Purple-Roof®

HYDROTECH
A SIKA COMPANY

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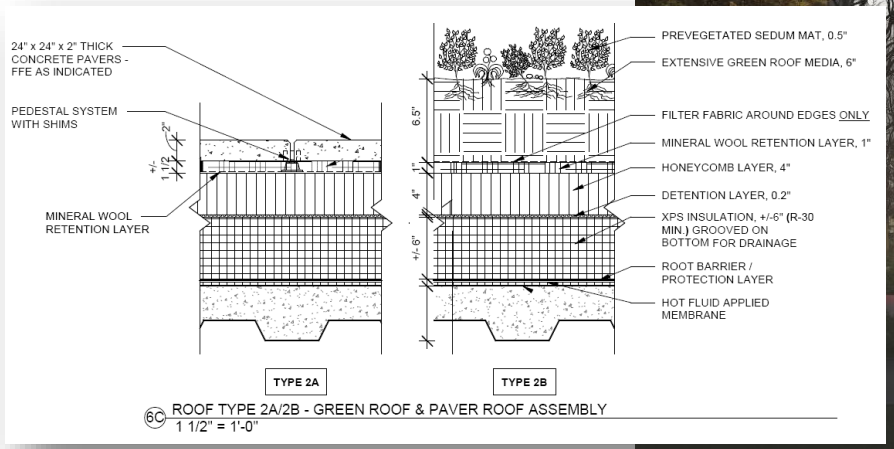
CASE STUDY- SNF AGORA INSTITUTE, JOHNS HOPKINS UNIVERSITY

The SNF Agora Institute, designed by architect Renzo Piano, stands adjacent to the Wyman Park Building, serving as a central hub for the Hopkins community. The structure seamlessly integrates transparent glass elements with the natural surroundings. One section accommodates faculty offices, laboratories, and classrooms, while the other hosts conferences, art exhibitions, and events. The institute's LEED certification and landscaping align with the region's environmental standards, contributing to its role as a prominent feature of Johns Hopkins University and the Baltimore cityscape.

Additionally, the institute included a Purple-Roof system, facilitating stormwater Retention , Detention and Peak Outflow Reduction without the reliance on a traditional tank system. This eco-friendly approach optimizes rooftop space while effectively managing stormwater, underscoring the institute's commitment to sustainable practices.



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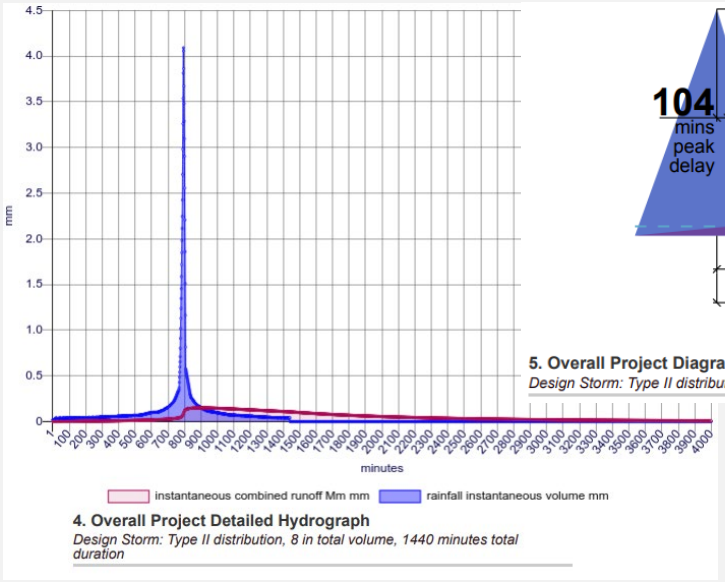
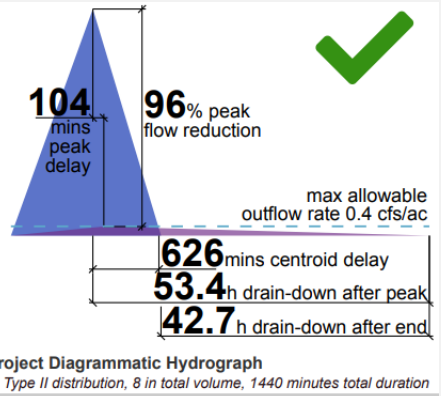
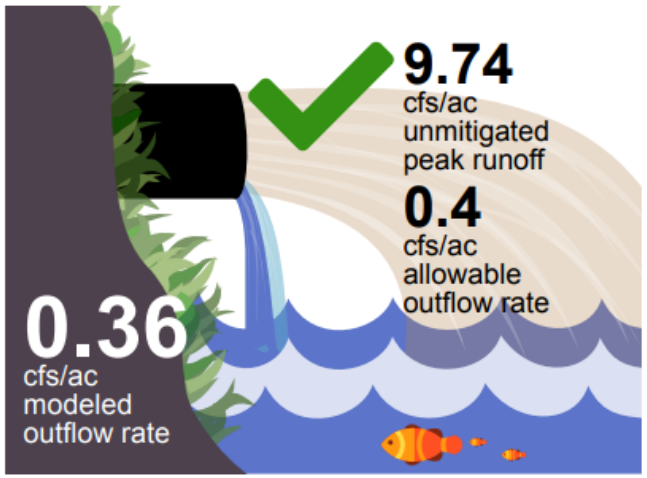


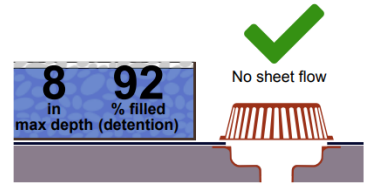
4. Overall Project Detailed Hydrograph
Design Storm: Type II distribution, 8 in total volume, 1440 minutes total duration



