

Low VOC Traffic Paint (Acetone Based) Assessment

Highway Stoney Trail, Trial Project
Traffic paint applied in July 2014
Evaluated on December 8, 2014

Summary

Retro-reflectivity

Retro-reflectivity was not taken at this time due to the wet pavement. However, it was visually observed that sufficient glass beads remain in the paint which should give fairly good retro-reflectivity readings.

Considering that snowplows operations during the months of November and December these paint lines are performing very well.

Durability

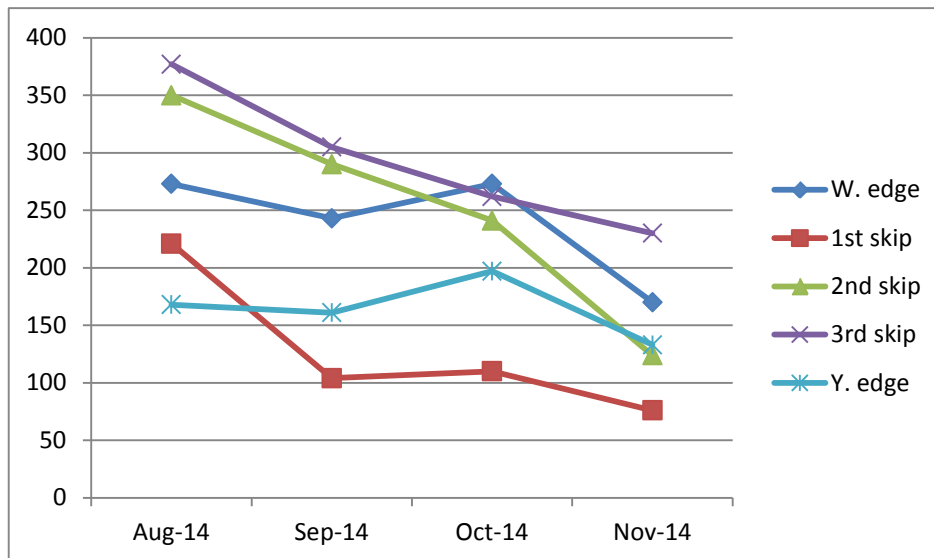
The durability of all paint lines is very good at this time. The paint lines are providing good delineation at the observed locations.

Conclusion

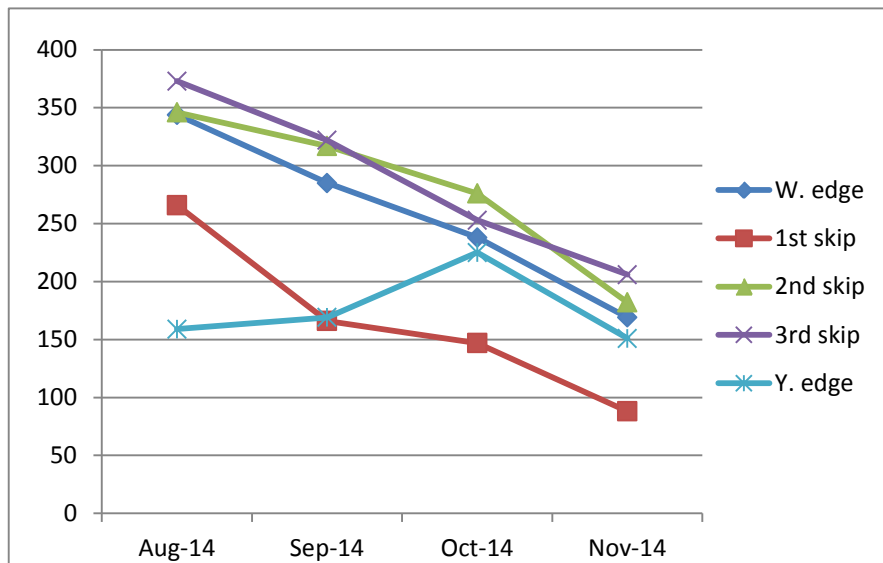
The fifth evaluation of the low VOC traffic paint reveals that the traffic paint is performing very well especially after snowplow operations. No retro-reflective readings were taken during this assessment due to the wet pavement. However, based on the previous 4 assessments and the visual observation of the 5th assessment the Low VOC Traffic Paint (Acetone Based) markings are considered a success and should be listed on the department's products list as approved traffic paint formulations for the 2015/16 season.

