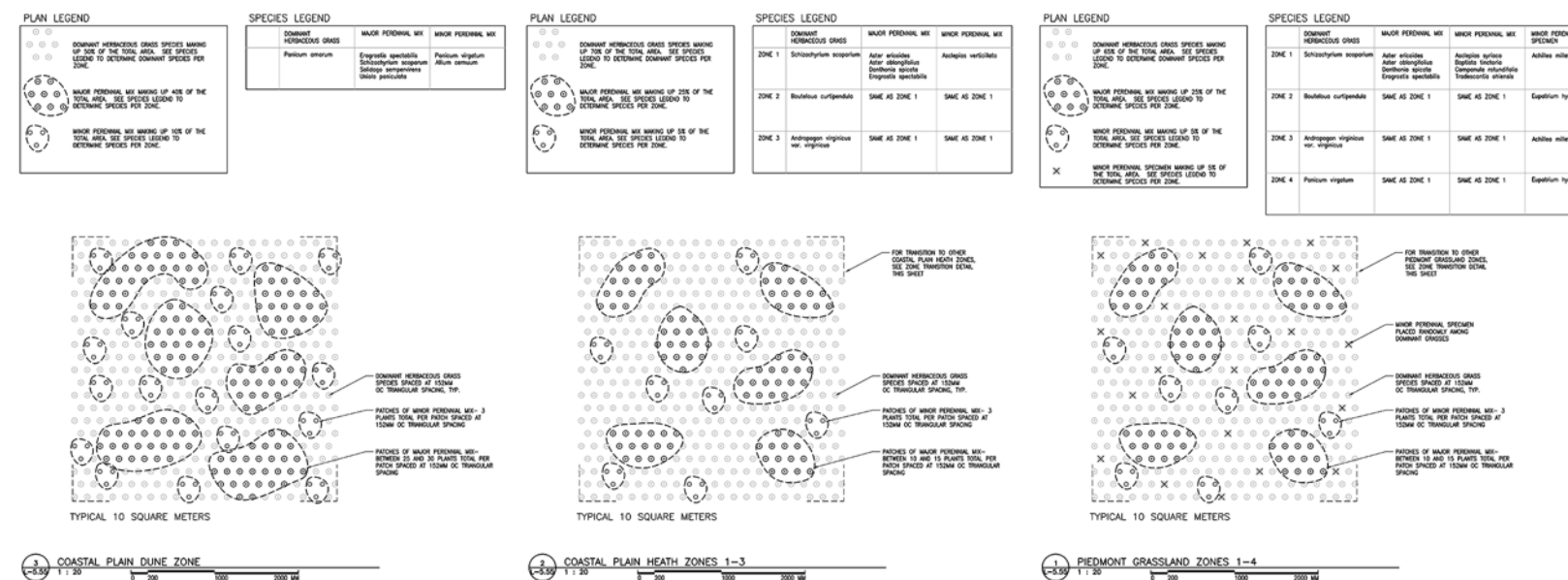
As there was no avoiding the presence of this water, it became the project’s ecological engine to help create sustainable infrastructure, lush wildlife habitat, and a rich experience for people. Between managing groundwater and meeting local rules for stormwater handling, the whole site basically became a gigantic weir to slow the flow of water from the top of its plateau down to the level of the river, as presumably the forest once did, though this project is estimated to reduce previous stormwater runoff on the site by 47 percent. At the bottom, a 2.4-acre retention pond captures much of what doesn’t soak into the roofs and rain gardens above it and creates a broad mirror across the base of the building. ↘

ABOVE
Green roofs step down and mimic the progression of mid-Atlantic ecosystems (including shade species).

OPPOSITE TOP
Roofs hold both extensive plantings of *Sedum* and intensive plantings of native shrubs, grasses, and forbs.

OPPOSITE BOTTOM
Planting patterns take after those of spontaneous plant communities.

ANDROPOGON/HOK, OPPOSITE TOP; HOK, OPPOSITE BOTTOM





PLANT LIST

AT GRADE

CANOPY TREES

Acer rubrum (Red maple)
Aesculus hippocastanum (Horse chestnut)
Betula nigra (River birch)
Carya ovata (Shagbark hickory)
Fagus grandifolia (American beech)
Fraxinus pennsylvanica (Green ash)
Liquidambar styraciflua (Sweet gum)
Liriodendron tulipifera (Tulip tree)
Nyssa sylvatica (Black gum)
Platanus occidentalis (American sycamore)
Quercus alba (White oak)
Quercus coccinea (Scarlet oak)
Quercus falcata (Southern red oak)
Quercus lyrata (Overcup oak)
Quercus palustris (Pin oak)
Quercus phellos (Willow oak)

CONIFERS

Chamaecyparis thyoides (Atlantic white cedar)
Juniperus virginiana (Eastern red cedar)
Metasequoia glyptostroboides (Dawn redwood)
Pinus rigida (Pitch pine)
Pinus virginiana (Virginia pine)
Taxodium distichum (Bald cypress)

UNDERSTORY TREES

Carpinus caroliniana (American hornbeam)
Cercis canadensis (Eastern redbud)
Chionanthus virginicus (White fringe tree)
Cornus florida (Flowering dogwood)
Halesia carolina (Carolina silver bell)
Hamamelis virginiana (Common witch hazel)
Ilex opaca (American holly)
Magnolia stellata (Star magnolia)
Magnolia virginiana (Sweet bay magnolia)
Ostrya virginiana (American hop hornbeam)
Oxydendrum arboreum (Sourwood)
Prunus virginiana (Chokecherry)
Sassafras albidum (Sassafras)

SHRUBS

Alnus serrulata (Hazel alder)
Amelanchier arborea (Downy serviceberry)
Amelanchier canadensis (Canadian serviceberry)
Arctostaphylos uva-ursi (Kinnikinnick)
Baccharis halimifolia (Eastern baccharis)
Callicarpa americana (American beautyberry)
Ceanothus americanus (New Jersey tea)
Cephalanthus occidentalis (Common buttonbush)
Clethra alnifolia (Coastal sweet pepperbush)
Cornus amomum (Silky dogwood)
Fothergilla gardenii (Dwarf witch alder)
Hamamelis vernalis (Ozark witch hazel)

