

JOB # 34 NORTH DAKOTA

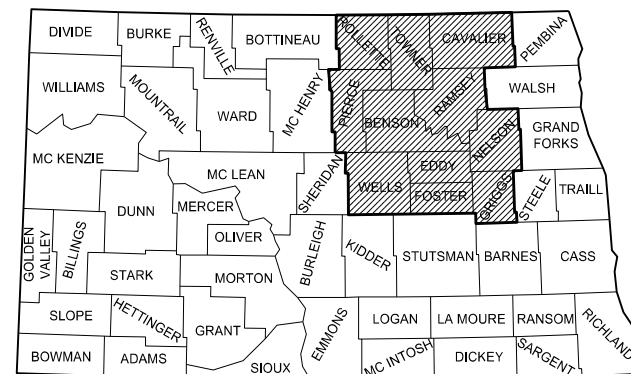
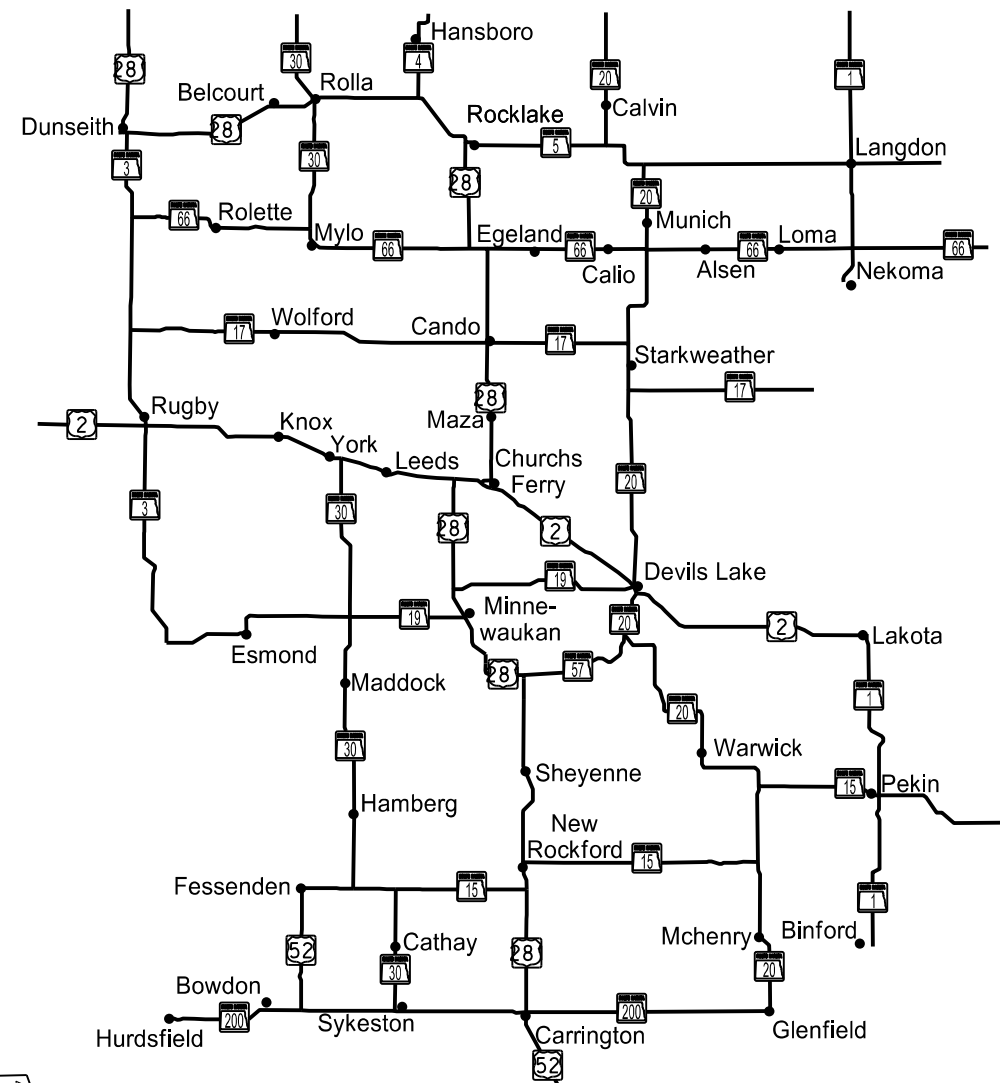
DEPARTMENT OF TRANSPORTATION

HES-3-999(046)
Devils Lake District
District Wide Pavement Marking

| | | | | |
|-------|----------------|-------|-------------|-----------|
| STATE | PROJECT NO. | PCN | SECTION NO. | SHEET NO. |
| ND | HES-3-999(046) | 23065 | 1 | 1 |

| | |
|-----------------------------|---|
| GOVERNING SPECIFICATIONS | Date Published and Adopted by the North Dakota Department of Transportation |
| Standard Specifications | 10/1/2020 |
| Supplemental Specifications | NONE |

| PROJECT NUMBER \ DESCRIPTION | NET MILES | GROSS MILES |
|-----------------------------------|-----------|-------------|
| HES-3-999(046) / Pavement Marking | 926.227 | 926.227 |



STATE COUNTY MAP

| |
|--------------------------|
| DESIGNER Steeg Nelson |
| DESIGNER |
| DESIGNER |

| | | |
|---|--------------|------------|
| ND DEPARTMENT OF TRANSPORTATION DEVILS LAKE DISTRICT | Wyatt Hanson | 02/05/2021 |
|---|--------------|------------|

NDDOT DEVILS LAKE

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PLAN SECTIONS

| Section | Page(s) | Description |
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| 1 | 1 | Title Sheet |
| 2 | 1 | Table of Contents |
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| 8 | 1 | Quantities |
| 20 | 1 | General Details |
| 120 | 1 - 5 | Pavement Marking |

LIST OF STANDARD DRAWINGS

| Number | Description |
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| D-101-1, 2, 3 | NDDOT Abbreviations |
| D-101-10 | NDDOT Utility Company and Organization Abbreviations |
| D-704-9, 10, 11 | Construction Sign Details - Terminal And Guide Signs |
| D-704-14 | Construction Sign Punching And Mounting Details |
| D-704-27 | Mobile Operation (Pavement Marking) |
| D-762-1 | Pavement Marking Message Details |
| D-762-4 | Pavement Marking |
| D-762-5, 6 | Pavement Marking for Standard 90 Degree Flared Intersection-(No Center Left Turn Lane on Major Road) |

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| ND | HES-3-999(046) | 6 | 1 |

NOTES

100-P01 COORDINATION: At least one week before beginning work, contact the District Engineer or Assistant District Engineer to assure that segments of highways are cleared for work. Segments may be removed or added pending additional projects being bid or not being bid.

Mr. Dan Zink, Director of Administration
 Red River Valley and Western Railroad Company
 P.O. Box 608
 Wahpeton, ND 58074
 701-642-8257

| PENDING PROJECTS BEING BID OR NOT BID CONSIST OF THE FOLLOWING | | | | |
|--|--|-------------------------|---------|--------|
| HWY | HIGHWAY DESCRIPTION | REFERENCE POINT (MILES) | | |
| | | FROM | TO | TOTAL |
| ND 1 | RP 150 to RP 152 | 150.203 | 152.682 | 2.479 |
| US 2 EB | 2 Mi E Churchs Ferry to Devils Lake | 252.161 | 267.156 | 14.995 |
| US 2 WB | RP 201 to 1 Mile W of Rugby | 201.000 | 209.646 | 8.646 |
| US 2 WB | 2 Mile E Cray E to Lakota | 284.008 | 295.390 | 11.382 |
| ND 15 | 16 Mi E of New Rockford to Jct ND 20 | 43.590 | 52.329 | 8.739 |
| ND 15 | Jct ND 20 to Jct ND 1 | 60.444 | 73.570 | 13.126 |
| ND 15 | Jct ND 1 Pekin E to Mcville | 73.604 | 81.044 | 7.440 |
| ND 17 | Jct ND 3 to Jct US 281 | 0.000 | 38.476 | 38.476 |
| ND 20 | Cty Line Warwick - Devils Lake Narrows | 77.954 | 97.709 | 19.755 |
| ND 30 | Jct ND 66 to Jct US 281 | 181.274 | 195.080 | 13.806 |
| ND 66 | Jct ND 3 to W Edge of Rolette | 0.048 | 9.395 | 9.347 |
| ND 66 | RP 40 | 40.258 | 40.480 | 0.222 |
| ND 200 | E Jct 3 Hurdsfield-E to W Jct 52 | 254.153 | 268.557 | 14.404 |

Obtain information regarding crossing numbers from the Federal Railroad Administration website: <http://safetydata.fra.dot.gov/Officeofsafety/>

107-P03 RAILROAD PROTECTIVE LIABILITY INSURANCE – SITE 3: This project crosses the BNSF Railway Company at nine locations see section 120, sheet 5. The type of work that will be performed within the railroad right of way is pavement marking. Direct inquiries regarding protective liability insurance to:

Rosa Martinez
 Marsh USA Inc.
 4400 Comerica Bank Tower
 1717 Main Street
 Dallas, TX 75201-7357, USA
 214-303-8519
 Roas.M.Martinez@marsh.com

Obtain information regarding crossing numbers from the Federal Railroad Administration website: <http://safetydata.fra.dot.gov/Officeofsafety/>

107-P01 RAILROAD PROTECTIVE LIABILITY INSURANCE – SITE 1: This project crosses the Northern Plains Railroad at eight locations see section 120, sheet 5. The type of work that will be performed within the railroad right of way is pavement marking. Direct inquiries regarding protective liability insurance to:

Jesse Chalich
 Vice President Operations
 Northern Plains Railroad
 P.O. Box 38
 Fordville, ND 58231
 701-229-3330
 jesse_chalich@nprail.com

Obtain information regarding crossing numbers from the Federal Railroad Administration website: <http://safetydata.fra.dot.gov/Officeofsafety/>

107-P02 RAILROAD PROTECTIVE LIABILITY INSURANCE – SITE 2: This project crosses the Red River Valley and Western Railroad Company at two locations see section 120, sheet 5. The type of work that will be performed within the railroad right of way is pavement marking. Direct inquiries regarding protective liability insurance to:

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|-------|----------------|-------------|-----------|
| STATE | PROJECT NO. | SECTION NO. | SHEET NO. |
| ND | HES-3-999(046) | 6 | 2 |

NOTES

762-P01 PAVEMENT MARKING INSTALLATION: Include all costs associated with four-inch pavement markings in the contract unit price for "PVMT MK INSTALLATION".

The Engineer will not measure the bid item "PVMT MK INSTALLATION" and will pay plan quantity, completed and in-place, and accepted by the Engineer; unless the Engineer makes any changes in the field. Any changes made in the field will be measured and payment will be adjusted accordingly.

762-P02 GROOVED PAVEMENT MARKING: The following table details the locations of grooved pavement marking. Installation of these pavement markings are not required under this contract:

| EXCLUSION AREAS OF EPOXY AND TAPE | | | |
|-----------------------------------|---------|---------|-----------------------------------|
| HWY | FROM | TO | EXCLUSION DESCRIPTION |
| US 2 EB | 270.534 | 272.292 | 8" Line, Messages |
| US 2 EB | 271.135 | 272.036 | Center |
| US 2 EB | 272.285 | 283.627 | 8" Line, Messages |
| US 2 WB | 270.534 | 272.036 | 8" Line, Messages |
| US 2 WB | 271.135 | 272.072 | 8" Line, Messages |
| US 2 WB | 284.015 | 295.390 | 8" Line, Message |
| ND 20 | 97.709 | 102.631 | 8" Line, Edge, Center, & Messages |
| US 52 | 222.630 | 222.767 | 8" Line, Edge, Center, & Messages |
| US 52 | 222.795 | 223.736 | Center |
| ND 57 | 6.117 | 13.277 | 8" Line, Edge, Center, & Messages |
| US 281 | 112.539 | 112.632 | 8" Line, Edge, Center, & Messages |
| US 281 | 231.622 | 253.741 | 8" Line, Edge, Center, & Messages |

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NOTES

| | | | |
|-------|----------------|-------------|-----------|
| STATE | PROJECT NO. | SECTION NO. | SHEET NO. |
| ND | HES-3-999(046) | 6 | 3 |

762-P03 CROSSWALKS: Include all costs associated with crosswalks in the contract unit price for "PVMT MK PAINTED 24IN LINE". Install crosswalks that cross mainline highway near the following intersections according to Standard Drawing D-762-01:

| INSTALLATION CROSSWALK | | | | | |
|------------------------|--------|------------------|---------|-------|-----------|
| CITY | HWY | LOCATION | CITY | HWY | LOCATION |
| Cando | US 281 | @ Hospital | Langdon | ND 5 | 4TH ST |
| | US 281 | @ School | | ND 5 | 4TH ST |
| | ND 17 | 3RD AVE | | ND 5 | 5TH ST |
| | ND 17 | 3RD AVE | | ND 5 | 5TH ST |
| | ND 17 | 4TH AVE | | ND 5 | 6TH ST |
| | ND 17 | 4TH AVE | | ND 5 | 7TH ST |
| | ND 17 | 5TH AVE | Rolette | ND 66 | Main ST |
| | ND 17 | 5TH AVE | | ND 66 | Main ST |
| | ND 17 | 6TH AVE | | ND 66 | Berg ST |
| | ND 17 | 6TH AVE | | | |
| Dunseith | US 281 | 1ST AVE S | Rugby | ND 3 | 2ND ST SW |
| | US 281 | 1ST AVE S | | ND 3 | 2ND ST SW |
| | US 281 | Peace Garden AVE | | ND 3 | 3RD ST SW |
| | US 281 | 1ST AVE N | | ND 3 | 3RD ST SW |
| | US 281 | 1ST AVE N | | ND 3 | 4TH ST SW |
| | US 281 | 2ND AVE N | | ND 3 | 8TH ST SW |
| New Rockford | US 281 | 1ST AVE N | | | |
| | US 281 | 1ST AVE N | | | |

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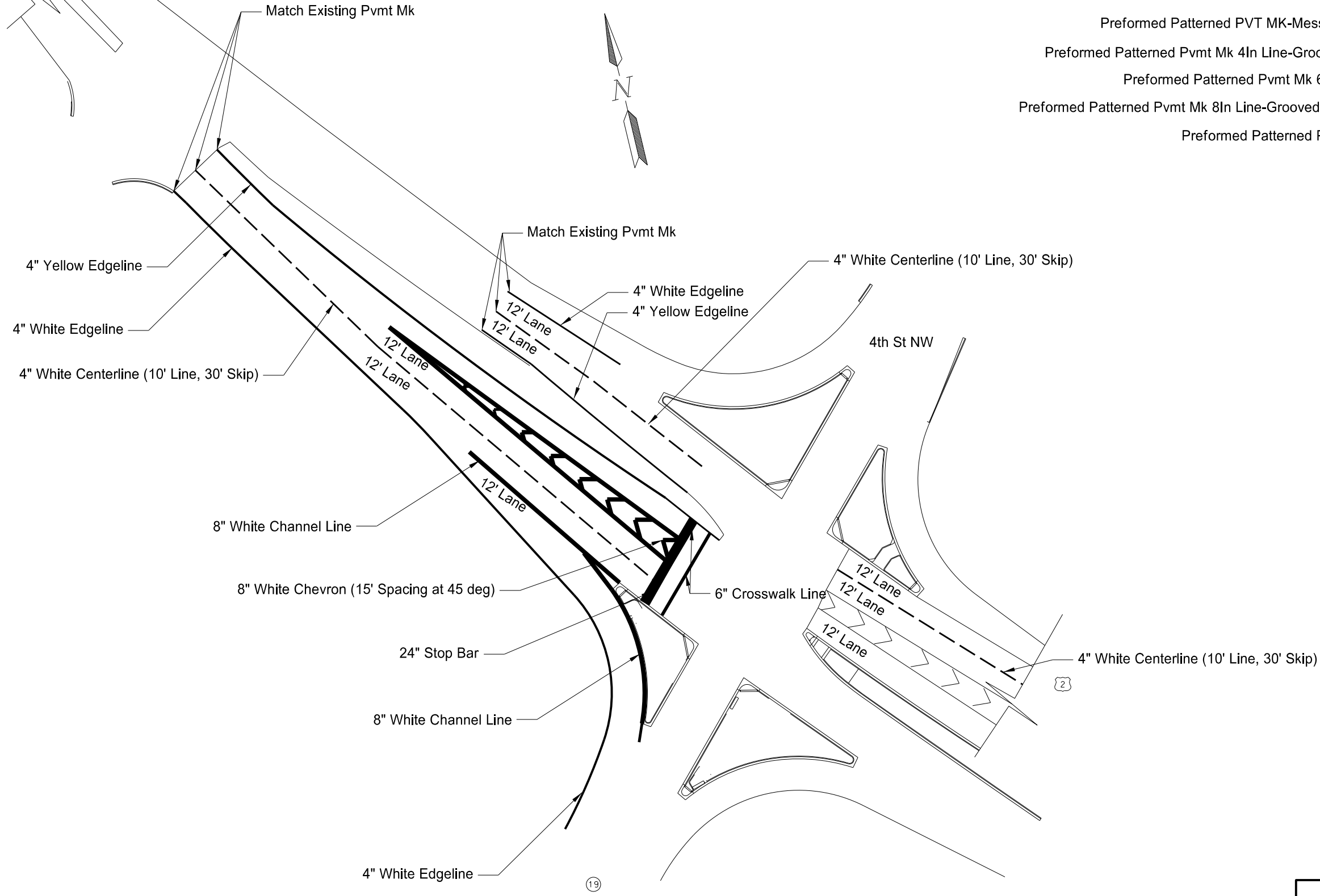
ESTIMATE OF QUANTITIES

| | | | |
|-----------|----------------|-------------|-----------|
| STATE | PROJECT NO. | SECTION NO. | SHEET NO. |
| ND | HES-3-999(046) | 8 | 1 |

| SPEC CODE | ITEM DESCRIPTION | UNIT | MAINLINE | TOTAL |
|-----------|--|-------|----------|--------|
| ----- | ----- | ----- | ----- | ----- |
| 103 | 0100 CONTRACT BOND | L SUM | 1 | 1 |
| 107 | 0103 RAILWAY PROTECTION INSURANCE-SITE 1 | EA | 8 | 8 |
| 107 | 0104 RAILWAY PROTECTION INSURANCE-SITE 2 | EA | 3 | 3 |
| 107 | 0105 RAILWAY PROTECTION INSURANCE-SITE 3 | EA | 9 | 9 |
| 702 | 0100 MOBILIZATION | L SUM | 1 | 1 |
| 762 | 0103 PVMT MK PAINTED-MESSAGE | SF | 14,013 | 14,013 |
| 762 | 0107 PVMT MK INSTALLATION | MILE | 2,198 | 2,198 |
| 762 | 0122 PREFORMED PATTERNED PVMT MK-MESSAGE(GROOVED) | SF | 96 | 96 |
| 762 | 1108 PVMT MK PAINTED 8IN LINE | LF | 65,136 | 65,136 |
| 762 | 1124 PVMT MK PAINTED 24IN LINE | LF | 3,256 | 3,256 |
| 762 | 1305 PREFORMED PATTERNED PVMT MK 4IN LINE-GROOVED | LF | 1,636 | 1,636 |
| 762 | 1307 PREFORMED PATTERNED PVMT MK 6IN LINE-GROOVED | LF | 120 | 120 |
| 762 | 1309 PREFORMED PATTERNED PVMT MK 8IN LINE-GROOVED | LF | 1,315 | 1,315 |
| 762 | 1325 PREFORMED PATTERNED PVMT MK 24IN LINE-GROOVED | LF | 60 | 60 |

| | | | |
|-------|----------------|-------------|-----------|
| STATE | PROJECT NO. | SECTION NO. | SHEET NO. |
| ND | HES-3-999(046) | 20 | 1 |