Retro-reflectivity Charts

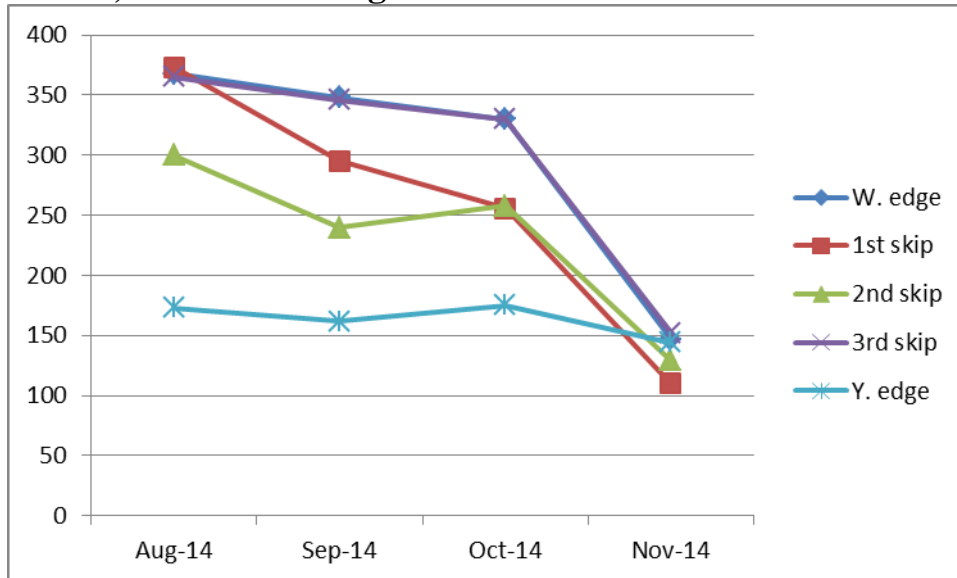
SE SB, 100m S. of Peigan Trail



SE SB, Glenmore Trail SE 1 Km Sign



SE NB, 300m S. of Peigan Trail



Please see the following detailed observation notes, retro-reflectivity readings and photographs:

Prepared by: Joe Filice

Stoney Trail – SE SB, 100m S. of Peigan Trail (3 rows of skip lines and 2 edge lines)