Hydrangea quercifolia (Oakleaf hydrangea)
Ilex decidua (Possum haw)
Ilex glabra (Inkberry holly)
Ilex verticillata (Common winterberry)
Itea virginica 'Henry's Garnet'
 (Henry's Garnet Virginia sweet spire)
Kalmia latifolia (Mountain laurel)
Leucothoe axillaris (Coastal doghobble)
Lindera benzoin (Northern spicebush)
Physocarpus opulifolius 'Monlo' Diabolo
 (Diabolo common ninebark)
Pieris floribunda (Mountain fetterbush)
Rhododendron calendulaceum (Flame azalea)
Rhododendron maximum (Rosebay rhododendron)
Rhododendron periclymenoides (Pink azalea)
Rhododendron viscosum (Swamp azalea)
Rhus aromatica 'Gro-Low' (Gro-Low fragrant sumac)
Rhus glabra (Smooth sumac)
Rosa carolina (Carolina rose)
Vaccinium angustifolium (Lowbush blueberry)
Vaccinium corymbosum (Highbush blueberry)
Viburnum dentatum (Arrowwood viburnum)
Viburnum prunifolium (Black haw viburnum)

HERBACEOUS

Allium cernuum (Nodding onion)
Andropogon virginicus (Broom sedge bluestem)
Carex muskingumensis (Muskingum sedge)
Carex pennsylvanica (Pennsylvania sedge)
Chasmanthium latifolium (Northern sea oats)
Chelone glabra (White turtlehead)
Coreopsis verticillata (Whorled tickseed)
Dennstaedtia punctilobula (Eastern hay-scented fern)
Deschampsia flexuosa (Wavy hairgrass)
Echinacea purpurea (Eastern purple coneflower)
Elymus hystrix (Eastern bottlebrush grass)
Eurybia divaricata 'Eastern Star'
 (Eastern Star white wood aster)
Eutrochium purpureum (Sweet-scented joe-pye weed)
Geum triflorum (Prairie smoke)
Helianthus salicifolius 'Low Down'
 (Low Down willow leaf sunflower)
Iris versicolor (Blue flag)
Liatris spicata (Dense blazing star)
Mateuccia struthiopteris (Ostrich fern)
Mertensia virginica (Virginia bluebells)
Muhlenbergia capillaris (Hairawn muhly)
Nelumbo lutea (American lotus) Water
Nymphaea odorata (American white water lily)
Onoclea sensibilis (Sensitive fern)
Panicum virgatum 'Shenandoah'
 (Shenandoah switchgrass)
Peltandra virginica (Green arrow arum)
Phemeranthus calycinus (Large flower flameflower)

Phlox divaricata (Wild blue phlox)
Phlox subulata (Moss phlox)
Polystichum acrostichoides (Christmas fern)
Pontederia cordata (Pickerelweed)
Rudbeckia hirta (Black-eyed Susan)
Rudbeckia laciniata (Cut-leaved coneflower)
Sagittaria lancifolia (Bull tongue arrowhead)
Salvia lyrata 'Purple Knockout'
 (Purple Knockout lyre-leaved sage)
Saururus cernuus (Lizard's tail)
Schizachyrium scoparium (Little bluestem)
Schoenoplectus pungens (Common three-square)
Silene caroliniana (Wild pink)
Solidago sphacelata 'Golden Fleece'
 (Golden Fleece autumn goldenrod)
Sporobolus heterolepis (Prairie dropseed)
Symphotrichum ericoides (Heath aster)
Viola sororia (Common blue violet)

GREEN ROOF

SHRUBS

Arctostaphylos uva-ursi (Kinnikinnick)
Aronia melanocarpa (Black chokeberry)
Gaylussacia baccata (Black huckleberry)
Ilex glabra (Inkberry holly)
Juniperus horizontalis 'Bar Harbor'
 (Bar Harbor creeping juniper)
Prunus maritima (Beach plum)
Quercus ilicifolia (Bear oak)
Rhus aromatica 'Gro-Low' (Gro-Low fragrant sumac)
Rhus copallina 'Creel's Quintet'
 (Creel's Quintet shining sumac)
Rosa carolina (Carolina rose)
Vaccinium angustifolium (Lowbush blueberry)

GROUND COVERS

Allium cernuum (Nodding onion)
Andropogon virginicus var. *virginicus*
 (Broom sedge bluestem)
Asclepias verticillata (Whorled milkweed)
Bouteloua dactyloides (Buffalo grass)
Eragrostis spectabilis (Purple lovegrass)
Panicum amarum (Bitter panic grass)
Panicum virgatum 'Heavy Metal'
 (Heavy Metal switchgrass)
Schizachyrium scoparium 'The Blues'
 (The Blues little bluestem)
Sedum pulchellum (Widow's cross)
Sedum ternatum (Woodland stoncrop)
Symphotrichum ericoides (Heath aster)
Symphotrichum oblongifolium (Aromatic aster)

HERBACEOUS

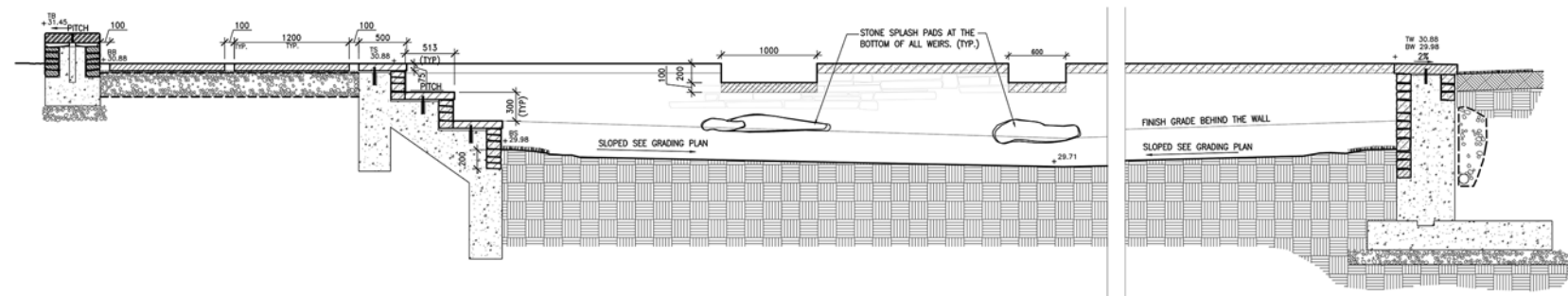
Achillea millefolium (Common yarrow)
Allium cernuum (Nodding onion)
Andropogon virginicus var. *virginicus*
 (Broom sedge bluestem)
Aquilegia canadensis 'Little Lanterns'
 (Little Lanterns Canadian columbine)
Asclepias syriaca (Common milkweed)
Asclepias tuberosa (Butterfly milkweed)
Baptisia tinctoria (Yellow false indigo)
Bouteloua curtipendula (Side oats grama)
Campanula rotundifolia (Harebell)
Carex pennsylvanica (Pennsylvania sedge)
Carex plantaginifolia (Seersucker sedge)
Carex platyphylla (Silver sedge)
Danthonia spicata (Poverty oat grass)
Deschampsia flexuosa (Wavy hairgrass)
Eragrostis spectabilis (Purple lovegrass)
Eupatorium hyssopifolium (Hyssopleaf thoroughwort)
Eurybia divaricata (White wood aster)
Heuchera americana (American alumroot)
Koeleria macrantha (Prairie June grass)
Oenothera fruticosa (Narrowleaf evening primrose)
Panicum amarum 'Dewey Blue'
 (Dewey Blue bitter panic grass)
Panicum virgatum (Switchgrass)
Penstemon digitalis (Foxglove beardtongue)
Phemeranthus calycinus (Large flower flameflower)
Schizachyrium scoparium (Little bluestem)
Silene caroliniana (Wild pink)
Solidago sempervirens (Seaside goldenrod)
Sporobolus heterolepis (Prairie dropseed)
Symphotrichum ericoides 'Snow Flurry'
 (Snow Flurry heath aster)
Symphotrichum oblongifolium 'Outdoor Skies'
 (October Skies aromatic aster)
Tradescantia ohioensis (Bluejacket)
Viola paniculata (Sea oats)
Waldsteinia fragarioides
 (Appalachian barren strawberry)