2



- Preformed Patterned PVT MK-Message Grooved 96 SF (3 Arrows @ 32 EA)
- Preformed Patterned Pvmt Mk 4In Line-Grooved 1,636' (4" White 953', 4" Yellow 683')
- Preformed Patterned Pvmt Mk 6In Line-Grooved 120' (6" Crosswalk Line)
- Preformed Patterned Pvmt Mk 8In Line-Grooved 1,315' (8" Chevron 345', 8" Channel 970')
- Preformed Patterned Pvmt Mk 24In Line-Grooved 60' (Stop Bar)

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Preformed Patterned PVMT MK Layout

| | | | |
|-------|----------------|-------------|-----------|
| STATE | PROJECT NO. | SECTION NO. | SHEET NO. |
| ND | HES-3-999(046) | 120 | 1 |

**PAVEMENT MARKING
DEVILS LAKE DISTRICT**

| HWY | HIGHWAY DESCRIPTION | REFERENCE POINT (MILES) | | | INSTALLATION (MILES) | | | | PAINTED LINE (LF) | | |
|----------|--|-------------------------|---------|--------|----------------------|-------|---------|--------|-------------------|------------|--------------|
| | | FROM | TO | TOTAL | EDGE | SKIP | BARRIER | TOTAL | 8" | X-WALK 24" | STOP BAR 24" |
| ND 1 | Jct 65 to Griggs County Line | 128.493 | 136.778 | 8.285 | 16.570 | 1.892 | 5.892 | 24.354 | | | |
| ND 1 | Griggs County Line to Jct 15 @ Pekin | 136.778 | 145.148 | 8.370 | 16.740 | 1.833 | 4.892 | 23.465 | | | |
| *ND 1 | Jct 15 @ Pekin to MP 150 | 145.148 | 150.203 | 5.055 | 10.110 | 1.264 | 0.914 | 12.288 | | | |
| *ND 1 | MP 152 to Jct 2 | 152.682 | 162.802 | 10.120 | 20.240 | 1.175 | 0.480 | 21.895 | | | 12 |
| ND 1 | Nekoma to Jct 5 @ Langdon | 200.526 | 213.947 | 13.421 | 27.442 | 3.169 | 3.150 | 33.761 | 455 | | 22 |
| ND 1 | Jct 5 @ Langdon to State Line | 213.947 | 230.289 | 16.342 | 32.684 | 4.086 | 3.086 | 39.856 | | | 21 |
| US 2 EB | Berwick to W Rugby | 199.902 | 209.646 | 9.744 | 19.488 | 2.436 | | 21.924 | 2,039 | | |
| US 2 EB | Rugby | 209.646 | 212.634 | 2.988 | 2.988 | 0.747 | 4.122 | 7.857 | 3,990 | | |
| US 2 EB | E Rugby to 2 Miles W Leeds | 212.634 | 236.673 | 24.039 | 48.078 | 6.010 | | 54.088 | 5,260 | | |
| US 2 EB | 2 Miles W Leeds to W Churchs Ferry | 236.673 | 248.758 | 12.085 | 24.170 | 3.021 | | 27.191 | 3,847 | | |
| *US 2 EB | W Churchs Ferry to 2 Mi E Churchs Ferry | 248.758 | 252.161 | 3.403 | 6.806 | 0.851 | | 7.657 | 909 | | |
| *US 2 EB | W Devils Lake to Devils Lake | 267.156 | 268.630 | 1.474 | 2.948 | 0.368 | | 3.316 | 655 | | |
| US 2 EB | E Devils Lake | 270.800 | 272.285 | 1.485 | 2.970 | 0.146 | | 3.116 | | | |
| US 2 EB | E Devils Lake to 2 Miles E Cray | 272.285 | 283.627 | 11.342 | 22.684 | 2.836 | | 25.520 | | | |
| US 2 EB | 2 Miles E Cray to Lakota | 283.627 | 295.468 | 11.841 | 23.682 | 2.960 | | 26.642 | 1,963 | | |
| US 2 WB | Berwick to W Rugby | 199.902 | 209.646 | 9.744 | 19.488 | 2.436 | | 21.924 | 2,279 | | |
| US 2 WB | W Rugby to Knox | 209.646 | 224.665 | 15.019 | 27.050 | 3.755 | 4.122 | 34.927 | 6,374 | | |
| US 2 WB | Knox to 2 Miles W Leeds | 224.665 | 236.949 | 12.284 | 24.568 | 3.071 | | 27.639 | 4,309 | | |
| US 2 WB | 2 Miles W Leeds to E Jct 281 | 236.949 | 248.812 | 11.863 | 23.726 | 2.966 | | 26.692 | 3,735 | | |
| US 2 WB | E Jct 281 to Mauvais Coulee | 248.812 | 252.121 | 3.309 | 6.618 | 0.827 | | 7.445 | 1,702 | | |
| US 2 WB | Mauvais Coulee to W Devils Lake | 252.121 | 268.630 | 16.509 | 33.018 | 4.127 | | 37.145 | 3,226 | | |
| US 2 WB | E Devils Lake | 270.800 | 272.072 | 1.272 | 2.544 | 0.084 | | 2.628 | 390 | | |
| *US 2 WB | E Devils Lake to 2 Miles E Cray | 272.072 | 284.015 | 11.943 | 23.886 | 2.986 | | 26.872 | 2,830 | | |
| ND 3 | Jct 19 to Jct 2 @ Rugby | 177.190 | 201.391 | 24.201 | 48.402 | 5.963 | 11.774 | 66.139 | 351 | | 36 |
| ND 3 | Jct 2 @ Rugby to N Rugby | 201.391 | 202.829 | 1.438 | 0.244 | | 2.876 | 3.120 | 531 | 324 | 39 |
| ND 3 | N Rugby to Jct 66 | 202.829 | 224.336 | 21.507 | 42.978 | 5.140 | 7.270 | 55.388 | 546 | | |
| ND 3 | Jct 66 to Jct 281 | 224.336 | 233.548 | 9.212 | 18.424 | 2.275 | 0.242 | 20.941 | | | 20 |
| ND 4 | Jct 281 to Canadian Line | 0.000 | 10.217 | 10.217 | 20.434 | 2.488 | 2.250 | 25.172 | | | 23 |
| ND 5 | Jct 281@ Rock Lake to E Jct 20 | 236.105 | 256.966 | 20.861 | 41.722 | 5.215 | 2.783 | 49.720 | | | 24 |
| ND 5 | E Jct 20 to 4th St @ Langdon | 256.966 | 278.751 | 21.785 | 43.186 | 5.454 | 1.813 | 50.453 | 604 | 360 | |
| ND 5 | 4th St @ Langdon to 10 Miles E Langdon | 278.751 | 288.966 | 10.215 | 20.430 | 2.479 | 1.189 | 24.098 | | 288 | 44 |
| ND 15 | Jct 52 @ Fessenden to W Jct 30 | 0.000 | 5.854 | 5.854 | 11.708 | 1.217 | 2.270 | 15.195 | | | 13 |
| ND 15 | E Jct 30 to S Jct 281 @ New Rockford | 10.349 | 24.280 | 13.931 | 27.862 | 3.483 | 1.003 | 32.348 | | | 12 |
| *ND 15 | E Jct 281 @ New Rockford to Jct ND 20 | 27.226 | 43.590 | 16.364 | 32.728 | 4.091 | 1.126 | 37.945 | 590 | | 30 |
| *ND 15 | E McVile to Jct 32 | 81.044 | 89.872 | 8.828 | 17.638 | 2.166 | 1.623 | 21.427 | | | 17 |
| *ND 17 | Jct 281 @ Cando to 5 Mi W of Jct 20 | 38.476 | 48.900 | 10.424 | 20.014 | 2.467 | 1.763 | 24.244 | | 480 | 19 |
| ND 17 | 5 Mi W of Jct 20 to N Jct 20 | 48.900 | 53.440 | 4.540 | 9.080 | 1.135 | 0.618 | 10.833 | | | |
| ND 17 | N Jct 20 to S Jct 20 | 53.440 | 58.439 | 4.999 | 9.998 | 1.250 | 0.659 | 11.907 | | | |
| ND 17 | S Jct 20 to W Edmore | 58.439 | 77.939 | 19.5 | 39.000 | 4.875 | 3.171 | 47.046 | | | 23 |
| ND 19 | Jct 3 to Jct 30 | 99.990 | 121.404 | 21.414 | 42.828 | 5.089 | 8.345 | 56.262 | | | 12 |
| ND 19 | Jct 30 to S Jct 281 | 121.404 | 133.614 | 12.210 | 24.420 | 3.415 | 3.141 | 30.976 | | | 30 |
| ND 19 | N Jct 281 to Jct 2 @ Devils Lake | 135.129 | 155.036 | 19.907 | 39.814 | 4.447 | 6.234 | 50.495 | 4,156 | | 24 |
| ND 20 | Jct 200 to S Jct 15 | 44.903 | 61.198 | 16.295 | 31.955 | 3.829 | 6.678 | 42.462 | | | 23 |
| ND 20 | S Jct 15 to N Bridge @ Reservation Line | 61.198 | 68.668 | 7.470 | 14.940 | 1.711 | 3.187 | 19.838 | | | |
| ND 20 | N Devils Lake to N Jct 17 | 104.248 | 124.464 | 20.216 | 40.432 | 5.007 | 2.220 | 47.659 | 1,958 | | |
| ND 20 | N Jct 17 to N Jct 66 | 129.463 | 141.255 | 11.792 | 23.584 | 2.958 | 4.089 | 30.631 | 1,064 | | |
| ND 20 | N Jct 66 to E Jct 5 | 141.255 | 150.270 | 9.015 | 18.030 | 2.210 | 0.884 | 21.124 | | | 20 |
| ND 20 | W Jct 5 to Canadian Line | 156.034 | 170.550 | 14.516 | 29.032 | 3.504 | 3.797 | 36.333 | | | 14 |
| | * RP Connects to Coordination Note 100-P01 | | | | | | | | | | |

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Pavement Marking Installation
Table One

| PAVEMENT MARKING DEVILS LAKE DISTRICT | | | | | | | | | | | |
|--|------------------------------------|-------------------------|---------|--------|----------------------|-------|---------|--------|-------------------|------------|--------------|
| HWY | HIGHWAY DESCRIPTION | REFERENCE POINT (MILES) | | | INSTALLATION (MILES) | | | | PAINTED LINE (LF) | | |
| | | FROM | TO | TOTAL | EDGE | SKIP | BARRIER | TOTAL | 8" | X-WALK 24" | STOP BAR 24" |
| ND 30 | W Jct 15 to N Maddock | 105.773 | 128.695 | 22.922 | 45.844 | 5.133 | 12.765 | 63.742 | | | 18 |
| ND 30 | N Maddock to Jct 19 | 128.695 | 135.846 | 7.151 | 13.562 | 1.718 | 3.352 | 18.632 | | | 18 |
| ND 30 | Jct 19 to Jct 2 | 135.846 | 153.084 | 17.238 | 34.476 | 4.151 | 7.224 | 45.851 | | | 33 |
| *ND 30 | Jct 281 to Canadian Line | 195.080 | 205.475 | 10.395 | 20.790 | 2.451 | 1.665 | 24.906 | | | 37 |
| US 52 | Jct 15 To Jct 200 | 185.548 | 198.717 | 13.169 | 26.338 | 3.234 | 1.920 | 31.492 | 231 | | 24 |
| US 52 | Jct 200 to W Carrington Roundabout | 198.717 | 222.460 | 23.743 | 47.486 | 5.492 | 4.252 | 57.230 | 2,812 | | |
| US 52 | S Carrington Roundabout | 222.767 | 222.838 | 0.071 | | | 0.142 | 0.142 | | | |
| US 52 | Carrington to Jct 9 | 223.736 | 232.410 | 8.674 | 17.348 | 2.165 | 1.474 | 20.987 | | | |
| US 52 | Jct 9 to Jct 36 @ Pingree | 232.410 | 244.865 | 12.455 | 24.910 | 1.734 | 3.104 | 29.748 | 445 | | |
| *ND 66 | W Edge of Rolette to E of Rollete | 9.395 | 9.751 | 0.356 | 0.712 | 0.000 | 0.710 | 1.422 | | 168 | |
| ND 66 | E Rolette to W Bisbee | 9.751 | 30.022 | 20.271 | 40.531 | 4.917 | 5.807 | 51.255 | | | 17 |
| ND 66 | W Bisbee to W Jct 281 | 30.022 | 37.997 | 7.975 | 15.950 | 1.957 | 3.055 | 20.962 | 224 | | |
| *ND 66 | E Jct 281 to MP 40 | 40.007 | 40.258 | 0.251 | 0.502 | 0.063 | 0.171 | 0.736 | | | |
| *ND 66 | MP 40 to Jct 20 | 40.480 | 56.996 | 16.516 | 33.032 | 4.009 | 3.234 | 40.275 | | | 13 |
| ND 66 | Jct 20 to Jct 1 | 56.996 | 78.993 | 21.997 | 43.994 | 5.482 | 1.242 | 50.718 | | | 20 |
| ND 66 | Jct 1 to Milton | 78.993 | 93.830 | 14.837 | 29.674 | 3.712 | 0.713 | 34.099 | | | 23 |
| ND 200 | Jct 281 to W Jct 20 @ Glenfield | 293.566 | 319.373 | 25.807 | 51.614 | 6.256 | 8.152 | 66.022 | | | |
| US 281 | Jct 52 to N Jct 15 | 112.632 | 128.504 | 15.872 | 31.744 | 3.984 | 2.478 | 38.206 | 1,346 | 144 | |
| US 281 | N Jct 15 to S Reservation Line | 128.504 | 139.633 | 11.129 | 20.184 | 2.541 | 4.247 | 26.972 | 580 | | |
| US 281 | N Reservation Line to Jct 2 | 156.345 | 175.185 | 18.840 | 37.680 | 4.688 | 4.604 | 46.972 | 2,721 | | 30 |
| US 281 | E Jct 2 to Jct 17 @ Cando | 175.185 | 190.219 | 15.034 | 30.101 | 3.345 | 5.035 | 38.481 | 846 | | 36 |
| US 281 | Jct 17 @ Cando to E Jct 66 | 190.219 | 200.226 | 10.007 | 18.984 | 2.350 | 1.471 | 22.805 | 331 | 108 | 26 |
| US 281 | E Jct 66 to W Jct 66 | 200.226 | 202.235 | 2.009 | 4.003 | 0.498 | 0.237 | 4.738 | 476 | 60 | |
| US 281 | Jct 66 to Jct 5 @ Rock Lake | 202.235 | 213.693 | 11.458 | 22.916 | 2.854 | 0.350 | 26.120 | | | 16 |
| US 281 | Jct 5 @ Rock Lake to E Rolla | 213.693 | 231.622 | 17.929 | 35.858 | 4.375 | 5.783 | 46.016 | | | |
| US 281 | Dunseith to Candian Line | 253.741 | 267.190 | 13.449 | 26.898 | 3.280 | 5.665 | 35.843 | 1,361 | 492 | 28 |
| US 281 | Churchs Ferry Spur | 900.000 | 900.947 | 0.947 | 1.894 | 0.067 | 1.355 | 3.316 | | | 15 |

| PAVEMENT MARKING DEVILS LAKE DISTRICT | | | | | | | | | | | |
|--|---------------------|-------------------------|----|---------|----------------------|---------|---------|-------|-------------------|------------|--------------|
| HWY | HIGHWAY DESCRIPTION | REFERENCE POINT (MILES) | | | INSTALLATION (MILES) | | | | PAINTED LINE (LF) | | |
| | | FROM | TO | TOTAL | EDGE | SKIP | BARRIER | TOTAL | 8" | X-WALK 24" | STOP BAR 24" |
| 1 - 281 | District Total | | | 911.232 | 1,784.405 | 215.366 | 197.870 | 2,198 | 65,136 | 2,424 | 832 |

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Pavement Marking Installation Table Two