Overall view looking north

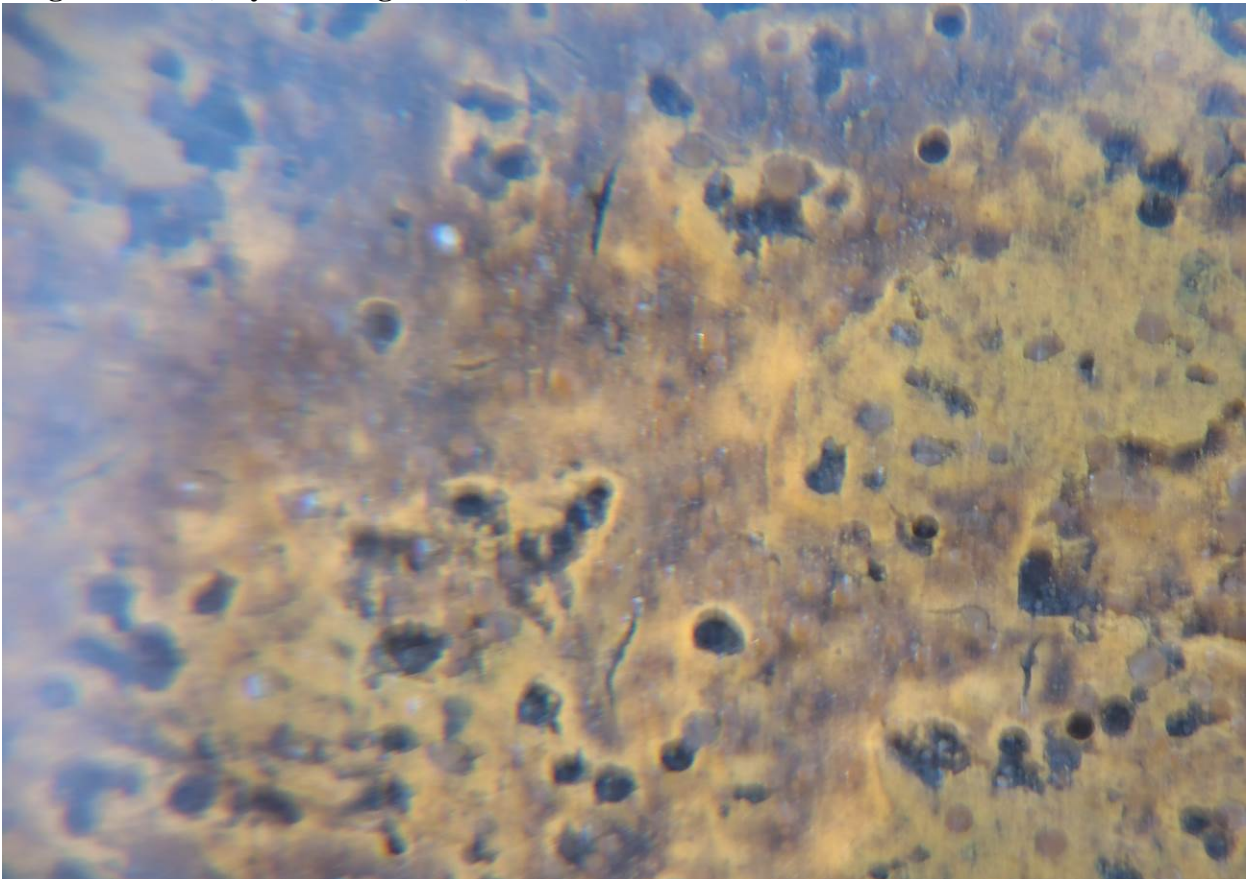
Retro-reflective readings:

W. White edge line average retro-reflectivity – No readings in Dec. wet pavement = (Nov. 170 Mcd) (Oct. 273 Mcd) (Sept 243 Mcd) (Aug. 273Mcd)
1st white skip line average retro-reflectivity – No readings in Dec. wet pavement = (Nov. 76 Mcd) (Oct. 110 Mcd) (Sept 104 Mcd) (Aug. 221Mcd)
2nd white skip line average retro-reflectivity – No readings in Dec. wet pavement = (Nov. 124 Mcd) (Oct. 241 Mcd) (Sept 290 Mcd) (Aug. 350Mcd)
3rd white skip line average retro-reflectivity – No readings in Dec. wet pavement = (Nov. 230 Mcd) (Oct. 262 Mcd) (Sept 305 Mcd) (Aug. 377Mcd)
E. Yellow edge line average retro-reflectivity – No readings in Dec. wet pavement = (Nov. 133 Mcd (Oct. 197 Mcd) (Sept 161 Mcd) (Aug. 168Mcd)

Considering the heavy snow plow operations the traffic paint durability and glass bead retention is holding up very well.