ORNAMENTAL SEDUM MAT

Sedum album (White stoncrop)
Sedum diffusum (Diffuse stoncrop)
Sedum kamschatcicum (Orange stoncrop)
Sedum kamschatcicum var. *floriferum* 'Weihenstephaner Gold'
 (Weihenstephaner Gold orange stoncrop)
Sedum pulchellum (Widow's cross)
Sedum reflexum (Jenny's stoncrop)
Sedum sexangulare (Tasteless stoncrop)
Sedum spurium 'Fuldaglut' (Fuldaglut stoncrop)
Sedum spurium 'John Creech' (John Creech stoncrop)
Sedum ternatum (Woodland stoncrop)



RAIN GARDEN SECTION (LL4)



and the species more in love with moisture. A deep, formal rain garden four levels down takes roof water and sends it through a series of crenelated stone walls set within basins of Pennsylvania sedge for cleaning and infiltration. Otherwise, it's dry and opens even more seating for a gathering. One courtyard over, a constant flow of fountains fills the air with a pleasant zing. On these levels, there are intriguing rises and falls. The portions over grade allow for building up the soil volume to make brows and bowls with tall grass carpets and what will surely be deep shade before long. In a rare flourish, there are Cor-Ten steel silhouettes of mountain ridges in this area placed as a reminder

of the Piedmont. They are not necessary; the landforms and planting do the trick.

There are about 300 canopy trees, plus around 600 conifers and understory trees combined; 500,000 native plug plants, and 186,000 square feet of mixed *Sedum* mats among the meadow plantings on the roofs. Profusion alone is never enough; the proof is in the arrangements, the logic, and the letting go. You can't help but think about the horsepower this place is going to require to keep up over the years. For the GSA, though, it is a magnum opus, so it is in the spotlight. "We're looking at these sites more critically to justify expenditures,"

↳ which floats out over it. From the retention pond, water is pumped to the top of the site to irrigate courtyards and roofs when needed. This water loop is said to save more than 520,000 gallons of potable water a year as it courses through the site.

From top to bottom, the open spaces follow a regional ecological narrative that would seem precious if it weren't so well executed. The roofs and courtyards trace the gradient of the mid-Atlantic landscape from the highlands of the Blue Ridge to the tidal marshes of the Coastal Plain. The highest garden, a ceremonial entrance court, is the hardest and driest, with a flat, bright granite plaza of about a half acre, scholar's rocks, and black granite pools outside the broad, minimalist proscenium of the lobby. The plants are rugged—tickseed, wild onion, moss phlox.

As you move down the levels, or stop to sit, as there is a fair amount of seating where you'd want it, the gardens become softer and thicker—the northern Piedmont, the Atlantic Coastal Plain—

ABOVE AND BELOW
An ipe boardwalk lines the perimeter of the Coastal Plain garden, where pitch pine, bald cypress, and white cedar grow amid gravel swales and

vernal pools that flood and evaporate.
OPPOSITE
A rain garden four levels down can fill with excess roof water.