**PAVEMENT MARKING
DEVILS LAKE DISTRICT**

| | | | |
|-------|----------------|-------------|-----------|
| STATE | PROJECT NO. | SECTION NO. | SHEET NO. |
| ND | HES-3-999(046) | 120 | 3 |

| HWY | HIGHWAY DESCRIPTION | REFERENCE POINT (MILES) | | | MESSAGE (SF) | | | | |
|----------|--|-------------------------|---------|--------|--------------|-------------|-------------------|------------------|-------|
| | | FROM | TO | TOTAL | ONLY 22 EA | ARROW 16 EA | RAILROAD 132.5 EA | STOP AHEAD 52 EA | TOTAL |
| ND 1 | Jct 65 to Griggs County Line | 128.493 | 136.778 | 8.285 | | | | | |
| ND 1 | Griggs County Line to Jct 15 @ Pekin | 136.778 | 145.148 | 8.370 | | | 2 | | 265 |
| *ND 1 | Jct 15 @ Pekin to MP 150 | 145.148 | 150.203 | 5.055 | | | | | |
| *ND 1 | MP 152 to Jct 2 | 152.682 | 162.802 | 10.12 | | | | | |
| ND 1 | Nekoma to Jct 5 @ Langdon | 200.526 | 213.947 | 13.421 | 2 | 2 | 4 | 1 | 658 |
| ND 1 | Jct 5 @ Langdon to State Line | 213.947 | 230.289 | 16.342 | | | | 1 | 52 |
| US 2 EB | Berwick to W Rugby | 199.902 | 209.646 | 9.744 | 10 | 10 | | | 380 |
| US 2 EB | Rugby | 209.646 | 212.634 | 2.988 | | 50 | | | 800 |
| US 2 EB | E Rugby to 2 Miles W Leeds | 212.634 | 236.673 | 24.039 | | 50 | | | 800 |
| US 2 EB | 2 Miles W Leeds to W Churchs Ferry | 236.673 | 248.758 | 12.085 | | 24 | | | 384 |
| *US 2 EB | W Churchs Ferry to 2 Mi E Churchs Ferry | 248.758 | 252.161 | 3.403 | | 13 | | | 208 |
| *US 2 EB | W Devils Lake to Devils Lake | 267.156 | 268.63 | 1.474 | 3 | 4 | | | 130 |
| US 2 EB | E Devils Lake | 270.800 | 272.285 | 1.485 | | | | | |
| US 2 EB | E Devils Lake to 2 Miles E Crary | 272.285 | 283.627 | 11.342 | | | | | |
| US 2 EB | 2 Miles E Crary to Lakota | 283.627 | 295.468 | 11.841 | | 27 | | | 432 |
| US 2 WB | Berwick to W Rugby | 199.902 | 209.646 | 9.744 | 16 | 21 | | | 688 |
| US 2 WB | W Rugby to Knox | 209.646 | 224.665 | 15.019 | 40 | 40 | | | |
| US 2 WB | Knox to 2 Miles W Leeds | 224.665 | 236.949 | 12.284 | | 38 | | | 608 |
| US 2 WB | 2 Miles W Leeds to E Jct 281 | 236.949 | 248.812 | 11.863 | | 29 | | | 464 |
| US 2 WB | E Jct 281 to Mauvais Coulee | 248.812 | 252.121 | 3.309 | | 12 | | | 192 |
| US 2 WB | Mauvais Coulee to W Devils Lake | 252.121 | 268.63 | 16.509 | | 35 | | | 560 |
| US 2 WB | E Devils Lake | 270.800 | 272.072 | 1.272 | | 6 | | | 96 |
| *US 2 WB | E Devils Lake to 2 Miles E Crary | 272.072 | 284.015 | 11.943 | | 24 | | | 384 |
| ND 3 | Jct 19 to Jct 2 @ Rugby | 177.19 | 201.391 | 24.201 | | 6 | | | 96 |
| ND 3 | Jct 2 @ Rugby to N Rugby | 201.391 | 202.829 | 1.438 | | 6 | | | 96 |
| ND 3 | N Rugby to Jct 66 | 202.829 | 224.336 | 21.507 | | | | | |
| ND 4 | Jct 281 to Canadian Line | 0.000 | 10.217 | 10.217 | | | | | |
| ND 5 | Jct 281@ Rock Lake to E Jct 20 | 236.105 | 256.966 | 20.861 | | | 2 | 1 | 317 |
| ND 5 | E Jct 20 to 4th St @ Langdon | 256.966 | 278.751 | 21.785 | | 9 | | | 144 |
| ND 5 | 4th St @ Langdon to 10 Miles E Langdon | 278.751 | 288.966 | 10.215 | | | | | |
| ND 15 | Jct 52 @ Fessenden to W Jct 30 | 0.000 | 5.854 | 5.854 | | | | | |
| ND 15 | E Jct 30 to S Jct 281 @ New Rockford | 10.349 | 24.28 | 13.931 | | | 2 | | 274 |
| *ND 15 | E Jct 281 @ New Rockford to Jct ND 20 | 27.226 | 43.59 | 16.364 | | 2 | | | 32 |
| *ND 15 | E McVile to Jct 32 | 81.044 | 89.872 | 8.828 | | | | | |
| *ND 17 | Jct 281 @ Cando to 5 Mi W of Jct 20 | 38.476 | 48.900 | 10.424 | | | | | |
| ND 17 | 5 Mi W of Jct 20 to N Jct 20 | 48.900 | 53.440 | 4.54 | | | | | |
| ND 17 | N Jct 20 to S Jct 20 | 53.440 | 58.439 | 4.999 | | | | | |
| ND 17 | S Jct 20 to W Edmore | 58.439 | 77.939 | 19.5 | | | | 1 | 52 |
| ND 19 | Jct 3 to Jct 30 | 99.99 | 121.404 | 21.414 | | | | | |
| ND 19 | Jct 30 to S Jct 281 | 121.404 | 133.614 | 12.21 | | | | 1 | 52 |
| ND 19 | N Jct 281 to Jct 2 @ Devils Lake | 135.129 | 155.036 | 19.907 | | 21 | | 1 | 388 |
| ND 20 | Jct 200 to S Jct 15 | 44.903 | 61.198 | 16.295 | | | | | |
| ND 20 | S Jct 15 to N Bridge @ Reservation Line | 61.198 | 68.668 | 7.47 | | | | | |
| ND 20 | N Devils Lake to N Jct 17 | 104.248 | 124.464 | 20.216 | | 13 | | | 208 |
| ND 20 | N Jct 17 to N Jct 66 | 129.463 | 141.255 | 11.792 | | | 2 | | 274 |
| ND 20 | N Jct 66 to E Jct 5 | 141.255 | 150.27 | 9.015 | | | 2 | | 274 |
| ND 20 | W Jct 5 to Canadian Line | 156.034 | 170.550 | 14.516 | | | 2 | | 265 |
| | * RP Connects to Coordination Note 100-P01 | | | | | | | | |

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Pavement Marking Messages
Table One

| PAVEMENT MARKING DEVILS LAKE DISTRICT | | | | | | | | | |
|--|------------------------------------|-------------------------|---------|--------|---------------|----------------|----------------------|---------------------|-------|
| HWY | HIGHWAY DESCRIPTION | REFERENCE POINT (MILES) | | | MESSAGE (SF) | | | | |
| | | FROM | TO | TOTAL | ONLY 22 EA | ARROW 16 EA | RAILROAD 132.5 EA | STOP AHEAD 52 EA | TOTAL |
| ND 30 | W Jct 15 to N Maddock | 105.773 | 128.695 | 22.922 | | | 4 | | 530 |
| ND 30 | N Maddock to Jct 19 | 128.695 | 135.846 | 7.151 | | | | | |
| ND 30 | Jct 19 to Jct 2 | 135.846 | 153.084 | 17.238 | | | | 1 | 52 |
| *ND 30 | Jct 281 to Canadian Line | 195.080 | 205.475 | 10.395 | | | | | |
| US 52 | Jct 15 To Jct 200 | 185.548 | 198.717 | 13.169 | | | | 1 | 52 |
| US 52 | Jct 200 to W Carrington Roundabout | 198.717 | 222.460 | 23.743 | | 21 | 2 | | 601 |
| US 52 | S Carrington Roundabout | 222.767 | 222.838 | 0.071 | | | | | |
| US 52 | Carrington to Jct 9 | 223.736 | 232.410 | 8.674 | | | | | |
| US 52 | Jct 9 to Jct 36 @ Pingree | 232.410 | 244.865 | 12.455 | | 2 | | | 32 |
| ND 66 | W Edge of Rolette to E of Rollete | 9.395 | 9.751 | 0.356 | | | | | |
| ND 66 | E Rolette to W Bisbee | 9.751 | 30.022 | 20.271 | | | | | |
| ND 66 | W Bisbee to W Jct 281 | 30.022 | 37.997 | 7.975 | | 2 | 2 | | 297 |
| *ND 66 | E Jct 281 to MP 40 | 40.007 | 40.258 | 0.251 | | | | | |
| *ND 66 | MP 40 to Jct 20 | 40.480 | 56.996 | 16.516 | | | | | |
| ND 66 | Jct 20 to Jct 1 | 56.996 | 78.993 | 21.997 | | | 4 | | 530 |
| ND 66 | Jct 1 to Milton | 78.993 | 93.830 | 14.837 | | | 2 | | 265 |
| ND 200 | Jct 281 to W Jct 20 @ Glenfield | 293.566 | 319.373 | 25.807 | | | 2 | | 265 |
| US 281 | Jct 52 to N Jct 15 | 112.632 | 128.504 | 15.872 | | 6 | | | 96 |
| US 281 | N Jct 15 to S Reservation Line | 128.504 | 139.633 | 11.129 | | 6 | | | 96 |
| US 281 | N Reservation Line to Jct 2 | 156.345 | 175.185 | 18.84 | | 12 | | 1 | 244 |
| US 281 | E Jct 2 to Jct 17 @ Cando | 175.185 | 190.219 | 15.034 | | 7 | | | 112 |
| US 281 | Jct 17 @ Cando to E Jct 66 | 190.219 | 200.226 | 10.007 | | 3 | 4 | | 578 |
| US 281 | E Jct 66 to W Jct 66 | 200.226 | 202.235 | 2.009 | | 4 | | | 64 |
| US 281 | Jct 66 to Jct 5 @ Rock Lake | 202.235 | 213.693 | 11.458 | | | | | |
| US 281 | Jct 5 @ Rock Lake to E Rolla | 213.693 | 231.622 | 17.929 | | | | | |
| US 281 | Dunseith to Candian Line | 253.741 | 267.190 | 13.449 | | 6 | | | 96 |
| US 281 | Churchs Ferry Spur | 900.000 | 900.947 | 0.947 | | | 4 | | 530 |

| PAVEMENT MARKING DEVILS LAKE DISTRICT | | | | | | | | | |
|--|---------------------|-------------------------|----|---------|---------------|----------------|----------------------|---------------------|--------|
| HWY | HIGHWAY DESCRIPTION | REFERENCE POINT (MILES) | | | MESSAGE (SF) | | | | |
| | | FROM | TO | TOTAL | ONLY 22 EA | ARROW 16 EA | RAILROAD 132.5 EA | STOP AHEAD 52 EA | TOTAL |
| 1 - 281 | District Total | | | 911.232 | 71 | 511 | 40 | 9 | 14,013 |

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Pavement Marking Messages
Table Two

| RAILROAD PROTECTIVE LIABILITY INSURANCE (EA) | | | | |
|--|---------|-------------------------|---|----------------------|
| HWY | RP | SITE 1 | SITE 2 | SITE 3 |
| | | NOTHERN PLAINS RAILROAD | RED RIVER VALLEY AND WESTERN RAILROAD COMPANY | BNSF RAILWAY COMPANY |
| ND 1 | 144.971 | | | 1 |
| ND 1 | 201.008 | 1 | | |
| ND 1 | 213.538 | | | 1 |
| | | | | |
| ND 5 | 252.529 | 1 | | |
| | | | | |
| ND 15 | 23.332 | | 1 | |
| | | | | |
| ND 20 | 141.162 | 1 | | |
| ND 20 | 144.294 | 1 | | |
| ND 20 | 159.636 | 1 | | |
| | | | | |
| ND 30 | 113.695 | | | 1 |
| ND 30 | 128.700 | | 1 | |
| | | | | |
| US 52 | 221.960 | | 1 | |
| | | | | |
| ND 66 | 32.073 | | | 1 |
| ND 66 | 59.868 | 1 | | |
| ND 66 | 71.723 | 1 | | |
| ND 66 | 92.968 | | | 1 |
| | | | | |
| ND 200 | 318.764 | | | 1 |
| | | | | |
| US 281 | 191.633 | | | 1 |
| US 281 | 200.144 | 1 | | |
| US 281 | 900.475 | | | 1 |
| US 281 | 900.586 | | | 1 |
| | | | | |
| TOTAL (EA) | | 8 | 3 | 9 |

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RR Protective Liability Insurance

NDDOT ABBREVIATIONS

? This is a special text character used in the labeling of existing features. It indicates a feature that has an unknown characteristic, potentially based on: lack of description, location accuracy or purpose.

Abn abandoned
 Abut abutment
 Adj adjusted
 Aggr aggregate
 Ahd ahead
 ARV air release valve
 Align alignment
 Al alley
 Alt alternate
 Alum aluminum
 ADA Americans with Disabilities Act
 & and
 Appr approach
 Approx approximate
 ACP asbestos cement pipe
 Asph asphalt
 AC asphalt cement
 Assmd assumed
 @ at
 Atten attenuation
 ATR automatic traffic recorder
 Ave Avenue
 Avg average
 ADT average daily traffic

Bk back
 BF back face
 Balc balcony
 B Wire barbed wire
 Barr barricade
 Btry battery
 BI beehive inlet
 Beg begin
 BG below grade
 BM bench mark
 Bkwy bikeway
 Bit bituminous
 Blk block
 BH bore hole
 Bot bottom
 Blvd Boulevard
 Bndry boundary
 Brkwy breakaway
 Br bridge
 Bldg building
 Bus. business
 BV butterfly valve
 Byp bypass

C Gdrl cable guardrail
 Calc calculate
 CIP cast iron pipe
 CB catch basin
 CRS cationic rapid setting
 C Gd cattle guard
 C To C center to center
 CL or C centerline
 Ch chain
 Chnlk chain-link
 Ch Blk channel block
 Ch Ch channel change
 Chk check
 Chsld chiseled
 Cir circle
 Cl class
 Clnt clean-out
 Clr clear
 Cl&gr clearing & grubbing
 Comb. combination
 Coml commercial
 Compr compression
 CADD computer aided drafting & design
 Conc concrete
 CECB concrete erosion control blanket
 Cond conductor
 Const construction
 Cont continuous
 CSB continuous split barrel sample
 Contr contraction
 Contr contractor
 CP control point
 Coord coordinate
 Cor corner
 Corr corrected
 CAES corrugated aluminum end section
 CAP corrugated aluminum pipe
 CMES corrugated metal end section
 CMP corrugated metal pipe
 CPVCP corrugated poly-vinyl chloride pipe
 CSES corrugated steel end section
 CSFES corrugated steel flared end section
 CSP corrugated steel pipe
 CSTES corrugated steel traversable end section
 Co County
 Crse course
 Ct Court
 Xarm cross arm
 Xbuck cross buck
 Xsec cross sections
 Xing crossing
 Xrd crossroad
 Crn crown

Culv culvert
 C&G curb & gutter
 CI curb inlet
 CR curb ramp
 C cut
 Dd Ld dead load
 Defl deflection
 Defm deformed
 DInt delineate
 DIntr delineator
 Depr depression
 Desc description
 Det detail
 DWP detectable warning panel
 Dtr detour
 Dia or \emptyset diameter
 Dir direction
 Dist distance
 DM disturbed material
 DB ditch block
 DG ditch grade
 Dbl double
 Dn down
 Dwg drawing
 Dr drive
 Drwy driveway
 DI drop inlet
 D dry density
 DSDS dynamic speed display sign

Ea each
 Esmt easement
 E East
 EB Eastbound
 Elast elastomeric
 EL electric locker
 E Mtr electric meter
 Elec electric/al
 EDM electronic distance meter
 Elev or El elevation
 Ellipt elliptical
 Emb embankment
 Emuls emulsion/emulsified
 ES end section
 Engr engineer
 ESS environmental sensor station
 Eq equal
 Evgr evergreen
 Exc excavation
 Exst existing
 Exp expansion
 Expy Expressway
 E external of curve
 Extru extruded

FOS factor of safety
 Fed Federal
 FP feed point
 Fn fence
 Fn P fence post
 FO fiber optic
 FD field drive
 F fill
 FAA fine aggregate angularity
 FH fire hydrant
 Fl flange
 Flrd flared
 FES flared end section
 F Bcn flashing beacon
 FA flight auger sample
 FL flow line
 Ftg footing
 FM force main
 Fnd found
 Fdn foundation
 Frac fractional
 Frwy freeway
 Frt front
 FF front face
 F Disp fuel dispenser
 FFP fuel filler pipes
 FLS fuel leak sensor
 Furn furnish/ed

| | |
|--|-------------------|
| NORTH DAKOTA DEPARTMENT OF TRANSPORTATION | |
| 07-01-14 | |
| REVISIONS | |
| DATE | CHANGE |
| 04-23-18 | General Revisions |
| 09-20-18 | General Revisions |
| 12-18-20 | General Revisions |



NDDOT ABBREVIATIONS

| | | | | | | | |
|--------|---------------------------|----------|--------------------------|----------------------|-------------------------------|----------|---|
| Galv | galvanized | Ln | lane | Obsc | obscure(d) | Qty | quantity |
| Gar | garage | Lg | large | Ocpd | occupied | Qtr | quarter |
| Gs L | gas line | Lat | latitude | Ocpy | occupy | | |
| G Reg | gas line regulator | Lt | left | O/s | offset | | |
| GMV | gas main valve | Lens | lenses | OC | on center | Rad or R | radius |
| G Mtr | gas meter | Lvl | level | C | one dimensional consolidation | RR | railroad |
| GSV | gas service valve | LvIng | leveling | OC | organic content | Rlwy | railway |
| GVP | gas vent pipe | Lht | light | Orig | original | Rsd | raised |
| GV | gate valve | LP | light pole | O To O | out to out | RC | rapid curing |
| Ga | gauge | Ltg | lighting | OD | outside diameter | Rec | record |
| Gov | government | Liq | liquid | OH | overhead | Rcy | recycle |
| Grd | graded/grade | LL | liquid limit | | | RAP | recycled asphalt pavement |
| Gmnd | ground | Loc | location | | | RPCC | recycled portland cement concrete |
| GWM | ground water monitor | Long. | longitude | PMT | pad mounted transformer | Ref | reference |
| Gdrl | guardrail | Lp | loop | Pg | pages | R Mkr | reference marker |
| Gtr | gutter | LD | loop detector | Pntd | painted | RM | reference monument |
| | | Lum | luminaire | Pr | pair | RP | reference point |
| | | | | Pnl | panel | Refl | reflectorized |
| | | | | Pk | park | RCB | reinforced concrete box |
| H Plg | H piling | Mb | mailbox | PSD | passing sight distance | RCES | reinforced concrete end section |
| Hdwl | headwall | ML | main line | Pvmt | pavement | RCFES | reinforced concrete flared end section |
| Ht | height | MH | manhole | Ped | pedestal | RCP | reinforced concrete pipe |
| Hel | helical | Mkd | marked | Ped | pedestrian | RCPS | reinforced concrete pipe sewer |
| HDPE | high density polyethylene | Mkr | marker | PPP | pedestrian pushbutton post | RCTES | reinforced concrete traversable end section |
| HM | high mast | Mkg | marking | Pen. | penetration | Reinf | reinforcement |
| HP | high pressure | MA | mast arm | Perf | perforated | Res | reservation |
| HPS | high pressure sodium | Matl | material | Per. | perimeter | Res | residence |
| Hwy | highway | Max | maximum | Perm | permanent | Ret | retaining |
| Hor | horizontal | MC | meander corner | PL | pipeline | Rev | reverse |
| HBP | hot bituminous pavement | Meas | measure | PI | place | Rt | right |
| HMA | hot mix asphalt | Mdn | median | P&P | plan & profile | R/W | right of way |
| Hyd | hydrant | MD | median drain | PL | plastic limit | Riv | river |
| Ph | hydrogen ion content | MC | medium curing | PI or P _L | plate | Rd | road |
| | | MGS | Midwest Guardrail System | Pt | point | Rdbd | road bed |
| | | MM | mile marker | PE | polyethylene | Rdwy | roadway |
| Id | identification | MP | mile post | PVC | polyvinyl chloride | RWIS | roadway weather information system |
| Incl | inclinometer tube | Min | minimum | PCC | Portland Cement concrete | Rk | rock |
| IMH | inlet manhole | Misc | miscellaneous | PP | power pole | Rt | route |
| ID | inside diameter | Mon | monument | Preempt | preemption | | |
| Inst | instrument | Mnd | mound | Prefab | prefabricated | | |
| Intchg | interchange | Mtd | mounted | Prfmd or Pref | performed | | |
| Intmdt | intermediate | Mtbl | mountable | Prep | preparation | | |
| Intscn | intersection | Mtg | mounting | Press. | pressure | | |
| Inv | invert | Mk | muck | PRV | pressure relief valve | | |
| IP | iron pipe | | | Prestr | prestressed | | |
| | | | | Pvt | private | | |
| | | | | PD | private drive | | |
| Jt | joint | Neop | neoprene | Prod. | production/produce | | |
| Jct | junction | Ntwk | network | Prog | programmed | | |
| | | N | North | Prop. | property | | |
| | | NE | North East | Prop Ln | property line | | |
| | | NW | North West | Ppsd | proposed | | |
| | | NB | Northbound | PB | pull box | | |
| | | No. or # | number | | | | |

| | |
|--|-------------------|
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| 07-01-14 | |
| REVISIONS | |
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| 08-03-15 | General Revisions |
| 04-23-18 | General Revisions |
| 12-18-20 | General Revisions |