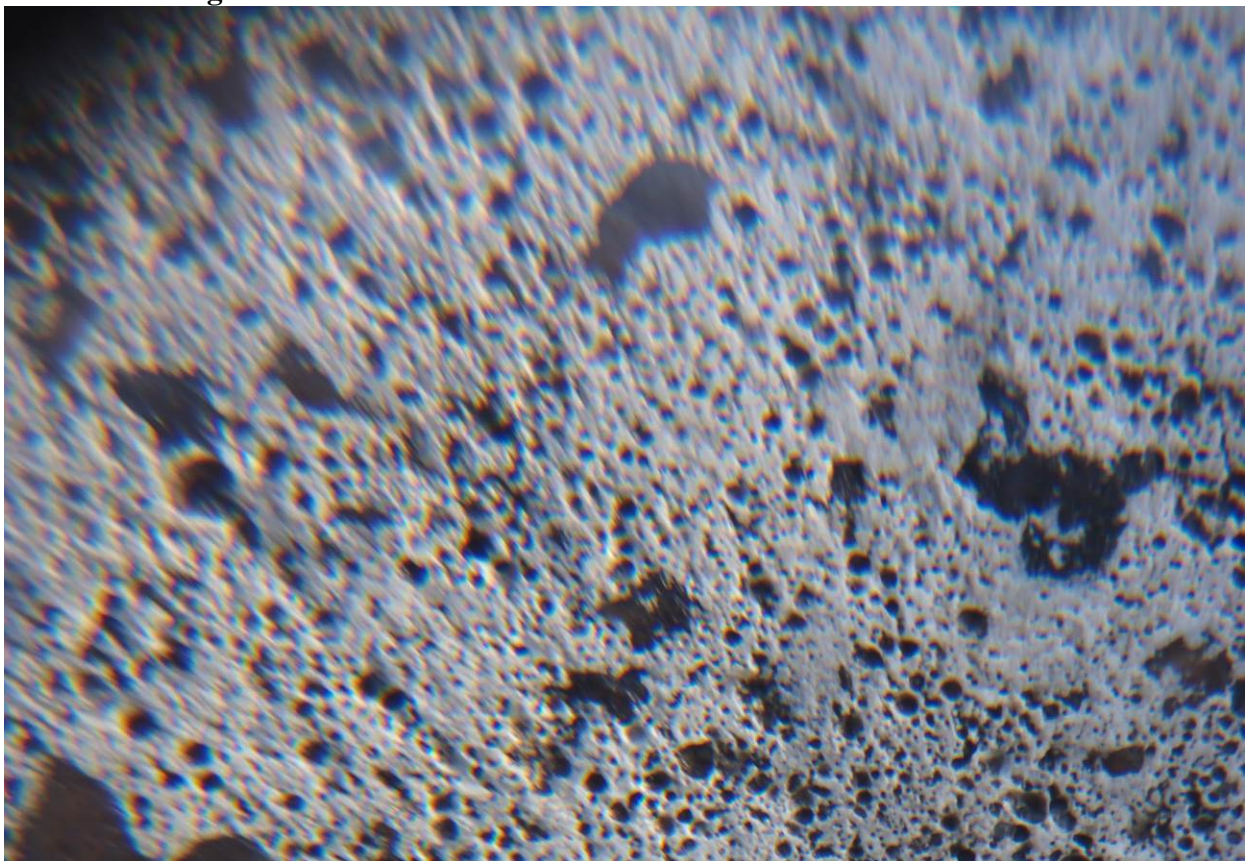
The durability and visual appearance of all the lines is very good.

Magnification (E. yellow edge line)



The larger glass beads have come out of the paint due to the snowplow operations. Many smaller glass beads remain.

W. white edge line



Larger glass beads have popped out of the paint, snowplow damage. Smaller beads remain.

Stoney Trail – SE SB, Glenmore Trail SE 1 Km Sign (3 rows of skip lines and 2 edge lines)