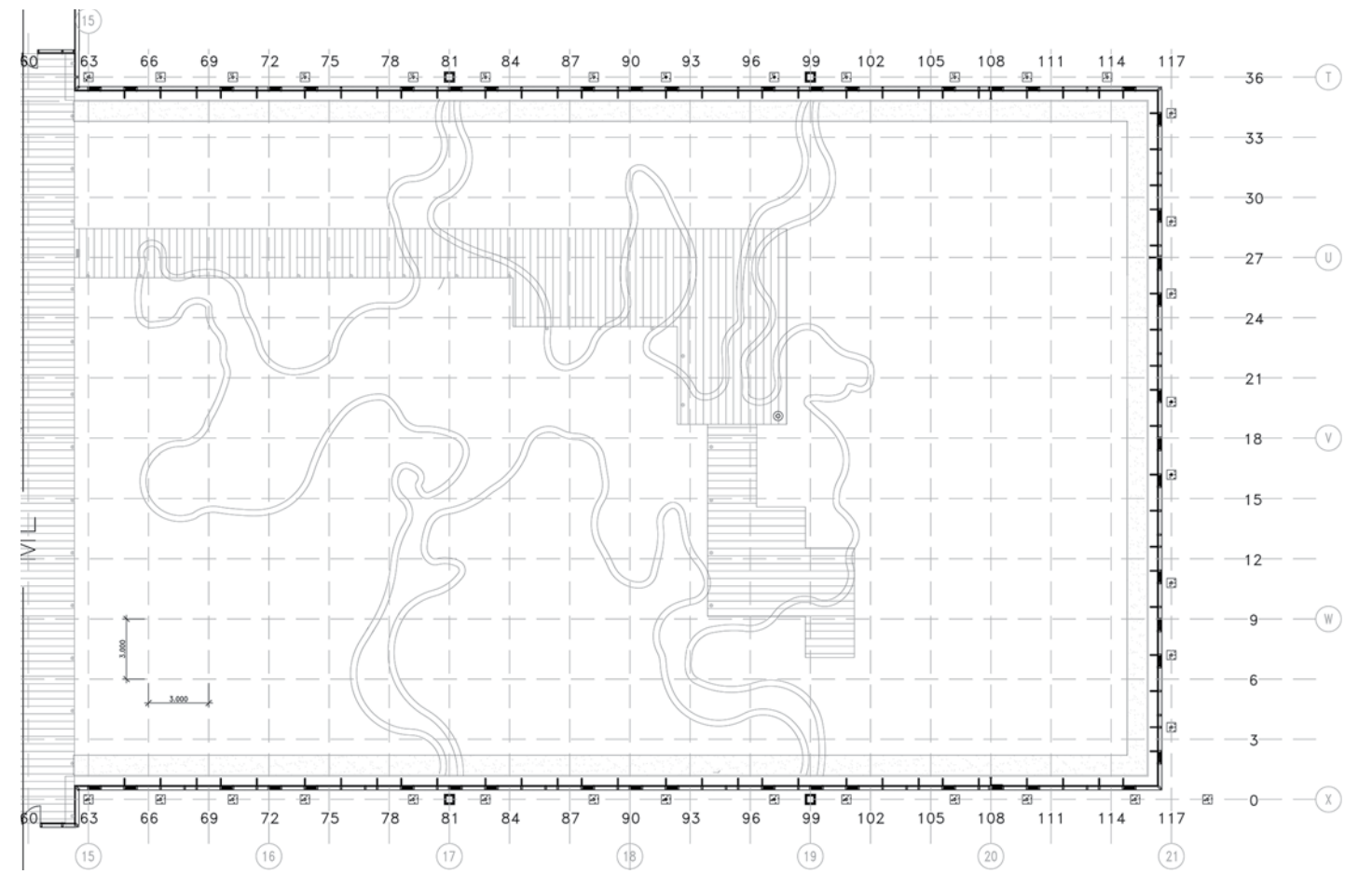
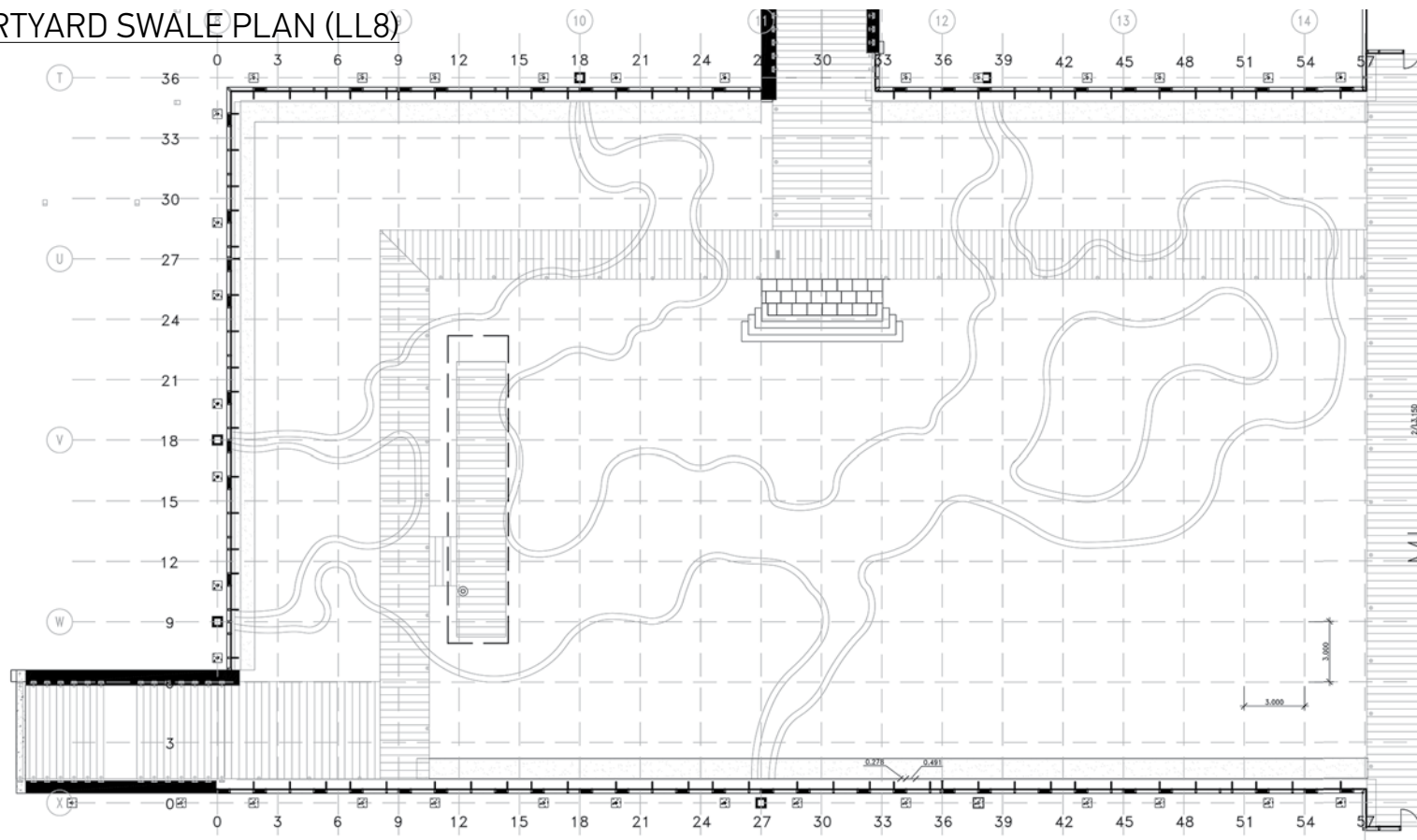