KIRK J. HOFF
REGISTERED
PROFESSIONAL
PE-4683
ENGINEER
NORTH DAKOTA
12 18 2020

NDDOT ABBREVIATIONS

D-101-3

| | | | |
|------------|----------------------------------|--------|------------------------------------|
| Salv | salvage(d) | Tel | telephone |
| San | sanitary sewer line | Tel B | Telephone Booth |
| Sec | section | Tel P | telephone pole |
| SL | section line | Tv | television |
| Sep | separation | Temp | temperature |
| Seq | sequence | Temp | temporary |
| Serv | service | TBM | temporary bench mark |
| Sht | sheet | T | thinwall tube sample |
| Shtng | sheeting | Ts | topsoil |
| Shldr | shoulder | Traf | traffic |
| Sw or Sdwk | sidewalk | TSCB | traffic signal control box |
| SD | sight distance | Tr | trail |
| SN | sign number | Transf | transformer |
| Sig | signal | Trans | transition |
| Sgl | single | TT | transmission tower |
| SRCP | slotted reinforced concrete pipe | TES | traversable end section |
| SC | slow curing | Trans | transverse |
| SS | slow setting | Trtd | treated |
| Sm | small | Trmt | treatment |
| S | South | Qc | triaxial compression |
| SE | South East | TERO | tribal employment rights ordinance |
| SW | South West | Tpl | triple |
| SB | Southbound | Typ | typical |
| Sp | spaces | | |
| Spcl | special | Qu | unconfined compressive strength |
| SA | special assembly | Ugrnd | underground |
| SP | special provisions | Util | utility |
| G | specific gravity | | |
| Spk | spike | VG | valley gutter |
| SB | split barrel sample | Vap | vapor |
| SH | sprinkler head | Vert | vertical |
| SV | sprinkler valve | VCP | vitrified clay pipe |
| Sq | square | Vol | volume |
| Stk | stake | | |
| Std | standard | Wkwy | walkway |
| N | standard penetration test | W | water content |
| Std Specs | standard specifications | WGV | water gate valve |
| Stm L | steam line | WL | water line |
| SEC | steel encased concrete | WM | water main |
| SMA | stone matrix asphalt | WMV | water main valve |
| SSD | stopping sight distance | W Mtr | water meter |
| SD | storm drain | WSV | water service valve |
| St | street | WW | water well |
| SPP | structural plate pipe | Wrng | wearing |
| SPPA | structural plate pipe arch | WIM | weigh in motion |
| Str | structure | W | west |
| Subd | subdivision | WB | westbound |
| Sub | subgrade | Wrng | wiring |
| Sub Prep | subgrade preparation | W/ | with |
| Ss | subsoil | W/o | without |
| SS | supplement specification | WC | witness corner |
| Supp | supplemental | | |
| Surf | surfacing | | |
| Surv | survey | | |
| Sym | symmetrical | | |

| | |
|--|-------------------|
| NORTH DAKOTA DEPARTMENT OF TRANSPORTATION | |
| 07-01-14 | |
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| 04-23-18 | General Revisions |
| 12-18-20 | General Revisions |



NDDOT UTILITY COMPANY AND ORGANIZATION ABBREVIATIONS

D-101-10

702COM 702 Communications
 ACCENT Accent Communications
 AGASSIZ WU Agassiz Water Users Incorporated
 AGC Associated General Contractors of America
 ALL PL Alliance Pipeline
 ALL SEAS WU All Seasons Water Users Association
 AMOCO PI Amoco Pipeline Company
 AMRDA HESS Amerada Hess Corporation
 AT&T AT&T Corporation
 B PAW Bear Paw Energy Incorporated
 BAKER ELEC Baker Electric
 BASIN ELEC Basin Electric Cooperative Incorporated
 BEK TEL Bek Communications Cooperative
 BELLE PL Belle Fourche Pipeline Company
 BLM Bureau of Land Management
 BNSF Burlington Northern Santa Fe Railway
 BOEING Boeing
 BRNS RWD Barnes Rural Water District
 BURK-DIV ELEC Burke-Divide Electric Cooperative
 BURL WU Burleigh Water Users
 CABLE ONE Cable One
 CABLE SERV Cable Services
 CAP ELEC Capital Electric Cooperative Incorporated
 CASS CO ELEC Cass County Electric Cooperative
 CASS RWU Cass Rural Water Users Incorporated
 CAV ELEC Cavalier Rural Electric Cooperative
 CBLCOM Cablecom Of Fargo
 CENEX PL Cenex Pipeline
 CENT PL WATER DIST Central Pipe Line Water District
 CENT PWR ELEC Central Power Electric Cooperative
 CENTURYLINK CenturyLink
 COE Corps of Engineers
 CONS TEL Consolidated Telephone
 CONT RES Continental Resource Inc
 CPR Canadian Pacific Railway
 D O E Department Of Energy
 DAK CARR Dakota Carrier Network
 DAK CENT TEL Dakota Central Telephone
 DAK RWD Dakota Rural Water District
 DGC Dakota Gasification Company
 DICKEY R NET Dickey Rural Networks
 DICKEY RWU Dickey Rural Water Users Association
 DICKEY TEL Dickey Telephone
 DNRR Dakota Northern Railroad
 DOME PL Dome Pipeline Company
 DVELEC Dakota Valley Electric Cooperative
 DVMW Dakota, Missouri Valley & Western
 ENBRDG Enbridge Pipelines Incorporated
 ENVENTIS Enventis Telephone
 FALK MNG Falkirk Mining Company
 FHWA Federal Highway Administration
 G FKS-TRL WD Grand Forks-traill Water District
 GETTY TRD & TRAN Getty Trading & Transportation
 GLDN W ELEC Golden West Electric Cooperative
 GRGS CO TEL Griggs County Telephone
 GTR RAMSEY WD Greater Ramsey Water District

GT PLNS NAT GAS Great Plains Natural Gas Company
 HALS TEL Halstad Telephone Company
 IDEA1 Idea1
 INT-COMM TEL Inter-Community Telephone Company
 KANEB PL Kaneb Pipeline Company
 KEM ELEC Kem Electric Cooperative Incorporated
 KOCH GATH SYS Koch Gathering Systems Incorporated
 LKHD PL Lakehead Pipeline Company
 LNGDN RWU Langdon Rural Water Users Incorporated
 LWR YELL R ELEC Lower Yellowstone Rural Electric
 MCKNZ CON McKenzie Consolidated Telcom
 MCKNZ ELEC McKenzie Electric Cooperative
 MCKNZ WRD McKenzie County Water Resource District
 MCLEOD McLeod USA
 MCLN ELEC McLean Electric Cooperative
 MCLN-SHRDN R WAT McLean-Sheridan Rural Water
 MDU Montana-dakota Utilities
 MIDCO MidContinent Communications
 MIDSTATE TEL Midstate Telephone Company
 MINOT CABLE Minot Cable Television
 MINOT TEL Minot Telephone Company
 MISS VALL COMM Missouri Valley Communications
 MISS W W S Missouri West Water System
 MNKOTA PWR Minnkota Power
 MOR-GRAN-SOU ELEC Mor-gran-sou Electric Cooperative
 MOUNT-WILLI ELEC Mountrail-williams Electric Cooperative
 MRE LBTY TEL Moore & Liberty Telephone
 MUNICIPAL City Water And Sewer
 MUNICIPAL City Of '.....'
 N CENT ELEC North Central Electric Cooperative
 N VALL W DIST North Valley Water District
 ND PKS & REC North Dakota Parks And Recreation
 ND TEL North Dakota Telephone Company
 NDDOT North Dakota Department of Transportation
 NDSU SOIL SCI DEPT NDSU Soil Science Department
 NEMONT TEL Nemont Telephone
 NODAK R ELEC Nodak Rural Electric Cooperative
 NOON FRMS TEL Noonan Farmers Telephone Company
 NPR Northern Plains Railroad
 NSP Northern States Power
 NTH PRAIR RW Northern Prairie Rural Water Association
 NTHN BRDR PL Northern Border Pipeline
 NTHN PLNS ELEC Northern Plains Electric Cooperative Incorporated
 NTHWSTRN REF Northwestern Refinery Company
 NW COMM Northwest Communication Cooperation
 NWRWD Northwest Rural Water District
 ONEOK Oneok gas
 OSHA Occupational Safety and Health Administration
 OTTR TL PWR Otter Tail Power Company
 P L E M Prairielands Energy Marketing
 POLAR COM Polar Communications
 PVT ELEC Private Electric
 QWEST Qwest Communications
 R & T W SUPPLY R & T Water Supply Association

RED RIV COMM Red River Rural Communications
 RESVTN TEL Reservation Telephone
 ROBRTS TEL Roberts Company Telephone
 R-RIDER ELEC Roughrider Electric Cooperative
 RRVW Red River Valley & Western Railroad
 S CENT REG WD South Central Regional Water District
 S E W U South East Water Users Incorporated
 SCOTT CABLE Scott Cable Television Dickinson
 SHERDN ELEC Sheridan Electric Cooperative
 SHEYN VLY ELEC Sheyenne Valley Electric Cooperative
 SKYTECH Skyland Technologies Incorporated
 SLOPE ELEC Slope Electric Cooperative Incorporated
 SOURIS RIV TELCOM Souris River Telecommunications
 ST WAT COMM State Water Commission
 STATE LN WATER State Line Water Cooperative
 STER ENG Sterling Energy
 STUT RWU Stutsman Rural Water Users
 SW PL PRJ Southwest Pipeline Project
 T M C Turtle Mountain Communications
 TCI TCI of North Dakota
 TESORO HGH PLNS PL Tesoro High Plains Pipeline
 TRI-CNTY WU Tri-County Water Users Incorporated
 TRL CO RWU Traill County Rural Water Users
 UNTD TEL United Telephone
 UPPR SOUR WUA Upper Souris Water Users Association
 US SPRINT U.S. Sprint
 USAF MSL CABLE U.S.A.F. Missile Cable
 USFWS US Fish and Wildlife Service
 USW COMM U.S. West Communications
 VRNDRY ELEC Verendrye Electric Cooperative
 W RIV TEL West River Telephone Incorporated
 WAPA Western Area Power Administration
 WEB W. E. B. Water Development Association
 WILLI RWA Williams Rural Water Association
 WILSTN BAS PL Williston Basin Interstate Pipeline Company
 WLSH RWD Walsh Water Rural Water District
 WOLVRTN TEL Wolverton Telephone
 XLENER Xcel Energy
 YSVR Yellowstone Valley Railroad

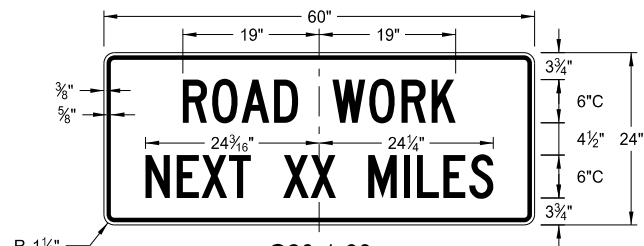
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|--|-------------------|
| NORTH DAKOTA DEPARTMENT OF TRANSPORTATION | |
| 07-01-14 | |
| REVISIONS | |
| DATE | CHANGE |
| 04-23-18 | General Revisions |
| 09-20-18 | General Revisions |
| 12-18-20 | General Revisions |



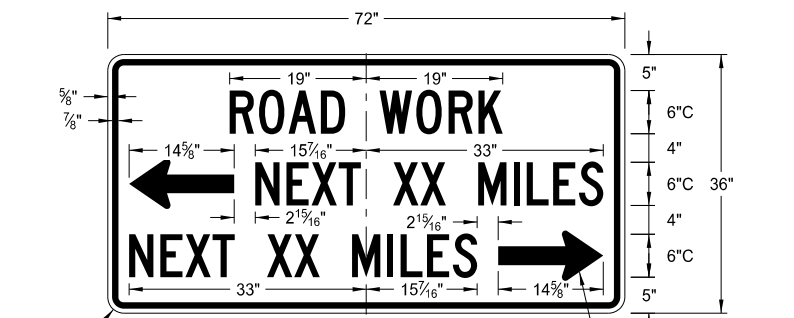
12 18 2020

CONSTRUCTION SIGN DETAILS
 TERMINAL AND GUIDE SIGNS

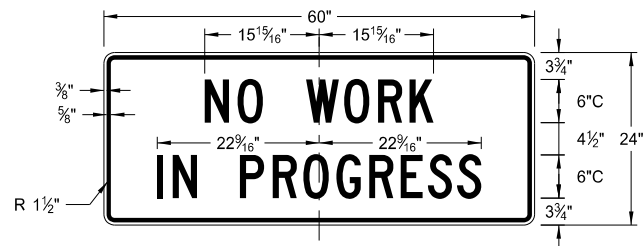
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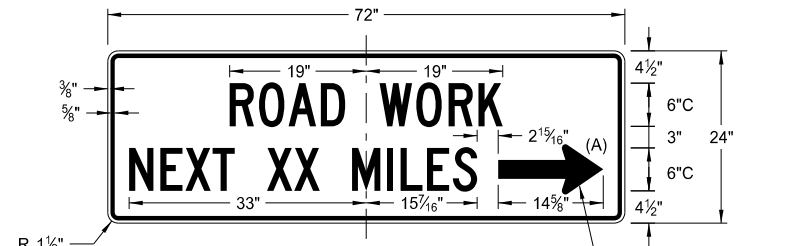
G20-1-60
 Legend: black (non-refl)
 Background: orange



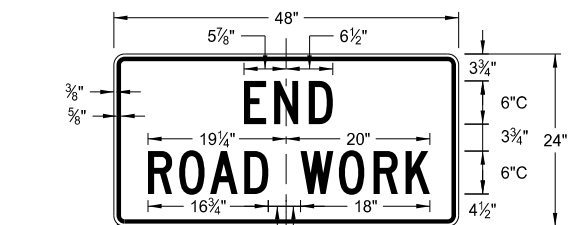
G20-50a-72
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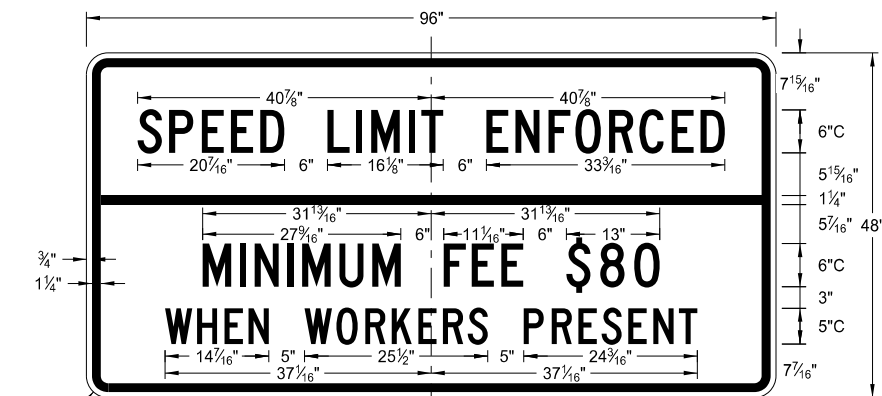
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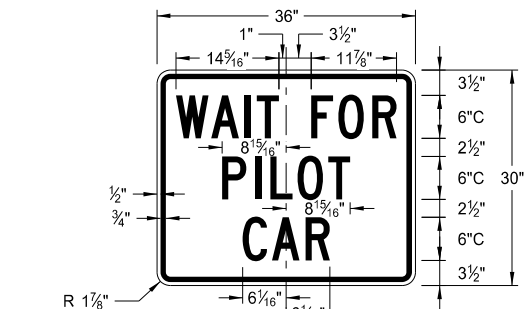
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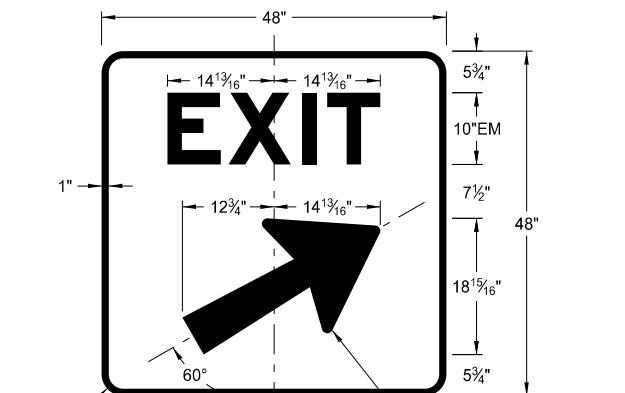
G20-2-48
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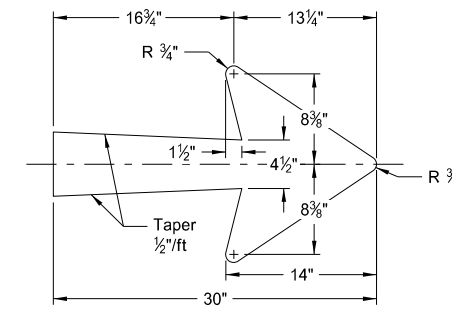
G20-55-96
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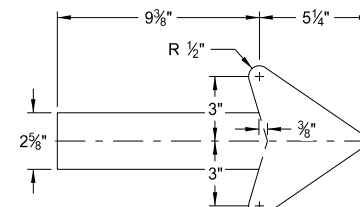
G20-4b-36
 Legend: black (non-refl)
 Background: orange