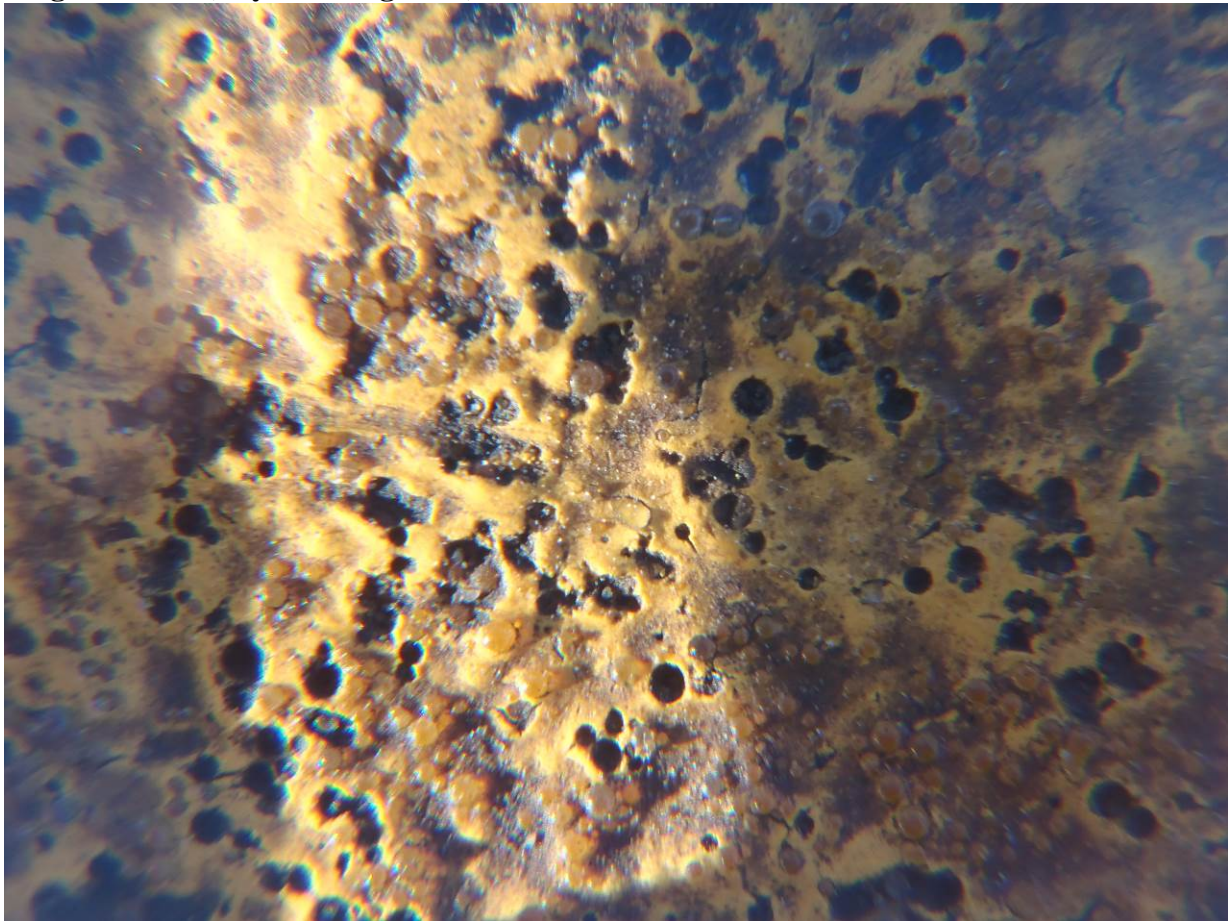
Overall view, looking north

Retro-reflective readings:

- W. White edge line average retro-reflectivity – No readings in Dec. wet pavement = (Nov. 169 Mcd) (Oct. 238 Mcd) (Sept 285 Mcd) (Aug. 344Mcd)
Ist white skip line average retro-reflectivity – No readings in Dec. wet pavement = (Nov. 88 Mcd) (Oct. 147 Mcd) (Sept 166 Mcd) (Aug. 266Mcd)
2nd white skip line average retro-reflectivity – No readings in Dec. wet pavement = (Nov. 182 Mcd) (Oct. 276 Mcd) (Sept 317 Mcd) (Aug. 346Mcd)
3rd white skip line average retro-reflectivity – No readings in Dec. wet pavement = (Nov. 206 Mcd) (Oct. 253 Mcd) (Sept 322 Mcd) (Aug. 373Mcd)
E. Yellow edge line average retro-reflectivity – No readings in Dec. wet pavement = (Nov. 151 Mcd) (Oct. 225 Mcd) (Sept 169 Mcd) (Aug. 159Mcd)

