

PROJECT CASE STUDY

Accelerated Wetland Restoration Using DURA-BASE® Composite Mats

Client
Major utility provider

Location
Central Indiana



BACKGROUND

A major utility company in Central Indiana needed to upgrade a 138kV line crossing several wetlands, culturally sensitive areas, and difficult terrains such as soft, bog-like soils. The area also contained several threatened and endangered species' habitats like the Eastern Massasauga, Blanding's Turtle and Indiana Bat. This case study highlights one of the difficult areas associated with the project.

CHALLENGE

A temporary construction entrance, short access road, and work pad was constructed within a Palustrine Emergent Wetland so that an existing lattice tower could be removed and a concrete foundation for a monopole installed. The soil conditions were exceptionally challenging as shown in the soil boring log which revealed black, wet peat to a depth of 28.5 feet. A concern from all parties was that if typical 3-ply wood or timber mats were used, several layers would have to be stacked in these conditions to support the heavy equipment, leaving some mats irretrievable when pushed too far down from the weight. At one point during construction the work pad supported a 90 ton RT Crane, drill rig, and a concrete truck all at the same time

SOLUTION

To meet the client's objectives, Newpark Mats & Integrated Services installed two separate layers of DURA-BASE mats with a configuration of 3 interlocked mats as a base, and 2 interlocked mats positioned on top as the access road. The work pad comprised two identical layers of interlocked mats. All mats remained on the ground for 216 days covering approximately 0.5 acres.

RESULTS

The exceptional weight distribution of the DURA-BASE mats allowed for very little compaction of the soil and greatly minimized impact to the wetlands. After the mats were removed, no de-compaction of the soil was required and no seed was applied.



1-877-MAT-ROAD
MatSales@Newpark.com
www.NewparkMats.com



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The existing seed bank is as unharmed allowing the area to naturally revegetate in under 30 days.



DAY 1



DAY 9



DAY 15



DAY 29

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