NDS®
We put water in its place

PROJECT SPOTLIGHTS

UAIC – United Auburn Indian Community

Project Name: UAIC – United Auburn Indian Community
Location: Auburn, CA
Property Size: Commercial – Large
Products: Permeable Pavers
Property Type: Government Building
Partners: Cook Engineering



Challenge: Create community roadway that minimizes runoff and avoids bioswale installation

The United Auburn Indian Community is located in the Sierra Nevada foothills of Auburn, CA, serving the Miwok and Maidu Indians. It's a fully developed 10-acre resource center investing in the community through economic development, education services and philanthropy. The council was in need of a gravel road to make travel easier between some of the facilities but engineers were faced with an issue – the land was on a grade so the project engineer needed to confirm the use of gravel pavers was a viable solution and wouldn't require a bioswale.

Solution: Slope reduction enables use of gravel pavers, saves usable land

Bioswales are channels designed to concentrate and convey stormwater runoff while removing debris and pollution. While they can be beneficial in recharging groundwater, bioswales require a considerable portion of land and once installed, permanently remove the opportunity to use that land for anything other than drainage runoff.

The council's ultimate goal was to avoid needing another bioswale in the complex since one had just been installed the year prior. An NDS in-house civil engineer worked directly with Cook Engineering to determine if the gravel pavers offered by NDS would work as designed on the land's current incline. After much research on the criteria necessary for installing NDS EZ Roll GP4x150, NDS recommended adjusting the slope from 9% to 4% to meet proper specifications and avoid the installation of another bioswale. After the grade was reduced, 34,000 sq. feet of gravel pavers were installed with 12" spikes along the winding road. The team used multiple joints to account for the road's curves, along with a rotohammer to drive the spikes through the aggregate base and firmly hold it in place. A continuous piece of geotextile fabric provides the strength to hold the gravel fill in place yet is porous to allow for the filtration of stormwater runoff and reduces demands put on the landscape drainage system.

Impact: Fully functional roadway with effective erosion control

Once the slope was reduced, the use of EZ Roll Gravel Pavers saved usable land while still reducing erosion and helping maintain the look and functionality of a gravel road without the need for a bioswale. Made with 100% recycled materials, the pavers became an effective long-term solution by minimizing surface water runoff and providing an attractive and sustainable alternative to a traditional concrete or asphalt roadway within the complex.

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