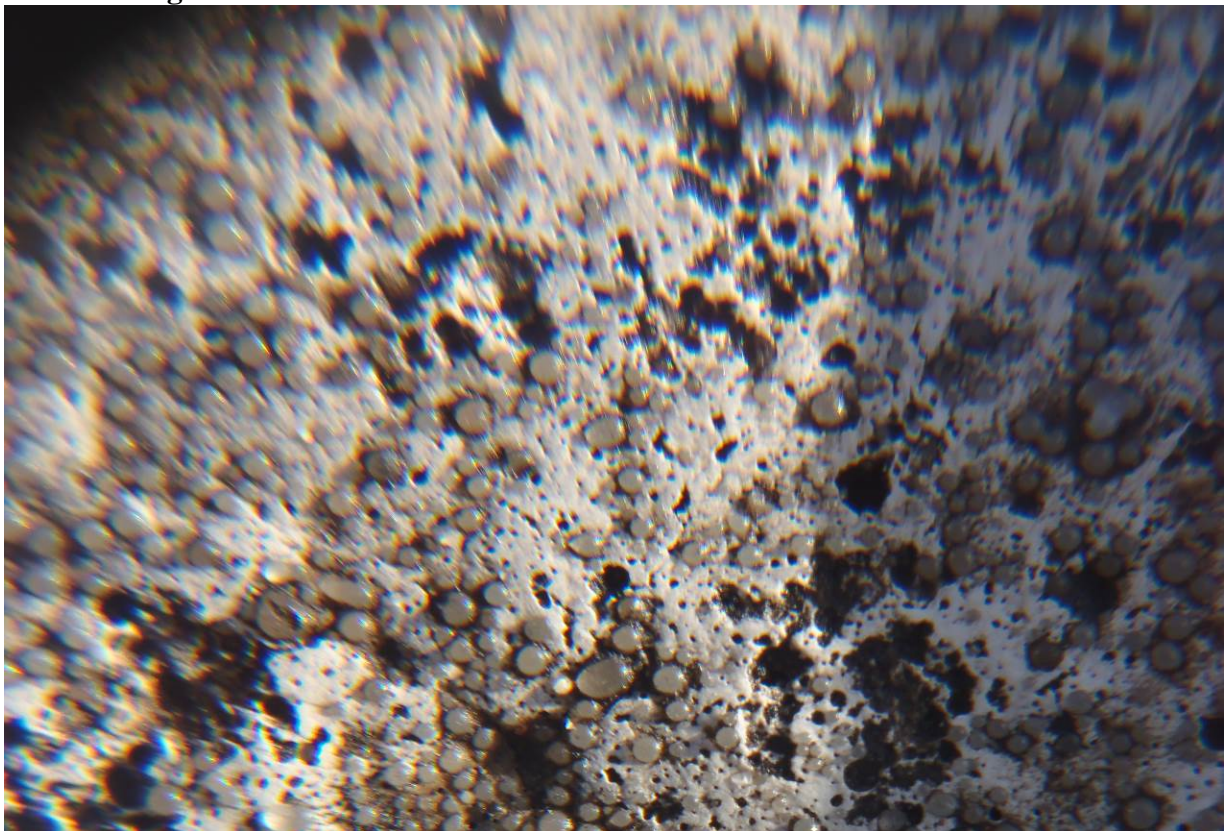
Retro-reflectivity is good when considering that snowplows have been operating on this road. The durability and daytime visibility is very good.

Magnification (E. yellow edge line)



Snowplow damage to glass beads, the larger glass beads have popped out. Smaller beads remain.

W. white edge line



Larger glass beads have popped out of the paint. Many smaller beads remain.

