

Rating unimproved roads

Many local communities have a few unimproved roads in their systems. These very low volume roads typically are 8-20 feet wide. Some may be grass-covered wheel tracks that look like trails and get more use by ATVs and bikers than trucks and cars. In wet weather these roads can turn into deep muddy ruts.

Under the new Wisconsin Local Road Inventory program (WISLR) even these seldom-used routes should be rated and reported. The T.I.C. has prepared a new **PASER Manual for Unimproved Roads** to help you record their condition if they are listed on the WisDOT inventory. The T.I.C. has copies available for your use (see *Resources* on page 2).

On an unimproved road the existing natural soil is the surface. In some areas the soil is sand or gravel and the road is relatively stable in wet conditions. Other roads are on clays, silts and organic materials that are unstable in wet weather and develop ruts under heavy traffic. Sometimes these roads have been lightly graded—cut into the soil with ditches for drainage and a small crown. Occasionally gravel has been added at some spots to stabilize wet or flood-prone areas.

As with other types of road surfaces, you can rate unimproved earthen roads based on condition and distress. Conditions include: profile and ride, drainage, crown, access, and surface material. Common types of distress are: ruts, pot-holes, rocks and roots, and washboarding.

The new manual suggests using a 4-point rating system: very good, good, fair, or poor. A very good unimproved road, for example, would be graded with a crown, and it may have ditches

and culverts. It is usually accessible in all weather, has no significant ruts and a stable surface material, and it is possible to ride it comfortably at 25 mph or more.

By contrast, a fair unimproved road would be ungraded with little or no crown, ditches or culverts. Ruts are common. The surface is uneven with occasional potholes, and access may be limited during and after rain. Most of the time the ride requires speeds lower than 15 mph.

Rating unimproved roads follows similar procedures to rating other surfaces and has similar benefits. You develop written documentation about changing road conditions which helps with annual budgets and long range planning. In general, light grading with some crown and ditch improvements will improve these roads. If current and future traffic and land use will keep the number of vehicles very low, it may be appropriate to limit any improvements.

For copies of the new PASER Manual for Unimproved Roads see resources page 2, or contact the T.I.C. using the form on page 7.



Graded road with crown allows good ride and speeds of 25 mph. Sandy surface soil.



Low volume forest access. Stable surface. Comfortable ride at 10 mph.

Resources

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NEW **Safe Winter Driving Considerations**, #18442 National Safety Council, 2001, 21 min. Basic winter driving advice for passenger vehicle drivers. Covers preparation and typical road hazards. Helpful for new auto drivers or a refresher. Does not discuss snowplow equipment operations.

NEW **Foam Injection Recycling**, #18446 Payne & Dolan, 2001, 8 min. Reviews process and benefits of foam injection recycling of asphalt pavements. Shows construction process of an alternate recycling method to rebuild pavements. Intended for elected officials and managers interested in asphalt recycling.

Recommended **Winter Operations Training Program Series**, Iowa DOT:

Introduction to Winter Operations, #18172, 11 min. Equipment types and use including trucks, graders, loaders and plows. A good introduction for new employees.

Pre-Season Preparation, #18173, 30 min. Mounting snow removal equipment and pre-season equipment checks. Intended for operators and shop personnel.

Equipment Operation, #18174, 10 min. Routine equipment checks before and after plowing. Proper radio procedures and winter clothing tips. Intended for operators.

Plowing Techniques, #18175, 30 min. Excellent review of snow plowing techniques on 2-lane and multi lane roads. Includes intersections, bridges, rail crossings and ramps. Covers plowing, winging, ice blades, and V-plow use. Intended for operators and supervisors.

Anti-Icing/Deicing, #18187, 30 min. Review of chemicals and abrasives for snow and ice control. Special topics on snow fences, salt brine production, and use of brine for pre-wetting salt. Excellent guidelines for use of brine for anti-icing. Intended for supervisors.