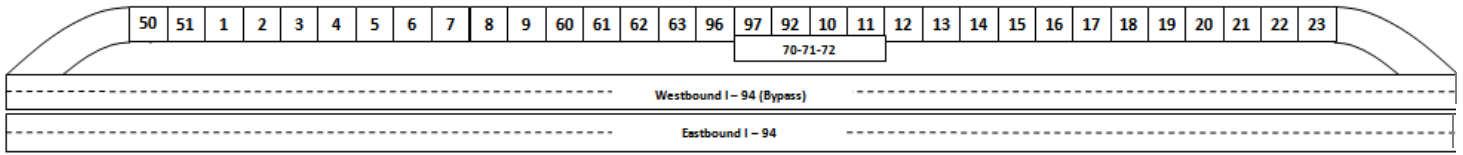


MnROAD Mainline



| Original HMA | Stabilized Full Depth Reclamation | | | | Unbonded Concrete Overlay | | | | Concrete Initiatives | | Original Concrete | | | Whitotopping | | | | |
|--|-----------------------------------|------------------|-------------------|-----------------------|---------------------------|-----------------------|-----------------------|------------------|----------------------|------------------|-------------------|---------------------|-----------------------|-----------------|----------------|----------------|-------------------------|--|
| 1 | 2 | 3 | 4 | 505 | 605 | 305 | 405 | 306 | 406 | 7 | 8 | 9 | 60 | 61 | 62 | 63 | 96 | |
| 6" 58-28 75 blow | 1" TBWC 2" 64-34 | 1" TBWC 2" 64-34 | 1" 64-34 2" 64-34 | 5" UBOL Fabric | 5" UBOL Fabric | 5" UBOL | 5" UBOL | 6" Long Time | 6" Long Time | 7.5" Trans Tined | 7.5" Trans Tined | 7.5" Trans Tined | 5" sealed | 5" noseal | 4" sealed | 4" seal '10 | 6" sealed | |
| 33" Class 4 | 6" FDR + EE | 6" FDR + EE | 8" FDR + EE | 7.5" cracked '93 PCC | 7.5" '93 PCC | 5" '93 PCC | 7.5" cracked '93 PCC | 6" OGAB Sp | 6" OGAB Sp | 4" PSAB | 4" PSAB | 4" PSAB | 7" 58-28 93HMA | 7" 58-28 93HMA | 8" 58-28 93HMA | 8" 58-28 93HMA | 7" 58-28 93HMA | |
| | 6" FDR | 2" FDR 2" CI 5 | 9" FDR + Fly Ash | 3" CI 4 | 3" CI 4 | 3" CI 4 | 3" CI 4 | 7" Class 5 | 7" Class 5 | 3" CI 4 | 3" CI 4 | 3" CI 4 | Clay | Clay | Clay | Clay | Clay | |
| Driving Lane 1.5" 52-34 HMA inlay 2006 | 26" Class 4 | 33" Class 3 | Clay | 27" Class 3 | 27" Class 3 | 27" Class 3 | 27" Class 3 | Clay | Clay | Clay | Clay | Clay | Astro Turf 6x5 | Astro Turf 6x5 | Astro Turf 6x5 | Astro Turf 6x5 | Trans Tined 6x5 Polypro | |
| Clay | | | | 15x14 15x13 no dowels | 15x14 15x13 no dowels | 15x14 15x13 no dowels | 15x14 15x13 no dowels | 15'x12' 1" dowel | 15'x12' 1" dowel | 2007 Innov Grind | 2007 Trad Grind | 2008 Ultimate Grind | 2011 CPR + Trad Grind | 2011 Trad Grind | | | | |
| Sep 92 Current | Oct 08 Current | Oct 08 Current | Oct 08 Current | Sep 11 Current | Sep 11 Current | Oct 08 Current | Oct 08 Current | Sep 11 Current | Sep 11 Current | Sep 92 Current | Sep 92 Current | Sep 92 Current | Oct 04 Current | Oct 04 Current | Oct 04 Current | Oct 04 Current | Oct 97 Current | |

