Rating Roads Effectively

Adapted from Michigan Transportation Asset Management Council Training Manual[1]

How to Rate Road Effectively

Speed

Rating roads at high speeds can cause inaccuracy. Reviews conducted by the CTT's road rating trainers have shown that teams that view roadways at lower speeds are much more likely to rate them accurately. Rating roads at high speeds can cause distresses to be missed and ratings to be higher than appropriate.

Lighting Conditions

Changes in lighting conditions and the time of day can influence how some distresses are perceived. Bright sunlight directly overhead may make surface texture defects or fine cracking hard to discern. Rating early in the morning or late in the afternoon on a sunny day while driving into the sun may also make it difficult to rate roads effectively. If lighting conditions are poor, slow down or stop to make sure that you are not overlooking any visual cues. Trees cause shadows that can appear to be road distresses. Tree shadows on the road make for very difficult rating conditions. Options are to return to the location at a different time or drive at lower speeds.

Inclement Weather

Both PASER and IBR are visual assessment systems. With the PASER system, trying to rate paved roads in the rain is ineffective. Road surfaces look different when they are wet—cracks look larger, puddles can hide distresses, and so forth. Teams should not rate roads when they are wet. However, with the IBR System™, features of an unpaved road are rated rather than the road's condition. As long as the feature is visible (i.e., not obscured by tall grass or snow), roads can be rated.

Group Dynamics

Condition rating is supposed to be a group process.

Road Ownership, Use or Importance

Do not rate an important road less than the actual rating. Do not confuse a management decision with rating. Road ownership, use, or importance does not change its distress rating.

What to Assess to Rate Roads Effectively

Rate the Worst Lane

If there is a difference in quality, select the worst lane for your rating.

Rate Distress, Not Ride Quality

Just because a road rides well does not mean that it has no distresses in need of capital preventive maintenance or structural improvement. This is especially true on a road with rutting and cracking in the wheel path, both of which can cause rapid deterioration yet still yield a smooth ride. Conversely, a concrete surface in relatively good condition with sealed transverse cracks often makes quite a bit of noise as tires pass over the expanded crack seal. More noise does not always mean severe distress. Do not let ride quality distort your ratings.

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[1] https://www.ctt.mtu.edu/sites/default/files/resources/paser/tamc-data-collection-manual.pdf,Pages 10-14.

Make Careful Distress Observations on Light-colored Pavement
Oxidized pavements can be very light and often look gray or off-white, which causes distresses to be less visible. Flat lighting on an oxidized pavement can also hinder visibility of distresses.

Measure Rutting
It can be difficult to detect rutting when moving at high speeds on a sunny day. When initially learning to assess ruts, teams can quickly get a tangible assessment of the extent of rutting on a road—where it is practical and safe to do so—by using a six-foot aluminum T-bar in conjunction with a tape measure. It is the rating team's decision to choose whether to measure rutting by physical assessment.

Paved Shoulders
For roads with paved shoulders, rate the pavement from edge line to edge line and omit the shoulder condition. Shoulders are not rated because they are often constructed differently than the traveled way; they typically have a thinner structural layer so deterioration is different.

General Safety
During data collection, you will be merging in and out of traffic, slowing down, pulling off to the shoulder for team discussions, and so forth; always take safety precautions! Driving the team vehicle is not something to be taken lightly. All the vehicles must be equipped with a warning light bar. Warning garments should be worn by raters that get out of the vehicle to view distress better or to measure rutting better. Above all, be sure to comply with your employer's warning garment and safety procedure requirements.