



High Capacity Chambers Installed in NASCAR Raceway's Wastewater Treatment System

The Phoenix International Raceway needed a cost-effective, replacement septic system that would be able to keep with the pace.

Project

Gravity-fed septic system with two septic tanks in-series utilizing 265 High Capacity Chambers from Infiltrator Systems.

Installation Date

September 2004

Designer

Kelly Brungardt
Septic Technologies
Goodyear, AZ

Contractor/Installer

Kevin Kirkpatrick
Septic Technologies
Goodyear, AZ

Permitting Agency

Maricopa County Health
Department

Owner

Phoenix International Raceway
Avondale, AZ

Design Flow Specifications

4520 GPD
1525 linear feet of chambers
Perc rate of 15 MPI
Two septic tank in-series:
6400 gallons and 4100 gallons



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Phoenix International Raceway is located in the foothills of the Estrella Mountains in Arizona and has long been associated with NASCAR racing. The raceway was in need of a new wastewater treatment system to serve its infield concessions, medical buildings, restrooms and offices. The existing stone and pipe septic system was no longer sufficient and was beginning to fail. An easy to install, cost-effective approach was required.

A new stone and pipe leachfield was first considered, however because of the size and location of the system, Infiltrator® chambers were selected. The system was to be installed in the infield of the raceway which posed some space restrictions and made for an oddly shaped area for the leachfield. The chambers offered more design flexibility when compared to the proposed stone and pipe system and were faster and easier to install.

To meet the demands during race events, a 4250 gallons-per-day wastewater treatment system was designed. It included two custom-built, in-series septic tanks and 1525 feet of High Capacity Chambers in a gravity-fed leachfield. The chambers were installed in fifteen 100 foot long trenches and one 25 foot long trench with six feet of separation. On raceday the system is subjected to high peak loads. The increased storage of the chamber system has the ability to accept large volumes of wastewater and store it. The soil is then able to slowly accept the wastewater and provide treatment.

Kelly Brungardt with Septic Technologies was pleased with the cost savings of using chambers as well as their design flexibility. Today, the system continues to perform well and keep with the pace that the Phoenix International Raceway is known for.