Stoney Trail – SE NB, 300m S. of Peigan Trail (3 rows of skip lines and 2 edge lines)



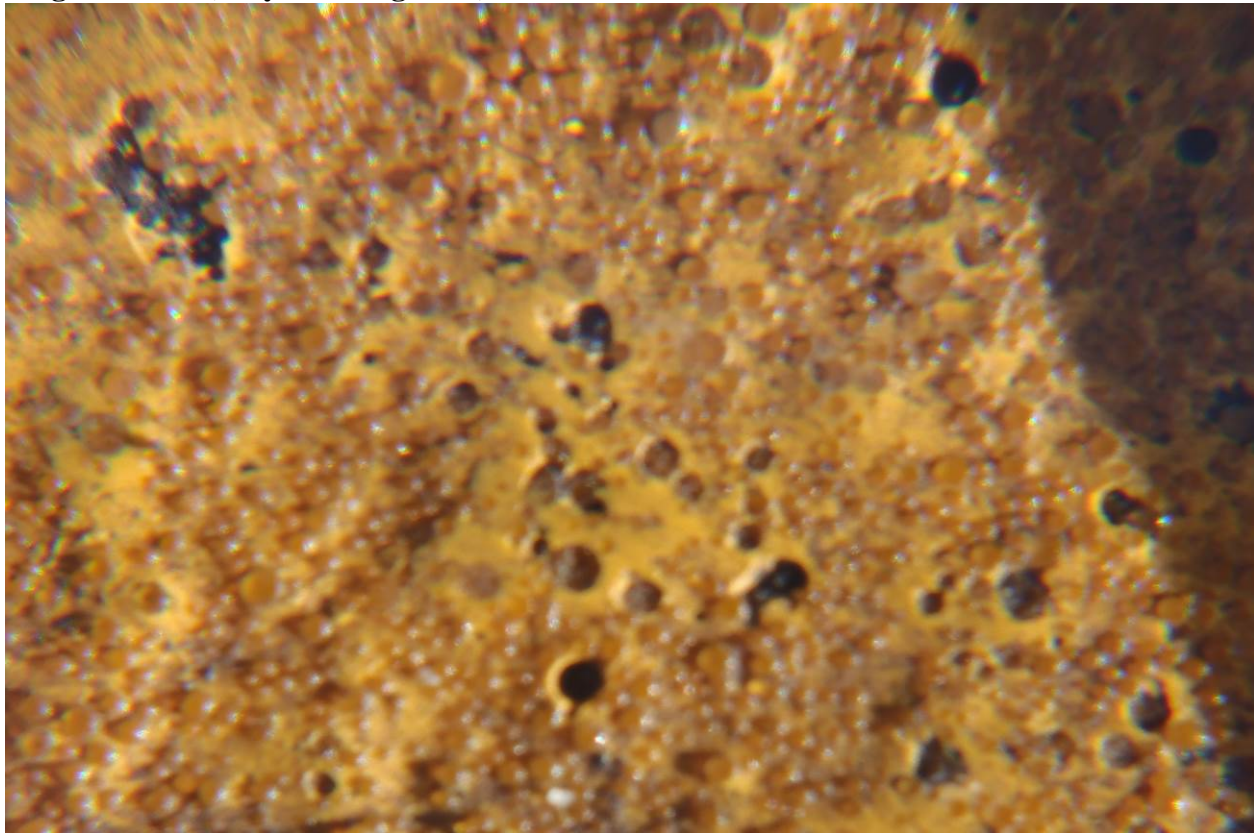
Overall view

Retro-reflective readings:

- E. White edge line average retro-reflectivity – No readings in Dec. wet pavement = (Nov. 147 Mcd) (Oct. 330 Mcd) (Sept 348 Mcd) (Aug. 368Mcd)
- Ist white skip line average retro-reflectivity – No readings in Dec. wet pavement = (Nov.110 Mcd) (Oct. 256 Mcd) (Sept 295 Mcd) (Aug. 373Mcd)
- 2nd white skip line average retro-reflectivity – No readings in Dec. wet pavement = (Nov. 129 Mcd) (Oct. 258 Mcd) (Sept 240 Mcd) (Aug. 300Mcd)
- 3rd white skip line average retro-reflectivity – No readings in Dec. wet pavement = (Nov. 152 Mcd) (Oct. 330 Mcd) (Sept 346 Mcd) (Aug. 365Mcd)
- W. Yellow edge line average retro-reflectivity – No readings in Dec. wet pavement = (Nov. 144 Mcd) (Oct. 175 Mcd) (Sept 162 Mcd) (Aug. 173Mcd)