BRANDON HARTZ, ASLA/HOK, BOTTOM RIGHT

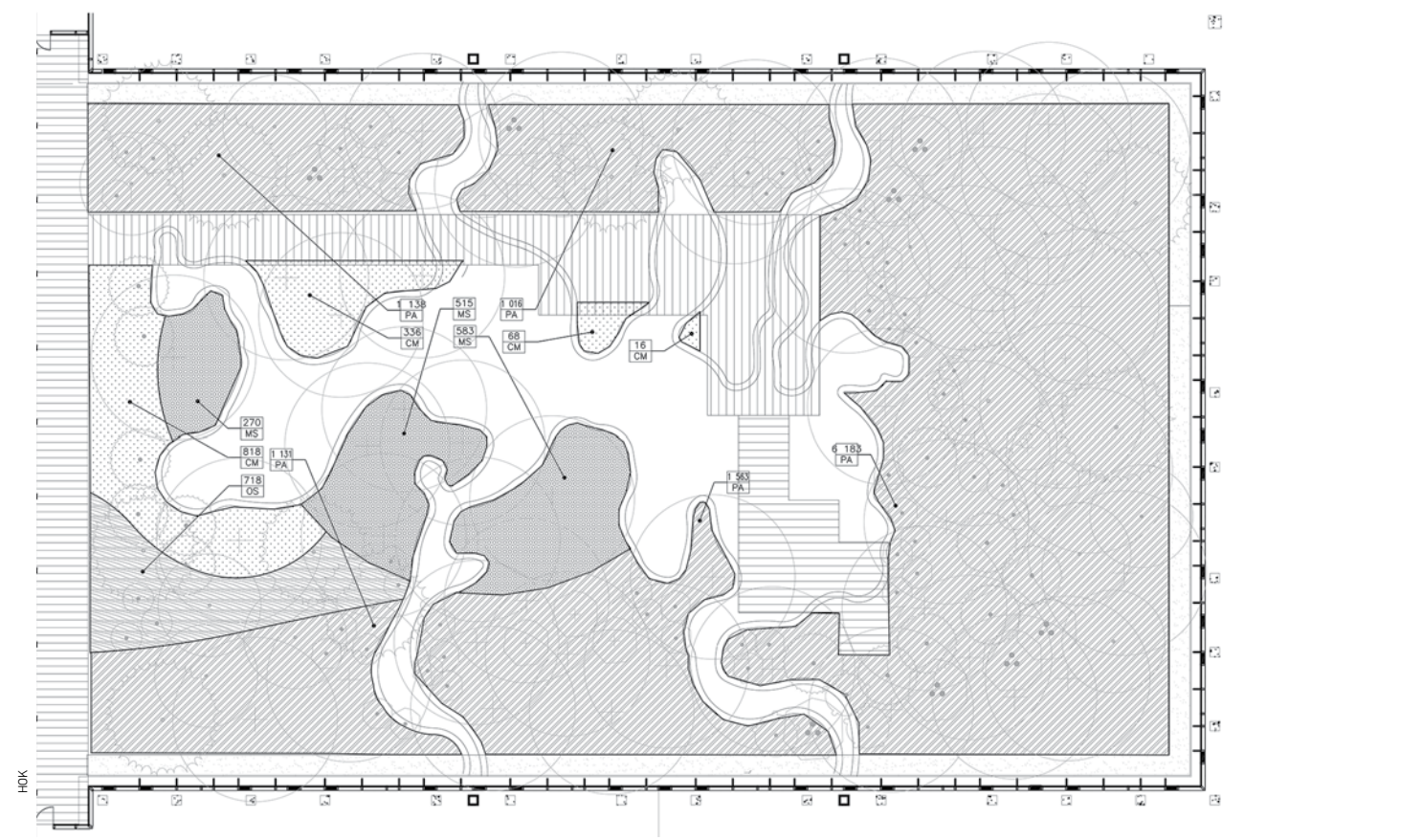
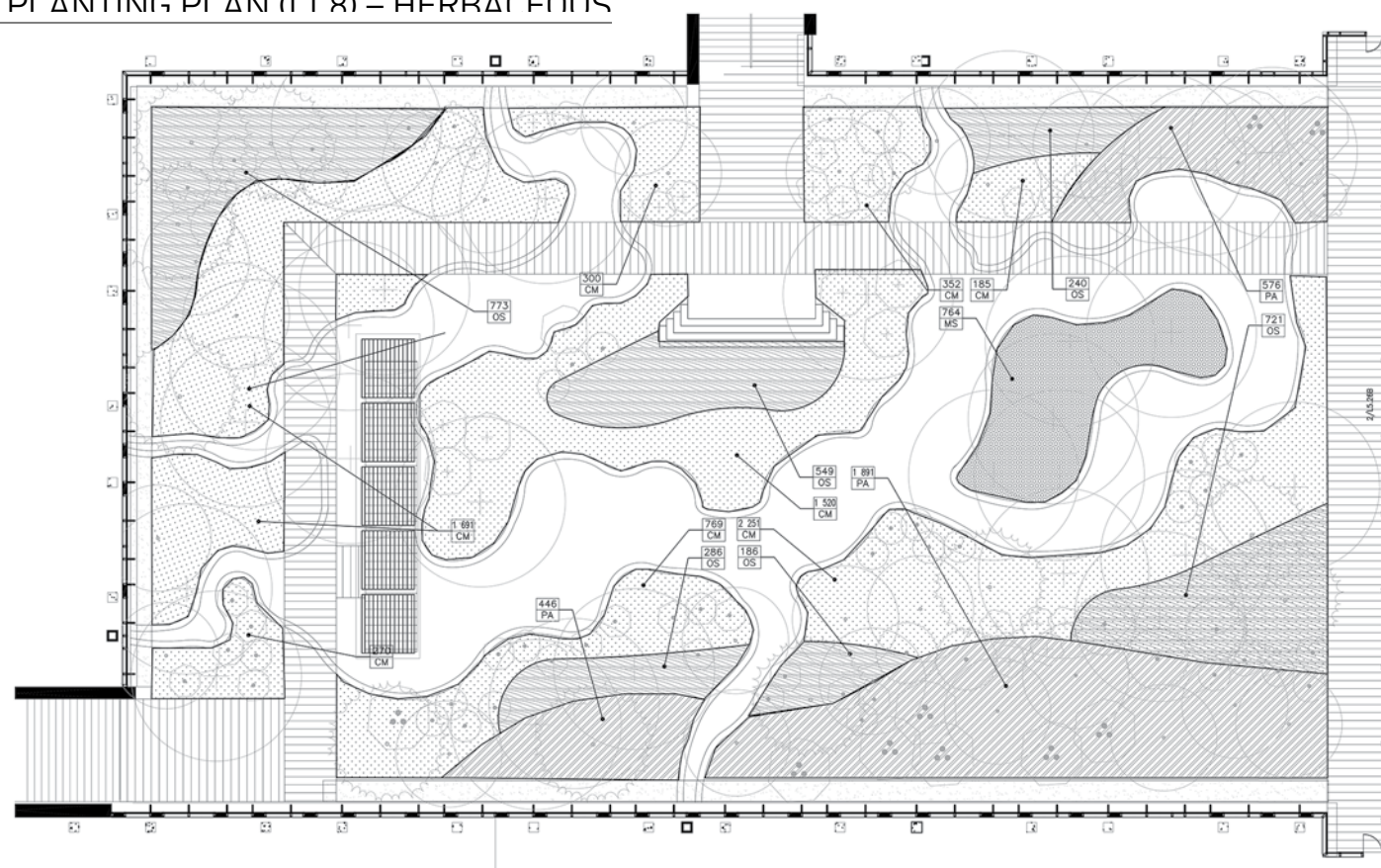


