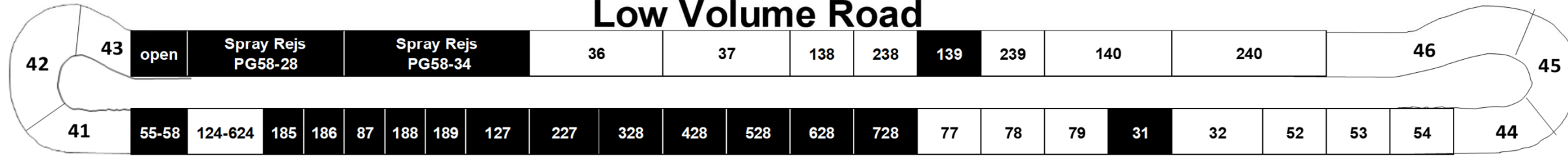


MnROAD

Low Volume Road



Minnesota Local Road Research Board
Supported since 1994

9/1/2022

| North Side Cells (West to East) | | | | | | | | | | | | | | | | | | | |
|-------------------------------------|--------------------------------------|-------------------------------------|--|------------------------|-------------------------|-------------------------|---|--------------------------------------|--|--|---|-------------------------------|--------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----|-----|
| West Loop | | | Spray Rejuvenator (2021) Treatment to the right (2017 CCPR) | | | | Original PCC | | Reduced Cementitious | | Fiber PCC Concrete | | Unbonded PCC Overlay | | East Loop | | | | |
| 41 | 42 | 43 | 33XX (west) | | 34XX (east) | | 36 | 37 | 138 | 238 | 139 | 239 | 140 | 240 | 46 | 45 | 44 | | |
| 12" PCC New Ulm Quartz | 12" PCC North Concrete Luverne | 12" PCC Shiely Lakeland | 2" PG 58-28 2X Chip | 2" PG 58-28 2X Chip | 1" PG 58-34 1.5" HMA | 1" PG 58-34 1.5" HMA | 6" PCC 15'x12'W 1" dowel Trans Tined | 6" PCC 12'x12'W Trans Tined | 8" PCC 1" Dowel 15'x12'W Astro Turf 500 lbs Cement | 8" PCC 1" Dowel 15'x12'W Astro Turf 470 lbs Cement | 3" HMA 3" Fiber Reinf PCC Turf | 4" Fiber Reinf PCC Turf | 3" Fiber Reinf PCC Thin Fabric | 3" Fiber Reinf PCC Old Fabric | 12" PCC High Early Mix | 12" PCC Type III Mix | 12" PCC Control | | |
| 15'x12'W 1" dowel Trans Tined | 15'x12'W 1" dowel Trans Tined | 15'x12'W 1" dowel Trans Tined | 4" CCPR Emulsion | 4" CCPR Foam | 4" CCPR Foam | 4" CCPR Emulsion | 5" Class 5 | 5" Class 5 | 5" Class 5 | 5" Class 5 | 6" Class 5 | 6" Class 5 | 5" Class 5 | 5" Class 5 | 15'x12'W 1" dowel Trans Tined | 15'x12'W 1" dowel Trans Tined | 15'x12'W 1" dowel Trans Tined | | |
| Clay | Clay | Clay | 12" Class 6 | 12" Class 6 | 12" Class 6 | 12" Class 6 | Sand | Sand | Clay | Clay | 4" Common Borrow | 4" Common Borrow | Clay | Clay | Clay | Clay | Clay | | |
| Opened Length (ft) 491 | 490 | 494 | 2021 425 | 2021 425 | 2021 425 | 2021 437 | Jul 93 480 | Jul 93 504 | 2017 240.5 | 2017 270 | 2020 275.5 | 2017 258.5 | Jul 13 225 | Jul 13 234 | Jul 93 508 | Jul 93 489 | Jul 93 442 | | |
| Inside Gap 97 | 147 | 175 | 425 | 425 | 425 | 437 | 127 | 504 | 42 | 19.5 | 8 | 275.5 | 258.5 | 225 | 234 | 108 | 98 | 146 | 0 |
| Outside Gap 102 | 152 | 175 | | | | | | | | | | | | | | | 102 | 153 | 0 |
| Outside Cell (ft) 510 | 510 | 508 | | | | | | | | | | | | | | | 493 | 511 | 463 |

| 2021 Spray Rejuvenators (MnROAD and St Michael) | | |
|---|--------------|--|
| PG58-28 West | PG58-34 East | MnROAD Descriptions (50 ft each) and St Michael (PG 58-34 - 1/10 mile each) - separate map |
| 3301 | 3401 | Replenify - FHR |
| 3302 | 3402 | Control |
| 3303 | 3403 | RePlay Biospan |
| 3304 | 3404 | Biorestor Low - ASI Roads |
| 3305 | 3405 | GSB88 |
| 3306 | 3406 | Biorestor - ASI Roads |
| 3307 | 3407 | CRF |
| 3309 | 3409 | Reclamite |
| 3310 | 3410 | RPE-R -- HG Miegs |
| 3311 | 3411 | Control |
| 3312 | 3412 | Delta Mist - Collaborative Aggregates |
| 3313 | 3413 | BioMAG - Iowa State University |
| 3314 | 3414 | TIO2 |
| 3315 | 3415 | Invigorate |