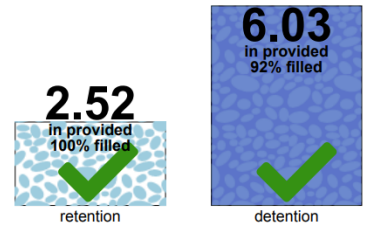
5. Overall Project Diagrammatic Hydrograph
Design Storm: Type II distribution, 8 in total volume, 1440 minutes total duration



6. Overall Project Diagrammatic Flow Rate Compliance
Design Storm: Type II distribution, 8 in total volume, 1440 minutes total duration



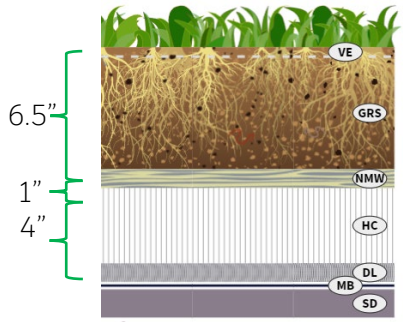
7. Overall Project Diagrammatic Overflow Compliance
Design Storm: Type II distribution, 8 in total volume, 1440 minutes total duration



Note: Retention value is likely (modeled) retention, which is lower than the ASTM E-2399 / FLL B.2 maximu volume.

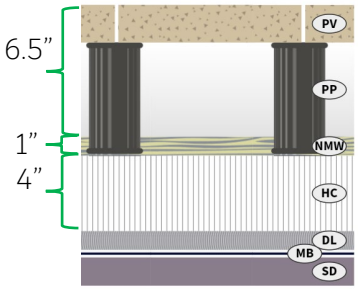
8. Overall Project Storage Summary (Modeled Values)

VEGETATED "6.5+1+4" PROFILE



property	value	standard
total thickness	12 inches	
dry weight	31.01 lbs/sf	FLL B.2 & ASTM E-2399
max dead load (wet)	52.47 lbs/sf	FLL B.2 & ASTM E-2399
max live load ***	22.99 lbs/sf	FLL B.2 & ASTM E-2399
max combined dead and live load ***	75.46 lbs/sf	FLL B.2 & ASTM E-2399
max retention storage volume	2.6 gals/sf	FLL B.2 & ASTM E2399
	4.17 inches	
max detention storage volume	3.8 gals/sf	GRD 2151
	6.1 inches	
anticipated max flow rate**	0.15 cf/s/acre	ASTM D4716++
typical plant palette	bs, grasses, sedums	

HARDSCAPE "PAVER+1+4" PROFILE



property	value	standard
total thickness	12 inches	
dry weight	24.73 lbs/sf	FLL B.2 & ASTM E-2399
max dead load (wet)	29.49 lbs/sf	FLL B.2 & ASTM E-2399
max live load ***	19.2 lbs/sf	FLL B.2 & ASTM E-2399
max combined dead and live load ***	48.69 lbs/sf	FLL B.2 & ASTM E-2399
max retention storage volume	0.6 gals/sf	FLL B.2 & ASTM E2399
	0.96 inches	
max detention storage volume	2.4 gals/sf	GRD 2151
	3.85 inches	
anticipated max flow rate**	0.15 cf/s/acre	ASTM D4716++
typical plant palette	NONE	none

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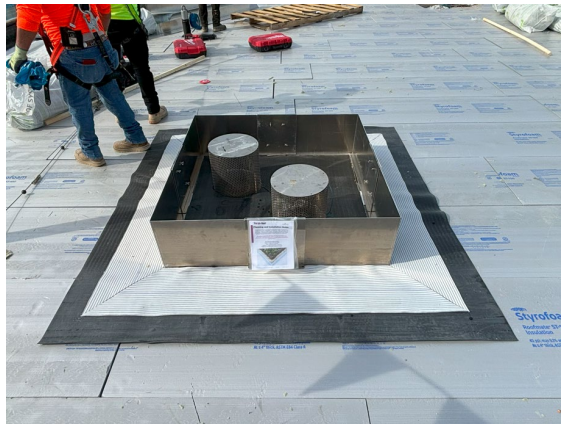

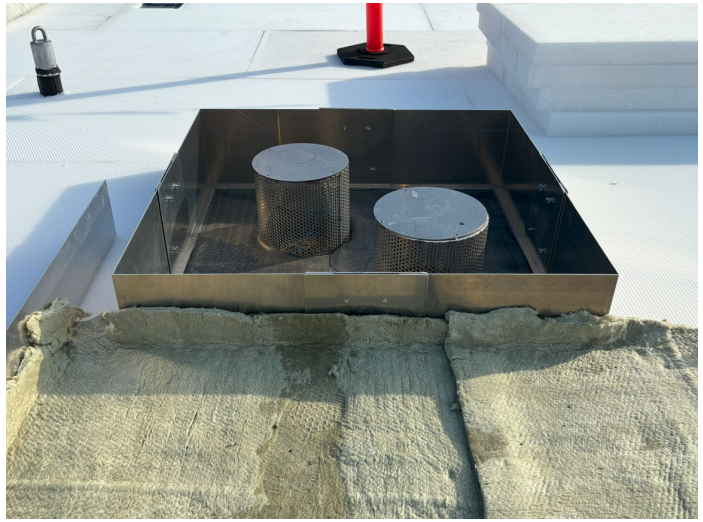

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Project Information:

Location:	3100 Wyman Park Drive, Baltimore MD
Client:	Johns Hopkins University
Design Architect:	Renzo Piano Building Workshop – RPBW
Architect of Record:	Ayers Saint Gross, Wash. DC
Civil:	Whitman, Requardt & Associates
Landscape:	The Olin Studio
Waterproofing:	Hydrotech