| 2009 SHRP-II Composite Pavements | | | Original PCC | Thin Concrete | | | | | Whitotopping on Distressed Asphalt | | | | | | | | |
|----------------------------------|----------------|-----------------|---|---------------------|---------------------|-----------------------|---------------------|-----------------------|------------------------------------|-----------------|-------------------------|-----------------|-------------------------|----------------------------|-------------------------|-----------------|-------------------------|
| 70 | 71 | 72 | 12 | 513 | 113 | 213 | 313 | 413 | 114 | 214 | 314 | 414 | 514 | 614 | 714 | 814 | 914 |
| 3" 64-34 Saw/Seal | 3" PCC EAC | 3" PCC | 9.5" Trans Tined | 5" 5" CI 1 Stab Agg | 5" 5" CI 1 Stab Agg | 5.5" 5" CI 1 Stab Agg | 6" 5" CI 1 Stab Agg | 6.5" 5" CI 1 Stab Agg | 6" turf | 6" turf | 6" turf | 6" turf | 6" turf | 6" turf | 6" turf | 6" turf | 6" turf |
| 6" PCC Recycle | 6" PCC Recycle | 6" PCC Low Cost | 5" Class 5 | 5" Class 5 | 5" Class 5 | 4.5" Class 5 | 4" Class 5 | 3.5" Class 5 | 5" 58-28 93 HMA | 5" 58-28 93 HMA | 6" 58-28 93HMA | 6" 58-28 93HMA | 7" 58-28 93HMA | 7" 58-28 93HMA | 7.5" 58-28 93HMA | 8" 58-28 93HMA | 8" 58-28 93HMA |
| 8" Class 7 | 8" Class 7 | 8" Class 7 | Clay | Clay | Clay | Clay | Clay | Clay | Clay | Clay | Clay | Clay | Clay | Clay | Clay | Clay | Clay |
| Clay | Clay | Clay | 15x12 1.25" dowels driving none passing | 15x12 1.25" dowel | long broom | long broom | long broom | long broom | 6'x6' 1" dowels driving | 6'x6' No dowels | 6'x6' 1" dowels driving | 6'x6' no dowels | 6'x6' 1" dowels driving | 6'x12' Flat dowels driving | 6'x6' 1" dowels driving | 6'x6' no dowels | 6'x6' 1" dowels driving |
| May 10 Current | May 10 Current | May 10 Current | Sep 92 Current | Oct 08 Current | Oct 08 Current | Oct 08 Current | Oct 08 Current | Oct 08 Current | Oct 08 Current | Oct 08 Current | Oct 08 Current | Oct 08 Current | Oct 08 Current | Oct 08 Current | Oct 08 Current | Oct 08 Current | Oct 08 Current |

| WMA | Recycled Unbound Base, Warm Mix Asphalt | | | | Low Temperature Cracking, Fractionated RAP | | | | WMA, taconite |
|--------------------|---|---------------------------|----------------|----------------|--|--------------------|--------------------|--------------------|---------------|
| 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | |
| 3" WM 58-34 | 5" WM 58-34 | 5" WM 58-34 | 5" WM 58-34 | 5" WM 58-34 | 5" 58-28 | 5" 58-28 | 5" 58-34 | 5" WM 58-34 | |
| 11" 64-22 1993 HMA | 12" 100% recycle PCC | 12" 50% RePCC 50% Class 5 | 12" 100% RAP | 12" Class 5 | 12" Class 5 | 12" Class 5 | 12" Class 5 | 12" Mesabi Ballast | |
| Clay | 12" Class 3 | 12" Class 3 | 12" Class 3 | 12" Class 3 | 12" Class 3 | 12" Class 3 | 12" Class 3 | 12" Class 3 | |
| | 7" Select Gran | 7" Select Gran | 7" Select Gran | 7" Select Gran | 7" Select Gran | 7" Select Gran | 7" Select Gran | 7" Select Gran | |
| | Clay | Clay | Clay | Clay | Clay 30% Non Fract RAP | Clay 30% Fract RAP | Clay 30% Fract RAP | Clay | |
| Sep 08 Current | Sep 08 Current | Sep 08 Current | Sep 08 Current | Sep 08 Current | Sep 08 Current | Sep 08 Current | Sep 08 Current | Sep 08 Current | |

* All thicknesses shown as design thickness