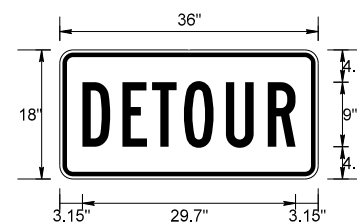
E5-1(L or R)-48
 Legend: white
 Background: green (orange optional)



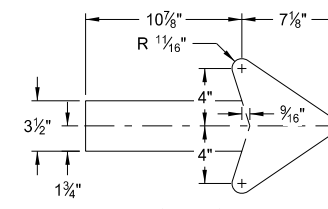
E5-1-48



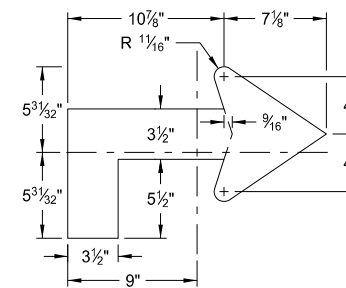
G20-50a-72
 G20-52a-72



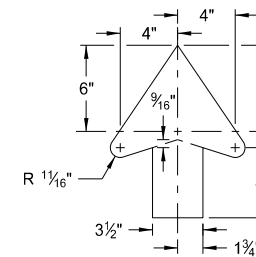
M4-8-36
 Legend: black (non-refl)
 Background: orange



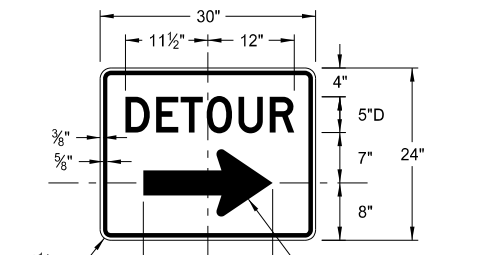
M4-9(L or R)-30
 Right or Left



M4-9(L or R)-30
 Advanced Right or Left



M4-9-30
 Straight



M4-9(L or R)-30 &
 M4-9-30
 Legend: black (non-refl)
 Background: orange

ARROW DETAILS

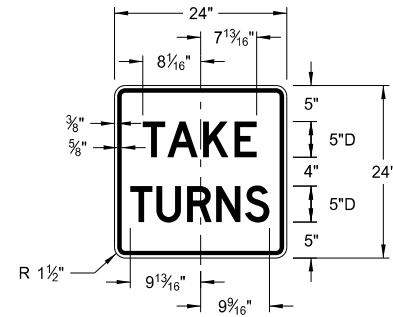
NOTES:

(A) Arrow may be right or left of the legend to indicate construction to the right or left.

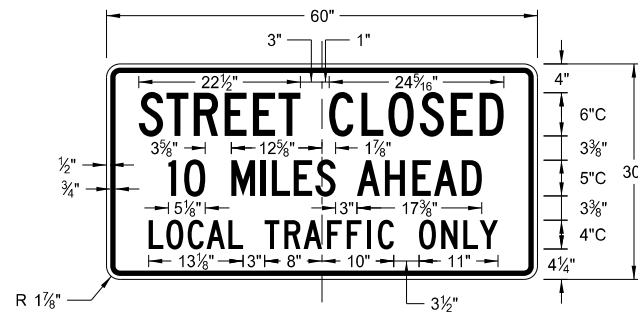
| | |
|--|---|
| NORTH DAKOTA DEPARTMENT OF TRANSPORTATION | |
| 8-13-13 | |
| REVISIONS | |
| DATE | CHANGE |
| 8-17-17 10-03-19 | Added sign & background color New Design Engineer PE Stamp |

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 Kirk J Hoff,
 Registration Number
 PE- 4683,
 on 10/03/19 and the original document is stored at the
 North Dakota Department
 of Transportation

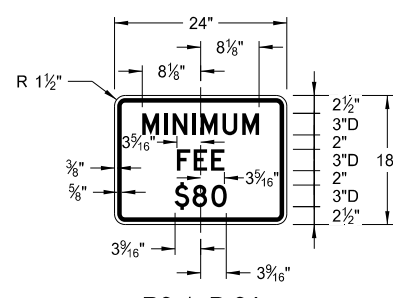
CONSTRUCTION SIGN DETAILS
REGULATORY SIGNS



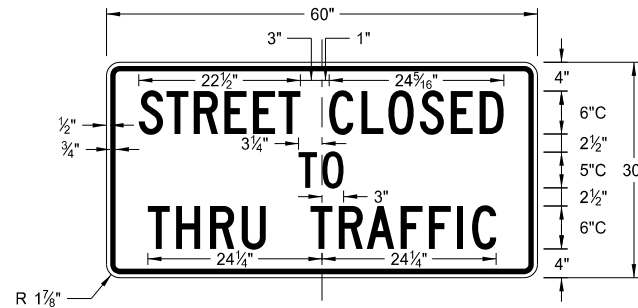
R1-50P-24
Legend: black (non-refl)
Background: white



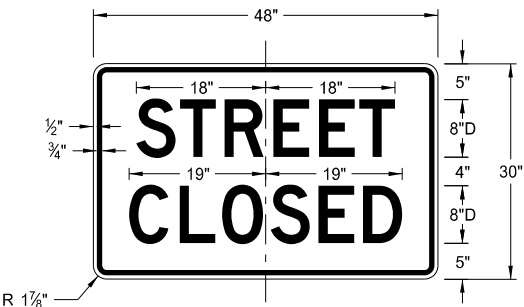
R11-3c-60
Legend: black (non-refl)
Background: white



R2-1aP-24
Legend: black (non-refl)
Background: white



R11-4a-60
Legend: black (non-refl)
Background: white

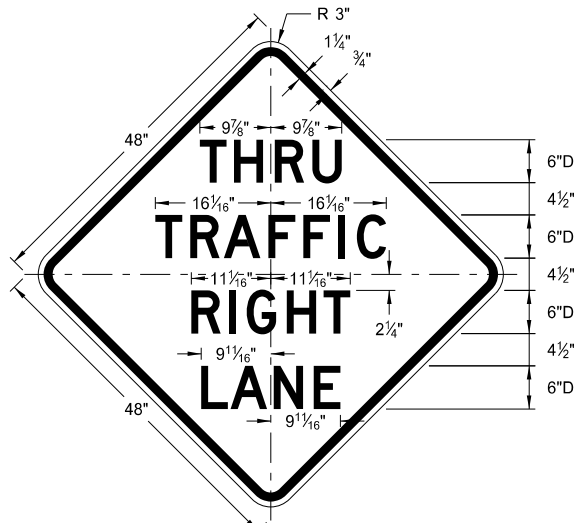


R11-2a-48
Legend: black (non-refl)
Background: white

| | |
|--|------------------------------|
| NORTH DAKOTA DEPARTMENT OF TRANSPORTATION | |
| 8-13-13 | |
| REVISIONS | |
| DATE | CHANGE |
| 8-17-17 | Revised sign number |
| 10-03-19 | New Design Engineer PE Stamp |

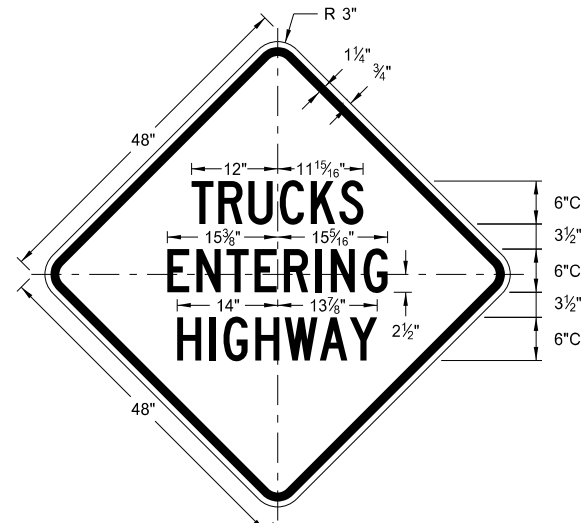
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CONSTRUCTION SIGN DETAILS
WARNING SIGNS



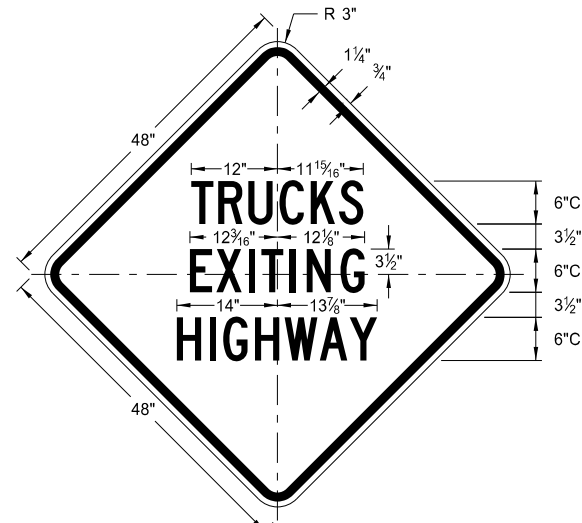
W5-8-48

Legend: black (non-refl)
Background: orange



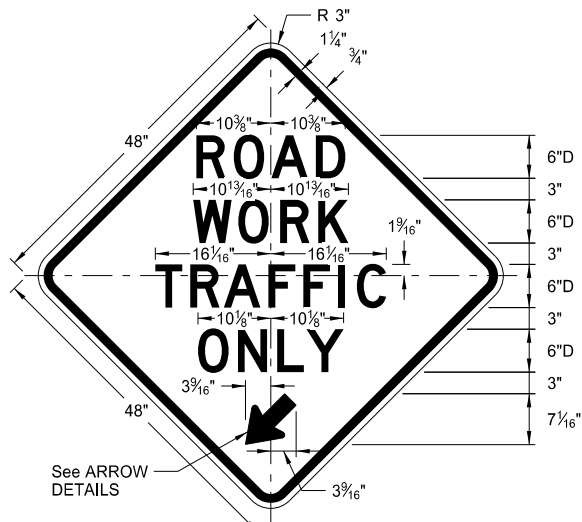
W8-53-48

Legend: black (non-refl)
Background: orange



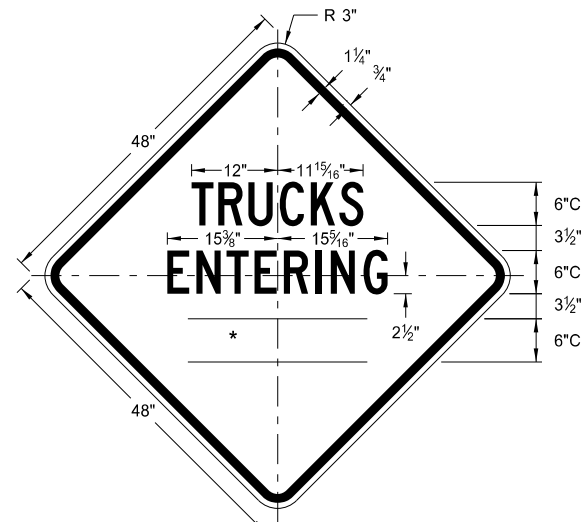
W8-56-48

Legend: black (non-refl)
Background: orange



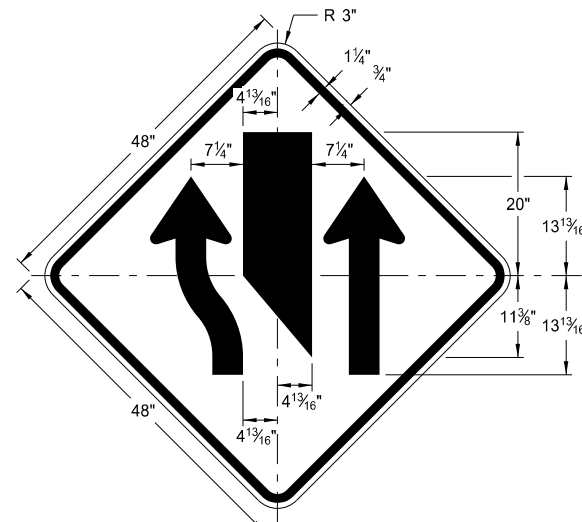
W5-9-48

Legend: black (non-refl)
Background: orange



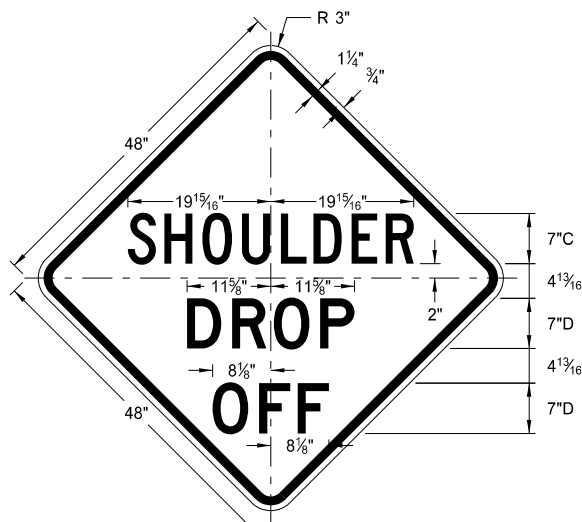
W8-54-48

Legend: black (non-refl)
Background: orange



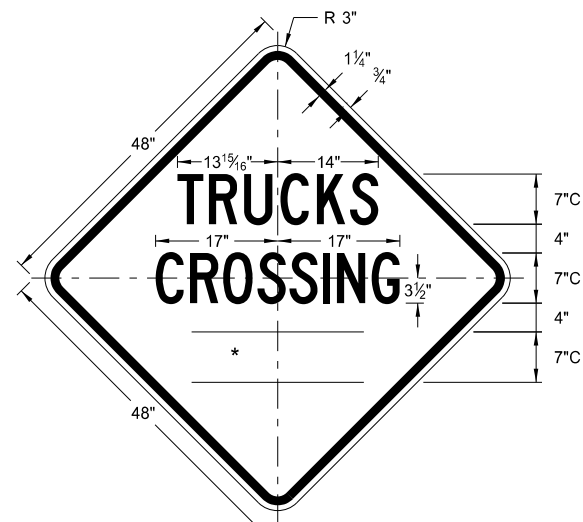
W9-3a-48

Legend: black (non-refl)
Background: orange



W8-9a-48

Legend: black (non-refl)
Background: orange

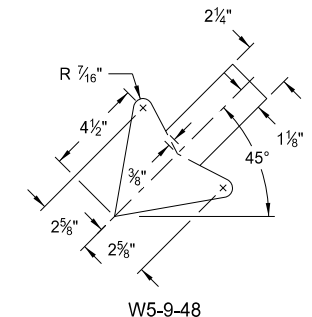


W8-55-48

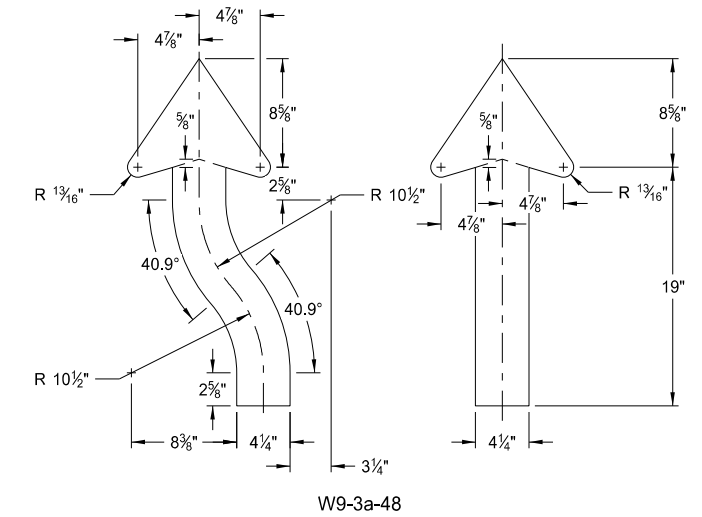
Legend: black (non-refl)
Background: orange

| WORD | LETTER SPACING |
|----------|----------------|
| AHEAD | Standard |
| 200 FT | Standard |
| 350 FT | Standard |
| 500 FT | Standard |
| 1000 FT | Reduce 40% |
| 1500 FT | Reduce 40% |
| 1/2 MILE | Reduce 50% |
| 1 MILE | Standard |

* DISTANCE MESSAGES



W5-9-48



W9-3a-48

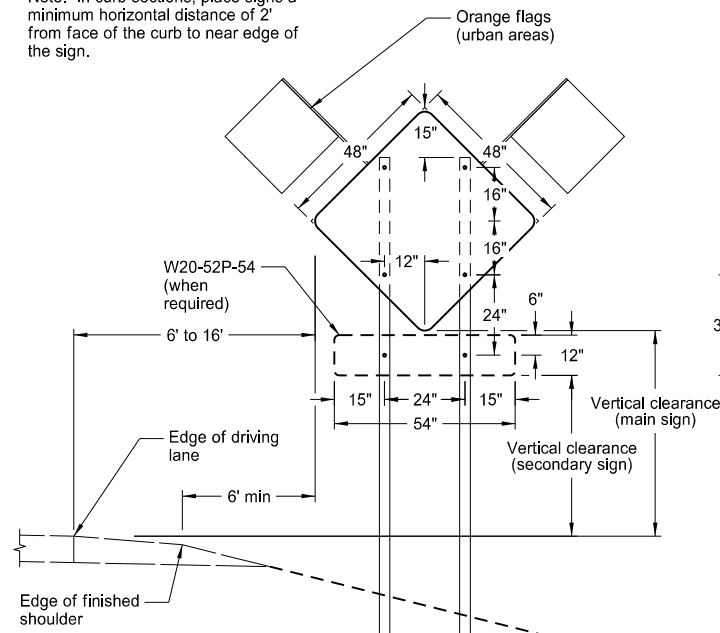
ARROW DETAILS

| NORTH DAKOTA DEPARTMENT OF TRANSPORTATION | |
|--|--------------------------------|
| 8-13-13 | |
| REVISIONS | |
| DATE | CHANGE |
| 8-17-17 | Updated sign number |
| 5-31-18 | Revised sign and arrow details |
| 10-03-19 | New Design Engineer PE Stamp |

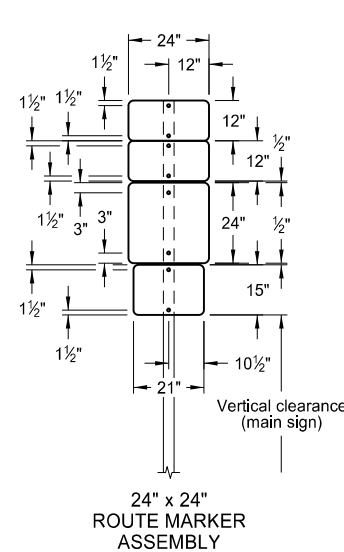
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CONSTRUCTION SIGN PUNCHING AND MOUNTING DETAILS

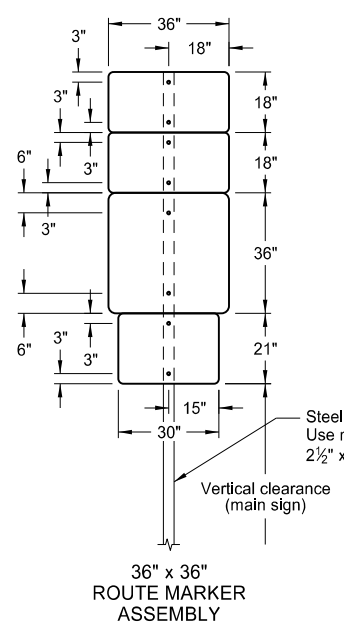
Note: In curb sections, place signs a minimum horizontal distance of 2' from face of the curb to near edge of the sign.



