

Case Study

NDS StormChamber[®] System

NDS DESIGN WORX[®] TEAM TAKES ON RIGOROUS DESIGN CRITERIA FOR HIGH SCHOOL ATHLETIC FACILITY

Denham Springs, a town in southern Louisiana, recently renovated their local high school's athletic facility, adding a new football stadium, sports field, and parking lots. During construction, the project required a drainage system that could detain more than 45,000 cubic ft. of stormwater.

The designated construction company, which NDS has partnered with in the past, turned to the NDS Design Worx[®] team to develop a layout that matched the detention criteria and fit within the constraints of the site. In 2016, Denham Springs had a significant flooding event that changed the way they mitigated stormwater with a 100-year storm design criteria, reaching almost 10 in. per hour.

The proposed system not only needed to handle the high volume of stormwater but the high inflow rate associated with storms of this magnitude. In addition, the specified solution couldn't interfere with the irrigation system being installed for the new turf on the field.

STORMCHAMBERS FOR THE WIN

The Design Worx team provided the customer with a turnkey solution, including a layout and submittal package with a robust NDS StormChamber[®] system that could be placed underneath the new football field. The final design not only met but exceeded the design storage criteria, provided a system with easy maintenance, and saved about 30% on costs when compared to a competitive product.

The NDS system also offered a high detention volume-to-size ratio, which greatly reduced the total footprint needed and lowered excavation costs.



FAST INSTALLATION, SIMPLE MAINTENANCE

The NDS solution saved time and money over a crate system that was originally considered. The crate style detention system would've required the construction of 8,400 separate pieces onsite – a significant amount of man hours compared to using the NDS chamber system, which does not require extra steps before installation.

The simplicity of NDS's solution turned months into weeks, with the installation of 280 44 in. chambers taking place over the course of about 8 weeks. The construction team had worked with the product before and could attest to its reliability and flexibility. In addition, the school benefited from the ease of maintenance by installing the NDS SedimenTrap[™] capture device – as sediment gathers in one place for quick removal by a vacuum truck.

PROJECT SUMMARY

PROJECT TYPE

Capture & Convey

PROPERTY

Public School

NDS PRODUCTS USED

10 qty. SC-44105-E-O 44 in. end units
10 qty. SC-44105-S-O 44 in. start units
260 qty. SC-44105-M-O 44 in. middle units

NDS Design Worx Services Utilized:

1. Submittal drawings
2. Product specification
3. CAD file creation
4. Installation instructions