HOK, TOP

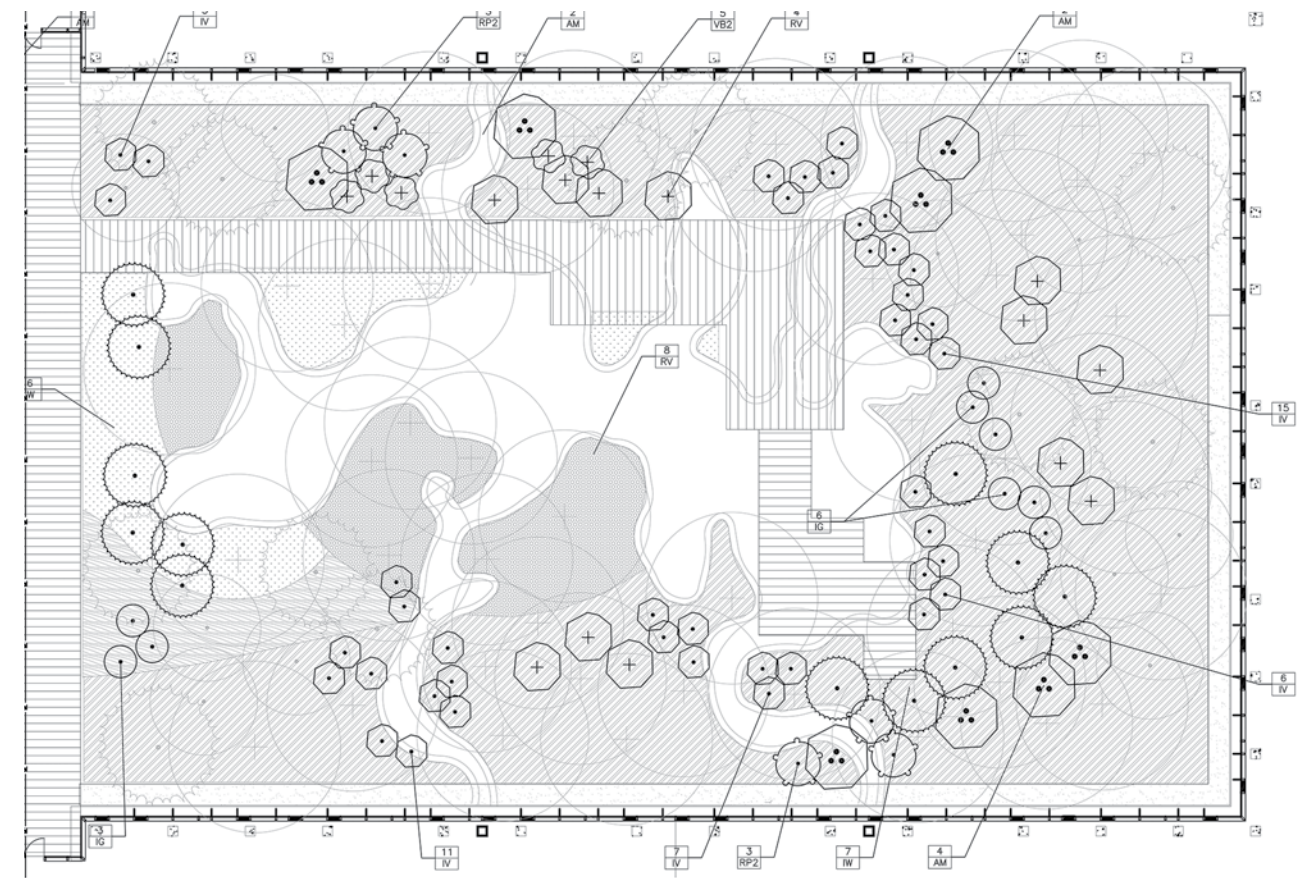
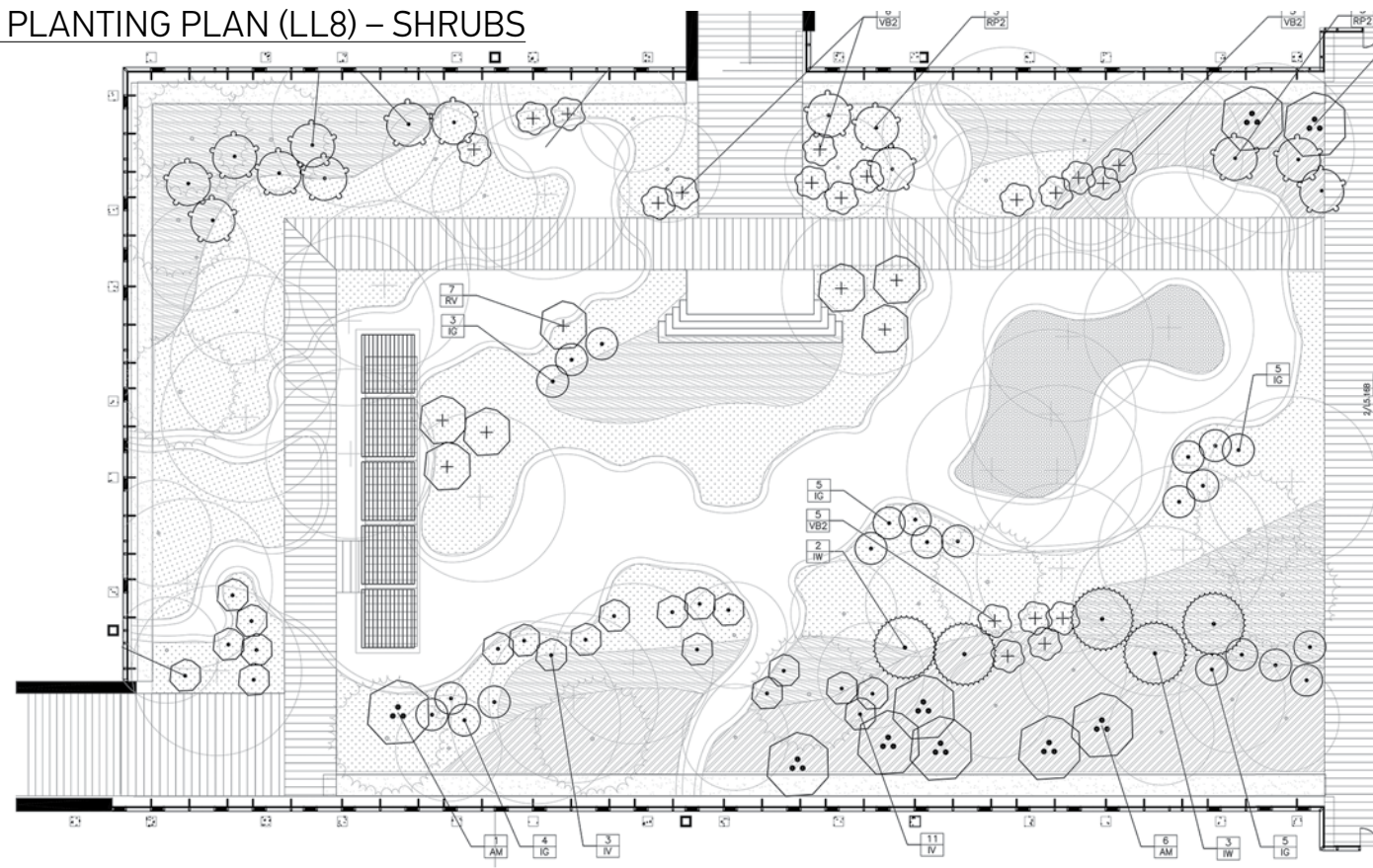
COURTYARD SWALE PLAN (LL8)



