

John Thomas Dye Academic Building

Project Identity & Location Located in the Bel Air neighborhood, as part of the landscape design services for the new Academic Building on the John Thomas Dye School campus, a green roof was developed to help mitigate stormwater runoff of the new building as well as creating an extended habitable landscape for the native flora and fauna of the sensitive canyon environment.

Purpose of Project The school had a need to expand facilities but while it occupies a large parcel of land, little of it was suitable for building due to topography, geology and neighbor concerns. Making use of every square foot was essential in creating a usable and creative space for the students and that included the roof. Standing on the green roof at John Thomas Dye Academic Building overlooking a spectacular view of Los Angeles and beyond, it is difficult to imagine the landscape as anything other than this extension of the campus landscape. The California native garden is thriving and providing for the teachers and students the ultimate tool in learning about sustainability and ecology in the most dramatic way....right on the classroom roof. A native plant demonstration garden on the green roof will teach the students about preserving the local native plant communities and the sustainable benefits of green roof design.

Role of Landscape Architect It was the specific role of the landscape architect to work closely with the design architect and client on the functionality of the roof hardscape and landscape design from conceptual design through construction administration. Throughout the conceptual design phase, various circulation and layout options were proposed and presented to the client for review and comment. After the preferred option was chosen, the landscape architect moved into construction document phase and consulted with the architect on the most cost effective and successful waterproofing system and growing medium detail. As the planting depth could not exceed more the 18 inches, this became a determining factor as the landscape palette was developed and refined. The landscape architect followed the project through construction administration to assure the design intent was realized and the client was satisfied with the final design.

Significance Green roofs are not really a common sight in southern California but they are beginning to emerge as a way to reduce storm water runoff and mitigate the heat island effect of the thousands of composition roofs that dot the Los Angeles urban sprawl. The storm water runoff significantly contributes to pollution by washing contaminants off building roofs into the already stressed Los Angeles water systems. We all know the benefits that green roofs can provide but at what cost? If a green roof in the arid climate of Los Angeles is to be in fact sustainable, then the design and thought should be based on practical sustainable ideas in landscape. Ray Michaud, the headmaster at the school was interested right at the beginning in creating a unique design feature but at the same time providing a teaching tool that can be used throughout the year. Early in the design process, the alternative to typical landscape type green roof plants were substituted with native species that were chosen for their ability to survive with the local rainfall and other climatic conditions. Using California native plants that would require minimal fertilizing and irrigation was one way of creating a benefit for the school and a complex ecosystem that could be considered truly sustainable.

Special Factors Providing a native plant palette did not come without its challenges. Many popular California native plants needed to be eliminated due to their attractiveness to bees. The very reasons that one might want to use a native plant in the landscape are to attract native fauna and encourage pollinators to visit your garden. The more pollinators you have, the more pollinated fruit you will get. Bees are especially great for vegetable gardens and a major element on the roof garden is a vegetable garden that the students have planted to offer nutritional education and essential responsibility and teamwork that is required to keep the garden alive. The experience of seeing a tiny seed and the soil, water and sun come together to create a plant is a wonderful lesson in protecting our natural resources. But having a concentration of bees in the garden could mean potential bee stings and for a few kids at the school who were allergic bee stings, it was a serious issue. Keeping bees out of the garden is impractical but choosing the right flowers can cut down on the amount of bees that visit the garden. Salvias were out, as were California buckwheats. Given that bees are most attracted to white, purple, blue and yellow blooms, red flowering plants were typically used near the paths such as *Zauschneria californica*/California fuchsia and *Galvezia speciosa*/ Island snapdragon. Native grasses such as the *Aristida purpurea*/ Purple Three-Awn and the *Leymus condensatus* 'Canyon Prince'/ Giant Wild Rye were used to complement the planting and provide movement and drama to the landscape.