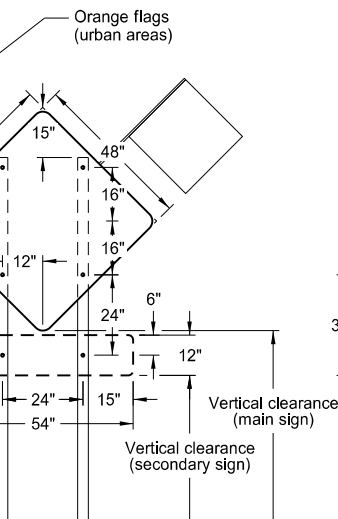
TYPICAL SECTION
(48" x 48" diamond warning sign shown)



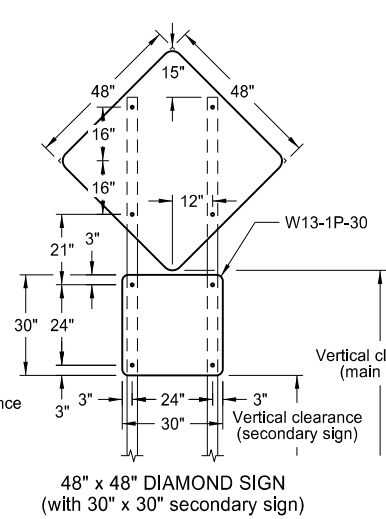
24" x 24" ROUTE MARKER ASSEMBLY



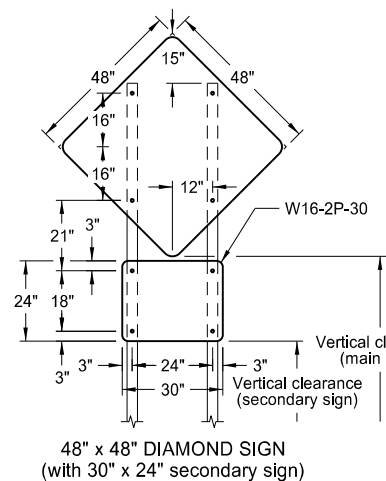
36" x 36" ROUTE MARKER ASSEMBLY



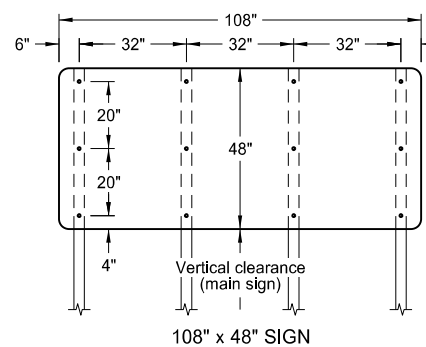
18" x 18" DIAMOND SIGN



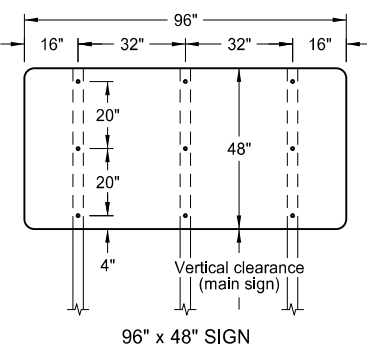
48" x 48" DIAMOND SIGN
(with 30" x 30" secondary sign)



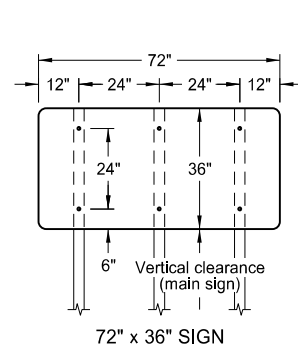
48" x 48" DIAMOND SIGN
(with 30" x 24" secondary sign)



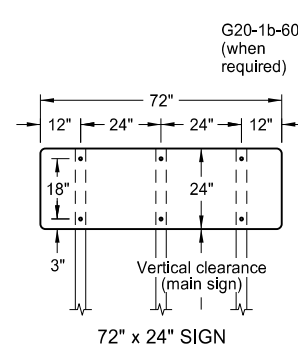
108" x 48" SIGN



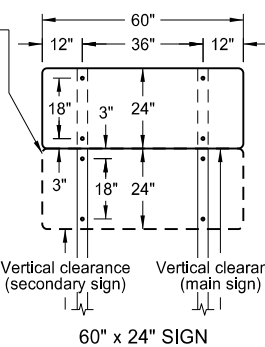
96" x 48" SIGN



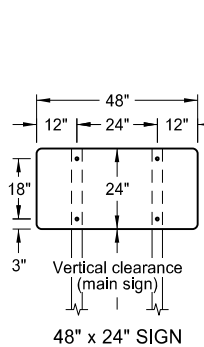
72" x 36" SIGN



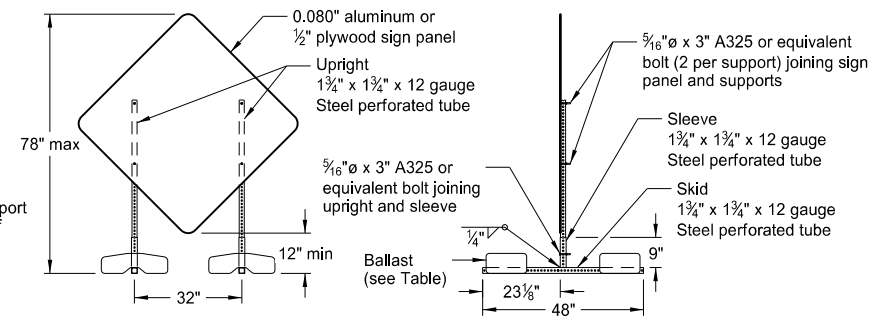
72" x 24" SIGN



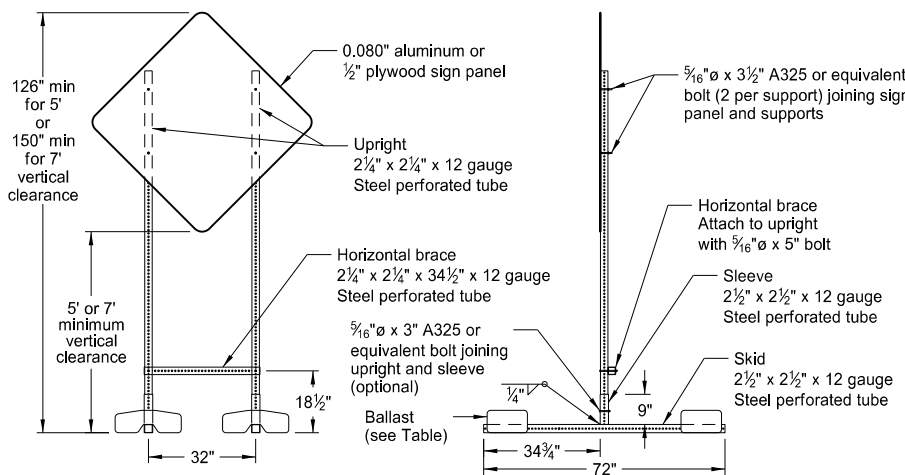
60" x 24" SIGN



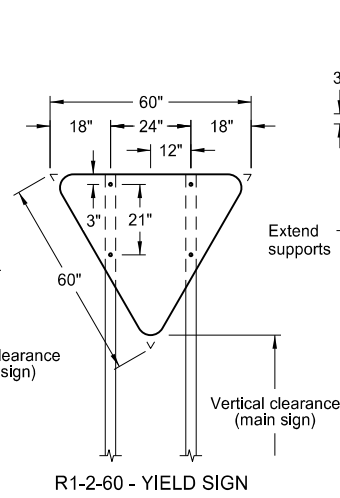
48" x 24" SIGN



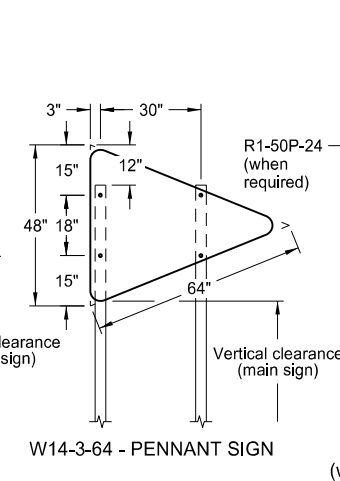
PORTABLE SIGN SUPPORT
LOW-MOUNTING HEIGHT



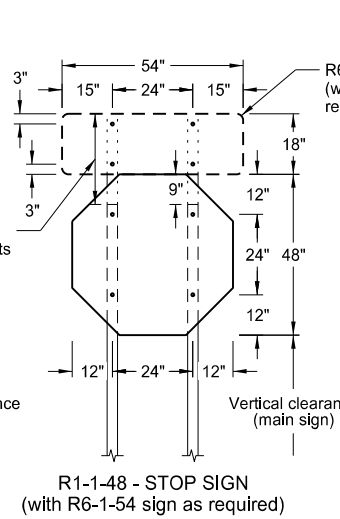
PORTABLE SIGN SUPPORT
HIGH-MOUNTING HEIGHT



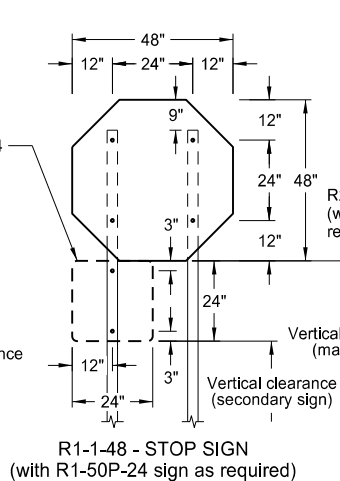
R1-2-60 - YIELD SIGN



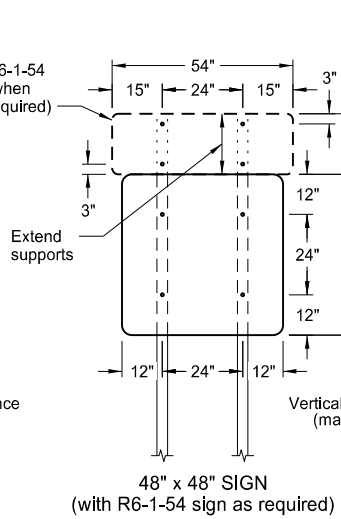
R1-50P-24
(when required)



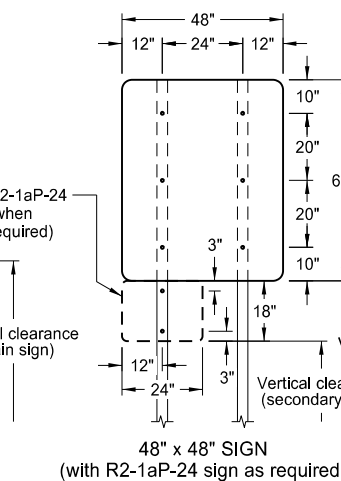
R1-1-48 - STOP SIGN
(with R6-1-54 sign as required)



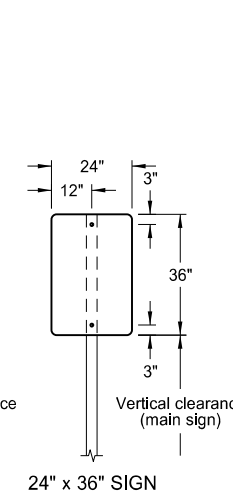
R2-1aP-24
(when required)



48" x 48" SIGN
(with R6-1-54 sign as required)



48" x 48" SIGN
(with R2-1aP-24 sign as required)



24" x 36" SIGN

NOTES:

- Sign Supports: Galvanize or paint supports. Minimum post sizes are 2.5 lb/ft u-channel or 2" x 2" x 12 gauge steel perforated tube, except where noted. When installing signs on u-channel, minimum post size for assemblies containing a secondary sign is 3.0 lb/ft. Post sizes based on a wind speed of 55 MPH.

Place signs over 50 square feet on 2 1/2" x 2 1/2" perforated tube supports as a minimum.

Do not attach guy wires to sign supports. Attach wind beams behind sign panels when used with u-posts.
- Sign Panels: Provide sign panels made of 0.100" aluminum, 1/2" plywood, or other approved material, except where noted. Punch all holes round for 3/8" bolts.
- Alternate Messages: Install and remove alternate message signs on reflectorized plate (without borders) as required. (i.e. "Left" and "Right" message on lane closure sign)
- Route Marker Auxiliary Signs: Provide route marker auxiliary signs, such as the cardinal direction and directional arrows, with a background and legend that match the route marker they are used with:

Interstate - white legend on blue background
Interstate Business Loop - white legend on green background
US and State - black legend on white background
County - yellow legend on blue background

- Vertical Clearance: Install signs with a vertical clearance of 5'-0" (see TYPICAL SECTION). In areas where parking or pedestrian movements are likely or the view of the sign may be obstructed, install signs with a vertical clearance of 7'-0" from the top of the curb or from the near edge of the driving lane in absence of a curb.

The vertical clearance to secondary signs is 1'-0" less than the vertical clearance stated above.

Provide a minimum clearance of 7'-0" from the ground at the post for signs with an area exceeding 50 square feet.

- Portable Signs: Provide portable signs that meet the vertical clearance stated above when it is necessary to place signs within the pavement surface.

Use of low-mounting height (minimum 12" vertical clearance) portable signs for 5 days or less, is allowed as long as the view of the sign is not obstructed. Time delays caused by unforeseen circumstances, such as equipment breakdowns, rain, subgrade failures, etc., will not accrue towards the 5 day period. Use of R9-8 through R9-11a series, W1-6 through W1-8 series, M4-10, and E5-1 is allowed for longer than 5 days.

Restrict signs mounted on portable sign supports shown in the LOW-MOUNTING HEIGHT and HIGH-MOUNTING HEIGHT details to a maximum surface area of 16 square feet.