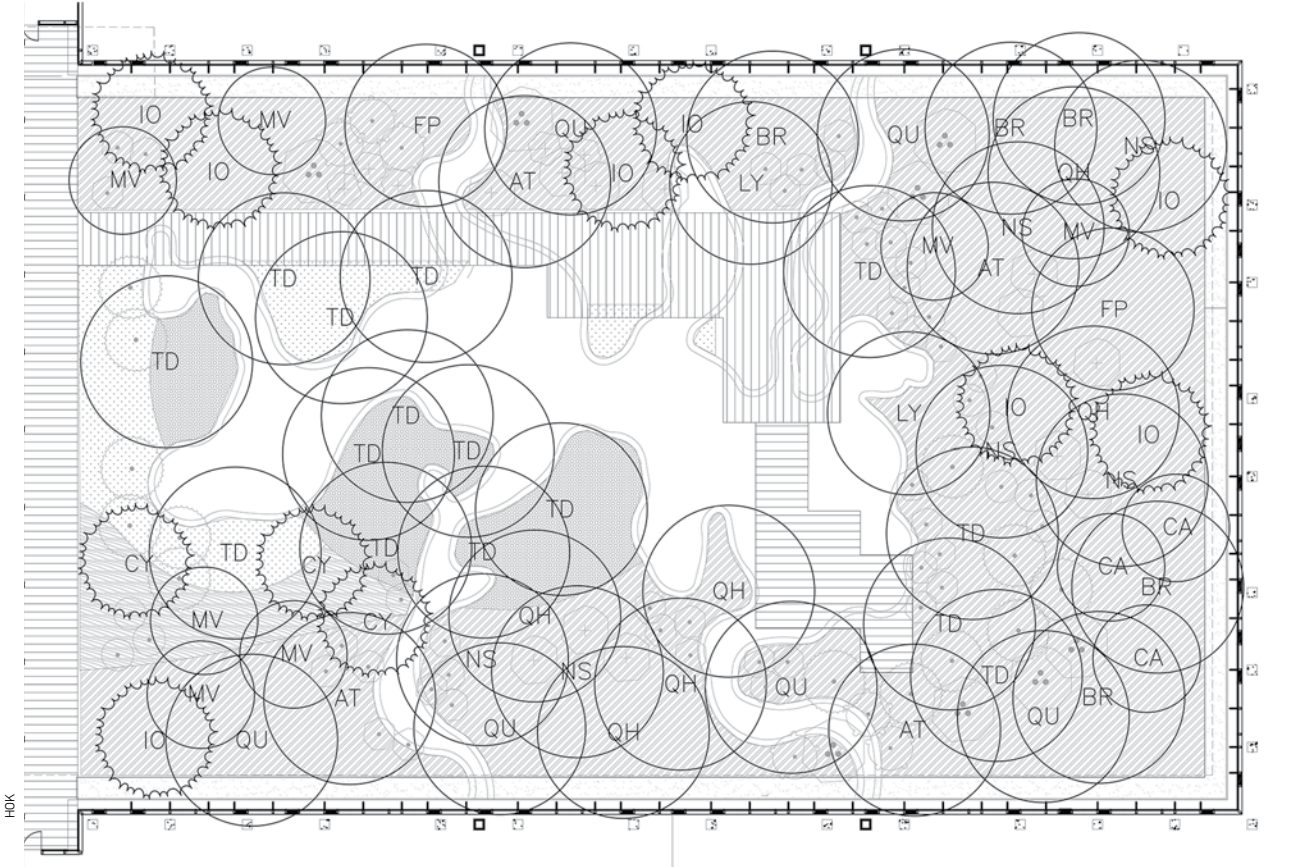
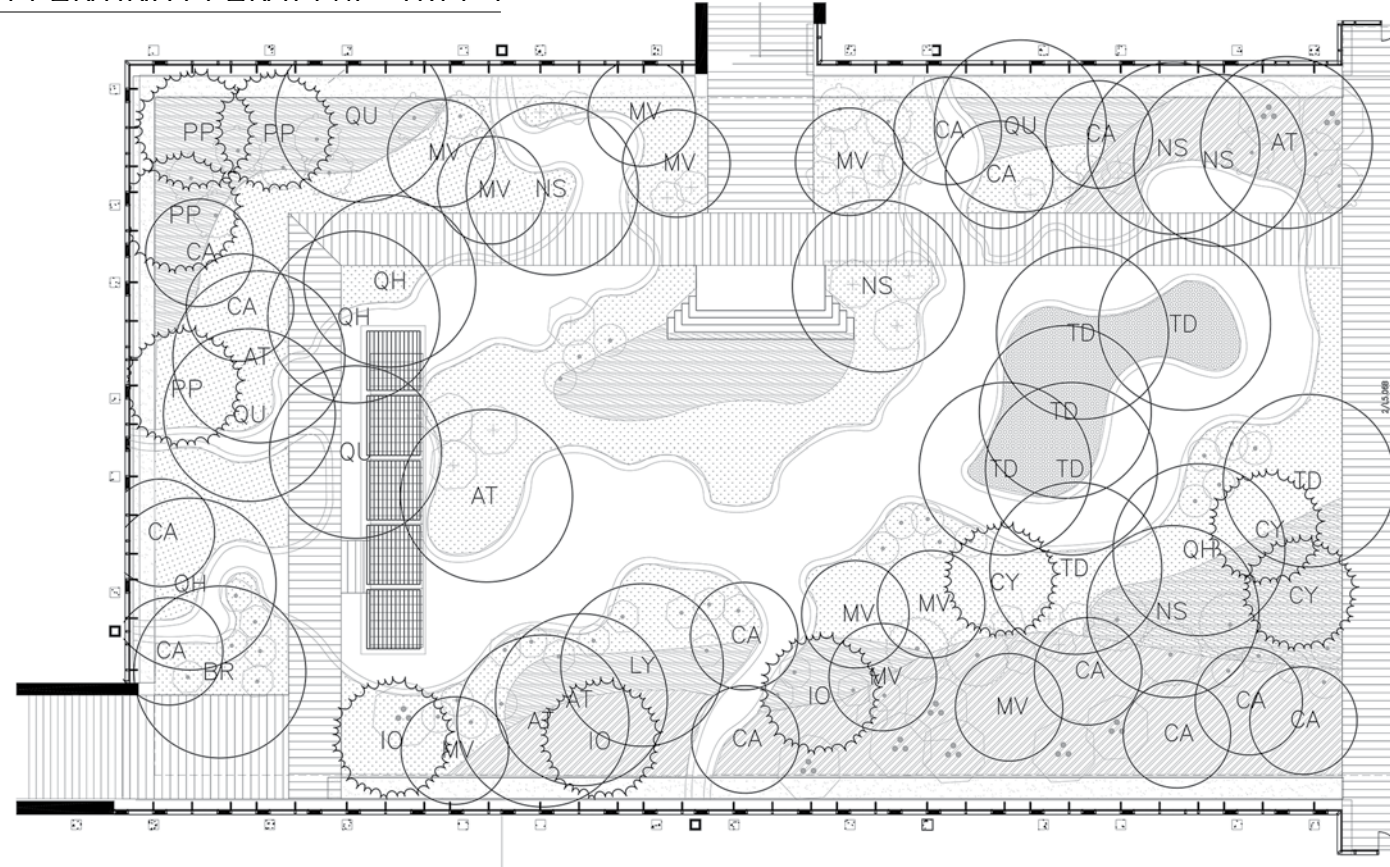
COURTYARD PLANTING PLAN (I I 8) - HERRACENUS