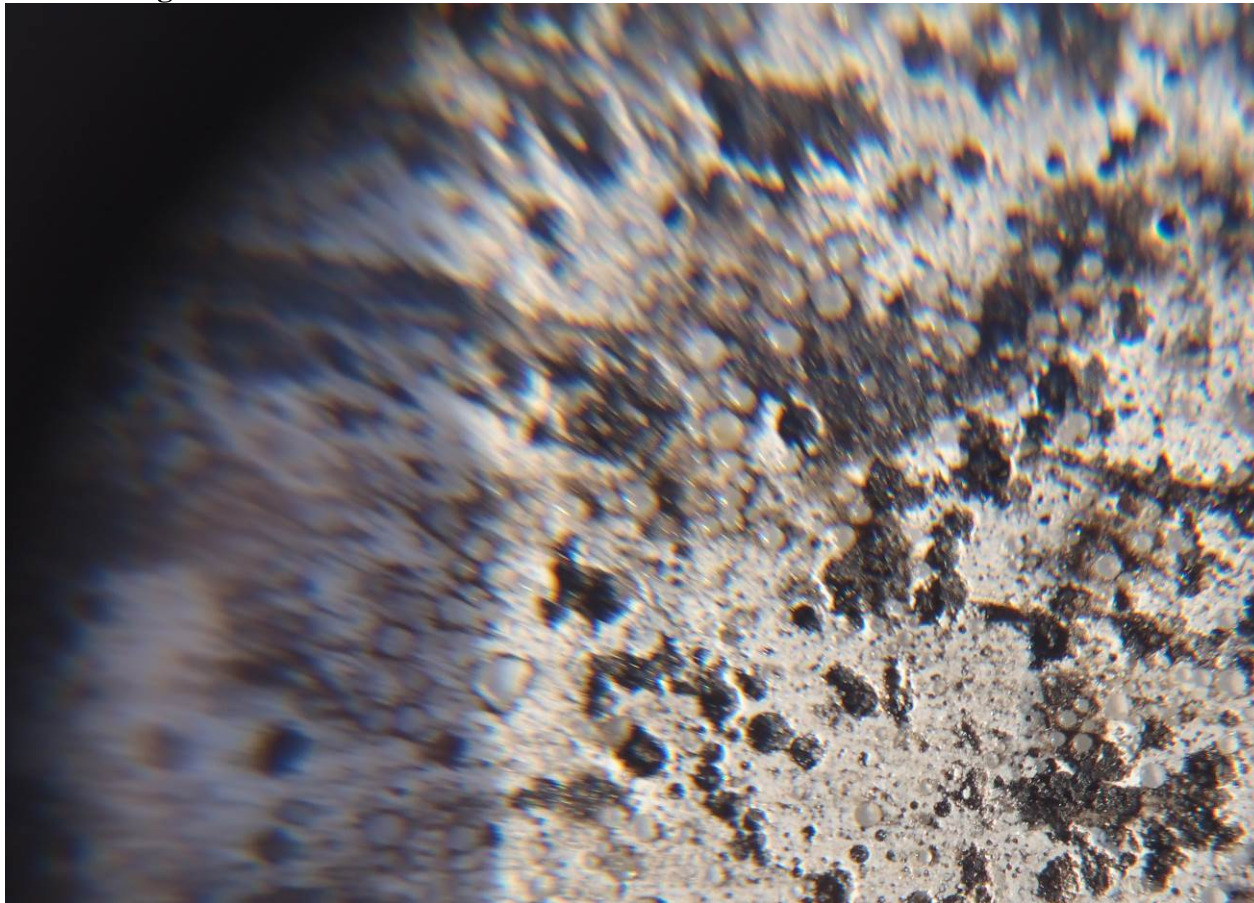
The retro-reflectivity is holding up very well at this location when considering snowplow operations on this road.

Magnification (W. yellow edge line)



Plenty of smaller glass beads remain in paint at this location.

E. white edge line



Smaller glass beads remaining in paint.