MINIMUM BALLAST
(For each side of sign support base)

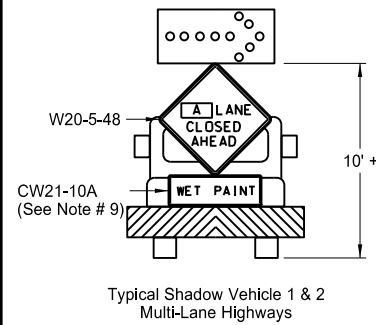
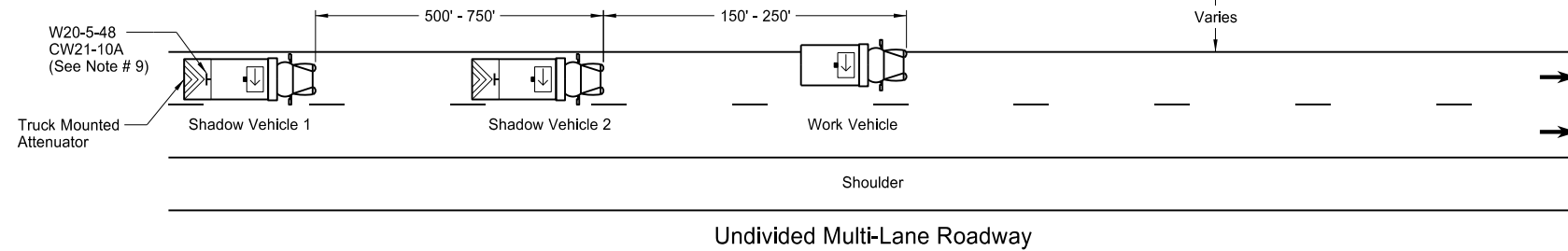
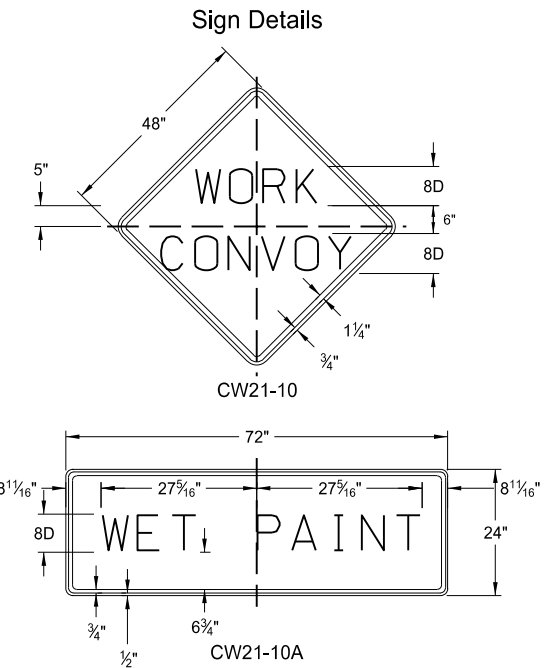
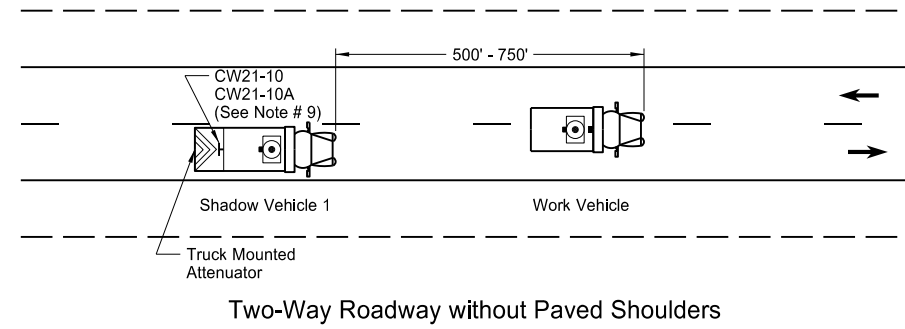
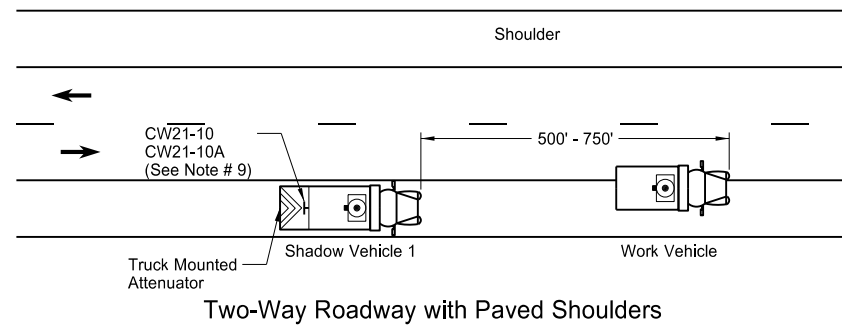
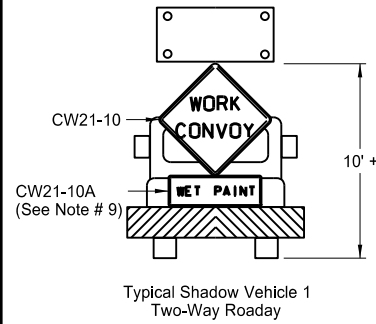
| Sign Panel Mounting Height (ft) | Number of 25 lb sandbags for 4' x 4' sign panel |
|---------------------------------|---|
| 1' | 6 |
| 5' | 8 |
| 7' | 10 |

Note: The number of sandbags are based on a wind speed of 55 MPH. Place sandbags at or near the ends of skids.

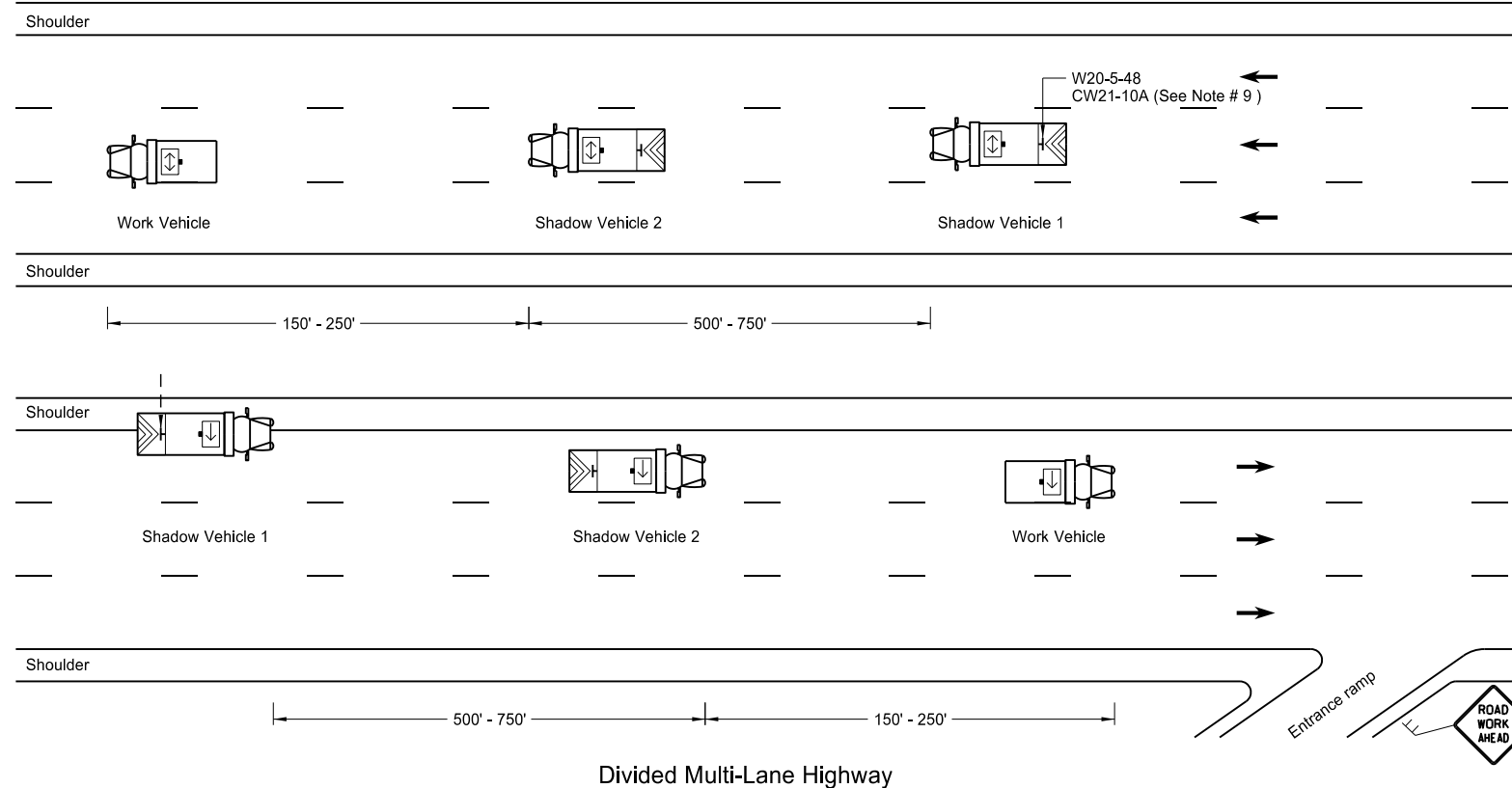
| NORTH DAKOTA DEPARTMENT OF TRANSPORTATION | |
|--|-----------------------------|
| 10-4-13 | |
| REVISIONS | |
| DATE | CHANGE |
| 11-14-13 | Revised Note 6 |
| 9-27-17 | Updated to active voice |
| 11-01-19 | Revised 60"x24" sign detail |

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Registration Number
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MOBILE OPERATION
(PAVEMENT MARKING)

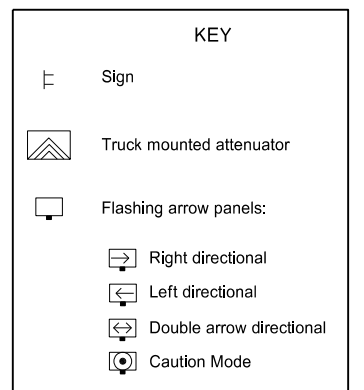


A = Left Right Center



Notes

- Use additional vehicles you choose to be in the convoy with truck mounted attenuators, at your own expense.
- Display yellow rotating beacons or strobe lights on shadow and work vehicles, unless otherwise stated in the plans.
- Use Type B or Type C flashing arrow panels controlled from inside the vehicle.
- Provide each vehicle with two-way electronic communication capability.
- Move shadow vehicle 1 first to shadow other convoy vehicles when convoy changes lane.
- Vary vehicle spacing between shadow vehicle 1 and shadow vehicle 2 based on sight distance restrictions. Motorists approaching the work convoy need to see trail vehicle in time to slow down and/or change lanes as they approach shadow vehicle.
- Sign Colors
Letters = Black
Border = Black
Background = Orange
- As an option, use shadow vehicle 2 the paint tender vehicle.
- Use sign CW21-10A only during painting operation.
- Pull over work and shadow vehicles periodically to allow motor vehicle traffic to pass on two lane - two way roadways.

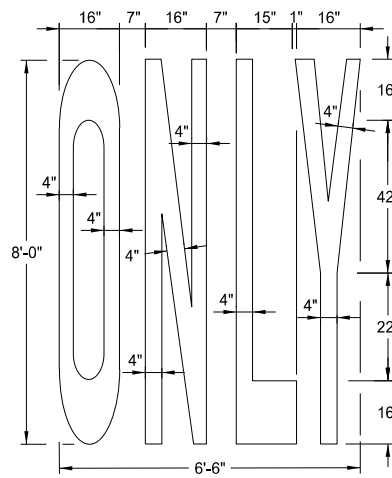


| NORTH DAKOTA DEPARTMENT OF TRANSPORTATION | |
|--|---|
| 9-27-13 | |
| REVISIONS | |
| DATE | CHANGE |
| 6-18-14 | Removed shadow vehicle 2 on two lane roadways |
| 9-27-17 | Updated to active voice |
| 11-08-19 | Changed Standard Heading |

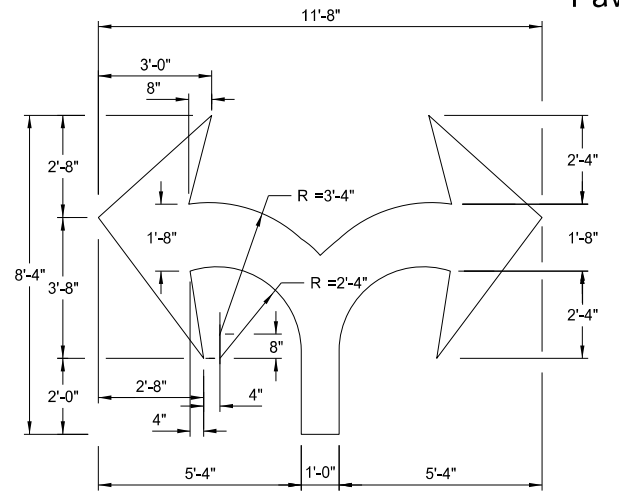
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of Transportation

Pavement Marking Message Details

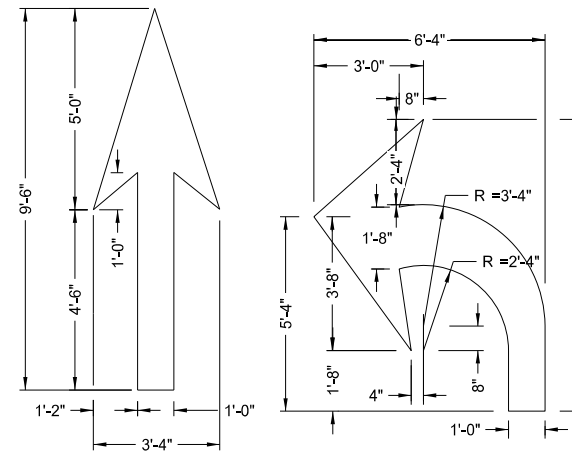
D-762-1



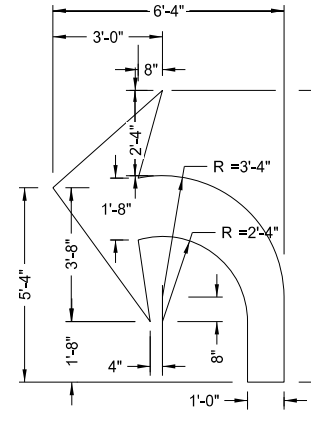
22 S. F.



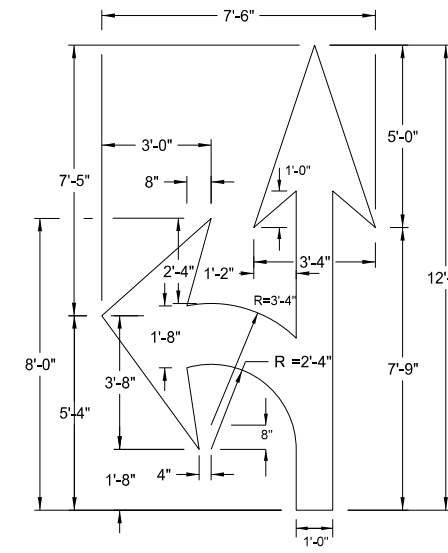
29 S. F.



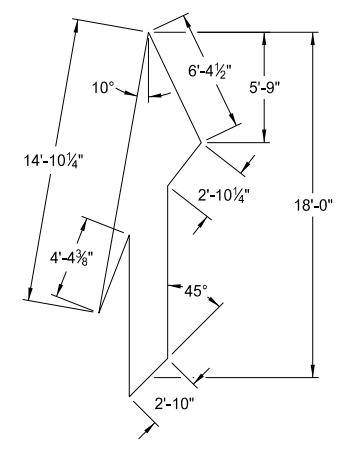
12 S. F.



16 S. F.

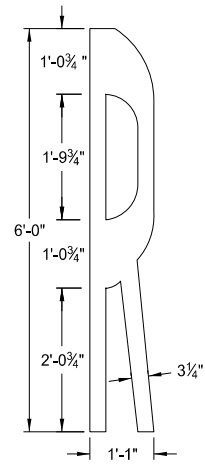


27 S. F.

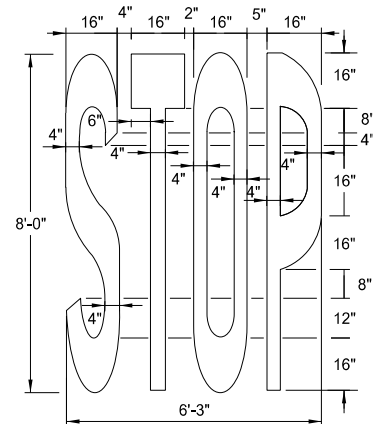


41 S. F.

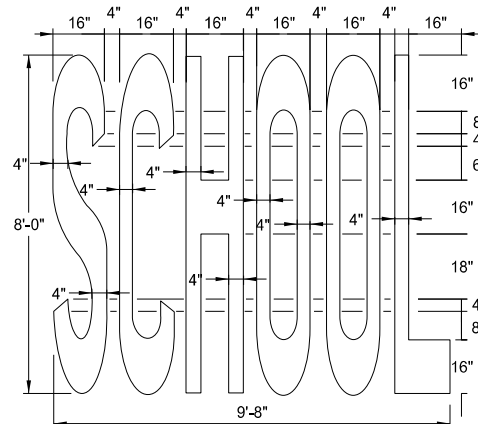
Note: Rotate merge arrow 20° from edge of roadway.



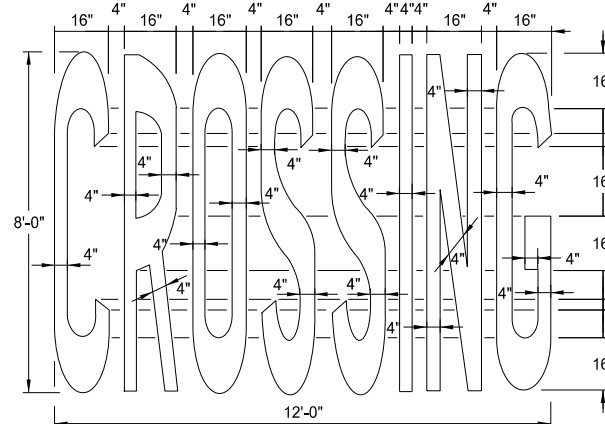
4 S. F.



22 S. F.



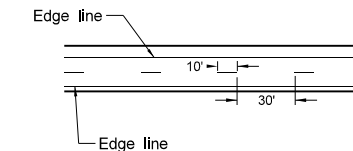
34.5 S. F.



46 S. F.

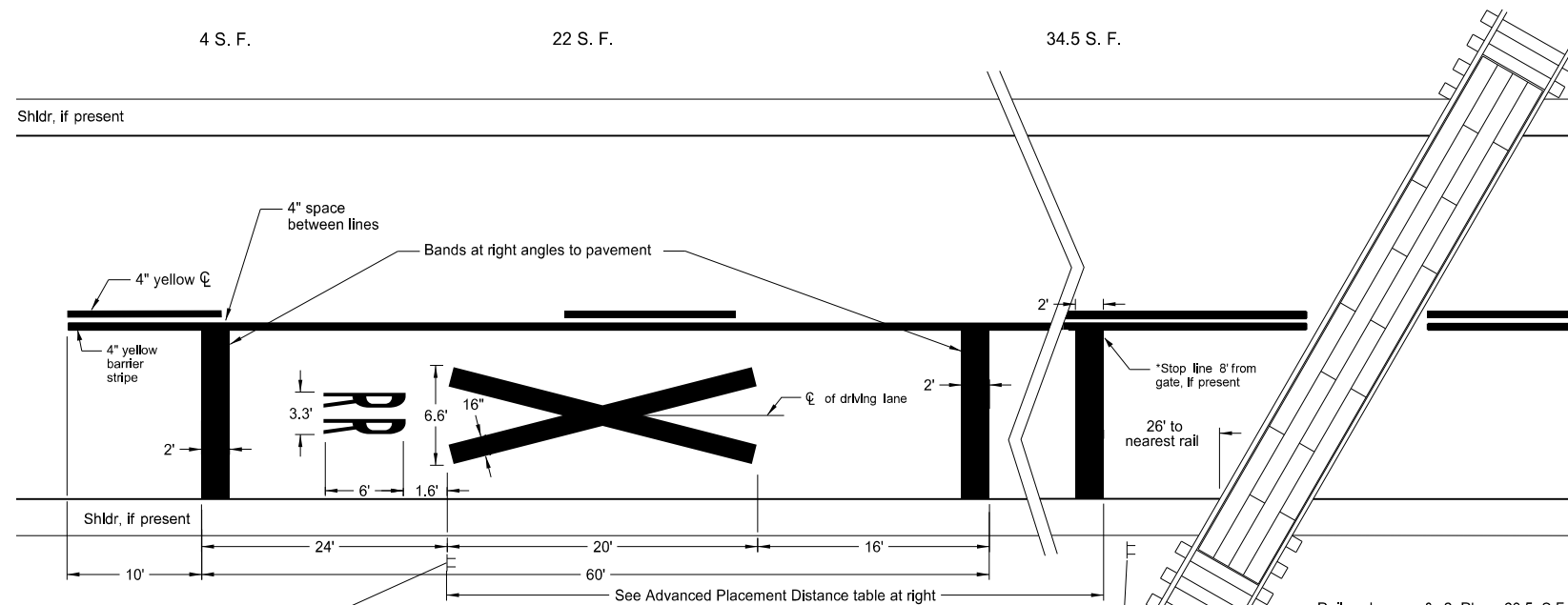
| Speed Limit | Chevron Width | Chevron Spacing 45° to Traffic |
|------------------|---------------|--------------------------------|
| 0-25 mph | 8" | 5' |
| 30-40 mph | 8" | 15' |
| 45 mph and above | 12" | 25' |

Chevron Crosshatching Table



Centerline Pavement Marking Skip Spacing Detail

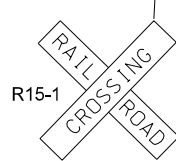
| Advance Placement Distance for Railroad Warning Signs | |
|---|------------------|
| Posted or 85th Percentile Speed | Advance Distance |
| 20 mph | min. 100 ft |
| 25 mph | min. 100 ft |
| 30 mph | min. 100 ft |
| 35 mph | min. 100 ft |
| 40 mph | 125 ft |
| 45 mph | 175 ft |
| 50 mph | 250 ft |
| 55 mph | 325 ft |
| 60 mph | 400 ft |
| 65 mph | 475 ft |
| 70 mph | 550 ft |



See Standard Drawing D-754-81

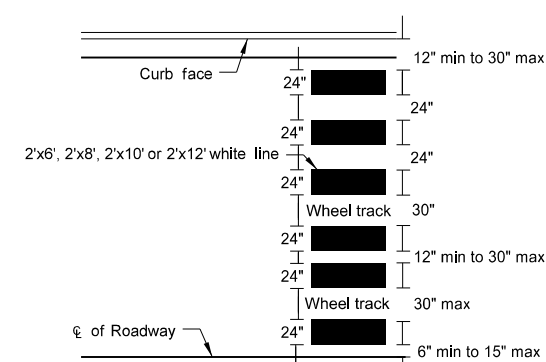
Notes:
Mark a three lane roadway with a centerline for two-lane approach operation on the approach to a crossing. On multi-lane roads, extend the transverse bands across all approach lanes, and use individual R X R symbols in each approach lane.