| Located at the MnROAD Site - not on LVR | | |
|---|------|---|
| PCC Pervious Pavements | | |
| 64 | 2007 | 7" PCC / 12" CA-15 Base/Geotextile/clay |
| 64-1 | 2011 | 6" Precast/1" base / 12" CA-15 Base/Fab/clay (Park Lot) |
| 74 | 2006 | 4" PCC/6" washed Stone/Geotextile/clay (SideWalk) |
| Implements of Husbandry | | |
| 83 | 2007 | 3.5" HMA/6" C-3 Base/Clay (Stockpile Area) 450 ft |
| 84 | 2007 | 3.5" HMA/9" C-3 Base/Clay (Stockpile Area) 450 ft |

| South Side Cells (West to East) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|----------------------------------|---|--|--|--|--|--|--|--|---|---|--|---|---|--------------------------------|---------------------------------|---------------------------------------|---|---|---------------------------------------|---|------------------------------|------------------------------|------------------------------|---------------|----------------|---|--|--|
| Open Graded Friction Course | | | | Concrete - Early Opening to Traffic | | | | | | Recycled Unbound Base | | | | Large Subbase | | Large Subbase and Geogrid Cells | | | | Stabilized Full Depth Reclamation | | Mesabi Rock | Thin PCC | PCC Dowels | 60-Year PCC | Mesabi PCC | | | |
| 55 | 56 | 57 | 58 | 124 | 224 | 324 | 424 | 524 | 624 | 185 | 186 | 87 | 188 | 189 | 127 | 227 | 328 | 428 | 528 | 628 | 728 | 77 | 78 | 79 | 31 | 32 | 52 | 53 | 54 |
| 1" OGFC Reg Tack | 1" OGFC Trackless | 1" OGFC Trackless 3" HMA 58-34 | 1" OGFC Reg Tack 3" HMA 58-34 | 6" PCC 15'x12'W 1" dowel Astro Turf | 6" PCC 15'x12'W 1" dowel Astro Turf | 6" PCC 15'x12'W 1" dowel Astro Turf | 6" PCC 15'x12'W 1" dowel Astro Turf | 6" PCC 15'x12'W 1" dowel Astro Turf | 6" PCC 15'x12'W 1" dowel Astro Turf | 3.5" HMA | 3.5" HMA | 4" HMA 4" Mesabi Ballast -- CA-15 | 3.5" HMA | 3.5" HMA | 3.5" HMA | 3.5" HMA | 3.5" HMA | 3.5" HMA | 3.5" HMA | 3.5" HMA | 3.5" HMA | 4" 58-34 Elvaloy + PPA | 4" 58-34 Elvaloy + PPA | 4" 58-34 Elvaloy + PPA | 4" 64-34 | 5" PCC | 7.5" PCC 15'x12'W 13/14" Astro Turf | 12" PCC 15'x12'W 1.5" SS dowels Trans Broom | 7.5" PCC 15'x12'W 1" dowel Astro Turf |
| 12" PCC | 12" PCC | 4" Class 6 | 4" Class 6 | 6" Class 6 | 6" Class 6 | 6" Class 6 | 6" Class 6 | 6" Class 6 | 6" Class 6 | 12" Coarse RCA | 12" Fine RCA | 4" Mesabi Ballast -- CA-15 Type V Geo- Textile | 12" Limestone Agg Base Class 6 | 12" Agg Base RAP+RCA Class 6 | 6" Class 6 | 6" Class 6 | 6" Class 5Q | 6" Class 5Q | 6" Class 5Q | 6" Class 5Q | 6" Class 5Q | 8" FDR | 8" Class 6 | 8" FDR + Fly Ash | 4" Class 5 | 7" Class 5Q | 5" Class 4 | 5" Class 5 | 12" Class 6 |
| 12x15 1" dowel Trans Tined | 12x15 1" dowel Trans Tined | Sand | Sand | 6" Class 6 | 6" Class 6 | 6" Class 6 | 6" Class 6 | 6" Class 6 | 6" Class 6 | 3.5" Select Granular Borrow Sand | 3.5" Select Granular Borrow Sand | 4" Mesabi Ballast -- CA-15 Type V Geo- Textile Clay Sand | 12" Limestone Agg Base Class 6 3.5" Select Granular Borrow Clay | 12" Agg Base RAP+RCA Class 6 3.5" Select Granular Borrow Clay | 18" Large Subbase 1 lift | 18" Large Subbase 2 lifts | Fabric 9" Large Subbase Clay | Fabric Grid 1 9" Large Subbase Clay | Fabric Grid 2 9" Large Subbase Clay | Grid 2 9" Large Subbase Clay | No Grid or fabric 9" Large Subbase Clay | Clay | Clay | Clay | 12" Class 3 | Clay | Clay | Clay | Clay |
| Opened Length (ft) 50 | 50 | 50 | 49 | 2017 130 | 2017 120 | 2017 120 | 2017 120 | 2017 60 | 2017 18 | 2017 201 | 2017 201 | Oct 08 226 | 2017 201 | 2017 200 | 2017 258 | 2017 260 | 2017 109 | 2017 108 | 2017 108 | 2017 113 | 2017 131 | Oct 07 286 | Oct 07 365 | Sep 07 324 | Sep 04 500 | June 00 460 | June 00 285 | Oct 08 115 | Oct 04 194 |
| Gap (ft) | | | | | | | | | | 50 | 1.5 | 1 | | | | | | | | | | 30 | 49 | 49 | 69 | 30 | | | |