## Kingsley Township – Branch Road Forest County



**Problem:** The existing cross pipes were undersized, and some were collapsing. There were no head or end walls on the cross pipes. The road base was soft and flat.

**Solution:** Five of the existing 12-inch diameter pipes were replaced with 18-inch diameter pipes. Head and end walls were installed on each of the new cross pipes. The outlets of the new pipes were stabilized with R4 stone. 580 tons of road fill were added to build up the road profile and establish a crown to encourage sheet flow away from the roadway. Three turnouts were installed to direct runoff into stabilized areas. All disturbed areas were seeded and mulched.