COURTYARD PLANTING PLAN (LL8) – SHRUBS



COURTYARD PLANTING PLAN (LL8) – TREES





↳ said Christian Gabriel, ASLA, the national design director for landscape architecture at GSA, on the site with us in June. “We’ve had a dearth of data.”

We were headed down to the edge of the pond. The lowest courtyards take roof water into swales that wend out in dendritic patterns among the oaks, river birches, sweet gums, and sour gums. There are vernal pools that flood and eventually disappear. A trim wood boardwalk keeps to the edge, with a platform and pergola for viewing into the growth, which can also be seen from above in an interior bridge between buildings. It is a heck of a walk to the office. ●

Project Credits

CLIENT U.S. GENERAL SERVICES ADMINISTRATION, WASHINGTON, D.C. (CHRISTIAN GABRIEL, ASLA, NATIONAL DESIGN DIRECTOR). **DESIGN EXCELLENCE TEAM LANDSCAPE ARCHITECT** ANDROPOGON, PHILADELPHIA (YAKI MIODOVNIK, ASLA, PRINCIPAL IN CHARGE; THOMAS AMOROSO, ASLA, DESIGN PRINCIPAL AND PROJECT MANAGER; MANISHA KAUL, ASSOCIATE/LANDSCAPE ARCHITECT; LAURA HANSPLANT, ASLA, ASSOCIATE/LANDSCAPE ARCHITECT; EMILY MCCOY, ASLA, ASSOCIATE/PROJECT LANDSCAPE ARCHITECT; NGIM CHEA, ASSOCIATE/PROJECT LANDSCAPE ARCHITECT). **ARCHITECT** PERKINS+WILL, CHICAGO (AKI KNEZEVIC, PRINCIPAL IN CHARGE; RALPH JOHNSON, PRINCIPAL DESIGNER; TOM MOZINA, SENIOR DESIGNER; PAUL CLINCH, PROJECT MANAGER). **ASSOCIATE ARCHITECT** WDG ARCHITECTURE, WASHINGTON, D.C. **INTERIOR DESIGN** PERKINS+WILL, WASHINGTON, D.C. **GENERAL CONTRACTOR** CLARK CONSTRUCTION, BETHESDA, MARYLAND. **MEP ENGINEER** ENVIRONMENTAL

ABOVE

The boardwalk-lined 2.4-acre pond accepts water not captured by the roofs and rain gardens above, which in turn is pumped upward for irrigation.

SYSTEMS DESIGN, CHICAGO. **STRUCTURAL ENGINEER** THORNTON TOMASETTI, CHICAGO. **CIVIL ENGINEER** WILLIAM H. GORDON ASSOCIATES, CHANTILLY, VIRGINIA. **LIGHTING** HORTON LEES BROGDEN, CULVER CITY, CALIFORNIA. **PROJECT MANAGEMENT** TISHMAN/AECOM JOINT VENTURE, WASHINGTON, D.C. **ACOUSTICAL AND AUDIOVISUAL CONSULTANT** CERAMI & ASSOCIATES, NEW YORK. **BLAST CONSULTANT** HINMAN CONSULTING ENGINEERS, NEW YORK. **VERTICAL TRANSPORTATION CONSULTANT** JOHN J. URBKAS & ASSOCIATES, CHICAGO. **SECURITY CONSULTANT** APPLIED RESEARCH ASSOCIATES, VICKSBURG, MISSISSIPPI. **FOOD SERVICE CONSULTANT** CULINARY ADVISORS, ELLICOTT CITY, MARYLAND. **CHILD CARE CONSULTANT** HORIZONS DESIGN/MICHAEL LINDSTROM ASSOCIATES, BROOKLINE, MASSACHUSETTS. **HISTORIC PRESERVATION CONSULTANT** WISS, JANNEY, ELSTNER ASSOCIATES, CHICAGO. **FITNESS CONSULTANT** WTS INTERNATIONAL, ROCKVILLE, MARYLAND. **PARKING CONSULTANT** WALKER PARKING, ELGIN, ILLINOIS.

DESIGN/BUILD TEAM LANDSCAPE ARCHITECT HOK, WASHINGTON, D.C. (BRANDON HARTZ, ASLA, LEAD DESIGNER AND PROJECT MANAGER; JOSE CHIENG; ZACHARY CHRISTESON, ASLA; JACALYN CHNOWSKI, ASLA; THOMAS NANTKA). **ARCHITECT** WDG ARCHITECTURE, WASHINGTON, D.C. **INTERIOR DESIGN** HOK, WASHINGTON, D.C. **GENERAL CONTRACTOR** CLARK CONSTRUCTION, BETHESDA, MARYLAND. **LANDSCAPE CONTRACTOR** VALLEYCREST LANDSCAPE COMPANIES, CALABASAS, CALIFORNIA. **ELECTRICAL/PLUMBING ENGINEER** GIRARD ENGINEERING, FALLS CHURCH, VIRGINIA. **STRUCTURAL ENGINEER** CAGLEY AND ASSOCIATES, ROCKVILLE, MARYLAND. **CIVIL ENGINEER** LOIEDERMAN SOLTESZ ASSOCIATES, ROCKVILLE, MARYLAND. **LIGHTING** MCLA, WASHINGTON, D.C. **SUSTAINABILITY CONSULTANT** HOK, WASHINGTON, D.C. **HISTORIC CONSULTANT** QUINN EVANS, WASHINGTON, D.C. **PARKING STRUCTURE ARCHITECT** MCKISSACK & MCKISSACK, WASHINGTON, D.C.