See plans for correct message. Use white pavement markings unless noted otherwise.



R15-1

*Stop Bar nearest crossing - 8' from gate or 26' to nearest rail - Use whichever is further from tracks.



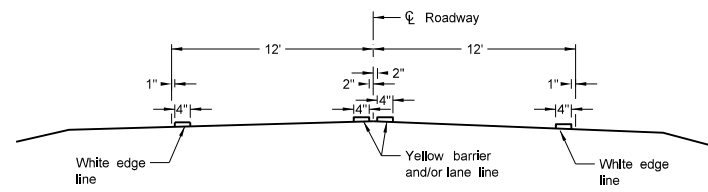
Continental Crosswalk Detail

| NORTH DAKOTA DEPARTMENT OF TRANSPORTATION | |
|---|--|
| 12-6-11 | |
| REVISIONS | |
| DATE | CHANGE |
| 10-17-17 | Updated to active voice. |
| 08-27-19 | New Design Engineer PE Stamp. |
| 01-28-2020 | Revised min Stop Bar distance to rail. |

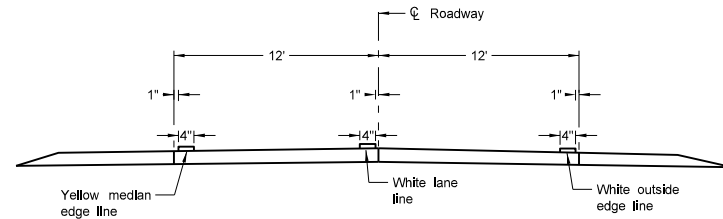
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PAVEMENT MARKING

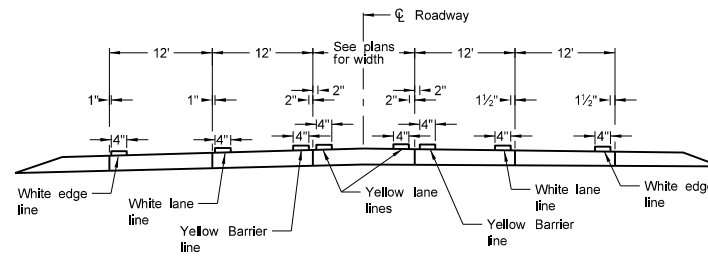
D-762-4



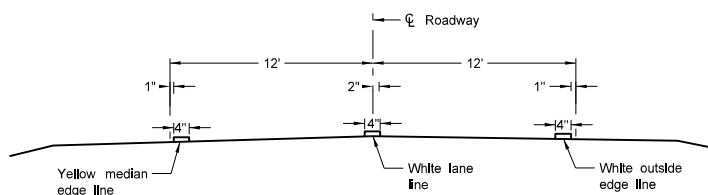
Two Lane Two Way
RURAL ROADWAY



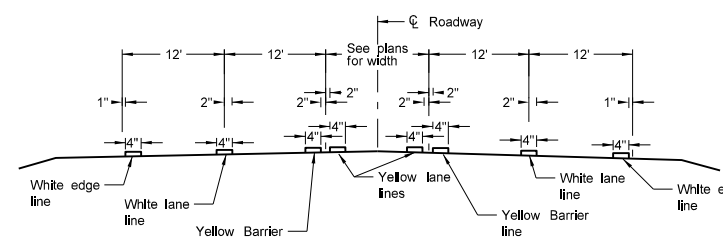
Two Lane Roadway
INTERSTATE HIGHWAY
Concrete Section



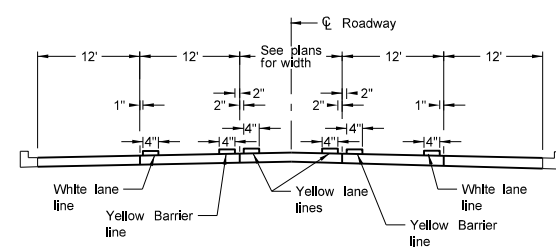
RURAL FIVE LANE ROADWAY
Concrete Section



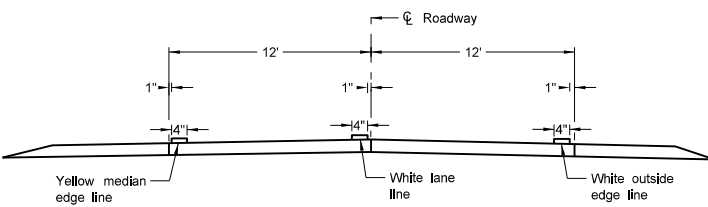
Two Lane Divided
Rural Roadway
PRIMARY HIGHWAY
Asphalt Section



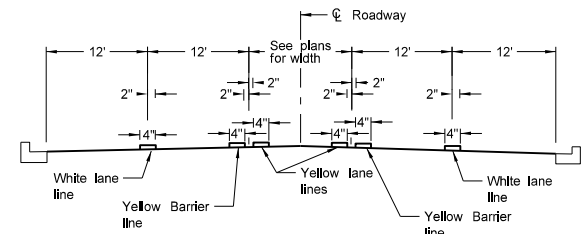
RURAL FIVE LANE ROADWAY
Asphalt Section



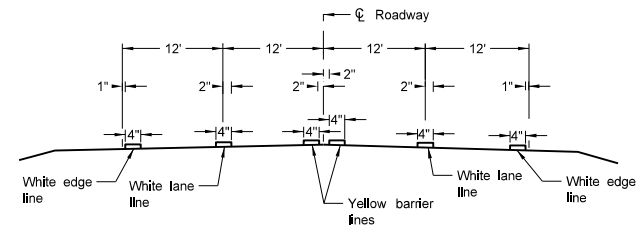
URBAN FIVE LANE SECTION
Concrete Section



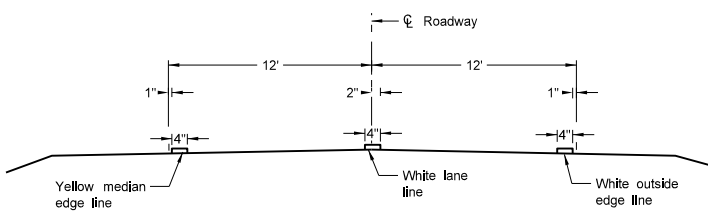
Two Lane Roadway
PRIMARY HIGHWAY
Concrete Section



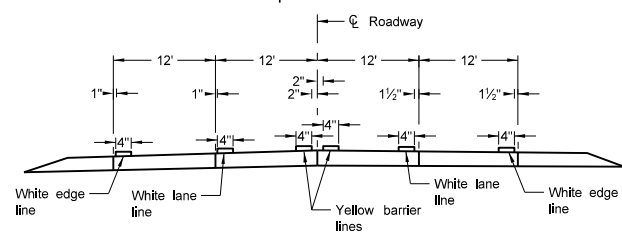
URBAN FIVE LANE SECTION
Asphalt Section



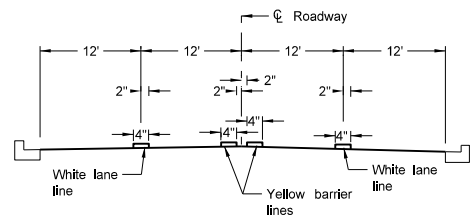
RURAL FOUR LANE ROADWAY
Asphalt Section



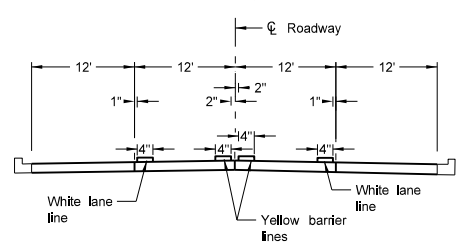
Two Lane Roadway
INTERSTATE HIGHWAY
Asphalt Section



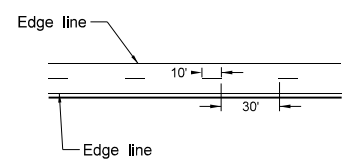
RURAL FOUR LANE ROADWAY
Concrete Section



URBAN FOUR LANE SECTION
Asphalt Section



URBAN FOUR LANE SECTION
Concrete Section



CENTERLINE PAVEMENT MARKING SKIP SPACING DETAIL

NOTES:
1. Continue edge lines through private drives and field drives. Break edge lines for intersections.

| | |
|--|-------------------------------|
| NORTH DAKOTA DEPARTMENT OF TRANSPORTATION | |
| 12-1-10 | |
| REVISIONS | |
| DATE | CHANGE |
| 10-17-17 | Updated to active voice. |
| 08-27-19 | New Design Engineer PE Stamp. |

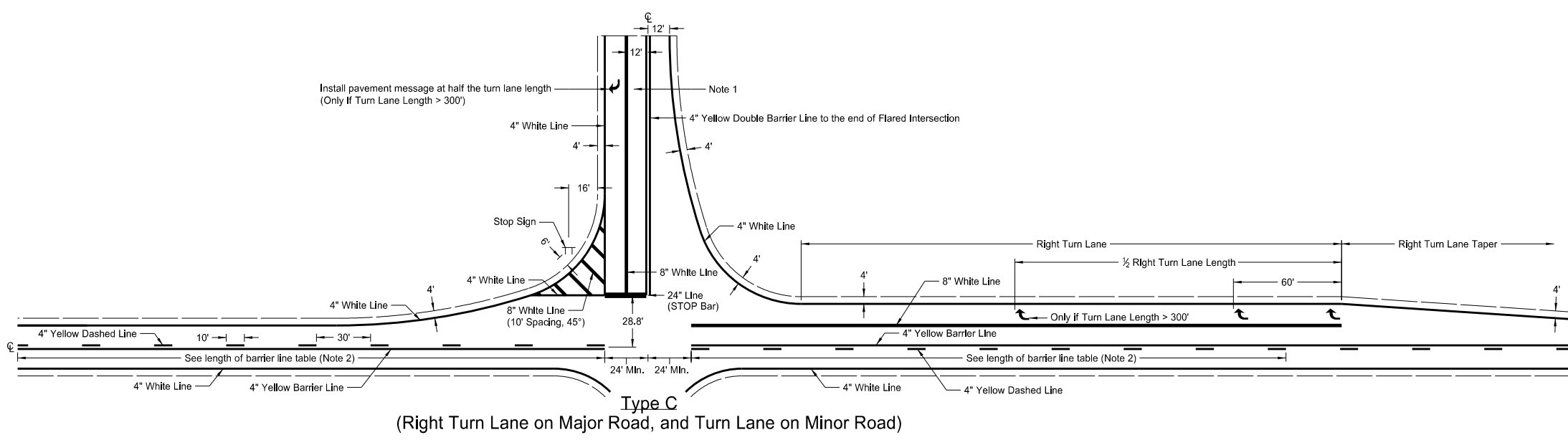
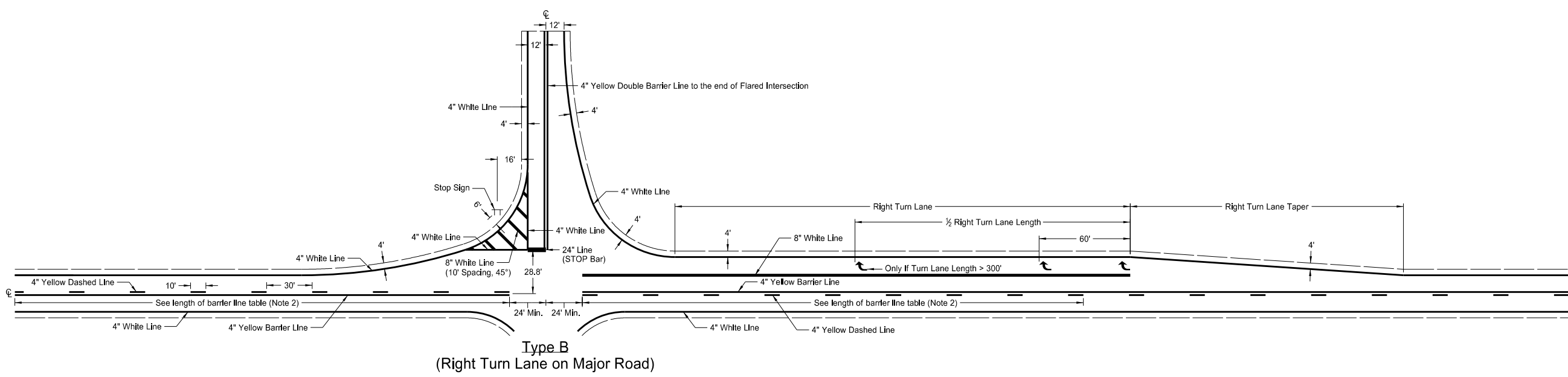
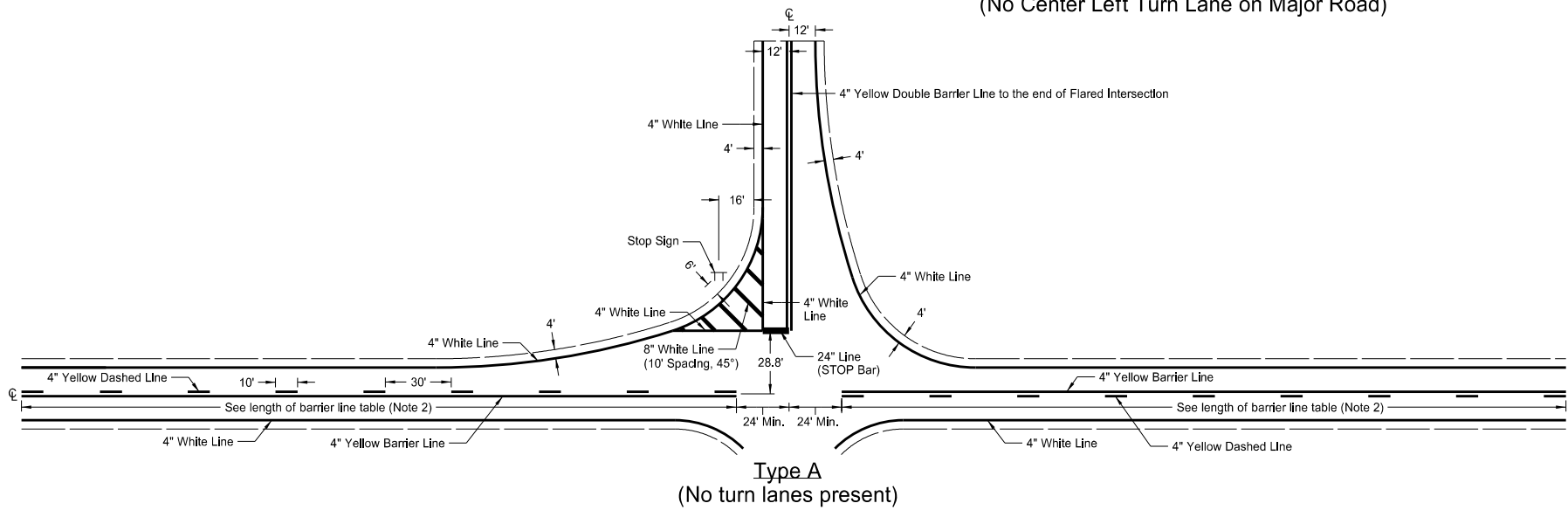
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PAVEMENT MARKING FOR STANDARD 90 DEGREE FLARED INTERSECTION
(No Center Left Turn Lane on Major Road)

Notes

1. At "T" intersections (3-leg), additionally install left turn pavement marking message arrow.
2. The barrier lines have variable distances dependent on speed limit. Obtain barrier line length from table below (stopping sight distance.)

| Table for Length of Barrier Line | | | | | | | | | |
|----------------------------------|------|------|------|------|------|------|------|------|------|
| Speed Limit (mph) | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 |
| Minimum Length | 200' | 250' | 305' | 360' | 425' | 495' | 570' | 645' | 730' |



———— 4" Marking
 ———— 8" Marking
 ————— 24" Marking

| | |
|--|-------------------------------|
| NORTH DAKOTA DEPARTMENT OF TRANSPORTATION | |
| 3-29-16 | |
| REVISIONS | |
| DATE | CHANGE |
| 8-17-17 | Updated note & dimensioning. |
| 8-30-18 | Corrected pmt mkg placement. |
| 8-27-19 | New Design Engineer PE Stamp. |

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