CONSTRUCTION ECO SERVICES

# CASE STUDY

## Can You Satisfy, Enable and Provide? FocalPoint Can.

## SUMMARY

The biggest transformation of New Orleans' historic riverfront in more than 30 years is underway – with plans to build new parks, hotels, housing and businesses in various stages of development. This spur in development along the riverfront has encouraged local business owners to expand. 30 years ago, stormwater management meant something totally different than it does in 2020. The big difference is how the first flush of stormwater runoff is managed.

The current ordinance in New Orleans requires developments over 5,000 SF to detain and treat that first flush with a variety stormwater management solutions. Green Infrastructure (GI) such as permeable pavement and bioretention are the favored solutions since they are the most visible to the community. A vacant lot next on the corner of Tchoupitoulas and Calliope was going to be a challenge to develop into a new eatery and bar in the Warehouse District. The surrounding environment isn't the most conducive to GI; an elevated expressway on one side and buildings on the other two sides with endless amounts if impervious cover in all directions. The elevated express way casts long shadows throughout most of the year but doesn't provide relief from rainfall.

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## THE SOLUTION

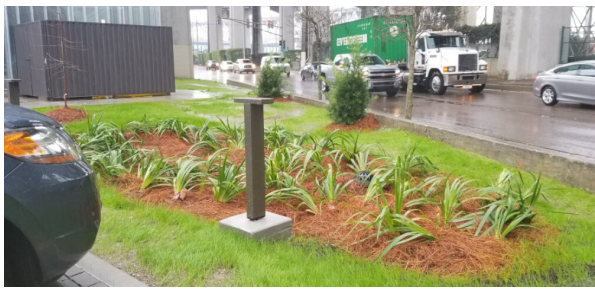
Kyle and Associates collaborated with Construction EcoServices (CES) on the stormwater management design. The footprint available for permeable pavement and bioretention wasn't much, just a small strip of space behind the building and another area in front of the parking stalls. Permeable Interlocking Permeable Pavers were used in the stalls, which helped manage the rainfall that landed on them. Small lots also make construction a challenge, which is why minimizing the footprint of the bioretention system was a priority. CES recommended using FocalPoint, a high performance bioretention system that manages large volumes of runoff within a small footprint. It consists of an open cell underdrain, bridging stone, high flow engineered soil, mulch and plants. It infiltrates surface runoff at 100"/hr, which is much faster than a typical bioretention soil mix. The high flow rate minimizes the footprint of the system and provides consistent performance, even when not maintained properly.

FocalPoint's fundamental TR-55 rainfall and distribution approach to sizing provides computations as to where every cubic foot of runoff is at any time during the rainfall runoff event. The ability to leverage the size of the FocalPoint treatment footprint within a surface depression or landscape area for temporary storage allows for the unique scalability of the system. This model is valuable to designers because it satisfies permitting requirements, enables robust design and provides adequate space for pretreatment. The result for this project was a 40 SF FocalPoint system.

One important step during installation is how CES protects the engineered soil prior to the site being vegetated. The entire system is wrapped with a geotextile to prevent clogging from construction sediment. Storm events are a common event in the Gulf coast and adequate stormwater pollution prevention ensures GI won't fail. Before the FocalPoint system was planted, CES tested the infiltration rate of the soil to ensure it hasn't clogged. One of the many values that the designer, General Contractor and owner benefit from a performance driven specification.

## THE RESULTS

This urban bioretention system has already been hard at work. Multiple heavy storm events have tested its resilience and the results have been fantastic. It even survived its first Mardi Gras!



## About Construction EcoServices

Construction EcoServices is focused exclusively in the stormwater marketplace. Our business units provide solutions involving turnkey compliance assurance services, engineering sub-consultancy and cutting-edge stormwater management systems to all segments of the development, design and construction markets where those pursuits intersect with the rapidly evolving stormwater regulations.

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